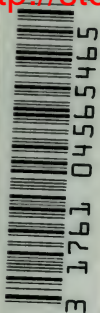


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THE
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WITH

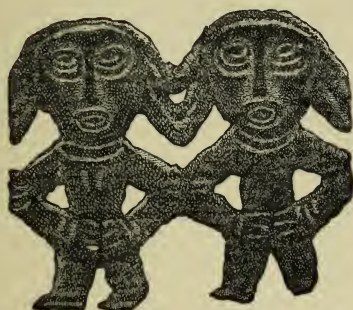
The Magic Songs

OF THE WEST FINNS

By the Honourable

JOHN ABERCROMBY

COR. MEMBER OF THE FINNO-UGRIAN SOCIETY



IN TWO VOLUMES

VOL. I.

Published by David Nutt
in the Strand, London
1898

4 5 6 0 2
2 6 | 6 | 9 9

Edinburgh : T. and A. CONSTABLE, Printers to Her Majesty

P R E F A C E

IN this country the term Finn is generally restricted to the natives of Finland, with perhaps those of Esthonia thrown in. But besides these Western Finns there are other small nationalities in Central and Northern Russia, such as the Erza and Mokša Mordvins, the Čeremis, Votiaks, Permians, and Zīrians, to whom the term is very properly applied, though with the qualifying adjective—Eastern. Except by Folklorists, little attention is paid in Great Britain to these peoples, and much that is written of them abroad finds no response here, the ‘silver streak’ acting, it would seem, as a non-conductor to such unsensational and feeble vibrations.

Although the languages of the Eastern and Western Finns differ as much perhaps among themselves as the various members of the Aryan group, the craniological and physical differences between any two Finnish groups is very much less than between the Latin and the Teutonic groups, for instance. All the Finns live nearly under the same latitudes, and in pre- and proto-historic times, which are not so very

remote, the differences in customs, religious and other beliefs, could not have been very great. This is important; it allows us to supplement what is missing or defective in one Finnish group by what is more complete in another, with far greater certainty than when dealing under similar circumstances with the Aryan-speaking groups. In the first five chapters of the first volume I have tried, with the combined aid of craniology, archæology, ethnography, and philology, brought up to date, to sketch as succinctly as possible the pre- and proto-historic history of the Eastern and Western Finns, showing the various stages of civilisation to which they successively advanced after contact with higher civilisations, at different periods of their evolution from neolithic times to the middle ages. Chapters six and seven contain an analysis of the beliefs of the Western Finns, so far as they can be gathered from the text of the Magic Songs in the second volume; and a perusal of them will facilitate the comprehension of the Magic Songs themselves. The second volume, containing 639 magic songs, some of considerable length, classed under 233 headings, is a translation of a very large portion of the *Suomen kansan muinaisia Loitsurunoja*, edited and published by the late Dr. Lönnrot in 1880. As the translation was made for Folklorists it is as literal as possible,

without additions, without subtractions, and the vocabulary employed is in conformity with the subject, with the humble social status and homely surroundings of the original composers. The metre of the original is the same as in the Kalevala, which cannot be reproduced in a language like English, where the ictus of the metre has to coincide with the natural stress-accent of the words. But where it could be done without loss of exactness a certain rhythm, generally three beats to a line, is given in the translation, though to save space the lines are printed in prose form.

In the work of translating the Magic Songs I owe a debt of gratitude to Lektor Raitio, with whom I first began to study them a good many years ago, for much friendly assistance. Finally, I acknowledge with thanks the reproduction of four illustrations borrowed from Mr. J. R. Aspelin's *Antiquités du Nord Finno-ougrien*, four from Mr. Kudriavtsev, three from Mr. Inostrantsev, one from Mr. Spitsin, and twelve from photographs given me by Mr. Novokreščennikh. The six illustrations from sketches made by myself were made hurriedly, and are not absolutely correct, though adequate, I hope, for the purpose.

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THE VALUE OF ADDITIONAL LETTERS OF THE ALPHABET

c in East Finnish = *ts*.

č = Eng. *ch* in choose.

č̣ = *tl*.

ĵ = Eng. *j* in joke.

ñ, ṇ̃ = Eng. *ng* in bring.

š = Eng. *sh* in shall.

ž = French *j* in *jour*.

χ = *kħ* or *ch* in Sc. loch.

Consonants with a dash over or beside them, *e.g.* *b', c', d'*,
are soft and followed by a slight *y* sound.

ȝ = a thick guttural *i*, the Russian *yeriŭ*.

y in Finnish words = *ü*.

ȝ before another vowel in Russian words = *y* in yam, yield.

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ILLUSTRATIONS

FIG.

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25. Upper Part of a Water-Bird. From a Photograph.

FIG.

- | | |
|---|--------------------|
| 26. Bird with Human Face on its Breast. | From a Photograph. |
| 27. Double Bird. | ” ” |
| 28. Three-headed Bird (?). | ” ” |
| 29. Double Bronze Button. | ” ” |
| 30. Man on Horseback. | ” ” |
| 31. Man riding on an Animal. | ” ” |
| 32. Circular Disc with Rings. | ” ” |
| 33. Circular Bronze Disc, with incised Ornaments. | |

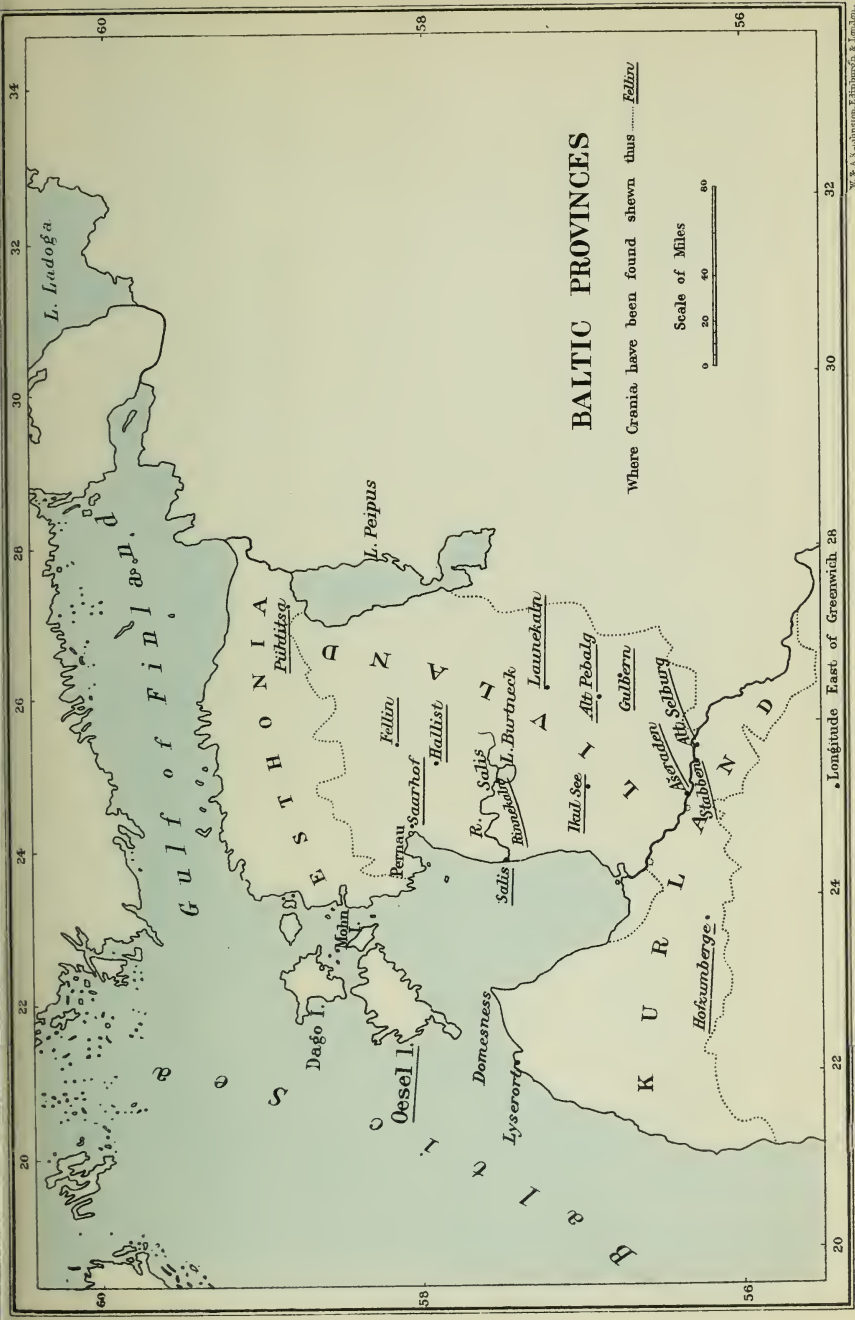
Excavations at Gliadénova, with Mr. Novokreščennikh in Middle Distance. From a Photograph by the Author. (Opp. p. 68.)

Excavations at Gliadénova, with the Kama in the Distance. From a Photograph by the Author. (Opp. p. 118.)

The Sand-Dunes of Volósovo. From a Photograph by the Author. (Opp. p. 118.)

MAPS

1. Finland.
2. The Baltic Provinces, showing where Crania have been discovered.
3. The Baltic Provinces, showing Archæological Finds.
4. Russia in Europe.



BALTIC PROVINCES

Where Grania have been found shown thus Felbu

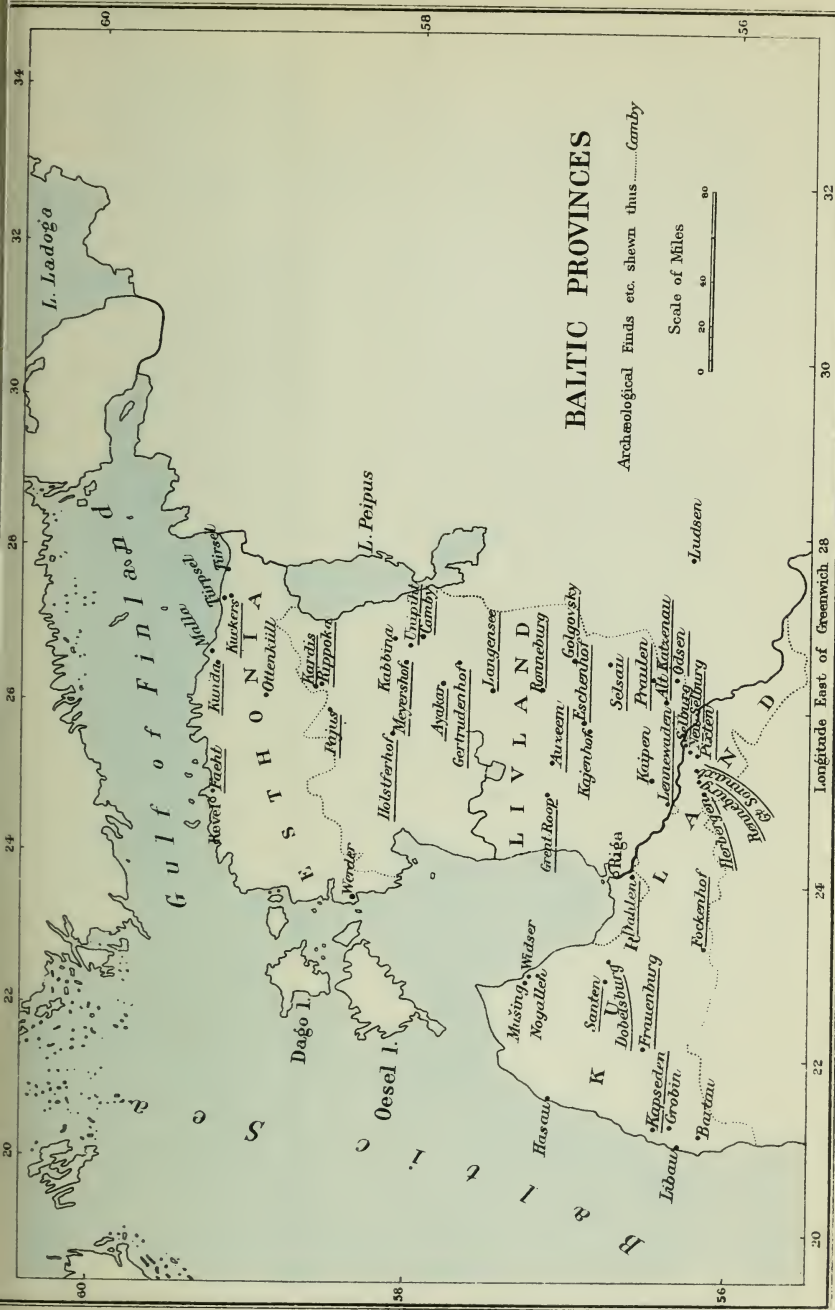
Scale of Miles



Longitude East of Greenwich 28

30

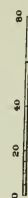
32



BALTIC PROVINCES

Archæological Finds etc. shewn thus *Camby*

Scale of Miles



NORTHERN AND CENTRAL RUSSIA

Scale of Miles

0 50 100 200



Longitude East 40 of Greenwich



FIG. 1.

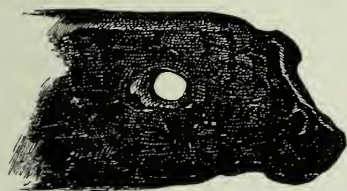


FIG. 2.



FIG. 3.



FIG. 4.



FIG. 5.



FIG. 6.



FIG. 7.



FIG. 8.

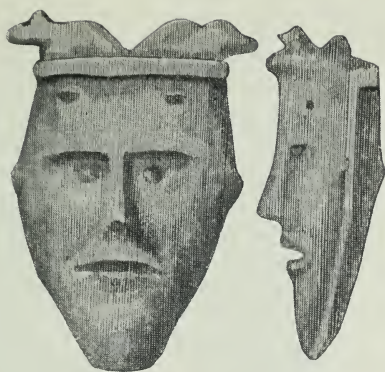


FIG. 9.



FIG. 10.



FIG. 11.



FIG. 12.



FIG. 13.

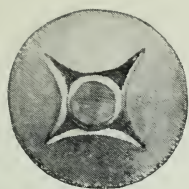


FIG. 14.



FIG. 15.

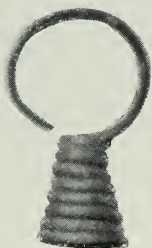


FIG. 16.



FIG. 17.

<http://stores.ebay.com/Ancestry-Found>



FIG. 18.



FIG. 19.



FIG. 20.



FIG. 21.



FIG. 22.



FIG. 23.



FIG. 24.



FIG. 25.



FIG. 26.



FIG. 27.



FIG. 28.



FIG. 29.



FIG. 30.



FIG. 32.



FIG. 31.



FIG. 33.

PRE- AND PROTO-HISTORIC FINNS

CHAPTER I

GEOGRAPHICAL POSITION AND CRANIOLOGY OF THE FINNS

As the main object of this work is an examination of the magic songs of the Finns, it may seem at first sight that most of the first volume is little more than a superfluity, unnecessarily heavy baggage that had better have been left behind. But from a point of view that may quite legitimately be held this is not the case. The Finns of Finland form only a large fraction of the Western Finns, and eastward of these live several groups that are commonly termed Eastern Finns, such as the Čeremis, Mordvins, Votiaks, and Zīrians. Philologists maintain, that to account for a certain community of structure and vocabulary, the different languages spoken by these peoples must originally derive from a common source; that once they must have lived much closer together than they do at present. But as community of speech does not necessarily carry with it community of race, it is necessary to give some of the craniological data that have accumulated during the last few years, not only to show how far race and language coincide, but also to help to determine whether certain prehistoric skulls, found in an area now inhabited by Finns, belonged to a Finnish or to a

European race. It is a commonplace remark that to understand and appreciate the present we must know as much as possible about the past. Properly to understand the magic songs of the Finns, to be able to separate the contents into something like a chronological series, to be able to say for certain that such and such a portion is of genuine Finnish origin and growth, while another is merely a Finnish graft on a foreign stock, necessitates some general notion of the past history of the Eastern and Western Finns. In the narrower sense of the word history this is impossible. But with the help afforded by philology and archæology it is possible to distinguish certain broad phases in their past career. Merely with their aid we are enabled to discriminate seven epochs, each marking some advance in ideas and civilisation in the past history of the Eastern and Western Finns. The first of these epochs may take us back some three thousand years, whereas documentary history only accounts for about a quarter of that time, and for our purpose can almost be left out of consideration. In Folk-lore the Finns take an important place, and as I believe that in this country not very much is known about the Eastern groups and their exact relation to the Western, the first volume of this work may serve as a general introduction to a knowledge of all the pre- and proto-historic Finns in Europe, viewed as an organic whole, though now broken up into isolated groups. It need hardly be said that in trying to reconstruct the unrecorded history of a people on the basis of facts furnished by philology, archæology, and other branches of knowledge, there is nearly always an ill-starred vein of uncertainty traversing every conclusion at which we may arrive; and it affords only a

GEOGRAPHICAL POSITION OF THE FINNS 3

modicum of comfort to remember that the same is true of nearly all documentary history that reposes on the evidence of only one or two witnesses. All that we can generally expect, then, is to reach conclusions that are probable from the present standpoint of knowledge, and to feel fortunate when that humble aim can be attained; for in the course of our inquiry many questions will present themselves that can only be answered, if at all, with many reserves. The only consolation is that it will not always be so. The work of the trained students now labouring in the fields of prehistoric archæology and Finnish philology will some day bear fruit, and to future generations much that is now obscure, or even quite dark, in the history of the past, will become distinct, or at least comparatively clear.

GEOGRAPHICAL POSITION OF THE WESTERN FINNS.

The Finns of Finland (*Suomi*) call themselves *Suomalaiset*, and are broadly divided into two branches, the Tavastlanders (*Hämäläiset*) and the Karelians (*Karjalaiset*). The former occupy the south-west of Finland; the latter fill not only the northern and eastern parts of the country, but stretch into Russia as far east as the west coast of Lake Onega, and thence in a straight line northwards to the White Sea. The Finns, however, are not the only inhabitants of the Grand Duchy. Along the west coast from Bothnia, southwards and along the south coast as far as the Russian frontier, there is a fringe of country inhabited by a Swedish-speaking people, forming about 14 per cent. of the whole population, the descendants, for the most part, of Swedish settlers that

have arrived at various unrecorded periods. Though there is no natural boundary to the north between the Finns and Lapps, the latter are not now found within the limits of the Grand Duchy save in the district round Lake Enare.

Formerly the Finns covered a still larger area than at present. In the middle of the ninth century we learn from Ohthere's account to King Alfred that Qvens (*Kainu-laiset*, a Karelian tribe) lived somewhere in the north of Sweden. Using light portable boats, they took advantage of the long narrow lakes to get far up country, then crossed the Fells and made raids upon the Northmen, who sometimes retaliated. In the north of Sweden the old name survives in the Kalix river, which is known to the Finns as *Kainuhunjoki*, or the Qven river. Far to the east the same explorer found the mouth of the Northern Dvina well populated by a people he calls Beormas, who are generally believed to have been Karelians. At any rate, according to Sjögren an examination of the place-names in the government of Archangel reveals the fact that Karelians once resided not only at the mouth of the river, and as far south as the district of Šenkursk, the most southern district in the above government, but also as far east as the basins of the Pinega and the Mezen, and that as late as the fifteenth century the south coast of the White Sea was termed by the Russians 'the Karelian coast.'¹ Under various names three small groups of Karelians are found in Ingria, which forms the northern and north-western part of the government of St. Petersburg. They are believed to have migrated from Finland at the end of the eleventh or the beginning of the twelfth century.

Beyond the limits of the Grand Duchy live three other

¹ Sjögren, pp. 290, 292, 323, 390.

divisions of the Finns: the Vepsas or Northern Čudes, the Votes (*Vatjalaiset*) or Southern Čudes, and the Esthonians (*Virolaiset*). The Northern Čudes occupy the north-west of the Bielozersk and the west of the Tikhvinsk districts, all the upper basin of the Ojat, and eastwards into Vitegorsk. Sjögren estimated their number at fully 21,000, though formerly they were more numerous. From documentary and other evidence there is reason to believe, that, in the eleventh century, Finns, known to the Russian chronicler as Em, Yem, lived on the east side of Lake Onega, where abundant traces of their presence have been left in local names. There is written testimony to the effect that as late as the middle of the thirteenth century Čudes (Vepsas) and Karelians lived on the north-east of Lake Kubinsk, in the government of Vologda. And in the middle of the fourteenth century a Russian monk, who founded a monastery at the south-east corner of Lake Onega, mentions that Čudes and Lapps lived in the vicinity of the lake.¹

It is generally believed that the Vepsas, from their name and geographical position, represent the Ves of the Russian chronicle, a people that dwelt near Lake Bielozero. This seems probable enough, but since the time of Fraehn's edition of Ibn Fozlan they are also identified with the Visu of Arab travellers of the tenth and eleventh centuries. Fraehn, however, was misled by the similarity of the names Ves, Visu (Isu, Isui). Ibn Fozlan merely says that the Visu lived at a distance of three months' journey from Bolgari, but Abu el Kassim, who visited Bolgari later, relates that he had been informed by the king of the Bolgars that a people called Visu lived at a distance of three months' journey to the *north* of his country, and that

¹ Sjögren, pp. 469, 292, 507, 509.

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with them the night in summer did not last even an hour. He adds that the Visu are adjacent to the country of the Yura (Ugra, Ugrians), which is bounded by the Sea of Darkness.¹ The only possible route to the north from Bolgari lay up the Kama, the Kolva, the Višerka, through Lake Čusovoe to the head of the Vogulka, where a short portage (*volok*) of about four and a half miles brings the traveller to the Volósnitsa, a navigable tributary of the Pečóra. Descending the river, he would at length reach the Usa, about lat. 66° N. As at lat. 66° 19' the night at the summer solstice is just about an hour long, the position of the Usa suits to a nicety the position of the Isu or Visu, according to the indications of Abu el Kassim. It may also be observed that up the Usa lies the regular route to Obdorsk, at the mouth of the Ob, then in the hands of the Yura or Ugrians of whom he makes mention. In all probability, then, the Isu or Visu were the same as the Pečórans of Nestor and early Russian chroniclers, and are now represented by the Zīrians.

The Votes are now restricted to about thirty parishes in the north-west of Ingria. They are first mentioned by Nestor in 1069, and probably occupied the whole of Ingria till partly dispossessed by Karelians from Finland and by Russians from the south. The Esthonians call themselves 'Country people' (*mā mēs, mā rahvas*), and are found in Esthonia (*Viro*) and the north of Livland nearly as far south as the river Salis, as well as in the islands of Dago and Oesel. The old Finnish inhabitants of West Livland and North Kurland have been almost entirely absorbed by the Letts, and their language is almost extinct, save along a narrow fringe of coast between Domesness and Lysertort.

¹ Abou el Cassim, pp. 81, 82.

GEOGRAPHICAL POSITION OF THE EASTERN FINNS.

From a linguistic point of view the Mordvins (*Mordvá*) stand nearest to the Western Finns. Though now in a highly dispersed condition they occupy a considerable area in the governments of Nižegorod, Kazán, Tambov, Penza, Simbirsk, and Sarátov on the west side of the Volga, and of Ufá and Orenburg on the east side. They are divided into two great divisions, the Mokša and the Erza, who predominate numerically. The latter occupy the south part of Nižegorod and Simbirsk, and extend into the governments of Tambov and Penza. They also constitute the principal contingent of the Mordvin population in the steppes beyond the Volga in the governments of Samára, Ufá, and Orenburg. The country on the west side of the Volga, where the Mordvins dwell, is still partly covered with huge forests, largely composed of deciduous trees, such as the oak, lime, maple, ash, etc.; and as late as the seventeenth century elks were hunted in the forest and beavers tenanted the streams.¹

From an examination of the place-names Professor Smirnov has arrived at the conclusion that the original territory of the Mordvins was bounded on the north by the Volga, on the west by the Oká, the Mokša, and the Tsna, on the east by the Sura, while southwards they once occupied the governments of Orél, Kursk, and Vorónež.² Under the form 'Mordens' the Mordvin name first appears about the middle of the sixth century in a catalogue, given by Jordanes, of the peoples subjugated by Ermanaric, king of the Goths, about two hundred years earlier. Though their geographical position is in no way defined, it

¹ Smirnov, (4) pp. 117, 118.

² *Ibid.* (4) p. 15; (1) p. 12.

seems likely that at any rate as early as the fourth century the Mordvins lived west of the Volga, though perhaps a little further south than at present. A proof that they have long been settled in the vicinity of the Volga is the fact that they call it the Rav, evidently the same as the Rha of Ptolemy.

The Čeremis call themselves Mari, 'people.' According to Zolotnitski the word Čeremis is from the Turkish *čirmeš*, 'warlike,' which corresponds formally with the Čuvaš *Sjarmis*, the term this people applies to the Čeremis. This name, under the form Tsarmis, is believed to occur for the first time in a letter addressed by Joseph, prince of the Khozars, to the vezir of the Khalif Abdurrahman III. in the year 960. No details, however, are given; they are merely mentioned in a list of tributary peoples living along the Volga.¹ For the most part they live on the left or low bank of the Volga, with the Vetluga as their western boundary; along the Volga they extend nearly to Kazán, then northwards to the Viátka in the neighbourhood of Uržum, and thence westwards to the Vetluga. The Hill Čeremis, so called from living on the high or right bank of the Volga, are confined to the south-west corner of the government of Kazan. Besides these there are small isolated groups on the Kama in the districts of Elábuga and Sarapul; also in the government of Perm, as well as on the Biélaya and its tributaries. Altogether they are believed to number over 242,000 souls. Their name for the Volga is the Yul.

Professor Smirnov, basing himself on the chronicle of Nestor, places the original seat of the Čeremis on the Oká, and brings them as far southwards as Spask (Riazán), and

¹ Semenov, p. 1.

eastwards as far as Saransk (Penza). Their eastern boundary was the Sura. Within this area he finds a number of place-names ending in *-mar*, 'people,' *-nur*, 'field,' *-iner*, *-ener*, 'ravine, river,' and *kuši*, which he ascribes to this people. From this position he supposes they were gradually pushed north by the Mordvins, who lay immediately to the south of them; for an examination of the place-names shows that the Čeremis formerly covered almost the whole of the existing government of Kostroma north of the Volga at a time when their eastern boundary was the Vetluga. In the fourteenth and fifteenth centuries some of the Čeremis probably still lived in the northern part of the government of Kostroma, but from the fourteenth century they began to be dislodged by the incoming Russians. The new country finally settled by the Čeremis was not a desert. Before their arrival all larger rivers had received names which are not Čeremisian.¹

The Votiaks, who call themselves Ud-murt, or Urt-murt, occupy a large tract of country east of the Viátka, in the upper basin of the river Čeptsa as far west as the Kosa, and a large portion of the south-east corner of the government of Viátka. They are also found in the government of Ufá, but appeared as new-comers from the banks of the Káma not earlier than the sixteenth century. An examination of the place-names shows, according to Smirnov, that the Votiaks originally lived further north, south, and west than we find them at present; within the government of Viátka as far north as the district of Slobodsk, and west of the Viátka as far as Yaransk, where Čeremis are now found. Their villages extended even beyond the limits of Viátka as far north as Sjsolsk (Vologda)

¹ Smirnov, (1) pp. 10-19.

and as far west as Nikolsk (Kostroma). From their older positions west of the river Viátka and the adjoining districts in the governments of Vologda and Kostroma, they gradually moved east and south-east, where they met Čudes, whom they partly absorbed and partly drove beyond the western limit of Perm. The appearance of Russian colonists in the government of Vologda belongs to the end of the eleventh century, and probably caused the eastward migration of the Votiaks.¹

The Permians and Zīrians to all intents and purposes may be treated as one people. They speak a language mutually intelligible, and both call themselves *Komi*. But Permian is more strictly applied to those settled on the right bank of the Upper Kama, in the districts of Čérdīn and Solikamsk, called Great Perm collectively, but by the natives *Kom-mu*, or 'land of the Komi.' Zīrians are met with at various points on the upper course of the Vičegda, with its tributaries as far west as Ust-Vīm, formerly known as Old Perm; in a north-westerly direction on the upper course of the Mezen and its tributary the Vaška; also on the Išma and the Pečóra as far north as Ust-Išma. There are also some on the Lower Ob beyond the Ural chain. According to older estimates they numbered over 162,000, but Dr. Sommer only allows them about 85,000 on this side the Urals and 1000 on the Ob.

Formerly the Zīrians seem to have extended much further west and north-west than at present. Both Sjögren and Smirnov, relying mainly on river-names, find traces of the Permians in the south-west corner of the government of Vologda in the districts of Totma, Vologda, Griázovets, and Velsk, though mixed with Finnish traces; northwards

¹ Smirnov, (2) pp. 8-13.

in the basin of the Pinega, where Sjögren found Permian names that were afterwards altered by Finns; and thence northwards to the ocean. Both authors find Permian names attached to western tributaries of the Dvina; in fact Sjögren would derive the Finnish name for it—*Viena*—from a Z̄ir. *v̄ina*, ‘powerful.’ Everywhere in the region of the Lower Dvina Finnish and Permian names seem to be found side by side. The southern boundary of the Permians is harder to fix, though towards the east there are no traces of them south of the S̄ilva or of the Volga. In a south-westerly direction the difficulty really begins. Smirnov, who receives some support from Sjögren, believes that river-names in the government of Kostroma, Vladímir, and Moscow, such as Kostroma (there is another in the government of Viátka), Viázma, Ukhtoma, Kliázma, Moskvá, Protva (another in Ust-S̄isolsk), etc., are of Permian origin.¹ Though it is very unsafe to rely solely on terminations like *-ma* and *-va* in attempting to fix ethnic boundaries, it is a fact that a bone arrow-head, metallic brooches, beads, and other objects reminding us of those found in graves in the government of Viátka, Perm, and Kazán, have been discovered in the prehistoric fort of Diákovo near Moscow.²

That the Z̄irians were not the only inhabitants of the eastern part of the government of Vologda when the Russians first came to know the province, is shown by the fact that the same river may bear two names; for instance,

the V̄ičegda is in Z̄irian the Ežva,			
„ V̄im	„	„	Yemva,
„ S̄isola	„	„	S̄iktilva,
„ Ukhta	„	„	S̄ikva,
„ Keltma	„	„	Kot-jem.

¹ Sjögren, pp. 300, 316, 320; Smirnov, (2) pp. 91, 93.

² *L'Anthropologie* (Paris, 1892), p. 499.

Without necessarily ascribing the names in the left-hand column to Ugrians, we know that at any rate as early as the end of the eleventh century there were Ugrians in the north-east of European Russia, for Nestor, who died about 1112, mentions them with the Pečórans and Yems as occupying part of 'Japhet's portion'; if they had inhabited Asia he would certainly have placed them in 'Shem's portion.' In 1185 they are mentioned as living on the Pečóra, and with the Pečórans (Zřrians) paying tribute to Novgorod. In the fifteenth century Voguls and Ostiaks carried on constant war with the Permians and Russians. In 1445 the Novgorodans were beaten by the Ugrians through treachery, and ten years later the Voguls are mentioned as fighting on the banks of the Vřčegda and killing the missionary bishop Pitirim, who had converted certain Voguls to Christianity, at his residence at Ust-Vřm.¹ That the Voguls lived permanently in the neighbourhood of Ust-Vřm, and did not merely make forays from beyond the Urals, is proved by documentary evidence. As the Russians advanced eastwards they continued to encounter Voguls, for in 1481 Andrew Miřnev beat them in an engagement below Čérđın, in Great Perm, and a document of 1607 proves that the Voguls along the banks of the Viřera in the above district were then paying tribute. After a time, however, they found such difficulty in paying it that they dispersed, and some crossed over into Siberia. From the life of Trifon it is clear that Ostiaks nomadized on the spot where the town of Perm now stands, and possessed the whole of the Čusovaya. Ostiaks as well as Voguls are mentioned in the district of Čérđın, and the name of the later people is given to a tributary of the Inva and of the

¹ Sjögren, pp. 308, 309; Smirnov, (3) p. 110; (2) p. 5.

Kosva. In fine, undoubted proofs exist that at any rate from the middle of the fifteenth to the end of the seventeenth century, Ugrians resided in the region situated between Ust-Vım and the Urals, on the Vičegda, the Pečóra and the eastern tributaries of the Kama, such as the Kolva, Višera, Yaiva, Kosva, and Čusovaya.¹ But at what period the Ugrians first appeared in Europe cannot now be decided.

THE ČUDES.

With regard to the Čudes much uncertainty exists. There are historical and mythical Čudes. The term was first applied by the Russians to the Esthonians. Then by extension it was used of another Finnish tribe, more especially of one behind the *volok*, or portage across a watershed, which seems to refer to the Karelians on the Lower Dvina. The word *volok* also means 'a great uninhabited forest,' and that was the sense preferred by Sjögren, but 'portage' is the older meaning, and Nestor in his introduction uses it in that sense. He mentions that there was a road from the Variags to the Greeks, and from the Greeks along the Dniepr and across the portage (*volok*) of the Dniepr to the Lovat, and so to Lake Ilmen—or Ilmer, as he calls it. As the Russians gradually extended eastwards the term Čude, Čudish, by degrees lost its ethnic signification and became far more general. It could now be applied to any non-Russian people that seemed to be aborigines; ancient mining-shafts, *tumuli*, and prehistoric forts far into Siberia, far beyond any region that could have been inhabited by a Finnish people, were now called Čudish, and

¹ Sjögren, pp. 308, 309; Smirnov, (3) pp. 108, 109.

assigned to an extinct race of people. Legends were told of them, of their manner of life, and how they had vanished. To avoid error it is evident that we must distinguish clearly between the historical and the mythical or semi-mythical Čudes. The first were Finns, the second may sometimes have been so, but not necessarily. In the mouth of illiterate Russians the word had no ethnic value. The types of antiquities termed 'Permian' by Mr. J. R. Aspelin and 'Čudish' by Russian archæologists, are attributed by the former, and by all Finnish archæologists, to the Permian groups, the Votiaks and Zīrians, because they are found in the government of Perm in districts occupied by these peoples. The distribution of these archæological types is limited to certain areas. They are found in the government of Perm, on the Pečora, on the right bank of the Kama in the government of Viátka, on the upper course of the Čeptsa and on the Pižma, both in the government of Viátka, but not in other parts of the government. They are therefore not co-extensive with the diffusion of the Zīrians by any means. Mr. Teploúkhov of Ilinsk (Perm), who possesses the largest collection of Permian antiquities in Russia, attributes them to the Permian Čudes, by whom he understands Ugrians, more especially Voguls. In a paper published by him in 1893 he believed that he had proved that the Permian Čudes already existed on the Central and Upper Kama in the fifth century A.D.¹ But since the recent finds at Gliadénova, near Perm, described in the next chapter, it becomes possible to maintain that the Čudes were in Perm about the second century. If his arguments hold good, as I believe they do, it means that the eastern frontier of Russia in Europe from about

¹ Teploúkhov, (3) p. 37.

lat. 57° N. northwards was in the hands of Ugrians as early as the second or third century, and therefore that all the eastern Finns must have occupied territory to the west of them. In the preceding pages it has been seen that the Russians have gradually pushed the Eastern Finns further and further eastward, their original seat having been nearer the centre of European Russia than nowadays. Later on we shall find craniological and archæological reasons which make it probable that several centuries before the present era a small body of Ugrians had established themselves as far west as the government of Yaroslav.

PHYSICAL FEATURES OF THE COUNTRY.

As regards the physical features of North Central Russia from Finland and the Baltic Provinces to the Urals, the immense region inhabited by Finnish tribes in bygone days, must have been tolerably uniform. Everywhere the country was a broken, undulating plain, densely covered with trackless forests of pine and fir, interspersed with birch and alder, a gloomy wilderness only relieved by open tracts of swamp and morass, impassable save when frozen hard in winter. In summer the only possible means of communication was by water, as is still the case in the northern governments. Only in the south-east of the region, in what are now the southern parts of the governments of Kazán and Nižegorod, and in those of Simbirsk, Samára, and Tambov, were there any natural open plains, occasionally broken, where water was abundant, by large forests of useful trees like the oak and the lime. In early times the immense plain of European Russia, so beset with forests and natural obstacles as to be wellnigh impassable

for large bodies of men travelling by land with all their belongings, was nevertheless provided by nature with two royal highways from east to west, and *vice versa*. Along the south was the grassy steppe fringing the north coast of the Black Sea, with room enough for a whole nation to march abreast. By a nomad people this route could best be traversed in summer, as there was then abundance of grass for their horses and cattle ; rivers were more easily crossed than in spring, and the clumsy wagons were less likely to stick in the mud of the soft, earthy ravines that seamed the steppe. The other highway was the treeless *tundra* that borders the Arctic Ocean ; winter was the best time for using it, when the rivers and morasses were frozen, the snow hard and fairly smooth. The only means of transport was a sleigh drawn by reindeer or by dogs, but when the latter were employed their masters had to follow on snow-shoes. The winters were long and rigorous, lasting nearly half the year. But for a hardy race of men, whose only desire was to live, there were compensations : the rivers and lakes were full of fish, some of them, like the sterlet, so foolish as to allow themselves to be taken with a bare, unbaited hook. The forests were well stocked with large game, such as elks, wild oxen, bison, bears, beavers, and other smaller animals. As fish are obtained more easily and with less trouble than large game, all human habitations were disposed along the banks of the larger rivers or on the shore of a lake. The watersheds and the tracts traversed merely by small streams were untenanted by man. And the permanent settlements along the rivers had always to be at some height above the ordinary surface of the water, as every spring, with the melting of the snow and ice, the rivers were enormously

swollen, and rose many feet above their normal level, inundating the low land for a very considerable distance.

With regard to metals the region is decidedly poor. All the best gold and copper mines lie on the east side of the Urals, where the ore is found in lodes. On the west side there are copper-bearing beds of sedimentary origin, and sometimes the metal is found in a native state. But there is no copper west of the mines near Taiševo, between Mamadiš and Malmiž on the Viátka, or of a parallel of longitude drawn through it; none, indeed, till we come to Pitkaranta, on the north coast of Lake Ladoga. In insignificant quantities oxide of tin with galena is also found there, but there is no tin or silver in the Urals. Iron is worked near Murom and in the neighbourhood of Petrozavodsk, on the west side of Lake Onega.

THE PHYSICAL AND MENTAL CHARACTERISTICS OF THE FINNS.

Having briefly described in general outlines the geographical distribution of the East and West Finns now and in the past, so far as it can be inferred from place-names, we have now to pass on to their physical and mental characteristics.

Professor Retsius defines the Tavastland or Häme type as follows:—

‘In physique it is strong, solid, broad-shouldered; in general, thickset and plump, with coarse limbs; of medium height, though individuals are found above and below the average.

‘The flesh is firm, generally without disposition to fat or to leanness; the muscular system is strong.

‘The skin is white, but often greyish inclining to olive grey; it is rarely as clear and pure with a transparent rosy hue as among blonde Teutons (Scandinavians and English).

‘The head is usually large, short and broad (brachycephalous), but not particularly high, often rather square with well-developed *tubera parietalia*.

‘The face is large, long, but above all comparatively broad both in the frontal region and still more so in those of the zygomatic arch and the jaws; the lower jaw is strongly developed.

‘The nose is small, rather wide, obtuse, or more often with a small point, just a little *retroussé*; the nostrils are rather wide. The mouth is also rather wide.

‘The eyes have small slits, are rather narrow, and sometimes slightly oblique. The iris is light, grey-blue, or more often blue-grey, even grey or bluish-white. The eyebrows are feebly developed and light.

‘The expression is rather morose and little sympathetic.

‘The hair on the crown is blonde, oftener flaxen, otherwise ash-grey; in women it is often yellow or yellowish-red at the tips, straight, never curly, and very silky. In children it is nearly always flaxen, sometimes almost whity-yellow; in adults it often becomes darker, assuming an ashy hue; it maintains, however, very often a dark flaxen hue.

‘The beard as a rule is small, with hair that is relatively sparse, short, coarse, and light, with a tendency to red, especially on the chin; in general, the beard is shaven, and therefore rarely seen at its full length.

‘From a psychological point of view the characteristic Tavastlander is serious, manly, melancholy, meditative, little communicative, taciturn, neither enthusiastic, lively, or alert physically or morally; but on the contrary slow,

torpid, ungainly, and heavy in his movements, very conservative in all respects, and little inclined to reforms and changes; he is not the man to take the initiative for a good or bad undertaking, and is not inclined to rebel against authority. He is suspicious and does not appear to be exempt from jealousy or vindictiveness; he cherishes a grudge for a long time, and postpones his revenge till the propitious moment arrives; hence grave, premeditated crimes are not altogether uncommon. In a high degree he is a fatalist; he is content with very little, enduring suffering and privation with admirable fortitude and patience. Though slow by nature he is very assiduous at his work, and with inborn tenacity never gives in so long as he sees a possibility of gaining his point. He is inclined to assist a neighbour, and is hospitable when civilly treated. Taken all in all he is an honest fellow. He is absolutely faithful, even if not lavish in his expressions of tenderness and goodwill, preferring to translate them into deeds rather than into words and demonstrations; in general he never expresses himself in the superlative, or in a positive and peremptory manner, but with diplomatic prudence and reserve. As regards his other psychical qualities he is not hasty, but sure in his judgment; he goes to the root of the matter slowly but thoroughly. He is neither musical nor poetical, at least he is not creative in these directions, and he is seldom heard to sing.

‘Thus in spite of its sterling merits the Häme type does not as a rule possess an exterior either beautiful or attractive; at least one seldom meets persons that answer to our ideas of beauty. This remark applies not only to men, but also to women; the latter have generally less angular and more rounded features, but beauties are extremely rare; at

least we have not found a single woman that merited this name among the thousands that we have seen. If then this Häme race is not distinguished by external beauty, it possesses at any rate, owing to its physical and moral solidity, its tenacity and meditative nature, the traits of character that make it a strong race that can hold its own in the struggle for existence. It is also on the whole fertile; from the point of view of sexual morality it is not, however, commendable, but rather the contrary.

‘The Karelian type is distinguished as follows:—

‘The physique is less strong than that of the Häme; it is less broad-shouldered, less thickset and plump, with less powerful limbs, but more slender, and the proportions more comely. As a rule it exceeds the average height, and often presents individuals of considerable stature.

‘The flesh is tolerably firm, with little disposition to fat, rather to leanness.

‘The colour of the skin is darker brunette, or rather ash-grey.

‘The head is not large, but in proportion, rather short (brachycephalous), but less so than the Häme type. The length of the neck is proportionate.

‘The face is in length proportionate, generally with a relatively small breadth both in the frontal and zygomatic regions and in the maxillary parts; these, however, are rather strongly developed, chiefly in height, especially the lower jaw.

‘The nose is long, straight, proportionate, and pointed.

‘The mouth is well proportioned.

‘In the eyes the apertures are in good proportion, and never or very seldom oblique. The iris is dark-grey blue.

‘The eyebrows are dark, strongly developed, often slightly bushy.

‘The expression is generally animated, open, and attractive, though with a certain air of seriousness.

‘The hair on the crown is dark, usually chestnut, sometimes dark ash, neither straight nor rough, but generally curly, and often abundant.

‘The beard seems to be rather small, but is usually shaved off.

‘From a psychological point of view the Karelian is more lively, brisk, and enterprising; he is not reserved, but expansive, gayer, and inclined to take the initiative, but less persevering and tenacious; less deep, penetrating, and fatalistic; he is more friendly, attentive, and obliging. He conducts himself like a gentleman, has a good, often a noble deportment, moves with a certain elegance, and produces in general an agreeable impression. Handsome types of men and women are often met; the latter, with usually an oval face, very regular features, a straight, pointed nose, large blue eyes, a pretty mouth, a rather animated expression, and a well-proportioned, sometimes slim figure, are decidedly pretty; and genuine beauties may sometimes be found among them.’¹

THE MORDVINS.

According to Mr. Mainov, who measured 225 Erza Mordvins of both sexes, in several districts and governments, the average height of the men is 5 ft. 6 in.; of the women 5 ft. 2 $\frac{3}{4}$ in.; 86 per cent. of the men and 70 per cent. of the women have dark hair—he recognises three shades—but the shade is generally less dark in the fair sex. The lightest shade is found in 12·6 per cent. of the women, and in only 2·4 per cent. of the men. With regard to

¹ Retsius (1), pp. 161, 162.

colour 86 per cent. of the men and 81 per cent. of the women have cinnamon-coloured hair; the remainder is nearly equally divided between olive and dark mud-colour, and none is reddish. And 89 per cent. of the people have straight hair; 8·2 per cent. wavy, and only 2·7 per cent. have really curly hair.¹ Dr. Sommer, who only visited one village—probably Mokšan, though he does not say so—in the government of Saratov, found two types among the Mordvins, corresponding to the Häme and Karelian types in Finland. The former was blonde, broad, and squat; the latter type was darker and brisker, with more Aryan features. On the whole, blonde hair predominated, and the beard was usually scanty. The colour of the iris was usually grey, inclining to blue or chestnut. He found the people extremely shy and difficult to deal with. But the women were less coy than the men, for none of the latter would let themselves be measured, while seven of the fair sex allowed him to take a few measurements. Though Pallas termed the Mordvins the dirtiest people in Russia, Dr. Sommer's experience led him to believe that in this respect they are surpassed by several others, such as the Ostiaks, Baškirs, Votiaks, and Čeremis. Besides being cleaner than the last two, the Mordvins are healthier, more robust, more wide-awake and less intellectually torpid. In fact he assigns them the second place after the Zīrians, who stand first among the Eastern Finns in activity of mind and body.² According to Professor Smirnov, the Mokšas offer greater variety of types than the Erzas, and contain a considerable percentage of persons with black hair, dark eyes, and a swarthy, yellowish skin. They are more thickset, and consequently more clumsy in their

¹ Mainov, pp. 186, 386, 103, 104.

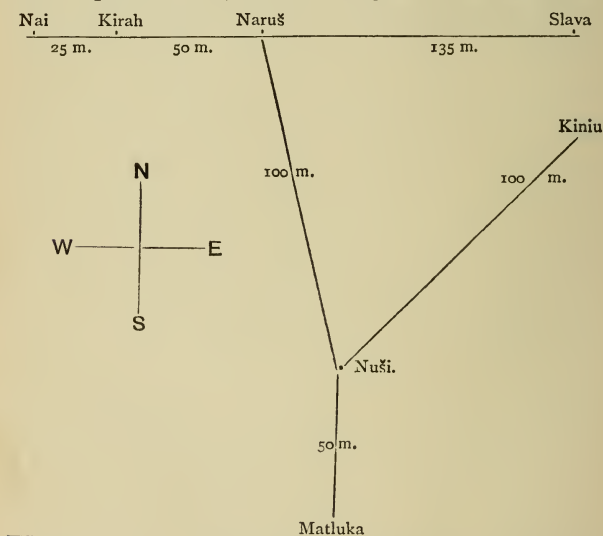
² Sommer, (2) pp. 118-122.

movements. Without displaying any grace of movement, the Mokšan girls and women exhibit in their gait, speech, and gestures a remarkable self-confident strength and energy. The excellent physique of the Mordvins, their stature, and the healthy colour of the skin, which distinguishes them sharply from the Čeremis, Votiaks, and Permians, is the result of having lived for centuries in a fertile region where food is abundant.¹ At the last census they numbered rather less than 800,000 souls.

It has been supposed by some that the Erza Mordvins, by others that the Biarmians, are referred to by various Arab travellers and writers of the tenth century. They mention nearly in the same words that the Rus were divided into three tribes. The first lived nearer to Bolgar, and its king had his seat at Kuyabā (*v.* Kutaba, Karbaya), a town larger than Bolgar; the second were called Slawiya, or Salawiya; and the third were the Arthaniya, the king of which dwelt at Artha (*v.* Arta, Arba, Abārka, Abarma). This latter people killed any foreigners that entered their country, but did a good trade with Kiev, the Khozars, and Bolgars, the exports being the fur of the black sable, the black fox, and lead. Dorn and Fraehn read Artha, Arthaniya as Erza, Ertsa, and identified the people with the Erza Mordvins, who, if they had black sables, had certainly no lead to export. Chwolson thought the name of the third tribe should be read Barmaniya, and identified it with the Biarmians of Scandinavian legend; Mr. Snellman, the latest Finnish writer on the early history of the Finns since the beginning of the present era, is inclined to agree with him. But apart from the fact that by Rus we generally have to understand Swedes and Northmen, not Finns, there are other notices of the Arthaniya which show that they dwelt far to the South, at no great distance from the coast of the Black Sea. Istakhri vaguely states that Artha lay between the Khozars

¹ Smirnov, (4) pp. 115, 121.

and Great Bulgaria, which bounds Rum to the north.¹ Idrisi is more explicit, though some of his geographical statements are hard to reconcile, and his place-names still more difficult to identify. Starting from Trebizond, he describes what seems to be a coasting journey round the east end of the Black Sea as far as the large town of Matrika, or Matrakha, by which Tmutarakhan, or Old Taman, is intended. Nevertheless it is said to be situated on the river Sakir, which branched off from the Athil (the Volga), the chief affluent of which passed near Athil, a town near the Caspian. One day's sail, or 100 miles before reaching Matrika, he places the considerable town of Matluka or White Comania. Its situation would therefore be near the port of Novorossisk. He then mentions four towns in Comania : Kirah, Naruš, Nuši, and Kiniow or Kiniu, and their relative positions may be given diagrammatically as follows :—



¹ Chwolson, pp. 171-176; Harkavi, pp. 193, 199, 200, 220, 276; Dorn, p. 57; Snellman, p. 54.

Before proceeding further, we must hear what Idrisi has to say of the Rus. 'Kokania,' he says, 'is inhabited by the Turks known as Rusa. They are divided into three hordes, one of which is called Beraws, and its king resided at Kokania; the second is called Slawia, and its king resided at Slava, a town on the top of a hill; the third is the Arthania, and its king lived at Arthan, a pretty town built on an abrupt hill between Slawa and Kokania, that is to say, four days (100 m.) from each. Musulman merchants went to Kokania, but it was reported that any stranger entering Arthania was infallibly put to death. One of their exports was lead.' Referring back to the diagram, we have to imagine Artha as situated 100 miles from Slava, though the direction is not mentioned, and 100 miles beyond this was Kokania. Further on, Kokania is stated to be about twenty stations from Bolgar, though I do not know what this distance implies. With regard to Nai, the most westerly point, in mentioning some of the towns on the Danabros or Dniepr, Idrisi states that from Kaw (Kiev?) to Nai, 'a town of Comania,' was six days' journey, apparently in a southerly direction, as he describes the places in a descending order.¹ Though the position of the Arthaniya cannot be exactly laid down from the indications given by Idrisi, it could not have been far removed from the coast, and lay somewhere in Comania, in the steppe between the Dniepr and the Don, or not far from it, so that the idea that these people were Biarmians or Erza Mordvins is without foundation. The next witness is Ibn Batuta, who made a land journey from Astrakhan to Constantinople. He mentions that at one day's journey from Ukak are the Hills of the Russians, who are Christians with red hair and blue eyes, an ugly and perfidious people. They possessed silver mines, and from their country were brought ingots of silver called *sum*, *som*, each weighing five ounces. He gives the position of Ukak as ten days' journey from Sarái (near Tsarev, and east of Tsarítsin), and ten days from Sudak on the east coast of the Crimea. Colonel

¹ Édrisi, vol. ii. pp. 399-402, 405, 398.

Yule has shown that there were two places called Ukak ; one lay about six miles south of Sarátov, and the other on the Sea of Azov, a little to the east of Mariúpol. In some mediæval maps it appears as Locac, *i.e.* L'Ocac. He also mentions that there are mines of argentiferous lead ore, containing 60 per cent. of lead, near the river Mius, which falls into the Sea of Azov about twenty-two miles west of Taganrog.¹ As mines of silver and lead, so far as my knowledge extends, are found in no other part of European Russia, save in the Central Caucasus, it seems extremely likely that the Arthaniya, or however the name is to be written, occupied the valley of the Mius. The steep and craggy sides of this valley are composed of stratified limestone, and afford admirable sites for a town such as Artha or Arthan, which was perched on the top of a precipitous hill, while the landscape, as a whole, corresponds with Ibn Batuta's expression, 'the Hills of the Russians.'

THE ČEREMIS.

Dr. Sommer describes the Čeremis as for the most part of slender build, and in appearance weak, though there are also sturdy fellows among them that reminded him of the Häme type. After eliminating what he considered to be the result of a Slav and Tatar intermixture of blood, he believed he could find in the pure Čeremis the Häme and Karelian types of Retzius. They are generally of low stature; the average of twenty-eight men was 1·60 m. (5 ft. 2½ in.); of eight women 1·50 m. (4 ft. 10½ in.). Their hands and feet are small, and the skin is white. Their hair is soft and abundant, neither curly nor stiff, and in colour from blonde to dark chestnut. A light blonde inclining to red is not uncommon, but black is very rare. Small children have nearly always light flaxen hair. The beard is scanty,

¹ Ibn Batuta ; Yule, vol. ii. pp. 488, 489.

appears late, and is usually blonde. The colour of the iris varies from blue to dark chestnut, but is more often yellowish grey and chestnut. The eyes are usually small, and sometimes a little oblique. In character the Čeremis are mild and of a good disposition; the Russians praise their honesty; but they are poor and dirty, shy, mistrustful, extremely obstinate, and endowed with a slow, limited intellect.¹ Dr. Pápai observed that their skin is white, and in uncovered places bronzed. Their hair is dark, and very dark tones predominate, though lighter ones often occur. The eyes are generally dark, though medium and lighter tones are common, and among women predominant.²

There is a marked difference between the Hill Čeremis and those on the left bank of the Volga, the former being taller and stronger. Yet the type of face on the whole is the same, and in both we find prominent cheek-bones, with the same admixture of dark- and light-haired persons with dark or light skins. The difference of physique between the two groups is entirely due to physical causes. The Čeremis on the left bank live among huge swamps and boundless forests, drink bad water, suffer from insufficient and improper food, and are consequently subject to fevers, lung disorders, goitre, and premature old age.³

From the resemblance between the names *Mári* and *Méria*, as well as from their geographical position, it is generally believed that the latter people, whose name is now extinct, were of the same stock as the Čeremis. About the end of the eleventh century they are mentioned by Nestor as paying tribute to Novgorod, and having their centres at Lake Rostov and Lake Kleščino. But their

¹ Sommer, (2) pp. 245-250, 238.

² Pápai, p. 264.

³ Smirnov, (1) pp. 84, 85.

territory embraced a far larger area, and included at least the whole of the governments of Vladímir, Yároslav, and the western part of Kostroma. Their old position, therefore, lay between the Čeremis and Mordvins to the east, and the Finns to the west or north-west. The earliest mention of them is in the catalogue of names given by Jordanes in the middle of the sixth century, where, under the name of Merens, they are placed immediately before the 'Mordens.'

THE VOTIAKS.

The Votiaks number about 276,000 persons. According to Dr. Buch their muscular system is only moderately developed, and their muscular force is small, though of course there are exceptions, and strong-built men are not uncommon. The trunk compared with the legs is longer than among Europeans. The skin is white, though in about twenty per cent. of instances it is brown; it is smooth and comparatively hairless on the body and the extremities. As regards colour, the hair of the head is of various shades of brown, but is sometimes reddish or yellow, very rarely black. The growth of the beard is scanty, and in colour usually reddish. The eyes, which are of average size, are generally blue, but also brown, grey, and occasionally green. The face is oval; the forehead low and narrow; the mouth of average size, with lips not unduly thick; the nose is usually straight and not very wide. Sometimes the younger women are not bad-looking, but the older ones are hideous. In general, the Votiaks are said to bear a great resemblance to the Esthonians.

In character they are described as extremely peaceful, very industrious and hard-working. Amongst themselves

they hardly ever come to blows, even in their cups. They are of a very retiring disposition, and keep themselves as much as possible apart from the other stranger nations that surround them, such as Tatars, Baškirs, Čeremis, etc., but especially from the Russians. On the whole, they struck Dr. Buch as being a dull, heavy people, for they take a long time to answer a very simple question. On feast-days the men drink to excess, but the women, though far from being teetotalers, manage to keep sober.¹ The low stature and feeble frame of the Votjak lies in close connection with his physical surroundings. It has been observed that inhabitants of low marshy ground are everywhere of lower stature than those living on high ground. The contrast already noticed between the Hill Čeremis and those on low ground is found between the Votiaks in the Viátka government and those in the government of Ufá. When the latter migrated into the fertile black soil of the Baškirs, they became physically regenerated and in no way inferior in appearance to their Russian and Baškir neighbours.²

PERMIANS AND ZĪRIANS.

From measurements taken by Dr. Sommer the average height of twenty male adult Zĭrians was found to be 1·636 m. (5 ft. 4 in.), and of eight women 1·536 m. (5 ft. ½ in.). Both sexes are well made, well fed, muscular and healthy. The colour of the skin is white, and the young people have fresh, rosy cheeks. Dark eyes are rare, the prevailing colour being grey. The hair is abundant and often curly, the predominant colour being blonde, which often tends to

¹ Buch, pp. 21-29.

² Smirnov, (2) pp. 81, 83.

reddish or golden. None had black hair. After twenty-five years the beard never fails to appear on men; sometimes it is scanty, but more often thick and abundant, and nearly always curly. The face is sometimes broad and somewhat massive, with large cheek-bones and a small but well-formed nose. It reminded him of the Häme type in Finland, and seems to be more frequent in women than in men. Sometimes, however, the face is oval, with cheek-bones neither large nor prominent; with a long, high nose, either straight or aquiline, and deep-set eyes, a type that resembles the Scandinavian rather than the Finnish face. In men this type is oftenest seen with a thick curly beard. The young women are rather pleasing, though they can rarely be termed pretty. All have the impression of being smart and intelligent; they seem well-to-do, clean and well dressed, especially when contrasted with the Ostiaks among whom they live.¹

Another observer also gives them a very good character, as being religious, obedient, peaceful and reliable, sober, of few words, and, above all, honest. Thieving is detested. They are slow, but not lazy; on the contrary, they are diligent, laborious, and not dirtier than their Russian neighbours.²

Assuming that the above inventories of the physical, moral, and mental qualities of the East and West Finns are accurate, or not less incorrect than all generalisations must necessarily be, we find remarkable correspondences and yet considerable differences. Except the Karelians, and to a less extent the Zirians, all branches of the Finns are distinguished by a certain sluggishness of mind and body, by shyness and suspicion of strangers, by obstinacy, great

¹ Sommer, (1) pp. 10-14.

² Sjögren, pp. 436, 437.

tenacity of purpose, and an unfailing power of enduring privations and suffering as a matter of course. With these are united honesty and fidelity. No doubt it is chiefly on account of these qualities that they have been able to maintain themselves for many centuries in the inhospitable climate of North Central Russia before civilisation made life comparatively easy. The brisker, more wide-awake, nature of the Karelians and Zīrians may be due to local causes—the latter, for instance, were civilised and Christianised more than a hundred years earlier than the Votiaks and Permians,—which have sharpened their wits to a greater extent than other Finns; yet the darker, curly hair of the former, compared with the straight towy hair of the Häme, suggests a blending of different stocks. The hair of the Mordvins is also dark, but only a small percentage have wavy, and a very small number curly hair. With the Čeremis, too, darkish hair prevails, and the eyes are generally dark, though lighter tones are common, and predominate among women.

In Table I. (p. 32) are brought together the height and cephalic index of living Finns, and for purposes of comparison they are placed between the Ugrians that lie to the east of them, and the Letto-Lithuanians to the southwest. It shows that stature increases towards the west, and it may be assumed that till civilisation improved the physique of the more advanced Finns, like the Mordvins, the Häme, and the Karelians, they were all an under-sized people. It appears, further, that all the Finns are sub-brachycephalous (Broca), save the Čeremis, Esthonians, and Livs, who are mesocephalous. The presumption lies near at hand, therefore, that the Finns are not quite homogeneous, but that at some period two different stocks

came in collision and amalgamated. The almost exact correspondence, as regards stature and cephalic index between the Häme and the Lithuanians on the one hand,

TABLE I.

	Sex.	Height.	Cephalic index.	Sex.	Height.	Cephalic index.
		ft. in.			ft. in.	
Losva Voguls ¹ . .	M.	5 1	77'31	...	...	...
N. Voguls ¹ . .	"	5 3	79'26	...	...	...
S. Voguls ¹ . .	"	5 4	84'69	...	...	...
Ostiaks ¹ . .	"	5 2 $\frac{1}{4}$	81'70	...	...	...
" ¹ . .	"	5 2 $\frac{1}{4}$	79'26	...	...	...
<i>Permians</i> ² . .	"	5 3	82'23	...	...	...
<i>Zyrians</i> ³ . .	"	5 4	82'44	F.	5 0 $\frac{1}{2}$	83'28
<i>Čeremis</i> ⁴ . .	"	5 2 $\frac{5}{8}$	79'40	F.	4 10 $\frac{3}{4}$	80'17
" ¹ . .	"	5 2 $\frac{1}{2}$	78'80	...	...	...
<i>Erza Mordvins</i> ⁵ . .	"	5 6	83'30	F.	5 2 $\frac{3}{4}$	81'3
<i>Karelians</i> ⁶ . .	"	5 7 $\frac{1}{2}$	80'9	F.	5 1 $\frac{1}{2}$	80'5
<i>Häme</i> ⁶ . .	"	5 5 $\frac{1}{2}$	81'6	F.	5 0	82'5
<i>Esthonians</i> ⁷ . .	"	5 4 $\frac{1}{2}$	79'4	...	...	...
<i>Livs</i> ⁷ . .	"	5 8 $\frac{1}{4}$	79'9	...	...	...
Letts ⁷ . .	"	5 7	80'5	F.	5 1 $\frac{1}{4}$	79'6
Lithuanians ⁷ . .	"	5 5 $\frac{1}{4}$	81'6	F.	5 0 $\frac{3}{4}$	83'4
" ⁸ . .	"	...	81'7	...	...	82'2

and the Karelians and Letts on the other, is worth noting, as it shows what small value stature and a single index possess when attempting to solve an ethnological problem.

¹ Pápai, pp. 257, 261.³ Sommier, (1) pp. 62, 65.⁵ Mainov, pp. 186, 386.⁷ Brennsohn, pp. 27, 28, 42.² Maliev, pp. 51-69.⁴ Sommier, (2) pp. 246-248.⁶ Retzius, (1) pp. 163-165.⁸ Yantchouk, p. 476.

FINNISH CRANIA.

Though the results to be gained by craniological measurements for ethnological purposes are not very satisfactory, they cannot be passed over in silence, and I have felt bound to lay before the reader some little of the material collected by G. Retzius, Virchow, Maliev, and others, with regard to Finnish crania. It is certainly an important matter to try to form some idea of a typical Finnish skull, as a considerable number of ancient crania have been unearthed in the Baltic Provinces, and elsewhere in Russia, in regions that have been or still are inhabited by Finns. From a historical point of view it is needful to decide, if possible, whether they are Finnish or otherwise. Professor G. Retzius has described and measured 94 adult West Finnish crania, preserved partly at Helsingfors, partly at Stockholm. The Helsingfors collection consists of 68 crania from various parts of Finland, except Karelia; of these, 41 are of males, chiefly malefactors; 3 are of women; the sex of the remainder, which came from old cemeteries, is not stated, but if the sexes were equally divided, about 72 per cent. of the 68 skulls may be considered male. The Stockholm collection consists of 26 adult West Finnish crania, obtained chiefly from parts of the country inhabited by Häme or people of Tavastland.¹ In comparing his measurements with those of Russian anthropologists it must be remembered that he uses the maximum height to obtain the vertical index, whereas the Russians use the *bregma* height recommended by Broca; his vertical index is therefore higher than it would be if

¹ Retzius, (2) Table v. ; (1) p. 176, Table v.

TABLE II.

	Place, etc.	No.	Sex.	AVERAGE MAXIMUM.			INDICES.				
				Length.	Breadth.	Height.	Cephal.	Vertic.	Tr. vert.	Orbit.	Nasal.
1. Dolichocephal .	Helsingfors .	8	M. F.	184	134.7	...	73.2	...	...	83.8	...
2. " "	Čeremis .	6	M. F.	188	136	137	72.3	73.3	100.7	...	...
3. " "	Perm .	3	F.	180	131	135	72.7	76.6	105.3	84.3	48.3
4. " "	Ostjak .	12	M.	188	135.8	127.2	72	67.5	93.7	83.6	51.5
5. " "	" "	8	F.	180.3	129.8	122	71.9	67.5	93.8	85.3	52.5
6. Sub-dolichocephal	Helsingfors .	10	M. F.	186.5	142.6	...	76.4	...	...	86.8	...
7. " "	Stockholm .	2	M.	185.5	141	138	76	72.5	97.8	...	...
8. " "	" "	2	F.	178.5	136.5	138.5	76.4	77.6	101.5	...	...
9. " "	Čeremis .	6	M. F.	181	139	137	76.7	75.3	98.5	...	...
10. " "	Perm .	1	M.	184	140	138	76.1	75	98.5	91.8	50
11. " "	" "	2	F.	173	132	134	76.1	77.1	101.4	89.6	59.4
12. " "	Ostjak .	8	M.	187.6	143	123	76.1	65.7	86.2	86.3	48.8
13. " "	" "	7	F.	177	135	118	76.4	66.5	87	85.4	52.7
14. Mesocephal .	Helsingfors .	14	M. F.	181.9	143.1	...	78.7	...	...	85.2	...
15. " "	Stockholm .	4	M.	181.2	143.7	142.2	79.3	78.5	99	...	...
16. " "	" "	3	F.	175.5	139	135	77	79.3	97.1	...	...
17. " "	Čeremis .	1	M.	182	142	140	78	76.9	98.5	...	...
18. " "	Perm .	4	F.	172	135	136	78.6	79.2	100.7	83.8	54.3
19. " "	Ostjak .	1	M.	179	142	128	79.3	71.5	90.1	84.2	44.9
20. Sub-brachycephal	Helsingfors .	21	M. F.	175.6	147.5	...	81.6	...	...	87.9	...
21. " "	Stockholm .	7	M.	178.7	146	137.5	81.6	76.9	93.2	...	...
22. " "	" "	4	F.	166	136	135	81.9	81.3	99.2	...	...
23. " "	Čeremis .	3	M. F.	172	140	132	81.2	75.6	94.2	...	...
24. " "	Perm .	6	M.	176	144	140	81.8	78.6	96.3	83.8	50.5
25. " "	" "	2	F.	174	141	132	81	75.8	93.5	77.4	47.9
26. Brachycephal .	Helsingfors .	15	M. F.	174.2	147.8	...	84.8	...	...	88.7	...
27. " "	Stockholm .	2	M.	172	146.5	137.5	85.2	80	93.7	...	...
28. " "	" "	2	F.	168.5	142	128	84.2	75.9	90.1	...	...
29. " "	Čeremis .	1	...	168	148	...	88.1	...	...	...	...
30. " "	Perm .	7	M.	169	147	134	86.7	79.2	91.6	85.5	52.9
31. " "	" "	1	F.	167	140	129	87.4	77.2	92.1	86.1	43.1

TABLE III.

	No.	Sex.	AVERAGE MAXIMUM.			INDICES.				
			Length.	Breadth.	Height.	Cephal.	Vertic.	Tr. vert.	Orbit.	Nasal.
1. Retzius	68	M. F.	...	...	...	80.	...	...	86.9	...
2. "	26	M. F.	...	...	...	80.7	77.7	96.2	...	...
3. "	15	M.	...	...	...	80.7	77.1	95.4	...	...
4. "	11	F.	...	...	...	80.6	78.5	97.4	...	...
5. Maliev	17	M. F.	...	...	...	76.8	74.7	98.5	...	...
6. "	26	M. F.	...	...	...	81.1	78.1	97.8	84.7	51.3
7. "	14	M.	...	...	...	83.8	78.6	94.1	85.2	51.7
8. "	12	F.	...	...	...	77.8	77.5	100	84.1	50.9
9. Virchow	6	...	...	...	...	80.1	74.7	93.2	...	...
10. Tarenetsky	160	M.	176	142	134	81.1	76.	93.6	82.	46.9
11. "	24	F.	174	139	128	80.3	73.4	91.3	82.	50.
12. "	9	M. 1 F.	185.1	135	134.1	73.2	72.1	98.3	82.2	48.4
13. Lissauer	5	M.	...	...	...	72.8	74.9	103.5	82.2	45.9
14. "	4	F.	...	...	...	72.4	72.8	100.6	89.4	51.9
15. " dolicho.	9	M. F.	...	...	...	72.4	74.	102.2	85.3	49.3
16. " sub-dolich.	6	M.	...	...	...	75.5	77.3	102.3	76.5	52.
17. " mesoceph.	5	M. 4 F.	...	...	...	79.	77.8	98.3	79.1	54.2
18. " sub-brach.	3	M. 3 F.	...	...	...	81.	78.2	97.5	84.4	51.
19. " dolicho.	11	M.	...	...	...	73.1	73.7	99.7	77.8	47.9
20. Ecker's Row-graves	...	...	191	136.3	140	71.3	74.	103.4	...	...
21. Hölder's "	...	...	186	134	...	72.9	...	...	...	...

using the French method. Maliev has measured 17 Čeremis crania from an old burial-place at the village of Little Sundir in the district of Kozmodemiansk (Kazán), and 26 Permian taken from a cemetery at Kudimkor in the district of Solikamsk (Perm).¹ Dr. Sommer has measured 36 Ostiak crania.² All these I have arranged in Table II. in five groups according to the classification of Broca, while the totals are given on the upper part of Table III. In the lower part, I add, for the purpose of comparison, 184 North Russian crania measured by Dr. Tarenetsky; on line 12 the dolichocephals are shown separately. On lines 13-18 are the indices of 23 skulls—3 hyperdolichos are omitted—from a row-grave cemetery at Laurenzberg on the right bank of the Vistula, near Kaldus in the district of Kulm, all of which were measured by Dr. Lissauer. Their date may be placed at the end of the last millennium, and to judge from the funeral furniture and pottery they belonged to a Slav-speaking population.³

An inspection of the two Tables shows that the Finns are not a homogeneous race, as it includes both dolichocephals and brachycephals. Beginning with the former class, and comparing the Häme with the Čeremis, we see that the former have shorter, narrower heads; that comparing the Häme with the Ostiak, taking the sexes together, there is little difference in the length and breadth of the head, though the former have a much higher head; that, taking both sexes together, the head of the Čeremis is rather larger and broader, and about 12 mm. ($\frac{1}{2}$ in.) higher than that of the Ostiak; that in length and breadth the crania of Permian and Ostiak women are almost the same, but

¹ Maliev, (2) xvii. Table xi. ; (1) Appendix. ² Sommer, (1) pp. 90-93.

³ Lissauer, (2) Table opp. p. 134, 106.

the latter are platycephalous. Comparing next the Häme with the dolichocephalous Russians in Table III. l. 12, we see that the length and breadth of the skull, and, therefore, the cephalic index is the same; the vertical index unfortunately is not given, but the orbital index of the Häme is a little higher. Compared with the above Russians the Čeremis head is longer, broader, and higher, but compared with the Teutonic crania (Table III. l. 20) it is considerably shorter, nearly the same breadth, but lower.

In the sub-dolicho group we find a change. Instead of being longer and broader than the Häme head, the Čeremis skull is now considerably shorter and rather narrower, though about the same height. Compared with the Permian male, the Häme head is longer and broader, but not so high; yet in the female skull the Häme is higher than the Permian. As regards the orbital index the Häme is mesoseme, but the Permian megaseme.

In the mesocephalous group the same relation between the Häme and the Čeremis is perhaps maintained, though there is only one skull to judge by. Though the Permian female skull is higher than the Häme it is decidedly shorter and narrower. In the sub-brachycephalous class the male Häme skull is longer and broader than any other in the group, and is only exceeded in height by the Permian; but the female head is much shorter, narrower, and higher than the Permian female head. In the brachycephalous group the male Häme head is longer and higher than the Permian, while both are nearly equally wide; the female Häme head is about the same length as the Permian, but narrower and lower, though after all the observation is made on a single instance.

The main difference on the average between North

Russian crania and those of the West Finns, seems to be that the latter have a lower cephalic but rather higher vertical index—in the case of female crania the difference is very decided—and considerably higher transverse vertical and orbital indices; though in the three sub-brachycephalous crania of Laurenzberg Slavs, the vertical and transverse vertical indices are even higher than the Häme, yet the orbital index of the latter always remains higher. It is perhaps the best test of all the indices here given. The Permian crania, taken on an average, in spite of the differences we have noticed above in the separate groups, have indices a little higher than the Häme, but on the whole agreeing with the latter, save in having a lower orbital index. But when the sexes are taken separately a great difference is observable; the males are brachycephalous, the women mesocephalous; whereas, taken on the average, the sex-differences in the Häme type are nearly smoothed over. The Čeremis being dolichocephalous, in the wider sense of the term, have naturally a low vertical index, which agrees nearly with that of the purely dolichocephalous Letts and Russians (Table III. ll. 9, 11), but is still far removed from the platycephaly of the Ostiaks.

As the West Finns contain a percentage of long-heads that cannot entirely be accounted for by crossing with Scandinavians, and the Permians and Votiaks also contain a few, while the Čeremis may be regarded as mainly long-headed, the question arises, How did they acquire this dolichocephaly, and what was the race with which they were crossed? Later on, when dealing with the archæology of North Russia, we shall find that a small tribe of small-headed dolichocephalous people lived on the Lower Volkhov, where it debouches into Lake Ladoga, far back

in the neolithic period; that at the source of the river the tribe included at least one short-headed member; that on the Oká two crania, one sub-brachycephalous and the other sub-dolichocephalous, belonging to the same early period, were found in two graves in the neighbourhood of Murom; that several short-headed and one long-headed cranium belonging to a much later time, though still in the neolithic age, have been taken from a shell mound in Livland. I shall be able to show, I hope, the considerable likeness that exists between the Ladogan and the Čeremisian crania, and to establish the probability that the Čeremis are in part descended from this pre-historic tribe.

As the Ladogan population was, comparatively speaking, small-headed, and had probably dark chestnut, not blonde, flaxen hair, it could not have been an Eastern prolongation of the Scandinavian blonde dolichocephals, though it had been so long in Europe that it almost deserves the term European. It will be seen, too, later on, that archæology speaks in the same sense. From the distant affinity between the Finnish or Ugrian languages, it is natural to suppose there might also be affinity of blood between this long-headed race, that seems to survive in the Čeremis, and the Ostiaks. It is true the latter are, almost without exception, chamæcephalous, but this perhaps is only a local variation, for in other respects these two peoples agree in possessing a white skin, dark chestnut hair, darkish eyes, short stature, small hands and feet. The question can be settled only by experts, though it may be pointed out that Virchow has measured fifteen male and female platycephalous crania, presumably Teutonic, from a row-grave cemetery near Alsheim (Rheinhausen), with

which were found a coin of Antoninus Pius and one of Constantine the Great. The indices were as follows:—

Cephalous index	6 M.	72·7	9 F.	74·2
Vertical	„	67·9	„	68·9 ¹

Platycephalous crania have also been found in the long barrows in England and elsewhere.

If the Čeremis are really the descendants in part of the old Ladogan population, and the short-headed men of the neolithic period were of a different stock, the latter may have been Finns, and, if so, may be regarded as having lived for a very long time in Europe. The question then presents itself: To which race belonged originally the languages now known as Finnish and Ugrian? In other words, did the short-headed men impose their tongue on the long-headed men, or was it *vice versa*? The question cannot at present be answered. Yet considering the great interval of time during which these two types of crania have been in close contact, it is possible to believe that the original congeries of human beings, from which by hypothesis sprang the united Finno-Ugrians or the united Finns alone, was not composed of a homogeneous cranial type. Even if this period is set back for a myriad of years there were still several myriads of years behind the human race, during which several allophyl elements had time to unite.

CRANIA FROM THE BALTIC PROVINCES.

The whole of Esthonia is and has been inhabited by Finns, at any rate in part, since the beginning of the later Iron Age, or about 500 A.D. The north of Livland is still

¹ Virchow, (1) p. 495.

peopled by Esthonians, but in the middle of the thirteenth century, when the German knights took possession of the country, the Finns or Livs, as they were called, extended further south, and also occupied the western portion of the province; the central and south-eastern divisions being at that time in the hands of the Letts. In Kurland the Kurs held the northern part of the great promontory that ends in Domesness, and perhaps a strip along the sea-coast that united them with the Livs. The rest of the province was and still is tenanted by Letts and Lithuanians. The question to be settled is whether Finns were the first occupants of Esthonia and Livland, or whether they were preceded by another people. Now that we have learnt a few facts concerning the Häme skull in Finland, it is possible to take a glance at the crania that have been brought to light in the Baltic Provinces, so as to form an opinion how far they belong to the Häme type of Western and Central Finland.

In Table IV. are brought together the indices of 91 crania; 87 of them measured by Professor Virchow, 4 by Dr. Kharuzin, who uses Broca's method, and all arranged in geographical order from north to south. Though no age is assigned to several of these crania, the presumption is that none of them belong to a very remote age, for, on the whole, before the introduction of Christianity cremation prevailed. Hence it is more than probable that they belong to a time when the population was the same as in the thirteenth century. The only certain prehistoric crania are those of the lower series, found in excavating the Rinnekaln in Livland, while the upper series from the same mound can only be from three hundred to four hundred years old.

TABLE IV.

ESTHONIA.	LIVONIA.	PLACE.	Date.	Sex.	Num.	INDICES.					REMARKS.
						Cephalic.	Vertical.	Tr. Vert.	Nasal.	Orbital.	
ESTHONIA.	Livish about the year 1250, now Lettish.	Pühtitsa . .	L. I.	M.	1	72.7	77.0	105.8	49.0	82.0 ¹	L. I. stands for Later Iron Period. P. for Prehis- toric.
		" . .	"	M.	1	73.7	73.7	100.0	46.9	84.6	
		" . .	"	F.	1	75.0	73.8	98.4	...	80.0	
		" . .	"	F.	1	78.7	71.7	90.1	46.0	86.8	
		Island of Oesel .	?	...	1	73.8	...	...	52.1	83.3 ²
		" . .	"	...	1	77.3	72.1	93.2	48.4	90.0	
		" . .	"	...	1	71.3	69.1	96.9	50.4	86.4 ³	
		Saarnhof . .	"	M.	1	79.7	73.6	87.1	...	...
		Fellin . .	L. I.	...	3	79.7	72.0	92.0	50.9	72.9 ⁴	
		Hallist . .	...	...	8	77.4	72.8	94.0	47.4	88.1 ⁴
LIVONIA.	Livish about the year 1250, now Lettish.	Salis and Mehtak	L. I.	...	5	73.6	70.7	96.3	46.2	81.2 ⁴	Hyper and dolicho. Sub-dolicho. Mesocephalic. Sub-brachy.
		Rinnekaln (lower series)	} P.	M.	2	84.5	72.9	...	49.5 ¹	75.0 ⁵	
		" . .	P.	{ F. Ch. I }	2	81.9	74.9	...	48.0	85.3	
		" . .	P.	F.	1	75.2	70.7	...	51.0	82.0	
		Rinnekaln (upper series)	} L. I.	{ M. F. }	3	72.9	71.3	97.8	48.0	78.5 ⁵	
		" . .	"	{ F. M. }	4	72.5	73.2	101.4	50.5	78.9	
		" . .	"	{ M. F. }	2	77.5	72.6	93.6	51.5	77.1	
		" . .	"	{ F. M. }	7	76.5	71.7	93.6	49.6	84.2	
		" . .	"	{ M. F. }	3	78.8	74.2	94.1	48.5	78.2	
		" . .	"	{ F. M. }	5	78.6	73.3	93.5	48.9	79.9	
		" . .	"	{ M. F. }	1	80.3	77.0	96.9	...	...
		" . .	"	{ F. M. }	4	82.2	76.8	93.3	...	...
		Ikul See . .	"	M.	1	72.7	67.6	93.0	56.0	68.1 ³	
		" . .	"	F.?	1	74.6	70.4?	94.4?	46.0	85.7	

LIVONIA.		1 hyperdol. 68.5									
Lettish now and about the year 1250.	Launekaln .	...	89.2	74.7	83.7	1	...	...	...	...	...
	" .	M.	98.6	75.8	76.8	I	58.6	77.1	...	...	...
Lettish now and in 1250.	" .	M.	98.8	75.6	76.5	I	54.4	78.9	...	...	...
	" .	F.	...	...	73.3?	I	43.3	74.6	...	...	...
Lettish now and about the year 1250.	" .	F.	...	...	73.2	I	50.0	75.6 ²	...	...	...
	" .	...	101.3	76.4	73.2	I	60.8	...	...	...	...
Lettish now and about the year 1250.	" .	...	...	...	74.1	I	...	...	...	...	...
	" .	...	107.5	81.7	76.0	I	...	...	...	...	...
Lettish now and about the year 1250.	Gulbern .	M.	99.6	72.9	73.2	8	51.1	78.4 ⁶	...	...	...
	Gulbern district	F.	94.8	71.6	75.6	8	48.9	86.6 ²	...	...	...
Lettish now and about the year 1250.	Ascheraden .	...	94.3	73.4	77.9	I	...	...	...	...	...

KURLAND.	Alt Selburg .	...	103.6	75.2	72.6	I	...	...	...	...	...
	" .	...	95.7	73.9	77.1	I	...	...	...	...	...
Lettish now and about the year 1250.	Stabben .	...	...	...	74.8	I	...	...	...	...	...
	Terveten, now Hofzumberge	...	95.1	70.7	74.3	I	...	...	...	...	...
Lettish now and about the year 1250.	...	...	97.7	73.3	75.0	I	...	...	...	...	...
	...	...	96.9	73.2	75.5	I	...	...	...	...	...
Lettish now and about the year 1250.	Lettish crania .	...	93.43	72.9	78.05	50	...	...	...	...	...
	Lithuanian .	...	94.87	74.45	78.45	15	...	...	...	...	...

4 *Ibid.*, (2) pp. 143-150.3 *Ibid.*, (1) p. 381.

2 Virchow, (1) pp. 372-373.

1 Kharuzin, pp. 254-259.

7 Lissauer, (2) p. 125.

6 *Ibid.*, (3) p. 121.

5 Virchow, (1) pp. 422, etc.

44 PRE- AND PROTO-HISTORIC FINNS

The Lettish and Lithuanian crania are given without indication of sex, though probably both sexes are included. For purposes of comparison it is often useful to know the average maximum length, breadth, and height of a set of crania, and as there was no room for this in Table IV. the measurements are appended below :—

		Length.	Breadth.	Height.	Ceph. ind.	Vert. ind.	Tr. vert.
50 Modern Lettish Skulls	}	179·6	140·1	130·9	78·05	72·9	93·43
15 Modern Lithua- nian Skulls	}	179·3	140·6	133·4	78·45	74·45	94·87

Both sets of crania seem very similar in length and breadth, but the Lettish is about an eighth of an inch lower, and therefore its vertical and transverse vertical indices are also lower than the Lithuanian. For a mesocephalous type 72·9 or 73· is a low vertical index, since about one unit must be subtracted to reduce them to the scale of Broca, which seems to imply that the group contains a large proportion of dolichocephals. Though the vertical index of two sub-dolichocephalous men of Häme type is only 72·5, the actual average height of their crania is 7 mm. higher than the Lettish; on the other hand, the vertical index of two sub-dolichocephalous Häme women is as much as 77·6. As the sub-dolichocephalous Čeremis and Permians have also a rather high vertical index, a low sub-dolichocephalous head in the Baltic Provinces cannot be regarded as Finnish, but must be considered as belonging either to a Lett or to a Finnicised Lett.

Though the modern Lettish skull is mesocephalous, it would seem that this has not always been the case. Professor Virchow, basing his opinion on crania of almost

certain Lettish attribution, such as the 16 from the Gulbern district, 3 from Terveten, 2 from Alt Pebalg, and 2 from elsewhere, arrives at the conclusion that the Lettish type is dolichocephalous, as the following Table exhibits: ¹—

TABLE V.

No.	Sex.	Ceph. ind.	No.	Sex.	Vert. ind.	No.	Sex.	Trans. vert.	No.	Sex.	Orb. ind.	No.	Sex.	Nasal ind.
11	M.	73'1	10	M.	73'7	11	M.	99'7	9	M.	77'8	5	M.	47'9
12	F.	76'	11	F.	72'7	10	F.	96'2	7	F.	85'3	5	F.	51'1
23	M.F.	74'4	21	M.F.	73'1	21	M.F.	97'8	16	M.F.	81'1	10	M.F.	49'7

Comparing these indices with the modern crania above, we see that the vertical index is practically unchanged, but that the transverse vertical index is lower in the latter. To account for this difference, supposing the actual height to have remained constant, the older skull must have been narrower than the modern one. No doubt it was also a little longer. What is true of the original Lettish type seems to be true of the old Lithuanian type. In the large and numerous Pagan cemeteries of the eleventh century that exist in the neighbourhood of Bielsk and Drohiczyn (government of Grodno), between the Bug and the Narev, that is to say, in a region inhabited at that time by Yatvings, a Lithuanian tribe, dolichocephalous crania alone have been disinterred.²

To the crania in Table IV. must be added 10 more from the three Baltic Provinces, for which there was no room before, as they are drawn up in another form.

¹ Sievers, (2) pp. 122-128, with observations by Virchow.

² Count Louis de Fleury, pp. 331-334.

They were measured by Dr. Weinberg, and were taken from burial-places dating from the tenth to the twelfth century.¹ As he has calculated the vertical and trans-vertical indices from the maximum height of Virchow, I have added two columns in which the *bregma* height is used, and enclosed the figures in square brackets.

It is now time to pass in review the contents of Tables IV. and VI. to ascertain how far the Finnish type of skull prevails in the northern half of the Baltic Provinces. Beginning with Esthonia, we find that out of 23 adult crania, from seven different places, not one accords with the average Häme type in Table III.; either the cephalic or the vertical index is too low, though the high orbital indices from 86 to 88·1 in some instances are certainly an indication of Finnish rather than of Lettish origin. Yet on that account alone we are not to suppose that the owners of these crania, when alive, did not speak a Finnish dialect. In all probability they did so; at any rate most of them. With regard to the 4 crania from Pühtitsa, which lies near the Russian frontier, Dr. Kharuzin, who measured them, is almost sure they could not have belonged to a Finnish people, and Professor Viskovatov, who conducted the excavations, says there is no doubt, judging from their family names, that the present inhabitants are Esthonianised Russians.² The high orbital index of the Hallist group may perhaps be attributed to crossing with Finns, while that of the Fellin triplet is low—rather lower, in fact, than the average Lettish male orbital index in Table V. That miscegenation on a great scale between Finns and a long-headed orthocephalous population, like the Letts, has taken place, seems quite evident.

¹ Weinberg, pp. 11-13.

² Viskovatov, p. 239.

TABLE VI.

	Sex.	Length.	Breath.	Max. height of Vitchow.	Bregma height.	Cephalic index.	Vertical index.	Vertical index (ii).	Trans. vert. index.	Trans. vert. index (ii).	ORBITAL.		Nasal.
											Right.	Left.	
ESTHONIAN.	M.	197	137	143	...	69.5	72.5	...	104.5	...	86.8	...	54.8
	"	185	139	...	...	75.1	...	...	...	...	...	...	...
	"	193	135	140	138	69.9	72.5	[71.5	103.7	102.2	...	83.3	...
	"	171	126	126	124	73.6	73.6	72.5	100.	98.4	...	...	...
	Average	186	134	136	131	72	72.8	72	102.7	100.3	...	...	...
LETTISH.	?	186	137	143	141	73.6	76.8	75.8	104.3	102.9	...	...	...
	?	179	133	133	131	74.3	74.1	73.1	100	89.4	80.4	...	...
	...	182	135	138	136	73.9	75.4	74.4	102.1	96.1	...	...	...
	Average	182	135	138	136	73.9	75.4	74.4	102.1	96.1	...	...	...
	M.	181	141	126	124	77.9	69.5	68.5	89.3	87.9	85.3	80.4	51.9
LIVISH.	"	183	142	137	137	77.5	74.8	74.8	96.4	96.4	87.8	85.7	52
	"	190	...	139	136	...	73.1	71.4	...	...	...	79.4	57.9
	"	187	126	125	122	67.3	66.8	65.2	96.2	99.8	...	...	...
	"	185	136	131	129	74.3	71	69.9]	94.9	93.7]	86.5	81.8	53.8
	Average	185	136	131	129	74.3	71	69.9]	94.9	93.7]	86.5	81.8	53.8

We know that in the twelfth century, when the Livs harried the Letts, they killed the men, and generally carried off the women and children as prisoners.¹ No doubt they were in the habit of doing so in still earlier times. Such a practice would lead not only to frequent crossing of blood between the two races, but to the incorporation of a considerable number of pure Letto-Lithuanians into the Finnish population, for the Lett boys and girls that were spared no doubt became Finnicised before they became adults. Though we have already found reason to believe that from a very remote time there must have been a certain percentage of long-heads among the brachycephal Finns, it would not account for the absolute absence of even a single sub-brachycephalous skull in the province of Esthonia. The only inference seems to be that Esthonia, before the arrival of the Finns in any great body, had already been colonised, though not very densely, by a long-headed orthocephalous people like the ancient Letts and Lithuanians. Another fact pointing in the same direction is the name of Esthonians, applied to the Finns of Esthonia. By the Scandinavians they were termed *Eistir*. This name is identical with that of the Aistii of Tacitus, the Estas of Wolfstan, a people that lived on the Baltic coast, east of the Vistula, and are identified with the Old Prussians, who were of Lithuanian stock. Letto-Lithuanian tribes may therefore be supposed to have held East Prussia and the Baltic Provinces, and to have been collectively known to the older Scandinavians as Aistiz, to those of the Viking period as Eistir. When the Finns made their way into the northern part of the provinces, and absorbed the native population, they also inherited the name of Eistir, and the

¹ Wiedemann, p. lxiii.

country they occupied received the name of Estland, or the land of the Eists.

Crossing the political, though not the linguistic, frontier into Livland, and leaving aside for the moment the crania from Rinnekaln, we find 5 crania from Salis and 2 from Ikul See that certainly belong to the Lettish type established by Professor Virchow. The low vertical and orbital indices seem decisive on this point. The four Livish skulls in Table VI. are of varied types, but Finnish blood may well have run through the veins of at least one of these brain-pans. So far then as the scanty evidence goes, the Livs must have been a mixed breed, at any rate in later times, when we first hear of them in history.

The crania from Rinnekaln in Livland require special notice and attention, for, if Professor Virchow is correct, a Finnish people frequented the spot in a neolithic period when all instruments were of stone or bone. On the south bank of the Salis, where it issues in a stream about 25 feet wide from Lake Burtneek, is a natural elevation about 198 feet long, 49 feet wide, and 8 feet high, known as the Rinnekaln. Its upper surface for a depth of about 3 feet is composed of mussel-shells, bones and scales of fish, with other food refuse. The archæological contents will be described in greater detail in another chapter. For the present it is sufficient to say that the upper part of the mound consists of the débris left by a prehistoric people that went there periodically to fish, to eat mussels, to hunt, and to trap beavers. With the exception of three or four stone implements, including a polished diorite axe found on the upper layer of mussel-shells, the harpoons, scrapers, arrow-heads, etc., were all of bone. The remains of wild mam-

malia included those of the Greenland seal, the beaver, elk, boar, *Bos primigenius*, the bison, etc., but not the reindeer. The domestic animals were the dog and the sheep, it being uncertain whether the few bones of a larger and smaller breed of cattle had belonged to domesticated animals or not. The presence of the horse is somewhat doubtful, as only one tooth was found near the top of the mound. A few sherds of pottery indicate that the potter's art was known and practised. In excavating the mound two series of crania were uncovered. The upper series lay at a depth of from 1 to 2 feet, and had been deposited there not more than three or four centuries ago, as coins and other objects lying beside the skeletons abundantly proved. The six crania of the lower series lay at different depths from 4 feet 2 inches to 2 feet 5 inches below the surface. Three of them reposed in the black earth underlying the shell-mound, and below layers of mussels and refuse that had not previously been broken through with pickaxe and spade. With one exception these six crania were brachycephalous. The indices of these five short-headed skulls, without distinction of sex—in Table IV. the sexes are given separately—were :—

Ceph. ind.	Vert. ind.	Orbit. ind.	Nasal ind.
83'0	74'1	82'7	48'3

In some instances the skeletons were preserved. Two of those in the black earth below untouched layers of shells, and one in the lower part of the shell-mound, had been deposited with the head to the north-east and the feet to the south-west. This last skeleton lay surrounded by quantities of splinters of bone and sherds of pottery. On the breast of the long-headed skeleton, which belonged

to a woman, lay a curious-looking ornament of bone ; at her head was a bone arrow-head, at her feet lay two others, one of bone, the other of mica schist.

Out of the 29 crania of the upper series only 5 were sub-brachycephalous. Taking both sexes together—in Table IV. they are given separately—the indices were :—

	No.	Sex.	Cephal.	Vert.	Trans. vert.	Nasal.	Orbit.
Sub-brachy. . .	5	M. F.	81·7	76·9	94·2	[2 p.]85·0	[1 p.]47·5
Mesoceph. . .	8	„	78·7	73·7	93·7	[5 p.]79·2	[5 p.]48·7
Sub-dolicho. . .	9	„	76·8	71·9	93·6	82·4	50·1
Dolicho. . .	7	„	72·7	72·4	99·6	78·7	49·4

Comparing the short-headed crania of the upper and lower series, Professor Virchow finds they closely resemble each other ; that they do not differ ethnologically, and there is nothing to prevent their being classed together. With regard to nationality he believes we need hardly hesitate to consider the short heads as the Finnish and the long heads as the Lettish element. The first stand very near the Saarnhof skull, the second closely resemble the crania from Alt Selburg, Alt Pebalg, Gulbern, and Terreten. With regard to the mesocephals he is uncertain whether they belong to a pure or to a hybrid race, and also whether the Livs are of mixed blood or not. The mesocephalous crania from Rinnekaln are not separable from those of Launekaln, Ascheraden, and Gulbern. If these are held to be Livish something is to be said in favour of the belief. But it must be remembered that Lithuanian and Lettish skulls, such as those, for instance, in Table IV., are also mesocephalous. For the present it is an open

question whether the Livs are a mixed Letto-Finnish people or not.¹

Assuming with Professor Virchow that the brachycephals of the lower series were Finns at a neolithic stage of civilisation, though the vertical and orbital indices of the males are lower than might be expected, it does not follow that they were the first settlers in what is now Livland. It would seem they were not permanently living on the shore of the lake, and one of the skulls of the series appears to have belonged to a sub-dolichocephalous old woman of Lettish type. Whether a captive or not, after death she was treated with respect. She was buried with a curious carved bone ornament on her breast, arrow-heads at her head and feet, and her body was laid in the same direction as a genuine member of the tribe. It is impossible to fix a precise date to the shell-mound at Rinnekalln, but it was rather late in the neolithic period, as the presence of sheep and of two breeds of oxen sufficiently show. It is also later than the stations at Kunda in Esthonia, of which we shall have to speak in another chapter.

¹ Virchow, (1) pp. 411-432; Sievers, (1) pp. 217-222.

CHAPTER II

THE NEOLITHIC AGE IN FINLAND

By a brief study of the archæology of Finland and the north centre of Russia, we may form an idea when man first came into these northern climes, and make more or less well-founded conjectures as to his manner of life and civilisation, as well as the quarter of the compass from which he proceeded. The north of Russia must have been habitable for a long time before man thought it worth while to try his fortunes in the wintry land, for traces of the mammoth have been found in almost every part of European Russia, from north to south and from east to west. Yet no handiwork of man is found associated with the tusks of *Elephas primigenius* in any part where it is likely that Finns have ever resided. It is true the late Count Uvárov believed he had discovered flint implements of palæolithic type with tusks of the mammoth at Karačárovo, near Múrom, but the antiquity of the flint implements has been disputed, and the presence of sherds of pottery clearly relegates the find to the neolithic period. The history of man in the north and centre of Russia begins with the neolithic age, when he had learnt to grind and polish his stone implements, though he often neglected to do so. As illustrations of archæological objects would be somewhat out of place in a work of this sort, I have

referred, whenever possible, to the well-known and very useful atlas of Mr. J. R. Aspelin, *Antiquités du nord finno-ougrien*, under the shorter form of Asp. No.

Perhaps the earliest type of stone implement found in Finland is a crowbar-shaped tool, a foot or two long, the point alone of which is usually ground smooth. This simple tool, supposed to have been used for boring holes in ice, is found in greatest abundance just above and below the arctic circle on the banks of the Kemi, on the shores of Lake Kemi, and even further northwards. In smaller numbers it is met with across the centre of Finland, in Karelia and Olónets, but not in the south-west of Finland, nor in Sweden and Norway (Asp. No. 28, 29). Another hacking instrument, sometimes as much as 17 in. long by $2\frac{1}{2}$ in. wide, with one side carefully ground flat, the back rounded like a keelless boat, and the two ends terminating in a point (Asp. No. 34) or a short straight edge, seems to have had its focus of manufacture in Olónets. Thence it spread in no great numbers westwards, though not so far as Satakunta or to the south-west corner of Finland, and northwards without reaching lat. 64° N. Examples have also been found near the mouth of the Volkhov in the great Ladogan find, and there is a broken specimen in the University Museum at Kazán from the district of Uržum (Viátka). In a variety of this instrument, found in Olónets, the upper flat surface is concave (Asp. No. 32, 33). A flat, wedge-shaped axe of oblong section, made of the native stone of the country, and of the same type as one widely distributed in the centre and south of Sweden, in the south of Norway, and the north of Germany, is also found in the Grand Duchy (Asp. No. 17, 19). It occurs in greatest profusion in the south-west

corner of the country ; it does not extend so far north as lat. 64° N., or further east than the western shore of Lake Ladoga, occurring there in only trifling quantities. A longer axe, generally of quadrangular but also of oval section, is also thinly distributed over much the same area, though reaching eastwards into Olónets (Asp. No. 31). Some of the chisels are of almost triangular section, and are mainly confined to Karelia and Olónets ; they are not found in Scandinavia or on the Baltic coast. Chisels no doubt were mainly used for cutting wood, though they could serve for other purposes, for stone chisels were still used not many years ago by the Lapps, in the parish of Kuusamo (Kemi), for removing the hair from the moistened hides of reindeer.¹ Of gouges there are two types. The first has a flat face, in which the groove is made at one end, and the short sides and back are rounded. With the exception of the extreme south-west corner, such gouges are common over the whole of Finland up to the Arctic Circle, but most of all in Karelia and Häme or Tavastland. They are also common enough in the governments of Kazán and Viátka ; and one from Anánino, near Elábuga, in the University Museum at Kazán, may serve in dating some of these instruments. The other type has a flat back, does not taper, and the short sides are also flat and parallel. It is chiefly confined to Central Finland, and hardly touches Karelia (Asp. No. 47, 48).

The most interesting archæological objects, however, are the perforated, boat-shaped hammer-axes of the same general forms, though with slight differences, as those known in Sweden (Asp. No. 64, 65). More than a hundred are recorded, and their distribution is worthy of

¹ Montelius, (2) p. 197.

notice. They occur only in the south-west angle of the Grand Duchy, and are not found east of a line drawn from about the mouth of the Kymmene, on the south coast, to Ny Karleby, on the west coast.¹ A couple of flint daggers with neat serrated ridges along the haft, of well-known Scandinavian type (Asp. No. 57), have likewise been found in the south-west of Finland. As there is no flint in the country, they must have been imported from Sweden. Like the boat-shaped hammer-axes, they belong to the fourth or latest period of the neolithic age, according to the classification of Mr. O. Montelius.

Very different from the perforated hammer-axe of South-west Finland is a rude perforated instrument, pointed at both ends, the body of which may be lozenge-shaped, or more or less elongated, but is always provided with a pivot-like protuberance, on each side of the hole, at right angles to the long diameter (Asp. No. 66-70). It has its chief development in Olónets, but it has also been found in Bothnia and in Satakunta, where both the lozenge and the narrow type occur. A lozenge-shaped axe or double pick, but without the lateral pivots, was found near the village of Volósovo near Múrom.² Not unconnected with these are the perforated picks of various forms, including that of the lozenge, but all terminating in the head of an animal. Five are known from Olónets, one from Karelia, and two from the government of Archangel, of which one came from as far north as the district of Mezen (Asp. 71, 73-76).³ Though these instruments certainly belong to a stone age, it is very probable, as Mr. J. R. Aspelin supposes, that they are imitated from bronze weapons of the later

¹ Nyman, pp. 303-337.

² Uvárov, vol. ii. Pl. 25, No. 369

³ *Ibid.*, vol. ii. Pl. 34, No. 4736.

bronze period, such as are found on the Lower Kama. Stone lance- and arrow-heads have also been found in small numbers, chiefly in Bothnia and Häme.

The art of pottery was also practised in the later stone age. At Hankasalmi, east of Jyväskylä, in the heart of Finland, were discovered by Dr. Heikel in 1894 several large fragments of an urn which he found possible to reunite, and so to restore in part the original vessel. In diameter it was about 15 inches, and the bottom was evidently round. It was ornamented with several alternate bands of holes in three rows and diagonally arranged punch-marks, made with a square-toothed, comb-like instrument, and the inner edge of the rim, which was bevelled, was adorned with similar punch-marks. In the neighbourhood of Lake Uleå ornamented clay vessels, partly finished, partly incomplete, were found with stone chisels, and at least two clay moulds for celts of East Russian and Siberian type. The ornament on the sherds consisted of rows of impressed points and diagonal punctured grooves, a very characteristic ornament often observed in the neolithic pottery from the mouth of the Volkhov, from Olónets, the Valdai, and the Oká. Sherds have also been discovered elsewhere, in the parish of Virdois north of Tammerfors, near Lake Kynsivesi in Häme, and in some profusion on the Vuoksi river.¹

From the above *résumé* several important deductions can be drawn with more or less probability. It is evident that during the stone period, which lasted to all intents and purposes to the beginning of the Christian era, Finland was inhabited by two, if not three, distinct peoples. Which of these first appeared upon the scene it is impossible to conjecture. Finnish archæologists are unanimous in be-

¹ Heikel, (1) p. 131, Fig. 16; Hackman, pp. 368, 369.

lieving that the south-west part of the country, where the flat wedge-shaped axes and the boat-shaped hammer-axes are found, was inhabited by a Scandinavian people that arrived there from Sweden. According to Mr. O. Montelius, the beginning of the Bronze Age in Sweden may be dated about 1700 B.C., and these hammer-axes belong to the period immediately previous. But as doubtless they were in use for a long time after the introduction of bronze, the first appearance of the Swedish colonists might be placed about 1500 B.C. Yet as the wedge-shaped axes are of a still older type, the hardy adventurers may have found their way to the coast of Finland at a still earlier date. The second people are generally supposed to have been the ancestors of the Lapps. But as the Ladogan people at the mouth of the Volkhov were certainly not Lapps, and the hacking instrument with a back like a keelless boat was known to them, and has not been found very far to the north, it seems likely that some of their tribes made at least hunting expeditions and fishing excursions to the fishy lakes and rivers of Finland.

NEOLITHIC MAN ON THE SHORES OF LAKE LADOGA AND EASTWARDS.

As no crania of neolithic man are known in Finland, it is fortunate that several have been brought to light in a region so near at hand as the south shore of Lake Ladoga. In 1878, while digging the new Siás canal from the mouth of the Volkhov eastwards to the river Siás, 10 crania, 8 portions of skeletons, numerous bones of animals, and many specimens of human industry, were uncovered. The majority of these lay on the level of the bottom of the

TABLE VII.

	FIRST GROUP.					SECOND GROUP.			THIRD GROUP.		
	1 M.	2 M.	3 F.	4 F.	5 M.	6 F.	7 M.	8 M.	9 F.	10	
LADOGAN CRANIA.											
{ Antero-posterior	179	170	192	181	170	181	182	167	194	183	
{ Transverse . . .	137	130	130	130	126	140	133	128	137	132	
{ Vertical . . .	132	...	134	...	...	140	136	124	...	137	
{ Frontal minim.	86	87	101	96	98	86	97	88	...	81	
{ Cephalic . . .	76.52	76.47	67.70	71.82	74.11	77.34	73.07	76.64	70.61	72.13	
{ Vertical . . .	73.74	...	69.79	...	...	77.34	74.72	74.25	...	74.86	
{ Trans. vertical.	96.35	...	103.09	...	...	100	102.25	96.87	...	103.78	
{ Frontal . . .	116	120	136	128	127	130	127	104	...	123	
{ Parietal . . .	120	115	116	126	121	115	116	117	...	120	
{ Occipital . . .	115	105	135	114	105	120	123	112	123	119	
{ Fronto-occipital	351	340	387	368	353	305	366	332	...	362	
{ Supra auric. trans.	280	...	...	...	...	305	291	275	...	280	
{ Horizontal . . .	485	470	520	502	490	505	508	468	520	495	
{ Biorbital . . .	103	103	...	109	103	104	108	...	...	104	
{ Bizygomatic . .	...	...	...	...	...	...	122	...	...	...
{ Breadth . . .	39	...	...	...	...	...	40	...	42	...	
{ Height . . .	32	...	...	...	...	...	31	...	33	...	
{ Index . . .	82.05	...	...	...	...	...	77.5	...	78.57	...	
{ Length . . .	49	...	...	...	...	...	54	...	53	...	
{ Breadth . . .	25	...	...	...	...	...	26	...	27	...	
{ Index . . .	51.02	...	...	...	...	...	48.15	...	50.94	...	
Nasal.											
Orbital.											
Face.											
Tr. vert.											
Vert.											
Ceph. ind.											
Height.											
Breadth.											
Average length.											
No.											
Dolichocephal	183	131	[2] 136	[3] 136	71.5	[3] 73.1	[3] 103	[2] 78	[2] 78	[2] 49.5	
Sub-dolicho .	174	133.7	[3] 132	[3] 132	76.9	[3] 75.1	[3] 97.7	[1] 82	[1] 82	[1] 51	

canal, in a thin bed of alluvial peat overlying a thin layer of red clay, itself overlaid by about ten feet of stratified sand and peat, which was again covered by seven feet of blown sand. The depth at which these human remains were found is therefore very considerable.

The crania have been described and figured by the late Professor Bogdanov, some of whose measurements are reproduced on Table VII.¹ Prehistoric Ladogan man was distinguished by the thickness of the walls of the skull in male crania; by small development of the forehead and by small-headedness. The femoral bones were also of small dimensions, but the attachments of the muscles show that his muscular system generally, especially in the upper part of the body, was well developed. Though Bogdanov found indubitable traces of relationship between the Ladogan crania and those of the *Kurgan* type of Central Russia, yet in his opinion the former belonged to a type that was neither Slav, nor Finnish, nor Mongol.²

Comparing the Ladogan dolichocephals with those on Tables II. and III., we find their indices agree best with the Čeremisian dolichocephals, though the latter have a longer and broader head, the height being nearly the same. In actual size these small Ladogan skulls come very near those of three Permian women, though the indices work out differently. Taking next the sub-dolichocephalous Ladogans, we again find an agreement, but still more close, with the indices of the sub-dolichocephalous Čeremis and with a single Permian man, though in all respects the Ladogans have a much smaller head—about the same size, in fact, as that of sub-dolichocephalous Permian women. Though we have only 10 Ladogan and 12 Čere-

¹ Inostrantsev, pp. 105, 106.

² *Ibid.* pp. 221-223; pp. 128, 237.

misian crania to compare, yet taking into consideration the difference of size between the two sets, and that they are separated in time by fully three thousand years, it is remarkable that four pairs should be found that are not so very dissimilar.

	L. 1.	Č. 7.	L. 2.	Č. 6.	L. 4.	Č. 3.	L. 10.	Č. 15.
Ant. post. diam. .	179	180	170	172	181	184	183	187
Transverse „ .	137	137	130	132	130	133	132	135
Vertical „ .	132	126	...	138	...	140	137	134
Horizont. circum.	485	509	470	484	502	503	495	513
Cephalic index .	76'5	76'1	76'4	76'7	71'82	70'7	72'1	72'2
Vert. „ .	73'7	70	...	...	...	...	74'8	71'6
Trans. vert. „ .	96'3	91'9	...	...	...	...	103'7	99'9

As I am not an anthropologist myself, it must be left to experts to decide whether a sufficient case has been made out for connecting these two series of crania—though, of course, it is not contended that the Ladogans were Čeremis, but merely that the latter are partly descended from the same stock as the former, though, with lapse of time and crossing, it may be, with other stocks, they have gradually acquired a longer and broader skull.

When prehistoric man lived on the south shore of Lake Ladoga, the dense forests and the broad swamps that hemmed it in to the south were better stocked with game than is now the case. *Bos latifrons*, bison, elk, reindeer, wild boar, beaver, and the tiny sable, tenanted the region. The two former are nearly extinct species, the others have disappeared into remoter districts; the northern limit of the wild boar, which grew to a large size, is now five degrees further south. Of dogs there were two breeds, a larger and a smaller; the former might have been used for draught,

the latter for purposes of the chase—though it should be mentioned that Count Uvárov doubted whether the dog was domesticated and was not used only as an article of food. Though seals are still found in the lake, they are small compared with the prehistoric *phocæ*. To find the puffin, which formerly frequented the solitudes of Ladoga, we must go to the extreme north of Norway. The climate, on the whole, must have been rather milder than now, for the predominant hard wood was the oak, which grew to a large size; at present it does not thrive so far north, but remains scrubby and stunted. As beavers live on hard wood, and elks prefer the foliage of such trees, the forests must have been largely composed of deciduous trees such as the oak, maple, willow, poplar, and alder.

The objects of human industry made of bone are more than twice as numerous as those of stone, though this was usually a kind of slate, and not difficult to work. There is no flint in the vicinity. Of bone and horn the Ladogans made lance- and arrow-heads, daggers, knives, scrapers, shovels, hooks (1), harpoons, needles, awls, and ornaments. Of stone they made scrapers, carefully ground axes, short flat-sided chisels with parallel sides of various types, that show symmetry and signs of care in their manufacture, gouges, wedges, mallets, whetstones, awls, knives, and ornaments. Some of the bones show clear traces of sawing, which was probably effected by a stone wedge with the assistance of coarse quartz sand and water. That these tools were well fitted for their purpose is shown by a dug-out canoe of oak, which must have given some trouble to hew, and by heads and outlines of animals carved in bone.

From the illustrations given by Inostrantsev, it is not very easy to say how far the Ladogan objects agree with those found in Finland, though the chisels, with straight short sides, and some of the gouges, seem tolerably similar in both regions, as well as the hacking instrument mentioned above. Some of the carved work is specially deserving of notice, as it may be supposed to possess a distinct ethnological value. One piece, Fig. 1, represents what is supposed to be the silhouette of a seal, carved in bone, with short strokes upon the surface to represent the fur. The eye is formed by a hole of suspension, and the plaque may have been worn as an amulet to bring luck to the bearer. The next, Fig. 2, is the muzzle of a dog or a bear carved at the end of a bone-scraper; the illustration, unfortunately, is not very distinct, but is interesting as the precursor of the stone picks with animal heads. Fig. 3 was compared by Inostrantsev to the handle of a dagger, but it was afterwards recognised by Dr. Tischler as 'the figure of a man, without a shadow of a doubt.' He considered these Ladogan carvings as belonging to the same category as the sculptured figures in bone and amber from East Prussia and Galicia, and regarded them as the beginning of plastic art in the north and east of Europe.¹ If this view is correct, it militates against the theory that the Ladogans were not a European people in the ordinary usage of the word; but I see very little likeness between the amber carving of East Prussia and the bone carving of Ladoga. The main likeness lies in this, that the human figures in both regions have a hole of suspension under each armpit, though the Prussian examples have sometimes another pair of holes on the level of the wrist, but never

¹ Tischler, p. 116.

is the head rendered as it is in the Ladogan figure. The carving of the human figures and of two horses' heads in amber is coarse, rude work, clumsy in the last degree, without a shadow of skill or taste in design or execution. The art and technique of the Cracow figure is on a par with that of East Prussia. The firm, clear outlines of the Ladogan carving, the careful handling of the fur on the seal, and the general symmetry of Fig. 3, point to qualities that the amber-cutters never possessed. That Fig. 3 is intended for a human figure seems to me doubtful, for if the double row of vertical dots is taken to represent the separation of the arms and legs, how are the diagonals that connect these, and the vertical line through the centre of the neck, to be explained?

The pottery was coarse, thick, uneven in thickness, and the clay was often mixed with pounded granite or mussel-shells. The size of the vessels was considerable, for the largest must have had a diameter of $22\frac{1}{2}$ inches at the top and the smallest 13 inches, but the idea of attaching a handle to a clay pot had not yet occurred. Only about ten per cent. of the sherds were ornamented, which probably means that the lower part of the vessel was left undecorated. The ornamentation consisted of single and double rows of holes, arranged horizontally; of diagonal rows of punch-marks; of parallel grooves; and of combinations of these elements. We have already seen that the Ladogan pottery has a great resemblance to that of Finland.

No date can be assigned to the Ladogan station, though it is certainly very ancient, and is prior to the introduction of perforated axes and hammers.

THE STATION OF KOLOMTSI.

More than one hundred miles to the south, at Kolomtsi, on the right bank of the Volkhov where it issues from Lake Ilmen, Mr. Peredolsky found abundant traces of prehistoric man. Though he considers the station to belong to the palæolithic age, there is no doubt it is neolithic. Several crushed and broken skulls were found, eight of which he was able to restore, with the result that seven proved to be dolichocephalous and one brachycephalous. Unfortunately no details are given. The bed of dark earth in which the crania lay was about 5 feet thick, and rested partly on a glacial deposit, partly on blue clay. This bed was itself covered by a stratum of brick-clay about $6\frac{1}{2}$ feet thick, and above it came layers of sand and vegetable earth from 3 to 4 inches thick. In his opinion the remains of man and his industry present an evident resemblance to what was found at the Ladogan station. They were evidently of the same primitive tribe, and their crania show features of likeness with those from the *Kurgans* of Novgorod, and generally of Western and Southern Russia. But here again details are wanting. Like the Ladogans, they had a taste for carving. One piece of bone was carved into the head of a bird; another represented the head of a man with a pointed chin, a very long nose, and a head-dress in shape like a fez. The clay of the pottery was mixed with gravel, bits of quartz, and broken shells, and was often ornamented. One design is the same as on a Ladogan sherd; another is found on sherds from Lake Onega. The bottom of the pots was either round or flat. The implements consisted of knives, scrapers, flat wedge-shaped axes, hammers, straight and concave saws, arrow-heads of various types

with and without a tang, and awls of flint; axes, chisels, arrow-heads, and whetstones of schist; lance- and arrow-heads, awls, harpoons, hooks, gouges, and small axes of bone. Small pieces of cornelian, jade, agate, etc., with traces of having been used by man, must have been brought from a distance. Perforated teeth of the bear, lynx, and other carnivoræ were worn as ornaments or amulets.¹

FINDS IN OLÓNETS.

More than two hundred miles east of the Volkhov, on the south-east shore of Lake Onega, on Lakes Tud, Kumbas, Lač, and other places in the south-eastern part of the government of Olónets, numerous articles of human industry, some perhaps earlier, some certainly later than the Ladogan station, have been brought to light. They were found in recent deposits of peat formed on the site of dried-up lakes, or in sand and clay on the shores of existing lakes and river valleys. No human remains were ever found with or near them. As flint is found on the east side of Lake Onega the arrow-heads were made of that mineral.

These weapons are very abundant, and of various types, very generally lancet- or almond-shaped; they show various degrees of skill from very coarse to very fine workmanship. The knives and scrapers are also of flint. Other instruments, such as axes, hammers, chisels, and gouges were made usually of hard clay slate, or of diorite, greenstone, or quartzite. The axes were often flat with the two faces ground and the short sides also ground flat, others were of nearly triangular section, like those in Finland and at Kartašikha on the Volga, in the government of Kazán.

¹ Peredolsky, pp. 139-144.

Some of the gouges are characteristic of Olónets and Finland, and one very narrow type is met with at Kartašikha. At the Ladogan station no instruments perforated to receive a handle were discovered, but on the Kinema river, and a few other places in Olónets, a few polished and perforated axe hammers and round hammers were found belonging to a later time. Poliakov states that two instruments—the material is not mentioned—have been found in Olónets, one ornamented with the head of an elk, the other with the head of a bear in relief. He gives references, to which I am unable to refer, but I suspect these instruments are of the same class and material as the picks ornamented with animal heads, already mentioned at p. 56 as having been found in Olónets.

The clay of which the pottery was made was largely mixed with sand, and at Lake Tud they strengthened the mass by the addition of some strong fibrous mineral which toughened it, so that the pattern is scarcely visible on such vessels. As none were ever found entire, their original shape cannot be determined. The exterior of the pots was decorated with diagonal, parallel rows of squarish impressions made with a comb-like instrument. Sometimes these bands were separated by a belt of small pit-holes from two to five deep. At other times the impressed lines or furrows took the form of a zigzag round the rim of the vessel. In character this style of ornament greatly resembles what is found in Finland and at the Ladogan station. Only one bone instrument seems to have been found, a lance-head 6 inches long, that was picked up at the mouth of the river Kinema. An indication of the age of some of these finds is given by the fact that at the mouth of the Tikhmangia, which falls into Lake Lač, not far from sherds

of pottery, broken bones of beavers, elks, reindeer, birds, and fish, were also found the bones of a seal, of a breed as large as a Greenland seal. Hence when neolithic man lived on the banks of the river there must have been large seals in that lake, which, though united by the river Onega with the White Sea, is more than 180 miles distant from it as the crow flies, and the lake must have been larger and deeper than is now the case.¹

THE VALLEY OF THE OKÁ.

Several stations of the neolithic age are known in the valley of the Oká, on both sides the river, above and below the historic town of Múrom. The most important and richest of all is that of Volósovo on the right bank of the river, some five or six miles to the east of Múrom, which lies on the left bank. The station lies on a ridge of white blown sand of sufficient altitude to protect the inhabitants from the spring floods which cover the level ground between the ridge and the Oká to a considerable height. A few years ago the ridge was covered with fir-trees, and in front of it runs a brook, so that at all times the inhabitants could get water, fish, and mussels without much trouble. On removing the white sand is found a stratum of black sand up to $3\frac{1}{2}$ feet thick, in which an immense number of stone implements have been discovered. On the ridge, but at a little distance to the south of the great area where these objects of neolithic man lay, the late Count Uvárov found five graves and several sepulchral urns.

The bodies lay east-south-east, and west-north-west, and the head was turned so that the left cheek was sup-

¹ Poliakov, (1) pp. 340, 364, 367, 368; (2) pp. 32, 35, 36, 19, 10.



THE NEOLITHIC STATION AND SAND-DUNES OF VOLÓSOVO.

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ported by the palm of the right hand. The depth of the graves was from 1'20 to 1'30 m., and the skeletons lay in a bed of wood ashes. On this layer, at the place where the head lay, was placed a clay urn filled to the brim with the burnt bones of animals and surrounded also with burnt bones of like nature. In the centre of the bones in the urn was laid a flint arrow-head of beautiful workmanship. The graves were filled up to the level of the ground, and there was nothing on the surface to betray their presence below. No trace of human handiwork was to be found in the immediate vicinity of the graves, but nevertheless they are probably neolithic.

Three crania, two of them very imperfect, were measured by Bogdánov, who compared them with three from the government of Smolensk, and found points of likeness between them. But below I have compared the complete skull with a male Permian skull, in which the points of likeness are much greater:—

	Volósovo.			Kudjmkor (Perm.).
Horizontal curve . .	530	...	...	529
Long diameter . .	180	180?	169?	180
Trans. diameter . .	144	140?	...	146
Vertical diameter . .	135?	...	...	134
Cephalous index . .	80	77·77	...	81·1
Vertical index . .	75	...	...	74·4
Trans. vertical index .	93·7	...	...	91·7
Orbital index . .	81·82	...	...	78
Nasal index . .	56·52 ¹	...	...	56·5 ²

So far as I can offer an opinion, the Volósovan population contained a sub-brachycephalous element that has analogies in the existing Permian Finns; of the other

¹ Uvárov, pp. 299, 300, 309.

² Maliev, (1) Appendix, skull No. 1.

element nothing definite can be said, though it seems to have had a tendency towards dolichocephaly.

Sherds of pottery are extremely numerous, and can still be picked up in quantities. As all fragments show a curved surface, they were certainly more or less globular, and some of considerable size, the diameter of the largest being about 18 inches in diameter and the smallest $1\frac{1}{4}$ inches. But none were found intact save the sepulchral urns, which are very small, almost without ornament, and flat-bottomed. In size and shape, though ruder in manufacture, one of these urns resembles somewhat two sepulchral urns from a much later neolithic station near Kazán, where again the great difference between sepulchral and household pottery is also observable.¹ Before being used the clay was mixed with gravel, broken shells, and feathers. The walls of the vessels were thick, but unequal in thickness; the top was always wide, and the lip seems sometimes to have turned a little inwards or was slightly everted. No ears or handles were attached, for these means of lifting or suspending were replaced by holes through which a cord was run, but this only in the case of the larger vessels. When finished, the bowl was burnt, but only incompletely. The decoration presents considerable variety of design, combined with a certain regularity and symmetry; in many ways it recalls that of Olónets. There is no trace of the cord ornament as at the Ladogan station and the neolithic stations on the Central Volga; nor of simple or concentric circles and semicircles like the neolithic pottery of the amber coast in East Prussia, where the amber figures referred to by Dr. Tischler were discovered. The axes were wedge-shaped, made of diorite,

¹ Uvárov, vol. ii. Pl. 16, No. 4053-4.

and were usually very carefully polished, the chipped and unground specimens, of which there were many, being merely unfinished. The largest was $9\frac{1}{2}$ inches long, and in section ellipsoidal. Hammer-axes perforated to receive a handle were very rare, and the hole was unskilfully bored. Besides boring they also knew how to saw stones, for some of the flat, schiefer pendants were evidently produced by such means. The flint arrow-heads were very numerous, and sometimes of beautiful finish; the chief forms being oval, lancet-shaped, rhomboidal, and tanged: a few were triangular, or with a notch at the base. Out of about thirty flint saws one was semicircular.

Of particular interest are silhouettes of men, birds, and animals chipped out of a piece of flint. I reproduce four from the drawings of Mr. Kudriavtsev; Figs. 4 and 5 are human figures; another, almost the same as Fig. 4, and also from Volósovo, is figured by Count Uvárov;¹ Fig. 6 represents a goose, and Fig. 7 might be a boar or a badger; Fig. 8 is a modern Vogul idol of wood in the Museum at Ekatrínburg, which may be compared with Fig. 4. The practice of chipping flattish pieces of flint into something approaching an animal shape is not confined by any means to the valley of the Oká. Far to the north, near the mouth of the Zolotitsa, which falls into the White Sea some hundred miles north of Archangel, there was a neolithic workshop for the manufacture of flint implements, and among the small saws, knives, and arrow-heads there was found the silhouette of a seal in flint, now in the Historical Museum at Moscow. And two flint outlines are figured by the Count Uvárov, the actual finding-place of which is unknown, though they were bought in the government of

¹ Uvárov, vol. ii. Pl. 14 A, described vol. i. p. 324.

Kazán.¹ One has a large thick neck and head, a short thick body, four short legs, and a broad tail. It might be taken for the skin of an animal, such as a beaver, dried and stretched. What the other represents I cannot even hazard a guess, though it is doubtless an animal form. The Volósovans also carved in bone. Mr. Kudriavtsev has in his collection the head of a swan in full relief, carved at the end of a long bone, the rest of which was left untouched. Another piece represents the head of a duck; a third a very small fish with a small hole of suspension through the tail. As it is difficult to believe that neolithic man in a low state of civilisation, when it is not certain that even the dog was domesticated, should take the trouble to hew out of flint and bone representations of men and animals merely to satisfy his artistic and creative instincts and faculties, some other reason must be sought for. It is more consonant with the extreme laziness of uncivilised man to suppose that he had a practical object in view, that the human and animal figures served as household gods or as personal amulets to secure luck when fishing or hunting.

Bone implements, such as awls of bird- or fish-bone, harpoons barbed on one side only, axes, knives, fish-hooks—though some of these were of flint made in two parts and tied together—and perforated teeth, were very numerous, though bone arrow-heads were rare. Besides fish-hooks they must also have had nets, as the impression of one has been found on a sherd of pottery. The commonest animal bones found were those of the martin, fox, hare, wild boar, and beaver; less common were the remains of the badger, wolf, bear, elk, wild ox, otter, reindeer, and dog. In fact,

¹ Uvárov, vol. ii. Pl. 14 C D.

canine bones were only found once, and then as an entire skeleton that resembled the smaller Ladogan dog. This makes it doubtful whether the dog was domesticated at all.¹

A good many miles down the Oká from Múrom is the station of Plekhánov Bor. The people lived largely on mussels ; in fact, no animal bones were found there at all. But the identity of the ceramic ornament with that at Volósovo shows that people of the same tribe lived at both places synchronously.²

THE VALLEY OF THE VOLGA.

On the left bank of the Volga from Kazán to a little south of the inflow of the Káma several neolithic stations are known, eight of them not very far from Kazán itself. Neolithic instruments, pottery, and animal bones are also found in considerable abundance above Kazán, but on the right bank near the mouth of the Sviága. Most of the implements are of flint, which is very plentiful, but a few are of eocene sandstone, which is not found in the government of Kazán, but might be obtained by descending the Volga to the Singilei river in the adjoining government of Simbirsk. Either the stone or the ready-made instruments must, therefore, have been imported, and these it should be noted are of excellent work and beautifully ground. In places the sherds are extremely numerous ; near Novo Mordovo, in the district of Spassk, they are spread over an area of about eighty-one acres, where they can be collected by the bushel. The clay was generally mixed with comminuted fresh-water shells, small stones, feathers, and at

¹ Kudriavtsev, pp. 234-255 ; Uvárov, pp. 314, 322.

² Uvárov, pp. 329, 318.

Novo Mordovo with mica; in place of mica, talc is found in the neolithic pottery from Galkina near the mouth of the Čusovaya and from Turbina on the right bank of the Káma nearly opposite, as well as in numerous sherds from the district of Ekaterinburg beyond the Ural chain.¹ After completion the vessels were either left unbaked or the burning was incomplete. The decoration is endlessly varied, very complicated at times, and consists of different combinations of linear ornament. It is generally placed below the rim, and never covers the whole height of the vessel; the inner surface is seldom decorated. A curious but very rare method of adornment was to impress the clay with a small spiral shell, probably that of a snail, and thus form horizontal bands of spiral depressions, separated by horizontal lines of small dots. This novel mode of decoration is also found on neolithic sherds from Lešvina, a mile and a half above the junction of the Čusovaya with the Káma.² The cord ornament was also used as at Lešvina and beyond the Urals. No handles were used, but sometimes a vessel could be suspended by means of two large round holes placed opposite each other. The bottom was always flat, and, with one exception, never rounded. The commonest implements were scrapers, knives, axes, chisels, mallets, spear- and arrow-heads; the scarcest were picks, awls, saws, and hammers. The arrow-heads were of various types—leaf-shaped, lancet-shaped, rhomboidal, tanged, and triangular, the latter being very rare. Some of the arrow-heads are so tiny—from 8 mm. ($\frac{1}{2}$ inch) to 10 mm. long—that Professor Višotski supposes they would have been useless unless poisoned.³

¹ Teploúkhov, (1) p. 24.

² Teploúkhov, (1) p. 15.

³ Stukenberg i Višotski, pp. 10, 13, 15, 18, 28, 37.

Practically nothing is known of the people who left these traces of their presence behind them. For although at two places interments have been brought to light that are supposed to belong to the neolithic period, the human remains were so shattered that almost nothing can be learnt from them. Near the village of Novo Mordovo was found the skeleton of a woman who had been laid with her head to the north and her feet to the south; near her right wrist lay the upper shell of a tortoise, on the inside of which were traces of red colour. The skull was round-headed, and showed marks of a primitive type. At the station of Great Bugór, near Kazán, traces of three interments were found, but so destroyed that only fragments of two skeletons and the funeral urns could be recovered. The bodies had been buried at a depth of about three feet, and had been placed on their backs with the head to the west and feet to the east, and in each grave was a small urn. There was nothing above ground to indicate the presence of graves. At this station, as well as flint implements, there were found bones of the domestic horse, cow, sheep, and swine, also of the elk; at two other stations bones of the horse, cow, and swine; at Tabaevo, near the junction of the Kama, those of the horse, bull, and swine.¹ The fact that neolithic man had now become acquainted with the most important domestic animals shows that these stations belong to a latish period. It is unfortunate, however, that we have no particulars about these animal bones, as something might be learnt from them. At present we have no clue as to whence the animals originally came, whether from the south or from the east. It would be instructive to know whether the Volgan horse of those days

¹ Stukenberg i Visotski, pp. 53, 54, 56, 65, 72.

was at all like the horse the remains of which have been found in many places in the east part of the government of Perm, beyond the Urals, sometimes as deep as ten feet and more below the surface, and which are now preserved in the Museum at Ekaterinburg. But as no vestiges of the domestic sheep or pig have been found in that region, it seems likely that the domestic animals came from the south or south-east.

THE GOVERNMENT OF VIÁTKA.

As flint of good quality is nowhere found in masses, the inhabitants made use of an inferior kind of whitish, clayey flint or chert, but never turned to use the erratic blocks which occur in the northern half of the province. In fact, the extreme north of it does not seem to have been inhabited at all, for no stone implements of any sort or kind have as yet been found along the course of the Viátka above Slobodsk, or on its upper tributaries, the Velíkaya, the Letka, and the Kobra. Very few too are known from the valley of the Čeptsa, and these are chiefly wedges and nuclei. On the other hand, on the upper course of the Kama, where it flows through the province, finds of flint implements are so numerous as to induce Mr. Ivanov to believe the district was thickly inhabited during the neolithic period. The west of the province too was not without its inhabitants. A few arrow-heads of triangular and quadrangular section, and considerable quantities of knives, scrapers, and nuclei, have been unearthed at the mouth of the Moloma and higher up its course near the village of Okátievo, as well as at several places on the upper and central course of the Yum, and the central

course of the Pižma, into which the Yum falls. On the central course of the Viátka a few finds have also been made, which increase at its junction with the Kilmez and further southwards. At none of the above-mentioned places and districts have any polished stone implements been brought to light. They are not however unknown in the province; in the southerly districts of Uržum and Yaransk a considerable number of polished flint and stone axes, wedges, chisels, and gouges have been discovered. At Orišut near Ernur, close to the boundary between the governments of Viátka and Kazán, was a workshop, the most typical instrument of which was a stone chisel with one side flat or slightly convex, while the opposite side had three faces like certain bronze celts, which are in Mr. Spitsjn's opinion the prototypes of these stone chisels. Along the right bank of the Central Kama, where it forms the southern boundary of the province, isolated finds of polished stone implements have also been made. But the only station is at the mouth of the Toima, not far from Elábuga, over which in later times accumulated the great cemetery of Anánino, so that Mr. Spitsjn believes that many of the stone implements said to have come from the graves at Anánino really belong to the underlying neolithic station. Here have been found flint arrow-heads, a fragment of a stone chisel of the Orišut type, bones, and sherds of pottery. The pottery is of two sorts: one is of thick yellow clay, the other of black clay, often mixed with bits of shells, for vessels of smaller dimensions.¹ These sherds seem to be the only examples of neolithic pottery in the whole province, and from this it may almost be concluded that there were no real permanent settlements

¹ Spitsjn, pp. 11-23.

in it during the earlier neolithic age, though it was traversed by hunters, who made flint implements of the simplest kind as occasion required.

THE GOVERNMENT OF PERM.

Up to the present the finds of the neolithic stage in the Upper Kama have been very few, leading us to suppose that the population was very scanty. In fact, settlements that can be exclusively attributed to this age have not been discovered. The flint and other stone implements are of local stone, and the workmanship is often very good. Beginning from the north, on the banks of the little river Velva, a left-hand tributary of the Kama in the district of Solikamsk, there have been found at various places scrapers, flakes, some of which are slightly toothed and could be used as a knife or a saw, nuclei, a well-made, tanged arrow-head, two spear-heads, a well-polished flat axe tapering towards the butt-end, a well-polished net-sinker, a gouge with a flat face in which the groove was made and with a rounded back. From the description it seems to resemble a type common in the Volga district of the last section, and is also found at Anánino near Elábuga, on the Kama; lastly a chisel of quadrangular section, the upper end of which is worked round like a handle 2 cm. long and 2 cm. wide. Further south near Šárdin on the Inva, a westerly tributary of the Kama, were found a leaf-shaped arrow- or spear-head, 9 cm. long, with a notch at the base, and another of similar shape, but smaller, and with a flat truncated base. Its long edges were distinctly toothed. In the valley of the Obva a bone harpoon, stuck into a log of wood, which probably belongs

to this period, was washed up from the bed of the river by the spring floods. It had four barbs on one side and a fifth reversed on the opposite side to facilitate attachment to a handle. In the same valley was also found a heavy stone hammer, weighing eight lbs., near one end of which was a shallow transverse groove running round the body of the hammer, the better to fasten it to a forked handle. From Ust Gareva, further south, comes a perforated axe-hammer of serpentine. At Lešvina, on the right bank of the Čusovaya, near its junction with the Kama, were found three arrow-heads, one of them leaf-shaped and greatly resembling another from the station of Kartašikha (Kazán) on the Volga; flint flakes with a serrated edge to serve as a saw; a broken, polished, flat axe, and a flat roundish hand-mallet with a hollow on each flat side to allow the stone to be held easier. It is very like a similar tool from Great Bugór near Kazán.

About thirty sherds of earthenware were ornamented with different patterns. From their small degree of curvature some must have belonged to large vessels; others of thinner clay were more curved, and probably belonged to vessels more or less spherical. But it is impossible to say what the shape of the bottom might have been. The patterns ran in zones parallel to the rim, and were produced with a stamp toothed like a comb. The cord-pattern was also in use, and less often the ornament consisted of a row of holes; on two sherds it consisted of diagonal impressions of a small spiral object, evidently the shell of a snail. Not far off is the prehistoric fort (*gorodišče*) of Galkina, in which a nucleus, splinters, and a net-sinker were found. At no great distance outside were flint flakes and a couple of arrow-

heads, one of bone, and not differing from those found in the so-called Čudish 'ossiferous areas' that are generally to be dated from the eighth to the eleventh centuries. The sherds of pottery differ in material and pattern from those at Lešvina, and were partly baked. The last settlement is at Turbina, on the right bank of the Kama, nearly opposite the inflow of the Čusovaya. It belongs, at any rate in part, to a late period. Here were found a scraper, a narrow chisel, merely formed by chipping and fragments of glass beads with an inside layer of gold-leaf, like those found in large quantities in the ossiferous areas on the Obva, at Gliadénova near Perm, and the north side of the Caucasus. The sherds of pottery resemble those from Galkina both in material and pattern. Generally the clay was unmixed with foreign substances, but one sherd contained largish pieces of talc, which had probably been brought from the other side of the Ural chain.¹

NEOLITHIC PERIOD IN THE BALTIC PROVINCES.

In the north of Esthonia, about two miles inland from the Gulf of Kunda, and about 180 miles west of the mouth of the Volkhov, remains of human industry were found in excavating the marl beds that once formed the bottom of what was formerly a lake. The harpoons, barbed on one side only, the spear- and arrow-heads, the daggers, knives, scrapers, and chisels, are all of bone, generally that of the elk. With the exception of one well-chipped flint arrow-head and a knife, no bone implements were discovered. But small, narrow flakes of flint were inserted into grooves cut into the sides of bone arrows, and were firmly cemented

¹ Teploúkhov, (1) pp. 5-26.

with a preparation of pitch. Similar weapons are known from Lake Šigir in the district of Ekaterinburg (Perm), in East Prussia, Denmark, and the south of Sweden. The almost total absence of flint is easily accounted for. It is not found in beds anywhere in the Baltic provinces, save on the east shore of Lake Burtneek, and even there in no great quantity. No pottery or personal ornaments were unearthed, but this may be explained by the fact that all the objects lay from 100 to 200 yards from the shore, and were lost either in the water or on the ice. Reindeer still roamed in the neighbourhood as well as the bison and the elk, but no trace was found of the dog. Grewingk calculated for these finds an age of only 1650 years, which would place them in the third century of the present era.¹ But little confidence can be placed in calculations founded on the rate at which deposits accumulate under water, and he himself believed that the date must be increased.

About 140 miles in a bee-line to the south-south-west of Kunda, on the left bank of the Salis, where it issues from Lake Burtneek, is Rinnekaln. In connection with the crania exhumed there this station has already been mentioned. Comparatively few fishing implements and weapons were found. The spear-heads and daggers of bone were of coarser make than at Kunda; the harpoons were smaller, with only one or two barbs on one or both sides. Stone implements and arrow-heads were in inconsiderable quantities, the more remarkable as a flint workshop is known to exist near Sveineck on the opposite side of the lake. The coarse, gritty pottery, the clay of which was mixed with broken mussel-shells, was either not baked,

¹ Grewingk, (1) pp. 1-36.

or but slightly. In form the vessels were probably more or less cylindrical, and seem sometimes to have been furnished with a lid; but apparently they had no handles, neck, or feet, and were of considerable dimensions. The ornament had some variety of design. It consisted of double and triple horizontal rows of holes alternating with diagonal lines of prick-marks; of short incisions at intervals, made sometimes with the finger-nail, and distributed either over the whole surface or in zones round the vessel. Decoration was also applied to the inner side of the rim, as at Hankasalmi. Grewingk remarks that the design is much more varied than at Ladoga, and resembles what has been found at Volósovo. Needles were made of bird-bone, chiefly of the swan. Carving in bone was practised with a skill and talent superior to that of the Ladogans, and the figures were either in full relief at the end of a long bone or silhouettes incised out of a flat plaque. Among the former are the head and neck of swans and geese, which remind one of Volósovan work, and the heads of a bear and an elk carved at the end of a bone, as at the Ladogan station. Among the latter are two silhouettes of birds, one of which has two holes of attachment. Some of the bone arrow-heads are of a very peculiar make. The upper part consists of a sharp-pointed cone, to which is attached a stalk of lesser diameter than the base, and somewhat flattened. In the other type the pointed cone projects from a four-sided base rather larger than the base of the cone, and this quadrangular base gradually reduces in size till it passes into a short flat stalk. The only analogies for such arrow-heads, so far as I know, are found in the sub-district of the Upper Isset in the district of Ekaterinburg. One quite like the first is in the University Museum of Kazán, but

came from the Upper Isset. In the Museum at Ekaterinburg there is another like it, but with a long stalk; others are more like the second type, but the upper cone rises from a reversed cone, which passes into a long thin stalk of circular section, which gradually becomes flattened. Wooden arrow-heads shaped like a double cone are still used by Ostiak children.¹ Several pieces of amber, one of them bored with a hole, were lying in the shell-mound; the usual ornament, however, seems to have been the perforated teeth of animals strung on a string. Grewingk considered the station at Rinnekalln to be younger than that at Kunda, as no reindeer-bones were found at the former, the presumption being that the animal was extinct in Livland when the shell-mound was formed.² During one period of the neolithic period the reindeer seem to have ranged as far south as the district of Preussisch Eylau, or about lat. 54°30' N.

Considering the great area of the Baltic Provinces, the neolithic age is not very strongly represented. The chisels so common in Finland are rare; gouges, knives, spear- and arrow-heads are almost wanting. The infrequency of spear- and arrow-heads is doubtless owing to the rarity of flint, and the few well-formed lance-heads and daggers of such material were probably imported. Nearly all the axes are perforated for a shaft, and number about five hundred, of which about twenty are boat-shaped. The latter may have been imported from the south-west of Finland or from Sweden. Virchow believes the majority of the polished stone implements in the Baltic provinces belong to the Iron Period, for they are sometimes found in the same

¹ Martin, (2) p. 10, Fig. 5-13.

² Grewingk, (1) pp. 36, 37; Virchow, (1) pp. 398-433; Kharuzin, pp. 100-103.

grave with bronze and iron as late as the younger Period of Iron. The distribution of stone tools and weapons over the three provinces is far from uniform. With the exception of the islands of Oesel and Mohn, few finds have been made in Esthonia. They become more numerous in Livland, especially on the banks of the Dvina, but are more plentiful in Kurland, especially in the central and eastern districts. With regard to their type, Mr. J. R. Aspelin considers that the stone implements of the older and newer periods in the Baltic provinces so resemble those from Lithuania, Vitebsk, Kovno, Grodno, and Minsk, that they can scarcely be distinguished.¹

Though the evidence is scanty, there seems reason to believe that in the earlier part of the neolithic age the Baltic Provinces were uninhabited, at least permanently. No one had thought it worth while to peg out tribal claims to any part of them; they formed a sort of No Man's Land into which short-headed men from the east or long-headed men from the south could make temporary hunting or fishing excursions, but they did not come to stay.

GENERAL CONCLUSIONS.

The results, then, of a survey of the archæology of Northern and North Central Russia from the Gulf of Finland to the foot of the Ural chain may be summed up as follows. Along the lower course of the Oká dwelt a people whose pottery, sculpture, and methods of art connect them with tribes inhabiting what is now the government of Olónets, the west coast of the White Sea, part of Finland, the course

¹ Aspelin, (3) p. 6; Grewingk, (4) pp. 92-96.

of the Volkhov, the north coast of Esthonia, and Lake Burtneek in Livland. But though the civilisation of this huge region is practically the same, it covers a great space in time. It is difficult for us, who live in an age of new discoveries of the most extraordinary kind, and of great social changes, to realise that bodies of men can live century after century, millennium after millennium, without any sensible change in their mode of life. But it is so. Uncultivated human nature is so constituted that having once accommodated itself to circumstances, and shaken down into a groove, it is content to rub on as best it can, and to pass on the heritage of life to another generation without further thought. Isolated as the tribes were that inhabited Central Russia, empires might and did rise and fall without their knowledge; nations might and did pass along the great natural highway of the steppe that fringes the Black Sea, but no echo of the event reached the solitudes of Central Russia. It is not surprising, then, that we must believe that a long interval existed between the first settlement of Volósovo and the temporary station at Lake Burtneek, just as a great space of time must be imagined between the former and the stations on the Volga below Kazán. In the south-west of Finland we seem to have a Scandinavian people that could hardly have arrived later than 1500 B.C., a period when bronze was already known in Scandinavia and Central Europe. The Ladogan station may be quite as ancient, while the settlements on the Oká have all the appearance of being considerably older. About 500 B.C. is perhaps not too early to set the animal-headed picks of Olónets and Mezen. As perforated stone implements seem unknown at Rinnekaln this station is older than that date; while the

station at Kunda is still older than the last, but less ancient than that on the south shore of Lake Ladoga. The stations on the Volga, and certainly some in the Upper valley of the Kama, are very much later than that at Volósovo. The Volgan pottery differs from that found on the Oká and further west ; it seems to have more affinity with the ceramic products of the Kama valley, and the people of the Volga may have been somewhat different from those on the Oká and to the west of it. It is not unlikely that the domestic animals came from the steppe to the north and north-east of the Caspian, and with them would naturally come the owners, who might belong to different, though not absolutely alien, tribes. Though the civilisation and arts of the fishers and hunters on the Oká, as well as to the north and to the west of it, were at such a low stage that they were almost the same everywhere, the aborigines were not all of the same stock : some were long-headed, others short-headed. Yet considering the antiquity of man on the globe, an amalgamation of stocks could have taken place ages before any tribes took possession of any part of Eastern Europe. What language or languages, if more than one, these aborigines spoke it is impossible to say, though no doubt it belonged to the agglutinating class, and if there were several they had much in common. That some of the direct descendants of these people, both the long-headed and the short-headed, still exist among the Eastern Finns, I have tried to make highly probable. That both stocks originally issued from Asia seems almost certain, though we cannot prick off on the map the course of their migrations by pointing to a succession of archæological finds.

THE BRONZE AGE IN FINLAND.

The belief that a Scandinavian population existed in the south-west of Finland in neolithic times is strengthened by finding objects of the Bronze Age in that part of the country, though they are few in number. With the exception of two useful ornaments, all of them are weapons, consisting of five swords, seven daggers, one lance-head, two knives, six palstaves, eight socketed celts, two spectacle fibulæ, all of bronze, and one large copper arrow-head. As all are quite Swedish in character, and no moulds have been found, they must have been imported from Sweden. The only apparent exceptions are three swords of Central European type, but as these types are also known in Sweden, the weapons were probably brought to Finland by way of Scandinavia. Nearly all the objects came from the south-west corner of Finland, including the Åland Islands; from near the lower course of the river Kumo; from the lower course of the river Kyrö in the district of Vasa; or between Viborg and the west coast of Lake Ladoga. All were found south of lat. 64° N., save the large copper arrow-head, which was picked up as far north as about lat. $69^{\circ}30'$ N., only about a couple of dozen miles south of the Varanger Fjord. Nearly a third of these bronzes were found in cairn graves. Using the classification of Mr. O. Montelius, twelve of the weapons belong to his second period (1450–1250 B.C.); one socketed celt to the third period (1250–1050); four socketed celts to the fourth period (1050–850); and the remainder, including the spectacle fibulæ, to the fifth period (850–650). It is evident, then, that there existed an intermittent communication between

Finland and Sweden for several centuries, and it is to be noted that all the weapons of the second period, with one exception, came from the Åland Islands or from the extreme south-west angle of the country, from what is called Proper Finland. But these importations are not the only reasons for believing the south-west of Finland to have been settled by a Scandinavian people. Hundreds of cairn graves are found in a broad belt along the coast of the gulfs of Bothnia and Finland, in the islands of the southern and south-western coast, and in the Åland Islands. In smaller numbers they occur along the shores of lakes in the interior. The correspondence in external form, and partly in the internal structure, of these cairn graves in Finland and Sweden, especially in Uppland, is very striking. The cairns are found singly, in groups, or in a long row; they vary in size and height, the diameter ranging from 20 feet to 81 feet, and the height from 3 feet to 10 feet. In internal structure there are also differences. Many are disposed round a tall upright central stone, quite the same as in Uppland, Sweden, where the arrangement is characteristic of the Bronze Age. Others contain one or more kists of flagstones or of largish angular stones. Cineration was practised as a rule, if not always. At least, no skeletons have been found in any exploration conducted in a scientific manner, though in 1896 some peasants reported that on removing eighteen cairns preparatory to ploughing, two kists were laid bare containing unburnt human skeletons. In opening cairns unburnt bones of domestic and wild animals have often been met with, but unfortunately they have never been sufficiently examined. Not nearly all the cairns, however, are to be attributed to the Bronze Age, for a number of finds prove

that such sepulchres were still used in the older Iron Age.¹

As in neolithic times we found stone implements of certainly two distinct peoples, occupying on the whole different areas of Finland, so in the Bronze Age we find a few implements of a totally different type from anything in Scandinavia. They consist of two socketed celts with a socket of quadrangular or hexagonal section of Uralian or Siberian type, and at least four moulds, whole or fragmentary, for casting celts of similar type. Beginning from the north, one mould, resembling the type of celts from Anánino, was found almost on the Polar Circle, in the parish of Upper Torneå; half of another about half-way down the Uleå; and fragments of at least two moulds for celts, together with fragments of three other moulds, stone implements, flint flakes, sherds of pottery, and traces of fire-places, were discovered near Lake Uleå. One celt comes from Lucksele on the Umeå in Swedish Lapmark (Asp. No. 158), and another from the parish of Laukas in the government of Wasa, in the very centre of the country. But this last and most southerly example is much less characteristically Uralian or Siberian than any of the others.²

THE BRONZE AGE IN NORTHERN RUSSIA.

Though in Russia, as in Finland, there was no Bronze Age, strictly speaking, yet a few objects of this period have been discovered there, of which it is right to take notice.

¹ Hackman, pp. 355-359, 361-364, 400.

² *Ibid.* pp. 367, 368, 394-399.

There were found on the banks of the Pinega, not far from the White Sea, two socketed bronze battle-axes, ornamented with the head of a dragon at the hammer end, and at the end of the socket the head of a bird, probably an eagle, with its head turned in an opposite direction from that of the dragon (Asp. No. 240, 241). Though extremely alike, these weapons are not exactly the same. Another, hardly differing from No. 241, now in the collection of Count Uvárov, came from Elábuga,¹ where a fine socketed bronze pick, one end terminating in a boar's head (Asp. No. 242), was also found. In form none of these weapons, so far as I know, are quite like any that have been found in Siberia. But a head not unlike the dragon's is to be seen on a carved piece of wood from a grave of the early Iron Age in the Altai,² also on the handle of a knife from Baikalova on the Yenisei, and the ears are similarly treated on a double head forming the loop of a pendant, also from the district of Minusinsk.³

Not far from the village of Fatiánovo, about twenty-four miles north of Yaroslav, on the Volga, an ancient settlement and cemetery were uncovered, where all the implements were of stone, though the presence of a green stain of oxide of copper, a piece of bronze wire, a round copper disk, and three pieces of glass, show that it did not belong to the genuine neolithic age. The skeletons lay on their backs on a layer of ashes; at the head and feet were urns, generally placed mouth downwards. On investigation it turned out that the copper disk, which was thinner in the

¹ Uvárov, Katalog, Fig. 90, opp. p. 80.

² Radloff, vol. ii. Tafel 9, No. 1.

³ Martin, Pl. 15, No. 20; Pl. 30, No. 11.

middle and thicker at the rim, and about the size of a thick halfpenny, contained a core of iron, and that the copper was alloyed with 1·90 per cent. of lead. The copper wire seemed to have been hammered out without preparatory fusion, and then curled into a loop and passed through a bear's tooth (Asp. No. 132). Grinding and polishing stone had reached a high degree of development. Most of the perforated hammer-axes have a cutting edge that curves under in such a way that it terminates much nearer the axis of the hole than the upper angle (Asp. No. 97, 98). In form and decoration the pottery is very different from any that has hitherto been described. The urns have no handles or holes for suspension, and are generally globular, with a short neck of less diameter than across the centre of the greatest swell, and an everted lip. The largest found entire was 5·5 in. high, but some fragments must have belonged to much larger vessels. The decoration is confined to the upper part of the vessel, and consists of horizontal rows of short diagonal strokes, each row at a different angle from the one above and below it; of short vertical strokes in horizontal rows; rows of dog-tooth or of short crossed lines; sometimes the lines are made with a comb-like punch. The skulls were measured by Bogdanov, who remarked that as regards dimensions the Fatiánovan crania are nearer the long-headed *Kurgan* type than the small heads of the Ladogan station. The vertical diameter could only be measured in three instances, and these show a platycephalous skull. These crania are not essentially different from the long skulls in the Merian graves, though they do not belong to the type he considers Merian.¹

¹ Uvárov, pp. 399-411, 416-419.

In consequence of the platycephaly of the Fatiánovan crania I have compared them with three Ostiak crania measured by Dr. Sommer. The second female skull

	FATIÁNOVO CRANIA.					OSTIAK CRANIA. ¹		
	No. 1 F.	2 F.	3 M.	4 M.	5 M.	2726 F.	2727 M.	2729 M.
Horizontal curve .	515	495	530	540	520	506	517	521
Long diameter .	182	182	196	192	194	183	191	191
Trans. diameter .	137	134	136	146	134	135	131	135
Vert. diameter .	127	115	...	..	133	120	134	128
Orbit. width .	40	41	41	42	...	41	41	39
Orbit. height .	33	37	38	35	...	36	35	35
Nasal width .	47	51	58	53	...	53½	50½	53½
Nasal height .	24	25	25	24	...	30½	24½	26½
Cephal. index .	75·2	73·6	69·3	76·0	69·0	73·7	68·5	70·6
Vert. index .	69·7	63·1	...	...	68·5	65·5	70·1	67·0
Trans. vert. index .	92·7	85·8	...	...	99·2	88·8	102·2	94·8
Orbit. index .	82·5	90·2	92·6	83·3	...	87·8	85·3	89·7
Nasal index .	51·0	49·0	43·1	45·2	...	57·0	48·5	49·5

seems to be very like the female Ostiak skull, save that the latter is platyrhine and mesoseme, while* the former is mesorhine and megaseme. But as the oscillations of orbital and nasal indices in a given group of crania are generally very considerable, too great stress need not be laid on these differences. The first Ostiak male skull is the only orthocephalous example in the twelve measured by Sommer, their average height being 127 mm. and the vertical index 67·5; the average height of the female skull is 122 mm. and the vertical index is the same as in the male skull. On the whole, then, there seems to be a kinship between the two sets of crania. The pottery is certainly not European. In form, and even in ornament, these small globular pots resemble the small globular pots found by Mr. Heikel in excavating *Kurgans* on the river Tobol and at the old fort of Čuvaš, close to Tobolsk, just

¹ Sommer, (1) pp. 90-93.

below the junction with the Irtyš,¹ though these latter belong to a much later time than the pots from Fatiánovo. The district in which they were found is very near the Ostiak country still, and in former days the Ostiaks probably occupied it. The peculiar form of the cutting edge of the axe-hammers mentioned above was also noticed on an example or two from a prehistoric fort on the Sar in the same government of Yaroslav; another came from the district of Riečitsk (Minsk);² from Insarsk (Penza);³ from Yaransk (Viátka);³ from Laiševsk (Kazán);³ and from Bobruisk (Mogilev),⁴ though this last differs from the others in the rapid slope backwards of the cutting edge from its upper angle. The backward curve of the cutting edge is also characteristic of the battle-axes of the copper period in Hungary⁵ and of the axes from Koban in the Caucasus.⁶ The presence of an Ugrian people resembling the modern Ostiaks so far to the west in Russia at so early a date, before the end of the last era, has hardly been suspected hitherto; at least any belief of the sort was based on more or less doubtful etymologies of place-names, but now it seems to me fairly well established both on cranio-logical and archæological grounds.

About eighty miles due east of Fatiánovo, near the town of Galič, in the adjacent government of Kostroma, there were found in a clay pot six objects of pure copper of non-European types. They consist of a human figure (Fig. 11); a human mask surmounted by what looks like a flat disk,

¹ Cf. Uvárov, Pl. 28, figs. 322, 315, 316, with Heikel, Pl. xxvii. No. 11, 12; Pl. v. No. 6, 10.

² Uvárov, Pl. 40, No. 5078. ³ In the University Museum at Kazán.

⁴ Historical Museum, Moscow, Zala 2, Škaf 9, No. 340.

⁵ Fr. von Pulszky, *Die Kupferzeit in Ungarn*, pp. 404-406.

⁶ E. Chantre, *Recherches antropol. dans le Caucase*, vol. ii. Pl. i. ii. iii.

on which are reclining two animals with their heads turned outwards (Fig. 9); a knife with a handle ending in the head of a reptile, the grip being *à jour* and ornamented with horizontal and diagonal incisions; a long-backed, smooth, long-headed animal with a short tail, short legs, an open mouth and hollow inside (Asp. No. 299-303); a long, solid bead; a bracelet of round wire pointed at the ends and not closed; and an axe of a type found in several places in Eastern Russia. The human figure is ithyphallic, with arms bent and the hands meeting in front of the body; the knees are also bent and separated, being united at the feet by a cross bar. The head is large, the chin rather pointed and beardless, the mouth somewhat open, the eyes staring to the front, and the general expression is saturnine. The ears are projecting and pointed; on the top of the head lies what looks like a circular disk or a broad fillet, and from the centre of this, and on each side of the head, above the ears, issue projections shaped somewhat like the head of an axe.

A figure very similar to the above was found somewhere in the government of Perm, whether on the west or east side of the Urals is equally unknown (Fig. 12) (Asp. No. 304). The attitude is the same, the hands meeting in front of the body, the legs separated, the knees bent and the feet united by a transverse bar as in the last. The head is also large, with a pointed beardless chin; the mouth is also somewhat open, but the eyes seem to be shown by two lense-shaped holes. The ears are more like projecting knobs. The head is also surmounted by what looks like a flat disk or a fillet, out of which spring three broad ray-like projections, as well as on each side of the head above the eyes, at the point of each shoulder, and from the outside of

each upper arm about half-way down. It is of ruder and probably later work than the figure from near Galič, but it belongs to the same type, and no doubt was made by people of common origin, probably Ugrian, like those we seem to have found at Fatiánovo. A head-dress, the lower part of which resembles that of the two figures and the human mask, is also found on a semi-human-headed bird-god from a grave in the government of Tomsk (Fig. 10). Very similar representations of birds with a human face, sometimes with a full-length human figure on the breast of the bird, are far from uncommon in the government of Perm, where they are attributed to the Čudes. These bird-idols have been well discussed in great detail by Mr. Teploúkhov.

In the government of Perm no settlement has been found belonging to the period of Bronze; only a few objects have been found, several of which are of copper, and none of them come from places north of the Obva, or about lat. $58^{\circ} 30' N$. The only remarkable piece is a large, slightly curved bronze knife, the haft of which terminates in figures of three mountain sheep (Fig. 13). It belongs to a Yenisean type, and as it was found at Turbina, nearly opposite the inflow of the Čusovaya, it may have been imported by way of that river. The other objects are mostly of rude work and of local manufacture.¹

THE BRONZE AGE IN THE BALTIC PROVINCES.

Strictly speaking there was no age of Bronze in the Baltic Provinces, for there was no metal in the country from which it could be made. But the nine objects assigned

¹ Teploúkhov, (1) pp. 26-29.

to this period are interesting, in so far that they prove the country was visited by foreigners several centuries before the present era, and at various times. All the objects, consisting of a flanged celt, a palstaff, a socketed celt, two lance-heads, a tutulus, a spiral, and two massive arm-rings, were found near the coast, including the islands of Oesel and Mohn, or on the Dvina. Not all of them are of Scandinavian type. The flanged celt, with a cutting edge like a cheese-knife, from Altona on the Dvina (Asp. No. 401), is exactly like one from the Kurische Nehrung, and like another from Schillingen in the district of Tilsit. This, the palstaff of Swedish type from the island of Oesel (Asp. No. 399), the eared and socketed celt from Tuckum in Kurland, and perhaps the tutulus from Thula in Esthonia, belong to the second period of Montelius. The others are later, and perhaps the two massive arm-rings do not belong to the Bronze Period at all. From the rarity of bronze objects in the Baltic Provinces, as well as in East Prussia, though in a less degree, it is evident the stream of material civilisation, that flowed from south to north and fertilised Scandinavia to such a wonderful degree, left the north-east of Europe to all intents and purposes untouched. The little that found its way into the Baltic Provinces seems to have come for the most part from Scandinavia.¹

THE TRANSITION FROM BRONZE TO IRON.

In Finland, the Baltic Provinces, and Central Russia west of the longitude of Kazán, there are no cemeteries in which we can trace a distinct passage from the use of

¹ Hausmann, (2) pp. xii, xiii.

bronze to the use of iron. But eastwards, in that part of the valley of the Kama which forms the southern boundary of the government of Viátka, the case is otherwise. Near the old mouth of the Toima, where it fell into the Kama a little below the town of Elábuga, is the cemetery of Anánino, the approximate date of which is placed by Mr. Aspelin in the fourth century B.C. Here objects both of bronze and iron are found together, and, what is most important, with hardly an exception the types of the iron weapons and instruments are simply continuations of the older bronze forms. As we have seen above, the cemetery seems to overlie or, at any rate, to be in very close juxtaposition with, a still older neolithic settlement. Externally the site presented the appearance of an irregularly-shaped ridge of no great height or size, lying east and west, and without any indication that there were graves below; though the surface seems to have been strewn with flat slabs, on some of which human figures and inscriptions were carved. The first excavations were unfortunately executed in the most haphazard manner by persons ignorant of archæology and of the vast importance of the finds. In 1859 Mr. Alabin commenced operations by unearthing about fifty skeletons, most of them lying in groups of two and three. With four exceptions all had been laid with the head to the south, and only six were inhumed, while the others had undergone incomplete cremation. Traces of the action of fire on some of the objects showed that the deceased had been cremated with his clothes, weapons, and ornaments upon him. By the side of the male skeletons was placed a knife and a bronze socketed celt or a spear-head, on the breast arrow-heads; with women were deposited necklaces, beads, and other ornaments. Some had

bronze, others iron weapons, and the knife was usually at the left side, while the celt lay near the right hand. In the poorer graves only a knife and some clay vessels were found. In 1881 excavations were resumed, when an untouched sepulchre was opened containing ten skeletons, by the side of which were objects of stone, bronze, iron, and even silver, but no detailed account of the find has as yet been published.¹ The bronze axes and picks, the bronze and iron daggers, the bronze socketed celts and arrow-heads, the bronze and iron snaffles, the bronze scabbard-tips, and the small iron rather sickle-shaped knives, have all a Siberian facies, and all or most of them can be matched by types or examples from the valley of the Yenisei. Bronze buttons, ornamented almost as in Fig. 14, are also found at Koban, at the north end of the pass of Dariel (Fig. 15). The pottery is made of a black, rather compact clay, often with an admixture of comminuted shells. The vessels are bowl-shaped, with a rounded bottom, and the ornament is disposed below the rim. The decoration is given by a row of small holes at intervals; by several rows of short gashes; by a zone of punch-marks alternately vertical and horizontal; by parallel lines of fine prick-marks arranged in zigzags or horizontally. On one small bowl, however, in the University Museum at Kazán, below the cord pattern and a row of small holes that run under the rim, is a row of quadrupeds, perhaps horses, with their heads to the right. The form of the animals is rendered by lines that imitate the cord pattern, and in shape the animals are perfectly geometrical, as if they had been copied from a piece of embroidery. The head is triangular, connected by two

¹ Spitsin, pp. 26-30.

vertical lines with a parallelogram, which represents the body, and the whole is supported by four vertical lines to represent the legs. The tail is formed by a vertical prolongation of the hindmost leg. A few bone arrow-heads and flint implements seem also to have been found in the graves. Two partly polished whitish flint gouges, now in the University Museum at Kazán, are quite like others from the neolithic settlements on the Volga below Kazán, but there appears to be a doubt whether they may not belong to the older neolithic station that underlay the cemetery.

So far as metallic objects are concerned, the finds at Anánino still stand alone in the valley of the Kama, but along that portion of the river that fringes the southern boundary of the government of Viátka, and up the Viátka river as far as the junction of the Pižma, there is a series of prehistoric forts, where the instruments and ornaments are almost entirely of bone, which, in Mr. Spitsin's opinion, belong to the same civilisation as that of Anánino, and approximately to the same period. The inhabitants of these forts seem to have been chiefly hunters, though they were partly pastoral, and from the immense accumulation of bones within the forts these are distinguished by the term 'ossiferous' forts. The commonest bones are those of the reindeer, elk, horse, bear, and beaver; less frequent are those of the pig, horned cattle, hare, otter, fox, wolf, martin, sheep, dog, of birds and fish. Though by far the greater number of archæological objects, such as battle-hammers, arrow-heads, knives, knife-handles, spoons, awls, fish-hooks, needles, combs, beads, and playthings, were of bone, yet bronze, copper, and iron were not unknown. Six bronze, earless, socketed celts, one of Anánino type, and most of

them devoid of ornament were found; also several iron knives and awls of quadrangular section, but only one arrow-head and one lance-head of that metal. Part of a mould for a celt and crucibles of clay show that metallurgy was understood, though little practised from dearth of metal; for there are no indications that the copper mines in the government of Viátka were worked in prehistoric times. Bone arrow-heads were in great abundance; the commonest were of quadrangular or triangular section with a short stem. Fish-hooks were not uncommon, but harpoons were rare, and of different forms. Spoons and combs were also rare, but the latter were always decorated. For ornament they used bear's teeth, small knuckle-bones, perforated bone beads, as well as beads of bronze, glass, and, at one place, of nephrite. The carving in bone is very skillfully executed, and is even artistic. For decorating a knife-handle or other object the favourite animal head was that of the elk, though also of the bear, fox, boar, horse, and even of the dragon. In the forts along the river Viátka objects of stone were few in number, and chiefly confined to flint arrow-heads, but the forts along the Kama were much richer in this respect, and yielded a considerable number of wedge-shaped axes and chisels of the Orišut type. Yet no flint scrapers, knives, or nuclei were found, showing that the genuine neolithic civilisation was a thing of the past. In Mr. Spitsin's opinion, the stone chisels, the bone battle-hammers, the bone arrow-heads, especially those of triangular section, and the bone awls, are simply reproductions in bone of bronze prototypes, more especially of Anánino type. Be this as it may, it cannot be denied that one of the perforated stone disks or whorls, on which an animal is carved (Fig. 18) bears a wonderful likeness to the bronze

cheek of a bit from Anánino (Fig. 19) (Asp. No. 474). Yet the pottery from the forts is very unlike what is found at Anánino; the former is large, strong, resonant when struck, and coarse as regards ornament, while the latter is fine, fragile, and often provided with a complicated and ingenious design. The vessels found in the forts have a round bottom, a mouth like a caldron, with a diameter of from $3\frac{1}{2}$ feet to 2 feet, though there were also smaller vessels, the smallest of which had a diameter of only $2\frac{1}{2}$ inches. The ornament on the large vessels was usually made with a six-cogged punch; the cord pattern was rarely used, and was sometimes accompanied by small circles. Mr. Spitsin gives no illustrations of these designs, but probably the small circles are the same as are sometimes found on the pottery of the so-called Čudish forts in the upper part of the Čeptsa valley, where they have a diameter of from 6 to 7 mm., and seem to be formed by hand with a pointed tool. Small circles of similar dimensions, but formed by small dots, are to be seen on a sherd from Kudimkor, in the district of Solikamsk, Perm. But otherwise no antiquities of 'Čudish' type are found in the ossiferous forts, showing that they belong to an earlier period,¹ that approximately corresponds with the older Iron Age in Finland and the Baltic Provinces, though it may have begun rather earlier.

THE EARLIER IRON AGE IN FINLAND.

In the earlier Iron Age of Europe, what is known as the Hallstadt and La Tène periods, extending from about 800 B.C. to about the end of the last era, though fairly well

¹ Spitsin, pp. 41-47.

represented in Denmark and Scandinavia, scarcely touched East Prussia, and never penetrated into the Baltic Provinces or into Finland. Except in Finland, it was not till after the beginning of the present era that these outlying countries began to be regularly visited by traders, who bartered arms and ornaments for the products of the country, which must have mainly consisted in furs and pelts. By means of this trade these remote regions were ultimately won over to a completely European civilisation. The oldest objects of the Iron Age are three bronze neck-rings from the village of Panelia in the government of Åbo. Similar rings are known in Uppland, Öland, Gotland, and also in Denmark. In Sweden they belong to the beginning of the Age of Iron (500–300 B.C.).¹ Then there is a gap till the beginning of the Christian era.

In J. R. Aspelin's opinion the population whose cairn graves are found in the south-west of Finland must be considered a branch of the contemporary inhabitants of Sweden.² The oldest relics of the Iron Age in Finland are so similar to those of the Iron Age in Scandinavia before 700 A.D. that it is impossible to explain the fact otherwise than by a Gothic settlement. For no people can borrow a completely foreign civilisation without modifying the forms in some way or other in conformity with their own peculiar genius. These forms may be improved upon, or they may become deteriorated, but they cannot remain exactly the same.³ It was formerly believed that from about the seventh to the middle of the ninth century a gap existed in the archaeological record, for there were no finds to connect the older with the totally new types of the later Iron Age. This barren interval was explained

¹ Hackman, pp. 402-404. ² Aspelin, (1) p. 355. ³ Aspelin, (3) p. 140.

by supposing that a great change had taken place in the population; that the old Scandinavian population had migrated and their place had been taken by the ancestors of the existing Finns, who now entered the country for the first time. But Mr. Hackman, writing in 1897, and well conversant with the unceasing discoveries of new archæological material in Finland, says that a study of the antiquities of the Iron Age shows us a continual local development, and therefore no break that might be referred to a sudden and tumultuous immigration of a foreign people. We can only prove in the later finds a gradual weakening of Scandinavian characteristics. Yet the finds of the latest heathen period still exhibit a Scandinavian influence. The immigration of the Finns can therefore have only taken place slowly in the course of several centuries. The old Scandinavian culture that existed since the Stone and Bronze Ages was therefore not abruptly broken and replaced by a new civilisation. Archæologically speaking, the Finns have far rather appropriated in part the forms of the first and then further developed them during continual contact with Scandinavian neighbours.¹

THE EARLIER IRON AGE IN THE BALTIC PROVINCES.

Here, as in Finland, Roman coins from Augustus to the year 364 A.D. occasionally assist the archæologist in approximately dating some of the finds. No more money is found till the eighth century, when Arabic coins between 725 and 1011 A.D. begin to make their appearance. These are followed by Anglo-Saxon coins from 802 to 1040; by Byzantine coins from 868 to 1014; and by German money

¹ Hackman, pp. 366, 367.

struck at Utrecht, Cologne, Trêves, Strasburg, etc., dating from 823 to 1180. For the most part the Roman coins were found in places near the coast, as at Reval, at Werder opposite the Isle of Mohn, in the islands of Mohn, Oesel, and Filsund, at Dreimannsdorf north of the Salis, at the mouth of the Dvina, at Hasau, Kapseden, Grobin, and Libau; or along the banks of the larger rivers that served as water-ways into the interior, as at Kabbina on the Lower Embach, near Treyden on the Livlandish Aa, at Riga, at Lennewaden on the Dvina, and at Bornsmünde on the Kurlandish Aa.¹

In Esthonia, the most northerly of the Provinces, the archæological record of the first Iron Period, dating from about 100 to 600 A.D. is still lamentably incomplete, the entire western half of it being practically a blank sheet. But in the north-east corner of the province four interesting finds have been made at Malla, Türpsal, Kuckers, and Türsel; at Facht, a few miles east of Reval; at Ottenküll in the east centre, and at Waetz in the south centre. All these finds, save the one from Malla, came from ancient cemeteries. According to Dr. Hausmann, Director of the Museum at Dorpat, the cemetery at Kuckers belongs to the second century, and perhaps partly to the third; Ottenküll to the second; Türpsal was used from the second to the fifth century; the greater part of the find at Malla belongs to the third and fourth centuries,² and Türsel also begins about the third century.

As considerable ethnological importance is attached to the manner in which a people disposes of its dead and constructs its graves, it is necessary to give a brief account of one or two of the burial-places. For it must be premised that only the one at Türpsal has been explored and

¹ Grewingk, (4) map; Kharuzin, p. 94. ² Hausmann, (1) pp. 48, 53.

recorded with anything like scientific accuracy. The burial-place found here was in a low natural mound, running east and west, about 40 yards long, 12 yards wide, and close to the high-road from Reval to Narva. On removing the upper layer of soil were disclosed three areas, marked off by large blocks of granite. The easterly compartment was oblong, the central one was of irregular form, but approximated a narrow oblong figure, and was the smaller of the three; the westerly area was also of irregular form, the north side being considerably longer than the south side, so that the long sides, running north and south, were not parallel. The eastern compartment measured 19 feet 6 inches long by 9 feet 9 inches wide, and all three were paved with blocks of stone. Between the three compartments were borders of gravel about 3 feet 3 inches wide, containing no sepulchral remains.

In the western and central compartments the dead were buried at no great depth, almost without any accompanying ornaments, sometimes singly, sometimes piled one on the top of the other. Over them was laid a pavement of large stones. In the eastern and probably later area there were no skeletons, but between the stones of the pavement ornaments and numerous bones and teeth of young and old were scattered in confusion. Most of these had not been cremated, though a few burnt bones were found among them. In the case of two skeletons in the western and central compartments it was possible to observe that they had been laid with the head to the south and the feet to the north, and that one of them, a robust man of about thirty years of age, only measured 4 feet 10½ inches in height. The skulls, unfortunately, were all crushed.¹

¹ Hausmann, (1) pp. 3-7.

The cemetery of Türsel, about sixteen miles west of Narva, and less than a mile from the coast, lies by the side of the highway from Narva to Reval. It consisted of an oval stone heap, lying east and west, about 50 feet long by 20 feet wide and 3 feet high, overgrown with turf. The area over which the mound was raised seems first to have been paved with stones, for between them were found cremated human remains, as well as the ornaments and other objects they had used when alive. The outline of the cemetery appears to have been marked by a row of stones, and two rows of stones running north and south divided it into compartments.¹ From an archæological point of view the finds from the two contiguous cemeteries of Türsal and Kuckers are closely related, though also distinguished by well-marked differences; so too those of Türsel and Malla. The most interesting fact connected with Kuckers and Türsal is the geographical distribution of some of the fibulæ found there. Most of them are absent from contemporary grave-finds in Livland and Kurland, are hardly known in Sweden, but were common in the Roman provinces north of the Alps in the first century, are plentiful in the island of Bornholm, and not infrequent in West Prussia. Again, one fibula from Türsal is not known elsewhere in the Baltic Provinces, nor apparently in East Prussia, but analogies are to be found for it at Darzau in Hannover. So too object No. 6 in Table VIII.,² a bangle of thick bronze wire, thicker in the middle, terminating in round knobs, ranging as far south as Auzeem in Livland, only recurs at Rondsén, near Graudentz in West Prussia, in a grave of the second century. And a semicircular knife or razor from Türsal,

¹ Grewingk, (2) pp. 9, 10.

² Opp. p. 110.

though the only one known in the Baltic Provinces, is common in Prussian graves.¹ This has suggested the idea that some of the objects found near the north coast of Esthonia were imported by a sea route from the south-west part of the Baltic as early as the second century. That this is not impossible will be touched upon in a subsequent chapter. But some of the articles may have come by land from the south. In Table VIII. it will be seen that object No. 1, a hook fibula of the earliest type known in the Baltic Provinces, is found at several intermediate stations in Livland, as well as at Santen in Kurland. In the Museums at Königsberg and Dantzic I have noticed several of the same type, with the same ornamentation on the arch, only differing in having the upper end of the fibula undecorated and more splayed at the top—the foot, according to the quaint but erroneous terminology of the late Dr. Tischler,—from Kainsvikus (Insterburg), Hol-länderie (Wehlau), from three places in Samland, and from Kleschkau near Dantzic. They are also found elsewhere in East Prussia.

None of the graves in the province show any signs of transition from a stone to an iron age. Of course it is possible that future exploration may introduce us to graves in which stone weapons are also present, but so far as the evidence as yet goes the change seems to have been made by totally discarding the old order and plunging headlong into the new civilisation with all the fervour of new converts. The presence of the tooth of a sheep and a pig at Türpsal shows that these domestic animals were bred in the country, no doubt before the introduction of iron; and the fibulæ, apart from a shred or two of cloth from Malla,

¹ Hausmann, (1) pp. 25-29, 35, 39.

are enough to prove that the natives wore woollen clothes, and that the women could spin, weave, and sew. Pottery was little used; only a very few sherds, one piece ornamented with very shallow irregular lines, were picked up at Türsel, but not elsewhere. The chief objects deposited with the dead were ornaments: fibulæ of diverse forms, finger-rings in abundance, neck- and arm-rings of different patterns and sizes for children and adults, but pendants and glass beads were few in number. The traders that brought them had probably parted with most of their stock before getting so far north. Arms and tools of iron were rare. At Kuckers there were only knives of simple form, but at Türrpsal, Türsel, and Ottenküll, besides these, were one or two lance-heads and celts, a semicircular knife or razor, an awl and a needle of iron, but no axes. Perhaps the stone axe was still in use, though none was deposited with the dead. About the fifth century arms were more abundant; at Haakhof, nearly half way between Türsel and Kunda, a hoard of that period was discovered, buried about a foot below the surface. It consisted of forty-eight socketed lance-heads, twenty-two sickle-shaped knives, with short, bent tangs, nine celts, two axes, and a fragment of a double-edged sword. So, even as late as the fifth century, the iron axe seems to have been far from common.

From Dr. Hausmann's Catalogue of the Archæological Congress, held at Riga in 1896, I have compiled Table VIII. to give an idea of the distribution over the three provinces of various types of fibulæ, neck- and finger-rings, arm-rings or bangles, large pins, etc., ranging in date from about the second to the fifth or sixth century. From this it appears that out of twenty-one objects from finds in Esthonia, five are confined to that province, sixteen pass the modern

TABLE VIII.

ABBREVIATIONS.—*s.* = stone setting; *c.* = with cremation. *s.r.* = stone row-grave. *m.* = mound-grave; *i.* = with inhumation.

[illegible]

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frontier, though two of these do not go far beyond it ; only two reach the south of Livland, and only two cross over into Kurland. In Livland, out of thirty-nine objects, seventeen are confined to the province, sixteen are likewise common to Esthonia, and only eight also occur in Kurland. But in Table VIII. both the objects No. 18, 20, one of which stops at Vellakravand and the other at Dahlen, after skipping Kurland, reappear at Oberhof in East Prussia, in the district of Memel. And the pendant No. 26, which stops short at Ayakar, crops up with very slight change at Heydenkrug in East Prussia, but north of the Niemen. Lastly, in Kurland, out of twelve objects, four are peculiar to the province, seven also belong to Livland, and only two to Esthonia. Hence we find from the very beginning of the new Iron Age civilisation certain provincial differences in the ornamental objects used in the three provinces, and that the connection between Esthonia and Livland was closer than between Livland and Kurland. As there are no iron ores in the Baltic Provinces, and none nearer than in the government of Vilna, all the earlier objects of iron or bronze, now alloyed with zinc and lead, must have been imported from abroad. After a time the natives learnt to work in metal on their own account, but before they began to do so objects of the second century that are special to one province—such as Table VIII. Nos. 8, 9, 10, 11,—can only be accounted for on the supposition either that they came from quite different trade centres, or from the same centre on different occasions separated by a few years.

In Livland the sepulchral arrangements are not quite the same as in Esthonia. Lying mainly in the north and centre of the province, there are cemeteries from 80 feet to

325 feet long, running east and west, surrounded by a low wall of dry stones, and divided into a good many compartments by parallel rows of stones, running north and south, that were successively added as occasion required.¹ The cremated remains, and the objects damaged by fire that accompanied them, seem sometimes to have been paved over with stones, over which was heaped a low cairn from 4 feet to 5 feet high. Grewingk termed these 'ship-graves,' under the mistaken impression that the external form of these burial-places had the form of a hull, and that the shorter transverse rows were intended to represent rowing benches. More accurate measurements and more exact plans have now shown that he was mistaken, and archæologists have therefore abandoned the term. They are now termed stone row-graves with cremation, and stone settings with cremation. No cinerary urns are found in these cemeteries, though there are sometimes sherds of pottery. An exception to this mode of burial is known at Auzeem (Gr. Roop), where a kist grave was opened containing merely an amber button.

In Kurland there are again differences. In the north-west corner of the province, not far from the coast of the Gulf of Riga, at Musching, Widser, and Nogallen (parish of Erwahlen) there are cairns about 60 feet long, 18 feet broad, and from 1 to 4 feet high, running north-west and south-east, and known to the natives as *Vella laiva*, or Devil's Ships. When some of them were explored by Professor Grewingk they were found to contain small kists about 10 inches square, in each of which stood a cinerary urn containing ashes and fragments of charred human bones. The only object found with them lay in an urn at Widser, and was supposed

¹ Hausmann, (2) p. xix.

to be a metallic blade about a finger in length. But it is now lost, and doubts are thrown upon its existence at all.¹ At New Selburg mention is also made of a kist grave, covered with a large stone, in which stood eighteen cinerary urns containing burnt bones, while at Santen (Kandau district) the uncremated skeleton lay on the level of the ground in the direction from west to east under a mound from 5 feet to 6 feet high, and each body had a grave to itself.² But on the whole our knowledge of sepulchral arrangements in Kurland is very uncertain and incomplete. It is certain that graves were sometimes surrounded or covered over with stones, and though cremation is proved at some places, such as Kapseden and Schlagunen, yet on the whole inhumation under mounds, such as are found at Herbergen, Renneberg, Selburg, and Sonnaxt, seems to have prevailed in the province.³ So too further south, in the district of Memel, in the great cemeteries of Oberhof and Schernen, inhumation was practised in the first five centuries of the Christian era. But here the cemeteries present a network of stone circles and compartments, sometimes touching each other, and with the enclosed areas unpaved, wherein they differ from the cemeteries in Samland, in which the areas are paved with stones. All these places of burial are flat fields without any mound to mark the presence of a grave.

It has already been noticed that very little pottery was used in Esthonia. The same remark applies not only to Livland and Kurland, the urns at Kapseden and Musching being a rare exception, but also to the cemetery of Oberhof on the north side of the Niemen. It is quite otherwise in the rest of East Prussia south of that river;

¹ Grewingk, (4) pp. 2-27.

² Kharuzin, pp. 154, 159.

³ Hausmann, (2) p. xix.

there large, well-made urns of many diverse shapes are of constant occurrence in the graves of the first four or five centuries of the present era.

From about 600 to 800 A.D. there is almost a gap in the archæological record of the Baltic Provinces, just as in East Prussia, though in each of the three provinces there are common places of burial in which objects of the earlier and later period are found. For instance, the cemetery of Türsel in Esthonia was used for many centuries. Subsequent excavations to those already mentioned showed that cremation, which prevailed in the older period, was gradually replaced by inhumation, and coincident with this there was a change, of course, in the character of the objects deposited with the dead. Mr. Viskovatov, who conducted the excavation, came to the conclusion that Türsel was used as late as the thirteenth, perhaps down to the fifteenth century,¹ though we have seen that it originated in the third century. It is possible, however, that the place was not used quite uninterruptedly for ten or more centuries as a place of burial, for the area over which it extends is of small size. The stone row-grave with cremation at Waetz has also furnished objects belonging to both periods.²

In North Livland, in the part inhabited by Finns in the twelfth century, there are likewise cemeteries with a mixed inventory of old and new. The northern part of the great cairn grave at Pajus showed two or three distinct stone rows, and within them were objects dating from about the third to the fifth century. The larger remaining sepulchral area was surrounded by a very strong dry wall of large stones, and within it no transverse rows could be traced. This enclosed space was afterwards heaped over with stones.

¹ Kharuzin, pp. 149, 175.

² Hausmann, (2) p. lxiii.

Though a few articles of the older period were found here, the great majority of them belonged to the later period. At Allats-Kivi there is a large stone-row cemetery with cremation, the long axis of which lies east and west, while most of the transverse rows run north and south. Between these lay many bones, most of them showing marks of fire. But here there were few objects of the older time ; all the other numerous ornaments, etc., belonged to the newer period. This cemetery is of great interest, as it is the latest known of its class. Close beside this cemetery lay another, belonging entirely to the later period (700-1200 A.D.), in which one or more bodies were laid uncremated in a shallow grave over which a mound was raised. One male skeleton lay with the head to the north and the feet to the south, another was orientated from west to east.¹ Two skulls from this cemetery have already been spoken of at p. 47, and shown to be far removed from the Finnish type. Although Dr. Hausmann attributes this cemetery positively to the Ests, it seems to me somewhat doubtful, not only on account of the skulls, but also of the mode of burial, which resembles that found on undoubted Lettish territory, such as at Ludsen in the government of Vitebsk and in Kurland.

Transition finds which seem to point to uninterrupted occupation in Lettish Livland have been found at Kaipen and Kajenhof, both in the district of Sissegal, at Ronneburg Strante, Odensee, and Odsen, as well as at Jasmuiša and Ludsen in the government of Vitebsk, which formed part of Livland till 1660. In Kurland, too, they are known in several places, such as Preekuln, Autz, Ilen, Fockenhof, Schlagunen, Alt Raden, Zeemalden, and Selburg. At all

¹ Hausmann, (2) pp. lxi, lxii.

these places, so far as is known, the mode of burial was inhumation, which helps to connect them with the older graves, where a similar method of interment was practised.¹

It is unnecessary to pursue the subject further, for during the later period there were certainly Finns in the Baltic Provinces. The problem to be solved is, When did they arrive? and does the archæology of this region for the first five centuries of the present era lead us to suppose they made their first appearance during that interval of time or subsequently? Grewingk attributed to Goths and Scandinavians the *Vella laiva* at Musching and the thirty or more 'ship-graves' in Esthonia and Livland. But as the 'ship-grave' theory was founded on inexact plans and preconceived ideas, apart from the fact that the Scandinavian 'ship-graves' belong to much later time, his arguments fall to the ground. Mr. O. Montelius and J. R. Aspelin believe the Baltic Provinces to have been solely inhabited by a Gothic or Teutonic people till about the year 400 A.D., because on the whole the types of the archæological objects found in these Provinces are also known on Teutonic soil. Professor Hausmann considers this theory unproved, and Dr. Kharuzin is inclined to believe some of the graves in Esthonia belonged to an Esthonian (Finnish) people. It is clear, however, that, in a non-metalliferous country, when a new civilisation that includes the use of metals is introduced, the natives for a long time must depend on strangers for every metallic object they possess, for it would not be in the interest of strange traders to teach the natives the art of metallurgy. As from a study of archæological objects alone we cannot solve the question, we must next take

¹ Hausmann, (2) pp. xlvii, xlviii, xxv.

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into consideration the modes of burial that prevailed in various parts of the Provinces. Comparing the description given above of the cairn graves in Finland, that lasted through the Bronze into the Iron Age, and were constructed by a Scandinavian people, with the description of the compartment graves at Türpsal and Türsel in Esthonia, we find little in common, and many important differences. But the structure of the graves in North Livland does not seem to differ much from those in Esthonia, and the method prevalent in Livland can be traced as far south as Ronneburg to the east and Auzeem to the west. A line drawn between these two places is only about twenty miles south of the boundary between the Esthonians and the Letts about the year 1250. An inspection, too, of Table VIII. shows there was considerably more intercourse between Esthonia and Livland north of this line than between the northern and southern halves of the latter province. Unfortunately little or nothing seems to be known of the mode of sepulchre south of this line till we reach Kurland, though the single kist grave at Auzeem points to a very different type from that which exists in the northern half of Livland. Though contemporary, the mound graves with inhumation in Kurland are evidently of a very different character from the compartment graves in Esthonia and the northern half of Livland. We seem then to be in the presence of two distinct peoples, that divided the Baltic Provinces nearly equally between them. And what is more, they seem tranquilly to have remained there from the beginning of the Christian era till the present time. For the passage from the older to the younger Iron Age brought with it no change of sepulchral construction at Allats-Kivi, while at Türsel,

Waets, and Pajus the old places of interment were used in the younger period. In Kurland, too, there are transition finds that seem to attest that no alteration had taken place in the native population. With regard to this province, and perhaps the south of Livland, it seems highly probable that the population was of Letto-Lithuanian stock, as is now the case. With regard to the northern half of the Provinces, the population was probably Finnish—at any rate in part. Though this view is entirely opposed to that held by Finnish historians and archæologists of the highest repute, it does not seem to me impossible, when we remember that, if Dr. Virchow is correct, there were Finns at Rinnekaln, though only temporarily, in the neolithic age, at a time to which we have found reason to assign a date earlier than 500 B.C. The main objection to this theory is that nothing attributable to the earlier Iron Age has been found east of the Narva, though Finns were probably living near the head of the Gulf of Finland all the time. But it may be there was an uninhabited tract for a considerable distance east of the Narva, which prevented trade articles from being distributed in that direction. And at any rate, in the future, finds of this period may be brought to light. That a Finnish people were not the earliest settlers in this region was shown in the last chapter, and also that from their practice of carrying off the women and children there must have been in every clan a certain percentage of Finnish-speaking lads and grown-up girls that had no Finnish blood in their veins at all. A practice of this kind carried on for generations, till the whole non-Finnish people had been absorbed, would work immense changes on the craniology of the invaders. The Finns that first entered the province

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probably filtered in silently and imperceptibly in small parties round both ends of Lake Peipus, the country being so spacious and thinly populated that they could live in many parts of it without even attracting the attention of the original inhabitants. But in course of time, when their numbers increased, they began to attack the earlier settlers, and eventually supplanted them altogether. If, as I believe probable, the population of the northern half of the Baltic Provinces was partly, perhaps predominantly, Finnish in the second century A.D., the first appearance of the Finns must be placed earlier. Corroboration of this view will be found in a subsequent chapter.

THE EARLIER IRON AGE IN EASTERN RUSSIA.

So far as our present knowledge extends, traces of the early Iron Age in that part of Russia proper where we have found remains of a neolithic, and bronze or copper period, are very scanty. Isolated specimens may have been discovered here and there, but no cemetery, no great hoard of objects. At Mokšansk and Saransk, in the government of Penza, Roman coins of the first two centuries have been dug up at various times, showing that the inhabitants, who may possibly have been Mordvins, were not quite out of touch with the outer world. With Roman money no doubt other products of civilisation found their way into the country. But on the whole the huge region stretching diagonally from the head of the Gulf of Finland to the great bend of the Volga seems to have been destitute of iron, or nearly so, till introduced by a trade that may have arisen about the seventh or eighth century, which flourished vigorously in the ninth and tenth centuries, and was

directed along the Volga from Bolgari westwards to the head of the Gulf of Finland. Before this time the Finnish population that lived between these two geographical points were probably in a transition state, such as we have found on the river Viátka and on a portion of the Kama. We may suppose that mainly they still employed instruments of stone and bone, though they were glad to acquire at rare intervals articles of copper and iron from more advanced Eastern neighbours, for they had not yet learned to extract iron directly from the ore. The find at Diákovo, near Moscow, already referred to, belongs perhaps to this period. That iron was known earlier on the Kama than elsewhere in Northern and Central Russia we have already seen. So it is not surprising that on the same river, though a good deal higher up, and on the opposite bank, is the only station of the earlier Iron Age as yet known in the centre and east of Russia in Europe. It is situated close to the hamlet of Gliadénova, some fifteen miles west of Perm. Within the ditch and rampart of a prehistoric or Čudish fort constructed on a projecting tongue of high ground with precipitous slopes on all sides but one, the northern slope being formed by the ancient bank of the Kama, now some two miles to the north, is an open space, covering about 270 square metres, thickly covered with ashes and burnt animal bones.

During the excavations conducted by Mr. Novokreščennikh in 1896 and 1897 about 23,000 objects were brought to light. They were found at no great depth, amid fragments of bone and the ashes of burnt wood. The site seems to have been a place of sacrifice, and the objects discovered may have been votive offerings; they were of gold, bronze, iron, flint, bone, and included innumerable glass



THE EXCAVATIONS AT GLIADÉNOVA: MR. NOVOKREŠČENNĬKH IN
MIDDLE DISTANCE.



GLIADÉNOVA WITH THE KAMA IN THE DISTANCE—LOOKING NORTH.

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beads. The most interesting discovery consisted in two Indo-Bactrian coins. One is of Kadphises I., whose reign is placed in the last half of the century preceding the Christian era, the other is of later date, but they allow the finds to be placed in the second or third century A.D. The gold objects were only three in number, the last found being a small ear-ring. The bronze ear-rings were generally of thin wire. In one of them the pendant is of wire coiled into a slightly truncated cone (Fig. 16). Most of the bronze objects are of the rudest possible art, consisting of human and animal figures, or representations of birds, snakes, and bees cut out of sheet bronze. Those in cast bronze are greatly superior. Sometimes the figure of two human figures, or of an animal, is given in low relief on a round flat disk of bronze provided with a ring of suspension. The best of the cast objects is the head of a beardless man (Fig. 17) with a singular head-dress and two—one is broken off—depending bands, ornamented with horizontal grooves at intervals. Were it not for the horizontal direction of the grooves one might be tempted to take them for two plaits of hair, such as are given in a ruder form in Fig. 20. Formerly the Ostiaks and Voguls wore their hair in two tails, men as well as women. There are also several good castings, such as Fig. 22, representing the head and shoulders of a bear in high relief, enclosed in a frame with a cord pattern running round the outer edge. These figures are of various dimensions, and some have a ring of suspension. One of these, in which none of the metal is cut through, resembles, as indeed they all do in general type, a bear's head and shoulders, figured by Aspelin, No. 569, also from Perm. The conventional mode of showing the muscles of the fore-arm and

hind-quarters of a bear (Fig. 24) is also found in two later and still more conventionalised Permian examples figured by Aspelin, No. 551, 552, both from the Pečora. The best of the representations of birds, generally with a human face on its breast, are also cast. The horned owl (Fig. 23) with a human face on its breast, the single bird (Fig. 26), and the double birds (Fig. 27), all belong to the same general type as the single-headed birds (Asp. No. 529-531) from the district of Perm and from the Pečora, the two-headed bird (Teploukhov, (1) Fig. 3) from the district of Čerdin (Perm), and Fig. 10 from Tomsk. Fig. 28, though difficult to make out, when complete may have represented a triple-headed bird, though the head on the right is more like that of an animal—with a human face between its two legs, and two clawed feet. Mr. Teploukhov also figures a three-headed bird with a human face between its legs, and taloned feet, which was found in the district of Čerdin. Fig. 25 is the upper part of a water-bird in full relief, and resembles a form that is not unusual in the Čudish antiquities of a much later time. Other bird-forms cut out of sheet bronze might stand for the prototypes from which highly debased forms such as Aspelin No. 588-590 originally sprang. There are several representations of men on horseback (Fig. 30), but all of very rude workmanship; the bar that unites the feet of the horse is noteworthy, as it recalls the bar that unites the feet of the human statuettes from Galič and the government of Perm (Figs. 11 and 12). Sometimes the rider is shown sitting sideways, as in Fig. 31, though here the animal is not a horse, and the rider has a boss on his chest in the form of a coiled snake. One of the large circular disks with a ring of suspension represents a human figure

with his hair in two thick plaits, like two ropes, on each side of his head, holding in his arms a large fish and standing on a quadruped of very uncertain species. In one instance two detached human figures, cast in full relief, are enclosed in a frame slightly arched at the top. The human figures cut out of sheet bronze are very rude, *e.g.* Fig. 21; sometimes they are in pairs of a man and woman; sometimes singly, when the phallus is occasionally a salient feature. In the same material are silhouettes of bears, horses, elks without horns, nondescript animals, snakes coiled and in other positions, birds and bees or large flies. Other objects of bronze are arrow-heads; flat buttons of various sizes with loop underneath; double buttons coupled by a short bar, each boss of the button being surrounded by a cord pattern in relief (Fig. 29); round metal disks about an inch in diameter with a hole in the centre, and occasionally ornamented with a few incised lines (Fig. 33) or a rude human figure. One ornament is a circular disk with seven small rings distributed round its circumference (Fig. 32). Flat bronze ribbons rolled into spiral cylinders an inch or more long were also destined for ornament.

The iron objects were arrow-heads, some with three flanges, and very small iron knives with a straightish back, a blade that curved slightly inwards, and a short tang. Similar knives are found at Čmi, near Vladikavkas, and they closely resemble a type very common at a later period in the government of Perm, as well as at Bolgari and Biliársk. The large and small glass beads, containing a film of gold leaf, are quite like those from the Čudish finds of a later period in the government of Perm, and have also been met with at Kombulta and Digori on the

north side of the Caucasus. The bone arrow-heads are of types found in other parts of the government.

Comminuted shells were generally, if not always, mixed with the clay of which vessels were made. The pieces found entire are of small size, with a round bottom, no handle, and generally have but little decoration, which is disposed horizontally below the rim. In one or two instances the rim forms a wavy line, as is also the case in an example from the neolithic station of Great Bugór near Kazán. The ornament consists of a row of short diagonal or curved incisions in pairs; or of small oval depressions to the right and left of an imaginary line, like small leaves issuing from a stalk, as on a sherd from the neolithic station of Novo Mordovo near the site of Old Bolgari; or of a couple of rows of small triangular depressions at intervals; or of rows of shallow, nearly parallel lines; or of a couple of rows of bold zigzags made with a pointed instrument, etc. In the opinion of Mr. Novokréščennikh, the site he excavated was a Čudish place of sacrifice, and the Čudes were probably Voguls. A statement made by Dr. B. Munkácsi with regard to the modern Voguls seems to throw light on the numerous small and rude representations of animal forms, cut out of thin bronze leaf, it may be on the spur of the moment. He says that when the will of the gods is once known through a Shaman it must be executed at once. 'The offering I demand in the evening do not postpone till morning; the offering I demand in the morning do not postpone till evening,' is the exhortation of the gods in the invocation songs of the Shamans. If the rapid fulfilment is impossible, a figure of the animal to be sacrificed (horse, reindeer) is cut out of a piece of birch bark and

placed near the idol as an I.O.U., and destroyed when the vow is fulfilled.¹ Why these promises to pay, if such they were, were not destroyed at Gliadénova, can be explained by supposing that the vows were often made before going on a dangerous journey or raid, and that many of those that had made vows lost their lives and were thus unable to fulfil their promise.

Most of the metallic objects enumerated or described above are of local manufacture, but now it becomes necessary to notice briefly a series of silver vessels and coins, all of which were imported from a great distance during the fifth, sixth, and seventh centuries, and are found solely in the government of Perm. The silver vessels, some sixty in number, consisting of large dishes, bowls, ewers, chargers, etc., are for the most part specimens of Persian art during the Sassanide dynasty. A very few are of late Greek or of Græco-Roman work, somewhat earlier than the Persian. The former can be dated in some measure by the Sassanide coins struck in the reigns of seven kings from Yezdegerd I. (397-417) to Chosroes II. (590-628), the last of the dynasty. Though it is unknown in what spot most of the vessels were found, in some instances the places are ascertained, and it is well to enumerate them, as it is an important point of history to determine, if possible, the routes by which they were brought within reach of the natives of the province. Beginning from the south, silver coins have been found near Šestakova in the district of Krasnoufímsk; silver vessels near Kliúčĭ in the above district; silver vessels and coins near Vereino in the sub-district of Čusovsk on the Čusovaya; coins near Kovina, sub-district of Ust

¹ Munkácsi, (1) p. 68.

Gáreva in the district of Perm; coins from the sub-district of Sludsk in the district of Perm; coins from the sub-district of Filatovsk in the district of Perm; a silver dish from the sub-district of Roždestvensk in the district of Solikamsk; silver vessels from the sub-district of Kuvinsk in the above district; coins from the sub-district of Kočeb'sk in the district of Čerdin; coins near Glazov in the government of Viátka, a district that was formerly occupied by Čudes. The commerce that brought these precious commodities from Persia to Perm was interrupted for a time by the fall of the Sassanide dynasty, but was afterwards resumed by the victorious Arabs, and lasted for four centuries longer. This last fact is only mentioned because if the Arab trade-route can be ascertained the older Persian route was probably the same. Mr. Teploúkhov, from whom I have taken the information with regard to the finds of Sassanide treasures in the province of Perm, considers it probable that in the ninth and tenth centuries the merchandise of the Arabs was chiefly transported by water across the Caspian and up the Volga, but that in the eighth century, when this route was partly in the hands of the Khozars, they most likely used a road that actually existed to the east of the Caspian. Starting from the Amu Daria it skirted the Sea of Aral, passed through Ust Urt, the Kirgiz steppe, and then through the country of the Baškirs to Bolgari. By this caravan route arrived Ibn Fozlan with a mission to the king of the Bolgars in 922; and Abu Ahmed Andalusi, speaking of mammoth tusks, says they were brought from Bolgari to Khwarezm (Khiva), whither caravans constantly arrived from the above town. Mr. J. R. Aspelin, who was the first to call attention to the route by which such a number of objects

of Persian art found their way to Perm, believes that the prehistoric trade-route from Persia to the Upper Kama led, not by the Volga, but along the Irtiř, that is to say through South-western Siberia. But Mr. Teploukhov opines it is more probable the Persian wares came by the same caravan route, leading from the south of the Sea of Aral to the north-west, which was afterwards used by the Arabs. Starting somewhere near the Sea of Aral, it led through Ust Urt and the Kirgiz steppe, then went west to the Urals through the land of the Bařkirs, keeping along the northern course of the Biélaya and up the valley of its tributary the Ufá. The find of Sassanide vessels at Kliučĭ, in the district of Krasnoufĭmsk, where other Čudish antiquities are not found, evidently points to the latter direction.¹ From the last-named locality it was not far to the Sĭlva, which falls into the Čusovaya at no great distance from the confluence of the latter with the Kama.

¹ Teploukhov, (2) pp. 5-25, 39-42.

CHAPTER III

HISTORICAL NOTICES OF CLASSICAL AUTHORS

As the sections on the earlier Iron Age in Russia have brought us down to historic times in the south of Europe, it is well, before proceeding to sketch the prehistoric history of the Finnish peoples, so far as it can be deduced from the culture-words in their vocabularies, to see what light the brief notices of classical and post-classical authors throw upon the huge territory in which we are interested, or upon its inhabitants. Herodotus, about the middle of the fifth century B.C., is the earliest writer that deals with any part of Russia, but as his knowledge was almost entirely confined to the north coast of the Euxine, he is of no great assistance. Indeed, it would be quite out of place to mention him at all here, were it not for the fact that several writers, including so well known and good a scholar as W. Tomaschek, identify several nations named by Herodotus with different Finnish peoples. For instance, the Budini are often identified with the Votiaks, who call themselves Ud-murt. W. Tomaschek does so, brings them as far south as Sarátov, and supposes they extended northwards as far as the lower course of the Kama and the Biélaya, eastwards to the Urals and westwards to the Sura. Yet, except in the passage in which Herodotus assigns the

Budini a geographical position three hundred geographical miles north of the Sauromatæ and east of the Don, the context of the other places in which they are mentioned all point to a more westerly position, somewhere near the upper waters of the Dniester or the Bug, where Ptolemy locates the Bodini. The father of history expressly states the Budini dwelt in a densely wooded country, though in his time, just as now, from Sarátov northwards and westwards the country for a great distance must have been very bare of timber. Along the banks of streams, and where the subsoil was damp, trees doubtless flourished, but it is well known that the 'black earth' districts were never covered with primeval forest. On these two grounds it seems to me doubtful if the Budini lived east of the Don at all. To connect the vocable Budini either with Votiak or Ud-mort seems questionable for several reasons. First, we do not know that this was the name they applied to themselves. Secondly, there is no assignable cause for dropping the *b*, which itself is an impossible initial sound in original Finnish. Thirdly, an original Permian dental, unless supported by another consonant, seems to fall out or turns into *l*: e.g. *ki*=F. *käte*-; *ku*=F. *kete*-; *ma*, *mu*=F. *mete*-; *va*, *vu*=F. *vete*-; *ku-ni*=F. *kuto-a*; *s'ulem*=F. *sydame*-, etc.

W. Tomaschek also connects the name Thyssagetæ with the Čusovaya, and identifies the people with the Voguls. The identification is ingeniously worked out, though hardly convincing, while to explain the four rivers that flowed through their territory into the Mæotis he has to do great violence to the text he is trying to elucidate. Nor can I find sufficient ground for believing that the Melanchlainæ were Čeremis and that the Cannibals were Mordvins, for

both these nations seem to have lived too far south to be connected with any Finnish people.¹

The next authority is Ptolemy, who wrote about the middle of the second century A.D., but sometimes incorporated into his geography information of considerably earlier date. By this time the interior of Russia must have been partly explored. The geographical position of the sources of the Volga or Rha, a name still preserved by the Mordvins, and of the Don are given, as well as the points where they make a sharp, protracted bend, and the course of the Kama is also laid down. If, as seems probable, Ptolemy has taken the source of the Mologa for that of the Volga, his longitude is nearly right, though the latitude is a full degree too far north. But the point where the Kama falls into the Volga is $2\frac{1}{2}^{\circ}$ too far west, and over 3° too far north, while the length he assigns to the Kama falls short of its real length, though it may reach to the confluence of the Čusovaya. The length of the Don is also too short, though the lower course below the bend is fairly exact. The neck where the Don and the Volga approach nearest each other was known, though it was placed fully 7° too far north and about $2\frac{1}{2}^{\circ}$ too far west. The mouth of the Volga is fairly accurate as regards longitude, but a full degree too far north, while the mouth of the Don is about $2\frac{1}{2}^{\circ}$ too far west, and fully 7° too far north.

At the bend made by the Don were the Perierbidi, who were a great people; above them Ptolemy names three others; above them Royal Sarmatians, Modocæ, and Horse-eating Sarmatians, and north of these the Hyperborean Sarmatians. All these tribes, including the most northerly, are expressly said to be a pastoral people, so that, starting

¹ Tomaschek, Bd. cxvii. pp. 8-10, 17, 19-21, 32-34.

from the bend of the Don northwards, they could not have extended beyond the Volga, and, if the information is correct, some of these tribes roamed over a region where Mordvins are now found. Whether any of them are ancestors of the Mordvins is a question that cannot be answered, though it does not seem impossible. Near the supposed source of the Kama, but really about the confluence of the Čusovaya, were the Robosci, and to them perhaps belonged the objects of stone and copper that have been found near its mouth (p. 79), as well as the place near Gliadénova where they sacrificed to their gods. East of the Volga, but south of the Kama, were the Lice-eaters, the Materi, and the district Nesiotis.

Although nothing definite can be learnt from a perusal of the ethnic names of Ptolemy, we have the assurance that the Don, the Volga, and the Kama were known for the greater part of their respective lengths by the middle of the second century, and possibly earlier. That means they had been traversed by persons of sufficient intelligence to measure roughly the length of the rivers on which they were travelling, and to note down the names of the nomadic tribes that lived on the banks. Along the Volga the notebook seems not to have been used after reaching the Oká, for pastoral tribes, owing to the forests, could hardly have pastured large herds west of that river. The left bank of the Volga appears to have been imperfectly known, which may mean that all the stopping-places were on the right or high bank. Along the banks of the Kama, which must have been thickly wooded, no notice is taken of the inhabitants, not even of the people who buried their dead in the cemetery at Anánino, till we reach the supposed source of the river. East of the Urals Ptolemy knew of no rivers

that drain into the Siberian Ocean, a sufficient proof that his knowledge did not extend much beyond the 55th parallel of north latitude, and that no caravan route could have existed in the time of Herodotus that led up the valley of the Kama, across the Urals and up the Irтіš, as W. Tomaschek maintains.¹

As nothing was known of Central Russia, taking Moscow as a centre and describing a circle with a radius of at least two hundred miles, it is more convenient to leave Ptolemy for a while and hear what Tacitus at the end of the first century has to relate about the *Æstii* and the *Fenni*. He places the *Æstii*, or *Aistii*, on the coast to the right of the Suevian Ocean, by which we have to understand somewhere on the east side of the Vistula, for his descriptive geography is hazy in the extreme. In dress and manners they resembled the Suevi, but they cultivated the earth with a patience that was hardly consistent with the natural laziness of Germans. They searched the sea for amber, which they termed *glēsum*, and were the only people that gathered it. Being possessed of little iron, their favourite weapon was the club. They worshipped the mother of the gods, and in war placed the greatest reliance on carrying about with them the figure of a wild boar; by doing so they were perfectly secure. With regard to their language it had more affinity with that of Britain.

In this brief account there are certainly discrepancies. In one breath the *Æstii* are classed with Germans, in another their language is said to resemble rather that of Britain, while the only word quoted is a genuine Teutonic vocable. In the next section, however, Tacitus hesitates whether to collocate the *Venedi* and the *Fenni* with Ger-

¹ Tomaschek, (1) p. 780.

mans or Sarmatians, though he finally arrives at the conclusion that the former must be ascribed to Germany, since they had settled habitations, knew the use of shields, and travelled on foot, while the Sarmatians lived on horseback or in wagons. His classification of ethnic groups was based therefore more on ethnography than on language. But if the introduction of the word *glēsūm* was made through inadvertence, as might well be the case, the substantial fact remains that the language of the Æstii and the Suevi differed more than dialectically; it belonged, in fact, to a different group. Tacitus further mentions in order from north to south the Fenni, the Venedi, and the Peucini without defining exactly their geographical position, though all must certainly be placed to the east of the Vistula. The Venedi led a wandering life and supported themselves by plunder, but at the same time they had settled abodes, used shields, and travelled on foot, not on horseback like the Sarmatians. The Fenni were extremely ferocious, poor, and dirty; they possessed no weapons, save bows and arrows tipped with bone, no horses, and no fixed abode. They slept on the ground, lived partly on herbs, and dressed in the skins of wild animals. As Tacitus hesitated whether to class the Fenni among the Germans or not, there may be some exaggeration in his picture of them, and it does not correspond with what we have reason to believe was the civilisation of the Finns at the beginning of the present era.

To Ptolemy the Vistula was the boundary between Germany and Sarmatia. He places the Venedic Gulf east of the mouths of the Vistula, and continues the coast in an easterly and north-easterly direction for several hundred miles. Along this stretch of sea coast he mentions four

rivers—the Khronos, Rhubon (Rhudon), Turuntos, and Khesinos (Khersinos, Khesynos). In contradistinction to the rivers west of the Vistula, most of which bear names that recall the ancient designations, none of these four can now be recognised. This circumstance might arise either from a complete migration of the older population, which was succeeded by another that renamed the rivers, or from the information that Ptolemy used having been obtained from a foreign, perhaps a German, source. To the watershed, lying 800 to 900 feet above the sea, from which these rivers descended, the Greek geographer and his successors gave several names; east of the Vistula it was termed the Venedic Hills; further east, but on the same parallel, it bore the name of Bodinon, and still further east, of Alaunon; $2\frac{1}{2}$ degrees north and a little to the east came the hills called Rhipaia. According to Marcian of Heracleia the Khronos was the smallest of the four rivers, and both it and the Rhudon debouched into the Venedic Gulf, but the first rose in the Venedic Hills and the other in the hill Alanos (Alaunos). The two other rivers had their rise in the Rhipaian Hills. Smaller tribes near the Vistula and south of the Venedai were the Guthones, then the Phinnoi, then the Sulones. East of these, and also south of the Venedai, were the Galindai, Sudinoi, and Stavanoi. It has been suggested that the names Galindai, Sudinoi are perhaps preserved in the old Prussian districts of Galindia and Sudovia, the first lying west, the other north-east, of the Spirding See, though Ptolemy seems to place them south of the watershed. On the coast adjoining the Venedic Gulf were the Veltai, north of them the Ossioi (Hosioi), and north of all the Carbones. East of the latter were the Karestai and Saloi, south of them the

Agathursoi. Marcian makes the remark that the Agathosoi (Agathursoi) were a Sarmatian people in Europe that lived on the Khesynos.

As the longitude of the mouth of the Vistula given by Ptolemy is only a little east of the true longitude, it may be the result of an astronomic observation; but he places its latitude more than a degree and a half too far north. Every point on his map east of this river is extremely doubtful, for when his data are protracted to scale on a modern map his furthest point falls to the west of the north end of Lake Onega. As this point was supposed to be in the same latitude as Thule, which Ptolemy placed three degrees of latitude too far north, it must be lowered by that amount and set on the 60th parallel, which runs through the head of the Gulf of Finland. And as the base point at the mouth of the Vistula is too far north, another degree or so must be subtracted, which places the furthest known point somewhere on the north-west coast of Esthonia. That Ptolemy's knowledge should have extended so far north, if not further, is corroborated by the archæological objects found in Esthonia, some of which had evidently been brought there by a maritime route. Between the furthest point on the Esthonian coast and the Vistula the four rivers above mentioned must be sought. As the Khronos was the smallest of the four, and rose in the Venedic Hills, it might be the Pregel, which at various times has been known as the Pregora, Lipza, Lipsa, and Skarra; the Rhubōn, which also fell into the Venedic Gulf, must be the Niemen, Lith. Nemōnas; the Turuntos is very difficult to identify, but I suppose it to be the Windau, Lith. Venta, though it does not rise anywhere near the Rhipaian Hills; the Khersinos is probably the Dvina.

The Venedai occupied the south coast of the Gulf of Dantzic as far, perhaps, as the Niemen, a territory that in historic times belonged to the Old Prussians, a people of Lithuanian stock. The Veltai, who came next, may have been on the coast of Kurland, the Ossioi in Livland, and the Carbones in Esthonia. The only evidence we have regarding the nationality of the tribes hereabouts is of a negative nature, the chance remark that the Agathyrsi on the Khesynos (Dvina ?) were a Sarmatian people implying at any rate that they were not Germans. Of course it is astonishing to find such well-known ethnical names as Agathyrsi and Aorsi, who came next below them, so far to the north, but a probable explanation is that local names resembling these in form have been transmuted into the above by a rash and thoughtless scribe. As the Agathyrsi were not on the coast, they may have lived about the Drissa, a northern affluent of the Dvina, and the four tribes mentioned by Ptolemy as occupying the country between the Agathyrsi and the Rhipaian Hills, in which the Khersinos or Khesynos took its rise, were possibly cantoned along its banks. If that is so the Dvina was navigated in boats that may have been taken as far as the site of Bielj in the government of Smolensk, where navigation begins, and some, if not all, of the inhabitants of the valley were Sarmatians.

If Ptolemy is to be credited, most, if not all, of the inhabitants of East Prussia in the middle of the second century were Slavs, for he calls them Venedai, or Wends. As he omits the Æstii he probably included them among the Venedai, who are expressly stated to have been a very great people. South of these, and presumably south of the Venedic Hills, he sets Guthones, who are generally

taken to be Goths, and whose position would therefore be in the north of Poland. South of them were the Phinnoi. Zeuss did not accept the Ptolemian account; he assumed that the name of Venedic Gulf was an entire misnomer, placed the Guthones on the coast instead of the Venedai, and affirmed it was impossible Ptolemy could have located the Phinnoi in their true position.¹ If by these we have to understand Lapps or Finns, it may certainly be granted that they never permanently lived near the right bank of the Vistula, and this position does not quite tally with that assigned to them by Tacitus. His Peucini inhabited the region north of the Carpathians, what is now Galicia; north of them were plundering Venedi, who may be placed in Volhynia, and north of them were the Fenni, in what is now the government of Minsk. Both authorities place the latter people in the same latitude, or nearly so, but Ptolemy sets them about two degrees further west. Although it is difficult to believe that any Western Finns ever resided permanently so far to the west and south as the government of Minsk, and although their civilisation in the second century A.D. was very different from that portrayed by Tacitus, it is not impossible to suppose that they made hunting or predatory excursions in that direction. To judge from the practice of modern Zirians and Samoyedes, a hunting or trading expedition to a place several hundred miles distant from their headquarters is no great matter; and the former, even in winter, travel very lightly attired, with no more property than can be placed on a light sledge and dragged along by its owner. At certain seasons, when wild fowl were in abundance, the Pinsk marshes may have presented great attractions, and they were well within

¹ Zeuss, pp. 266, 274.

reach of Finns near the sources of the Volga, the Valda Hills, and other places where they can with certainty be postulated. On these excursions all the members of a large family or small clan would not take part; some would be left behind to look after the few horses and cattle they possessed, to protect the huts, and till the ground. As iron was scarcely known, at any rate was very rare, the arrow-heads were tipped with bone. Supposing, as we are bound to do, that such respectable authorities as Tacitus and Ptolemy had sufficient warrant for the statements they advanced, it is only by a hypothesis of this kind that we can explain the presence of Finns not more than one hundred geographical miles from the banks of the Vistula.

To return to the Aistii: they are mentioned in the sixth century by Jordanes, who speaks of them as a very peaceful people, living on the coast to the east of the Vidiarii, an aggregate of diverse nationalities that dwelt between the three mouths of the Vistula. They were therefore posted along the amber coast of East Prussia. In the ninth century, under the name of Estas, they are mentioned by Wulfstan in the description he gave to King Alfred of his voyage along the south coast of the Baltic. He sets them east of the mouth of the Vistula, and speaks of the Frische Haf as the Estmere. Estland is said to be very extensive, and to contain many towns, with a king over each. Honey and fish were there in abundance. The kings and the richest people drank mare's milk, while the poor had to content themselves with mead, as beer was entirely unknown.¹ When a man died his body was left unburnt

¹ Ibn Dustah, about the year 912, says much the same of the Slavs. Only the great prince drank mare's milk, the rest of the people drank mead (Khvolson, pp. 31, 32).

with his relations for a month, or even six months, according to the wealth and status of the defunct. During the whole of this interval the friends and relations were continually feasting and amusing themselves till the day of cremation. All that was left of the deceased's property after the long jollification was divided into several lots, and placed at different distances from the dead man's home. The relatives and friends then raced for the lots, and the man with the best horse carried off the best share, which was also the furthest off. When this excitement was over the corpse was burnt with the weapons and clothing. As neither drinking mare's milk nor racing in connection with funeral rites have been recorded as Teutonic customs, but are compatible with a people of Sarmatian descent or mode of life, the *Æstii* of Tacitus may be regarded as the progenitors of the *Estas* of the ninth century. And as the *Est* name was eventually transferred to the Finnish *Esthonians*, it is probable that, taken in connection with the craniological and archæological data of previous chapters, the whole of the Baltic Provinces were once possessed by tribes of Lithuanian or Lettish stock.

In a previous chapter it was mentioned that some of the best archæologists believe that the Baltic Provinces up to the fifth century were occupied by a Teutonic people who disappeared without leaving any trace of their presence, save the archæological finds of the earlier Iron Age. But as Ptolemy and other authorities make the Vistula the boundary between Germany and Sarmatia, and several indications seem to show that part of the information was received from German sources, such as words like *Fenni*, *Æstii*, *glēsūm*, *Khronos*, *Khersinos*,

it is singular that none of the intelligence from such sources led Ptolemy to suppose that Germans lived along the Baltic coast east of the Vistula. It is remarkable, too, that the so-called 'face-urns' of the Hallstadt period, so common and characteristic of the region west and south of Dantzic, are only known in one place east of the Vistula, quite close to the right bank. This is easily explained by the hypothesis that the river was the boundary between two distinct nationalities, though not otherwise. The question whether the Lithuanian peoples are recent intruders might be definitely answered, if we knew of any grounds for believing them to have been settled for a very long time on the south-east shores of the Baltic, where they can certainly be traced for the last eighteen centuries. Two words show they have not materially changed their abode for a long period of time. They have native words for the 'eel' and the 'salmon,' both of which have to migrate annually to the sea, and are found in rivers that drain into the Baltic, but not in those that find an outlet in the Black Sea. This places the old home of the Lithuanian peoples north of the watershed of all rivers that run southwards; an area that includes East Prussia, Poland, the Baltic Provinces, and the governments of Kovno, Suvalki, Vilna, Vitebsk, Pskov, and Petersburg. But Poland and East Prussia west of the Pregel may be excluded, as the word for 'beech' is a Teutonic loan word, and the eastern limit of the tree at present is formed by a line drawn from Königsberg to Podolia. The original home of the Letto-Lithuanians may be sought chiefly in the valleys of the Niemen and the Dvina, with their tributaries. Though there are eels, there are no salmon in the Velikaya, the Embach, or

Lake Peipus, as their progress is stopped by the Falls of the Narva; but they are caught in the Narva below the Falls, in the Salis, and all other rivers that fall into the Baltic. Whether salmon are found in Lake Ilmen or the Volkhov I have no information, but a variety of the salmon frequents Lake Ladoga, and there is no obstacle to prevent their ascending the Volkhov to Lake Ilmen. Yet it is curious that at the prehistoric station on Lake Ladoga no salmon bones were observed.

According to Professor Y. Koskinen, the first reliable information of a Finnish people being settled in the Baltic Provinces belongs to the middle of the ninth century. In his *Life of St. Ansgarius*, Rimbert mentions that the Kurs (Cori) had formerly been subjected to Sweden, though they had shaken off her yoke a long time ago. He then narrates how the Danes, about 853 A.D., had made an unlucky raid into the land of the Kurs, which was divided into six districts (*civitates*), and how afterwards the Swedes with better luck and the aid of Christ had again brought them into subjection. This shows that in Rimbert's time the Kurs were already settled on the Baltic coast, and this settlement must have occurred at least by the end of the eighth century, probably earlier. There is no doubt that the Livs and Kurs were one and the same people, and evidently about the same period the Ests settled in Esthonia and the Finns proper in Finland.¹ Against part of this statement Pastor Bielenstein raises an objection. Though he grants that the Kurs were undoubtedly Finns, and that the name was probably given them by the Scandinavians, he considers it a mistake to suppose that a Finnish people must have covered the

¹ Koskinen, p. 360.

whole area where the name Kur is found. For instance, the Kurs of the Kurische Nehrung have always been Letts, and the Lithuanians call the Letts that live among the Finnish Kurs—Kuršei. In his opinion the Cori of St. Ansgarius, who fought with King Olaf in Apulia, not far from Schoden on the Bartau, were most likely Letts or Lithuanians, as no Finnish place-names occur in that part of Kurland.¹

This seems rather to invalidate the proposition that in the middle of the ninth century the Scandinavians knew of a Finnish people in the north-west of Kurland. But as about 12 per cent. of Finnish place-names are to be found in the old province of Bihavelanc, through which the lower half of the Bartau flows, some Finnish Kurs must have been settled there. It is possible then that the Finnish (?) Cori on this occasion, when attacked by a stronger force of Swedes, were compelled to retire up the river, and were actually on Lithuanian ground when, feeling themselves cornered, they delivered battle.

Although the first reliable notice of the Kurs is by Ansgarius, they are named by Saxo as having taken part in the great battle of Bravalla between the Swedes and Danes about the year 775, in which the former were victorious. On this notable occasion Kurlanders and Esthonians are said to have fought on the side of the Swedes, while Livonians and Slavs had sided with the Danes. It is possible, perhaps likely, that these names are the additions of a later time, but it shows the Finns were a fighting people and were accustomed to face the sea at the time when these names became attached to the

¹ Bielenstein, pp. 350, 351.

legend of the great battle. The Slavs here mentioned are the Wends of Pomerania, and it is to be remarked that the Letts and Lithuanians are passed over in silence; either they were not a very warlike people, or they were not distinguished from the Wends, as Ptolemy seems also to have done.

Almost contemporaneous with the first notice of the Cori is the mention of the Ests, or Esthonians, under the name of Čudes, by Nestor, the earliest Russian annalist. In 859 he records that the Variags came from the other side of the sea and levied on the Čudes, Slavs, Merians, etc., a tribute of one white squirrel-skin per head. Three years later they again visited Russia. But on this occasion the above-mentioned peoples refused to pay the tax, drove the enemy back across the sea, and made an interesting experiment in self-government. It did not however prove a success. Internal quarrels were so numerous that a deputation of Čudes, Slavs, etc., was sent to the country of the Variags to solicit the loan of an impartial prince, strong enough to keep the peace. The result was that Rurik and his two brothers came to Russia, built the town of Ladoga, and became the founders of the Russian Empire.¹ So far as we can judge from the brief entries of the annalist, the Čudes and Slavs were apparently on a footing of equality. Both peoples rose against the Variags, and both took part in the council that determined to summon a foreign prince who could hold the balance evenly between the conflicting interests of Finns, Slavs, etc. The Čudes were probably as well, if not better, armed than the Slavs. If Ibn Dustah's information is to be relied upon, the latter fought on foot, and were only

¹ Akiander, pp. 12-14.

armed with javelins, spears, and shields. In addition to these, the Čudes might have had swords as well as bows and arrows. At any rate they and the Merians took part with the Variags and Slavs, not only in Oleg's expedition that led to the capture of Smolensk in 882, but also in his far more important campaign against the Greeks in Constantinople in 907. Those of the Finns that lived to return to their homes no doubt brought back their share of the ransom that the Greeks had to pay to Oleg to avoid the complete sack of the imperial city. He had demanded and obtained twelve grivnas, or about six lbs., of silver for each of his fighting men. For more than a hundred years afterwards the Finns and Slavs seem to have lived together on friendly terms. It is not till the year 1030 that this happy state of things was disturbed by Yaroslav, who invaded the country of the Čudes, conquered them, and laid the foundations of Yúriev (Dorpat). Twelve years later his son Vladímir made a campaign against the Yems, now mentioned for the first time, subdued them, and took many prisoners. The Russians were not however always successful, for in 1054, when Ostromir and his Novgorodan soldiers made an incursion upon the Čudes, he was killed, and many of his followers. Generally speaking, however, the Čudes came off second-best, and no doubt were greatly outnumbered.¹ As the entries in the Chronicle are extremely brief, and tell us nothing of the customs or social life of the Finnish tribes, and often leave their geographical position uncertain, it is unnecessary to pursue them further.

Though mentioned earlier, not much is known of the Livs till the arrival of the Germans at the mouth of the

¹ Akiander, pp. 15, 19; Paris, i. pp. 35, 36.

Dvina in 1159. When Meinhart arrived in 1186 he found them paying tribute to King Vladimir of Polotsk, and the same winter the Lithuanians devastated the country and carried away many captives. His well-intentioned efforts to convert the Pagan Livs were not crowned with immediate success; when by promises of protection against their enemies a few had been enticed to accept baptism, even these few persons took the first convenient opportunity of washing it off in the waters of the Dvina. The German chroniclers tell us almost nothing of the Paganism of the Livs. A Bull of Pope Innocent in 1190 avers that the Livs paid the honour due to God to brute beasts, to leafy trees, to clear water, to verdant herbs, and to unclean spirits. They seem to have cut the images of their gods on the boughs of the sacred trees, and it is known that the Esthonians had images of their gods in a beautiful wood in Wierland. The offerings to the gods consisted of a dog or a ram, occasionally of a man. To discover the will of the gods before important undertakings different modes of sortilege were employed; and to this punctilious observance of the Livs a German missionary bishop once owed his life. They were under the impression that the sacrifice of the bishop would have a beneficial effect upon the crops. But they first consulted the oracle by making a horse step over a lance. As it crossed the spear with the foot that showed the victim was unsuitable—probably the left foot—the life of Bishop Theodorich was spared. How the Livs disposed of their dead is not recorded, but the Kurs practised cremation, and the funeral ceremony was accompanied with loud lamentation. The Livs did not form a connected state under a common head, but were under a number of small elders, whom Henry of Lettland

generally terms '*seniores*.' Besides these there was a class of wealthier people, called by the chronicler '*primores, meliores*,' from whose families hostages were taken. Some of the elders were entitled kings—without meaning, however, that they exercised authority over the other elders. And the district over which an elder ruled was termed '*provincia*,' or in the language of the Ests—'*kylegunda*,' originally a loan word from the Scandinavians. The Livs were armed with swords, lances, javelins, bows, and shields, and fought both on foot and on horseback. Their many wars were chiefly predatory expeditions against their neighbours; at first against the Letts, whom they despised, and in later times against the Esthonians, Zemgalls, Lithuanians, and Russians. These incursions were carried on with great barbarity and devastation of property, the men being all killed, while the women and children were generally led captive. In this, however, they were no worse than their neighbours, and not so bad as the Letts, whom Henry describes as the most cruel of all people. The Livs, when not fighting and marauding, occupied themselves with agriculture, fishing, hunting, cattle-rearing, and bee-keeping. Before the arrival of the Germans they had some trade to boast of, for Adam of Bremen, writing of Livland some one hundred years before that event, says that it was rich in gold. Henry, too, relates that the sons of Lettish elders, after a raid into Esthonia, brought back three lispunds (sixty lbs.) of silver, besides other booty. Though the Livs used ships and boats, it is never mentioned that they used them for piratical expeditions. In this they differed from the Kurs, who, before the advent of the Germans, had the reputation of being noted pirates, and in conjunction with the islanders of

Oesel extended their depredations as far as Denmark and Sweden.¹

Although the Kurs are mentioned earlier than the Letts in Kurland, it does not follow that they were the older inhabitants. There is ground for believing them to be intruders. Both in Kurland and Livland, to judge from the evidence of place-names, the Finns only occupied a fringe of territory along the coast, for Finnish names on the map gradually diminish in number as we recede from the sea. Their name, too, for the Dvina (Vēna, Väinä) seems borrowed from a Slav dialect.²

¹ Wiedemann, pp. xxx, lvi, lxi-lxiv.

² Bielenstein, pp. 348, 357, 365.

CHAPTER IV

THE PREHISTORIC CIVILISATION OF THE FINNS

HAVING reviewed some of the craniological, archæological, and historical facts that bear more or less directly on the Finns, we have now to turn to comparative ethnography and philology for any help they may afford towards enabling us to form a slight picture of their prehistoric condition. Theoretically the prehistoric past may be divided into two divisions, hereafter to be mentioned as the first and second periods. To the first belong words that are common to the Ugrian and the various Finnish groups; these originated in Asia, when Finns and Ugrians seem to have lived in close contact, for the physical and craniological differences between the Finns and Ugrians are too great to allow us to suppose they are descended from a common stock. But they were neighbours, living under conditions of life precisely similar. Though we have to believe that once the remotest ancestors of the Finnish peoples lived in Asia, it is, I think, impossible to trace them there; the inference is made purely on linguistic grounds. In the craniological chapter we have found that the crania at Volósovo, and at the Ladogan station seem to have analogies with existing Eastern Finnish skulls. So there is ground for assuming that the earliest neolithic inhabitants of Central Russia were

ancestors of Finns that had somehow reached Europe and settled on the Oká. Having done so, it is difficult to imagine any external cause that could oblige them to leave it. For though they had nomadic instincts, like all other nomads they did not roam at large, but over a certain more or less defined district, which they regarded as their own. They were so isolated from the rest of the world that no direct outside pressure could be brought to bear upon them. The only influences that could touch them and induce some of them to move were of an internal nature: the natural increase of population, famine, pestilence. Of these the most efficient factor would be the first; to a people living only on fish, shell-fish, and wild animals, famine of a very severe kind would probably be of rare occurrence; but when too many members of a clan died at one time the remainder would very likely abandon the locality, at any rate for a time, and migrate elsewhere. I assume, therefore, for the present—the reasons can best be brought forward at the end of this chapter,—that at the end of the first period the undivided Finns had entered Europe, bringing with them, of course, various simple notions embodied in the language they had acquired in Asia; and that the earliest neolithic settlements in the Volga region of Central Russia belong to this time. As the settlements on Lake Ladoga and the Upper Volkhov are later than those on the Oká, the movement of the Finns was evidently westward, and the finds at Fatiánovo and Galič seem to show that, even on European soil, Finns and Ugrians lived at no great distance from each other for part of the second period.

The second period embraces the time between the first settlements in Europe and the first contact with an Iranian

civilisation, which may have taken place from four hundred to six hundred years before the present era. It covers a long lapse of time, and may be divided into an earlier and later half. The first half is characterised by a series of words common to all, or nearly all, the East and West Finnish groups, and we have to suppose they had not yet split into different linguistic groups, though various fractions of the united body may have lived at very considerable distances apart. The second half is marked by words that are confined to two or three members of the Finnish family. As all know, numerous words in every language die out and are replaced by others for reasons that can only be guessed at. So it would be wrong to maintain that all new additions to a language exactly coincide with the new ideas conveyed by these new words. For instance, the Lapps have borrowed a word for 'moon' from the Scandinavians, the Finns a word for 'neck' from the Lithuanians, and yet these new words conveyed no new ideas. Sometimes in certain classes of words, such as the names of spirits, divinities, sacred animals, animals and fish caught for food, we can perceive a reason for borrowing a new term from a foreign language. There was a distinct reluctance, amounting to fear, that prevented a native from using these names, so that either an epithet or allusive term was employed, or a word borrowed from a foreigner. Hence we readily understand how it came to pass that to certain powerful spirits, whose real name the Lapps were afraid to use, were given the Norwegian name of *Stor Junkare*, and why the Finns gave a name of Scandinavian origin to their spirits of nature—*haltia*. It is probably some such reason that has caused the want of common terms for sun, moon, sky, spirits, and for most of the

common wild animals among the Eastern and Western Finns. But nevertheless on the whole the new words of the second period must be taken to mean increase of experience, modification of the ancient mode of life, and a slight forward development of the different groups made independently of each other during the latter half of it. They are also to be considered as older than the first contact with an Iranian or European civilisation. But of many genuine words confined to the West Finns alone we cannot always be quite sure whether they came into use before or after this event in the history of their civilisation.

The late Professor Ahlqvist has already drawn us a picture of the prehistoric civilisation of the Finns that has often been referred to, but now I propose to supplement it in some respects by drawing upon the existing customs and beliefs of the Eastern Finns, and laying more emphasis on the psychological element. But in doing so it must be borne in mind that they too are more or less civilised, for the most part Christianised, and living under conditions very different from those of their prehistoric ancestors. From about the eighth to the thirteenth century they were exposed to the civilising influence of Bolgars and Turks, who have left many traces of their superior civilisation and higher religion in a series of loan words. All that is known of their sacrificial rites, their divinities, their ideas about the phenomena of nature, cannot therefore be accepted without considerable reduction and allowance for subsequent growth and accretion. The mere passage from a hunting and fishing stage to one that is almost purely agricultural, the change from a nomad to a settled mode of life, undoubtedly affected the class of gods to whom they paid especial worship. To a hunting nomad the idea

of a great and benevolent earth-mother that gave forth of the fruits of the earth in due season, of a beneficent sun-god that ripened them, could never occur. Hence all notice of gods whose being and worship entirely depends on the practice of agriculture by their worshippers may be excluded from our survey. The beliefs, customs, and so forth, of the Ostiaks, Voguls, Samoyedes, and Altaian Turks are on the whole more likely to tally with those of the prehistoric Finns than any other people on the globe, though they too have been subjected to various civilising influences for which allowance must be made.

THE GODS AND DIVINITIES.

Had the Finns of the first and second periods any notion of the supernatural? This question, as it seems to me, must be answered in the negative. At the first beginning of humanity on the globe there could have been no such notion, for before it can be formed at all some idea must exist of nature and the natural. As an idea, Nature is so complex that a long time must have elapsed before man could form the least conception of it. Yet at a very early period the human mind, working unconsciously, must have framed categories and separated the phenomena of nature into those of daily occurrence and those that happen at longer or shorter intervals. Under the first category would fall the relative weights of common things, such as stones and feathers, the fact that if a thing dropped from one's hand it fell to the ground, the recurrence of night and day, the heat of the sun, etc. These being facts of daily experience excited no astonishment. Under the second category would come the distinction between a hot and cold or dry

and wet portion of the year ; the phases of the moon ; the fact that fish run up rivers at a certain season and return at another ; that certain animals frequent particular parts of the country at one time more than other. These and many other similar observations that they made would seem to them, no doubt, what we should now call natural ; that is to say, these phenomena excited no astonishment. But others of uncertain periodicity, and recurring at long intervals, such as eclipses, earthquakes, comets, famines, and the like, would certainly create wonder, sometimes fear, and might therefore be termed wonders, marvels, or miracles in the old sense of the word, but not supernatural, for they had no conception of nature as a starting-point from which the idea of supernatural could be deduced. Their gods even, conceived probably as invisible beings with purely human attributes, the attributes of humanity at a very slow stage, could in no sense be considered supernatural. Men could also render themselves invisible. The gods too were so human that they could be forced to act in accordance with the wishes of their worshippers, and could likewise be punished. But in course of time, though not everywhere at the same time, to the worship of the older gods, that resided chiefly in trees, wells, rivers, and animals, was added the worship of a higher order of divinity whose seat was in the sky. This was the result of the gradual development of a new order of ideas. Just as a man in need of anything applies first to his friends or neighbours nearest at hand before turning to a distant stranger, so man in the early stages of his history had recourse, when in danger or trouble, to the helpers that seemed nearest at hand, that dwelt, as he believed, in the trees and waters at his very door, rather than to the distant

heaven, to which no human voice could be expected to reach.

At last a change took place in this respect. Some men, resolving to leave no stone unturned, ventured to seek aid from the sky-god, who in time would gain a large circle of worshippers. The intellectual energy and development of these adherents of the new god would no doubt be superior to that of the adherents of the older gods. Yet to them the sky-god was not supernatural, though a step was taken in that direction; he was now supermundane. Partly from his elevated position, partly perhaps from regarding the sun as his eye, the sky-god would in time acquire the attribute of omniscience; though at first this would merely be superhuman, not supernatural knowledge; it would exceed the knowledge of any one man, but would only be equal to the sum of knowledge of all men, what each man knew of his own actions. Again, instead of attributing storms, thunder, lightning, rain, and drought to the anger of witches, sorcerers, or of the inferior order of gods that dwelt in trees and stones, these phenomena were now ascribed to the will of the god in the sky above. This tended to produce the impression that he was all-powerful as well as omniscient. Still, with all this, his power was merely superhuman in the sense that it exceeded the capacity of any one man or body of men. The idea of his being a supernatural personage could only arise when his omnipotence was raised to such a pitch that he became thought of as the creator of the world, of nature as we perceive it. As the creator is necessarily greater than the created, it now for the first time became possible to regard him as a being transcending nature in every conceivable way—as supernatural, in fact. The notion of a supernatural

being or god, wielding supernatural power, must, if this view is correct, be of late origin. It never could develop among a people in whose pantheon there was no creator of the world. If such a people possess a notion of the supernatural they must have borrowed it.

It cannot be doubted that the prehistoric Finns, when they stood in the open air and gazed around, were under the impression that nearly every object in nature was the habitation of a spirit. This cosmological theory naturally accounted for the life and movement they perceived around them; even inanimate objects, like rocks and stones, required an active cause to account for their presence, for their difference in size, and for their often strange shapes. Of course, all spirits were not of equal value or of equal strength: that would depend in some measure on the size of their habitation. The spirit of the sky was greater than an ordinary tree, stone, or house spirit. So a Samoyede wizard in addressing his familiar spirit says: 'I cannot approach Num' (the god or spirit of the sky), 'he is too far away; if I could reach him I should not beseech thee, but should go myself, but I cannot.'¹ The Samoyedes of the government of Tomsk, who are partly Christianised, fear Num to such an extent that they pronounce his name with evident trembling, and prefer the use of an epithet meaning 'the watcher over reindeer.'² Tūrm, the sky-god of the Northern Ostiaks, who only speaks in thunder and the angry voice of the storm, is an inexorable being whom no prayers can reach, whom no offerings can propitiate. He is therefore not the object of any worship, and Ostiaks in need of help must turn to a spirit of lower degree.³ Here we see that the physical remoteness of

¹ Castrén, (2) i. 207.

² *Ibid.*, (2) ii. 162.

³ *Ibid.*, (2) i. 301, 309.

the sky from the earth gave rise to the idea of an inaccessible god. Like the Ostiaks, the Turks of the Altai do not turn for help to the highest god, but to deities of lower rank.¹ Some Votiaks allege another reason for not paying full honour to Inmar, the god of the sky. He is very good, and so they do not fear him, worshipping him with prayers, but not with sacrifices.² Though, in the above instances, the sky is conceived mainly as a spirit, the latter was not quite incorporeal. To the Samoyede the rainbow is 'Num's mantle'; to a Čeremis it is 'the bow of Jumo' (sky, god), the thunderbolt is his stone (*Jumon ki*); to a Vogul the lightning is 'the arrow of Tārim.' Compared with the Northern Ostiaks, the Voguls have greatly modified their view of the sky-god Numi Tārim. He is a great hunter, the bear is his dear daughter, and they pray to him as 'our father' to let down fish and wild animals from above.³ He is therefore no longer inaccessible to direct entreaty, which shows a later stage in religious development; the fear of using his name has passed away, and the feeling of distance from him is removed or lessened. The ascription of the epithet 'father' is not, as might be supposed, the result of Christian influence, for in the heroic poems of the Irtiř Ostiaks, which go back to about the thirteenth or fourteenth century, a prince who is hard pressed in battle calls to his god in the following terms: 'Is it possible the Golden Light (the Sky-god), my father, has decreed that common soldiers should take my iridescent scalp?'⁴ Judging from their poetry, the Tūrim of the Southern Ostiaks on the Irtiř was very different from the Tūrm of the Northern Ostiaks described by Castrén. The former is rather a

¹ Radloff, ii. 8.

³ Munkácsi, (1) pp. 185, 186.

² Ostrovski, p. 33.

⁴ Patkanov, (1) pp. 48, 49.

mild god ; 'father' is his constant epithet, and he dispenses good solely from his merciful nature and his love for man. And judging from the epic poetry he does not seem to have demanded any worship, sacrifice, or prayers. Even animals in danger cry for help to him, and never in vain.¹ It would be interesting to know whether this revolution of ideas with respect to the character of the sky-god was independent of all foreign influence ; it is difficult to believe that it could have taken place spontaneously.

Num, like the Türk. *teñri*, means 'sky' and 'god,' and among the Finns we find the same confluence of two distinct ideas in a single word.

Fin.	Lap.	Mord.	Čerem.	Votiak.	Zür.
<i>jumala</i> ² <i>ilma</i> ³ <i>ilmari</i> ⁴	<i>ibmel</i> ² <i>allme</i> ^{1 3} ...	[<i>jondol</i>]	<i>jumo</i> ^{1 2}	$\begin{cases} \text{in}^{1 2 3} \\ \text{inmar}^{1 2 3} \end{cases}$	$\begin{cases} \text{jēn}^{1 2} \\ \dots \end{cases}$

¹ sky.² god.³ air.⁴ Prop. name.

Though F. *jumala* now means 'god,' the corresponding word in Čeremis also means 'sky,' and the Mordvin for 'lightning,' *jondol*, stands for *jom-dol*, 'the fire of *jom*.'² On the other hand, the F. *ilma*, 'air,' corresponds with the Permian words for 'air,' 'sky,' 'god,' and the proper name *Ilmari*, L. *Ilmaris*, who is sometimes substituted for the native wind-god, is formally the equivalent of V. *inmar*, 'sky,' 'god.' It can hardly be doubted that 'sky' is the older meaning, though it may always have been associated with the idea of 'sky-spirit,' and that 'god' is secondary. It would be interesting to know at what stage in the history

¹ Patkanov, (2) pp. 100, 101.² Paasonen, (1) p. 12.

of the Finns this differentiation of meaning took place. With the Western Finns it seems to have taken place as early as the fourth period, for otherwise it is unintelligible why they should have borrowed from the Lithuanians a word for the physical sky, *taivas*, unless Jumala had ceased to bear this meaning, and meant only the sky-spirit, the personality that seemed to be behind all aërial phenomena. At first, there was only one god, *jumala*, *jumo*, *inmar*, the spirit of the sky, but in course of time these words were used in the plural, and employed as epithets to a number of deities. As god of the sky, Jumala, like Num, no doubt sent forth thunder, rain, snow, and wind on luckless mortals, but whether he received worship is doubtful; at any rate, most of the worship appears to have been reserved for deities that seemed nearer at hand.

The question may be raised whether all aërial phenomena, such as thunder, lightning, wind, snow, and rain, were originally attributed to the will of the one sky-spirit, or whether the earlier belief was that they were due to the action of separate and independent spirits. At present the Eastern Finns specialise most of these phenomena, so that each has its father, mother, ruler, or other functionary who directs its activity. They also specialise their domestic tutelary deities in the minutest way; there is one for the hearth, another for the courtyard, one for the cowhouse, another for the stable, for the sheep-pen, etc. As the names for these buildings are for the most part loan words of comparatively recent origin, the specialisation of guardian spirits goes hand in hand with the increase of civilisation. But the Samoyedes, whose lack of culture is much greater than that of the most backward of the Eastern Finns, take the above phenomena *en bloc*, and

refer all to the will of a single spirit. Hence there is reason to assume that in prehistoric times the Finns generally attributed these diverse operations of nature to the active will of a single being, the spirit that dwelt in the sky. In fact, to some of them, such as rain and wind, short of a hurricane, they must have been from their mode of life comparatively indifferent.

What conception the prehistoric Finns had of the spirits of nature we do not know, and there is no common term by which they were designated. By the Eastern Finns at present they are simply called the 'father, mother, uncle, aunt, ruler, prince, or god' of each particular element, which shows that they are generally thought of as anthropomorphic, and they do sometimes appear in human shape. Once when a Votjak shot a water-spirit, *vu-murt*, the water was tinged with his blood.¹ And if the blood of a forest spirit, known as *pales murt*, is shed, from each drop a fresh spirit comes into existence.² The Mordvins sometimes picture to themselves the water-mother as a beautiful woman with silky hair and girt with a silver girdle; but sometimes she is seen in the shape of a huge fish, surrounded by much smaller fish, which she sends away to different rivers and lakes. At times her children fall into the fisherman's net, and if he has pity on the weeping water-spirit he will be rewarded with a good catch of fish. At other times she has been seen as a bird skimming over the surface of the water.³ The 'forest-wife' of the Mordvins may appear as a beautiful woman, but she can change her shape and become manifest in the form of fire or a whirlwind; occasionally she comes to a

¹ Smirnov, (2) p. 20.

² Wichman, (1) p. 9.

³ Smirnov (4), p. 211.

village as a cat, dog, horse, or wolf.¹ By the Votiaks the *vu-murt* or water-spirit is sometimes seen as a huge pike,² a fish that is held sacred by the Voguls,³ and was probably sacred to the prehistoric Finns. But these anthropomorphic and animal shapes assumed by spirits may be later developments, for originally spirits seem to have been invisible. Transition forms of the belief are seen in the Votiak house-spirit, *korka murt*, who is an aged man in a sheepskin coat, whom it is possible to feel and to seize, and who yet is invisible ;⁴ as also in the Lapp belief that the spirits of the dead are visible, but not in corporeal form ; and that they cannot be squeezed or tired, and move at a terrible rate.⁵ The Permian superstition that a man can steal without being seen, if he provide himself first with the hand, tooth, or shirt of a dead man, is only explicable by a belief that the spirits of the dead are invisible.⁶ But the Samoyede belief is that spirits, for which there are several names, are only visible to wizards, not to ordinary mortals, except so far that some of them have their habitations in queer-looking stones, trees, natural objects, or in rude dolls dressed like a Samoyede.⁷ To a certain extent it would seem that all spirits were not considered immortal, for the Samoyedes in the government of Tomsk have each a special idol god, who, at the death of his worshipper, is supposed to die too, and at any rate is thrown into the river.⁸ So too the household and clan gods of the Ostiaks are to all appearance merely artificial dolls, decked out in their best. But that originally the spirit was thought of as

¹ Smirnov, (4) p. 218.

³ Munkácsi, (1) pp. 67, 186.

⁵ Von Düben, p. 247.

⁷ Castrén, (2) i. 209 ; ii. 162.

² Vereščagin, p. 79.

⁴ Smirnov, (2) p. 194.

⁶ Smirnov, (3) p. 247.

⁸ Castrén, (2) ii. 164.

distinct from the stone, branch, or idol in which he was located, is shown by the belief of the Voguls. According to this, the ghosts or manes of the heroes dwell in the place of their former exploits, where they are represented under the form of images. These images are called *pupy*, while the indwelling spirit, which appears with lightning speed when summoned by the magic power of an incantation, is termed *aatir*, 'the prince,' or *nai*, 'the princess.' The images of the gods are often replaced by a natural stone or rock formation, which the people believe to be transformations of the heroes. And when the Voguls are preparing a place of sacrifice, they set up in the front part of it a birch sapling to serve as a sacred resting-place for the god who is to be invoked.¹ So too the Votyak household god, *voršud*, 'the giver of luck,' is supposed to live either in a special chest or basket, in which the offerings are laid, or in branches of fir specially strewn in a particular place, but is otherwise invisible. The household spirit of the Čeremis is also embodied in a fagot of sticks,² and the *seita* of the Lapps, as a rule, are only to be seen in a pile of stones or in a human figure rudely blocked on a wooden post. Yet in spite of the invisibility of the spirits, they were so far cast in a human mould that they needed to be fed, though not with the same regularity as human beings. The Samoyedes, Ostiaks, Voguls, and Lapps all smear the mouths of their idols with blood and fat. If the spirit was not embodied in an idol, the food-offerings had to be made in other ways. For instance, when the fishing on the Ob is bad, the Ostiaks throw a reindeer into it to propitiate the spirit. Generally speaking, when an animal is sacrificed, most of the flesh is eaten by the worshippers,

¹ Munkácsi, (1) p. 67, 68.

² Smirnov, (1) 174.

though some is set aside for the god. The sacrifice is in the nature of a feast, at which the god is an invited guest. Among the Southern Ostiaks, when a god has received an offering he is bound to fulfil the request of the Ostiak. If he refuses he must be chastised by man. Thus the shaman exhorts the tribal god to be compliant, and its owner does the same to his house-god. If the warning is of no avail, and the god remains obdurate, he is threatened with punishment, and this is executed forthwith. The image is thrown on the ground, beaten, and trampled under foot; sometimes it is burnt and replaced by a new one that has witnessed the chastisement.¹ Little wonder then that prayers and offerings were made by preference to the lower divinities who could thus be coerced by worshippers, whose actions were regulated by the Bismarckian maxim, *do ut des*.

To a people that lives by fishing and hunting the elements are clearly of far less importance than to an agricultural people. To the former wind, snow, and rain come as a matter of course, and are regarded with stoicism and indifference. The spirit that lives in a large river, that gives or withholds fish; the spirit of the forest that owns the wild animals with which it abounds; the household spirit that looks after the welfare of the family;—these are the divinities the hunter and fisherman is most inclined to worship with sacrifices and offerings. So it is not surprising the Ostiaks should esteem the river Ob above all other gods, should address it with their warmest prayers, and approach it with their richest offerings.² The Lapps made prayers and offerings to the water-spirits, *čáčče olbmak*, to obtain fish, though in East Finmark there was a special

¹ Patkanov, (2) p. 112.

² Castrén, (2) ii. 108.

fish-god, *guli ibmel*,¹ a term which is evidently of later date. As the household god looked after the general interests of the family he could be prayed to give so important an article of food as fish, and accordingly the Samoyedes turn to their *hahe* when they want a good haul.² But a water-spirit can be looked upon from another point of view: he it is that causes people to be drowned. To the Ostiaks, the water-spirit, *Kul'*, is an evil and destructive being;³ to the Votiaks the *vu-murt* (water-man) is a thoroughly evil spirit.⁴ The water-spirits, *vu-murt*, *vu-kužo*, who live in rivers, brooks, and lakes, are a numerous family, and their number is increased by men that are drowned, who subsequently become their servants⁵ or have to act as their horses.⁶ After bathing the Mordvins say: 'Thanks to the *Ved at'a* (water-father), the silver-bearded,' and in a story he is represented as seizing by the beard a man who was drinking, and not releasing him till he had promised to give his son to his assailant.⁷

The forest-god of the Lapps, *Læib olmai*, ruled over all forest animals, which were regarded as his herds, and luck in hunting, or the reverse, depended on his will. His favour was so important that, according to one author, they made prayers and offerings to him every morning and evening. Under his special protection was the bear.⁸ The 'forest men' of the Votiaks send game to the hunter and food to cattle.⁹ All the forest animals are in the power of the 'forest-uncle' or the 'forest-man.' He is of human shape, and is inclined to be bad-tempered; to see him brings mis-

¹ Friis, p. 100.

² Castrén, (2) i. 209.

³ *Ibid.*, (2) i. 307.

⁴ Ostrovski, p. 33.

⁵ Wichman, (1) p. 10.

⁶ Smirnov, (2) p. 201.

⁷ Smirnov, (4) pp. 210, 211, 213.

⁸ Friis, pp. 94, 95; Von Düben, p. 244.

⁹ Smirnov, (2) p. 198.

fortune, usually sickness or death. In time of old sacrifices were made to him oftener than now, but in the district of Sarapul they are still made in autumn under a pine in the forest. The offerings consist of brandy, bread, a bull, and a grey ram. In some places the bread is placed on the branches of a tree for the master of the forest, and he is implored to give of his forest animals, his squirrels, foxes, or wild boars.¹ The Čeremis bring offerings to the forest-spirit that he shall not entangle them in the forest.²

Like the Samoyedes, the Ostiaks are divided into many small clans (*slägt*), each composed of a number of families, having a common ancestry, that do not intermarry. Each clan has a common cult, and from time immemorial has had its own images, which are worshipped by the clan with offerings and other religious ceremonies.³ The separate families, and even individuals, have also their little wooden images, rudely representing a male or female personage, but not differing from the clan images, except in being less elaborately dressed. The clan keeps its images in a house or a tent, or on some remote hill in the forest. The private and family gods, however, are not always small wooden images with a human face and a pointed head. They are sometimes odd-looking stones, or some other natural object. Every family and individual owns one or more such idols, which serve as tutelary gods, and when on the march they are transported on a special sleigh. Often each image is credited with a special function: one protects the reindeer, another provides a good haul of fish, others care for the health, the wedded life, etc., of the family. When wanted they are set up in the tent, on the pasture-ground, or at the

¹ Wichman, (1) pp. 9, 10, 31; Vereščagin, p. 53.

² Smirnov, (1) p. 187.

³ Castrén, (2) i. 299, 300.

places where animals and fish are caught.¹ Professor De Harlez thinks it possible that the small domestic idols of felt and rags, used by the Mongols, and mentioned as early as the year 1200 by Armenian authors, may have been introduced by the Buddhist preachers, as Vartan states without hesitation.² Household gods of this description may have passed from the Mongols to the Ostiaks. But, be this as it may, the doll-like idols of the Ostiaks are certainly of later date than the queer stones and other natural objects that serve the same purpose. The household gods, *hake*, of the Samoyedes are curious-looking stones, trees, or other natural objects, or they may consist of rude images. Of these they ask help in all undertakings, especially when they want a good catch of fish, and the idols follow the migrations of the family on a sleigh.³

The clan and family gods of the Lapps seem to have been known in different parts of the country under the name of *Seita* or *Storjunkare*. Each family or clan (*släkt*) had its *Storjunkare* standing in the district where it lived. Every Lapp settlement had its *seita*, which had no regular shape, and might consist of smooth or odd-looking stones picked out of a stream, of a small pile of stones, of a tree-stump, or of a simple post. They were set up on a high, prominent place, or in a rich meadow. Under and round such *seitas* they strewed green fir twigs in winter, and in summer green leaves. The *seitas* protected their worshippers against misfortune to the herds of reindeer, gave instructions how to catch wild reindeer, and in return offerings were made to them of the hides and hoofs of

¹ Castrén, (2) i. 301-303.

² De Harlez, pp. 178, 179.

³ Castrén, (2) i. 208, 209.

reindeer, calves, and sometimes of a dog. But a private person might also have his own *seita*, to whom he prayed for good luck. The Storjunkare are described sometimes as stones, having some likeness to a man or an animal, that were set up on a mountain top, or in a cave, or near rivers and lakes. Honour was done to them by spreading fresh twigs under them in winter, and in summer leaves or grass. The Storjunkare had power over all animals, fish, and birds, and gave luck to those that hunted or fished for them. Reindeer were offered up to them, and every clan and family had its own hill of sacrifice.¹

The Votiaks have a family and clan god, known generically as the *Voršud*, or 'protector of good luck,' who protects the fortunes of the family. His clan character is shown by the fact that two persons bearing the same *Voršud* name cannot marry, or, what comes to the same thing, if they worship in the same large *kuala* or hut where the clan *voršud* is kept.² The *voršud* is represented in different places in different ways. In one place it is described as an idol placed on a shelf or raised place in the front corner of the *kuala* or outhouse used in summer for cooking purposes. The idol itself is a roughly made wooden head, with a beard of marsh grass. In another *kuala* it is a box, with a small opening like a window on one side, in which stands an image made of dough, the box being placed on a table or stand.³ Elsewhere it is a small quadrangular basket, containing a bundle of birch or fir twigs, a few bits of money, squirrel-skins, a pie, honey, etc., and sometimes the box is laid upon fresh branches of pine. The bundle of birch

¹ Von Düben, pp. 233-235.

² Smirnov, (2) p. 145.

³ Smirnov, (2) pp. 212, 213.

twigs, and sometimes the squirrel-skins and the pie, are changed annually in spring.¹ It is evident that the wooden head and the dough image are later modifications: the *voršud* was originally thought of as an invisible spirit, but residing in the bundle of twigs instead of in a stone, like the house gods of the Lapps, Ostiaks, and Samoyedes. By the Ufimsk Čeremis the term *kuda vodiž*, or 'house-spirit,' is applied to a fagot of twigs kept in the front corner of the house. By the Viátkan Čeremis the twigs are renewed annually. Towards evening on a fixed day in spring all the men of the village mount their horses, and carry away from each house in the place the old fagot, and transport it separately to a certain field, where it is left. A new fagot is cut and taken home. The master of the house then says: 'Old one, go away! let another, a good one, come! Whenever anything happens, preserve me, do not bring evil!'² But to return to the Votiaks: the most important family sacrifices are those held in the *kuala* which each family possesses, and is the home of the *voršud*. Besides the family *kuala* there is a clan *kuala* in every village. If there is more than one clan in a village, an event of rare occurrence, there is a corresponding number of additional *kualas*. The clan *kuala* forms part of the farm-buildings of the oldest man directly descended from the ancestor of the clan, but differs in nothing from a family *kuala*. Sacrifices in these buildings are held on fixed and on accidental occasions. The family and clan sacrifices are held regularly twice a year, at the beginning of summer, and autumn when the field-work is over. The offerings consist of bread, groats, beer, spirits,

¹ Wichman, (1) p. 20; Gavrilov, (1) pp. 161, 162.

² Smirnov, (1) pp. 174, 175.

and a duck. The man on whose farm the clan sacrifice is made acts as priest, and the office is hereditary.¹ Though these facts seem clear enough there is much uncertainty as to the origin of the *voršud* names. Only a few of them can now be explained by the modern Votjak and Zirian languages, which is not surprising if they are family or clan names. Out of a short list given by Gavrilov, *Bigra* might be explained as the adjective of *Biger*, 'a Tatar,' 'a Bolgar.' *Durga* is a 'beetle,' *Selta* might be a derivative of *selt*, 'a horse-hobble,' *Ul'a*, of *ul'* 'a branch'; *Purga* is (1) a tributary of the Vičegda, (2) the name of a village, (3) a snow-storm. The other names he gives are inexplicable. Out of a list of Votjak patronymics written down at the end of the last century occur Birgin, Z'um'in, Kibin, Šudzin, derived from the still existing Voršud names Birga, Z'um'a, Kib'a, Šudz'a. Some river-names are identical with *voršud* names, such as Lekma, Yumia, Čabia, Dokia, Niria, Možga, which last is also a village name.² As rivers were worshipped by the Votiaks, it is possible that the spirits of these rivers had been adopted as tutelary spirits, and so became clan names, though other equally plausible reasons might be urged for other explanations. And as village names are often called after their founder, there is no difficulty in explaining the similarity of village and *voršud* names. But still it remains uncertain whether the *voršud* took its name from the clan that worshipped it, or whether it gave its name to the clan.

The Mordvins being more civilised than the other Eastern Finns, seem to have no tutelary family and clan gods corresponding to those above mentioned, though they have several divinities that protect the house, the hearth,

¹ Wichman, pp. 20, 21.

² Smirnov, (2) pp. 38, 39.

the threshing-floor, the corn-kiln, etc., to whom small sacrifices are made.

From the above examples of existing beliefs among the Ugrians and Eastern Finns, we may safely assume that the prehistoric Finns also had gods of the family and the clan, who were supposed to be domiciled in quaint-looking stones, in small stone piles, in fagots of twigs, and in sacred trees. Further, that they worshipped the spirit that inhabited and personified every large river. Whether they revered a god of the forest is not certain, for, as we have seen, all that he could bestow could also be given by the personal or family god.

As in the course of the second period the Finns became acquainted with domestic animals, to which grass is essential, and practised a little agriculture, it is possible they occasionally paid homage and made sacrifices to the sun. The Samoyedes at dawn and sunset turn towards the sun and utter a few words of prayer, though otherwise they do not seem to pay any special regard to it.¹ But the Lapps offered white male animals to it so that it should shine and promote the growth of grass. Every year the sun ought to have the so-called 'sun's groats,' which both sexes ate in honour of the sun when they prayed it to cast a gracious sunshine on their reindeer. After the feast they fell a second time on their knees, and begged the sun to give them a good milking year, and to let their herds of reindeer thrive. It was only to the sun that burnt-offerings were made, and, being a male deity, only male animals were sacrificed to him. The moon was also a male divinity, for to him likewise only male animals were offered.² The Votiaks pray to the 'sun-mother' to give warm days; but

¹ Castrén, (2) i. 207.

² Friis, pp. 81, 151.

she is not an important divinity. On the other hand, to the purely agricultural Mordvins the sun-god, E.M. *Čipaz*, M.M. *Ši bavas*, is the supreme deity.¹

BELIEFS, WIZARDS.

A brief mention of some of the beliefs of the Ugrians and Eastern Finns will help to show what the general mental attitude of the prehistoric Finns might have been when face to face with the incidents and vicissitudes of daily life. The Samoyedes think that if a hunter eat bear's flesh he would run the risk of being eaten himself. At any rate fish and bear's meat must not be eaten at the same meal, or all the fish would disappear from the river.² The Ostiaks suppose that any one who has been eaten by a bear, who has been drowned, injured by fire, or has met with any accident, most likely has committed perjury, a crime always punished during a man's lifetime.³ The Votiaks say that the bear originated from man, and so understands human speech, though he cannot speak himself. In their opinion the dog is so tenacious of life that if you kill one with a stick, and do not leave the weapon upon its body, it will come to life again. And if it were not for the milky way, the wild geese flying from west to north, and *vice versâ*, would lose their way and perish.⁴ The Samoyedes are of opinion that sickness can be sent by an evilly disposed man as well as by God.⁵ The Votiaks hold that fever and ague are sent by an evil spirit, *Perkino*, who has to be appeased with offerings of bread, butter, and gruel, and is entreated not to be angry.⁶ The Čeremis imagine that

¹ Wichman, (1) pp. 7, 124; Smirnov (4), p. 212. ² Castrén, (2) ii. 185.

³ Castrén, (2) i. 309.

⁴ Vereščagin, pp. 70, 77, 79.

⁵ Castrén, (2) i. 206.

⁶ Wichman, p. 33.

the spirits that cause illness, especially fever and ague, are continually recruited on the death of old maids, murderers, and those that have died a violent death.¹ The Mordvins suppose that sterility, or the sickness of a member of the family without apparent cause, results from having neglected his ancestors. Plague among the cattle is attributed to the same cause.² When any one becomes dangerously ill the Lapps feel sure that one of his deceased relatives wants his company in the region of the dead, *Jabmi aimo*, either from affection or to punish him for some trespass.³ The Turks of the Altai have a similar belief. The soul after death willingly lingers for some time in the house, leaves it unwillingly, and often takes with it other members of the family or some of the cattle.⁴

The Votiaks of Sarapul say that the body after being committed to the earth sees visions, as persons that are asleep do.⁵ A dead Votiak is believed to hear all that is said around him till he has been washed and buried.⁶ The Čeremis imagine that the dead still preserve the sensations of heat and cold, and can see until lowered into the grave. If a lad or a girl dies unmarried, it is thought they can marry in the next world.⁷ When a respected Ostiak dies his nearest relations make a figure of him, which is kept in the tent of the deceased, and enjoys the same honour as himself when alive. At every meal the figure is brought in; every evening it is undressed and put to bed; every morning it is dressed and set in the usual seat of the deceased. The figure is honoured in this way for three

¹ Smirnov, (1) p. 164.

³ Friis, pp. 126, 127.

⁵ Smirnov, (2) p. 180.

² Smirnov, (4) pp. 193, 194.

⁴ Radloff, ii. 52.

⁶ Wichman, (1) p. 39.

⁷ Smirnov, (1) pp. 148, 149.

or four years and then thrown into the grave. By that time the corpse is supposed to have mouldered into dust, and when that is accomplished even immortality comes to an end.¹

The prehistoric Finns, judging from the beliefs of their descendants and successors, were a simple folk. By them, no doubt, sudden sickness was attributed to any cause but the right one,—to the ill wishes of a neighbour, to the violation of an oath or a taboo, to inattention to the legitimate needs of deceased ancestors. When a man was dead they probably supposed, knowing nothing to the contrary, that he continued to see, hear, and feel for a considerable time. Something of the man lived on, but not for ever. When his memory was forgotten, when food supplies failed, or when the body had turned into dust and ashes, the spirit was thought to perish likewise, and nothing of the man remained. It would seem too that the stuff of which spirits were composed was much the same whether they were human spirits or the spirits that give apparent vitality to the phenomena of nature. After death some human spirits increased the host of spirits of disease, or became the servants of water-spirits, and when a worshipper died his private tutelary spirit became functionless and ceased to exist.

Believing as they did in various supernatural, invisible powers who were inaccessible to ordinary men, the prehistoric Finns no doubt had recourse to wizards and exorcists, who were credited with possessing the power of communicating with the unseen world, and of interpreting and explaining the will of the gods and the invisible spirits. The reason why this power was attributed to

¹ Castrén, (2) i. 308.

certain men was simply the fact that they were partially demented, were queer in their behaviour and appearance, and when young were subject to fits, spasms, hysteria, incoherent raving, and other signs that clearly showed they were possessed by a spirit, and therefore fit and natural interpreters of the invisible world of spirits. Such are the signs by which the Buriats, the Turks of the Altai, and the Yakuts know that a youth has been specially chosen by the gods to act as a *šaman*, a *kam*, or an *ojun*.¹ As partial mental alienation is apt to run in families, the wizard's power would generally be handed down from father to son, as is the case with the above-mentioned Siberian peoples; and judging from what is related of it, the amount of education given to the young *šaman* was not very great. But he had to be a good mimic; he must know how to imitate the screech of the eagle, the cackle of the goose, the croak of the raven, the hissing of the snake, the neighing of the horse, and many other natural sounds, when pretending to ascend to the sky or to descend to the lower regions. For such journeys were not related in mere words; they were vivid dramatic representations of a primitive kind, in which the *šaman* played the part of many invisible characters and animals, changing his voice to suit each part. Such a performance could not fail to leave on the simple unquestioning minds of the spectators a deep impression of the reality of the whole affair. These exhibitions are best preserved by the Turks of the Altai, but considerable traces of similar performances were to be found among the Lapps a couple of centuries ago.

Originally the wizards and seers were not what we should nowadays call magicians: they did not employ magic

¹ Mikhailovskij, pp. 85, 86, 90; Radloff, ii. 16.

means to thwart the will of a god, or even to exert external force upon him. From their own point of view, their actions were perfectly rational, and their words both natural and harmless in themselves. Their functions were to find out why any one had been taken ill; whether a certain animal destined for sacrifice would be acceptable to the god, where lost animals were to be found, and practical questions of that sort. To fulfil their tasks they had at their beck and call certain friendly familiar spirits who could inquire of the higher spirits with whom even the wizard was unable to converse. To summon the familiar spirits who lived a long way off a drum had to be used, and when they arrived they were supposed to place themselves inside the drum. It was a most important instrument, and in the hands of a skilful wizard produced a variety of tones: hollow, muffled sounds that seemed to come from the depths of the earth; sharp incisive raps showing that a decisive point had been reached in the dramatic performance; loud, rapid, tumultuous sounds that pictured a terrible conflict. But the drum, perhaps only in later times, was also used as a divining instrument, and so the Altaian Turks, the Ostiaks, and the Lapps drew rude designs in red on the surface of their drums. The figures on the upper part pictured the gods and the sky, those in the lower part referred to the lower world, while a central horizontal band represented the earth. By causing a ring or something of the sort to move freely over the surface of the drum, and observing on what figure it stopped, a wizard could manage to give information about persons and things both above, below, or upon the surface of the earth. Speaking of the Samoyedes, Castrén tells us that the wizard can do little of himself, he is only the interpreter of

the spirit-world, and his whole power consists in being able to place himself in correspondence with certain spirits, and receive from them the necessary information. At the same time he must be young and strong, or the spirits will make a fool of him. His office is hereditary, and the sound of his drum penetrates to the world of spirits, and awakens them from sleep.¹

The clan gods of the Ostiaks are often kept in a certain house which is under the charge of a spiritual man, who is at once seer, priest, doctor, and enjoys a religious respect. The advice of such seers or shamans is taken in all doubtful cases, but the seer answers no question directly. He refers it first to the decision of the gods, and explains the reply to the interrogator. Questions however cannot be put to Tūrm, who is inaccessible to mortals. In the event of a general sacrifice to the gods, or when their advice is asked, a shaman is necessary, as he alone can open the hearts of the gods and converse with them. The drum is indispensable, for an ordinary voice does not reach the ear of the gods. Sometimes the image of the god, placed in front of the seer, speaks, but only the seer can understand what is said.²

When the Voguls desire to sacrifice to a divinity, the sort and quality of the offerings are determined by the wizard (*nájt*=F. *noïta*), who serves as a medium between god and man. He is prepared for his office from earliest childhood, not only by strict observance of religious precepts, and taking part in ceremonies, but also by learning religious songs, legends, and the proper conjurations. In all important religious acts he is the leader, and among the instruments he uses are the drum (*koiþ*, cf.

¹ Castrén, (2) i. 199-201.

² *Ibid.*, (2) i. 300-303.

L. *kobdas*, *komdas*, F. *kannus* > **kamdus*), the drumstick, swords, arrows, and other weapons. His hardest work is conjuring the gods. It is he that leads out the animal to be sacrificed and cries forth his entreaties towards the sky, though the actual slaughter of the animal is performed by assistants on his giving the sign.¹

In very important matters the Lapps summoned a wizard (*noaide*=F. *noita*), who, using his drum as a divining apparatus, explained the will of the gods and answered different questions. But when necessary he was also able to make a journey to the house of the dead, *Jabmi aimo*, to appease its inhabitants, and engage them not to pursue a sick man down to the grave, or to get a deceased relative to come up to the earth again to tend the reindeer. Striking his drum, and singing as loud as he could, he began to summon his *saivvu* followers or helpful spirits. First he summoned the *saivvu* bird, and told it to bring from that region some of its inhabitants, but first of all the *saivvu* fish or snake. When all who intended to assist at the ceremony had arrived, the wizard took off his cap, loosened his belt, placed his hands on his face, knelt down, swayed to and fro on his knees, and began, drum in hand, to run round on his knees with wonderful rapidity and with curious gestures. Now and then he cried out: 'Harness the reindeer! launch the boat!' Then he threw hot ashes from the fire with his naked hands, pretending fire did not hurt him, drank brandy, and struck himself on the knee with an axe. Finally, from the effects of previous fasting and his violent exertions he fell into a swoon, during which no one might touch him, for his spirit

¹ Munkácsi, (1) p. 68.

was now travelling on the *saiuvo* fish to Saivvo or to *Jabmi aimo*. When he came to himself he related what he had seen, what arrangements he had made with the dead, and announced in an oracular manner what ought to be done.¹

Among some Votiaks the seer (*tuno*) enjoys great authority; the animals to be sacrificed are selected on his recommendation; he shows the spot where the sacrifice to each god is to be made; where an illness has seized a sick man, who is guilty of it, who it was that damaged the invalid, what he is like and the colour of his hair, etc. And in general he is respected by the people.² In other places he has a bad reputation, is a habitual sot, and is therefore despised. Of less importance is the exorcist, *pell'askis'*, so called because while pronouncing his exorcisms he accompanies the words with blowing, *pell'askon*.³

As regards the Samoyedes and Ostiaks, it does not seem certain who or what the spirits were that assisted and protected the wizards. Among the Lapps, however, these spirits were called *saiuvo* people, who lived in a *saiuvo* home, which was said to lie close under the surface of the ground. Directly after death souls were believed to pass into *saiuvo aibmo*, the inhabitants of which lived exactly as on earth, but in a higher degree of prosperity and happiness, and they became the guardian spirits of the living. Every adult Lapp, especially *noaides*, could have several *saiuvo* people as tutelary spirits.⁴ If this is correct, the helpful spirits of the Lapp wizards were really those of their deceased ancestors, though perhaps

¹ Friis, pp. 24, 129, 130.

³ Buch, pp. 126, 127.

² Vereščagin, p. 37.

⁴ Friis, pp. 113, 115.

the *Saivvo* people were not wholly composed of human spirits, and certainly not of all human souls, for most of the dead went to *Jabmi aibmo*, which is sometimes confused with *saivvo aibmo*, though the places were different. It seems to have been the same with the Altaian Turks. The intermediaries between the *kam* or wizard and the lower spirits, the *Jär-su*, are the spirits of ancestors. But not all can give help; only shamans that transmit their power from father to son are able through the power of their ancestors to invoke these lower spirits of nature, the *Jär-su*.¹ So too with the Jakuts, the *emekhet* or helpful spirit of the wizard, *ojun*, is generally a defunct shaman, though occasionally a secondary deity, who comes at call, helps, defends, and gives him advice.²

ANCESTRAL WORSHIP.

There is reason to believe that at any rate to some extent the prehistoric Finns worshipped their deceased ancestors. Castrén mentions that the Ostiaks and Samoyedes make offerings to the dead, and that this service is founded on the belief that the dead retain the same needs and follow the same occupations as in life.³ Among the Lapps the dead were held in great honour. The relatives sacrificed reindeer in memory of them for several years, and believed themselves to be still in such close relations that the luck they enjoyed was regarded as a gift from the deceased.⁴ At the annual commemoration the Votjak priest invites the deceased to take part, in the

¹ Radloff, ii. 8.

³ Castrén, (2) i. 308.

² Mikhailovskij, p. 133.

⁴ Von Düben, p. 249.

following words: 'Thy anniversary has arrived, we give thee a bloody sacrifice, a roan stallion with a thick mane. Don't be angry; look well after our good cattle, and do not lay hold of us from before or behind. Gather all the dead around thyself. Be healthy. Come forward to eat and drink with the people around thee. Your grandfathers and grandmothers came forth to eat and drink.'¹ The Permians in the district of Glazov bring food in birch baskets to the cemetery, hang them on branches of the trees there, and call to the deceased to come and eat.²

Among the Mordvins, on the eve of the day for commemorating the deceased, forty or forty-nine days after death, the nearest relative who most resembles the defunct is asked to personify him on the following day. Next day he comes to the house, puts on the clothes in which the dead man died, and sits on the bed on which he breathed his last. All the relations assemble to welcome him. Each brings a present of flour, bread, pancakes, or mutton, lays it with a bow on the table in front of the impersonator, and inquires how he is getting on in the other world. At night a very noisy feast is held, during which the personator tells of the life beyond the grave, and about the crops there. To the visitors that inquire after their dead relatives he gives the most circumstantial news. 'Your relation keeps good horses, and drives about the forest in a carriage'; 'Yours ruined himself'; 'Yours keeps bees'; 'Yours is given to drink'; 'Yours has married a beautiful wife.' About midnight all gather round to listen to the wishes of the dead man. His personifier then advises them to live peacefully, to look after the cattle, not to thieve, and hopes they will have

¹ Smirnov, (2) p. 183.

² *Ibid.*, (3) p. 245.

abundance of beer and brandy. Later on a bull is slaughtered with some ceremony, its flesh is boiled in kettles, and the whole is consumed by the guests. When this repast is over the personator announces it is time to re-enter the grave. All present kneel down and beg his blessing. A cart is made ready, on which is placed a vat containing viands of various kinds. The personifier, after being embraced by the old women, is laid on the bed, which is now placed in the cart, and the whole company goes off to the cemetery. Here they set him and the bed on the grave, then lay a variety of food before him, and beg him to eat for the last time. To keep him company the escort also partakes. They then take leave of the impersonator and invite him to return in summer when the corn is ripe and they will reap his share. The ceremony is now over; the personifier makes a bow, suddenly springs up from the grave, throws the bed upon the cart, and vanishes from the scene.¹ The Mordvins ask the deceased ancestors to give them a long life, to increase their prosperity, to give a good harvest, increase of cattle, etc.—in fact, to accomplish all that is usually the function of the gods. Sometimes it happens that the ancestors are neglected and left to starve. Such conduct is not left unpunished. They warn the relations in a dream, and, taking the hint, the latter bake pancakes, kill a hen and make a feast, the greater part of which they eat themselves, but the remains are taken to a place near the cemetery.² The ascription by the Mordvins of what may be called divine power to their ancestors, such as the ability to dispense prosperity, health, increase of cattle, etc., is closely paralleled by the capabilities in this respect of the

¹ Smirnov, (4) pp. 176-179.

² *Ibid.*, (4) pp. 184, 193.

family and clan gods of the Ostiaks and Lapps mentioned above. It opens up the question whether the latter are not, at any rate partly, the spirits of ancestors, though there is not enough evidence to arrive at a definite conclusion.

THE FAMILY.

Though the Eastern and Western Finns seem to have no word for 'clan,' 'tribe,' we have already found reason to believe that the prehistoric Finns were acquainted with these ideas, and it must be supposed that the words, being no longer wanted, have fallen into disuse, and are buried in oblivion. Georgi, in the last century, says the Votiaks were formerly divided into tribes, and we have already seen that those that worship the same *voršud* cannot intermarry, and that the Ostiaks are divided into many small clans, composed of several families descended from a common ancestor. Unfortunately Castrén nowhere gives the Ostiak word which he translates by *slägt*. There is also no word for 'family' common to the Eastern and Western Finns. The latter use *perhe*, which has been adopted by the Lapps, while the Permian group and the other eastern groups generally employ loan words from Russian or Tatar. In fact there is a great difference at present between the two branches in the constitution of the family. The usual conception of a family among the West Finns is a household consisting of a man and wife with their children, as in Western Europe. But among the East Finns it is different. With them the family is large, consisting of from twenty to forty, and even sixty, persons living under the same roof and governed by a single head. Among the Votiaks it is not uncommon to find ten or

more adults in a single family, not including children ; for there may be three or four married brothers living with their parents in one large family.¹ A family of from twenty-five to thirty persons in one house is not uncommon, and north of the Čeptsa, in the government of Viátka, there are families of even forty persons.² Among the Mordvins several families live together in one house, though this is composed of several buildings, and constitute a large family. Though households consisting of a single family are to be found, they are still uncommon, and are the result of Russian influence. Not long ago there were families among the Erza of from fifty to sixty souls.³ Although there are obvious economic reasons that may account for the enormous size of some Mordvin families that live entirely on agriculture, these would hardly hold good for the smaller but still large families of the Votiaks on the Čeptsa, where soil and climate place agriculture in a subordinate position as a means of subsistence. The modern practice of several married sons living together as one family must be referred to an older instinctive feeling of greater security that kept all those of the same stock together. It is not too much to assume that in prehistoric times the family was also large, consisting of three or four generations, living, if not under one roof, yet in huts so contiguous as to form a single home-stead.

At the present time the family is everywhere on a patriarchal basis. Though the head of a Votiak family has unlimited power over the other members of it, we are told that the natural good-nature of the people is such

Ostrovski, p. 26.

² Smirnov, (2) p. 151.

³ Mainov, (2) p. 58 ; (3) p. 153.

that his authority is wielded in a milder fashion than we should expect, and the members of the family, even the women, enjoy greater freedom than in a Russian family.¹ Among the Mordvins, too, there are, properly speaking, no bounds to the power of the husband over the wife, so that he can beat her at pleasure and no one blame him for doing so as a punishment. Though the power of the father over his children is specially great, it never exceeds certain bounds. A Mordvin takes great care that no member of the family shall become estranged, but, on the contrary, shall feel solidarity with it, and he reluctantly eliminates members really guilty of crimes. Nor is the parental authority of short duration. Even among the Erza it lasts till a son is thirty years of age, for a father can always make himself so respected that sons of that age do not usually think of evading his wishes. And the Mordvin like the Votjak father does not misuse his authority.²

The position of women among the prehistoric Finns could have been neither high nor enviable. An Ostiak woman is a slave in the strictest sense of the word; she is regarded as unclean, and lives in the deepest degradation. She gives no expression to her own will, but must humbly submit to every caprice of her husband. Her wishes are never consulted; she is treated like a piece of goods, and can never inherit property.³ Vogul women in general may not approach idols or holy places. If a woman treads upon or steps over a man's clothes, weapons, or instruments of any sort, they are rendered unclean, and must be purified by fumigation with castoreum.⁴ Among the Lapps woman still takes a very low place in the social organisation.

¹ Ostrovski, p. 27. ² Mainov, (2) pp. 23, 33-35; (3) pp. 121, 131, 132.

³ Castrén, (2) i. 310, 312.

⁴ Munkácsi, (i) p. 70.

Formerly she might not touch a *noaid's* drum, or eat the least bit of any offering made to the thunder-god, Hora-gales; nor might she look in the direction of the *seita* on the holy places.¹ Similarly a Votiak woman may not be present at the sacrifices made to the *lud*, or evil spirit that dwells in certain groves, nor may she approach such a grove.² Even with the more civilised Mordvins the power of the house-mother while her husband is alive is not very great; when he dies it ceases altogether.³ And as late as the eighteenth century there was a lively recollection of a time when a man could sell his wife and the children begotten by her, if she ceased to please him.⁴

At present the Eastern and Western Finns, as well as the Ostiaks, are exogamous, though Mainov argues that, as the gods of the Mordvins marry their own daughters, the nearest relationship was no bar to marriage, and that only a deficient supply of women led the Mordvins to seek wives among strange clans.⁵ Among the Erza of the district of Sergatčsk in the government of Nižegorod, as well as in the government of Simbirsk, a tradition is preserved that in the old days a brother could marry a sister. Not long ago there lived in the village of Dubensk a very pretty and hard-working girl. Her parents were reluctant to part with her and give her in marriage to a stranger. So they sent her to pay a long visit to her relatives at a distance, and on her return they received her as a complete stranger. From that day forth they obliged her to consider her brother as her husband.⁶ In answer to a direct question, a heathen Čeremis told Professor Smirnov

¹ Friis, pp. 86, 27, 70, 137.

³ Mainov, (2) pp. 35, 36; (3) p. 133.

⁵ Mainov, (2) p. 6.

² Wichman, (1) p. 17.

⁴ Smirnov, (4) p. 158.

⁶ Smirnov, (4) pp. 144, 145.

that it was possible to marry a sister, though it was not done, from which he draws the conclusion that formerly the Čeremis were endogamous, there being no formal prohibition against marrying sisters. He also quotes a custom that forbids a Čeremis marrying a girl from a place where the women wear a costume different from that worn in his own village. He finds traces, too, of endogamy in some of the marriage customs.¹ With regard to the Permians, one author states that in out-of-the-way places cases occur of brothers and sisters cohabiting, and another writer mentions that in the district of Glazov sexual relations between very near kindred are not uncommon, while it is not considered blameworthy to have children begotten in incest.² Among the Votiaks in some places there is a custom that forbids a girl walking with a lad from another village.³ Yet, in spite of these exceptions, the probability is great that in the main the prehistoric Finns were exogamous, though under stress of circumstances the nearest relationship was no bar to cohabitation.

Before attempting to discover the constitution of the Finnish family in prehistoric times by an examination of the words that denote relationship, it may be mentioned that not one of these ranges through all the groups. Some are widely diffused, but none universally. Still, from this it would be erroneous to argue that in the second period something like group-marriage or general hetairism prevailed. The absence of common terms for natural phenomena like 'sun' and 'moon,' etc., are enough to show that old words could be discarded and new terms substituted. It may also be noted that as a rule no distinction is drawn between boy and son, girl and daughter, woman and wife,

¹ Smirnov, (1) p. 128.

² *Ibid.*, (3) p. 209.

³ *Ibid.*, (2) p. 145.

woman and mother ; each doublet is usually expressed by a single word. As a rule, too, there is no word for brother or sister, only for elder brother, elder sister, and these are nearly always coupled with the connotations of uncle and aunt. Native words, too, for nephew, grandson, and first-cousin are generally absent. Professor Smirnov maintains that these facts can only be explained by assuming the existence of communal marriage or general hetairism as the basis of the family, and presupposes a state of society in which every adult woman of a group was the concubine or potential wife of every adult man in it ; the children being children of the group, no distinction could be drawn between boy and son, girl and daughter, woman and wife. In his opinion, the absence of a word for 'widow' shows that a woman was never left without a husband, while the want of a juridical term for 'adultery' proves that regular marriage did not exist. He finds a corroboration of his theory in the freedom of sexual relations that exists between lads and girls before marriage in all branches of the Eastern Finns. But Darwin, Dr. Westermarck, and others, have pointed out and laid stress on the fact that jealousy, especially in sexual matters, is and always must have been a very strong passion in man, as it is in all the higher gregarious animals. The strongest men in each small group would therefore always keep their women to themselves so long as they were able to do so. Their children would therefore have a known father as well as a mother, and could not be regarded as merely children of a group. As the supply of women became restricted by the action of the stronger men, the weaker ones were forced to have recourse to various expedients, and thus polyandrous types of marriage or concubinage, and incestuous

intercourse, would arise simultaneously with the polygamy of the stronger men.

The oldest type of family that we can trace among the Finns is one composed of several adult males, probably related by blood, living with several women and their children in one hut. With the exception of his two parents, to any member of the dwelling all male and female members older than himself were his elder brothers and sisters; all younger than himself were younger brothers or sisters, or some analogous term. Traces of a classificatory system, founded on seniority, are still found among the Eastern Finns. It is best displayed among the Čeremis. Exclusive of the father and mother, all blood-relations are divided, with regard to oneself or to a given person, into two categories of older and younger persons.

Iz'a designates and is the term of address for an uncle younger than one's father, an elder brother, his son if older than oneself, and a first cousin if also older.

šölö is a younger brother, a nephew, a grand-nephew, a younger first cousin, and the son of a first cousin.

aka is an aunt younger than one's father, an elder sister, a niece, and a first cousin older than oneself.

šušar is a younger sister, a niece, a grand-niece, a first cousin younger than oneself, and the daughter of a first cousin.

The wife of an *iz'a* is addressed as *engai*; of a *šölö*—*šeške*.

The husband of an *aka* is called *kurska*; of a *šušar*—*veñge*.¹

As it stands this nomenclature is probably not very

¹ Smirnov, (1) pp. 122, 123.

ancient, for some of the terms seem to be loan words of no very ancient date ; but the principle on which it is based is undoubtedly old.

The nomenclature of the modern Čeremis exactly fits the case of a father, mother, and their married sons with their families, living under a single roof and numbering say twenty persons. It may be illustrated by the following diagram :—

A—A'	b'	c'	d'
b	<i>e</i>	i	n
c	f	<i>k</i>	<i>o</i>
d	<i>g</i>	l	p
	h	m	<i>q</i>

Here A A' represents a man and wife with their three sons b, c, d. In course of time their wives b', c', d', bear families, shown in three columns to the right and lettered from *e—q*, the italics marking the girls. It is possible, and we therefore suppose that niece *e* is older than her uncle d ; that i is older than his first cousin h, and that n is older than his first cousins h, m. Then with regard to d, we see that b, c are his elder brothers (*iz'a*), his niece *e* is his elder sister (*aka*), and his remaining nephews and nieces from f—*g* are younger brothers (*šolö*) and younger sisters (*šušar*). With regard to h his two uncles c, d, and his first cousins i, n are his elder brothers, his full sisters *e, g* are his elder sisters, and his first cousins *k, o, q* are his younger sisters. In conversation b' would be addressed as *engai'*, and c', d' as *šeške*. As there is no native term for grandson in the Finnish groups, the father must have called his grandsons 'sons,' but all the grandchildren from *e—g*

address A, A' as the 'great father,' the 'great mother.' In a family circle of this description the terminology of the family may be reduced to a minimum, though in course of time it will gradually enlarge; we see, too, that words for nephew, niece, grandson, granddaughter, first cousin, and even younger sister—younger aunt answers the purpose,—can easily be dispensed with, and need only develop after a long period of time, or after contact with a more civilised people. It is manifest, of course, that the above diagram can be adapted to a stage of family life far less advanced than that of the modern Čeremis, and at the beginning of the second period no doubt the relations between the sexes was different from what now holds. Very likely when the head of the household died, or became infirm, if he was ever allowed to reach that stage, his eldest or strongest son inherited his wife or wives, if young enough. And until the sons were strong enough for each to keep a wife to himself, they may have kept one in common, so that for a season polygyny and polyandry might exist under the same roof. The girls, too, in a household, till appropriated by a single man, may often have had intercourse with the younger men who had no households of their own. But the principle always remained that there was a head of each household, however humble the dwelling might be, and any children born under his roof were regarded as his and formed his family.

Hitherto we have only found in the prehistoric family a certain number of males living with a certain number of females, but we have not learnt how the women were acquired, whether by violence or in some peaceful manner, such as exchange, early betrothal, purchase, or personal

service; or what sort of relations existed between the families of the husband and wife. If we could find widespread terms for any of the bride's relations, that imply marriage of some sort, we might reasonably infer that after taking a wife the relations between the husband and wife's families were not hostile, implying that she had been obtained on the whole by pacific means. There are two words that point in this direction, those for 'son-in-law' and 'father-in-law,' though the latter is a dubious term meaning 'wife's father' and 'husband's father':—

	Fin.	Lapp.	Mord.	Čer.	Ost.	Vog.	Magy.
Father-in-law	<i>appi</i>	<i>vuoppa</i>	...	<i>oba</i>	<i>up</i>	<i>up</i>	<i>ip</i>
Son-in-law	<i>vavy</i>	<i>vivva, vīb</i>	<i>ov</i>	...	...	<i>vāps</i>	<i>vo</i>

In the above equations, though four of the words for father-in-law are used in the double sense, yet to the Voguls and Ostiaks the word *up* only means 'wife's father,' hence there is the presumption that this was the original meaning of the others. It is evident that to a household framed on the Čeremisian system there could never be occasion for one member to address another as 'son-in-law,' though there might be several in the family. The term could only be used by a man or woman in a different dwelling—by the father and mother, in fact, of one of the wives in the first-mentioned household. The fact that the word for 'son-in-law' covers nearly the same area as that for 'father-in-law,' and that the first necessarily connotes the existence of a wife and her parents, immensely increase

the probability that the words for 'father-in-law' once meant 'wife's father' and nothing else, for then both words point in the same direction, towards the old home of the wife. If this is so, we find terms for 'wife's father' and 'son-in-law' among the Western Finns, the Lapps, some of the Eastern or rather Central Finns, and the Ugrian groups in what at first sight seems to be the first period, though probably, for reasons that will be exhibited at the close of the chapter, not before the middle of the second period. Now if the method of obtaining a wife had been solely by hostile capture it seems hardly likely she would ever see her father again, even if he had not been killed in the affray, and so her husband's family would have no occasion to give him a special name; and as he would have no occasion to speak of his son-in-law, such a term would never arise. The probability is, therefore, that in pre-historic times wives were largely, though not exclusively, obtained without fighting. So far as can be learnt from language, the mother-in-law was subordinate to the father-in-law, for in Vogul and Ostiak the bride's mother is merely known as the 'wife of the *up* (father of the bride),' and in N. Ostiak the bridegroom's mother is distinguished as the 'great woman,' showing that the young husband's mother was regarded with greater respect than the bride's. So too the Finnish *anoppi*, 'mother-in-law,' seems to mean 'wife of the *oppi* (father-in-law),' or something of the sort, and so to indicate a position in the family that derived all its authority from the man. In fact, there is nothing in these words for 'father- and mother-in-law,' or in the other terms used by the East Finnish groups, to lead us to suppose that the headship of the family rested in other hands than those of a male.

Another word with a wide range is that for 'daughter-in-law,' 'bride':—

Fin.	Lapp.	Votjak.	Zür.	Ost.	Vog.	Magy.
<i>miniä</i>	<i>manña</i>	<i>itsi mon'</i>	<i>ič mon'</i>	<i>men</i>	<i>ič man'</i>	<i>meny</i>

There is a remarkable difference in the distribution of this word compared with the terms for father- and son-in-law. It is unknown to the Mordvins and Čeremis, and retained by the Permian groups, unless indeed they have borrowed from the Voguls (*ič*, *itsi*=little), as I think is probable, for reasons to be stated hereafter. The next to be noticed has several meanings: (1) wife of brother, (2) wife of husband's brother, (3) sister of wife, (4) daughter-in-law:—

Fin.	M.M.	Erza.	Votjak.	Zürian.	Ost.
<i>Käly</i> 1, 3	<i>Kel</i> 2	<i>Kijalo</i> 2	<i>Kali</i> 4	<i>Kel</i> 1, <i>Kelja</i> 2	<i>Kili</i> 3

Here the third meaning is interesting, as it implies that friendly relations were maintained between the families of the husband and of the wife, so that a term of address for her sisters had to be formed, which is identical with that for a 'brother's wife' or the 'wife of a husband's brother.' Yet this meaning, though found in groups so widely separated as the West Finns and Ostiaks, cannot reach back to the first period, for the Mordvins, Ostiaks, and Zürians have borrowed an expression for 'wife's sister' from the Turkish, Čuvaš, and Russian respectively. Though F. *Käly* can also be used in the sense of 'husband's sister,' it is a later usage, for the West Finns and the Čeremis have a special term for this: F. *nato*, Č. *nuda*. A

term for 'uncle' is widely distributed, though it does not extend to the Ugrians:—

Fin.	Lapp.	Erza.	Čer.	Votiak.	Zır.
<i>setä</i>	<i>čacce</i>	<i>čiče</i>	<i>čüči</i>	<i>čuž</i>	<i>čoz</i> ¹

The first three mean 'father's brother,' the last 'mother's brother,' and the remaining two refer to either uncle.

Not much light is thrown on the method of obtaining a wife by examining the various verbs for 'to marry' in the Finno-Ugrian groups, for on the whole they are ambiguous. The Voguls say 'to take a wife,' the Ostiaks 'to take as wife,' which might mean after paying for her, or after capture, or after her parents' consent. In the epic poetry of the Ostiaks the word for 'to marry a daughter' is *ōmdem*, literally 'to cause to sit, to seat,' a meaning which Mr. Patkanov believes may have arisen from the father seating his daughter in the boat or sleigh of his son-in-law when taking her home after the marriage feast.² For 'to marry' the Zırrians use several verbs derived from the nouns 'woman, wife, bride,' which do not in the least explain the mode in which the action takes place; 'to marry a daughter' is 'to give behind a man,' and when a woman marries she is said 'to go behind or after a man.' When a Votiak parent marries his daughter he is said 'to give (her) to a man,' and of a woman marrying she is said 'to go away to a man,' or 'to run away to a man,' or simply *bizini*, 'to run away.' Here, at any rate, there is no trace of capture; a girl flies to her lover's arms and saves him all further trouble. For a man marrying, the Erza and the Mokša Mordvins use a derivative of the noun 'wife, woman,' which gives us no information; for a woman, the Erza use

¹ Paasonen, (1) p. 30.

² Patkanov, (1) p. 60.

the expression 'to go out or away to a man' or 'to go to a man.' The Western Finns also use a colourless derivative of *nai-*, 'woman,' when speaking of a man marrying, but of a woman they say *mennä miehelle*, 'to go to a man or husband.' Though not much enlightened by this survey, it seems on the whole to corroborate the view expressed above, that in the second period wives were obtained by pacific means.

Though of course monogamy is now the rule among the Eastern and Western Finns, the Čeremis in certain districts of the governments of Perm and Ufá, when circumstances permit, are polygamous, and take two, more rarely three, wives. With the wealthy each wife has a separate house; the position of the wives is identical, and in their rights no distinction is made between the children of the different wives. For though those of the eldest wife enjoy greater respect, in the matter of inheritance they have no privilege. In the eighteenth century polygamy was the custom among the Čeremis, and it still happens with them that several sisters live with one husband.¹ In an indirect manner polygamy was also practised by the Čeremis, Votiaks, Z̄irians, Mordvins, and Ostiaks, for it was not unusual as late as the last century for a father to acquire for his infant son an adult wife who lived in the same house as himself. This of course led to concubinage with the father-in-law, for which the Russians have a special term—*snokhačestvo*.² The levirate also existed, for in the year 1501 Bishop Simon reprehended the newly converted Z̄irians for breaking the ecclesiastical law, and instances that a brother married his deceased brother's wife.³

¹ Smirnov, (1) pp. 121, 124.

² *Ibid.*, (1) p. 124; (2) pp. 142, 143; (3) p. 212; (4) pp. 152, 155; Ahlqvist, (1) p. 160.

³ *Ibid.*, (3) p. 211.

The usual mode of obtaining a wife among the Eastern Finns at present is by purchase, for which the Mordvins have a native word, though some of the Eastern Finns have borrowed the word *kalim* from the Turks. This loan word, however, is insufficient to prove that the custom was first introduced with the new word. In the thirteenth or fourteenth century, before the Ostiaks came in contact with the Tatars, marriage by purchase was a recognised institution, and forcible capture was only resorted to when the paternal claims were too exorbitant. Yet marriage by hostile and formal capture still exists, and was still more in vogue a couple of centuries ago. Among the Čeremis, in the governments of Viátka, Perm, and Ufá, capture is still practised, and marriage by match-making in the government of Ufá is extremely rare. In fact all the terms used in arranging a marriage by contract are said to be of Čuvaš origin. In the district of Malmiž (Viátka) the bride is carried off from the dance at a festival, or in the woods while picking berries and mushrooms, or from the bank of a stream while engaged in washing clothes.¹ But among the Votiaks in the district of Sarapul capture only takes place to avoid the expense of a wedding; or if the girl is willing, but the parents refuse their consent; or if the parents wish to marry their daughter to a rich suitor whom she detests.²

Though hostile capture as a means of obtaining a wife has no doubt existed from the earliest times, it was only a concurrent method for attaining the end, and only undertaken under stress of circumstances as a last resort. Among the Yakuts, whose mode of living and habitat greatly resembles that of the ancient Finns, marriage is by purchase, though the husband cannot bring his wife home till he has paid

¹ Smirnov, (1) pp. 129, 133.

² Vereščagin, p. 27.

the whole price. If he is a poor man he pays by instalments, and is allowed to visit his wife at her home till the balance is paid; sometimes three years may elapse before he is able to do so.¹ Writing in the last century, Georgi relates of the Barabints Tatars that instead of giving money for his wife, a man might work for his father-in-law, hunting, fishing, and ploughing with him for a certain length of time. Of the Kačints Tatars he relates that if a suitor is too poor he guards his father-in-law's herds for from three to five years, hunts, and gets wood for him, etc.² Though it is of rare occurrence for a Zirian son-in-law to settle for good in his wife's home, it is sometimes done in the government of Viátka. In such cases he severs connection with his own people, abandons his family name, and assumes that of his wife's father. His children augment the family of his father-in-law, and bear the name of the latter.³ Though not expressly stated, it is probable that some economic motive, such as inability to pay the bride's price, induces the Zirian to abandon his home and take up house entirely with his father-in-law. It is impossible to say whether such a custom was ever the rule, but it may point to an older state of things when the bridegroom had to live at his father-in-law's house for a limited time in a menial capacity, and under special circumstances prolonged the period for life. The only other sign-post that points in the same direction is the custom of 'mutual avoidance,' as Dr. Tylor terms it,⁴ by which the wife avoids her husband's relations and he hers. He regards it as having arisen in the transition period between the maternal and paternal system, when the husband, after a

¹ Böhlingk, p. 73.

² Georgi, vol. ii. pp. 130, 190.

³ Smirnov, (3) p. 215.

⁴ *Jour. of Anth. Inst.*, Feb. 1889, pp. 246-252.

limited residence in the wife's house, subsequently shifts to his father's abode. But it was continued into the later period, when a man takes his wife home at once, and it is in this last stage that we find it among the Votiaks. Among them a bride must hide from her father-in-law, and in his presence must conceal her face with a kerchief. For a whole year she must not say a word to him, or even mention his name. In his presence, or in that of her elder brother-in-law and the eldest sister-in-law, she may not appear bare-headed or bare-footed. The same takes place in the behaviour of the son-in-law towards his wife's father and mother.¹

PERSONAL NAMES.

Though the prehistoric Finns had no surnames or family names, no doubt they had something corresponding to clan names, and gave names to their children. It is not easy to ascertain on what principle they did so, as the light thrown on the subject by existing or recent practice is far from clear. But, on the whole, it would seem that the element of chance was an important factor in deciding the momentous question how a child was to be called. The first person or natural object fortuitously encountered by the name-giver was accepted as a supernatural coincidence, so that the imposition of his or its name on the newborn child would naturally be accompanied by luck. In the middle of the last century, according to Le Brun, a Samoyede child was named after the first man or beast that entered the hut, or after the first they met on going out, or after the first object they set eyes upon, whether

¹ Smirnov, (2) p. 160.

beast, bird, river, or tree.¹ In the heroic ballads of the Ostiaks the name of an old prince was, 'The rotten elderly hero, the chick of a large grebe, a little grebe's chick that has rotted for three hundred years.'² But a name of this sort could not have been given at birth. More than one hundred years ago, speaking of the Čeremis, Georgi states that a name was given to a male child by the first male friend that arrived, and to a female infant by the first female friend or neighbour that looked in. Further, that a husband never called his wife by her name, but simply 'woman,' *vata*, and she called him *mari*, 'man, Čeremis.'³ To the Mordvins of former times the naming of a child was a very important matter, and one had to be chosen that would bring luck. The father went out of the house, and the first living or inanimate object that caught his eye was given as a name. Hence such names as 'Splinter,' 'Leaf,' 'Grass,' etc. The name Smith is common enough, which shows the first person met was of that trade; Fiddle, for a similar reason, is likewise common.⁴ Among the Votiaks the name of a new-born child was formerly given by the midwife. At present this has fallen into desuetude in the district of Glazov, unless the babe is female. In that case the midwife gives it the name of the *voršud* to which the child's father belongs. Till her marriage she is never called by this name, but at her husband's house she is always called by it till death, and her children are called after the *voršud* of their father. In the government of Kazán a child born in the ploughing season might be called *Gerei*, from *geri*, 'a plough'; if in harvest-time, a suitable name is *Urakai*, from *urak*, 'a sickle.' To break

¹ Le Brun, p. 14.

² Patkanov, (1) p. 11.

³ Georgi, ii. 840.

⁴ Mainov, (2) pp. 13, 14; (3) pp. 12, 13.

the run of ill-luck, when several children have died in succession, the name *Tuktar*, 'Stay!' is given.¹ Another author mentions that Wolf, Bear, Squirrel, Thrush are common male names, and are given to children born at the season when these are hunted or caught; but that nowadays women, till married, are called by their Russian baptismal names, and after that by the name of the village they come from.² In some parts of the district of Glazov the practice is different. The husband does not call his wife by her own name—a woman has two names—but by a maternal one that she inherited from her mother, and she in turn from hers. At birth the midwife who gives the name to the new-born daughter says, for instance: 'Be good Čabia, Ebga' (the mother's name). Professor Smirnov sees here an undoubted survival of the maternal system. The mother yields her right to the father to transmit his name to his son, but keeps her right to hand down her name to his daughter.³ But as the second name is of the nature of a surname, and the wife in ancient times had practically no rights, this use has all the appearance of a very modern development, dating from a time when, with the increase of civilisation, some freedom of will was allowed to married women. If a Lapp child became ill, or cried excessively, the reason was that it had been given a wrong name. It was therefore rebaptized, and from this cause a Lapp might have three or four additional names.⁴

THE HOUSE, DOMESTIC OCCUPATIONS, ETC.

The settlements of the prehistoric Finns must always have been on or near the bank of a river, or along the

¹ Gavrilov, (1) pp. 168, 169.

² Buch, p. 108.

³ Smirnov, (2) pp. 137, 138.

⁴ Friis, p. 127.

shore of a lake, as everywhere traces of neolithic man are found in such obviously suitable localities. The dwelling in which the prehistoric patriarch lived and ruled his family was far from luxurious. That used in summer was little more than a screen for the fire that burned in the centre. It was a more or less conical structure of light poles, cut or broken from trees, the lower ends of which rested on the ground, while the upper ends inclined towards the top, leaving an aperture for the escape of the smoke. This framework was covered with bark, hides of wild animals or with sods of turf and was entered by a door that very likely faced towards the south. Such a primitive dwelling still survives as an outhouse for cooking in the F. *kota* and the portable Lapp tent, *goatte*. The name, though not the original shape and structure of the house, is still preserved by the Mordvins, Čeremis, the Permian group, and the Ostiaks, and therefore takes us back to the first period. For the rigorous winters of the north such a habitation was manifestly quite insufficient, and to protect themselves better against cold they lived in winter in huts that were partly underground. An excavation of suitable size was dug with some kind of rude implement to a sufficient depth, was roofed over with poles and then covered with sods of turf. Such a dwelling is termed *gort* by the Permians, and is found in great numbers in the government of Vologda in groups of from ten to fifteen; it is also known to the Ostiaks under the name of *tal xot* or 'winter hut.' As the F. *huone* 'a house, a room,' seems to have meant 'a warm, snug place,'¹ it may originally have been an underground winter hut.

Though there is no common word for village, it is not

¹ Setälä, (1) p. 270.

likely the ancient Finns lived permanently in isolated dwellings far from neighbours.

As a word for 'fire' (F. *tuli*) is common to all the Ugrians, the East and West Finns, it may almost be inferred that it was neither sacred nor an object of worship, though its warmth must have been appreciated. For 'door' there are two sets of words: F. *ovi*, Vog. *ävi*, *eu*, Ost. *ou*, and F. *uksi*, Lap. *uks*, *ufsa*, Z. *ödžös*, *ös*, *öbös*, V. *ös*. The only common words for an enclosure of any sort outside the house seems to be F. *piha* 'courtyard,' Č. *peče* 'a fence.'¹ For outhouses and storehouses, though there are often native words, yet each term is confined to a single group. A place fortified by a rampart and ditch to serve as a refuge from attack was unknown in remote prehistoric times, though in the protohistoric period forts were much used by the Ugrians and by both branches of the Finns. The furniture of the hut was almost *nil*; tables, chairs, stools, etc., were unknown, but they had prepared skins of animals to spread on the ground for sleeping and sitting upon, and were therefore not so badly off after all.

Besides looking after the children the women had a variety of occupations. With half-closed eyes smarting from the smoke that filled the hut, they plied their coarse bone needles (F. *äimä*, L. *aibme*, Č. *im*, Z. *jem*) threaded with sinew, (F. *suoni*, L. *suodna*, M. *san*, V. and Z. *sön*, Vog. *tan*) while making boots (F. *kenkä*, L. *gam*, M. *kämä*, Č. *kem*, Z. *köm*) or other articles of dress. Or taking up a bundle of fibre made from some kind of nettle by means of a spindle and whorl, (F. *keträ*, M. *kištir*, Č. *šidir*, V. *čers*, Z. *čörs*) they span (F. *punoa*, L. *padnam*, M. *ponan*) it into thread (F. *syy*, V. and Z. *si*) and wound

¹ Setälä, (1) p. 274.

it into a ball (F. *kerä*, M. *kirnä*). This could be used in two ways; for 'sewing with wide stitches,' (F. *kursia*, E. M. *kurje*)¹ or for weaving (F. *kutoa*, L. *goddet*, M. *kodams*, Č. *kuo*, V. *kuni*, Z. *kinī*). The loom of course was a very rude and simple apparatus, but they attached the threads of the warp (F. *loimi*, M. *limä*) to one end of it, worked in the woof (F. *kude*, L. *goda*, V. *kuon*, Z. *kian*; M. *añks*=*ats* in Esth. *ats-põl* 'a shuttle'²) and thus manufactured woven stuff (F. *kutama*, M. *kotf*, V. *kuon*, Z. *kian*). Perhaps the shuttle was not used as there is no common term for it, though several native ones are to be found. Though sewing and making boots must have been practised in the first period, the existing words all belong to the first half of the second period, as well as the terms for spinning and weaving.

The cookery was decidedly plain. Fish and flesh were generally eaten raw, but fat meat must have formed the basis of the 'broth' (F. *liemi*, L. *liebma*, M. M. *läm*, E. M. *lem* 'grease,' Vog. *lom*) they had learnt to prepare, and this must have been boiled in some kind of pot that would resist fire or into which hot stones could be dropped. For holding liquids there were wooden bowls (F. *malja*, M. *mal'anka*),³ and for solids they had plaited baskets (F. *vakka*, M. *vakan* (?)). Like all inhabitants of the north the pre-historic Finns of the first period, when they could get it, ate fat (F. *voi*, M. *vai*, Č. *ii*, V. *vöi*, Z. *vii*, O. *voi*, Vog. *voi*); in later times the word was also used for 'butter.' There is no common word for 'milk,' showing there were no domestic milking animals in the first period. But before the end of the second period the Mordvins and

¹ Paasonen, (1) p. 16.

² *Ibid.*, (1) p. 8.

³ *Ibid.*, (1) p. 20.

West Finns had learnt how 'to milk' (F. *lypsää*, Z. *lįstini*¹=M. *lofsa*, 'milk'), and to churn (F. *pyöhtää*, M. *pištoms*)² the milk into butter.

The oldest prehistoric weapons were the bow and arrow, the words for which with little change are found in the Ugrian, East and West Finnish languages. Whether the bow was simple or compound we do not know. At any rate the Ostiaks, who are far from being a progressive or inventive people, used in the thirteenth or fourteenth century and still use a bow composed of two kinds of wood fastened together with fish glue and then bound round with birch bark. The lower half was of very hard pine, the upper part of birch. Though the string is now made of hemp, in ancient times it was doubtless of sinew.³ Besides the pointed arrow they also used the blunt-headed kind, F. *vasama*, though there is no common word for it. F. *veitsi* 'a knife,' which corresponds with M. *iñks* 'a scraper,'⁴ and F. *ora*, M. *ura*, *uro* 'an awl' or instrument for boring holes may originally have been flint or bone instruments.

In winter the hunting expeditions were made on long wooden snow-skates (F. *suksi*, M. *soks*, Ost. *toχ*, Vog. *tout*). In summer they travelled in 'boats' (F. *veneh*, L. *vanās*, M. *venš*) which they 'rowed' (F. *soutaa*, Vog. *tovantam*) and steered with a 'paddle or steering oar,' (F. *mela*, L. *mælle*, M. *milä*). But this class of boat and paddle belongs to the later half of the second period. The sleigh appears to have come into use at a much later time as there is

¹ The original meaning of these words, preserved in Zīrian, is 'to press out,' so that 'to milk' is a secondary and more specific meaning.

² Paasonen, (1) p. 22.

³ Patkanov, (1) p. 29.

⁴ Paasonen, (1) p. 41.

nothing in common between the East and West Finns in this respect, though F. *ohja*, M. *vožja*, 'a rein' if genuine and not loan words,¹ indicate that driving was known by the close of the second period. A primitive mode of catching fish would be to dam up a small stream with a 'dam or weir' (F. *pato*, N. Ost. *pot*), and capture them as they passed through a small opening. Nets were probably unknown in the first period, but in the first half of the second they invented 'wicker traps' (F. *merta*, M. *mereta*, Č. *murda*, V. *murdo*, Z. *morda*) for catching fish, which undoubtedly formed a most important article of food.

About the middle of the second period agriculture began to be practised, for though there are no common terms to express ploughing and sowing, those employed are taken from the native stock of words. The earliest grain may have been the humble variety of wheat known as 'spelt' (M. *viš*, Č. *višt* < **višn*, V. *vaz'*), forms that correspond with F. *vehnä*, 'wheat,' though the Häme have another word for the same grain, *nisu*. Besides these the East and West Finns have several apparently native words for cereals, which are confined to one, or at most two groups: M. *toiz'uro*, 'wheat,' is evidently a compound of *s'uro*, 'corn'; M. *šuz*, Č. *šoš*, 'barley'; Vtk. *jidi*, Z̄ir. *iđ*, 'barley,' perhaps connected with F. *ide*, 'a growing shoot'; F. *otra*, *ohra*, 'barley'; M. *pineme*, 'oats,' and Vtk. *s'ezi*, 'oats.' As Mr. Paasonen equates F. *suurima*, 'groats,' with M. *s'uro*, *s'ora*, 'corn, grain,' (Z̄ir. *sör*, 'oats'); F. *sii-kanen*, 'the beard on grain, chaff,' with M. *s'iva*, Č. *s'u*, 'chaff,' and Z. *s'u*, 'corn, rye'; F. *kyrsä*, 'a loaf, bread,' with M. *kša*, *kši*, 'bread,'² there can be little doubt that one or two cereals were known and used as food about the middle of

¹ Paasonen, (I) p. 21.

² *Ibid.*, (I) pp. 34, 30, 17.

the second period. The cultivation of the soil must have been of a very primitive description and no doubt was left to the women and 'slaves' (F. *orja*, M. M. *ur'ä*), who scratched the surface of a plot of ground near the dwelling with a pointed stick, threw in a few handfuls of grain, covered it over with earth and waited till it grew up. When ripe the grain was separated from the 'straw' (F. *olki*, M. *olgo*) and 'ground' (F. *jauhoa*, M. *jažams*) between a couple of stones.

In the first period the year was only divided into 'winter' (F. *talvi*, L. *dalvve*, M. *t'ala*, Č. *tele*, V. *tol*, Z. *töl*, Vog. and Ost. *tal*) and 'summer' (F. *kesä*, *suvi*, L. *gässe*, M. *kiza*, Z. *gožim*, Vog. *tuv*). It was only in the second period when the state of the crops drew their attention to it that a word for 'autumn' (F. *syksy*, L. *čakča*, M. *soks*) was found to be necessary. Some of the natural measures of length seem to have been in use at a very early period. The 'fathom' has a very wide range (F. *syli*, L. *sal*, M. *sel*, V. and Z. *sil*, Vog. *tal*, Ost. *lal*); the 'ell' (F. *kyynärä*, M. *kener*, Č. *ku'ner*, V. *gır* (?)) and the 'span' (F. *vaaksa*, L. *vuopse*, M. *vaksa*, Z. *ves't*) have a less range. In the first period they could only count up to seven; by the time they needed a term to express ten, they were already divided into four groups—a West Finnish-Mordvin, a Lapp-Čeremis-Vogul, a Votiak-Zirian, and an Ostiak group. The last two groups borrowed their terms from a Persian and Turkish source respectively. It was only at a later time that much was done in the way of 'counting' (F. *lukea*, L. *lokkat*, M. *luvan*), 'paying' (F. *maksaa*, L. *makset*, M. *maksan* (I give), and 'selling' (F. *myydä*, L. *mieggad*, M. *mijan*, Vog. *mişam*).

THE METALS.

One of the great turning-points in the history of a people is the introduction of the use of metal and the gradual disuse of stone implements. The first metal that became known to the Finns may have been copper, though no distinction was made between this and bronze.

Copper, 1	}	F.	Lapp.	Mord.	Vog.	Ost.	Magy.
Metal, 2							
Wire, 3							
Iron, 4							
		<i>vaski</i> , 1, 2	<i>vešk</i> , <i>væikke</i> , 1, 2	<i>us'k'ä</i> , <i>vis'k'a</i> , ¹ 3	<i>voχ</i> , 2	<i>vāχ</i> , <i>voχ</i> , 2, 4	<i>vas</i> = <i>vaš</i> , 4

At the present time the Ostiaks use *vāχ*, *voχ* in the general sense of 'metal, money,' and in some places 'iron.' When they wish to be explicit they prefix *patar* or *vosta*, 'green, yellow,' when they mean 'copper'; *navi*, 'white,' when they mean 'silver'; and *et*, which Castrén translated by 'simple,' when speaking of iron.' Among the Voguls *voχ* has also the meaning of 'money, metal,' though in some places it means 'copper.' Taking everything into consideration it seems best to suppose that the original meaning of *voχ*, *vāχ* was 'bronze,' with its necessary connotation of 'metal.' Another word for 'copper' alone is confined to Vogul, Čeremis and the Permian group.

Čer.	Vtk.	Zür.	Vog.
<i>vörgēn'e</i>	<i>irgön</i>	<i>irgön</i>	<i>ärgin</i>

As this set of words has only one meaning and is never used in the sense of metal it is probably of later origin than the *vaski*-group.

The next metal to be noticed is 'silver,' for which the West Finns have a special name, *hopea* < *šopedä*, not found, however, in the Eastern groups or among the

¹ Paasonen, (1) p. 40; Wichman, (2) p. 23.

Ugrians. But the Permian and Ugrian groups have a very interesting and puzzling series of words for this metal which cannot well be separated from the terms for 'tin, lead.' Some of them have the appearance of being compounds, the last part of which is believed by Mr. Wichman to be of the same origin as F. *vaski*, Vog. Ost. *vox*.¹

	Votk.	Zjr.	Ost.	Vog.	Magy.	Oset.
Silver	<i>azves'</i>	<i>ezis'</i>	<i>navi-vox, āln</i>	<i>ōlīn</i>	<i>üst, ezüst</i>	{ <i>ävžeste,</i> <i>avzist</i>
Lead	<i>s'öd uzves'</i>	<i>ozis', ozis'</i>	<i>toŭpa</i>	<i>atveš, atkues</i>	<i>ólom, ón</i>	{ <i><avzist,</i> <i>ävžeste</i>
Tin	<i>tōdi uzves'</i>	<i>ozis', ozis'</i>	<i>navi-toŭpa</i>	<i>gaim atveš</i>	<i>ón</i>	

Dr. Munkácsi maintains that the Osetan is the original source from which the Permian group and the Magyars obtained their word for 'silver,' but this is denied by Schrader, Hübschmann, and Wichman, who consider, on the contrary, that the Osetan form is borrowed from an East Finnish source. The latter, starting from the Vtk. *azves'*, analyses it into *az*, 'white,' and *ves'*, 'metal,' the equivalent of F. *vaski*. But the grounds on which he makes *az* to mean 'white' seem to me very precarious. Dr. Munkácsi took down a Votiak magic song in which the word *aziz* occurred as an epithet of a 'hill' and a 'prince.' The word was unintelligible to him, but his Votiak teacher explained it by what looks very much like a piece of folk-etymology. As *iz* means a 'stone,' he explained that *iz* was a 'stone' and *az* 'a very heavy white stone.' The explanation not being very intelligible, Mr. Wichman supposes that *az* must mean 'white,' and *aziz* 'white stone.'² But it seems to me that the teacher did not really understand the

¹ Wichman, (2) p. 23.

² *Ibid.*, (2) pp. 23, 24.

word and merely hazarded a guess. As a good many Arabic and Persian words have crept into Votiak through a Tatar source, I rather suspect this is the Arabic-Persian-Turkish '*aziz*, 'precious, respected, powerful,' a fitting epithet for a 'prince' and one that under certain circumstances might be applied to a 'hill.'

Referring back to the list above, we notice: (1) that the word for 'silver,' common to the Permian group, to Magyar and Osetan, is not found in Vogul or Ostiak; (2) that the Ostiaks use a compound word meaning 'white metal' instead, and the Voguls a word that corresponds with the Magyar for 'lead'; (3) that in the Permian group, lead and tin are either distinguished as black and white *uzveš* or no distinction is made at all; (4) that the Vogul for 'lead' seems to be the same as the Permian, Magyar and Osetan for 'silver,' as Vog. *t* is often the equivalent of a common Finnish *s*, *z*; (5) that the Permian, Magyar, and Osetan for 'silver' seem to be compound words; (6) and, that as the words for 'tin' in Vogul-Ostiak mean 'white lead,' 'male lead,' much as in the Permian groups, we may neglect the word for 'tin,' and confine our attention to 'silver' and 'lead.'

From the fourth observation we are led to suppose that the older meaning of Vog. *atveš* was 'silver,' not 'lead,' though it is by no means certain. It might also be imagined that *atveš* was borrowed from the Vtk. *azveš*, *z* being replaced by *t*, a phonetic change that certainly might take place. But this does not account for the form *atkues*, where *kues* seems to be the Ost. Sam. *kues* 'iron, metal,' a word that in other Samoyede dialects appears as *jěse*, *vese*, *bese*, *basa*, *baza*. In the short excursus at the end of this section it will be seen that all these forms, including *kues*,

go back to an original form beginning with *v* or *j*. The Osetan and Permian forms seem to show that the original sibilant was an *s* not an *š* sound, as in Magy. *ezišt*, Vog. *atveš*. If this is so, still the probability that Vog. *atveš* < *atves* is a loan from the Votiak is considerably lessened by the consideration that there is also a Sam. *vese*.

Corresponding to and probably of the same origin as the Samoyede words for 'iron, metal,' are 'Magyar *vas* 'iron,' Vog. Ost. *voχ* 'copper, metal' and F. *vaski* 'copper.' The word in Northern Asia and Siberia that corresponds best with the Samoyede forms is undoubtedly the Turk. *jes*, Mong. *dzes*, Burj. *zet* (<*jes*, *jet*) 'bronze, copper, metal.' As the Turks have a word for 'copper' only, the oldest meaning may have been 'bronze'; and as in one Samoyede dialect we find that initial *j*, *v*, are equipollent, it seems possible to suppose that *jēse* was borrowed directly from a T. *jes* and dialectically became *vese*, *vasa*.

If this is correct the West Finnish, Vogul, and Ostiak for 'copper, metal,' the Magyar for 'iron' and the second part of the words for 'silver' in Permian are all referrible ultimately to a common form *jes*, which is also found in Turkish and Mongolian. Whether the last two peoples obtained it from a still more remote source must be left undecided. I imagine that the diffusion of the word took place in this way. From the Altai region, where copper is abundant and tin is also found, *jes*, with the meaning 'bronze,' gradually spread through the medium of Samoyede tribes to the Ugrians living chiefly on the east side, but also in considerable numbers on the west side of the Urals, reaching them not later than the sixth century B.C. and possibly a good deal earlier. From the Ugrians, under the form *vas*, it was passed on to the West Finns, Mordvins

and Lapps, who added the suffix-*ke*, *k'ä*, perhaps merely a diminutive that did not essentially affect the meaning. This hypothesis receives support from the facts recorded in chapter ii., for the earliest bronze socketed celts, found in the north of Finland, in Lapland, at Anánino, as well as in other parts of the government of Viatka, are all of transuralian form, the aperture of the socket being always angular, never circular in section. The battle-axes from the coast of the White Sea and Anánino are also of Siberian type. While the crania from Fatiánovo, associated with minute pieces of copper and iron, seem to be Ugrian.

As the Magyar for iron is *vas*, and the Vogul-Ostiak for 'copper, metal,' is *voχ*, *vuaχ*, it is clear that the second part of their words for 'silver,' 'lead' (*-üst*, *-veš'*) are borrowed. And if Vog. *-veš'*, *-kues* are borrowed, as suggested above, from Samoyede dialects, they do not stand alone. Ahlqvist has noted eighteen Vogul or Ostiak words borrowed from the Samoyedes and among them *atkues*.¹ Perhaps, too, the Ost. *patar*, which has no meaning by itself, in *patar-voχ* 'copper' is the Ost. Sam. *padal* 'green,' probably 'yellowish green' as it is a derivative of *pad* 'the gall.' The Mordvin word for copper also means 'green.' It still remains to explain the suffix *-te*, *-t* found in the Magyar and Osetan words for silver. In Samoyede, the breathing marked by ' as in *jěse'* can sometimes be traced back to lost dental as in the Jur. *ji'*. Tav. *bě'*, Jen. *bi'*, 'water' compared with Knd. *vit*. O. *üit* 'water.' The older forms of *jěse'*, *vese* may therefore have been **jeset*, **veset*, or **jesete*, **vesete*, and from this would arise the Magyar *-üst* < **veste*, which occurs as a loan from the Magyar in the Osetan *-vist*, *-veste*.

¹ Ahlqvist, (3) pp. 5-8.

The origin of the prefixes *ez-*, *az-*, *at-*, in the words for 'silver' requires explanation, if we reject that of Mr. Wichman, and I offer the following suggestion instead.

Castrén explained the Ost. *et-voχ* 'iron' as 'simple metal.' Owing to its form and meaning it is difficult to separate this from the Ost. *int-vuaχ* 'steel,'¹ the first part of which is evidently connected with Vog. *jemtan*, Vtk. *andan*, Os. *andan* 'steel,' all from a N. Pers. *hundwānī*, *hindawānī*, *hindī*, 'Indian steel,' see p. 234. As initial *h* is regularly dropt in Osetan, and the Permian group has no *h*, it is uncertain whether Vtk. *andan* is a direct loan from Osetan or *vice versâ*, or whether both borrowed from a common source. Here the *int-* is clearly adapted from one of the N. Pers. forms, and *int-vuaχ* is a folk-etymology containing as an ingredient *vuaχ* 'metal,' the *int* being unintelligible. This being the case it is possible to suppose that dialectically the *n* may have dropt out and the result was *etvoχ* 'iron,' 'steel(?)' The first member of this compound is perhaps the same as the *at-* in Vog. *atveš*, *atkues* 'lead.' If the last part of this is a loan from the Samoyede, and *at-* is not of Samoyede origin we must suppose that at one time the Voguls used *veš*, **ves*, **veste* concurrently with *voχ* as an independent word, and the Magy. *üst* 'silver' seems to confirm this, though the old meaning is changed. The loans *voχ* < **vas*, *veš* < **veste* must also have been made at different epochs. From some such form as **etveste* the Magyars formed *ezveste*, in which form it was taken by the Osets, and subsequently *ezüst*. If there is anything in this suggestion, the Magyar word for 'silver' once meant 'Indian metal,' and the Permian equivalents of F. *vaski*

¹ Tomaschek, (2) p. 42, gives this form, which was unknown to Castrén and Ahlqvist.

viz. *-ves'*, *īs'* were introduced quite independent of the Finnish and at a much later date, but also through an Ugrian channel.

To account for the Permian words for 'lead,' 'tin,' there is the N. Pers. *arzīz*, 'lead, tin,' from which they might be borrowed with the loss of *r*, as in Vtk. *juges*, 'an eagle,' from Os. *cārgās* (*c=ts*), N. Pers. *kargas*. In this case the inserted *v* in *uzves'* would have followed the analogy of *azves'*, while the original is better preserved in the Zīr. *ozīs'*. As the N. Pers. *arzīz* is itself a loan word from the Ar. *raṣaṣ*, 'lead, tin,' the Permian words, if this view is correct, cannot be older than the seventh century A.D. There is no silver or tin in the Ural Mountains, so that in any case the East Finns and Ugrians can only have seen these metals as imported articles. Galena, on the contrary, is found in a good many places in the above region, though it does not appear to have been utilised in prehistoric times, all the so-called Čudish mines being of copper or gold.

The next metal that followed in the wake of bronze and copper in North-eastern Russia was probably iron, how long after we cannot say, though the interval may not have been very great, for a small piece, evidently very precious and embedded in a disk of copper, was discovered at Fatiánovo. As all the names for it are borrowed, they will be mentioned in a later section. Gold may have followed next, as the loan words for it in East Finnish and Ugrian were borrowed about the same time as those for 'iron' and from the same source. On *à priori* grounds we should expect gold to be known much earlier than silver, the ore of which is difficult to reduce, while the other metal is often found in nuggets. But at present the place at which the earliest finds of gold objects have been made is

Gliadénova, though only to the number of three out of about 23,000, while a few silver articles were obtained not only there, but also at Anánino. The introduction of terms for 'metal,' 'bronze,' and 'copper' may therefore be set in the latter part of the second period; for 'iron,' 'gold,' 'silver,' and 'lead' in the third period for the East Finns, but not till the fifth period for the West Finns, with the exception perhaps of silver.

Though there are forms in Mordvin and Ugrian corresponding to F. *valaa*, 'to cast (metal), to pour out (any fluid),' there are no common words for 'mine,' 'crucible,' 'bellows,' 'moulds,' and other apparatus necessary for an artificer in bronze, when casting alone was employed. This is to be explained by the very simple appliances used, which scarcely required a technical expression, and by working as a rule on a small scale. For instance Ostiak women still cast their own tin ornaments in moulds of pine bark made by themselves,¹ and a recent English visitor of the Island of Kolguev describes how he saw a Samoyede make a ring. Round a stick he cut a groove, fitted a piece of paper over it, and then ran in some white-looking metal which he had heated in the fire in a hollow piece of wood. The wood of the stick was cut away, the ring removed, and finished with a knife and sand. He worked away till he had a ring as well and accurately shaped as any plain gold signet ring. Though this mould was of wood, the Samoyedes use bullet moulds of stone set in a pair of wooden scissors.² As the anvil, the sledge-hammer, the forge-fire, and the smith himself only became a necessity when iron was abundant, it is not surprising

¹ Martin, (2) Tafel, 4.

² Trevor-Battye, *Icebound on Kolguev* (Westminster, 1895), pp. 172, 298.

that though for some of these expressions there are native words, none of them are common to two groups unless they are loan words.

*

It might be supposed that *kues* is either a different word or that it retains an original *k* that the other dialects have lost. This, however, is not the case. There are at least a dozen words in which Jurak *j*, *v*, Jenisei, Tavgi, and Kamasin *b* are represented in Sam. Ostiak by *k*. And first it must be observed that the Tavgi and Jenisei dialects have no *v*, *ɸ*, so that the equivalent of an initial *v*, *ɸ*, in Jurak is perforce *b*, *f*, in these two dialects. In Sam. Ostiak no word can begin with a soft consonant or with *j*. In Kamasin *v* is not an initial sound, and sonant stop consonants in that position are rare. The instances in which Ost. *k* correspond with Jur. *j*, *v*, Jen. Tav. Kam. *b* are to be explained by *b* being exchanged for *g* which hardened initially into *k*. There are a good many words in which Jur. has initial *k* and all the others *k*, showing that the latter was the original sound. There are also a good many in which Jur. Jen. Tav. begin with *j*, but Ost. with *ʈ*, *č*, and Kam. with *ʈ*; here the original initial was doubtless *j*.

	Jurak.	Jenes.	Tavgj.	Kamasin.	Sam. Ostiak.
1. Fish-hook	vada	boda	batu	buda	kote
2. Dog . .	{ jandu, } vueno }	buno	bāñ	men < ben	kanak
3. Bowel, gut	{ jēd'u, } vet'u }	bere < bede	beatuñ	bedü	käte
4. Ten . .	ju	biu	bī'	bied	kōt
5. Sturgeon	{ jehena, } vehena }	behana	bakuna		kuagan
6. A river .	jaha	jaha	bigoi	t'aga	ki', kege
7. Superfluous	vata, va'	bodadde	badatua		kue, kueñ
8. Left (side)	vādisei	bodi'o	badi'e		kuedagi
9. A crow .	varña			bāri	kuere

No. 1 is an interesting example, the original being the White Russian *vuda*, Gr. Rus. *uda*, 'fish-hook.' Fish-hooks were probably early import articles of the Great-Novgorodian merchants trading in Siberia, and were found more serviceable than the old native ones of bone.

No. 3 may be compared with M. *getesōn*, Burj. *geteheñ*, 'bowel, guts,' but the relations between Mongol and Samoyede have not yet been worked out, so that it proves nothing. No. 6 is not quite regular; the Kam. *t'aga* and Jen. *jaha* come from *jaga*, not from *vaga* as we should expect; all the forms may be compared with N.O. *jogan*, F. *joki*. In No. 9 *varña* is the same as N.O. *vorga*, *vorña*, 'a crow'; the Vog. *kuereχ*, judging from the vowels, is borrowed from the Sam. Ost. *kuere*, and this may be compared with Mng. *kerije*, 'a raven,' though the resemblance is possibly accidental. From the above it is quite evident that the initial *k* in *kues* is not original, and that most likely it was *v*, as initial *j* in a number of instances becomes in Kam. *t'*, in Sam. Ost. *t'*, *č*, and even occasionally *k*. There is just one exception in the *j* and the *v* series.

Water	<i>jv̄, vit</i>	<i>bī</i>	<i>bē'</i>	<i>bu</i>	<i>üt, öt.</i>
Fat	<i>jur</i>	<i>jō</i>	<i>jir</i>		<i>iir, ör.</i>

Comparing the first set with Mng. *usun*, 'water' < **utun* (?), it is likely that the original initial was *u*, *ü*, which has been retained by Sam. Ostiak intact; the same may be true of the next line.

DOMESTIC ANIMALS.

The animal first domesticated or enslaved, and that in the first period, was the dog. There is a term for him common to all the East and West Finns as well as to all the Ugrians. Whether he was used for drawing burdens cannot be stated with certainty as there is no common expression for 'sledge,' but every hunter must have been followed by a woolly-haired, sharp-nosed, savage, and ill-

fed dog. If he was used for draught the burden was probably attached to two light poles, the upper ends of which were fastened to a sort of collar, while the lower ends trailed along the snow.

In the archæological chapter we learnt that before the close of the neolithic age, that is to say, towards the end of the second period, the principal domestic animals, the horse, ox, sheep, and pig were known to the settlers on the Central Volga, between Kazán and the mouth of the Kama, and that at the Station of Burtneek in the far west, the ox, sheep, and, perhaps, the horse, were also known. As by hypothesis the East and West Finns were in possession of the upper Volga valley at a still earlier period, it follows they must have acquired the knowledge of domestic animals from some other more civilised people, for though there were wild cattle and wild swine in the region they inhabited, there were no wild sheep or wild horses. If the Finns had brought the domestic animals with them from Asia into Europe, they must have entered the country by a much more southerly route than is generally supposed. The country east of the Urals, in the governments of Perm and Tobolsk, was densely forested, was studded with impassable morasses, and was quite unsuited for sheep, horses, and horned cattle. Even at the present day the Ostiaks hardly keep any, and in their epic poetry, though much is related of lifting herds of reindeer as well as of feasting, the sheep is never once mentioned, and the horse appears rather as a legendary animal. In fact, till the Finns became civilised and provident enough to cut and stack a supply of hay for the long winters they could have kept neither sheep, cattle, nor horses in such a region. The only possibility of keeping

these animals in high latitudes is when certain conditions are fulfilled. It is necessary that large tracts of pasture should be free from snow all the year round. In a flat, forested region like the valleys of the Central Ob and the Irtysh the snow lies far too deep for horses and cattle to reach the herbage below. It is only in mountainous tracts like the Altai, where hillside terraces and shallow valleys are exposed to violent blasts of wind, that sweep away the snow, that animals can be maintained in the winter months without the necessity of providing them with artificial fodder. The northern limit of the sheep under natural conditions starts from near the north corner of the Caspian and passes through the intersections of Lat. 50° N. Long. 60° E. and Lat. 57° N. Long. 90° E.¹, or roughly speaking from the north-east corner of the Caspian to Yeniseisk.

Next to the dog the name for 'sheep' has the widest range among the Finno-Ugrians, and its natural habitat shows the Finns could not have known it before they entered Europe.

	Fin.	M. M.	E. M.	Vtk.	Zjr.	N. Ost.	S. Ost.	Vog.	Magy.
{ Sheep 1	<i>uttu</i> 2	<i>uča</i> 1	<i>utsa</i> 1	...	...	...	...	...	...
{ Ewe 2	<i>uuh</i> 1 <i>ūši</i> 2	...	...	<i>īž</i> 1	<i>īž</i> 1	<i>oš, os</i> 1	<i>ōš, ač</i> 1	<i>oš</i> 1	<i>uh</i> 1

The Ostiaks and Voguls used *oš* as a generic term, and to distinguish the sexes prefix 'male,' 'female,' while a lamb is a 'sheep's young one.' As a rule such a nomenclature is not that of a pastoral people, who generally have a special term for each sex and each age, though

it is true the sheep-breeding Turks use a compound of *koi* 'sheep' to denote a 'ewe.' The Čeremis seem to have borrowed all their words from a Čuvaš and Turkish source, and in Zirian, with the one exception of *iž*, all the words have a Čuvaš, Iranian and Russian origin. The Mordvins have perhaps borrowed a word for 'lamb' from an Iranian people, and certainly for 'ram' from a Turkish and a Russian source. The West Finns borrowed a term for 'ram' in the fourth or Lithuanian period, but they have two native words for 'lamb,' one of which merely means a 'yearling,' and the other (*karitsa*) is evidently formed from *kari*, a call-word used for attracting lambs, so neither of these terms is necessarily of any great age. It is clear then that sheep-breeding at first was on a very small scale, and the Finns could in no sense be called a pastoral people. It is also to be noted that the West Finns borrowed a special term for 'wool' at the same time that they adopted a new term for 'ram.'

The terms for 'horse' have a much narrower range:—

	Fin.	Lapp.	Mord.	Vtk.	Zir.
Stallion	<i>uvē' < uβeš</i>	...	...	<i>už</i>	<i>už</i>
Horse 1, Cow 2 . . .	<i>lehmä 2</i>	...	<i>lišmä 1</i>	...	...
Mare 1, Reindeer cow 2	...	<i>aldō 2</i>	<i>äldä 1</i>	...	...

Professor Setälä connects the Permian *už* with F. *uvēh*, while Dr. Munkácsi equates the former with Os. *urs*, *vurz*, 'a stallion.'¹ The West Finns have another native word for 'stallion,' *orih*, as well as for 'mare' (*tamma*), and

¹ Setälä, (2) p. 6; Munkácsi, (2) p. 195.

'colt' (*varsa*), but they are not found in the Eastern branches. The origin of F. *hevonen*, 'a horse,' is not quite certain, though it is probably a loan word. As L. *ald̄do* could hardly have been borrowed from the Mordvins, I suspect it was really taken from the West Finns, who subsequently lost the word, and that the older meaning of F. *lehmä* was 'horse,' not 'cow.' The Mordvins have also a native word for a 'foal,' *vaše*, *vašenü*. The Čeremis *βül'o* 'mare,' Vtk. *val*, Zır. *völ* 'horse,' if not connected with M. *äldä*, L. *ald̄do*, might be compared with Tat. *ulak*, *ulā*, Čuv. *vil̄ix*, 'a draught animal, a post horse,' and if *βül'o* is really a loan word, as I suppose, then the Čeremis have no native word for a horse, for *imne* 'a horse,' *jaßaga* 'a foal,' are of Tatar origin and the Permian group have only one term, all the others being Turkish or Russian loan words. The Ugrian groups have a special word for 'horse' which never penetrated westwards:—

Ost.	Vog.	Magy.
<i>łovi</i> , <i>łox</i> , <i>łau</i> (<i>ł=tl</i>)	<i>lu</i> , <i>lo</i> , <i>l̄i</i>	<i>ló</i>

Perhaps these are remotely connected with Mong. *tagi*, 'a wild horse,' otherwise they stand alone. Dr. Munkácsi believes that the rich equine terminology of the Voguls and Ostiaks, their preference for horse-sacrifices and horse-flesh shows that once they lived further south in the wilderness between the Urals, the Caspian and the Sea of Aral.¹ The northern limit of the extinct horse in Europe, is said to be a line drawn from the mouth of the Elbe, to where Lat. 50° N. cuts the Ural River. Where it has not been introduced, the northern limit of the horse is from near

¹ Munkácsi, (2) pp. 156, 187.

the point where Lat. 44° N. cuts the Caspian Sea to the source of the Yenisei and then eastwards.¹ If this is correct it shows that, till they arrived in Europe, the Finns could never have seen a horse.

Though it is probable that horned cattle became known, at any rate to some of the Finnish peoples, as early as the horse, the terms for 'ox, cow' have only a limited extension.

	Fin.	Lapp.	Mord.	Čer.	Vtk.	Zjř.	Ost.	Vog.	Mgy.
Cow 1 Reindeer } calf (m. or f.) 2 }	..	<i>miesse</i> 2	..	..	<i>mös</i>	<i>mös</i> 1	<i>mis</i> 1	<i>mis</i> 1	..
Cow 1 Horse 2	<i>lehmä</i> 1	..	<i>lišmä</i> 2	..	..	..	..	..	..
Ox, bull .	..	..	..	<i>űšköz</i>	ű	<i>őš őška</i>	<i>űges</i>	<i>űska</i>	..
Calf 1 Reindeer } calf 2 Heifer 3 }	<i>vasa</i> 1, 2	..	<i>vaza</i> 1	..	..	..	..	<i>väsiz</i>	<i>űszö</i> 3
Heifer . . . {	Est. <i>vedikse-</i>	..	<i>ved'aka</i>	..	..	..	..	..	..

Dr. Munkácsi compares Vog. Ost. *mis* with Zend *maēši* N.P. *meš*, 'a ewe,' but as he also compares Zjř. *mež*, 'a sheep' with the same Iranian forms, and the Zjřian term for 'cow' is *mös*, these two Zjřian words cannot have a common origin, unless Z. *mös* is a direct loan from the Ugrian *mis*.³ Though Z. *mež* might easily be referred to a N.P. *meš*, with the same meaning, the difficulty of comparing Ost. Vog. *mis* 'a cow' with N.P. *meš* is considerable, apart from the difference of meaning, and I suppose it has an independent origin, though borrowing may have taken place from Ugrian to Permian, or *vice versa*. He also compares the Permian *oš*, *őš*, Vog. *űska*, *us'ka* 'ox,' with a Kabardin *viš*, 'young bull' and Znd.

¹ Murray, map 42.

² Munkácsi, (2) pp. 186, 192, 196.

ukhsan, Gth. *aúhsa*, 'ox, bull,' adding that these indo-European words agree with the common Turk. *öküz*, *ögiis* 'ox, bull.'¹ As Ost. *ūges* is certainly a loan from the Turk. *ögiis*, it is probable that Vog. *ūska*, *us'ka* has the same origin, either by metathesis or by contraction (*ūs* < *ögiis*) with a diminutive suffix—*ka*. In that case the Permian forms seems to be derived from the Ugrian and not *vice-versa*, as the original final *s* is preserved in the latter, while the Permians have first borrowed a softened form *us'ka* and further changed it into *oš*, *öš*, *öška*. Another word for 'cow' is perhaps also of Turkish origin:—

	E. Mord.	Čer.	Vtk.	S. Ost.	Vog.	Turk.
Cow	<i>skal</i>	<i>uškal</i>	<i>sikal</i> , <i>iskal</i>	<i>sāgar</i>	<i>sair</i>	< <i>sigir</i>

The Ugrian words are certainly Turkish; the East Finnish forms are less certain, but if borrowed, the group that turned the final *r* into *l*, perhaps the Erza, must have handed on the word to the other groups. Tomaschek compares with hesitation F. *vasa*, M. *vaza* 'calf' with Skr. *vatsa*, Ost. *väss* 'calf,' but as the medial consonant *s*, *z* is single, the equation must be considered doubtful.² Professor Thomsen is inclined to believe that F. *hehko*, *hehvo*, Vote *ōhva* 'a heifer' may be derived from the Lith. *ašva* (gen. *-ōs*) 'horse,' an older form of which was *ešva*, though an intermediate form **ehvo*, *ehva*.³ The West Finns have a native word for 'bull' *sonni*, which in Estonian carries the meaning of 'stallion colt,' but it does not extend further.

The Permians have also several isolated words: Vtk. *vali*, 'a cow in calf' which may have the same origin as Vtk.

¹ Munkácsi, (2) p. 186.

² Tomaschek, p. 13.

³ Thomsen, (1) p. 146, note 4.

val 'a horse'; Zjr. *poroz* 'a bull,' *biš* 'a small ox,' probably from the Russian, and *zil'um*, 'an ox, a boar.'

The words for 'reindeer' are not widely diffused and in some instances borrowing from a neighbour is tolerably certain.

	Fin.	Lap.	Mord.	Čer.	Vkt.	Zjr.	N.Ost.	Vog.
3 yr. old rein. cow.	<i>vaatime-</i>	<i>vačam-</i>	...	...	...	...	...	...
Rein. I, calf 2								
Rein. deer	...	...	...	...	?	<i>pužei</i> I	<i>peš</i> 2	<i>pěš</i> 2
Rein. I, stag 2	...	...	<i>s'arda</i> , I, 2	<i>s'ordo</i> I	...	<i>kür</i> , <i>kir</i>	...	<i>ger</i> , <i>qir</i>

The West Finns have several words for reindeer; *poro* 'a tame reindeer,' *petra*, *peura* 'a wild reindeer, a stag,' which last with great reservation and a note of interrogation is derived by Professor Thomsen from Lith. *brėdis* 'elk';¹ the equation is therefore doubtful. Fin. *hirvas* 'male reindeer, stag,' and Fin. *hirvi* 'elk' are referred by him with a note of interrogation to a hypothetical Lith. **širvis*, *širvas*, based on O. Pr. *sirvis* (or *sirnis*) 'a roe.' He regards Lap. *sarva* 'stag, elk,' as undoubtedly a loan from Fin. *hirvi* and Lap. *sarves* 'a reindeer bull' as a loan from Fin. *hirvas*.² The Fin. *vaadin* gen. *vaatimen*, 'a three or four-year-old reindeer calf,' is connected with Lap. *vaŋ*, gen. *vačem* 'a reindeer cow' and with Lap. *vāja*, gen. *vačama* 'a two-year-old reindeer calf.' Whether Vtk. *pužei* 'a reindeer' is a loan word or not I am not sure,

¹ Thomsen, (I) p. 162.

² *Ibid.*, (I) p. 225.

but Z̄ir. *peš* 'a reindeer calf,' and Z̄ir. *k̄ir* 'a reindeer' are almost certainly borrowed from a Ugrian source. The Lap. *ald̄do*, 'a reindeer cow' has already been mentioned; the Mordvin and Čeremis forms seem to stand alone. At the present time Finland cannot be termed a reindeer country, though in winter wild ones wander as far south as the central districts and the north shore of Lake Ladoga, so that they are known to hunters and to the Finns who live as neighbours of the Lapps in the extreme north of the country. But they are not bred by the Finns unless perhaps in Lapland. Further east and north of the Volga they are not kept by the Čeremis, the Votiaks, or the Z̄irians, save such of the latter as have got possession by foul or by fair means of the herds of the unfortunate Samoyedes. The Mordvins live too far south for reindeer, and can only know of them by hearsay. At the present time reindeer are not kept in the valley of the Ob, south of Berezov, or about Lat. 64° N., though a few centuries ago when the epic songs were composed these animals were bred along the whole central course of the Irtiřh to within 200 miles north of Tobolsk or about Lat. 59° N., perhaps even further to the south.¹ According to Andrew Murray the southern limit of the reindeer, starting from about Lat. 62° N. on the west coast of Finland, takes a line about a degree north of the general course of the Volga before it turns south, about as far as where Lat. 55° N. cuts Long. 60° E., thence it continues eastwards towards Akmolinsk, but south of it, as far as Kobdo, north of the great Altai mountains.² The southern limit east of the Urals is certainly brought too far south, though it may correspond fairly well with the range of this animal in prehistoric

¹ Patkanov, (1) pp. 34, 35.

² Murray, map 32.

times. From the above we may conclude that the reindeer was never a domestic animal of the prehistoric Finns.

The only other domestic animal to which the East and West Finns can lay claim is the 'pig,' Fin. *sika*, Mord. *tuva*,¹ though Professor Genetz refers it eventually to an Indo-European **swi-* with a Finnish diminutive suffix *-ka*.² The Permian group, the Voguls and Ostiaks have all borrowed from the Russian, though the Z̄irians have three native words for 'boar,' of which one has also the meaning of 'bull.' The West Finns have also native words for 'boar' (*karju*, *urosa*); for 'a gelded boar' (Fin. *oras*, Mord. *uris*), which has been compared with the Zd. *vareza* and for 'a sow' Fin. *imisä*. In a wild state the pig must have been known to the Finns from the very beginning of their history.

TREE-NAMES.

Beside the above culture words there is yet another small series to consider, as they show the class of trees that grew in the country inhabited by the Finns in the second period. Soft-wood trees and indeed a good many hard-wood trees being of no use in this inquiry, it is only necessary to enumerate a few of the latter.

	Fin.	Mord.	Čer.	Vtk.	Z̄ir.	Ost.	Mg.
Bird- cherry }	<i>tuomi</i>	<i>l'om</i>	<i>lomba</i>	<i>l'öm</i>	<i>l'öm</i>	<i>l'om, lom</i>	...
Elm .	...	<i>säli</i>	<i>šole</i>	<i>sir-pu?</i>	<i>sir-pu?</i>	...	<i>szil-fa</i>
Oak .	<i>tammi</i>	<i>tuma</i>	<i>tumo</i>	...	...	...	...
Maple .	<i>vahder</i>	<i>uštir</i>	<i>vašter</i>	...	...	...	...
Lime .	<i>niini-puu</i>	...	...	...	<i>nin-pu</i>	...	...
" .	...	<i>pekše</i>	<i>pištö</i>	...	...	...	...

¹ Setälä, pp. 8, 9; Paasonen, p. 31.

² Genetz, (3) p. 42.

The 'bird-cherry' no doubt belongs to the first period and therefore was known to the Finns before they left Asia. The same cannot be said of the 'elm,' even if the above equations are correct, as this tree does not grow on the eastern slopes of the Urals. For this tree the West Finns have another word—*jalava*. In the West Finnish dialects there are several names for the 'lime' and more than one in Mordvin, so there is no doubt it was known during the whole of the second period. In the Zirian country both this and the elm grow along the Sisola about as far north as Latitude 62° N., but the trees are stunted and of small size. The lime however grows well in the neighbourhood of Perm and in the south-western part of the government is a forest tree, yet the finest forests are found on the right bank of the Volga in the country of the Mordvins. The northern limit of the 'oak' passes along the south coast of Finland at no great distance from the sea, then approximately through St. Petersburg and Vologda eastwards to Long. 50° where it turns south-east to about Slato-ust in the Urals and from here it turns south-west to about Orenburg. As it does not cross the Urals and does not reappear in Siberia till we reach the distant valley of the Amur, the Finns who know the tree must have named it after their arrival in Europe. The Zirians have borrowed their word from the Russian and the Vtk. *tipi-pu* seems to have the same origin. The northern limit of the maple, which does not grow east of the Urals, and of wheat, is nearly the same as that of the oak. The 'ash,' which appears to be only known to the West Finns, covers a much more restricted area than the oak. Its northern limit skirts the south coast of Finland, passes through St. Petersburg and about 1° north of Moscow to

half or quarter of a degree north of Penza and thence, passing about 1° north of Sarátov to the river Ural. All these indications seem to point to some district in the valley of the Volga from the mouth of the Kama westwards as the original home of the undivided Finns. Archæological considerations had previously led us to a similar conclusion. As the Permian group gradually pushed northwards they would lose their word for oak and possibly, nay probably, they never lived within the area where the ash flourishes.

At the beginning of the chapter it was mentioned that reasons would be given at the close of it in support of the propositions that at the end of the first period the Finns were in Europe and formed the earliest settlers in the valley of the Oká, and therefore that the life of the still undivided Finns, embraced by the first portion of the second period, was passed in the valley of the Volga. During this epoch the Finns of course were at a stage of pure neolithic civilisation without knowledge of any domestic animals but the dog. In order to make the matter clearer forty-nine of the words already discussed above are arranged in Table IX. in a way that displays at a glance the range that each possesses. We have first to show that the lapse of time between the beginning of the second period and the beginning of the Christian era cannot be less than one thousand years, and that about fifteen hundred years is a better estimate; secondly, that though absolute proof is wanting that the whole of this period was passed in Europe, there is proof that a large portion of it was so spent, and a considerable probability that this whole epoch was European not Asiatic. The table shows that a word for 'ten' was not found necessary

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TABLE IX.

	Finnish.						Ugrian.		
1. Winter . . .	F.	L.	M.	Č.	V.	Z.	O.	Vg.	M.
2. Fire . . .	F.	L.	M.	Č.	V.	...	O.	Vg.	M.
3. Fat (butter) . . .	F.	...	M.	Č.	V.	Z.	O.	Vg.	M.
4. A fathom . . .	F.	L.	M.	...	V.	Z.	O.	Vg.	M.
5. A bride . . .	F.	L.	...	...	V.	Z.	O.	Vg.	M.
6. Father-in-law . . .	F.	L.	...	Č.	...	...	O.	Vg.	M.
7. Sheep . . .	F.	...	...	...	V.	Z.	O.	Vg.	M.
8. Sinew . . .	F.	L.	M.	...	V.	Z.	...	Vg.	...
9. Bird-cherry . . .	F.	L.	M.	Č.	V.	Z.	O.	...	...
10. Uncle . . .	F.	L.	M.	Č.	V.	Z.	...	...	...
11. To weave, plait . . .	F.	L.	M.	Č.	V.	Z.	...	...	...
12. A whorl . . .	F.	...	M.	Č.	V.	Z.	...	...	...
13. Fish-trap . . .	F.	...	M.	Č.	V.	Z.	...	...	...
14. A boot . . .	F.	L.	M.	Č.	...	Z.	...	...	...
15. Son-in-law . . .	F.	L.	M.	...	...	...	...	Vg.	M.
16. Copper . . .	F.	L.	(M.)	...	...	...	O.	Vg.	...
17. Snow-skates . . .	F.	...	M.	...	...	...	O.	Vg.	...
18. Sky (god) . . .	F.	L.	M.	Č.	...	...	...	...	...
19. Air (god) . . .	F.	L.	...	...	V.	Z.	...	...	...
20. Summer . . .	F.	L.	M.	...	...	Z.	...	...	...
21. Needle . . .	F.	L.	...	Č.	...	Z.	...	...	...
22. Woof . . .	F.	L.	...	...	V.	Z.	...	...	...
23. Cloth . . .	F.	...	M.	...	V.	Z.	...	...	...
24. Spelt (wheat) . . .	F.	...	M.	Č.	V.	...	...	...	...
25. An ell . . .	F.	...	M.	Č.	V.	...	...	...	...
26. Oak and maple . . .	F.	...	M.	Č.	...	...	...	...	...
27. A span . . .	F.	L.	M.	...	...	Z.	...	...	...
28. Broth . . .	F.	L.	M.	...	...	...	...	Vg.	...
29. Thread . . .	F.	...	...	...	V.	Z.	...	...	...
30. A stallion . . .	F.	...	...	...	V.	Z.	...	...	...
31. To spin . . .	F.	L.	M.	...	...	...	...	...	...
32. To count . . .	F.	L.	M.	...	...	...	...	...	...
33. To pay . . .	F.	L.	M.	...	...	...	...	...	...
34. To sell . . .	F.	L.	M.	...	...	...	...	...	...
35. An awl . . .	F.	L.	M.	...	...	...	...	...	...
36. A boat . . .	F.	L.	M.	...	...	...	...	...	...
37. A paddle . . .	F.	L.	M.	...	...	...	...	...	...
38. Autumn . . .	F.	L.	M.	...	...	...	...	...	...
39. Cow (horse). . .	F.	L.	M.	...	...	...	...	...	...
40. Ten . . .	...	L.	...	Č.	...	...	...	Vg.	...
41. Ten . . .	F.	...	M.	...	...	...	...	...	...
42. Husband's sister . . .	F.	...	...	Č.	...	...	...	...	...
43. Knife (scraper) . . .	F.	...	M.	...	...	...	...	...	...
44. The Warp . . .	F.	...	M.	...	...	...	...	...	...
45. Ball of Thread . . .	F.	...	M.	...	...	...	...	...	...
46. A loaf . . .	F.	...	M.	...	...	...	...	...	...
47. Straw . . .	F.	...	M.	...	...	...	...	...	...
48. To grind . . .	F.	...	M.	...	...	...	...	...	...
49. A ewe . . .	F.	...	M.	...	...	...	...	...	...

till the Finns had broken up into three larger groups. In the third period, which may have begun between 400–600 B.C., a term for ‘one hundred’ was borrowed. It is not too much to suppose that the word for ‘ten’ became current a hundred years earlier, or about 500–700 B.C. Then for the first half of the second period and the earlier part of the second half, during which time they taught themselves to weave, to make wicker fish-traps, to cultivate spelt on a small scale and to give a name to the horse, not less than five hundred years can be assigned, thereby bringing the beginning of the second period to 1000–1200 B.C. But this is a low estimate; the interval between learning a word from ‘ten’ and for ‘100’ might well be increased, as well as the period of the undivided life and the interval between this and the genesis of a term for ‘ten.’ So that from 1500 to 1800 B.C. does not seem to me an excessive estimate, and that is probably sufficient to meet all archæological requirements. The reason for supposing that the whole of this time was passed in Europe is based on the nearly undivided Finns having learnt the use of spelt, which it seems impossible to believe could have been cultivated in their Asiatic home, and in the fairly wide range of the word for ‘oak,’ a tree that could not have been seen beyond the Urals and may once have been known to the Permian groups, though they subsequently lost it in a way that can very naturally be explained.

It is generally supposed that the West Finns knew ‘copper’—the ‘sheep’ may be added—before leaving Asia, as the terms employed are common to the Ugrian family. But in that case the words must have come into use more than eleven hundred, more likely fifteen hundred, years before the present era, a date that no one will try

to justify. The conclusion therefore is that though a word is common to West Finnish and to one or more members of the Ugrian group it does not necessarily belong to the first period. Some other explanation must be offered. With regard to 'copper' I have already tried to show that the West Finns borrowed their word from an Ugrian source and the same may hold true, though I do not absolutely assert it, for 'bride, father-in-law, son-in-law, sheep,' which must otherwise be referred to the first period.

CHAPTER V

THE THIRD OR IRANIAN PERIOD.

THE third or Iranian period is of special interest. Now, for the first time, the Finns and Ugrians, emerging from their sombre, impenetrable forests and trackless swamps, came in contact with a civilised people, speaking an Iranian dialect, and now for the first time it becomes possible to assign an approximate date to the epoch. The new things and the new ideas now introduced may be divided into two categories; those found in West Finnish and those confined to the East Finns and Ugrians. The first list of words, on the whole, favours the idea that these civilised foreigners had no hostile intentions, but were rather traders who wished to do business with the natives. All that the latter would have to barter at first would be the pelts of wild animals, though after they had been taught the art of bee-keeping, wax and honey may have been added to the list. The earliest trading-place would be the banks of a large river, and a survival of this fact is found in the Vogul *vāta-kum*, 'a trader,' literally the 'bank of a river man.' Small trading-posts or factories may also have been established in various parts of the country by the foreign merchants, just as used to be done a couple of centuries or so ago in the territory of the Hudson's Bay Company, of the Niger Company, and by the Russians in Siberia. But if all the

words of the second category were certain, which, however, is not the case, we should rather have to suppose that the civilised foreigners formed part of the wandering Scythians and Skolots that nomadised along the north shores of the Black Sea, of the Caspian, and for a considerable distance inland. These Scythians are believed by the most reliable authorities to have been in the main an Iranian people, a few of whom still survive as the Osets of the north central Caucasus. Wm. Tomaschek has noted over thirty words in Mordvin, and about thirteen in the Permian group, which he believes have an Iranian origin. Dr. Munkácsi gives a list of forty-two words in the Ugrian and Finnish languages which, in his opinion, are derived from a similar source.¹ Some of these are very doubtful, others are confined to the Ugrian branches, others have no cultural significance, so that it is only necessary here to give a selection.

These words, it would seem, were not all adopted exactly at the same time. Some are older loans than others, and if taken from an Iranian people, the language was at an earlier stage than any existing record of it. For instance, judging from the first vowel in the West Finnish and Mordvin words for 'honey,' these are supposed to go back to an Indo-Eur. *médhu*, while the other East Finnish forms might come from a Zend or Bactrian form, and therefore be of later date. So, too, the front vowels in all the words for 'name' correspond best with the O. Sl. [*n*]*ime*°, though the wide diffusion of the word makes it probable that the loan is earlier than any distinctly Slav word, besides the fact that it is unknown to the Letto-Lithuanian branch of the Slavs. It may strike one at first as singular that an Iranian word for 'fly' should be uniformly accepted as an appro-

¹ Tomaschek, pp. 12-14; Munkácsi, (2) pp. 191-197.

	Fin.	Mord.	Čer.	Vtk.	Zij.	Ost.	Vog.	Mg.	Zend.	N. Pers.	Os.
100 . . .	<i>sata</i>	<i>s'ada</i>	<i>s'uda</i>	<i>s'o</i>	<i>s'o</i>	<i>sāt</i>	<i>šāt</i>	<i>szaz</i>	<i>sata</i>	<i>sad</i>	<i>sade</i>
Name . . .	<i>nimi</i>	<i>lem</i>	<i>lin</i>	<i>n'em</i>	<i>n'im</i>	<i>nem</i>	<i>nām</i>	<i>nev</i>	<i>naman</i>	...	<i>{ nām, nom</i>
Honey . . .	<i>mesi</i>	<i>med</i>	<i>mi</i>	<i>ma</i>	<i>nu</i>	<i>mavi</i>	<i>maṣ</i>	<i>més</i>	<i>madhu</i>	<i>mai</i>	<i>miđ</i>
Bee 1, Fly 2	<i>{ mehi- lainen 1</i>	<i>{ mäkš 1</i>	<i>mikš 1</i>	<i>nuš</i>	<i>moš 1</i>	...	...	<i>méh 1</i>	<i>makhši 2</i>	<i>magas 2</i>	...
Fox . . .	<i>repo</i>	<i>rives</i>	<i>rebež</i>	<i>džiči</i>	<i>ruč'</i>	...	...	<i>ravasz</i>	...	<i>rōbāh</i>	<i>{ rōdas, rūbas</i>
Horn . . .	<i>sarvi</i>	<i>sura</i>	<i>šur</i>	<i>šur</i>	<i>šur</i>	...	...	<i>szary</i>	<i>sru, srva</i>	<i>suru</i>	...
Hammer, Axe	<i>vasara</i>	<i>uzere</i>	...	...	...	...	...	...	<i>vazra</i>	<i>gura</i>	...

priate term for 'bee.' The explanation is that in Sanskrit and Osetan, so probably in Old Bactrian as well, 'bee' is expressed by 'honey-fly'; the Finns therefore adopted the word in an apocopated form. It is hardly to be supposed that traders would bring bees with them, but they may have taught the natives how to domesticate wild bees, or at any rate how best to take their wax and honey, which may subsequently have become an article of barter as well as the skins of black foxes. As the words for '100, horn, hammer (axe)' come directly from an Iranian source at the same stage as the Zend, supposing, of course, that the latter two equations are correct, they must either be later than the words for 'honey, bee, fox,' or they were introduced by strangers speaking a different and less ancient dialect. The original meaning of the Z. *vazra*, 'mace, club,' is best preserved by the West Finns; whether the head was of stone or metal it is impossible to say.

The second list embraces a still larger number of words. (Table on next page.)

The special interest attached to the words in the first line is that if they really are derived from *zarayañh*, the borrowing must have taken place at a time when the original final *s* had not developed into *ñh*. The same remark applies to lines 3 and 4. If Vg. *s'oter* stands for *s'oser*, as it might do, the *h* and *ñ* in *hazañra* must have sounded *s*, as in the Skr. *sahasra*, '1000'; and *ahura* must have been pronounced *asura*. Dr. Munkácsi estimates that these loan words may be placed as far back as the sixth or seventh century B.C. If that is true, the words for '10' and '100' must be quite as old, though from their present form they might easily be taken for comparatively recent loans. It is odd, though, that if the

	Mord.	Čer.	Vtk.	Zjr.	Ost.	Vog.	Mg.	Zend.	N. Pers.	Os.
1. Sea . .	...	...	zarež'	sar, saridz	s'aris	s'aris	tī'z	zarayāñih	darya	...
2. 10 . .	...	...	das	das	... s'aris	...	ezer	dasan	das	dase
3. 1000 . .	...	...	s'urs	s'ures	t'aras	s'o'ter	...	hasaiña	hazār	...
4. Lord . .	azoro	...	...	...	urt	äter	...	ahura	Phl. auhar	{ äxsin (lady)
5. Lord . .	...	...	öksei	öksj	...	...	achzin	Skl. ksaí	...	...
6. Man . .	mirda	...	murt	mort	...	...	...	{ mareta { O. P. martya }	} mard	...
7. Gold . .	sirnä	šörtel'ä	zarni	zarni	sarni	sorni	arany	zaranya	zar	-särine
8. Iron . .	(kürät)	kürrn'ö	kört	kört	karta	ker	(kartd)	kareta	kard	...
9. Steel . .	...	...	andan	jemdon	intvuaX	jentan	...	...	...	{ andan, ändön }
10. Grain . .	ju	...	ju	...	...	...	yava	yava	barra	yev
11. Lamb . .	v'eräs	...	...	...	...	...	...	...	...	värig
12. Goat . .	sijü	...	...	...	...	...	...	udra	...	sägñä
13. Otter . .	...	...	vudor	vurd	...	...	...	ukhiñ	...	{ urd, urđū }
14. Ox . .	...	...	oš	oš	os, oš	uškü	juh	Skr. ajá (goat)	...	...
15. Sheep . .	nču	...	iž	iž	mis 2	as, oš	...	mačša I	meša I	...
16. Ewe 1 . . Cow 2 . .	...	...	...	mez I	mis 2	mis 2	...	...	...	...
17. House . . Court- yard . }	...	...	gurt	gort	karta	karda	kert	Prth. -kerta	-gird	...
18. Axe 1 . . Dagger 2 . } Arrow 3 . }	...	...	tir I	čer I	...	...	tör 2	tighri 3	tir 3	...
19. Wheat 1 . . White 2 (?) }	...	...	čabei I	šobdi I	šomši I	...	...	spaeta 2	sipéd 2	...

Ostiaks had learned to count up to a thousand some 2500 years ago, their arithmetical ideas should still be so hazy; a single word does duty for 80 and 800, another for 90 and 900. A thousand, therefore, can seldom be used except as a round number, and perhaps was never more than that. In the last chapter I made a rough calculation that the West Finnish and Mordvin words for '10' may have originated about 500 B.C., but if they borrowed a term for '100' between 600 and 700 B.C. the '10'-word must be still older. On line 5 Dr. Munkácsi traces the Permian words for 'lord, master' to a Skolotan or Scythian *ksai*, preserved by Herodotus in the words *Leipo-xais*, *Arpo-xais* the old Bactrian equivalent of which is *kḥšaya* 'powerful, master' from *kḥši* 'to rule.' In Hübschmann's opinion the connection between Zir. *kḥši* and Os. *äxsīn* 'a lady' is very problematical, so the equation of the Permian words with an Osetan or Scythian form is not thoroughly established, though the identification is attractive. The words for 'gold' in line 7 are evidently a good deal later than those in line 1, 3, 4, for now the initial O. B. *z* is reproduced as *s*, *z* not by *š*, as the older aspirated *ž*, from which *z* originated, would lead us to expect. A term for 'iron' came into use about the same time no doubt; and the new metal was introduced in the form of a 'knife or short sword,' for that is the meaning of the O. B. *kareta*, from which are derived most of the East Finnish and Ugrian terms for 'iron.' The Magyars have retained the original sense of the word, but the Mordvins, more peaceably inclined, have turned the sword into a 'plough-share.' The latter have a special word for 'iron,' *kšn'ü* which may have an East Persian origin. In the Pamir dialects we find *išn*, *spin* 'iron'; an older form of the first would be

**išpin*, **ošpinā* and from this by rejection of the initial vowel, by metathesis of *p*, *š* and mutation of *p* into *k*, all which phenomena are possible in Mordvin, we should obtain *kšina kšnâ*. The word for 'steel' is later and probably belongs to the end of the Iranian period. Professor Schrader believes the origin of the Osetan word is to be found in East Finnish, Dr. Munkácsi on the contrary regards the Osetan as the original word; but Colonel Yule has pointed out that the *ondanique* of Marco Polo, *and-anicum* in the Latin text, is to be referred to the N. P. *hundwānīy*, 'Indian steel' and quotes an Arabic dictionary of about 1200 A.D. in which *Hunduwān* is explained by *ensis*.¹ The identity of Os. *ändón* with the *ondanique* of Marco Polo is certain and the Osetan form is therefore from the N. P. *hundwānī*, *hindawānī* 'made of Indian steel; a sword'; Osetan always rejects initial *h*. The Permian words for 'otter' may go back to an Iranian form, but might equally well be referred to a European word. It is tempting to believe that in line 14 Vg. *ūs-kā* comes from an O. B. *uχšan* > *ūš*, which became *ūs* in consequence of the *k* of the suffix (cf. *pesken* < R. *puška*) and perhaps it is so rather than the explanation given in the last chapter. But in the next line the equation is very doubtful as we can hardly suppose a Sanskrit-speaking people, even as traders, were ever in contact with the protohistoric Finns-ugrians, and the O. Bactrian equivalent is *iza*. Still the possibility of a Scythian original for the word is by no means excluded, for nothing is known of the Scythian dialects. Forms like Lith. *ožis* 'he-goat,' *oška* 'she-goat' leave room for the presumption, till positive proof to the contrary is adduced, that the Finno-ugrian words for

¹ Yule, vol. i. pp. 93, 94.

'sheep' and very likely for 'ox, bull' were borrowed from some of the nomads that wandered over the *steppe* on the north side of the Black Sea and perhaps far inland. The equation, however, of Z. *mež* 'sheep' with N. P. *meša*, hardly with an older *maēša*, seems tenable. Munkácsi further connects the words in line 17 with a Parthian-*kerta* found in place-names, but it is more likely they belong to a much later time and were borrowed from the Čuwaš or some Tatar source. The attempt to derive the Permian words for 'wheat' from a Persian word for 'white' is, I think, certainly wrong. By 'wheat-coloured' the modern Persians understand 'brown,' the colour of the grain when ready to be cut. A fuller and better Vtk. form is *č'abli* which is evidently borrowed from the Tatar *kaplı* 'spelt,' an inferior sort of wheat.

From the above we deduce the conclusion that the Iranian period may have begun about 600 B.C., and lasted for several centuries. In the east of Russia we have already learnt that intercourse was kept up with Persia till the overthrow of the Sassanide dynasty in the seventh century. For the West Finns however its duration was very much shorter, perhaps not more than 100 or 200 years. When the Finno-ugrians first came in contact with Indo-Europeans though they had particular names for many things, they had no word for the abstract idea of 'name' apart from a particular object. The more advanced Finns, having already taught themselves a word for '10,' now learnt to count up to '100,' while the more backward Permians had even to borrow a word for '10' though apparently they and some of the Ugrians, outstripping the more advanced West Finns and Mordvins, borrowed a word for '1000' several hundred years earlier than the

latter. About the same time they took to bee-keeping and their foreign superiors were given a title of honour for which they had no native term and accordingly had to borrow one. The westerly Finns became acquainted with a new and better form of hammer or hammer-axe which I imagine was only of polished stone and all the Finns borrowed a term for 'horn,' which perhaps may be taken to mean that up to that time they had no knowledge of horned cattle. A good deal later, perhaps about 300 B.C., gold and iron were introduced among the East Finns and Ugrians, who thus became acquainted with these metals several centuries earlier than the West Finns. The trade in iron swords seems to have continued for a long time. Abu el Kassim relates that it was said the Bolgars conveyed to the Yugra (Voguls, or Ostiaks) swords fabricated in Mohammedan countries. Though these swords had no handles or ornament, and were simply blades as they left the hands of the blacksmith, they were bought at a great price by the Yugra, who threw them into the Sea of Darkness. God then causes a huge fish, the size of a mountain, to issue from the bosom of the ocean and a still larger fish to pursue it. The first fish directs its flight towards the coast of the Yugra and gets into shoal water near the shore. Those that threw the sword into the sea surround the fish in their boats and cut off its flesh. They maintain that if they did not throw a sword into the sea no fish would come and they would suffer famine.¹

We have now to consider the questions whether in all cases the East Finns and the Ugrians received the same word from the fountain-head independently, or whether only one received and then passed it on, perhaps after a

¹ Abu el Kassim, p. 83.

considerable lapse of time; and whether the East Finns and Ugrians were both on the east side of the Urals. Dr. Munkácsi holds that, at the beginning of the Iranian period when the Persian civilising element was introduced, the Magyars and the people nearest them, especially the Voguls, Ostiaks, Zիրians and Votiaks, formed a connected whole, and that this separation had not taken place in the sixth or seventh century B.C. And as the beginning of the Iranian influence affected the West Finns and Lapps, but did not bring them a knowledge of gold and iron, the separation of the West Finnish-Lapp branch from the original home and communion with the Ugrians cannot be later than the third century B.C. at the latest.¹ A glance down the columns of Ugrian words in two lists above, shows not only a good many words common to the Permians and the Vogul-Ostiaks that are wanting in Magyar, but that when there are corresponding words in Magyar their form is so different that the Vogul-Ostiaks and the Magyars must have borrowed at different times and presumably in different places. As it seems to me, the separation of the Magyars from the rest of the Ugrians had already taken place before the commencement of the Iranian period. The Mordvin loan-word for 'lord, master' being also found in Vogul-Ostiak, suggests that the latter were also on the west side of the Urals when they borrowed the word; though I do not suppose the whole body of them lived in Europe, only that they wandered on both sides of the Chain. Certainly the reverse could not have been the case, that the Mordvins dwelt east of the Urals. For earlier than this loan the Mordvins and West Finns had invented a word for 'IO,' and presumably about the

¹ Munkácsi, (2) p. 88.

same time the Voguls, Čeremis, and Lapps agreed upon another word. Some two hundred or three hundred years later the West Finns, after adopting a word for '100,' were so far to the west, that the words for gold and iron never reached them. So short a space of time would not allow of the West Finns traversing the great extent of country that stretches between Western Siberia and the region of the Waldai Hills or thereabouts. The West Finns and Mordvins were therefore certainly in Europe before the beginning of the Iranian period. No doubt the Permians have for a long time been nearer to the general mass of the Ugrians than other members of the Finnish family, and this, together with their living on the same trade route, accounts for the greater number of words they have in common, compared with the Central Finns. Still it is possible that sometimes a word has been borrowed by the Ugrians and subsequently passed on to the Permians or *vice versâ*. In the term for '1000,' apparently one of the oldest loan-words, the Voguls have preserved the old form best in so far that metathesis has taken place in Ostiak and in the Permian groups. The probability is that this only once took place, and most naturally among the Ostiaks; the conclusion being that in this instance the Permians borrowed from the Ostiaks and not directly from an Iranian source. So too the exact likeness between the Ostiak and Permian words for 'gold' makes it probable that both were not drawn from the fountain-head. The fact that the Permian forms show what looks like the original initial *z* proves nothing, for initial *s* can in Permian readily become *z*, a sound with which no Vogul-Ostiak word can begin; and in the word for 'sea' the Zirian form begins with *s*, the Votjak with *z*, which is

therefore to be considered a later change. The adoption of a word for 'man' by both Mordvins and Permians, though perhaps at different times, also tends to the belief that the Permians lived west of the Urals.

If we could show that the Volga and the Kama were the most likely routes by which Iranian traders penetrated among the Finns and Ugrians, we should go far to prove that on the Volga, at the beginning of the new period, there were Mordvins who may in fact have borrowed their name for it from Iranians; that there were Permians and Ugrians partly perhaps on the Volga, partly on or near the Kama. About 500 B.C. Hecataeus and, about three hundred years later, Eratosthenes were both under the impression that the Caspian was connected with the circumambient ocean. In geographical, as in other myths, there is often a substratum of truth or of physical fact. In this instance it really exists. With the exception of a short portage of a little over four miles, it is possible to travel by natural waterways from the north coast of Persia to the Arctic Ocean, by ascending the Volga, the Kama, and its tributaries, to the watershed between it and the basin of the Pečóra. The myth seems to repose on the fact that before 500 B.C. the Volga and the Kama had been previously ascended for a very considerable distance by traders, for no one else travelled in those days, who learnt from the reports of the natives, that at the north end of the world there was a great Sea of Darkness which was accessible by water. In a previous chapter it was made clear that the works of Arabian art found in the province of Perm came there by a road leading along the west side of the Urals, and the presumption was great that the Arabs followed the old route of the Persian

merchants whom they had supplanted. Arab writers hint at two routes to Bolgari—one by water, the other by land—but both of course lay west of the Urals, which is the really important point. As it is nearly certain that from the fourth century A.D. for several hundred years there was a trade between Persia and the valley of the Kama either by the Volga or by a land route a little to the east of it, but west of the Urals, it is more likely than not that any earlier traffic between these two regions must have followed the same routes. The Yugra mentioned by Abu el Kassim were probably living at the mouth of the Ob. Yet all their swords came *viâ* Bolgari, though actually manufactured, as another writer mentions, in Aderbaijan, where they cost four pieces of gold. The same author states it was the Isu or Zīrians of the Pečora basin who acted as middlemen and transmitted the swords to the Yugra. Here we have direct evidence that an Ugrian tribe on the east side of the Urals obtained Persian wares *viâ* the Volga, not *viâ* the Irtiř or the Ob valley.

The earliest known settlement on the Kama belonging to this period is at Anánino. Though most of the objects found there are of Central Siberian type, some are Kobanian, and it is not impossible that the place was at first a small Iranian trading post established among natives of uncertain affinities. A very late Arab writer, Sherif ed din, mentions that the old name of Elábuga, which lies close to Anánino, was *suddum* or *sodum*, and that in the Yunani language it meant a 'perch-fish,' in Tatar *alabuga*.¹ Though *yunani* means 'Greek' in Arabic, it cannot have that meaning here, but possibly it meant the language of the Bolgars, some of whom clung to the

baseless belief that Bolgari had been founded by Alexander of Macedon. Otherwise it must have referred to the natives of the neighbourhood. Though *suddum*, *sodum* does not mean 'a perch' in any Finnish or Ugrian language, Wiedemann catalogues a Zīr. *šulim* as '*ein Fisch (?)*', a word which comes near it in form. As the name of a fish is compatible with a river-name, we may note here a *Sodom-ka* river in the district of Kotelnits (Viátka), and the Ostiak name for the Salīm, a tributary of the Irtiř, is the *Sōdom*. Though Spitsin does not quote the word in Arabic, the double *d* may be a transcription of the letter *dād*, which does not correspond, I believe, with any Finno-ugrian dental, yet might be used perhaps to represent an Ugrian *dl* sound. With regard to the late tradition of the Bolgars that their chief town was founded by Alexander of Macedon, it seems just credible that when they first arrived there they found a tradition current that the spot had previously been occupied as a trading post by some Iranian people whom the Bolgars, after acquiring a knowledge of Arabic, identified with the Greeks and Alexander of Macedon. None of the above inferences to demonstrate that the Iranian influence penetrated to the Permians and Ugrians by the valley of the Volga may be very conclusive in themselves, yet on the other hand, so far as I am aware, there is no evidence, archæological or historical, to indicate the existence of any trade route northwards from Khorasmia, Sogdiana, or Bactria to the Iřim, the Irtiř, or any other great tributary of the Ob, into the heart of the Ugrian territory. The ancient geographers knew nothing of these rivers.

THE FOURTH OR LITHUANIAN PERIOD.

In the Iranian period it is not necessary to believe that the West Finns ever came personally into contact with Iranians. All the words in the first list might have been transmitted to them by some intermediate tribe like the Mordvins, even though the West Finns have sometimes preserved an older form than the tribe from whom they borrowed can now show. In the fourth period it was quite different. The general mass of the West Finns seem to have shifted their centre of gravity somewhat west or north-westwards and broken away from the Mordvins before 300 B.C., or whenever it was that the words for 'iron' and 'gold' reached the latter. In course of time the West Finns had become neighbours for the first time in their history with a so-called Indo-European people speaking a Lithuanian dialect.

The Europeans whom the West Finns now met could not have been very highly civilised themselves, though in most respects they were certainly more advanced than the latter. It is not certain that the former knew iron or even bronze, for we have already seen that iron was unknown in the Baltic Provinces before the second century, and there was strictly speaking no bronze age at all in that part of the world. So the inland tribes that lived far from trade routes would most likely to all intents and purposes be still in a neolithic stage of civilisation. The Baltic people possessed flocks and herds of sheep and goats, cattle and horses, and led to a great extent a roving life. In winter they travelled in sledges, but in summer they seem to have used carts or wagons, the wheels of which no doubt were solid, being made of two or more thick

planks clamped together with wooden pegs. Such cumbersome vehicles could only have been drawn by several yoke of oxen. When a deep and narrow water-course had to be traversed, they knew how to throw a light bridge of planks across it.

Professor W. Thomsen estimates that the date of the first contact between the two peoples certainly cannot be later than the first centuries of the present era, perhaps rather earlier. And they may have been in touch till about 500 A.D., at all events not later than 800 A.D.¹ It is to his labours that we are indebted for the best and most thorough explanation of the loan words made by the Finns from the Letto-Lithuanian or Baltic peoples, and from him I have taken all those that are found in this section;² those marked with an * are not quite certain.

Into the nomenclature of the family several new terms were now introduced, such as 'sister,' 'daughter,' 'cousins,' 'bride,' and * 'son-in-law.' None of these words were accompanied by wholly new ideas. There had always been a term for 'elder sister,' but it was associated with other meanings, while 'younger sister' may have been included under 'girl'; but now blood relationship was emphasised, and the mere rank or status that the sister held in the family fell into the background. A 'daughter,' too, was now distinguished from a mere 'girl,' and a 'bride' from a 'young daughter-in-law.' Here the first instance again shows a greater insistence on blood kinship, and the second might point to some change in the marriage ceremonies in which the bride played a more important part than before. 'Relationship' *heimo*; 'a comrade, a person of the same name' *kaima*; * 'society, company' *seura*, and

¹ Thomsen, (1) pp. 151, 152.

² *Ibid.*, (1) pp. 145-148.

'a social gathering at which neighbours, in consideration of being supplied with food and drink, give their help on certain occasions' *talka*, were partly new ideas, partly old ones from new points of view.

The Finns had never been without a knowledge of 'fire,' though apparently without attaching any sacred quality to it; now they borrowed a fresh term (*pamu*), which has acquired a personal and mythical character, though the original word from which it comes seems to have been of the neuter gender. The 'hut' *maja*, 'bath or out-house' *pirtti*; *'room' *tupa*, 'wall' *seinä*, all constructed of *'boards' *lauta*, with a 'wooden roofing' *malka*, outside which lay an 'enclosure' *tarha*, fenced round with 'stakes' *seivas*, as well as the wooden 'bridge' *silla*, were certainly additions to the civilisation of the Finns.

Some of the instruments now introduced may have been of new forms, or better in some respect than those that they supplanted, such as the 'axe' *kirves*, and its *'shaft' *varsi*, the *'ice-pick' *tuura*; 'distaff' *kuontalo*,¹ and 'comb, brush, curry-comb' *suka*, as well as 'string or ribbon,' for tying things together. But the 'wedge' *vaaja*, *'spade' *lapio*, 'besom' *luuta*, for sweeping out the house, 'ladle' *kauha*, and 'butter-dash' *mäntä*, were probably new; for though butter was known the more primitive way of making it is to shake the milk and cream in a leather bag. Though weaving was also an old occupation, the 'thrums' *niisi*, received a name for the first time. For transport purposes they had now a 'sledge' *reki*, and an unwieldy 'cart or wagon,' as the word for 'wheel' *ratas* has that meaning when used in the plural.

Articles of dress were the 'tall cap' *kypärä*, of a new

¹ Mikkola places this loan in the Proto-Slav or sixth period.

shape, *‘boots of raw hide’ *kurpponen*, and some sort of ‘trimming’ *paarre*.

Without our being able to explain exactly why, the Finns of the fourth period borrowed terms for various parts of the body, such as, ‘tooth,’ ‘neck,’ navel,’ *‘thigh,’ ‘the tendon Achilles,’ ‘the *os sacrum*,’ and *‘beard.’

In relation to out-door life stand words for ‘forest’ *metsä*, ‘woody island’ *salu*, ‘branch’ *haara*, ‘birch-bark’ *tuohi*, ‘tar’ *terva*, ‘juniper’ *kataja*, *‘lichen’ *karve*, *‘moss’ *sammal*, and ‘burdock or thistle’ *takiainen*. New varieties of instruments for catching birds and wild animals were the ‘snare’ *ansa*, and the ‘bird-trap’ *lahto*. Among the new names for wild animals, birds, and insects were *‘elk’ *hirvi*, *petra*, ‘wild ox (?)’ *tarvas*, the exact meaning of which in old Finnish is now lost, but the Lithuanian word from which it is taken means ‘*bos primigenius*,’ and sometimes the ‘buffalo’; ‘goose,’ ‘magpie,’ ‘cuckoo,’ ‘thrush,’ ‘heath-cock,’ ‘snake’ *käärme*, though there was already a native word, ‘hornet’ and ‘wasp.’

In connection with domestic animals the following terms were now introduced: ‘ox’ *härkä*—the Lithuanian word means ‘horse’—‘ram’ *jäärä*, ‘wether’ *oinas*, ‘pig’ *porsas*, ‘goat’ *vuohi*, *‘draught-ox, or horse’ *juhta*; ‘a grey animal’ *halli*, ‘an animal with a star on its forehead’ *laukki*, ‘a polled ox’ *mulli*; *‘udder’ *utar*, ‘fresh milk’ *rieska*; ‘blubber, fat’ *ihra*, ‘mane’ *harja*; ‘hair, colour’ *karva*; ‘thong’ *hihna*, ‘wool’ *villa*, and ‘hide’ *vuota*. The animals were put in charge of a ‘herdsman or shepherd’ *paimen*, who may have been provided with a *‘herding-horn’ *torvi*. During the long winters the beasts could now be fed on ‘hay’ *heinä*, in connection with making which the Finns learnt what the ‘aftermath’

ätelä, meant; also the 'water-meadow' *luhta*, 'rushes' *vihvilä*, * 'clover' *apila*, and * 'dried-up grass' *kulo*.

The adoption of several of these new terms which are not evidence of increased civilisation may be explained by a change in the mode of life of many of the Finns. They had become more pastoral, and now observed things that formerly escaped their notice. It was not necessary to be in the neighbourhood of the Baltic to hear the thrush and the cuckoo; in the valley of the Volga they might have listened to the song of these birds. And if they had looked they might have observed hornets and wasps, clover, burdocks, juniper, rushes, and water-meadows, ages ago. But evidently they had cared for none of these things; they were of no use.

In agricultural matters improvements were also effected. A regular 'furrow' *vako*, was now made, into which the 'seed' *siemen*, of some kind of 'corn or grain' *jyvät*, was sown. The grain had a 'beard' *oka*, and outside the kernel was the 'husk' *pelut*. 'Peas' *herne*, were quite a new article of food and now came into use. After the sowing was completed the furrows may have been filled in with a * 'harrow' *äes*, or a 'bush-harrow' *hara*. Out of barley or millet they may also have brewed * 'ale' *olut*, which Professor Thomsen now refers to the Lithuanian period, though formerly and, I think, with greater probability, to the Proto-Scandinavian or fifth period, when they learnt the use of 'hops' and how to make 'malt.' According to Wulfstan the Eastas knew mead, but not ale, and the final *t* is better explained by a Teutonic than by a Lithuanian original.

Connected with boating and fishing we find terms for such words as 'sea' *meri*, 'ship' *laiva*, 'sail' '*purje*,'

*‘coracle’ *karvas*, *‘the side of a ship’ *laita*; ‘crab,’ ‘eel,’ and ‘salmon’ which could now be caught with a ‘leister’ and ‘torch’ or by a new sort of ‘fish wear’ *toe*, and perhaps *‘a pole for driving fish into the net’ *tarpa*, was also employed. The first three words, however, do not necessarily imply that the Finns had reached the sea, for the Lithuanian *mares* can be applied to a large inland lake, and in fact usually means the Frische Haf. For the ‘sea’ the Lithuanians use a different word.

With regard to external nature, the Finns now noticed things from a different point of view and began to differentiate. They had always known the sun, but the word also meant ‘day’; now they seem to have borrowed a word that meant *‘dawn’ or the *‘morning star’ and used that for ‘the sun’ *aurinko*, alone. So, too, they had always known night frosts and hoar frost, but till they took more seriously to agriculture such natural phenomena hardly attracted notice; at any rate they were harmless. But now all this was changed; premature ‘night frost’ *halla*, and ‘hoar frost’ *härmä*, resulting in hard ‘frozen ground’ *routa*, could, and often did, ruin their prospects of harvest in a single night; the new experience demanded a new set of terms. Having good sleighs, too, they now noticed whether ‘the state of the road’ *keli*, was propitious for travelling upon or the reverse. From time immemorial they had seen the sky above their heads and had given it a name that perhaps always included a personality or spirit inhabiting it. But at the very beginning of the fourth period the physical aspect of the sky seems to have dropt out of sight and they now borrowed from the Lithuanians a new word that meant ‘god,’ but which is now used by the Finns simply as the ‘physical sky or firmament’ *taivas*. No

doubt the Lithuanian word implied 'the god that dwells in the sky,' and was therefore at first almost synonymous with F. *Jumala* and *Ilmari*; but the personality implied by the native words prevailed in the native mind, so that eventually nothing was left of the foreign divinity but his tabernacle, the physical sky. Another personal name of foreign origin has also entirely changed its meaning without leaving a trace of its ancient signification. F. *perkele* 'devil,' is borrowed from L. *perkunas*, the thunder-god of the Baltic peoples, who is still regarded as a beneficent being. To the Letts he is of little less importance than God himself; he drives away evil spirits; is invoked to strike and destroy a stitch in the side; to hurl forth lightning and close a dam that has been made to stop the bleeding of a wound; to break and reduce a swelling or tumor; and in a song he is addressed quite like a national god and the defender of his people:—

Thunder, thunder, Pêrkoniti,
Split the bridge o'er the Daugava, (Dvina)
Lest the Poles and the Lithuanians
Should cross to my father-land.'¹

Various abstract terms, adjectives, etc., were also introduced during the fourth period, such as 'custom, manner' *tapa*, 'order, state, condition, quality' *laita*, 'a turn, a time' *kerta*, 'narrow, tight' *ahdas*, 'greyish, green' *halea*, 'grey' *harmaa*, 'yellow' *kelta*, 'loose, unbound' *irtainen*, 'thin,' 'lazy,' 'flat,' 'wet,' * 'skew' *karsas*, 'empty,' 'all,' 'always,' 'still, yet,' and the important word for '1000.'

A Lithuanian influence can also be traced among the Mordvins and Čeremis. Professor W. Thomsen gives a

¹ Kobert, pp. 171, 270, 245, 251, 259, 260; Sprogis, p. 316.

list of twenty Lithuanian words which seem to be found as loan words in one or other or both the above peoples. Of these all but three were also adopted by the West Finns. The more important Mordvin loans are 'daughter,' 'younger sister'—the original of which is simply 'sister'—'stall, courtyard,' 'pig,' 'udder,' 'thong,' 'knife,' 'millet'—neither of these two last are found in W. Finnish;—'goose,' and 'rooo.' The Čeremis have also borrowed * 'heath-cock' and 'out-house' *pört*, a word that has travelled as far east as the country of the Čuvaš.¹ Whether these words came directly or indirectly to the East Finns is necessarily uncertain. Some of the links that once served to connect the East and West Finns, such as the Meriens and the people of Murom, no longer exist. There is nothing improbable in supposing that the words were transmitted mediately through these now vanished tribes. Articles like knives and millet, which are easily carried, may have found their way to the Mordvins directly through the medium of Lithuanian traders; though, possibly, as Professor Thomsen suggests, in a southerly direction the Lithuanians and Mordvins may once have been in contact.

THE FIFTH OR PROTO-SCANDINAVIAN PERIOD.

Though, as Professor W. Thomsen supposes, the Lithuanian and the Proto-Scandinavian or East Teutonic influence may have been partly contemporaneous, both belonging to the early centuries of the present era, the former certainly began earlier and the new civilisation it introduced was far less important. In loan-words of the fourth period the voiceless explosives *k*, *t*, *p*, and the voiced

¹ Thomsen, (1) p. 153.

g, *d*, *b*, were treated as identical and reproduced in the Finnish by *k*, *t*, *p*. But in the fifth period a difference made itself felt. Now a Teutonic *g*, *d*, *b*, was rendered in Finnish by *k*, *t*, *p*, while a Teutonic *k*, *t*, *p*, was, when possible, doubled, appearing as *kk*, *tt*, *pp*, each explosive being sounded twice. This gemination also took place exceptionally in the fourth period, showing that its duration was considerable. In the fourth period there are several examples of a passage from *ti* to *si*, as in F. *silta* < L. *tiltas* 'a bridge,' a phonetic change which is not found in loan-words of the fifth period.¹ But though on the whole the Proto-Scandinavian loan-words are later than the Lithuanian, they nevertheless belong to a stage of East Teutonic as old, often older than the Gothic of the fourth century. They show no trace of the vowel change caused by *i* or *u* in the second syllable reacting on the vowel or diphthong in the root syllable; the original diphthongs *ai*, *au*, *iu*, as well as initial *j*, *v*, are retained; where a Gth. *ē* answers to O. N. *ā*, the Finnish agrees with the former; and in a word like F. *autuas* < Gth. *ādags* < **audagas* 'blessed,' the original final *-as* is retained, while in the Gothic the *a* has disappeared. Dialectically however the vowel maintained itself much later than in Gothic; in the runic inscription on the By stone, Buskerud Amt, in the south of Norway, attributed by Professor Bugge to about the middle of the seventh century, the nominative of masculine nouns still ends in *-aR*.² According to Professor Bugge the *umlaut* caused by *i* had already taken place about 500 A.D.; the final *z* did not become *r* till after that time; initial *j* was already lost in the sixth century, and initial *v* had vanished by the middle of the

Thomsen, (1) pp. 72-76, 151.

² *Ibid.*, (2) p. 118; Bugge, p. 115.

seventh century.¹ It may be assumed then that most of the loan-words about to be enumerated² are earlier than 600 A.D. or thereabouts.

For the first time in their history the West Finns began to acquire the notion of a 'king' with persons of lower dignity, such as 'princes' and local 'governors' (*haltia*), whose prerogative it was 'to govern' and 'to judge' the 'nation' and the 'state,' which for convenience was divided into smaller 'provinces or administrative districts' (*kihlakunta*), the various villages of which were bound together for mutual protection by giving 'pledges or hostages' (*kihla*) to that effect. In connection with these dignitaries was the 'herald' and the 'guard.' The judge dealt with cases of 'murder,' had to pass sentence on the 'thief,' perhaps on the 'harlot,' had to decide on the merits of the case when two men were at 'strife' and one brought an 'action' against the other, and had authority to inflict a 'fine.' If a 'trader' in order to promote and augment 'trade' obtained a 'loan' from a 'rich' neighbour he had now to pay 'interest' for it. Communication was rendered easier over marshy ground by laying down a 'bridge of felled trees or planks' and 'rafts of timber' were now floated down stream. In the family circle it was now considered derogatory to use the old native word for mother, as that was also used for the females of animals, and a new term for 'mother,' free from such a stigma, was accordingly adopted. The 'bride' was also distinguished from the new daughter-in-law and a more formal 'betrothal' (*kihla*) belongs perhaps to this period, though it is not the earliest sense in which the word was used.

¹ Bugge, pp. 107, 71, 103.

² These will be found in Thomsen, (2) pp. 121, 128, 185.

Among the new arms introduced were the 'spear' and the 'sword' (*miekka*). As the Gothic *mēkeis* translates *μάχαιρα* the new weapon must have been a short, one-edged sword about two feet long, such as was used in Scandinavia and the East Baltic area during the first four centuries of the present era. The natural complement of a sword was its 'sheath.'

Besides giving each article of dress a special name, a general term for 'clothes' was now introduced as well as words for 'coat, petticoat,' 'shirt,' 'breeches,' 'gloves,' the 'upper shoe-leather' of a boot as well as its 'sole.' The 'combs' and 'rings' now introduced were doubtless improvements on the old ones, were more ornamental, were of new shapes, and far more fashionable.

The 'farm-house' (*kartano*) was now built of 'beams,' contained 'rooms' and 'sleeping-rooms,' was provided with a 'floor,' a 'hearth' of improved construction, and if need be the door could be fastened with a 'lock.' Inside the house stood a 'chest' or two for keeping clothes; at the head of the bed lay a 'bolster,' and on the hearth was the 'kettle.' In other parts of the house stood the 'churn' which might have 'hoops' round it, the 'milk-pail,' the 'weaver's reed,' and, if the house belonged to a small merchant, 'weighing scales' which registered a 'pound weight.' Outside the house was the 'well,' and on the roof of the house the 'stork' may now have perched. It is hardly likely the 'hawk' was trained for hawking as the country was too forested. In summer when the house was oppressively hot they could take refuge in a 'tent.'

Among the instruments that came into use were the 'axe-hammer,' which was certainly of iron and so required a new name, the *'wedge,' 'borer,' 'saw,' and 'needle,'

all of which would now be of metal. In connection with the needle was the 'seam.'

Fresh names were adopted for the 'he-goat,' the 'bullock' and the 'sheep,' which was now 'shorn' instead of being plucked, as was probably the case in the fourth period. Plucking, it may be remarked, instead of shearing was resorted to by the Shetlanders as late as the last century. The horse was already known, but the 'headstall,' 'halter,' and 'saddle' made riding more comfortable. By means of a 'yoke' the oxen were attached to a 'plough' of a better description than the old native one, the coulter being doubtless of iron. 'Uncultivated or desert' land was now distinguished from the 'field,' on which 'manure' was also thrown, and after being ploughed could be sown with 'oats,' 'rye,' 'hops,' 'flax,' or 'hemp,' from which last 'ropes' and 'hawsers' were manufactured. In the 'mould' of the garden, which was already known, they planted 'leeks' and borrowed a general term for a 'shoot or sprout.' After being threshed and freed from 'chaff' the grain was gathered into a 'barn.' In hay-making, after cutting the grass it was piled up in 'hay-cocks.' Barley was already known; now they learnt to make 'malt,' and with the addition of 'hops' to brew it into 'ale.' The 'wine' must have been imported. From 'dough' they made a better kind of 'bread' than before, and it could also be eaten with 'honey,' though this certainly was no new luxury.

Although the 'cod' frequents the Baltic, the 'whale,' I believe, is unknown in those waters. The introduction of the latter term seems to show that some of the West Finns had by this time penetrated as far as the 'shore' of the White Sea and the Arctic Ocean. Boats had

now 'seats,' well-defined 'bows,' and were propelled by regular 'oars.' Fishing was practised with a 'line' or with a 'net.' Now they became acquainted with the special dangers of the sea, its great 'waves,' its 'rocks,' and 'reefs,' its narrow 'sounds' and 'high tides,' as well as with its more or less fabulous 'monsters' (*tursas*).

The new metals were 'iron,' 'gold,' and 'tin,' and it may be observed that the Finns did not borrow the ordinary word for iron, but one that meant 'red iron ore, hæmatite.' It looks rather as if the West Finns first learnt to know the ore before seeing the metal, which was ultimately extracted from it, and that may mean that the Scandinavians compulsorily employed their Finnish captives in the hæmatite mines. The prisoners, after becoming familiar with the term for ore, subsequently transferred the meaning to the metal extracted from the hæmatite, for at first they would not know that a metal could be obtained from it. On the escape or release of some of the captives, the word gradually would reach the main body of the West Finns. Besides learning these new metals the heat of the 'forge fire' was augmented by the use of 'bellows.'

To various parts of the body were now given fresh names, such as 'bosom,' 'the back of the shoulders,' 'belly,' the 'hips.' And the body became subject, though not for the first time in the history of the Finns, to 'disease,' 'pain,' 'sudden spasms,' 'wounds' and the 'scars' that accompany them. If, in course of time, pursued by a remorseless fate, the 'sick man' died, the lot of the 'deceased' (*vainaja*) was regarded as wretched, for Professor Setälä derives the word from the Gth. *vainags* 'unhappy, miserable.'¹ The Finns were no pessimists,

¹ Setälä, p. 60.

they preferred to live as long as possible ; the life beyond the grave was anticipated with anything but pleasure.

Some confused notion of a spirit distinct from the body the Finns always possessed ; towards the end of the period they adopted a more distinctive word for 'soul.' Various abstract terms also became current, such as 'necessity' ; the notion of making a 'mistake' or falling into 'error' ; asking 'permission' from a superior and 'vexation' of any kind. By natural disposition it was recognised that a man might be 'just,' 'wise,' 'merciful,' 'gracious,' 'willing,' 'assiduous or eager' ; that he might be 'blessed,' deserve 'merit' and be worthy of 'renown' ; on the other hand, he might also be 'timid.' Other abstract terms were applicable to man, and to natural or artificial objects such as 'rich,' 'abundance,' 'worth,' 'precious,' 'beautiful,' 'unique.' Though some sort of singing must have accompanied the zither in the previous period, a new word was introduced for a 'song' *runo*.

The word for 'Russia' (*Venäjä*) is very interesting as it represents the *Venedi* of Tacitus, the A. Sax. *Wined* and the modern *Wend*. In Ohthere's time *Wendland* meant Pomerania, but in the second century there were *Venedi* on the east side of the Vistula and along the north of the Carpathians. By the sixth century some of these had pressed northwards, though without coming into contact with the West Finns. As the word *Wend* is not applied by the Slavs to themselves, but only by Teutons to their Slav neighbours, the Finns borrowed the term from the East Teutons, and originally, though not now, *F. venäjä* must have meant the Wendish people as well as *Wendland*. The Scandinavians in their journeys to and fro between their native land and the country occupied by the Goths,

that lay north of the lower Danube, or in the south-west corner of modern Russia, would have to pass through the land of the Wends, In this way it came to pass that the Finns heard of Wends and a great Wendland to the south of themselves, and in course of time, as the Slavs or Wends pressed closer upon them from the south, the idea of *Venäjä* expanded, till it included the whole area occupied by the people they had learnt to call Wends from the Eastern Teutons, but whom we call Russians.

Partly to account for the Proto-Scandinavian influence several writers on the subject have supposed that the Baltic Provinces were inhabited by Scandinavians, at any rate in part, but the most recent results of archæology lend a very uncertain support to this theory. With much greater show of reason, archæology can point to the south-west of Finland as having been inhabited by a prehistoric Scandinavian people from a very early date down to about the sixth century. It also leads us to conclude that before they took their departure—they may have gone south to join their kinsmen the Goths—they had taught so much metallurgy to the West Finns that there is no absolute breach of continuity between the civilisation of the first and second periods of iron in that region. The passage is gradual, clearly showing the Finns had entered far enough into Finland to get within reach of the new civilisation at an early date, perhaps as early as the second or third century A.D. Before reaching Finland the Finns had lived further south, had apparently touched on Lithuanians in Esthonia and eventually dispossessed them altogether, though they may have migrated with the East Teutons of Finland to the sunny south, to the great Eldorado where plunder was easily obtained. But this event, if it ever

really took place, is still very obscure. How far inland the West Finns were spread cannot of course be determined, but probably as far as the Waldai Hills. It is not necessary to suppose that more than the outer fringe of the main body were in actual contact either with the Lithuanians or with the East Teutons. If a sufficient length of time is allowed, all the culture-words of the new civilisations would gradually permeate and leaven the whole mass of the people. The Finns still lived an unsettled, half-roving life, and no doubt annually there were great gatherings for some special object to which some members of the most remote clans inevitably flocked. To people that live such a mode of life, a journey of several weeks' duration to attend a national festival is nothing; time has absolutely no value. Another way in which new ideas with corresponding new words could travel very far from their source is to suppose that escaped prisoners, or even such as voluntarily had entered the service of the foreigners, eventually returned to their native homes. Again, the Finns, when they had an opportunity, would make prisoners of their enemies, who might be sent far inland, and from them the Finns living at a distance would learn many new arts of civilisation.

THE SIXTH OR EARLY SLAV PERIOD.

Although there are no actual records of the event, it is certain that for several centuries after the present era various Slav tribes, subsequently known collectively as Russians, were gradually pushing up from the south in the direction of Lake Ilmen. In course of time they met some of the West Finns, such of them as still lived outside

Finland and formed the southern fringe of the nation. The date of this occurrence cannot of course be accurately fixed, but it was later than the fifth period and earlier than the earliest literary documents of the Slavs. The test of the antiquity of the loan-words of the sixth period lies in the retention of a vowel $+n$ instead of the nasal vowel of the earliest manuscripts and the treatment of the vowels *yerŭ*, *yerŭ*. Mr. Mikkola, who has collected and discussed the loan-words of this period, and from whom I have taken all the words given below,¹ is of opinion that they were borrowed before the Finns entered Finland, an event which was completed at any rate about A.D. 800.² This statement is, I believe, far too sweeping. If there is any truth in what has been advanced in the last section, some of the West Finns were in Finland perhaps as early as the second or third century, while the more southerly tribes may have extended as far as the Waldai Hills and Lake Ilmen. According to my interpretation these more southerly Finns borrowed a considerable number of new words from the Slavs, but ultimately were pushed northwards, partly into Finland to amalgamate with the earlier settlers there, partly north-westwards to swell the numbers of the Esthonians, and partly perhaps to the north-east in the direction of Lake Bielózero. The result of this late movement was that a number of words of Slav origin passed into all groups of the West Finns much quicker than they otherwise would have done.

As a social body the Finns lived in different 'communities or parishes,' separated from each other by definite 'boundaries.' From time to time they assembled in the 'market-place,' which might be several 'versts' from their

¹ Mikkola, pp. 31, 36-180.

² *Ibid.*, pp. 28, 29.

respective homes, and there transacted business, not by barter, but in silver currency, using the old Russian *grivna* (F. *riuna*). Originally this was a silver *torque*, or collar, worn round the neck; then it was used as a unit of value with a weight, at Novgorod, of thirteen ounces; finally it became a coin, and now has a value of only ten kopeks, or about threepence. For buying and selling there was a definite 'measure' of quantity or of weight; 'goods' were distinguished by their 'quality or sort,' and agricultural produce could be kept or transported in 'sacks.'

The house was now provided with a regular 'window' and an outside 'gate'; besides stools there was the 'bench' and the 'bench fixed into the wall' in the vicinity of the 'stove.' As an offset to this increasing comfort they had now to put up with 'cockroaches.' Outside in the courtyard was the 'cow-house,' and the 'sparrow' for the first time seems to have attracted notice. Inside the house the women plied the 'distaff,' the 'spindle,' and a new sort of 'weaver's reed,' with which they wove 'linen,' and perhaps *'home-spun cloth' and *'sackcloth.' It would be their business, too, to make the 'footless socks' to protect the feet in walking through snow, the 'linen drawers' and 'cloaks' that now became the fashion. 'Boots' were now sewed with 'waxed or pitched thread,' and for summer wear 'bast-shoes' were found advantageous.

The only new weapon was a 'battle-axe' of iron; for lopping off branches 'twigs' and 'rods' they used a 'bill-hook'; for carpenters' work a *'chisel'; for reaping a 'sickle,' and for spearing fish a new kind of 'leister.' The hunter was followed by some new breed of 'hunting dog.'

The boatmen perhaps navigated the inland waters and narrow 'sounds' in *'barges,' and learnt the use of the

'fire beacon.' The 'walrus' could only have been known by hearsay, though they may have seen its tusks or the strong ropes and tackle that were made from its hide.

Although the Finns had already borrowed a number of words for various parts of the body, they now augmented the number by re-naming the 'throat.'

New articles of food from the kitchen garden were 'beans' and 'carrots.' On feast days the bill of fare was increased by the addition of a 'pie or pasty.' After a drinking bout they learnt, hardly for the first time in their history, the disastrous effects of 'drunkenness and hot coppers.'

Murder as a crime was known in the previous epoch, now they borrowed a term for the 'thief' and the 'wizard.' A new ailment, or one with a fresh name, was the 'itch.'

Among the new abstract ideas were the sensations of feeling 'free,' of being 'clean and decent' or 'sorrowful'; the deeper-seated sensations of 'pity' and 'anguish'; and the more advanced conceptions involved in the notions of 'insight, comprehension,' and 'counsel, reflection.'

Among the very latest of the loan-words are several ecclesiastical terms, showing that Christianity had been preached at a fairly early date, though hardly before the beginning of the tenth century. The words are 'cross,' to 'christen,' 'priest,' the 'Holy Scriptures,' and 'heathen.'

THE SEVENTH OR TATAR PERIOD.

Between the third or Iranian, and the seventh or Tatar Period, there seems to have been an interregnum of stagnation among the East Finns, though the former may have lasted to the fall of the Sassanide empire. The oldest

Mordvin loan-words of this period, according to Mr. Paasonen, to whom I am indebted for all the loan-words given below,¹ seem to have been taken from the Čuvaš, some of them when it was at an older stage than at present.² Dr. Radloff, Vambéry, and Paasonen all hold that the Čuvaš are descendants of the ancient Bolgars. They speak a strongly marked Tatar dialect, presenting certain phonetic peculiarities which led Dr. Radloff to believe that they are a Tatarised people; the physical aspect of the people points to the same conclusion. Several Arab authors aver that the language of the Bolgars and Khozars was the same, and was different from the Turkish and Persian. The former first appeared in Europe in the fifth century, and, if they called themselves Bolgars or Bulgars, must have been Tatarised before entering Europe. They may have settled on the central Volga as early as the sixth or seventh century, where they maintained themselves till the capture of Bolgari in 1238 by the Mongols. The earlier Čuvaš loans are about sixteen in number, and are indicated below by a (Č.) in brackets; the later ones date from the thirteenth century onwards, and were made from the Mišār Tatars, now found in the governments of Nižni, Simbirsk, Penza, and Saratov.

The Mordvins now adopted two fresh terms for dignitaries, the 'prince' and the 'Kān.' The 'assembly of the community' took place in the street, for that is the meaning of the Tatar original. Hospitality seems to have been a new 'custom,' and was marked by receiving the 'stranger' and treating him as a 'guest' or as a 'friend or comrade.' As a counterpoise to the exercise of this virtue the 'glutton' came into existence.

¹ Paasonen, pp. 26-57.

² *Ibid.*, p. 5.

Merchants and traders, braving 'storms' and 'waves,' assembled in the 'market-place or bazar,' and had 'scales' weighing up to a 'weight of 10 lbs.' They 'tested' the quality of an article to see if it was 'bad or spoilt,' and it was 'good luck' for them to buy 'cheap.' Among the foreign articles they traded in were 'pepper,' 'paper,' 'brass,' 'chains,' 'silk,' and many other articles.

In the family new terms were borrowed for '(Č.) mother, wife, woman,' and '(Č.) elder sister or aunt (on either side).' Marriage customs took a new turn or were conducted with greater ceremony and etiquette, for 'match-makers' appear on the stage, and haggling took place over the 'price of the bride' or the bridal feast, as the word means in the original. Fresh terms of address and respect were adopted for the 'husband's sister older than the husband,' 'husband of elder sister or brother-in-law,' 'husband of sister's wife,' 'wife's younger sister,' 'younger brother,' 'son, young man,' and 'child.' A 'sense of shame or decorum in girls' was now required, and a stigma was attached to 'leading an immoral life.'

Men wore a '(Č.) long coat or kaftan,' with a 'pocket' in it, as well as a 'cap.' The 'pretty' women adorned themselves with 'necklaces of glass beads' and 'coins worn as an ornament.' The best clothes of both sexes might be of '(Č.) silk,' embroidered with 'gold and silver thread,' and the colour of their garments was sometimes 'white.' Against 'cold, wind, or weather,' they had 'coverings of felt.'

A 'beard,' when it could be grown, was now the fashion, and fresh terms were borrowed for the 'lower part of the back,' and the 'left (hand).' They now suffered from 'skin disease' and 'itch,' and the 'blind' excited com-

passion; in the old days they were perhaps put away as soon as the blindness was remarked.

The 'house' no doubt was an improvement on the older dwelling; the furniture included a 'chest' and part of the building could be partitioned off with a 'curtain.' The warmth and comfort of the establishment however invited the '(Č) bug.' Increased notions of cleanliness necessitated the use of 'soap.' Outside was the 'enclosed courtyard,' where 'turkey cocks' now displayed themselves, the 'cultivated field' and the 'portion of a field or forest.' In the cultivated ground grew '(Č.) hops,' 'cucumbers,' 'horse radish,' 'male hemp,' and 'fruit' as well 'dry grass' and weeds like 'darnel.' Beyond the cultivated fields by the 'steep bank' of some stream grew the '(Č.) willow' and the '(Č.) elm or ash,' the original of which last meant the alder; a fresh term too became current for a '(Č.) branch or twig.' In the open fields the 'hare' crouched in its form and the 'mole' threw up mole-hills. With regard to wild birds they borrowed a name for the 'hawk' and two for the 'jackdaw.'

The dietary was improved by the introduction of 'dumplings,' '(Č.) round cakes' which could be eaten with 'honey-comb,' 'cream,' and 'sour milk'; 'pepper' was used as a seasoning. With the hops 'small beer' was brewed which sometimes would lead to 'intoxication' and fighting with 'clubs.' For holding liquids there was the 'trough.'

As the Tatars were a horse-loving people, the Mordvins adopted new terms for 'stallion,' 'gelding,' a 'refractory horse' and a 'hired horse and conveyance' as well as for a 'saddle girth' and 'halter.'

'(Č.) Brass' was the only new metal, and this as well as iron could be wrought into 'chains.'

In the religious life, besides learning 'to fast' and to keep 'pure and holy,' they were taught the existence of 'Satan,' of an 'evil spirit of Keremet,' of a 'sorcerer or evil spirit,' and they acquired some new way of 'divining' the future to see what their 'luck' would be.

Among the more abstract ideas were 'free will, freedom,' 'clean, well, strong,' 'to assist,' 'to prepare,' 'to despise,' and a 'contour or outline,' the original word meaning the ghost of a dead person.

The Čeremis were quite as much indebted to the Čuvaš and to the Tatars. All the loan-words below are taken from Professor Smirnov.¹ The new civilisation introduced the 'chimneyless hut' with its 'hearth' and 'escape for the smoke.' Inside the house was a 'loft' and the furniture consisted of 'stools,' 'chairs,' 'cushions,' 'featherbeds,' and even 'bed curtains' to keep out the midges and mosquitoes. New ideas of cleanliness led the people to adopt the 'tub' and the use of 'soap.' Women span thread with a 'distaff,' and learnt 'to embroider.' Round the house were distributed the 'cellar,' the 'bath house,' and the 'cattle shed,' and these were contained within a 'compound or fenced enclosure,' in one side of which was a 'gate.' They bred 'cattle,' 'horses,' and 'sheep,' for which there are several names. The hay was kept in a 'covered structure' for that purpose, and 'enclosures for cattle' were now made in the woods or in the fields. The 'herds' were in charge of a 'herdsman,' and a 'trough' for the cattle to drink out of in winter was found useful.

Agriculture took a new development. The 'ploughed fields' were manured with 'dung,' and ploughed with a 'hook plough' into 'strips,' with a 'boundary' between

¹ Smirnov, (I) pp. 24-29.

each, and might be sown with 'oats.' After being reaped the corn was bound into 'sheaves' and the 'straw' was separated from the grain by threshing. 'Hay' was cut with a 'scythe' and turned with a 'fork' before being housed. Near the house was the 'kitchen garden' in which vegetables and fruit such as 'onions,' 'garlic,' 'radishes,' and 'apples' were cultivated. For transporting the corn and agricultural produce there was a 'wagon' to which horses were attached by means of a 'collar,' and to separate the shafts they used a 'bow or arch' which rose immediately above the collar. The horses were ridden and driven with a 'bit' and in connection with the wagon and its harness they made use of 'nails,' 'hooks,' 'chains,' and 'cords.'

As a consequence of turning their attention largely to agriculture the Čeremis were now able to indulge in 'porridge' and to eat 'pancakes.'

The people were no longer on an equal level of modest competence; they had to recognise the difference between 'rich' and poor,' between 'master and mistress' on the one hand and 'work-people' on the other. A trader brought his 'goods' to the 'bazaar or market place,' put a sufficient 'price' upon them to make a 'profit' and secure himself against 'loss' and was 'paid' in 'money.' If his stock ran short he could apply to a 'usurer' for a 'loan.'

From Mohammedan missionaries, who first came to Bulgari in the tenth century, the Čeremis imbibed a number of totally new ideas, such as 'religion' and 'sin.' He trembled at the idea of the 'Judge in the other world,' of 'hell' and of 'Satan.' Their immediate surroundings, they heard, were only a small part of the 'world' and the

sky itself only formed a part of 'nature' as a whole. They adopted a word for 'man,' which placed him in a new light; which differentiated him entirely from animals and made him a special creation of the Almighty with whom he might ultimately expect to dwell in 'paradise.' For man was possessed of a 'soul' and 'spirit' which directed his 'mind' and 'will.'

The Votiaks have borrowed still more largely than the Čeremis and the Mordvins from their Tatar and Čuvaš neighbours. Dr. Munkácsi, from whom I have taken all the words given below,¹ has enumerated a list of over 800 Votiak words of Tatar, Persian, and Arabic origin, many of them verbs. But as they all came through a Tatar source and belong to the same period as the loan-words in Mordvin and Čeremis, it is not necessary to separate them into three categories or to enumerate the whole of them.

In their social life the Votiaks now recognised a 'lord' and 'prince' in 'authority' over them, to whom they paid 'tribute' and 'taxes,' who would preside at their 'assemblies,' issue his 'commandments' and govern a 'district.' The 'judge' administered the 'law' and the 'statutes,' tried the 'robber,' and the 'thief,' the 'debtor' and the 'calumniator' that had 'told lies' about the prosecutor; and heard the 'witnesses' 'give evidence' on 'oath.'

Of lower rank than the prince was the 'master,' for which there are a couple of terms. The mass of the 'people' was still lower in the social scale and they were subdivided according to their vocation. There was now the 'artisan or handicraftsman,' the 'workman,' 'herdsman,' 'watchman,' 'messenger,' 'servant,' and also the 'harlot.' A distinction was thus drawn between 'rich'

¹ Munkácsi, (3) pp. 79-151.

and 'poor,' and in other ways the old social equality was impaired, for a 'strong man or hero' could now make a name for himself and raise himself above his fellows in a way that formerly had not been possible. The new laws of hospitality brought in a word for a 'guest,' who was treated as a 'friend' and 'comrade.'

In the 'family' a considerable number of new terms were adopted, showing that its old constitution had undergone a change. Such were 'grandmother,' 'elder-brother,' 'brother,' 'elder sister,' 'elder sister on the father's side,' 'elder sister or aunt,' 'husband of wife's sister,' 'wife's brother or sister'; 'step-father, step-mother'; 'relation.' Marriages were arranged by a 'match-maker'; the young couple were formally 'betrothed' and the 'price of the bride' was agreed upon beforehand. With the stricter marriage laws a definite, legal term for 'adultery' was added to the vocabulary. At the wedding feast and other festivities was to be heard the 'singer' accompanying himself on the 'zither,' as well as the player on the 'fiddle,' 'bagpipes,' and 'horn.'

The new 'farm-house' was built on a 'foundation,' and was provided with a 'hearth' and a 'chimney flue,' besides being divided into separate 'rooms'; a 'staircase' led to the upper chambers. As furniture there were 'mats,' 'cushions,' 'pillows,' and 'coverings.' Outside, enclosed by a 'fence' of some sort for which there are two words, was the 'courtyard,' 'bath-house,' 'shed' and 'granary,' including the 'well' and 'bucket' for drawing water. Within the yard, to which there was access by a 'gate,' could be heard the gobbling of the 'turkey-cock,' the crowing of the 'cock,' the cackling of the 'hens' and 'chickens,' the cooing of the 'dove,' the lowing of the

'calf' and bleating of the 'sheep, lambs' and 'he-goats.' Some birds were kept in 'cages.'

As a means of transport there was the 'wagon' to which a 'gelding' could be harnessed. Some riders preferred the 'ambling horse' with 'a saddle,' 'stirrups,' and 'halter,' others the 'ass.' Excepting as a name and by vague report the 'camel' could hardly have been known. For fodder in winter they made hay which was heaped into 'hay-cocks' with a 'pitch-fork.'

The 'fields,' for which there are two expressions, were tilled and might be sown with 'flax' or 'corn' of some kind such as 'millet'; when cut it was tied up in 'sheaves' and the 'grain' was separated from the 'straw' by threshing. In the 'kitchen garden' they grew 'lentils,' 'gourds,' 'radishes,' 'turnips,' 'onions' and 'garlic,' as well as 'fruit,' such as 'apples' and 'cherries.' They even took a fancy to 'roses,' perhaps to other 'flowers' by reason of their 'colour' and smell. Agriculture of a more advanced type was introduced and with it the artificial 'beehive' in which better 'honey-combs' were produced.

'Bread' was now baked and the above vegetables, including 'rice' which of course was imported, could now be made into 'soup and food' of various sorts by cooking them in a 'pan'; 'meat' was 'roasted' before the fire. The meal was washed down with 'beer' and 'brandy,' drunk out of a 'glass' or 'bowl'; the results of drinking too much led to 'drunkenness and hot coppers.'

Spinning and weaving had already been learnt, but a different sort of 'weaver's sley' was introduced. The dress for great occasions was of greater splendour than of yore. 'Women's cloaks' could be of 'silk,' embroidered with 'gold thread,' for 'gold' was now known. They also

wore 'pearls,' 'shoes,' 'stockings,' and a 'cap.' Men let their 'moustaches' grow, and new terms were substituted for various parts of the body, such as 'foot or leg,' 'loin,' 'throat,' 'cheek,' and 'belly.'

New instruments, all of course of metal, were 'shears,' 'saws,' 'knives,' 'wire,' 'anvils,' and 'weighing scales.' With the latter was associated a 'weight of $2\frac{1}{2}$ drachms' (*miskal*); Munkácsi does not give the word, but it is certainly the Ar. *mithgal*, which weighed about 74 grains, or nearly 10 grains in excess of the modern weight. Metallic 'money' was now current and with it came the ideas of 'gain' and 'profit.' 'Paper' was used for writing and drawing upon, for some of the natives had learnt 'to read' and could recognise a 'picture or portrait.' Formerly the divisions of 'time' were of ample dimensions, nothing less than a month; now they divided the month into 'weeks.'

Though the Votiaks had always lived in a cold country and were acquainted with meteorological and other natural phenomena, they thought fit to enlarge their vocabulary by new terms such as 'frost and cold,' 'fog,' 'storms' (two words), the '*steppe*,' 'steep bank,' 'island,' 'chalk' and 'reeds.'

So too they found it advisable to incorporate into their language several words for animals, some of which they knew before, and in certain instances they have changed the original meaning of the loan-word. Such are 'elk'; 'beaver or otter,' but musk-rat in Tatar; 'rat,' but beaver in Tatar; 'squirrel,' but hare in Tatar; 'martin' and 'lion.' New bird-names are 'eagle,' the 'great horned owl,' 'gull,' 'jackdaw,' 'crane,' 'lark,' and 'quail.' Among cold-blooded animals are the 'serpent' as a mythological fancy, 'leech,' 'frog,' besides two words for 'flies.'

A new malady may have been 'small-pox': a man might be 'deaf,' 'blind,' 'crippled,' or in 'pain' from a 'wound,' but instead of the old charms for banishing the evil spirits of disease he could now resort to the use of 'medicine.'

In the 'street' besides 'shops' could now be seen the 'mosque' with its slender and picturesque 'minaret.' Here was proclaimed the 'religion or creed' of the 'Prophet,' bringing with it new notions of the nature of 'sin' and 'guilt'; of the deceptions of 'Satan' and the manifold 'evil spirits' which pervade the 'world,' though their machinations could be thwarted by the good offices of 'angels'; of the virtues of 'fasting,' 'alms,' 'offerings,' 'prayer,' 'penance,' and 'compassion' for the 'poor.' Now they cherished a 'hope' of 'eternal life' in 'Paradise' and shuddered at the idea that their 'fate' should lead them to 'Hell' to abide with the 'accursed.' The 'place of sacrifice' of their own native gods also acquired a new name.

Lastly, the mental horizon of the Votiaks was enlarged by abstract terms such as 'honour,' 'duty,' 'true and right,' 'good,' 'righteous,' 'generous,' 'beautiful,' 'joyful,' 'peace,' 'friend,' 'friendly,' 'freedom' and 'free.' The opposites of these were 'treachery,' 'treacherous,' 'deceit,' 'deception,' 'dissolute,' 'lust,' 'wickedness,' 'hatred,' 'derision,' 'enemy' 'unclean' and 'unfree.' They also borrowed words denoting 'intelligence,' 'insight,' 'advice, counsel,' 'watchful, careful' and many verbs such as 'to remember,' 'to forgive,' 'to honour,' 'to advise,' 'to take counsel,' 'to make a vow,' 'to boast,' 'to regret,' 'to fall in love or to take up with any one,' 'to bless'; 'to rob,' 'to be vexed,' 'to curse and to swear.'

CHAPTER VI

BELIEFS OF THE WEST FINNS AS EXHIBITED IN THE MAGIC SONGS

SPIRITS.

IN the previous chapters enough has been said to allow us to gain some idea of the civilisation of the Finns as a whole at various stages of their history. And now that our attention has to be turned solely to the West Finns we shall be in a better position to estimate the amount of change and evolution that has taken place in their ideas from their first appearance in Europe to the beginning of the present century. For the sake of convenience no notice was taken of the West Finns in that part of chapter iv. relating to the existing beliefs of the Eastern Finns and Ugrians. The reason is that as the following chapters contain an analysis of the beliefs of the West Finns, so far as they can be extracted from the Magic Songs in vol. ii., it is better to keep this matter together, referring back, when necessary, to any coincidences of belief and practice in chapter iv. The references in brackets refer to the numbered sections of the Magic Songs in vol. ii.

Till recent times it may be said that the West Finns held the same belief in spirits as the East Finns. They were of opinion that every lake, stream, forest, heath and swamp, every tree and flower, as well as every living being,

was inhabited or ruled by a spirit, sometimes called a *haltia*, who might be of either sex, as among the East Finns. We have already learnt that *haltia* is an early Scandinavian loan-word meaning 'governor, ruler.' For instance, in Genesis, Joseph is termed the *haltia* or steward of Pharaoh's household. In the Magic Songs it occurs several times as the spirit-ruler, or wielder of authority. An exorcist declares that God is his *haltia*, who assisted him against sorcerers (2 *f*). The Creator is the *haltia* of the heavens (59 *a*). Old mother *Eine*, life's *haltia*, is invoked to rouse herself before a sorcerer rises, to help a beloved son, by whom the exorcist himself is intended (176 *a*). A hunter begs Annikki, Tapio's daughter, to awake with shouts the king of the forest, the *haltia* of the backwoods (139 *n*). A herdsman beseeches 'the old wife' of cattle, the *haltia* of kine, to awake before any sorcerer or jealous person rises (132 *c*). A treasure-seeker exclaims: 'Kinsmen of Hiisi, now arise! awake, thou mountain *haltia*!' (111). A prayer begins: 'Welcome! O Earth, welcome! Earth's *haltia*' (102 *a*). A hunter sadly complains that with other men luck does the work, their *haltia* fetches them coin, but his luck, his *haltia*, lies confused under a stone with gloves on his hands, or as we should express it colloquially, with his hands in his pockets (89 *e*). A snake is addressed as a ghost or phantom that looks like a *haltia* (29 *c*). Again, a wizard in working himself into an ecstasy invokes his *haltia* to rise from its hole, from under a fallen tree, or stone, or moss, or wherever it may be, and mentions its brilliant eyes and spotted cheek, as if he had a snake in his mind's eye (12 *a, b*). The technical term for being in an ecstasy (*olla haltiossansa* l. *haltioisansa*) means literally 'to be in one's *haltia* or among one's *haltia*,' in

other words, 'to be in the spirit or among the spirits.' From the above examples we see that the heavens, the earth, the forest, the mountain, and individual men, have each their spirit, ruler, or guardian. Such an idea goes back to the earliest times. That the word '*haltia*' is a loan-word is of no moment, it merely related to function and carried with it no connotation of spirit. Nearly parallel with this is the usage of the native terms *isäntä*, *emäntä*, 'house-father, master,' 'house-mother, mistress.'

UKKO.

Ukko, the 'old man,' was the anonymous air- and thunder-god. In the text his usual epithets are 'the god (lord, father) on high,' 'the god above the clouds,' 'the aerial god,' 'the great lord of the air,' 'the god that rules over journeys,' 'the god known everywhere,' 'the golden king,' 'the mighty father of the sky,' 'the father of the rulers of the sky,' 'the ancient father of the sky' 'who lives at the midpoint of the sky,' 'at the edge of a thunder-cloud,' 'the ruler of thunder-clouds,' 'the white-headed.' The Finns, therefore, assigned him many honorific epithets, but no wife or children. He remained a spirit almost without any anthropomorphic tendency. He is not, like the thunder-god of the Mordvins, amorously inclined, first making love to and then carrying off the fair maidens that live on the earth.

In the older period Ukko appears armed with a club or axe, usually of gold, and it is by no means certain that these were intended to symbolise the thunderbolt. He merely carries the indispensable weapons used by the ordinary Finns of that period. It might be supposed that

the club was a metaphorical expression for a thunderbolt when he is said to strike down with his club the spirit of disease (17 *x*), or when he splits with it the head of rust in corn (95 *b*). But it cannot be so when he is invoked in child-birth to bring his golden axe or club to remove obstructions and allow a child to be delivered in safety (166 *a, b*); or when a wizard asks for the loan of his golden scraping knife or his silver axe to remove a tumour with (129 *a*); or when a trapper wants the loan of his axe to fell a honeyed aspen with which to make an attractive trap (151 *a*). Instead of a scraping knife Ukko, on one occasion, is requested to drop his pincers from the clouds into the right hand of an exorcist, who will then proceed to extract the arrows of a sorcerer (149 *a*). And as the golden king he is begged by a hunter to take his golden club and beat the woods, so that pine branches may turn into squirrels and the wooded wilds into otters (139 *i*). In these last six examples it is clear the speaker is not thinking of a thunderbolt, but of some appropriate instrument which Ukko would be sure to have.

When armed with a sword, which became known in the fifth Period, Ukko appears more clearly as a god of lightning, though not always. By striking fire in the sky with his fiery-pointed sword he gave humanity the great blessing of household fire (226 *a*). Another time when the great lord of the air struck fire, a spark shot down into the sea and turned into rock-salt for the benefit of man (223). As ruler of thunder-clouds he is asked to thresh out his fiery barns, to thunder and clatter in the bellows of the air, and to pour down fire to destroy jealous persons and witches (176 *p*). Sitting on the edge of a thunder-cloud he is implored to destroy with his fiery sword all injuries caused

by spells (154 *b*); or to lend an exorcist his fiery sword with which to scatter and destroy such injuries (154 *a*); or to give a sufferer a fiery sword with which he can slash and for ever destroy the spirit of disease (154 *c*).

As god of the air he causes snow to fall (89 *b*), and is invoked to let fresh snow descend and form a good road for a sleigh to glide along (152). By a cautious soldier he is requested to bring the clouds together to rain on the touch-holes or let snow cover up the locks of the enemies' guns (162 *a*). As golden king of the air he is begged to raise a storm to destroy the boats of a dreaded enemy (180 *a*). With drops from the clouds, with iron hail Ukko condescends to break the head of the destructive cabbage grubs (119); and with sharp needles and iron hail he is invoked to pain the head of disease (17 *f*). As the kindly god, Ukko is implored by a husbandman to create a cloud and let water and honey drizzle down on the newly-sown seed (130 *a*). On the other hand when too much rain has fallen he is besought to take his clouds to Russia, his rainbows to Karelia where they want water to baptize a child (156). As powerful father of the sky he is asked to join the clouds and rain down honey and water to make a goodly salve (181 *e*); or to bring a bottle of pure water and luscious juice to make a salve to promote the delivery of a child (166 *c*). As god above the clouds he is prayed to roll a huge cloud down on the foaming surge of certain rapids, that the boatman may not be observed and eaten up by witches or sorcerers (127 *c*). From always having water at command Ukko is invited to fling himself into a fire with water in his mouth and a water-hat on his neck; to throw water on burns and cause an icy blast to blow on the burnt skin to prevent suppuration (171 *d*). As god

of the air it is within his province to protect cattle; accordingly he is invoked to watch over the herds at pasture (123 *b*); or to make the summer beautiful, the marshes placable and the forest amiable; to hide the flock under a cloud and if a greedy bear comes prowling round to turn the cows temporarily into stumps and stones (123 *i*).

Hitherto Ukko has been asked to do nothing more that is compatible with the character of a god or spirit ruling over the air and the thunderbolts. But in the instances that follow Ukko is rather regarded as an all-powerful god that can grant any request, a mode of viewing him that may be attributed partly to the Scandinavian belief in an all-father, partly to the permeation of Christian doctrine. There is a gradual confusion perceptible between him and the Almighty which ended in complete amalgamation. Ukko, the god that rules over journeys and governs the clouds is invoked by the leader of a bridal party to come as quick as fire from the sky, and having the size of a huge forest fir to protect the procession against enemies (117 *b*); or to give away a maiden's hand and lead a man about to be betrothed (117 *a*). A prudent soldier going into battle implores the ancient father of the sky to give him fiery furs and a flaming shirt, and further to build a wall of six fathoms in each direction to protect him against the enemy's shot (162 *b*); or to bring him the swords of 100 men of such sort that they will not glance off a bone, nor break against a skull (163 *a*). A suppliant begs him to build an iron fence reaching from the sky to the earth to shelter him and his people from sorcerers (176 *m, n*); or to let fall from the sky a copper horn, a golden shield which the petitioner can put on and guard himself with against the

arrows of sorcerers (176 *o*). The dear father in the sky is invoked to free a man from the effects of spells (165 *b*); or to watch jealous people, remove witches, and take care that the suppliant is not killed before his time (176 *l*). A hunter asks him for a straight and swift pair of snow-skates, on which he can scud rapidly to the heaths of the north where game is to be found (164). Ukko of the air is besought to stop a flow of blood with turf; failing that he is to thrust his thick thumb into the wound to serve as a stopper (177 *g*). Or as the white-headed one, he is asked to plough up a bit of turf to staunch the flow of blood, and then let skin grow over the wound during the night (177 *h*). As the Creator up above, Ukko is desired to boil water and honey to make a goodly salve. He is to take a bit of salmon, some butter, fat and a rasher of bacon, and make of the compound a potent ointment for healing fractures (181 *d*). Lastly, it was Ukko, the aerial god, the Creator on high, that by rubbing his hands against his left knee gave birth to three Luonnatars that they should become the mothers of iron (214 *a*). Here we find Ukko with the new epithet of Creator, an attribute that was not applied to him in purely heathen times.

Among the Voguls, Ostiaks, and some of the Votiaks, as we have already learnt, no sacrifices are made to the sky god, Num, Inmar, and there was no special worship of him. The same seems to have held true of the West Finns. Ukko is asked to assist, but nothing is offered or promised him in return and that was the old traditional standpoint. The idea of appealing to him at all is perhaps not earlier or not much earlier than the fourth period.

ILMARINEN.

As the name implies, Ilmarinen, the diminutive of Ilmari, was connected with the air and weather (*Ilma*). And there is reason, I think, to believe that he was the old air and sky god of the Finns before they ever came in contact with Europeans. *Ilmari* corresponds formally with the Votjak *Inmar*, whose name is now used to denote the monotheistic god of the Russians and of the Tatars, but in one district the word has its older meaning of the 'sky or heaven' as well, just as *tängri* signifies 'god and sky' among the Turkish tribes of the Altai. In other places *in(m)* is employed without the suffix *-ar* for 'God' and 'sky.'¹ *Inm* is therefore the equivalent of *ilma*, which, before the Lithuanian term *taivas* 'sky' was borrowed, included this meaning as well as 'air' and 'weather.' Then the Lapps at a comparatively recent period borrowed the name of Ilmarinen under the form of Ilmaris, and sometimes drew his portrait on their magic drums. But it is to be observed that they did not regard him as a smith, but as a god that could produce storms and bad weather. On a magic drum he takes the place usually occupied by the native wind god.² This conception of him agrees on the whole with Bishop Agricola's description in the middle of the sixteenth century. He terms him a god of the Tavastlanders who made calm and weather (*ilma*) and led travellers forward.

It would seem then that though Ilmarinen was best known as the wonderful smith, he was still regarded as an air and storm god as late as the middle of the sixteenth century. The transference from one character to another is not difficult to imagine. We may suppose that at some

¹ Wichmann, (I) p. 5.

² Friis, p. 37.

time not earlier than the fourth or fifth century, when the Finns had become familiar with the smith's craft, the clang of the hammer on the anvil and the sparks flying from the hot iron struck some one as something like the rattling of thunder accompanied by flashes of lightning. So the air god, when thundering in the clouds and launching forth his fire, became gradually assimilated with a human smith working in his forge. In this way he acquired a new anthropomorphic character and eventually became more and more separated from his aspect of the thunder and storm spirit, which was continued under the newer appellation of Ukko the 'old man.'

The original character of Ilmarinen comes out when he, together with Väinämöinen and the aerial god, is invoked by an exorcist to come to crush a malady, personified as the evil spirit, Hiisi (15 *a*). Again, fire is said to have originated from a spark struck in the sky by Ilmarinen and Väinämöinen, which afterwards fell to the earth (226 *e*). And a riddle runs thus: 'Ilmarinen struck fire, Väinämöinen caused a flash? Answer. A flash of lightning.'¹ These two companions together with Lemminkäinen are mentioned as rowing in a red boat towards the north, Ilmarinen taking the bow oar and Väinämöinen steering (107 *d*). The story is recited as a charm by persons travelling by water and so has a certain mythological character, but otherwise it has only a slight bearing upon Ilmarinen as an air god.

In the remaining instances in which he is mentioned in the text he appears only in the character of a smith, though not as a man living on the earth at the time he is invoked. He is appealed to rather as a divinity. The weapons and instruments he is asked to forge are purely

¹ *Arvoituksia*, No. 245.

imaginary and unreal. The exorcist uses his own instruments, but assumes by a figure of speech that they are the manufacture of the divine smith. This mere assumption imparted all the virtue of reality. As the everlasting hammerer he is implored to make little pincers with which a wizard can extract 'Lempo's arrow,' that is some physical ailment or disorder, from a man's body (149 *b*); or as the skilful hammerer, to forge a new sword, a dozen pikes and several spears for a soldier going to the wars (163 *b*). A best-man boasts that Ilmarinen himself shod the horse that was to carry him to woo the girls in Hiisi's castle (65). An exorcist threatens to place 'Tuoni's grub,' which generally means the tooth-worm, under the forge of Ilmarinen (21 *c*). Once upon a time the smith Ilmarinen was walking along a 'tinkling' road when he saw a variegated stone. He threw it into his forge fire, plied the bellows for three days, and ultimately saw the ore pouring out as copper. This he moulded into kettles (227 *a*). Again he finds iron sprouts in the tracks of a bear or a wolf, sets up his bellows, makes white iron, and forges it into axes, spears, etc., (214 *a*). In a couple of variants it is a god or else Väinämöinen that finds the iron sprouts, or seeds, and takes them to Ilmarinen to be forged into iron (214 *b, c*). On one occasion Pakkanen (sharp frost) attempted to freeze the smith Ilmari, but the latter plunged him into the fire till he swore that he would not do so again (93 *a*); in the Kalevala R. 30, 174 this fact is related of Ahti.

VÄINÄMÖINEN.

What part Väinämöinen played originally in the mythology of the Finns it is hard to determine. There is evi-

dence, however, that he was more than a personification and embodiment of magic wisdom and of song. He possessed these attributes certainly, especially in the later tradition, but various functions are attributed to him that cannot be explained by supposing him to have been an ideal wizard and nothing more. Writing in 1551, Bishop Agricola spells the name Äinimäinen, and simply records that he was a god of the Tavastlanders, who hammered out *i.e.* composed songs. From this, it would appear that about 350 years ago he was looked upon chiefly as the divinity of magic song, which would likewise include supernatural wisdom. In current ballads relating his adventures, he is generally a human hero endowed with wonderful magic power. He must either have been a real, historical wizard of whom were related wondrous stories, which gradually became so overlaid with fabulous matter that the hero of them became a completely mythical personage; or he was the spirit of some natural phenomenon that in course of time became anthropomorphized like Ilmarinen. I hold to the latter opinion, and suspect that he is the sky-god under a new appellation. The differentiation would come about in this way. The sky-god was also the Thunderer; thunder is the voice of the god speaking; but speaking can easily be turned, if the god is thought of as in a joyous mood, into singing. In fact one Čuvaš expression for thundering is *Asl' adi avdat* 'the great father (or old man) is singing'; more common, however, are such phrases as 'the cock is crowing,' 'the cuckoo on the top of a golden post is cuckooing.'¹ The Creator's golden wattled cock mentioned in the Magic Songs (124) is perhaps a recollection of the old thunder-

¹ Zolotnitski, pp. 199, 200.

bird. We have already seen that he and Ilmarinen gave fire to mankind, which seems to connect him with the sky-god. As the diviner as 'old as time' he is besought to utter incantations on behalf of an exorcist and to bring an iron-coloured dog to eat up the spells of sorcerers. Or he is to send some of the old folk that have long been dead and buried, to support and assist the exorcist. And he is to bring the fiery-edged sword of the air with which the supplicant will chase away corpses and frighten Hiisi's people (176 s). Here Väinämöinen is almost identified with the thunder-god, for the fiery-edged sword of the air in this passage can only mean a thunderbolt. In the next example he receives the same title of *ukko*, 'the old man.' As the old man, the diviner as old as time, Väinämöinen is begged to bring a scythe from Esthonia, a reaping-hook from hell with which the exorcist can facilitate a child-birth (166 f). We have seen above, that Ukko is desired to perform a similar function with his golden axe or his golden club. In the next example he appears rather as a god or spirit of vegetation or of trees, though he retains the stereotyped epithet of the 'diviner as old as time.' He is said in a variant to have put six or seven seeds into a martin-skin bag and then gone to sow the earth with trees (212 a). In one riddle he figures rather as the sun. 'Once upon a time Väinämöinen's milk-bowl upset upon a rock, its contents can never be picked up? Ans. Sunshine.'¹ On the other hand, in popular language the streamers that form on the sea after a storm are called 'the tracks of Väinämöinen's boat,' or 'the path of Väinämöinen,' as though he were regarded as a storm-god. In various parts of the parish of Sordavala there are sandy heaths where the surface

¹ *Arvoituksia*, No. 2006.

presents huge natural ridges and furrows, like the waves of the sea. These are termed the 'ploughing of the Väinämöinens,' the word being used in the plural. In this part of the country Väinämöinens, giants, Hiisis and Lapps all mean the same supernatural beings.¹ His name, too, is borne by two celestial bodies. Orion's belt is his scythe; the Pleiades are his bast-shoe. When he and his wife set to work to sweep the sea, to mop the waves with a broom (185 *b*), a figure of speech is used which seems to refer to a storm sweeping over it.

He was clearly regarded as a god of the healing art, which was mainly exercised by reciting incantations, but not always. He was therefore the special friend of the wizard or exorcist summoned to eject the evil spirits that cause disease. Accordingly his strength and assistance are very justifiably invoked by exorcists when they are about to set to work (2 *b*, 3 *a*). He is implored to help a well-beloved son (*i.e.* the exorcist) to be the comrade of a famous man, when the latter is about to divine a 'deep origin' or to battle with disease (157 *a*). A fisherman invokes Ahti, the god of the sea, to send a swarm of fish to listen to the music of Väinämöinen (120 *a*), which evidently means the charms and incantations sung by the fisherman himself, but attributed to the immortal singer. There is much virtue in what belongs to him. The Virgin Mary is requested to take Väinämöinen's belt and his yellow cloak with which to bind up a cut vein (177 *b*). A bee is told to fly to old Väinämöinen's residence and snatch from his belt a honeyed wing with which to stroke a sick man (181 *j*). An exorcist in raising steam to make a vapour bath, salutes the steam as 'Väinämöinen's sweat' (87 *c*), a figure of speech which

¹ Killinen, p. 88.

implies that it possessed highly remedial qualities. Kivutar (sickness and pain personified as a woman) is invoked to take a plume from the Creator's mouth or a feather from Väinämöinen's belt with which to sweep away pains and sores (128 *c*). A soldier bound for the wars prays for old Väinämöinen's cloak, for the mantle of the distant Lapp (99), an expression which only means a wizard in this instance. In the last five examples we note that cures or protection from danger were anticipated from the use of external means independent of Väinämöinen's power of magic song. In the next three instances he himself is expected to heal and protect from harm by purely physical agencies. Reliable old Väinämöinen, the diviner as old as time, is invited to raise his paddle [*v.* sword] from the sea and destroy the abscesses and scabs on a human body (146 *d*); or to clip wool from a stone, hair from a rock and make of it a shirt of war in which a soldier can fight in safety (162 *e*); or to take a bath-switch and a honied wing from his belt with which to sweep away to the land of Lapps the fearful pains of a sufferer (157 *b*). But it is purely as a magician that the reliable old diviner makes a boat from the fragments of an oak by singing a series of magic songs, one for each part of the boat (229). In another passage the outside chip of a gigantic oak, when struck with an axe, flew into the sea to serve as a boat for Väinämöinen, the singer, without further ado on his part (211 *b*).

He is also known as Väinö, and his daughter is coupled with Kivutar, the Pain-maiden, (10 *c*) because both were helpful in removing all sorts of pains and diseases. A soldier begs Väinö's girl, who wears golden ornaments on her temples, a copper petticoat, and a silver belt, to dash

water on the pan of a touch-hole to prevent his enemy's gun going off (162 *f*). Their home is Väinölä, which is collocated with Pohjola, Ulappala, Lapland or Turja (17 *x*, 26 *b*, 149 *d*, 154 *e*, 198 *a*), for the far north was pre-eminently the land of wizards, sorcerers, and magic. But it is as a warrior and the old son of Kaleva, not as a singer relying on the force of magic songs, that Väinämöinen sharpens his spears and arrows before going into battle (205 *f*) or when he tests his sword by striking it against an iron hill (202 *b*).

TAPIO AND THE DIVINITIES OF THE FOREST.

One of the most popular of Finnish gods was certainly Tapio. The hunter depended on him for game; not so much for consumption as for their valuable furs which could be sold or bartered. The sheep and cattle, of which every family had a few, were pastured in the forest and their welfare and safety from wild beasts was therefore largely contingent on the goodwill of the forest divinities. The chief of these was Tapio, the golden king of the forest with a mossy beard and who wears a hat of fir twigs; though also known as old Ukko with the rumpled beard, the feather-hatted lord of the woods. Sometimes he was simply called 'the Forest' (139 *a*, *c*) or Kuippana 'the long-necked,'¹ Kuitua, Kuittola, Nikki Näkki, or Hitsi Hätsi. The wild animals that belong to him are figuratively spoken of as his flocks and herds, his ewes and rams, or 'drooping

¹ So it is explained in Renvall's Dict. who adds that it is the same as Kuikkana. It seems to mean something long and hollow for there is a riddle: 'Kuippana on the stove-bench? Ans. A dough-trough or tub,' *Arvoituksia*, No. 544.

ears'; as his 'gold and silver,' and even as his 'sheaves of flax.' But in a riddle 'Tapio's bull' is a 'fir-tree.'¹

His wife has several appellations which depend partly on her frame of mind as it seemed to a suppliant hunter when invoking her. When kindly disposed she was Mielikki (the amiable) and was pictured as wearing rings and bracelets of gold; when unkind and deaf to his prayers she was Kuurikki (the deaf), was black and terrible in appearance, being horribly dressed in rags while the rings and bangles on her arms were mere withes (89*f*). The name of Hiiletär (the charcoal wife) may have been assigned her for a similar reason as the last, though perhaps it was given her by charcoal-burners as she is not connected with wild animals in the one passage where she is mentioned (52*d*). Hongas or Hongatar 'Fir's daughter' was a natural name for the wife of the king of the forest, who himself seems to be described as a 'hollow fir' with a fir-twig hat (139*k*). This hollowness is also a feature in Teutonic folklore. In Sweden, Denmark, and Stiermark, the Forest-wife (Skogs-nufva) or Elf-girl (Ellepige) or 'Wild-frau' is pictured in the popular imagination as being hollow behind like a hollow tree-stem or a dough-trough.² As Simanter she wears a tin sheath and a silver belt; the word perhaps is another form of Simatar (virgin honey wife), an epithet that would be given to show her sweet disposition. Mimerkki is dressed in the same way and was also of a conciliatory nature. When out of spirits and dejected she may have acquired the name of Nyrkitär. As directress of the droves (*juoni*) of forest cattle, the mistress of the forest receives the appellation of Juonetar.

¹ *Arvoituksia*, No. 1745.

² Mannhardt, (1) pp. 120-126; Hyltén-Cavallius, vol. i. p. 19.

As ermines, stoats, and other furry animals frequent stony places, it was natural enough to call the chief in charge of the 'money' by the name of their favourite haunts, Raunikko (full of stone heaps) (153 *b*). As Elina, she is invoked by a snarer of hares (118 *a*). And another name for her is Kuuritar.

Tapio does not seem to have had many sons, as only three are mentioned. Nyypetti is asked to act as herding-boy to a herd of cattle on the summer pasturage (123 *f*). Nyyrikki, so called, perhaps, from being slow in his movements, is pictured as wearing a blue cloak and a tall red hat, and on one occasion as having a white beard. Pinneys is desired not to hold back the wild animals from a hunter in search of them (139 *r*); for his name seems to imply that he was likely to keep a firm grip (*pinne*) on the paternal property.

Tapio's daughters are more numerous. Tellervo tinkles in a gold and silver dress. Lumikki is so called because in charge of snow-white animals, such as the ermine, and she is besought to let them wander towards the trap of a hunter (118 *b*). Ristikko seems to receive her name from animals with a white cross (*risti*) on their breast which were under her special care. 'Flax-stalk' (*päistär*), as a figurative name for a long-backed and small furry animal like the ermine or the weasel, is the basis of the name Päistärys. She is requested to strew her 'flax-stalks' and 'cloaks' about, and let them run without suspicion into a petitioner's trap (153 *c*). Vitsäri (the whipper) is the lively woman who drives out game from Tapio's Hill. Tuulikki, the famous beauty of the woods, must have been compared in some sort of way with the wind (*tuuli*). Annikki is a diminutive of the christian name Anni, 'Anne,' but it may

have been selected from suggesting the idea of a gift (*anti*) giver. Two other daughters were Tapiotar and Tyytikki. The tiny lassie Pihlajatar (Rowan), the lovely Katajatar (Juniper), and the short Tuometar (Birdcherry) are three tree-spirits, but also daughters of Tapio, whose office sometimes is to herd cattle.

The daughters-in-law of the forest are Mikitar—the daughter of *Mikki* (Michael), a word also used as an epithet for the fox—and Varvutar (Twig's daughter), who give game to the hunter (118 *c*). Miiritär, whose name seems to mean that she was a very small creature, is asked by a hunter to get up a tree and listen to his songs and tell him if they are suitable (139 *d*). Huijutar and Siilikki, from *siili*, 'a hedgehog,' take charge of the wasps that haunt the woods (113). Two other forest-spirits, who are not directly connected with Tapio, should be mentioned here. The chosen Kunnotar, or the golden Kärehetär is asked to leave off melting gold or silver as a trapper has already put some into her bowl (173 *a*). According to Ganander (p. 36), Käreitär was the patroness of foxes who brought them to the hunter's traps.

Tapio's abode is Tapiola or Metsola (Forest-home) or Havulinna (Brushwood Castle) or the famous village of the woods (17 *l*, 89 *a*). It was sometimes imagined that in the forest there were three forts or castles of wood, bone, and stone. In the first lived the forest lassies, in the second the mistresses and the master of the forest in the fort of stone (89 *f*). A mere prayer was not always enough to propitiate Tapio and his numerous family; he needed an offering. Accordingly a trapper asks them to take a fancy to his groats and salt, and in return to send quantities of animals into his traps (153 *b*). Kuippana,

the king of the forest, the brisk man of the woods, with a beard of tree-moss, or the liberal mistress of the forest, is desired to accept the hunter's tribute of salt and groats and send game into his traps (153 *a*). A hunter beseeches the grey-bearded old man of the forest and his wife, Mimerkki, to make an exchange of gold. The hunter's is Swedish gold obtained by fighting in the wars, while Tapio's, as we have seen, consists in his wild animals with precious furs (173 *b, c*).

The bear, as a forest animal, was naturally enough nursed by Hongatar and rocked by Tuometar at the foot of a stunted fir (193 *b*). And the woodland sprites, Mielikki, Annikki, and Tellervo, are requested by a bear-hunter to muzzle their 'dogs' (*i.e.* bears) till he can approach them (121). In order to obtain the game he covets, the hunter is ready to adopt any device. He is willing to go as Tapio's man-servant, or even as the boy who picks up the arrows, if Tapio will only be propitious (139 *a*). Or he asks the forest to marry his (the hunter's) men to the pleasant daughters of the woods, to the downy-breasted little chicks (139 *c*). If Tapio happens to be asleep he desires Annikki of the fair complexion, who wears a down-like shirt, to awake the king of the forest, or to wake up the forest-mistress by playing a tune in her ear (139 *n*). On one occasion he invites the forest to play the zither (*kantele*), so that the wild animals shall lend an ear and be attracted towards himself (139 *b*). He invokes the chief man of the knoll with a golden breast and who wears a hat of twigs, Mielikki, Tellervo, and Nyyrikki with the tall red cap, to show him the direction he ought to take by setting up posts and landmarks (139 *e*). He implor-
old Ukko with the rumpled beard, the 'hollow fir' wi-

a fir-twig hat, to beat the wilderness and make the trees resound with thuds in order to drive out the game for him (139 *k*). Or Tuulikki, the delightful forest-girl, is invited to chase out the animals from the slopes of the Forest Fort, and to make a fence with her hands on each side of them to keep them on the right track. If obstacles intervene she is to remove them (139 *o*). He beseeches the famous beauty Tuulikki, Pihlajatar, short Tuometar, and kindly Hongatar to chase wild animals in front of him, and if none are near to fetch them from Lapland (139 *p*). He desires the forest-youth with a golden hat and the forest-mistress Juonetar to send the best of their flock to his trapping places (139 *t*). If the animals are sluggish he implores the lively Vitsäri and Tellervo to take from Tapio's Hill a whip of rowan, or a cattle-scourge of juniper, with which to drive out the game (139 *q*). Lastly, he prays Mielikki to send plenty of animals so near him that he can knock them over with a stick, or seize them with his hands. If that is out of the question she is to support his bow or steady his gun, and thus enable him to shoot a squirrel and pay his tax (144 *b*).

The wild animals are represented as being kept in a magazine or storehouse. So Mielikki, the famous 'golden buckle of the woods,' is invoked to take the golden key at her side, to open Tapio's storehouse, and let the 'silver'

1 'gold' escape towards a hunter dressed in white (139 *f*).

2 Mielikki, the mother with the lovely face, is asked to open the honeyed chest and let loose a file of animals in front of a hunter. Should she be disinclined to do this

3 herself, she is to send one of her servants (139 *g*). The queen of the forest, Kuuritar, is requested to open her honey magazine and let out the animals for a hunter to

catch in his traps (139 *h*). Annikki, the girl with honeyed mouth, is asked to open the storehouse door and throw out the hunter's share on the bough of a tree. Then she is to spin a thread along which an arrow can travel straight to the brow of a little squirrel (144 *a*). The forest mistress, Simanter, is begged to make a din in the copper hills, and to let the mountain storehouse be opened for the 'mountain cattle' to run out and enter the hunter's traps (151 *c*). Annikki, who keeps the keys, and Eva, the little serving-maid, are desired to open the magazine and let out the animals (139 *n*). In one instance, Tapio is humorously represented as carrying the game about with him on his own person. The good and splendid old man, the golden forest king, is implored to take his best and fattest 'ewes and rams' from out of his shirt or his waistcoat, and to poke his 'sheaves of flax' into the traps of the supplicating hunter (151 *b*).

In a lesser degree Tapio, as lord of wild beasts, or one of his people, was implored to watch over flocks and herds grazing in the woods, and protect them from the attacks of bears. Thus Mielikki and Tuonetar are requested to anoint a bear's paws with wort and its teeth with honey that it may not hurt the cattle (122 *b*). The king of the forest, Kuitua, and the benevolent Hongas are solicited to restrain their 'dog' (*i.e.* a bear) from injuring the herds (122 *b*, 123 *c*). The forest king, Kuippana, is supplicated to control his 'bastard son' (*i.e.* a bear), and to stick a mushroom up its nose to prevent its getting scent of the pasturing kine (122 *c*). The good mistress, Hongatar, and the observant Tapiotar are urged to keep a bear in check and prevent it doing harm (122 *d*). The forest Nikki [v. Hitsi Hätsi], the golden king of the woods, and

the kindly mistress are invoked to take care of the herds grazing in the forest (123 *g*). In the capacity of herd-girls the tiny lassie Pihlajatar and the lovely Katajatar are desired to cut a branch from the back of Tapio's Hill, and with it drive the cattle from the woods back to their own home (123 *l*).

Although evil might come from Metsola (17 *l*), its usual epithet is the delightful Metsola, and it was full of honey. A bee is asked to fetch honey from Metsola, luscious stuff from Tapiola from which an ointment may be made (181 *f*). And Vuotar, the maker of salves, concocted them a whole summer in Metsola, for delightful honey is there from which she made the unguents (232 *f*).

HIISI.

Originally Hiisi was a spirit of the forest that dwelt in wooded hills. In the middle of the sixteenth century Bishop Agricola describes him as a Karelian god 'who allowed profit to be made out of the beasts of the forest.' But the Bishop also used the word in the plural (*hijet*) to translate 'high places' in the passage: 'And the *high places* of Isaac shall be desolate' (Amos vii. 9); and 'groves' in the passage: 'I will cut off the *groves* out of the midst of thee' (Micah v. 14). When the Bishop wrote, the word was therefore applicable to a 'sacred grove' where sacrifices were made. The corresponding word in Esthonian, *hiz'*, is also used in the sense of a sacred grove or thicket, which is usually on elevated ground. In several passages in the Magic Songs, Hiisi is found as a parallel word to 'hill, mountain,' showing that the two words are in a certain measure synonymous (9 *b*, 14 *i*, 65, 187).

He is often represented as dwelling in or being connected with a hill. Thus a treasure-seeker invokes a kinsman of Hiisi, the ruler (*haltia*) of the mountain, to show him where to go (111). A best-man boasts that he has wooed the girls of Hiisi's fort, the cousins of Rakko Vuori (65). And the origin of the horse is said to be from Hiisi, that of the splendid foal from the mountain (187). The recollection that Hiisi was a forest divinity is retained in the following examples. Hiisi's little boy, that rides a good two-year-old, is told to take a golden spur from a golden chest, and with it to tickle and prick the flanks of wild animals to make them run in the direction of the hunter (139 *a*). In order to quicken the pace of the sluggish animals of the forest another hunter desires that Hiisi's hottest coals may be placed under their hind feet (151 *c*). And to the hare is given the nickname of 'the bandy-legged of Hiisi' (67 *b*).

That Hiisi in the popular mind was intimately associated with trees and forest is shewn by various riddles in which 'Hiisi's elk' or his 'elk with one hundred horns' is a 'pine tree,' and 'Hiisi's land' is the 'forest.' And though in three others 'the neighing of Hiisi's horse in Hiisi's land' stands for 'thunder,'¹ we must not connect him in any way with the thunder-god. The noise made by wind rushing through trees, thought of as horses, had sufficient resemblance to the whinnying of a horse and to thunder, to invite a concocter of conundrums to regard them as identical. So too Hiisi's elk, horse, and ox, mentioned in the Magic Songs, seem to have been originally playful names for a large coniferous tree, though the terms were sometimes employed with only a faint or more usually complete want of perception of their proper signification.

¹ *Arvoituksia*, No. 176, 257, 1586; 129-131.

The original animal assigned to Hiisi must have been the elk, reindeer, or ox; the horse is manifestly a later substitution. For instance, Hiisi's ox, that ascends the Hill of Pain, has one hundred horns on his forehead and one thousand nipples on its breast, each full of ointments (109 *i*); here the branches and multitudinous small projections on a resinous pine-tree seem to form the basis of the imagery. Hiisi's chestnut horse with a fire [coloured] forelock and an iron [coloured] mane is so tall that it must be bridled from the top of a house and saddled standing on a fence. On its croup is a lake from which sorcerers drink, and it does not sweat (9 *b*) or slip on the ice-like path of the air (9 *a*, 65). Several points in this description appear to be reminiscences of a dendrous prototype; the chestnut or reddish brown colour, the extraordinary height and the quality of not sweating, while the lake on the croup suggests the idea that the tree was partly hollow like Tapio. A pond of water on the croup is, however, characteristic of other horses (14 *h*, 52 *d*) besides Hiisi's, and in modern songs has become a commonplace epithet for a wonderful horse. Again, in Hiitola there is an ox [*v.* elk] with one hundred horns, with a mouth one hundred fathoms wide, and a throat like three cataracts that can extract the arrows of a sorcerer (37 *c*). Here the mouth and awful throat are amplifications of the singing exorcist, while the meaning of an elk with one hundred horns is found in the riddles. In the next example the imagination of the singer has carried him so far that only in describing the back does he remain faithful to the prototype. The head of Hiisi's horse is said to be of stone, its shanks of copper, its back of tarry wood, its feet of iron, and its muzzle of fire (9 *a*). In a

still later example, as I suppose, Hiisi's elk or reindeer is invoked to drive away the snakes and adders that drink the ale of the mistress of the house (91), where nothing is remembered but the fact that he owns such animals.

In course of time Hiisi acquired a very bad character, and in modern times he is more or less synonymous with the devil. The date of this change is to be placed, I imagine, in the twelfth and thirteenth centuries, when Christianity began to spread. That the missionaries fixed upon him specially is an indication that he was held in great estimation by the heathen Finns, and that his worship in the sacred groves was a special thorn in the sides of the preachers of the new religion. Sacrifices to Hiisi would be placed under a ban, and the native converts would gradually come to think of him as a very evil spirit, hardly distinguishable from the devil himself. In the Magic Songs he is sometimes called the humpback from the home of gods (1 *c*, 128 *h*, 166 *g*). The spirit of disease, or sickness of any kind, is addressed as 'Hiisi!' (5 *b*, 8 *b*, 22, 56) or as 'hound of Hiisi!' (8 *d*). A tumour is his toadstool; a snake is Hiisi's scourge or Piru's whip; a spell-sent injury is his cancerous sore (154 *b*); toothache is his son or his cat (114 *a*, *c*); a sty in the eye is Hiisi's blemish (46 *a*); and rash owes its origin to a water-Hiisi (206 *b*). As a bird of ill-omen the body, legs and guts of the raven are made of Hiisi's glove, spinning-staff, and belt appendages (200 *b*). The snake originated from his saliva (203 *a*); or he gave life to the spittle of Syöjätär and made it into a black snake (203 *c*). The tremulous aspen is his harlot son (212 *i*). And nightmares are termed 'Hiisi's corpses.'

As diseases and maladies were often thought of as the

bolts, spears, arrows, or jagged spikes of a sorcerer or of some evil spirit like Hiisi, Lempo and Piru, this armoury of weapons had to be forged somewhere. Accordingly, Hiisi's home, Hiitola, is provided with a smithy where such instruments are manufactured. There Piru, Äijö's son, forges bolts and jagged spikes to launch into some wretched man's body, and even there an exorcist can give an order for pincers for extracting them again (37 *a*). In a charm against pleurisy it is related that Hiisi's little girl saw the chips of a huge oak floating on the sea and carried them home. In reply to her brothers' question she says that sorcerer's arrows might be made of them. Hiisi overheard this, and sent his son to the smithy to make them into spears and arrows (211 *b*). In a variant Hiisi's iron-toothed dog sees an oak-chip floating on the water, snaps it up and brings it to Hiisi's daughter who thought that arrows for a sorcerer might be made of it if taken to a smith (211 *a*). Once when the people of Hiitola celebrated a wedding and held a drinking-bout, they killed a horse and sprinkled the blood at the back of the forge of Hiitola (210 *c*). The idea of a smithy of course suggested coals and soot. So a man wishing to ward off a jealous eye expresses a hope that it may be filled with Hiisi's slag and soot or flow like butter into Hiisi's bin of coals (3 *b*). From his coals and fire comes the whooping-cough (23). An exorcist consigns the toothache into Hiisi's coals, into the fire of the evil power (114 *b*). A jealous person adjures Hiisi to poke his pole for stirring coals between two lovers in order to separate them (134). And a hunter desires that Hiisi's hottest coals may be put under the hind feet of reluctant wild animals to hasten their movement towards himself (151 *c*).

This association of Hiisi with fire and coals made the transition easy to identify Hiitola with Hell and Hiisi with Piru and the Evil Power. And in the following examples it is rather as an infernal power, perhaps in despair of other assistance, that he is invoked as a helper, just as the devil was invoked by witches and sorcerers in other parts of Europe in the Middle Ages. The old man and old wife of Hiisi, the fiery-bearded of Hell, is requested to bring people from the hill to hold down a horse about to be castrated (158 *a*). An exorcist invokes the aid of the terrific heroes of Hiitola, the tall men of Pirula, to extract 'arrows' (37 *c*). Fiery Hiisi is desired to come from fiery Hell with his three sons and two daughters and to press his shaggy glove against a torn vein; failing that he is to tear a collop from his fleshy thigh to plug the hole with (177 *k*). Hiisi, the Pirulainen (devil's son), is asked to remove his 'sting' or 'goad' from a human skin and plunge it instead into the hard bones of a bear (149 *g*). As the humpback he is invited to come from Hiitola, from the home of gods with his sons and servant girls to destroy an evil. He is to bring a scythe from Hell and give it to an exorcist who will then cut out the evil that causes the sick man pain (128 *h*). Again the humpbacked of Hiitola is asked to come in a golden sleigh in which is a golden axe and with it to remove obstructions and facilitate a child-birth (166 *g*). A man wishes that the bloody cloak of Hiitola, that Hiisi's gory rug, needing five men to lift, may be bound across the eyes of an envious person (3 *d*). Hiisi or Lempo is requested by a soothsayer to lend his linen cap, his broad-brimmed hat, into which to throw the alder slips used for divining (59 *c*). Hiisi is invoked to close a dog's mouth with his tall hat, or Lempo is to do so with his broad-

brimmed hat (126 *c*). A man wishing to pass a dog unobserved desires that the bloody cloak of Hiitola or Lempo's gory rug may envelop its head and ears so that it shall neither see nor hear (72 *a*). A man hoping to render an enemy's gun useless desires that the hide of an elk from Hiisi's land may take possession of the gun, may twist the touch-hole pan, and smash the 'egg,' *i.e.* the bullet, so that it shall do him no harm (150). Probably to account for something bad in the nature of copper, its origin is derived from Hilahatar, Hiisi's girl, Hiisi's old wife, or Hiisi's mare having staled on a rock. The stale dried up and became copper ore (227 *b*).

His daughter Hippa, and his cat Kipinatar, are requested to tear and torture a thief till he restores the stolen property (174). His maiden Hiki-tyttö is implored by an operator to sharpen a knife with sweat (*hiki*), so that he may excise a tumour without hurt to the patient (135). But his girl Hiki-tukka (sweaty hair) steals milk, and takes it to Mana or to Tuonela (88 *a*).

Though originally Hiisi had nothing to do with water, an evil water-spirit could be called a water-Hiisi. As we have seen before, a water-Hiisi was the cause of rash (206 *b*). An exorcist asks whether a certain malady has come from the homes of Nixies (*lumme-koira*, 'dog with ears like a water-lily leaf'), from the dens of water-Hiisis (5 *b*). And the daughter of Tuoni (Death), when in the pangs of labour, rushes into the sea, into the den of a water-Hiisi (216 *b*).

It is not quite certain whether the word Hiisi can be identified formally with the Lapp *Sieite*, *Seita* (p. 163). Whether they have the same origin or not, they have several points in common. The position of the *seita* was

often on high ground like Hiisi's Hill, and consisted of a tree-stump, post, or small pile of stones, which in a treeless district might be taken to represent the stump of a tree. The fresh twigs and leaves spread under them, and renewed annually, might also be taken to mean the *seita* was originally a tree-spirit. The same may be said of the birch or fir twigs, changed every spring, that sometimes represent the Votiak *voršud*; and of the fagot of twigs, also replaced by a new fagot once a year, in which the *kuda vodiž* or house-spirit of the Čeremis had his habitation. Before becoming a forest-spirit, Hiisi no doubt was a tree-spirit. Judging from the Lappish, Čeremisian, and Votiak analogies, it is probable that at one time he was a very favourite divinity of the protohistoric West Finns, and in some measure a family or clan god, like the Seitas and the Stor Junkares of the Lapps, who give liberally of the wild animals of the boundless forests, or, as they expressed it in later days, of his 'forest gold and silver.'

LEMPPO.

Though there is no direct trace of it in the Magic Songs, Lempo seems to have been originally a forest-spirit of a malignant kind. For among the Vepsas living between Lakes Ladoga and Onega the Lempos are still regarded as evil spirits of the forest, in stature as tall as trees, who do their best to lead travellers astray. As the Vepsish form of the word, *lemboi*, means not only 'devil' but also 'fire, flame,'¹ it is possible that Lempo was at one time a personification of an *ignis fatuus*, or Will o' the Wisp, a phenomenon that in Finnish is generally termed *virva*,

¹ Ujfalvy, pp. 81, 115.

virva-tuli. In many respects he is synonymous, or nearly so, with Hiisi, Piru, and Evil in general. Disease is addressed as 'Lempo' (5 *c*); a tumour is Lempo's lump (28 *b*, 129 *a*), or his whorl, his ball (201); a hornet is his cat or Hiisi's bird (214 *a*); stitch and pleurisy are termed the arrows of Piru, the leaf-headed spears of Lempo (37 *b*), or it is his arrow, his bloody knife (149 *b*); toothache is Lempo's dog or Hiisi's cat (114 *a*). Piru made arrows, Lempo leaf-headed spears from the boughs of a fiery oak, from the splinters of an evil tree, and then shot them into a human body (211 *c*). Lempo, Piru the limping fellow, is asked to extract his arrows, made perhaps from an evil oak, and shoot them down the throat of a raven, which will carry them to Lempo's family and place of birth, never to be seen again (149 *f*). For the raven is also Lempo's bird, and its breast-bone, tail and guts were made of his spinning-wheel, sail, and needle-case (200 *a*). If a knife slips in the hand of an operator, it is the work of Lempo, though he is made to suffer for it by being cut in two with a knife made by himself even though sitting at the time on his mother's knee (31, 55 *a*, *b*). Homma, the most brisk of kings, is invoked to take a piece of flesh from Lempo's thigh, from the groin of the evil spirit, and with it plug a severed vein (177 *j*).

WATER-SPIRITS—AHTI, VELLAMO, ETC.

Living so much as they did either on the sea or near large lakes the Finns had often occasion to invoke the aid of the chief water-spirit, Ahti, or of his wife Vellamo. Thus a man travelling by water implores Ahti and Vellamo to tranquillise the waves and the force of the water (107 *b*).

When descending dangerous rapids a boatman prays the golden king of the water, the gracious Ahti of the waves, to come and steer with his sword, so that the boat may keep clear of rocks (127 *b*). Litvetti or Livetti, the king of the waters beneath the stream, is invoked to make the rocks that lie in the rapids as soft as moss (127 *a*). If, when journeying by water, the oars are too short, the rowers feeble, and the coxswain is as helpless as a babe, Ahti is besought to give better oars. And if the waves run too high, he and his sons are to still them (178 *a*). The old woman below the waves, that lives near foam, is asked to ascend to the surface to collect the foam and take charge of the foam-capped waves in front of a sailing boat (178 *c*). But danger at sea, or on a lake or river, did not arise solely from storms and rapids; peril was to be anticipated from spells and witchcraft. Hence a man beseeches Ahti, the master of the water, to give him his oars and a boat before the petitioner ventures to cruise over waters inhabited by witches, and also to allow the boat to glide smoothly along (178 *b*). Melatar (Oar-wife), the gracious woman, is asked for her steering oar (*mela*) to steer with, while passing along spell-bound streams (127 *a*).

Help in other ways was also to be obtained from water-spirits. An exorcist implores the blue-capped mistress of the waters to rise from the waves to strengthen and support a weak, unsupported man. She is to raise men from the sea and land-locked lakes, bowmen from streams, and swordsmen from wells, to help the petitioner against his enemies (176 *g*). Another exorcist invokes the men of the sea, the heroes of inland lakes, the 'scaly cloaks' from the gravel, the 'sandy shirts' from the pool, who are as tall as pillars of cloud or as huge forest firs, and a thousand

armed men to follow him and overthrow his enemies (176 *u*).

As lord of the waters Ahti and his wife ruled over the fish, and were therefore invoked by fishermen. Thus foam-mantled Ahti of the sea, the reedy-bearded old man, is requested to put on his gift-giving clothes and draw a crowd of fish to listen to Väinämöinen's music (120 *a*), by which we have to understand the magic songs of the fisherman. Another man desires Ahti, the master of the waves, the ruler of a hundred caves, to send fish into his net (120 *b*). Or a fisherman implores the damp-bearded, golden king of the water, who wears a slouching hat, to come and fish with him as a sure means of getting plenty (120 *d*). The old wife of the sea with a reedy breast is besought to send perch to tug the lines set by the petitioner (120 *e*). Another fisherman asks the assistance of Vellamo, who has a reedy breast and wears a shirt of reeds, and he will give her in return a beautiful linen shirt spun by the daughters of the Moon and Sun (120 *c*). Lastly, the beautiful old wife Juolehetar, the benevolent mistress of the water, is implored to send shoals of fish in the direction of the fisherman's nets (120 *f*).

On one occasion it is related that when Sharp Frost tried to freeze the sea, the warship of Ahti remained unaffected. It then tried to freeze the god, who however knew a trick or two, for he shore moss and fluff from a stone, made it into socks and mitts, and so was able to hold Sharp Frost and prevent his getting away (93 *b*).

EARTH SPIRITS, SÄMPSÄ PELLERVAINEN.

The earth spirits were not very prominent personalities in the mythology of the Finns and are not often invoked.

When this happens it is sometimes to obtain the assistance of the dead, who had been buried in the earth, but whose spirits still continue to live. So Earth's daughter, the girl of dry land (*manue*), is asked to listen to the golden words of an exorcist and to raise from the earth 100 men without swords and 1000 men with swords to help him against wizards and sorcerers (176 *h*). The old crone beneath the earth (*manner*), the boy of the lowest depths of the earth, is invoked to extract the arrows of a sorcerer with her fingers or her back teeth. If that is of no avail she is to raise her men from the earth, her heroes from the hard dry land (*mantu*), (149 *c*). The old man of the earth is invited to rise from out the earth, the son of the field from out the headrig, or from the side of a church with 100 planks, to help a man to work, to make a fence, or to row over the water (176 *i*). A wayfarer implores the old wife of dry land (*mantu*) and the primeval master (*peri-isäntä*) to rise from the earth to aid a well-beloved son and to be his comrade while travelling (138). Before lying down to sleep a man salutes the earth, the dry land (*manner*), and the master of the dry land (137).

As the earth also causes trees, herbage and seed to grow, we find it stated that grass is made to sprout by Peler-moinen, to grow from the earth by the soil, *mantu* (45 *b*). A tree is the creation of God, a shoot made to sprout by earth's daughter, Maatar (87 *c*). A sower beseeches the old wife below the ground (*manner*), the earth's mistress, the old wife of the soil (*mantu*) to cause herbage to grow; for the earth never fails if the food-mothers (*einetten emät*) so desire (130 *c*). Skin eruptions (*maahinen*) were popularly supposed to result from the anger of an insulted earth-elf (*maahinen*), who revenged himself by sending a

rash on his insulter. An exorcist declares that a rash is from the earth by birth and arises from the anger of the earth or of water. Its legs are even shorter than those of a worm or snake. If it has come from the earth, fire or water, it is to return there (206 *a*). Again, a rash (*maahinen*) took its origin from a water-Hiisi, who was rowing in a boat, reached the land like a strawberry, *i.e.* unobtrusively, bashfully, and fell down like a lump of wheaten dough, *i.e.* helplessly and clumsily (206 *b*).

The earth's mistress, Manuhutar, is said to have made a dog's head from a grassy knoll, its legs from stakes, its nose of wind, etc. (198 *b*).

Among the earth-spirits must be included, as a later development after the introduction of agriculture, Peller-voinen or Pellermoinen—a diminutive of *pelto* 'a ploughed field,' who is solely associated with the growth of vegetation. Thus grass is made to grow from the earth by Mantu (the soil), and to sprout or become bushy by Pellermoinen (45 *b*). The Fir, the useless boy, was brought forth by Syöjätär, was formed from the earth by Maa-jatar, was made bushy by Pellervoinen and nailed down, *i.e.* fast rooted, by Naservoinen or Natulainen (212 *g*). Bent-grass is said to have sprung from a pearl that fell from the Lord, from the hand of Jesus on the unploughed edge of Peller-voinen, on the edge of Osmo's field (220).

In the remaining examples he appears rather as a spirit of vegetation who performs his functions by sowing the ground. Thus Pellervoinen, the boy or son of the field, Sampsa the tiny little boy, sowed swamps and firm land and succeeded in getting other trees to grow, but not the oak. At last, after the lapse of a week it struck root, was drawn upwards by Jesus and made to grow by the soil

(224 *e*). Again, Sampsa, the boy Pellervoinen, put six or seven grains or seeds into a martin-skin bag and went to sow the land. He sowed firm land, swamps, sandy clearings run to waste, and stony places. All sorts of different trees grew up, each adapted to the soil on which it was sown (212 *a*). The same is told in different words of Semmer, the limping or stooping boy—an epithet that probably has reference to the action of sowing—who is evidently Sampsa or Pellervoinen under a different name (212 *b*).

In an interesting song, collected in Ingria by the late Mr. V. Porkka, Sämssä Pellervoinen appears very clearly as the spirit of vegetation that sleeps all winter, but is awoke in summer by the genial warmth. I give it here in a slightly curtailed form:—

‘Why do our oats and rye not grow at all in the clearings and in the vales, on the hillock of Sämssä, on the hill of Pellervo?’

‘Sämssä is asleep in bed with seven crosses on his back with ten finger rings at his side. His shins are visible in the bed, his red stockings in the straw.

‘There is no one to awake Sämssä, to cause Pellervo to rise.

‘The manly Winter-lad jumped up to awake Sämssä, to cause Pellervo to rise.

‘He took a horse of the Wind, a young horse of Ahava and began to drive with the Wind, to dash forwards with Ahava.

‘He drove up to Sämssä’s bed: “Get up, Sämssä, from your bed to excite the rye, to hurry the growing corn.”

‘Sämssä forthwith replied: “I shan’t get up for you. I shall get up for another man. You did wrong to come,

did worse when you returned. You blew the leaves off the trees, the catkins off the grass, and blood from the maidens."

'Who summoned Sämepsä to appear, who cause Pellervo to rise?

'The manly Summer-lad jumped up, etc.

'He took a horse, etc.

'He drove up, etc.

'Sämepsä forthwith replied: "I shall get up for you, but not for another man. You did well to come, better when you went away. You blew leaves upon the trees, catkins upon the grass, and blood into the maidens."'¹

LUONTO (NATURE)—LUONNOTAR.

The word for nature (*luonto*), like *luoja* 'Creator,' is a derivative of *luo* 'to make a beginning,' 'to throw up or off,' 'to create.' And by 'nature' we have to understand, not external nature, but, the force behind it, a female personification of the energy of nature. An abstract idea of this kind is far from original and no great age can be assigned to the passages in which *luonto* or *Luonnotar* 'the daughter of nature' occur. As personifications of a creative energy the birch-tree is said to have been created by three Luonnotars (212 *h*). And Ukko, the aerial god, the Creator on high, after rubbing his palms against his left knee, produced three Luonnotars to be mothers of iron, which they afterwards milked from their breasts (214 *a*). The daughter of nature (*luonto*), Udutar, and the sharp maiden Terhetär sifted mist in a sieve at the end of a misty promontory, thereby giving origin to fevers and

¹ Kuvallehti, 1894, p. 91.

pleurisy (211 *d*). The three sisters have a home given them in the sky in a story in which the bear is said to have been born on the horns of the moon, on the back of the seven stars, beside the maidens of the air, near Nature's daughters (193 *b*). But the original idea underlying their name is quite lost in the narrative in which three Luonnotars walking by the sea observe the spittle of Syöjätär on the shore and wonder what would become of it if the Creator gave it life. Eventually Hiisi—not the sisters—turns it into a snake (203 *c*).

The recuperative power of nature would naturally occur to exorcists and wizards when healing the sick, and in a more objective form would be appealed to for assistance. Old mother Kave (the woman), the daughter of nature (*luonto*), the oldest of womankind, the first mother of individuals, is therefore invoked to come and see pains and remove them (128 *g*). Almost in the same terms she is implored to help an exorcist (1 *c*). And under the same title she is invited to allay the pains of child-birth because she formerly freed the moon from imprisonment in a cell, and the sun from a rock (166 *d*). But the original idea is on the wane in a charm for relieving pain, in which it is related that three Luonnotars sit where three roads meet and gather pains into a speckled chest or a copper box, and feel annoyed if pains are not brought to them (10 *b*). And the old idea of her functions is missing where the the woman (*kave*), the old wife Luonnotar, the darling and beautiful, is asked to point out the path to a bridal procession (117 *a*). Or when she is invited to bewitch sorcerers and crush witches; to weave a cloth of gold and silver, and make a defensive shirt under which an exorcist can live safely with the help of the good God (176 *e*). In

the next two examples Nature can scarcely be separated from God the Creator and seems only another term for him. A soldier in time of war implores the Creator, Nature (*luonto*), the God on high, to save men armed with swords, and crews with their freights from the murderous waves of men (162 *c*). And to avert danger from spells a man beseeches the Creator, Nature, the God on high, to save him from the spells of villagers with words (*i.e.* counter-spells) framed by the Creator and prescribed by the Holy Ghost (165 *a*).

She appears in a very different character when described in two instances as the furious old wife, the portly woman Luonnotar, who began to sweep the sea, to mop the waves with a broom, with a cloth of sparks on her head and with a cloak of foam over her shoulders. Eventually some of the sweepings stick in her teeth and become the origin of toothache (185 *b, c*). In a variant, as we have seen above, the same is told of Väinämöinen and his wife. Perhaps in both instances we should rather read Louhiatar, the mistress of Pohjola, as the events related would be in harmony with her character.

In another group of instances the wife or daughter of Nature appears as the personification of the warm, genial, growing weather that accompanies a southerly wind and receives the appellations of Suvetar 'the wife or daughter of summer, or of the south wind,' and Etelätär 'the wife or daughter of the south (wind).' She is invoked in this capacity by the husbandman and the owner of herds. Thus Etelätär the youthful, the boisterous and jolly girl, is asked to cause a honeyed cloud in the sky and to rain honey and water down on the growing corn (130 *b*). Suvetar and Etelätär, the old wife of nature, is implored to bring her horn from

the sky or from the depths of the earth and then blow it, so that lakes of milk and streams of butter may issue forth. By blowing she is to beflower knolls, make beautiful the sandy heaths and turn swamps into honey on which the suppliant can feed his herds (123 *e*). Excellent Suvetar, Nature's old wife Etelätär, is besought to bore holes in the fields and cause liquid honey to flow on each side of the pasturage; she is further to sink a splendid well from which the herd can drink and then give rivers of milk (132 *a*). The same personalities are requested to feed the cows from the moist hillocks and verdant knolls that they may yield abundance of milk. If the milk has been carried away she is to blow a horn that came from the sky and let the milk run back through the horn (132 *b*). The distinguished Suvetar, Nature's old wife Etelätär, is desired to feed and tend a herd of swine when it is sent into the woods (161). In the last example the original conception of Nature is quite obliterated though she still remains beneficent. The distinguished woman Suvetar, Nature's old wife Etelätär, that watches herds, is invoked to clean out the byre and to bring good luck. She is then to make a golden comb or a silver brush and attach it to the doorpost for the cattle to rub against (123 *a*).

MAIDENS OF THE AIR, OF SPRINGS, ETC

The Maidens of the air, of springs, dells, swamps, etc., are beneficent beings, and were often invoked for extinguishing fire and cooling burns. The four anonymous maidens first mentioned are perhaps the Luonnotars. Four maidens, three celebrated daughters, were formerly mowing grass on

a misty cape in a foggy island and making it into hay. After spreading it out a fiery Tursas from Turjaland came and burnt it to ashes. It happened opportunely that they were short of ash and in need of lie to wash the head of the sun's son, but before they could collect the ash a north-easter whisked it away to the banks of a holy stream and from it a splendid oak sprang up (224 *a*). In another version the four maidens, a triplet of brides, are making hay when a boy from Pohjola or an eagle from Turja came and burnt the hay, put the ash into his wallet and carried it to Lapland where it was sown in black mud and from it sprang a huge oak (224 *b*). Again, four maidens find a sapling oak and plant it in an island formed where three rivers had flowed from a tear shed by a Kyytöläinen (224 *c*).

In a charm against injuries from fire, Ismo, one of the daughters of the air, is asked to come with the speed of thought and pour herself out like foam upon her son's evil work and throw water from her apron on the burns (140 *b*). Nunnus or Munnus of the daughters of the air is requested to bring frost and ice, as there is frost enough in the air, to freeze the fingers of an exorcist and allow him to handle fire unhurt (172 *d*). After Ukko had struck fire in the sky and put it into a golden bag he gave it to an Air-maiden to rock, who carelessly let it fall to the earth (226 *a*). A holy maiden on a cloud, a woman (*kapo*) on the rim of a rainbow with a golden box under her arm and a golden wing in her hand, wiped away the pain caused by burns and salved the injuries of fire (52 *e*). A maiden standing by a little pond in a drop of water in a cloud carries slush and ice in her arms with which she extinguished fire and cooled the burns it had caused (52 *f*). Again, in order to extinguish

fire an exorcist says he will raise up Sumutar (daughter of Mist), the portly woman, from the swamp and she will repair the injury done (52 *b*). In the next example the character of the Air-maiden changes, though she still belongs to cloud-land. A little girl, a woman (*kapo*), appeared on the edge of a rainbow and while smoothing her hair the milk in her breast overflowed, fell on a honey-dropping meadow, and from it salves and ointments are obtained (232 *d*). In the next two examples her function is entirely different. A maiden lives in the air, on the edge of a little cloud, with a skein of veins on her lap and a roll of skin under her arm. She let them fall on the earth and from them bits of skin are taken to place on wounds from the tooth of a wolf or the claws of a bear (25). A maiden from above the air, from the middle of the sky, is desired to come in a copper boat and row with honeyed oars round a wound caused by iron; to row in a boat made of veins through the bones and joints; to lengthen short veins, shorten those that are too long and arrange them in their proper places. Then with a needle and silk thread she is to stitch up the ends of the veins (140 *b*). These last two Air-maidens cannot be very different from Suonetar, where the beauteous woman of veins (*suoni*), the beautiful Suonetar, who spins veins from a golden tuft on a copper spinning-rock and weaves a cloth of veins, is invoked to approach and tie up the ends of broken veins (140 *c*).

An exorcist requests a maiden to rise from a dell, from inside a frosty spring, with her clothes all over frost and rime in order to gag Fire's mouth and weigh down the head of Panu (171 *f*). A dear, clean-faced girl is desired to rise from a dell, from the corner of a swamp, and bring

some cooling stuff to lay upon a burn (171 *g*). A frosty maiden, an icy girl crouching at the mouth of a frosty spring with a golden ladle in her hand is invoked to throw water upon burns (171 *b*). In a charm to excite love a grey-eyed maiden is besought to rise from a spring and help a darling wife. She is to fetch water from the spring of Love that the wife may wash her baby, her little bullfinch, and make it very beautiful so as to be admired by every one (133 *e*). In a charm to fortify water and give it virtue a slender-fingered maiden is invoked to rise from a spring or from the gravel and to fetch energetic serviceable water from Jordan in which Christ was baptized (179). Lastly, a maiden from a dell, from the humid earth, or a warm maiden from a spring, a 'blue socks' from a swamp, a swarthy girl with shaven head and skinless teats was holding a copper box containing a golden comb. One of the teeth of the comb fell out and from it sprang a splendid oak the head of which seized the sky and its branches held the clouds (224 *d*).

The Mist- and Fog-Maidens differ considerably from their sisters of the air. The Mist- and Fog-Maiden and the Air-maiden *Auteretar* is asked to sift down mist and fog to prevent an enemy seeing either to attack or to escape (180 *b*). The Maid of Mist and Fog is invited to clip wool from a rock and make a shirt of mist, a copper cloak, which an exorcist can wear day and night as a protection against sorcerers and Lapps (168 *f*). With the epithets of 'leaf-bud,' 'ship-borne yarn,' *i.e.* dressed in fine linen, she is invoked to scatter fog from a sieve before the wild animals of the forest, when they approach a hunter, so that he may have time to get his bow ready (139 *s*).

Fire is the offspring of Höyhenes of the Panutars (Fire's daughter), of Lemmes of the Lentohatars, who gave birth to her child in the sea. She could not hold or touch it and from that she knew it must be fire (226 *d*). Höyhenes of the Panutars is invoked with Nunnus mentioned above to bring frost and ice to freeze an exorcist and allow him to handle fire without hurt (172 *d*). Panutar, the best of girls, is asked to come and quench a fire by putting it into her clothes and keeping it safe there (172 *c*). An anonymous Maid of Fire is desired to extinguish Fire and repair Panu's work. She is to bring frost, ice, and iron hail to apply upon the burns. If that is not enough she is to poke a heifer's hide into Fire's mouth or throw it over Panu's head (171 *k*).

The Maid of Pain and Sickness, Kivutar, in spite of her name, is always invoked as a kindly, benevolent personality. Kivutar has a kettle, the daughter of Väinö a pot, in which she boils pains on the Hill of Pain and then flings them into a hole nine fathoms deep, so that they cannot possibly escape (10 *c*). The vehement maid of Kipula, sitting on a speckled stone, spins pains on a copper spindle, winds them into a ball and hurls them into the sea (10 *c*). The good mistress Kivutar, the distinguished Vammotar (daughter of Wounds), is asked to take a feather, and sweep away wounds, to put them into her glove, which she is then to throw down on the Hill of Pain, on which is a big stone. Then she is to break the stone, to poke the glove inside and roll it into the depths of the sea (128 *c*). The lovely old wife of Pains, the good mistress Kivutar is requested to come and see the sufferings in a human body and make them cease. She is to wrap them up in a bundle and throw them into a mountain

cleft, into a blue stone, into a liver-coloured chink, where they will never be heard of again (128 *e*). Kirsti, the maid of Pains, sits on a stone of pain where three rivers flow, grinding the stone of pain, twirling the hill of pain. She is asked to gather the pains into a hole of a blue or speckled stone and then roll them into the water (128 *a*). An exorcist wishes that certain pains may be shot into the cup of Kivutar, into the box of Vammotar, into the bed of Vaivatar (daughter of Suffering), or down on the pillow of Päivätär (17 *z*). The Maid of Swellings, Kullatar, the active girl, the packer-up, is desired to pack up her packages, to remove her needless and monstrous things and take them to an apple or an oak tree (129 *b*). The beautiful old mother of Pains, the great mistress of the Hill of Pain, the old maker of Salves, that makes the best of magic cures, is requested to try if certain ointments are good and if so to bring them and anoint a sick man's wounds (181 *c*). It is only when we come to origins that the old wife or daughter of pain and sickness is regarded as an evil spirit. Inflammatory wounds result from the fire that fell from a fiery horn which Kivutar, the old wife of Pain, was carrying (10 *d*). The daughter of Pain, the daughter of Death, fell asleep on a meadow, was made pregnant by an east wind and gave birth to a snake (203 *d*). And the daughter of Pain and Tuoni's son are the parents of snails (184).

POHJOLA.

The word Pohjola means 'the home of the north (*pohja*),' though the term is quite vague, indeterminate, and without geographical significance. Another and older meaning of

pohja is 'the bottom or lower end of anything,' for instance, of a cask, sack, or haystack. Pohjola is described as murky, and with a speckled lid, where there is neither sun nor moon; the gate of the north is immense, the pass of the atmosphere (*ilma*) is hingeless (17 *m*). In dark Pohjola, in strong Sarentola, there is a fiery river throwing off sparks, and this is drunk by a dry-throated man of Pohjola (52 *k*). But there is an eternal bridge across the river of Pohjola for a traveller to reach that gloomy place. It is formed by a gigantic oak felled by a little man who emerged from the sea (211 *a*).

Though this dark, gloomy land of the north is quite mythical and unreal, it was a fact that the farther north a hunter penetrated, the more likely he would be to find game, for there the country was wild and uninhabited. From this point of view Pohjola would naturally be associated with wild animals and regarded much in the same way as Tapiola and Metsola. So a hunter desires that the scent of game may reach the nose of his dog from gloomy Pohjola, from under the window of Tapio (125). Another hunter requests Laaus, the master of Pohjola, to give him a bird to take home, for if so he will be thanked (136 *c*). Annikki, the daughter of Tapio, is asked to twist a red thread on her rosy cheek and draw it across the stream of Pohjola for wild animals to run along and so reach the hunter (139 *n*). The open-handed wife of Pohja, Laaus, master of Pohjola, Sinisirkki, maid of Pohja, the son and daughter of Pohja, and others, are desired by a hunter to frighten away the animals sleeping in the forest that they may come in great quantities in his direction (139 *s*). Raunikko, that regulates the 'money,' Louhi, mistress of Pohjola, is requested to rattle her hand that is full of

'money' and to send plenty animals to a trapper (153 *b*). A bear-hunter implores Louhi, mistress of Pohjola, to thrust out her woolly fist, her hairy palm, in front of him (121). If Jokiatar has no otters to give a trapper, she is to get some from Lake Imatra, or from a river of Pohjola (155).

The women of Pohjola have also to do with dogs, especially sporting-dogs. Louhi, mistress of Pohjola, the distinguished Penitar, 'Puppy's daughter,' is desired to remove impediments from her son, *i.e.* from the hunter's dog (125). Another hunter implores Raani, mistress of Pohjola, to prevent his dog giving tongue at the wrong time (126 *a*). And the best maiden in Pohjola smeared the teeth of a dog with sweet stuff, and thereby rendered it tame, useful, and not liable to bite (198 *a*). It was possibly, however, that from bad qualities in a dog its origin is attributed to the old woman Louhiatar, the harlot mistress of Pohjola, having slept with her back to the wind, become pregnant thereby, and eventually giving birth to a pup (198 *a*). For under the name of Loveatar, the harlot mistress of Pohjola also gave birth to a wolf (222 *c*). Perhaps from her connection with animals the blind whore of Pohjola, the wholly blind of Ulappala, is invoked to let fall some of her milk on the wound caused by the operation of castration (158 *b*).

As the north is by nature a cold region, Sharp Frost, after narrowly escaping destruction in the forge of Ilmari the smith, very naturally moved off to Pohjola, to strong Sarentola (93 *b*). And cold can sometimes be turned to good account. A boy is desired to come from Pohjola, from the cold village, and bring ice with him to cool burns (171 *i*). The Virgin Mary is requested to go to

murky Pohjola, to a snowy mountain top, and bring with her ice and snow to apply upon a burn (171 *h*). Porotyttö, a maid of Pohjola, who had burnt herself, cooled and healed the injury with slush taken from the mouth of a stallion of Pohjola that had on its croup a pool of slush (52 *d*). The crone of the north, with crooked jaw and scanty teeth, is asked to bring slush and ice to lay upon injuries from fire (171 *h*). And it was a girl from Pohjola, from the middle of an icy spring, that stood godmother to Fire, as she alone could hold him (226 *c*).

In other ways, too, assistance was obtainable in Pohjola. A boy from there, with iron knees, is invoked to crush and shoot down the tooth-worm that produces toothache (114 *a*). The blind old wife of Pohjola, the blind hag of Ulappala, is asked to extract spears and arrows, *i.e.* pleurisy from a naked skin. Failing her, an old man in the land of the north, who has strong nails and iron teeth, is requested to draw out the spears and arrows and then break them (149 *d*). A boy from Pohjola, from the real land of Lapps, is invited to poke his fleshy thumb down the barrel of a gun to prevent the bullet being discharged against the petitioner (150). An exorcist, that feels himself weak, asks the help of a boy from Pohjola, of a tall man from Pimentola, to prevent his being overwhelmed with shame when near sorcerers (176 *j*). Or an old woman is invited to come from Pohjola with a basket containing a dish, in which is a golden feather, to anoint wounds (159 *b*). Lastly, Louhi, mistress of Pohjola, is implored by an exorcist to help him (1 *c*). But in this, as in the examples immediately preceding, it is possible that these helpful personages were invoked for the same reason that Hiisi was sometimes appealed to; because they were strong, and, though of an

evil disposition, might be appeased and mellowed by suitable offerings.

Pohjola had also a bad aspect, for all sorts of evils could come from it. What is said of Tuonela, 'the home of Death,' in one version, may be told of Pohjola in a variant (216 *b*). The powerful Louhiatar, mistress of Pohjola, was made pregnant by a violent east wind and gave birth to Boil, Scab, Pleurisy, Gout, Gripes, Fits, Sudden Death, Rickets, a nameless boy, and a daughter Tuuletar (216 *a*). Raani, the swarthy old wife of Pohja, was got with child by a wind, was confined in an outhouse of Pohjola, and gave birth to Tuuletar, Viimatar, and Pakkanen, 'Sharp Frost' (210 *b*). The cold-throated old wife of Pohja, after sleeping a long time in the cold, rubbed her hands together so hard that blood was produced, and from it originated rust in corn (217). A furious old crone [*v.* the strong woman Louhiatar] ate iron groats, pounded by Tuoni's girl, became heavy with child and brought forth a numerous progeny consisting of all sorts of maladies and injuries (216 *d*). And when the huge Pain-maiden, Äkähätär, whose hair-plait reached to her heels and whose breasts hung down to her knees—like those of a Swedish Skogsnuftva, of a Danish sea-woman, or of a Wildfräulein of the Eifel¹—was about to be confined she goes to Pohjola, to a bath-house in Sariola, where she was delivered of Wind, Fire, Sharp Frost, Snow-fall, Atrophy, Worms, Cancer, Heart-eater, Gout, and Pleurisy (216 *c*).

LAPLAND, TURJA.

Though Lapland is a real country the term is generally used in quite a vague sense as the dark, northern land of

Mannhardt, (1) pp. 88, 123, 128; Hyltén-Cavallius, vol. i. p. 14.

sorcery and magic, in a pre-eminent degree. And the word Lapp is often only another term for a wizard or sorcerer. Turja also has a place on the map. It is the eastern portion of the Kola Peninsula, the Tarje of the Russian Lapps. In the narrative, recorded by King Alfred of Ohthere's voyage of discovery in the ninth century to the White Sea and the mouth of the Dvina, mention is made of the Ter-Finnas or Lapps of the Tarje district.

From their remote northern situation, Lapland and Turja were both thought of as abounding in game and sometimes as densely wooded. If game is not to be found near at hand, a hunter desires the forest divinities to bring some from Lapland's gloomy wooded wilds, from near Lake Imantra, or from the boundary of the Turja Fells (139 *p*). The origin of the reindeer is to be found in Lapland, and the old crone of the north is requested to send plenty of game from the north, from Lapland's level tracts, into the traps of a supplicating hunter (148).

More usually help was expected from these countries because their inhabitants were associated in the popular mind with the practice of magic arts. It is related that an old man from Turja, a little man from Pimentola (home of darkness), came with a roll of skin, a skein of sinews, some spare flesh and a ladle of blood, and repaired the injured portions of a wounded man (32 *a*). A maiden from Turja, from Lapland, sails in a red boat all over icicles and with a kettle full of ice, which she is asked to give to a person that has been burnt or scalded (52 *h*). An eagle dwells in Turja, in Lapland, with a beak of steel and iron claws; with one wing it grazed the water, with the other the sky; its beak is like five sickles. It is invoked to devour the pain from which a man is suffering

(128 *i*). An eagle from Turja with five talons like sickles, with eyes at the tips of its wings, is besought to come and extract Keito's spears from the body of a sick man (149 *e*). Again, in the north-east, in Turja, dwells a famous eagle. Under its wings are a hundred men, at the tip of its tail a thousand men all girt with swords. It is invoked to remove injury caused by spells (154 *e*). A fiery-throated Lapp, that has drunk up rivers of fire, is invited to come to sip blood and stop a flow of blood. He is to fetch a stopper from the Fells or a nail from Pohjola to serve as a plug; then he is to make a copper or tin pipe and draw back the blood to its proper place, to the lungs and heart (177 *i*). Only once is Turja connected with violence or outrage; that is when a fiery Tursas, a Lapp, came from Turja and burnt some hay that four celebrated maidens were in process of making (224 *a*).

PERSONIFICATIONS OF DEATH—KALMA, TUONI, MANA.

Though Kalma may sometimes be taken as a proper name, it signifies 'a grave, the smell of a corpse, a corpse,' and a cemetery or collection of graves is a *kalmisto*. In the sense of grave the word may belong to the end of the second period, for the Mordvin *kalma* also means a 'grave,' and there is a verb *kalman*, 'I bury.' As a proper name, then, Kalma is a mere abstraction or personification of the grave, and therefore of no great antiquity. Tuoni originally meant the 'deceased,' and is the same as the Lapp *duodna*, 'miserable.' From *Tuonela*, 'the place of the dead or miserable,' was afterwards formed by analogy a personal name, Tuoni. Mana was also formed by analogy from Manala, 'the place of the dead under ground,' which

is shortened from *maan ala*, 'under ground, below the ground.' Lönnrot seems to have been the first to use it in the nominative as a proper name.¹

The abode of Death was under ground, and a river is sometimes mentioned in connection with it. Some chips of an awful oak, felled by a boy from Pohjola, drifted into the black river of Tuoni, into the subterranean waters of Manala (211 c). An old witch rolls fire up into a ball and hurls it along through the earth and soil (*manue*) into the river of Tuonela, into the depths of Manala (226 b). But a man must not go there without being killed by disease or removed by ordinary death (149 b). The huts of Manala are eternal (5 a).

Disease in general, sometimes toothache in particular, is termed 'Tuoni's hound' (13, 15 a, 21 b), or his 'grub,' or the 'worm of Manala' (21 c). But a snake is also the 'worm of Manala,' or 'Tuoni's grub,' or a 'grub the colour of Tuoni' (29 a), while a real grub or caterpillar is 'Tuoni's rag.' Injuries from spells are 'the bit of death (*surma*),' 'the chains of Manala,' or 'Tuoni's reins' (154 c). Disease or sickness sometimes comes from the house of the spectral host (*kalmalaiset*) (5 a), from the armpit of a spectral form (*kalmalainen*), from Kalma's heath (5 b), or it rushes forth from a grave (*kalma*) (17 c). A place of burial is 'Kalma's heath' (5 b), 'Kalma's sleeping-chambers,' 'the huts of the *manalaiset*' (17 b). Ukko is invoked to fix Tuoni's lock on the jaws of a bear, or to thrust a stone of Manala down its throat (123 i). When milk had been taken by means of spells from some owner of cows it was said to have gone to Tuonela or to Mana (132 c).

Kalevala, vol. ii. pp. 165, 171.

Although the personifications of death were naturally dreaded as evil beings, they were also invoked to remove harm. Tuoni's short girl is requested to take her cur, the toothache, from a sufferer's jaws, and to press her injuries down into Hiisi's coals (114 *b*). And Tuoni's girl, the Maid of Pains or Sickness, collected pains with gloved hands and boiled them in a small kettle that no one should receive hurt from them in future (10 *d*). Tuoni's girl Kipu-tyttö, 'the Pain-maiden,' the huge Akähätär, is asked to winnow and sift torments, and to make stones suffer instead of human beings (128 *d*). An exorcist requests Tuoni's red-cheeked boy to twist a red cord against his left thigh that the petitioner may tie up a severed vein with it. If he is unsuccessful Tuoni's son is to perform the operation for him (140 *d*). Again Tuoni's son, wearing a red hat, with eyes askew and crooked-jawed, is invited to knock down sorcerers, to shoot them in the belly, to gouge out the eyes of the envious and drag a gory rug over their eyes (176 *k*). And a son asks his dead mother to rise from the earth, from the cemetery, and to bring him from Tuoni's land a fur coat, which he will put on to protect himself against sorcerers and witches (176 *b*).

When the origin of anything possessed of evil qualities is related, its parentage, or origin, is sometimes ascribed to the evil spirits of the lower world. The blind daughter of Tuonela, the hideous child of Manala, was made pregnant by a wind, was with child for nine years, and subsequently gave birth to Wolf, Snake, Cancer, Ringworm, Thrush, Cripple, Toothworm, Heart-eater, and Woman's Enemy (216 *b*). Once when Tuoni's iron-toothed old wife, the crooked-fingered and crumpled-jawed, was spinning,

some blood spirted from the distaff and turned into a snake (203 *f*). Iron is capable of doing harm, because when Hölmä came from Tuonela, the son of Manala from under the earth, he found purple melic grass growing on a swamp, and took it to Ilmarinen, who forged it into iron implements (214 *f*). Probably because nets are deadly to fish the origin of nets is assigned to Tuoni's three-fingered girl, to a three-fingered crone of Lapland, who span a net of one hundred fathoms in a summer's night (230 *c*). Again, because flax can be turned to bad uses, a huge flax plant is said to have grown up from a flax seed found in the storage place of Tuoni's grub, and sown in the ashes of an incinerated boat (204 *a*).

SUN, MOON, GREAT BEAR.

The heavenly bodies received some attention from the Finns, and were personified; but there is not much in the Magic Songs to suggest that the sun and moon were held in any special honour, or were regarded as very powerful personalities, though Agricola mentions that the Finns in his time served the sun, moon, and stars. There is a vague reference in the text to a share being offered to the moon, sun, and Great Bear, while nothing is given to the disease called thrush (44). And the sun is asked to rise in proper time, to give gifts, health, success in hunting and fishing (110). This, of course, may be due to losses of traditional material incurred during the lapse of centuries; for there are passages in the songs that seem to be fragments of older nature myths that have otherwise disappeared, but were formerly current. For instance, it is twice mentioned that after the son of the sun (*paivä*)

had been enclosed in a rock, in an iron mountain, and the moon shut up in an enclosure, in an iron barn by Kuume, by a Pirulainen, they were released by a woman (*kave*), by Päivätär (8 *a*, 42 *b*). In another passage the release is effected by the daughter of nature (166 *a*), and it is quoted as a precedent why another release of a different nature—the delivery of a child—should take place. The exorcist in this as in the two other instances must therefore be appealing to a well-known myth, though he has only occasion to refer to a small portion of it. In a much more modern version it is vaguely stated that the Creator formerly freed moons, released suns, and with a curse sent Satan away to hills of steel, to rocks of iron (42 *a*). None of these passages seem to refer to an eclipse, or to the waning of the moon, for the Finns express that by *kuu syödään*, ‘the moon is being eaten.’ And Agricola mentions that ‘animals (*kapeet*) ate the moon,’ by which expression one or both of these phenomena must be intended. As Finnish poetical art requires the two lines in each pair to be synonymous, or nearly so, it is quite possible that though two different heavenly bodies are named, only one is intended. It is, therefore, not improbable that the sun alone is referred to, and its relative concealment in winter is the natural phenomenon really hinted at. But when it is related that half the sun and a third of the earth were darkened and concealed by a gigantic oak (211 *a*), or that the sun and moon were hidden by the growth of a lovely oak (211 *b*), it is not at all certain that we are in presence of a nature myth. Evidently the same tree is intended in a variant, in which no mention is made of its extreme height, or of its obscuring the heavenly bodies (211 *c*). So all this may simply be

due to the lively personal imagination of individual singers, and not be in the least mythical. No more so than in a lyrical Lettish ballad, where a girl says:—‘I would not enter a village where oaks grow on the ploughed fields; the oak has thick foliage, you don’t see when the sun rises.’¹

In her character of the ‘releaser,’ Päivätär, the doughty maiden, together with other powers, is invoked by an exorcist to effect deliverance and to release a sufferer from the effects of spell-sent sickness (1 c). As givers of light the sun, moon, and the great bear (*otava*) are not unnaturally requested to guide a child from the womb into the open air that it may see and rejoice at the sun, moon, and stars (166 *h*). And Otavatar, the maid of night, the steady watcher during the night, is desired to watch over the petitioner’s property, to notice if anything is stolen, and if so to have it returned (175).

Their primitive character is less evident when Kuutar and Päivätär are implored by a hunter to bake a suet cake, a honeyed bannock, with which he may propitiate the forest (139 *b*). Indeed, the appeal to Kuutar may have been suggested by a play of words, for *kuu* means both ‘moon’ and ‘suet,’ and in offering a suet cake, it would be only a playful figment of the imagination to aver that it was baked by the moon’s daughter. Or when a fisherman promises to give Vellamo a linen shirt, woven by Kuutar and spun by Päivätär, as an inducement to her to give him a good haul of fish (120 *c*). It is less easy to understand why in a charm against wasps the same pair are desired to conceal their children, *i.e.* wasps, and not to follow the wish of a sorcerer, or be made jealous

¹ Sprogis, p. 32.

by jealous people (113). Once when Päivätär was bewailing her gold, and Kuutar her silver, a tear trickled from her eyes and rolled into a dell. From it sprang a lovely oak (205 c).

In what appears to be a song of late date, Fire (*Panu*) is said to be the offspring of the Sun (*Auringo*), and to have been made in the centre of the sky, on the shoulder (*i.e.* close to, near) of the Great Bear (226 f). Elsewhere Panu is the son of Aurinkoinen and Auringatar, and lives under forge-fires (172 b). Three or four famous maidens are credited with washing with lie the head of the son of the sun (*päivä*) (224 a).

ELVES, BROWNIES.

There is a class of beings occasionally mentioned in the Magic Songs for whom the Finns seem to have had no special name, but who may be grouped under the comprehensive title of Elves or Brownies. Though they are always pictured as emerging from the sea they do not appear to be water-sprites. The stone boots and hat they sometimes wear belong rather to earth- or stone-elves, and the power of suddenly assuming a gigantic height is a characteristic of the Russian *Lieši* or forest-spirits, who change their stature according to circumstances.¹ Perhaps the fact that one of them is summoned to fell a gigantic tree, being the only person capable of doing so, points in the same direction.

Once when a huge oak hid the sun and moon from shining and obstructed the course of the stars, a man was sought for from all parts to fell it, but none was to

¹ Mannhardt, (2) p. 145.

be found. At last there emerged from the sea a [*v.v.* small, black, old, iron] man, a quarter of an ell high, as tall as a woman's span, who could stand under a sieve. His hair reached to his heels, his beard to his knees. He wore a hat, boots, sleeves and a belt, all of them of iron, and he also had an iron axe and shaft. He sharpens his axe for a long time on five or six whetstones. By this time he had become huge; his head touched the clouds and his beard shone like a leafy grove upon a slope. Then in three blows he felled the gigantic oak (211 *ö*). In another version a swarthy or black man rises from the sea, who is as tall as a straightened thumb, three fingers high [*v.* the height of an ox's hoof]. He carries on his shoulder an ornamented axe with a decorated shaft; on his head he wears a tall stone hat, on his feet stone boots. With three blows of his axe he fells the gigantic oak (211 *a*). From the sea rose a wee man, scarcely a quarter ell in height and carrying an axe. With it he fells the oak that sprang from a tear shed by Päivätär or Kuutar (205 *c*). Once a huge ox was bred up in Finland. With its head it roared in Tavastland, it wagged its tail in Tornio. A swallow took a day to fly from its withers to the end of its tail, and in a month a squirrel could not run from one horn to the other. No one could be found to slaughter it, till a swarthy man emerged from the sea, who was but a quarter of an ell high, the height of a woman's span. He overturned and killed the ox, from the carcase of which ointments and salves were obtained (232 *g*). On the other hand, a small man rose from the sea, only three fingers high, wearing an icy hat and gloves, who knew how to recite 'the ravages of fire,' and by doing so healed burns (52 *j*).

The origin of toothache is twice attributed to the Brownie. A black or swarthy (*v.* iron) man the length of a thumb, rose from the sea; from his beard a worm grew which became a tooth-worm (185 *a*). A wee man, axe in hand, emerged from the sea. He came across an oak which he felled. In doing so a chip stuck in his teeth and became a tooth-worm (185 *f*).

GIANTS—TURSAS, TURILAS.

Like elves, giants play but a small part in the Magic Songs. Tursas as a proper name is derived by Thomsen from O. N. *thurs* 'a giant.' But the word has also a meaning in Finnish. According to Lönnrot it signifies 'tumid, swollen'; according to Renvall 'a snout or muzzle,' as that of a horse, an ox, or a pig. In a couple of riddles *tursas* and *turilas* are both used with reference to a pig routing up the earth with its snout.¹ In the middle of the sixteenth century Martin uses *turillas* in the sense of 'a dog that bites animals.'²

Once upon a time a lovely girl rose from a damp dell, who gave no heed to suitors. So a giant (*turilas*), a sea-Tursas in shirt-sleeves sent a nightmare upon her, and while she slept ravished her. He then took his departure (215). On another occasion there came from 'Turja a Lapp, named the fiery Tursas, who burnt the hay that had been cut by three celebrated maidens (224 *a*). From these two brief references it would seem that giants were destructive rather than stupid, the character they have assumed in later Scandinavian folklore. And the action of the first mentioned is quite in accordance with the

Arvoituksia, No. 1849, 1853.

² Grotenfelt, p. 19.

lustful nature assigned to many half-brutish forest-spirits in European folklore.

The somewhat similar name of Turisas is ascribed by Agricola to a god of the Tavastlanders who gave victory in war.

RAHKOI.

According to Agricola Rahkoi was a god of the Tavastlanders who darkened the moon, but the Rahko of the Magic Songs seems to be a different person. In a couple of charms against nightmare Rahko, who wears iron boots and makes a 'stony hill revolve,' is desired to put the nightmare under a beam, an iron roof, a tongueless bell (35, 145). Almost in the same terms he is mentioned in two riddles, but in a way that throws little light upon the subject. 'Rahko in iron boots makes a stony hill revolve, it bows to the rapids?' *Ans.* 'A mill-wheel, a mill-sail.' Or 'Iron-booted Rahko hurries over a stony hill, he treads on a gravelly one?' *Ans.* 'A plough—a poker.'¹ The 'stony hill' of the text seems to mean a mill-stone, and the exorcist probably wishes Rahko to put the nightmare under the stone of his mill which is termed a tongueless 'bell' from the clatter it makes. As *rahk* means 'gravel, hard limestone' in Esthonian, it seems likely that Rahko was a stone-*haltia*.

PERKELE, PIRU.

Perkele < Perkene is from the Lith. Perkunas, 'the god of thunder,' and Piru from the Russ. Perùn 'a thunderbolt,

¹ *Arvoituksia*, No. 1508, 1509,

lightning,' but formerly 'the thunder-god.' The Mordvins at an early period have also borrowed the word under the form *Purgene*, and use it in its old sense. But in the Magic Songs *Perkele*, *Piru* only signifies an evil spirit and answers more particularly to the biblical and modern devil. There is not the slightest trace of the older meaning; and in estimating the approximate period to which the Magic Songs in the main belong, this complete change of front cannot be overlooked. It may also be observed that the Letts have retained the old tradition of *Pērkons* and still regard him as beneficent, though capable of doing harm when asked to do so. A couple of stanzas of a modern Lettish ballad run thus:—

Thundering gently, gently,
Pērkons crosses the sea,
 He hurts not the bloom of the bird cherry tree
 Nor the work of the husbandman.
 O *Pērkons*, rumble and thunder,
 Split the bridge o'er the *Daugava*,
 That no Poles or Lithuanians
 Shall enter my fatherland.¹

Perkele, often coupled with *Piru*, *Hiisi* or *Juutas*, is a name given to the fearful spirit of disease that an exorcist is summoned to combat and exorcise (1 *a*, 5 *b*, 13, 17 *m*, 154 *d*). In a charm to silence a dog, *Perkele* is invoked to do so (126). In a variant *Hiisi* is invited to rise from Hell, *Perkele* from *Pimentola* to crush or devour the violent pain a wretched man is suffering (128 *h*). Here he is desired to perform a benevolent action, perhaps from the old feeling that seems to have prevailed among the Finns that no spirit was by nature entirely good or entirely

¹ *Sprogis*, p. 316.

bad even though bad on the whole. But Tuoni's girl is invoked to fling toothache into an iron baking-pan or at the end of Piru's tongs or among Hiisi's coals (114 *b*). And in the 'origins' Piru is regarded as a source of evil. Piru made arrows in a steel mountain, in a smithy without a door and windowless. He made the heads of steel, the shafts of oak, and plumed them with swallow's plumes bound on with locks of Hiisi's girl, and poisoned with the venom of a snake. He then shot his arrows and the third recoiled against a steel mountain and entered a human being (211 *a*). The alder buckthorn was made from the hair of a Pirulainen's beard and the rowan is the creation of Piru (212 *i*).

GOD, THE CREATOR.

We have already seen in Chapter IV. that the term 'god,' F. *Jumala*, originally meant the 'sky, the sky-spirit,' and that in course of time it came to mean 'god' in a general sense, applicable to a variety of deities. Thus Ahti is termed a god (93 *b*). Hiisi is the humpback from the home of gods (1 *c*). An exorcist exclaims: 'may help from the gods arrive, from the nourishing mother aid' (102 *a*). In a charm to be used when heating a vapour-bath it is said that the gods above and the earth-mothers down below use hot baths (87 *a*). The Virgin Mary is implored to restore health before the rising of the sun, the dawning of the god of dawn (169 *a*). And the lord of horses, Tahvanus [*v.v.* Timanter, Rukotiivo] is called a god that cleans out mangers (115 *b*).

As a rule, however, the word god, especially when qualified by the terms Creator, Almighty, seems to refer to the

Christian God. Whenever this is so the exorcism is not older than the middle of the twelfth century, unless the term is a substitution for an older heathen name, as undoubtedly is sometimes the case. A fragment of some lost legend appears to be preserved in a charm against hæmorrhage where it says: when countries were upheaved, when hard dry land was lifted up from beneath the sea, our great Creator then made an incision in his flesh, in his left foot (55 *f*). This perhaps includes a reminiscence of Väinämöinen who cut his left knee when making a boat and who also was said to have taken part in the creation of the world. When a hunter exclaims: 'Why is the great Creator wroth, the giver of game enraged, that he never gives at all' (89 *c*), he is probably thinking of Tapio, though the name of the forest god is replaced by that of the Creator. Or, when another hunter beseeches dearest God, the ruler of the earth, to give him abundance of wild animals, mentioning at the same time that he does not prostrate himself merely to be given stumps of trees; he must have animals (139 *m*). Again, when God the Creator is invoked to watch over a herd at pasture (123 *d*), it is quite possible that new names have been worked into an older incantation.

Some of the songs in which the name of God is employed appear to belong to the transition period between heathendom and Christianity. For His name is invoked in a way that clearly shows the exorcist was no professional theologian. The aerial God, the spirit Lord Jesus, is desired to harness his colt, to take a seat in his ornamented sleigh, and drive through bones and loosened veins in order to join them together, and where a bone was broken to fasten in another (140 *a*). God the father,

Jesus the Lord of air, that knows how to throw a bullet and to recite a charm for stopping bullets, is invited to let water fall on the touch-hole of an enemy's gun so that it will not flash and go off (150). God the Creator is desired to recite a charm to heal a sick man, and to assuage his pain with formulas that are holy and well arranged (157 *d*). In a charm for making a healing vapour-bath, God, the father of the air, is asked to enter the steam, to restore health to the sick person and give him repose. But he is to do it secretly, without being heard by a worthless wretch, and without the knowledge of the village people (169 *c*). God the Creator is prayed to give luck and contentment. He is to build round the suppliant's property an iron fence, a stone castle, reaching from the earth to the sky (143). God is called the oldest of spell-reciters, and the Creator the oldest of wizards (106). The Creator is desired to come and exorcise, God to come and speak, and aid a man in overthrowing his enemies and envious persons (176 *d*). And the Creator's cock with golden wattles is implored to come and speak on a man's behalf, but it is also to stop the judge's ears, to bribe the jurymen, and bind silk across the sheriff's eyes (124). Why the Creator has a cock with golden wattles is explained perhaps by a riddle. 'One cock is an iron cock, the second a copper cock, the third a golden cock. The iron cock split the ground, the copper cock cut the sea, the golden one divided the sky?' Answer—'A plough, a ship, the sun.'¹ Though it may be a reminiscence of the thunder-bird, as mentioned above.

At a later period in order to staunch blood an exorcist could say: 'May the word of God become a bar, may

trust in the Maker be a plug. If blood should flow in rapid drops, may the Creator hold it fast, may God seize hold of it (55 *e*). But when he continues: 'Let some of kindly Jesus' flesh, a bit from the side of the Lord be a plug for the fearful hole, a dam for the evil gap,' he is only adapting an older heathen formula to the new terminology. So, too, when the Lord is asked to fling his gloves down as a stopper on the fearful hole from which 'the milk' is flowing, the idea was not a new one. But the end of the charm certainly belongs to the new faith. 'May the Maker's lock be a lock, may the Lord's word be a bar, that the "milk" to the ground shan't flow nor the guiltless blood upon the dirt, despite the nature of God, against the intention of the Blest' (177 *f*). An exorcist declares he can do nothing without the grace and help of God the Creator (1 *a*, 42 *b*). He throws himself on his God, who abandons not the good and virtuous (5 *a*). He declares that the arrows of a sorcerer can be extracted by virtue of the word of God, by the spirit of the Lord's decree (37 *c*). The breath that he exhales is the breath of the Lord, the warmth that he emits is that of the Creator, the water he employs is the blood of Jesus (102 *a*). And he asks, Is a man to be put to death without God's mercy, without the true Creator's leave? (42 *a*). A diviner begins: 'I crave from the Creator leave, assistance from the Lord I beg. Tell the divining gear, O God. Divining gear! declare to me whence the calamity has come' (59 *a*). And he finishes: 'If the divining gear speaks truth, its reputation is enhanced, the divining gear is raised aloft to the knees of the holy God' (59 *b*). A charm to quiet a child begins: 'Lull the child to sleep, O God, cause it to slumber, Mary dear' (79). On going to bed one may repeat a *lorica* like

the following: 'May the Earth be a good defence, the Omnipotent a guard, may the Creator lock the door, may a saint draw-to the bolt, may Jesus be a shield, Mary a sword' (137). In preparing a bandage an exorcist says: 'Let the Maker's silk be a ligature, the cloak of the Lord be a covering, let the word of God be a bolt, the furs of the Lord be a coverlet; may the Creator's mercy grant, may God's word bring about that the wound shall not inflame' (159 *a*). The Creator, Nature, God that dwells above, is invoked to save a person from incantations and spells by means of words framed by the Creator prescribed by the Holy Ghost (165 *a*). Fire is said to have been created by God, to be born of Jesus' word and rocked by the Virgin Mary (226 *c*). And as salves are said to be prepared behind the stars, they are desired to trickle down from the mouth of the gracious God or from the beard of the Blessed One (232 *c*).

JESUS, MARY.

The names of Christ and of Jesus are often mentioned, but never together. Jesus is desired to consecrate the flocks and watch the herds of the petitioner when they are sent out to graze (123 *b*). Christ is said to have christened Tapio's son, Pinneys, in the middle of the forest field to tend the animals of the forest (139 *r*). Jesus is asked to send a good barley year that the people of Bothnia and Savolax may have plenty of good ale to drink (182). Jesus is invoked to wash a small child clean with water made by the Creator and ordained by the 'Holy Birth,' a term used in Karelia for Christ (168). Or he is to wash a girl clean from the harm caused by evil gossip and bad

reports (133 *a, b*). The water an exorcist uses for healing purposes is feigned to be taken from Jordan, in which Christ was baptized (106, 228 *c*). Or it is the washing water of Jesus, the tears of the Son of God, brought from Jordan by the Virgin Mary (228 *d*). A maiden from a spring is requested to bring serviceable water from Jordan, in which Christ was baptized (179). An exorcist declares that he uses the guiltless blood of Jesus, the sweet milk of Mary, which had come rippling down from the sky, as an ointment for wounds (109 *a*). As lord of the air, the God that dwells in the sky, Jesus is desired to come and see his son who is sick, and to spit some of his spittle on him as an ointment and thus to restore him to health (157 *c*). Jesus is besought to take anxious care of a child created by himself, to build a wall of stone, an iron enclosure, behind which a soldier can shelter himself against the weapons of an enemy (162 *d*). He is implored to help a man in danger, who addresses him: 'Lord Jesus, do not cast me off, do not abandon me, good God, to the magic spells of whores,' but 'bring him a fiery sword with which he will slash the wicked men and crush the foul persons at a blow' (176 *c*). Once when Jesus was travelling over a red sea in a red sloop with red sails, a red ointment trickled from the sails and yards and formed the best of salves for every kind of injury (109 *b*). Jesus and Mary are asked to taste and see whether certain salves are the magic remedies of the Almighty with which the Creator was salved, the Omnipotent was healed when pierced and tortured by a devil (181 *i*). Once when Jesus and Mary were driving to church the horse fell and sprained its leg, which was healed by Jesus (34 *a*). A cow-house snake bit Christ's horse, killed the foal of the

Almighty, through the bony floor of the stall (205 *e*). If a snake will not remove its venom from a bite, an exorcist will loudly shout to his father, to Jesus, and to his mother Mary (29 *d*). Once when Jesus was walking along a road with Peter he encountered a Cancer. He asked the Cancer where it was going, and on learning that it was bent on visiting a village to bewitch people's bones and make their flesh putrify, he ordered it under a thick flat stone, to shriek and yell where the sun and moon never shine (39 *b*).

The ordinary epithets of the Virgin Mary are the dear mother, the compassionate, or the holy handmaid of the sky, the holy little serving-maid. In some instances she merely replaces the Air, Spring, or other maidens of an older period. The Virgin Mary, the pure mother, beautiful of shape, wandering along the edge of the air with a skein of veins on her back, a can of blood under her arm, a longish piece of bone in her hand, and a lump of flesh on her shoulder, came and spliced a vein, poured in blood where some had leaked, fastened a bone that was loose, and added flesh where a bit had been removed (32 *b*). The Virgin Mary, the holy little serving-maid, sits on the surface of the sea, wearing a golden ring on which are six horns full of magic cures, with which she once salved the Creator and healed the best of Lords (109 *d*). Once the dear mother, the Virgin Mary, threw herself down to sleep on a turf knoll. Milk exuded from her breasts, and became an ointment good to apply upon a wound (109 *c*). As the dear mother she is invoked to bring a golden cup and a honeyed wing, and then to prepare a healing vapour-bath (169 *b*). As the holy handmaid of the sky, she is asked to weave a gold or silver belt to serve as a bandage (159 *a*). As the kind, compassionate mother, she is desired

to go to gloomy Pohjola to fetch snow with which to quench fire (172 *a*). As the compassionate mother, or as the holy little serving-maid, she is asked to stop a flow of blood with her thumb, or with turf, or with a handful of flax, or with a slice of birch-bark, and then to sew up the wound with a needle and silk thread (177 *a, b, c*). The beloved and merciful mother, the Virgin Mary, is implored to come in her fleet shoes to seize pains, to remove plagues, etc.; then to throw them into the sea or to the wind (128 *f*). As the dear, compassionate mother, she is requested to give a soft fur coat as a protection against bitter cold, and to throw fire into the socks and tatters of the suppliant so that he may not be nipt by the frost. The frost-bites she is to anoint with butter and fat (147 *b*). As the eternal mother of the earth, the benefactor of all time, she is to let water pour from a rock by means of her golden staff and wash a girl in it in order to remove the effects of spells and to make her irresistibly attractive to young men (133 *d*). The Virgin Mary, the dear mother, is desired to heal a sufferer by virtue of the word of God, through the mercy always of the Lord (169 *a*). She is invoked too to bring honey and water from the sky, or to take milk from her breasts and anoint a sick man; if that is insufficient, she is to anoint him with the blood of Jesus (181 *a*). Or she is to use the salves with which Jesus was salved, with which the Omnipotent was healed when tortured by Pilate (181 *b*). An operator beseeches the beloved and compassionate mother to let her skilful fingers be transformed into his, that he may snatch a bit of chaff out of a person's eye (160 *a*). Or she is to take from her golden box a golden hook, and with it fish out the chaff that irritates a man's eye (160 *b*). To get rid of an attack of gout it is

addressed with flattering words: 'Good Gout, thou lovely Gout, Mary's sweet Gout, depart!' (30). Before going to bed one may repeat at the end of other formulas: 'May Mary lull to sleep, may Jesus raise me up to thank my God, to give Jesus praise' (137). Dear Mary and good Peter are implored to give a man a small plot of ground gratis, on which he may build a new house (167). After gelding a horse the operator gives it water, and says: 'Now of this water drink, of Mary's washing-water sip' (96).

SAINTS.

In an ale-charm it is related that a little boat was being rowed on a little pond in a drop of water in a cloud. St. Andrew (Antti) pulled, little Peter steered, and Jesus sat in the middle. There they were occupied in combing Hiisi's elks, and the housewife reciting the charm invokes these animals to drive away the snakes that are drinking her ale (91). Christopher, the river chief, the golden king of rivers, together with Nokiatar [*v.* Jokiatar] is desired to send a whole host of otters into the traps of a trapper (155). St. Anni, the gracious maid, the beauteous maiden of the veins, span a red thread and bound it round the sprained or dislocated limb of man or beast (34 *d*). The dear mother St. Catharine is asked to come in her best attire and see the harm her creature, the ram, has done by butting some unfortunate fellow (141). Expert St. Stephen (Tapani) or Tahvanus, lord of horses, a god that cleans out mangers, is desired to watch carefully over horses sent out to grass (115 *a, b*). As the father and mother of a boy that has been gored by an ox, St. Saitäri

and the lovely Pullukka are invoked to take care that the lad does not die of the injury before his time (116).

Besides these references to saints there are allusions to biblical subjects and persons as well as to ecclesiastic ceremonies, which it is well to record. Man is made of a cake of mould to which the Lord gave breath and life (191.) Kalma is asked if he is of the stock of Adam and Eve (24). The Creator cursed the snake to crawl on its belly along the ground (29 *a*). He cursed Satan and made him enter hills of steel, rocks of iron (42 *a*). There is a vague mention of the temple of the Lord (102 *a*), and to stand still like the wall of Jerusalem, is used as a simile to express the utmost immobility (61). A hunter declares that he does not praise a stone or worship a boulder-stone, or hunt on holy days or exert himself on Sabbath days (89 *d*). Juhannes, the priest of God, concocted unguents for a year in a tiny kettle, and with them he stroked and healed the wound of the Lord while being tortured by Pilate (109 *e*). The same priest of God plucked herbs by the thousand, boiled them all summer and thus made useful salves (232 *b*). An old man in riding to church on an elk-like horse as fat as a seal, crosses the brook Kedron (34 *b*). A stone is described as being as high as a church (28 *b*, 99). In expelling an evil spirit, an exorcist says: 'now is the precious time of grace, the solemn festival of God, the priests are going to the Mass, proceeding to the preaching-house' (8 *c*). Another exorcist asks the evil spirit of disease if it has been torn from the base of a cross, has been conjured up from women's graves (5 *b*).

To an evil spirit an exorciser exclaims: 'If thou should injure a Christian man, destroy a man that is baptized, christening perhance will injure thee, thee will a baptism

destroy' (16 *b*). And he banishes another spirit to priestless places, to unchristian lands (17 *w*). He tells an evil spirit of disease to cease injuring a Christian man, destroying one that is baptized (22, 36 *b*, 39 *a*). Ukko is asked to let rain fall in Russia, in Karelia, where a woman has a child of two months, that has not been baptized for want of water (156). The bear was christened by the king of Himmerkki (*i.e.* the kingdom of heaven) himself, while the Virgin Mary not only carried him to baptism, but also stood godmother (193 *a*). Juhannes, the priest of God, the holy knight, was desired by Louhiatar to christen her children, but as he absolutely declined to do so, she profanely did it herself (210 *a*). But it was Juhannes, the best of priests that christened Fire and gave him the name of Panu (226 *c*). Raani, the old wife of Pohjola, asked God the Creator to baptize and name her children, but as he never came, she, too, did it herself (210 *b*). Tuoni's girl also baptized her children as the two priests and the sacristans, whom she had asked to perform the ceremony, firmly declined the invitation (216 *b*). After searching in ten villages, the mother of Rickets, being unable to find any one to baptize him does it herself on a water-girt stone, but in filthy water (215). Sharp Frost was christened by his mother at a bubbling stream in the centre of a golden cliff (219 *a*). Or, according to another version in a silver stream, in a golden spring (210 *c*).

KALEVA.

There is so little to be learned from the text about Kaleva, that we may suppose either that the tradition about him was dying out, or that his importance has been

exaggerated. In the last century, he is described by Lencqvist as a giant, the father of twelve sons, all the names of whom were not remembered, though Hiisi, Soini, Väinämöinen and Ilmarinen were among the number. Their great height, according to popular imagination, is the notion that underlies a couple of riddles. 'Two sons of Kaleva reside in the bath-house, their heads are washed in the yard.' 'The sons of Kaleva are in the bath-house, their heads are washed in the yard.' *Ans.* 'The rafters of the roof,' the projecting ends of which are well soused by falling rain.¹

In the middle of the sixteenth century, Agricola regarded the sons of Kaleva as benevolent divinities of the Tavastlanders, who mowed meadows and suchlike. In this they resemble the Selige Fräulein of the Tyrol who mow grass and cut corn for upland farmers and are comparable with the gigantic Fanggen or Wild Women of the Tyrol, who are willing to enter man's service and to perform work for him.² An anonymous author who wrote in 1778 tells us 'the good Kaleva covered fields with verdant grass and filled the barns of country people with new hay.' And sheet-lightning, which in folk-belief is often considered beneficial to growing corn, is termed in the south of Finland 'the sword of Kaleva.' He seems, therefore, in one aspect at least to have favoured the growth of vegetation, before helping to cut it down. Several passages in the Magic Songs, in which he is coupled, and therefore more or less identified with Osmo, favour this view. Hops were planted at the side of Kaleva's well, on the headland of Osmo's field and grew flourishingly. An old man sowed Osmo's barley in Osmo's new field and splendidly it grew

¹ *Arvoituksia*, No. 334, 1368.

² Mannhardt, (1) pp. 107, 90.

in Osmo's new field, in the clearing of Kaleva's son (209 *a*). The origin of bent-grass is said to be from a pearl that fell from the Lord, from Jesus' hand, on the edge of Osmo's field, on Pellervoinen's unploughed edge (220). Osmotar is described as the brewer of ale, who took barley, hops and water, and began making beer. In the course of the narrative she is aided by Kalevatar (209 *a*). On the other hand, when Jesus and Mary were driving to church, they crossed the heath of Kaleva, the unploughed edge of Osmo's field (34 *a*). In the parish of Ilamants in Finnish Karelia a 'field of Kaleva' (*Kalevan pelto*) means a place where nothing grows.

In the text, the sons of Kaleva are Väinämöinen [*v.* Kullervo] in his capacity of a warrior, and Suoviitta (Swamp-cloak). In giving the origin of water, it is said that Vesiviitta (Water-cloak) the son of Vaitta, (or) Suoviitta, the son of Kaleva, dug water from a rock, let water gush from a mountain, with a golden staff (228 *a*). In a variant, that Vesiviitto, son of Vaitö, (or) the offspring of Sinervätär [*v.* Suoviitta, son of Kaleva], slept a while in a mountain, grew for a long time in a rock while bringing forth water, though at last it spirited forth to be the death of fire (228 *b*). In a charm to quench fire Vesiviitta, the son of a mountain, the lovely offspring of a rock [*v.* Suoviitta, the son of Kaleva], that has slept for a year in the mountain, is asked to tether himself to the glowing ash and to cast himself down on Fire, so as to render him powerless for doing harm (171 *m*). In the last example Kaleva is coupled with God. Iron swears his solemn oath in the presence of the well-known God on the shoe of Kaleva, not to harm his brother (40 *c*).

WIZARDS, SORCERERS, ETC.

The Finns possess a considerable number of words and epithets for wizard, sorcerer, witch, seer, ecstatic and the like. Some of these are native words like *noita* 'a sorcerer,' *tieto-mies* or *tietäjä* 'the knower,' *loitsija* 'the reciter of a magic song (*loitsu*), *arpoja* 'a diviner,' *näkijä* 'a seer,' *myrrys-mies* or *into-mies* 'an ecstatic,' *lumoja* 'a stupefier,' *lukija* 'a reciter,' *katselija* 'an observer,' *laulu-mies* 'a song-man,' *ampuja* 'an archer,' *kukkaro-mies* 'a bag-man.' Others are of foreign origin like *mahti-mies* or *mahtaja* < Goth. *mahts* or Sw. *magt* 'might,' *taikuri* 'he that uses *taika*' < Goth. *taikns* 'a token, a wonder,' *velho* 'a witch,' is probably an early Slav loan, while a latter one is *poppa-mies* 'priest-man' from the Rus. *pop*. Though between these appellations no hard and fast line can be drawn, dividing them into good and bad categories, yet on the whole, injurious or black magic would generally be the work of the *noita*, the *ampuja*, the *velho*, and the *kukkaro-mies*. Beneficial or white magic, like the great bulk of the Magic Songs, was used for ejecting evil spirits of disease, etc., and would be practised by a *loitsija*, a *tietäjä*, a *lukija*, or a *laulu-mies*; in some instances by a *lumoja*, *näkijä* or an *arpoja*. Yet we have an example of an exorcist terming himself a *noita* and a Lapp (12 *b*). As a rule there is nothing in a Magic Song to show what sort of wizard the reciter of it might be; so as his function is to drive away disease, I shall term him the exorcist.

The sorcerer (*noita*), the fortune-teller (*arpoja*), is said to have been born behind the limits of the north, on the flat land of the Lapps, on a bed of fir boughs, on a pillow of stone (207). The sorcerer has a nose like an eagle's

beak (2 *d*) and wears a tall hat (14 *c*, *e*), as the Lapps do still. Sorcerers, when they exercise their arts, are naked and without a stitch of clothes (14 *b*). They are said to drink water from a pool in the croup of Hiisi's horse, and in drinking to make it hiss (9 *b*, 14 *h*). The offensive weapons of the sorcerer, the wizard (*tietäjä*) and the 'archer,' are knives of iron, pointed iron and shooting instruments (2 *a*, *b*, 14 *c*, 37 *a*, *b*). Sorcerers and wizards use arrows, and witches (*velho*) have knives of steel (176 *o*). But these expressions are not usually to be understood literally; they imply sickness, disease, or any injury caused by the spells of a sorcerer at the instigation of some jealous neighbour; though, sometimes, a sorcerer no doubt would drive a knife or a nail into the footprint of an enemy to do him harm, and there is a vague allusion to roasting and melting an image (46), into which pins or nails would first be stuck. The arrows of a sorcerer are said to be made of the wood of a tall fir growing on the Hill of Pain, and he is quite indifferent where he shoots them (208 *a*). Or they were made from chips of a huge oak that were taken to a smithy by a scoundrel, who made the arrows to be stitch and pleurisy in men, sudden sickness in a horse and elf-shots (F. jagged spikes) in kine (211 *a*). Or from the chips of a fiery oak they were made into arrows by Hiisi's son (211 *b*). Wizards, sorcerers, witches, and diviners, are to be found at every gate, at every fence, along every road, in damp dells, near water, and in fact everywhere (2 *c*, *d*).

A cursing spell may be repeated in a whining or a mumbling voice and is said to be bitten off with the teeth (46), just as one might bite off a length of thread from a clew held in the mouth. Words, *i.e.* spells or

Magic Songs, are brought from the north, from Lapland (28 *a*).

An exorcist requires a fluent mouth, a ready tongue and pliant fingers (1 *a*). In order to make him into a wizard, a skilful man and a singer, an exorcist was washed naked three times one summer night on the nether stone of a handmill by his mother (14 *e*), probably to harden and strengthen him, the stone itself being hard and strong. Another boasts that he is the son of a Northerner (*Pohjolainen*), was rocked by a girl of Turja, and was cradled by a Lapp (14 *f*). The vaunt of another is that he is the youngest son of a sorcerer, the 'calf' of an old diviner (14 *d*). He can repeat a spell learnt from his father to obtain a favourable wind (107 *a*). He depends on his father's strength of mind and armaments (12 *b*, 14 *b*). But he also inherits power from his mother. An exorcist's mother could bring back stolen milk from Mana, from Tuonela, from sorcerers, etc., and what she did he can do likewise (88 *c*). Another brags that Sharp Frost has no effect on him or on any of his family and kin. In fact he kills Frost and takes from it clothing with which to protect himself (93 *d*). If he has need of Magic Songs he will go and learn them from the old wife of Pohjola and also how to use an eagle's claws (28 *a*). At a later date an exorcist wishes the Creator, whose words and phrases are holy and well-arranged, to speak for him (157 *d*). And God is asked to save a person from the effect of village spells and incantations with words framed by the Creator and prescribed by the Holy Ghost (165 *a*). By his song an exorcist boasts he can split the shoulders of a witch or of a sorcerer, by his lay can bisect his jaw-bone and feed him on snakes and toads (14 *a*). By sing-

ing he can bring a pigskin over the eyes of sorcerers and a dogskin over their ears (14 *c*). By means of his song he turns the best singers into the worst and puts strong gloves and shoes on their hands and feet (14 *e*), meaning that they are now bound and helpless. He sings sorcerers, wizards, witches and 'archers' with their knives, arrows, etc.' into the mighty Rutja or Turja Rapids (14 *c*). By the power of his song a wolf is bitted or a bear is chained (16 *b*). He boasts that he can milk adders, handle snakes, can arm one thousand men in one night, can bit wolves and shackle bears (14 *f*). As a comrade he has one of Hiisis's people, who is of great strength and will give him hardness of body (14 *i*). Elsewhere he brags that he has a sandy skin, a hide of iron slag, a body made of steel, or one taken from the branches of a fir (14 *c*). In fact, from his possessing a sandy skin, an iron-coloured hide, it is useless for a wasp to try to sting him (19 *a*). One exorcist describes how skilful he is at surgical operations (31); another vaunts that he is a man without his like and a famous son (176 *v*).

But the exorcist is not always in a boasting mood, and does not rely solely upon bounce. Sometimes he is far from being over-confident (1 *a*, 38 *a*). In his diffidence he refers to himself as an unfortunate lad, as a poor boy, (28 *a*). He lays great stress on the difficulty of the task of ejecting evil spirits of disease (1 *a*, *b*, *d*, 3 *a*, 15 *a*, 65, 75). He asks how he is to proceed (1 *a*, 13, 15 *a*, 37 *c* etc.), how he is to protect himself (2 *a*). He pleads complete ignorance of the cause of an illness or accident (5 *a*, *b*, *c*, 23). And if he is not afraid it is because he has put on a shirt of defence (2 *c*) or something of the sort (12 *b*, 14 *b*). In the latest period he can do nothing

without the grace and aid of God the true Creator. Or he speaks with the Lord's good breath and washes the sick man with the blood and tears of Jesus (101). He acts with the Creator's leave and by the mercy of the Lord (1 *a*, 42 *b*).

DISEASE.

The disease an exorcist has to drive away is either sent by God the Creator—an idea evidently of late date—or is caused by the spells of a sorcerer for reward (5 *a*), which is undoubtedly the older belief. When an illness is effected by the spells of an enemy it is said to be the result of human art (17 *g*, *h*, *j*, *k*) and is thus distinguished from a natural malady. Disease in general is pictured as a huge and hideous devil (1 *a*) or as a bogie, *rienä* (1 *c*). It is termed a Hiisi, a devil (5 *b*, 8 *b*, 13, 15*a*), a filthy Lempo (5 *c*), an uninvited shape, *muoto* (8 *c*), a hound of Hiisi, a monster of the earth (8 *d*). An exorcist is quite astonished that a mouthless, eyeless, toothless, tongueless creature like Rickets can see to suck or to eat (41).

Sometimes an illness may have been ordered to attack a man by its father, mother, brothers or sisters (11). On the other hand it is invited to approach and recognise the evil it has done, on pain of a report being made to its mother, who would be greatly vexed thereby (6 *a*). For, after seeing the harm it has wrought, it is capable of feeling ashamed (6 *b*, 8 *d*), and of repairing and making amends for it (6 *b*, 36 *a*). An exorcist may even treat it as he would a boy and threaten to flog it with rowan shoots and tips of fir (16 *a*). The person who sends an illness or disease by means of spells is called its master or

mistress, and so the malady may be told to go home and break the head of its master or mistress (17 *g*). Or to injure in some terrible way the individual that sent it, such as by 'giving her veins a sudden squeeze, making her blood-pipes pipe a tune' (17 *h*). A sickness may also come from a grave or from the spirits of the departed (17 *b*, *c*). From this may be inferred that the Finns sacrificed to the *manes* of their ancestors, who were occasionally dissatisfied and then avenged themselves by sending disease etc., on their descendants. Ailments are also brought by wind and water (17 *v*). Once upon a time three attacks of sickness came along a swamp, along firm ground and by water. The first had a neck like a pole, the second a neck like an arch, the third was the worst attack, but is not further described (14 *h*). Or three attacks of sickness came along a swamp, along a winter-road and along springs of water, but on this occasion the worst had come along the swamp (20 *b*).

Though pain, disease and sickness of any kind were generally thought of as evil spirits with human propensities, yet they can be wound up into a ball and thrown into the sea (10 *a*). An exorcist puts them into his wallet and takes them to three Luonnotars who collect them in a copper box (10 *b*). And Kivutar, the maid of pains and sicknesses, boils these in a little kettle on the top of the Hill of Pain (10 *c*, *d*).

Inducements to depart.

When an exorcist did not feel quite strong enough to drive away a disease by force he sometimes parleyed with it, tried the arts of persuasion and offered a substantial inducement to it to retire to some other place. If it will

only go he will provide it with a splendid horse (9 *a, b*) and he urges that the road is good and there is moonlight to travel by (8 *b*). But as it was regarded as a ravenous, flesh-eating monster an appeal is generally made to its grosser appetites. It is invited to go to a cemetery where there is plenty bread of sifted flour, plenty elbows and much fat flesh (17 *c*); to Pohjola, where there is a sea beach to scamper along, both cooked and raw flesh, the boneless meat of an elk, a fat ox or of a reindeer already slaughtered and only waiting to be eaten (17 *m*); to the North, as blazes have been cut on the trees making it easy to find the way, and once there it will find a good bed, plenty to eat and drink, boneless flesh, blood to drink, elk, reindeer, and bear's meat and to crown all a pig sty to sleep in (17 *n*); to battlefields, where it is easy to visit relatives, to eat raw flesh and drink warm blood in abundance (17 *o*); in front of a cannon, where there is blood to drink and flesh to eat, that never grows less (17 *p*); to the sea, to be gently swayed by it, where there is plenty fish and roast meat for a hungry fellow to eat (17 *y*). To Metsola, to the stone heap of a bear, to eat a bear or a horse (27 *b*). To Lapland, where it is nice and cold and where it can eat reindeer meat without trouble (36 *b*). To go home, where a bitch has littered two pups, the heart's core of which Colic is welcome to devour (58). To Hell, where a horse has died, the foot of which Small-Pox can bite (27 *b*). To Metsola where there is a butter bed, a milky sleeping-place, a bacony resting-place and a soft pillow (17 *l*).

Occasionally an appeal is made to the finer feelings. A disease ought to go home because his family is alarmed and vexed at his absence and his son is lying sick (17 *i*):

Or a Pain ought to go into the sea where all his relatives, his brothers and sisters, his nephews and nieces reside (45 *a*). If there is any vanity in him, he may go to the stars 'to flame like a fire, to sparkle like a spark' (17 *q*).

The principle of offering an inducement to pursue a certain line of action is extended by exorcists or other reciters of Magic Songs to birds and animals as well as to spirits of disease. A raven, instead of injuring snares, is advised to fly to Pohjola, to Lapland, where there is elk meat and boneless flesh for a hungry fellow to devour (94). Instead of attacking cows, a bear is advised to mature his claws and strengthen the muscle of his forearm by shaking a rotten tree, by throwing down trees and twisting bushes (69 *c*). Or he should retire into the forest where there is always a bed ready for a bear (69 *d*). An ermine is recommended to enter a trap because the bait is made with cunning skill, tastes salty and is honey to the mind (73). A game bird should not fly away at the sight of a hunter's snares or it will certainly be killed by a hawk (83 *a*). A cabbage grub is advised to go into the sea where there is plenty sea-sand and water to eat and drink (66 *b*). A bug ought to withdraw into the crevices of a wall where there is plenty of fat, instead of biting the tarry back of a man (85). An attempt is even made to persuade Ukko, the god of the sky, to send rain to some other place on the ground that a mother is there with a child of two months old that has seen no water and is still unbaptized (156).

Places whither Diseases are conjured.

The exorcist conjured the spirits of disease to all sorts of localities, and at times gave the reins to his fancy in im-

aging out-of-the-way places. And once there they cannot escape unless the exorcist comes himself to set them free (18 *a, b*), a most unlikely event. He banishes them to their own country (9 *a, 17 g, h*); to Metsola (17 *l*); to deep gloomy forests whence no man returns (50); to the north (17 *n, 36 a*); to a snowy mountain peak (17 *s*); to the Hill of Pain (9 *b*); to the top of a copper hill, into the rift in an iron mountain (17 *r*); below the earth, under a copper mountain (15 *b*); to Manala's eternal huts (43); to Sariola, to unploughed land, to a nameless meadow (17 *a*); to damp dells and swamps (17 *a, t*); to the sky (17 *q, 36 b*); into a variegated stone (17 *u*); into stones that feel no pain, to swamps, deserted clearings, into moving gravel and sand (17 *t*); to priestless places, to unchristened lands (17 *w*); into the hole of an ermine (17 *a*); into a nine-fathom deep hole in a stone lying in a spring in a field (10 *c*); to the middle of the open sea (10 *a*); into the violent rapids of Ihari, Kalari, Vuoksi, Turja or Rutja (17 *d, e, f, 43*); down the mouth of Antero Vipunen (17 *a*); into the sleigh of a brindled cat, the cart of a black cock to be carried to gaol, or into the sleigh of a fox to be carried into the water (17 *a*); into the skin of a kindly seal to be carried out to sea (17 *u*); into the eye of a blue gwyniad, to the tail of a red salmon or into the mouth of an iron burbot (17 *x*); into the mouth of an iron stallion, of a wolf or a crow, under the tongue of a reindeer or under the tail of a black dog (17 *a*); to fiery rapids, to a holy stream, where there is a reef on which stands a bull with a burning mouth that will carry the disease to Tuonela (17 *d*); or into an apple or an oak tree (129 *b*), as is common enough in European folklore.

Instruments.

The belief in the power of magic song was great, but it did not preclude the use of instruments, either real or imaginary. If the voice of an exorcist is not strong enough, he takes a horn or a pipe and blows on it towards the sky in order to be better heard (1 *d*). He thrusts his herding-horn towards the sky and brings down milk from there (88 *c*). In order to claw Disease, the hideous thing, he uses the claws of a bear or of an eagle (14 *h*, 16 *a*, 20 *b*, 28 *a*), or the hands of a dead man (15 *b*, 16 *a*). To extract the 'arrows of a sorcerer' or 'Tuoni's grub,' he employs little tongs or pincers made expressly by a smith (15 *b*, 21 *c*, 37 *a*). He asks Ukko to drop into his hand pincers, the points and shafts of which are made of snakes, that he may draw out the 'arrows' and 'bloody needles' of a sorcerer (149 *a*). Smith Ilmarinen is desired to make tiny tongs and pincers for him that he may extract Lempo's arrow or his bloody knife from the body of a sufferer (149 *b*). In order to bite Colic, he goes for the teeth of a bear and squeezes the ailment with its paws (58). Before tackling Disease he puts on his viperous gloves, his snaky mitts, and smears his hands with the fat of snakes (16 *b*). He has a willow bough and an alder shaft with which he shoots down Tuoni's grub, or he grinds the animal with his pestle and mortar (21 *c*). To press down tumours he uses three stones taken from the river of Tuonela, or one as high as a church and as thick as a tower (28 *a*). He lops off tumours and excrescences with his axe (28 *a*), or uses a knife with a silver blade and a golden haft that fell into his hand from the sky (31). He requests Hiisi to bring a scythe from Esthonia or from Hell and lend it to him that he may cut out the disorder from which a patient is suffer-

ing (128 *h*). Nightmares he places on his steelyard (35) that they may exhaust themselves in weighing it down.

Defensive Precautions.

Besides employing instruments, an exorcist has often to take measures to protect his person, but their description also must not be understood too literally. From his point of view the mere recitation of a magic formula, in which he describes himself as putting on armour, was tantamount to really doing so. He drew no hard and fast line between fact and figment; the simulation of performing a certain act was potentially equivalent to its performance in reality. For at one period it is very possible that he, like the Shamans of Siberia, actually donned a particular dress for the occasion, and during the operation repeated a charm, such as one of those termed 'Taking defensive measures.' In the first of these the exorcist says he will put on an iron shirt, an iron helmet, iron gloves, copper socks, and iron boots, so that neither the arrows of a sorcerer nor the knives of a witch can injure him (2 *a*). These instruments, as we have often remarked, are figurative expressions, not to be taken in their ordinary sense. Again, he wishes the fiery shirt of his father and mother may be brought from Tuonela and put on him to guard him against the 'shooting instruments' of an 'archer' (2 *b*). He asks his dead mother to rise from the grave and bring from Tuoni's land a fur coat, which he will don, to protect himself against sorcerers, witches, etc. (176 *b*). Old wife Kave, Nature's daughter, is invoked by him to weave a cloth of gold and silver and make a shirt of defence, a copper cloak, which he can wear as a protection against spells and witches (176 *e*). He himself clips wool and fluff from a stone, hair

from a rock, and makes of them a shirt of defence against sorcerers and witches (2 c). Or he asks the Maid of Mist and Fog to pluck wool from a rock and make a shirt of mist, a copper cloak, which he can wear day and night as a defence against sorcerers and Lapps (176 f). Ukko, the old father of the sky, is to build an iron fence, a steel screen, reaching from the sky to the earth, to shelter an exorcist and his people. It is to be interlaced with lizards and snakes, which will keep an eye on sorcerers and eat up spells, etc. (176 m, n). Ukko is further requested to let fall from the sky a pipe, a copper horn, a golden shield which the exorcist will use to prevent the arrows of a sorcerer from sticking into him (176 o). Lastly, he implores the Virgin Mary to give him her blue silk scarf to bind round his hand, that he may be able to quench a fire unhurt (172 a).

Helpers.

When an exorcist, or other reciter of magic songs, felt himself powerless and in need of assistance he had no lack of helpers. He received or hoped to obtain aid not only from the multitude of spiritual beings that seem to animate nature, but also from animals, birds, fish, insects, and trees. Sufficient examples of aid from the former class have already been given. Before enumerating instances that come under the latter headings, it is only necessary to add that help was to be expected from ancestors, from forests with their men, and from lakes with their armed men (15 a, 124); from a deceased mother (176 b); from horsemen and swordsmen in the sand, that have lain for long in the earth (1 b, 15 a).

An exorcist avers that he saddles snakes, and puts a bit

in the mouth of a bear and a wolf, that they may run alongside him and gobble up the spells sent by village people (14 *g*). He threatens to raise a ram with twisted horns, or an ox with horns, to butt at and push away a disease or ailment such as colic (16 *a*, 58). He wishes an iron-hoofed mare, reared in Karelia, to kick a Hiisi away (22). The powerful black Vento ox, or a wolf of Manala, a bear of Kalma's, is invoked to extract the arrow of a sorcerer (37 *c*). He threatens to set his father's voracious, hairy-nosed, black dog at Disease—a dog with fiery mouth, with teeth like rakes, and with an iron heart that ere now has devoured a thousand men (16 *a*). And Hiisi's elks and reindeer, after being combed by Jesus, St. Andrew, and St. Peter, are desired to drive away the snakes and adders that drink the mistress's ale (91).

According to his own account, an exorcist owns three eagles, with iron, copper, and silver claws respectively, that will eat up the pain caused by burns (52 *b*). An eagle from Turjaland, with five talons like sickles, with a burning mouth, and eyes at the tip of its wings, is invoked by him to extract Keito's spears from the body of a suffering man (149 *e*). A famous eagle with a beak like five scythes, a throat like three cataracts, with iron claws, and eyes at the ends of its wings, is invited to come from Turja, from Lapland, to devour the pain caused by burns (128 *i*). An eagle from Turja is asked to lend three feathers to serve as a bulwark to a boat when about to shoot rapids (107 *c*). In the north-east, in Turjaland, dwells a famous eagle, under its wings are a hundred men, above them another hundred, at the tip of its tail are a thousand men, all girt with swords. This wonderful bird is invoked by an exorcist to remove the harm caused by spells (154 *e*). An iron-crowned cock is

desired to claw Dropsy, here spoken of as 'toads' and 'Hiisis' (56). An iron cock and hen are invited to rise from the ground to eat up burns and sip 'fire's broth,' another name for scalds and injuries from fire (171 *d*). A black cock and an iron hen are told to rise from the earth to help an exorcist by pecking out the eyes of jealous people and tearing the noses of sorcerers (176 *t*). The Creator's golden wattled cock is requested to come to speak on behalf of a defendant, to stop the judge's ears, to bribe the jurymen, and bind silk across the eyes of the sheriff (124). And a yellow wren is sent on an unsuccessful mission to Pohjola to fetch an old woman who could heal burns, though the errand was afterwards effected by a bee (52 *g*). Another bee is sent to a distant island to fetch honey for fermenting beer (142 *a*). And a spider is requested to spin a web to staunch a flow of blood (55 *e*). A golden burbot is to come from the mouth of a copper burbot to restore health and seize the pains from which a sick man is suffering, so that he may sleep in peace (102 *b*). In folklore-medicine it is a well-known remedy to catch a fish, convey to it symbolically the malady from which a patient is suffering, and then return it to the water. As this belief is also current in Finland, it seems likely that this song to restore health might have been sung during the performance of such an act.

An unfortunate mistress who has no one to herd her cows asks a willow, an alder, a rowan, and a bird-cherry tree, to do the work for her, and menaces them with dire punishment should they refuse (70 *b*). If a man cannot obtain the assistance he otherwise expected, he goes to a rock, to a boulder on a hill, for there is help in a hill, there are supplies in Hiisi's castle (65).

Precedents.

As will be seen below, when we come to examine the structure of the Magic Songs, there are a multitude of instances in which the exorcist or other reciter of charms tells a short story, the incidents of which have reference to what he wishes to do or to get. By implication this is used as a precedent why a similar event should happen again. But in seven instances a previous event is explicitly cited as a precedent and reason why something analogous should again occur. In a couple of charms against injuries from spells, after narrating how formerly the Creator freed moons and suns, released men with swords, horses with saddles, and priests with their parishioners, from mighty battle-fields, the exorcist adds: 'May He effect deliverance on this occasion, remove the harm wrought by magic, and dispel the spell-sent injury' (42 *a*). After describing how Kuume formerly had enclosed the moon in an iron barn, and the sun in a mountain of steel, and how Kapo had released them, the exorcist continues, 'So I too now release this man from the spell-brought harm of villagers, enchantments of the long-haired ones, charms spoken by the women-kind. Just as the son of the sun escaped when freed by Päivätär, so may this person too escape when freed by me' (42 *b*). An exorcist relates that formerly the solid gates of a castle *moved*, its iron hinges shook, the copper hills quaked, the earth was shaken out of joint and the sky riven into holes at the coming of the *hour* of God, when help from the Lord approached. So he asks the Disease—here spoken of as an uninvited shape, an evil one—why it does not *move* and withdraw before an *hour* has elapsed (8 *c*). After recounting how father Lempo

had received a cut, and mother Lempo and all the Lempos had cut themselves with their own knives, and stating that their veins were afterwards knotted up, the wizard summoned to stop the hæmorrhage exclaims, 'So why not this vein too? why is the blood not stopped, the deadly cataract not plugged?' (55 *b.*) A charm for making a vapour-bath to heal some malady begins with the statement that the gods above and the earth-matrons down below have baths that are heated up, new rooms that give forth whirls of smoke, and this is used as a reason for steam being given off on the present occasion, of such quality that it will serve as an ointment for injuries and an embrocation for wounds (87 *a.*). A hunter after reciting his misfortunes asks, 'Why was the great Creator wroth, the giver of game enraged, that he never gives at all? He fed the tribe, gave the race to drink, he nourished the first ancestor, so why does he not feed me too with the great morsels of the tribe, or with the titbits of the race?' (89 *c.*) At the close of a brief charm to make bread rise, a despairing housewife cries to the yeast, 'The sun and moon have *risen* both, yet thou hast not begun to *rise*' (74).

Blessing and Cursing.

The exorcist did not often have recourse to blessing, though on one occasion he says: 'Whoever without envy looks, may Jesus bless him so that he shall honeyed eyes possess, shall wend his way with a honeyed mind' (3 *a.*). He was stronger in curses. In a charm to guard against envy he says: 'Whoever looks with jealousy, may his eyes shed blood, let them run with rheum; into his eyes

may the lashes grow, as thick as a hatchet-haft, a bow-string long; may these pour blood along and across his cheeks' (3 *a*). 'Whoever looks with an envious glance, may the slag of Hiisi fill his eyes, the soot of Hiisi soil his face, may a fiery bung plug up his mouth, may Lempo's lock clinch fast his jaws, may his mouth get overgrown with moss, the root of his tongue be broken off, may his head dry into stone and skin grow on the top' (3 *b*). 'If envious persons look, if cock-eyed people pry, may a branch tear out their eyes; may a withered fir-tree grow, an iron-branched tree, before the envious person's house, throw out thick shoots, on which he shall fix his eyes, that unless set free he won't get free during the space of earthly time' (3 *c*). Or the exorcist wishes that the bloody cloak of Hiisi, that takes five men to lift, may be bound round the heads of jealous, envious, prying people, so that they may neither see nor hear (3 *d*). An exorcist hopes that for any one that repeats his private spells, 'the root of his tongue may be twisted round and his hair rubbed off' (4 *a*). 'Whoever hath bewitchment used, on him may death bewitchment use; may his tongue rot off, his mouth get overgrown with moss' (4 *b*). After consigning all sorts of necromancers and warlocks to the mighty Rutja Rapids, the exorcist wishes they may there fall asleep till the grass grows through their heads, shoulders, and tall hats (14 *c*). Or after banishing a spirit of disease to the violent Vuoksi Rapids he says: 'If thou raise thy head from there, or exalt thy snout, may Ukko pain thy head with sharply pointed needles or with iron hail' (17 *f*). 'May all the sorcerers in dells, through their own arrows, come to nought; those that use witchcraft—through their knives;

diviners—through their tools of steel; all other strong men through their strength' (2 *d*). 'May all the spells that sorcerers cast, all things that the seers see, return to their proper homes; may they cast their spells upon themselves, over their children sing their charms; may they destroy their families, may they dishonour kith and kin' (14 *d*). An exorcist addresses a poor frog in language like this: 'If thou raise thy head from there, may thy shins be smashed, thy thighs be rent, may thy marrow be withdrawn, from which an ointment will be cooked and unguents be prepared' (97). In a charm against bears: 'May the forest bear be choked with a honey ball in its mouth, so that its jaws won't open up, that its teeth won't come apart, that its tongue sha'n't freely wag' (122 *a*).

Sometimes flattering words were used. The spirit of the grave is thus addressed: 'Kindly Kalma, lovely Kalma, Kalma of the fair complexion' (24). Gout or heartburn: 'Good Gout, thou lovely Gout, Mary's sweet Gout, depart!' (30.) The spirit of pain and sickness: 'Good mistress, Kivutar, distinguished woman, Vammotar' (128 *c*), or 'Lovely old wife of pains, good mistress Kivutar' (128 *e*). A hornet: 'O hornet, thou complaisant man, don't shoot thine arrows forth' (19 *b*). A snake: 'My sweetheart, my wee bird, my beauty, my wee duck!' (75.) An ermine: 'Furred beauty of the winter-time, dear little hen of fields run wild, flower dwelling at the root of firs' (73). In raising steam to make a vapour-bath: 'O welcome, welcome, my dear Steam, my darling Steam, my darling Warmth, thou steam of wood, dear water's warmth, old Väinämöinen's sweat!' (87 *c*).

Offerings, Worship.

In former times, as the Finns did not expect to get benefits gratis, they made offerings of various kinds to their divinities to propitiate them, and sometimes to harmful spirits to induce them to desist. In later times the offerings were very small, and when a hunter speaks of the gold and silver that he is offering to the forest deity, it probably means that he has scraped a little silver off a silver coin, or at most has laid a small silver coin or two at the foot of a tree. A trapper tells Kunnotar and the golden woman Kärehetär, the divinity of foxes, to cease melting gold and silver, as he is putting bits of gold and silver into her bowl. The gold is as old as the moon, the silver as old as the sun, and was brought by his father from the wars when the speaker was a child (173 *a*). The mistress of Metsola and the Forest's golden king are asked by a hunter to enter upon an exchange of gold and silver. The 'gold' of Metsola is more coloured and darker, that of the hunter is more glistening (173 *b*). A hunter asks the master and mistress of Tapio's farm to make an exchange of gold and silver. His gold is as old as the moon, his silver as old as the sun, and is Swedish silver brought from Tornio after a battle (173 *c*). Another hunter requests the mistress of the Forest and its golden king to take his gold and silver, and to give theirs, as it will be for the benefit of Tapio's farm, and will give delight to Metsola (173 *d*). A disconsolate hunter laments that the Forest does not care for his silver or ask for his gold (89 *c*).

Sometimes the offerings were of food. A trapper implores Kuippana, the king of the forest, to take a fancy to and approve of his salt and groats, and to give instead

his 'sweet rye cakes' and 'groats,' *i.e.* game (153 *a*). Kuutar (Moon's daughter) and Päivätär (Sun's daughter) are requested by a hunter to bake a suet cake, a honeyed bannock, with which he may propitiate the Forest when he goes hunting (139 *b*). A trapper invites Tapio to take a fancy to his groats and salt (153 *b*). If Para brings good luck he is to get a calf as a reward (153 *d*). A man asks Water and Water's mistress to make him well, as he prays with chosen words, and gives blood and salt as offerings to appease and reconcile them (157 *e*). Chaff in the eye is invited to take a fancy to the sea in exchange for pleasant fat (45 *b*).

The references to worship are very rare, but they are worth noting. A hunter declares that he does not worship boulder stones, or praise a stone, or hunt on holy days and Sabbaths. Other men's offerings of gold, silver, and tin are not more glittering than his, and if they say a prayer he brings more solid offerings, and says the best of prayers to the donors that are best (89 *d*). Another hunter does not bow down to firs, but bows to the 'flowers' of a fir, *i.e.* to squirrels (72 *b*). A third hunter prays for 'hoofs and feet,' and will not give thanks for a stone or prostrate himself for stumps, or serve for willows (139 *m*).

A stone where festivities of some sort, no doubt partly of a religious nature, were held, is referred to in the expression 'Jesus' stone of joy, the Creator's rock of sports' (203 *b*).

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