

The Anthropological Study of Finland

By BERTIL LUNDMAN*

In 1957 the Finnish Academy of Science published the last provincial monograph of the national anthropological research project carried out by that body since 1924. It seems, therefore, appropriate to review the results thus far obtained in the anthropological study of that country. Of the approximately four million inhabitants of Finland some nine-tenths now speak Finnish and one-tenth Swedish. There are also several thousand Lapps and Russians. However, the Finnish Lapps, about whom I have written several times in connection with the rest of the Lapps, will not be considered in this article.

I

The prehistory of Finland has been studied with remarkable success (*Swedish Compendium*, by C. F. Meinander, 1952). These explorations have, unfortunately, yielded practically no human remains. The only ones of any importance are those from the moors near the west coast in the province of South Ostrobothnia. They are the remains of somewhat more than a dozen individuals and date from approximately 800 A.D. These remains are from males of very short stature, on the average scarcely 5 feet 3 inches (160 cm.) tall, and of graceful build. The skulls are dolichocephalic (on the average hardly 74 for the males), with a length-height index of about 71.5. Presumably these are remains of decadent northern types — criminals or slave weaklings who were of almost no value to their owner and were therefore used as sacrifices (Pesonen, 1940, and Blomquist, 1953). This meager find does not, of course, contribute much to racial history. We are, therefore, obliged to go back to the ethnogeny of the various tribes, as it is known from the history of culture and settlement.

Most of the modern prehistorians assume that the ancestors of the present-day West Finns began to arrive on the southwest coast of Finland around the time of the birth of Christ. However, the ancestors of the East Finns are believed to have settled in the eastern part of the country as early as the Stone Age, and at that time with a more or less comb-ware culture (*Kammkeramischer Kultur*). This difference showed itself at the dawn of

* Translated from the German by George H. Classen.

history, around 1200 A.D., in a rather sharp contrast between the west, or "true," Finns (Suomi) and the Tavasts, on the one hand, and the eastern tribes of the Karelians and Savolaxians on the other. (Northern Finland was actually settled permanently by the Finns only in the Middle Ages. The settlers were the so-called Kvaens, a tribal mixture predominantly of East Finns with a minority of West Finns). This distinction between west and east in Finland is thus much older than the Late Medieval boundary, which happened to run farther eastward. Until the Peace of Teusina in 1595 this border separated the Swedish and the Russian spheres of influence. Even in our own days the line of separation is still quite noticeable as regards anthropology, ethnology and dialect.

The antiquity of the present Swedish population in Finland, however, is a matter of much controversy. Only a few historico-cultural indices (such as place-names) point to uninterrupted settlement since pre-Christian times. Furthermore, this is true only of the southwest, notably the offshore islands and probably also some adjacent coastal areas. The rest of the Swedish settlements probably came into being only after the Swedish conquest around 1150 A.D. This is clearly demonstrated by the still thickly settled Swedish area along the western portion of the south coast. This stretch was first colonized before about 1300 A.D. by settlers from east-central Sweden, which agrees well with anthropological findings (see below).

Finally, the Lapps continued to roam about the whole country as long as the Late Middle Ages, even reaching as far as the south coast. But they are now confined entirely to the northernmost parts of the country and number no more than 2000.

Settlement patterns solidified during the Late Middle Ages. From that period on the Swedish population is to be found in three main areas of the southwest: on the Aland Island (and most of the islands between the Alands and the southwest coast), and along the two lengthy stretches of coastline, one of them being the central and western portions of the south coast, the other the central portion of the west coast around the (admittedly rather wide) narrows called Kvarken between the southern and northern parts of the Gulf of Bothnia. A few smaller portions of these two coastal areas are now populated entirely by Finns. Otherwise the Swedes continue to predominate, since the devastating old Russian wars (up to 1809) caused only local population shifts.

II

The history of the anthropological study of Finland begins in the year 1843 with a lecture before the Finnish Academy of

Science by the physician K. A. Haartman on the anthropological tribal types of Finland. It was the same year that Anders Retzius gave his fundamental lecture on the cranial shape of the Northern people before the Swedish Academy of Science. (There is obviously a direct historical connection with Haartman's lecture; however, nothing further is known about it.) Beginning with the then very eagerly pursued study of Finnish tribes (we must remember that this was the age of awakening nationalism), Dr Haartman sketches a very simple picture of the Finns. However, Haartman likens the Karelians to "desert Bedouins" (!), with brown hair, blue eyes (!), long and high-vaulted crania, narrow faces, and straight, narrow noses. The Tavasts were completely blond, with turned-up noses, broad and low-vaulted crania, and also a shorter and broader build than the Karelians. The Savolaxians were viewed as a mixed race of Karelians and Tavasts. Although this assumption was wrong, it continued to serve as a basis for Finnish tribal typology until the end of the nineteenth century. It was even elevated to a sort of canon in the works of Gustaf Retzius (son of A. Retzius) following his travels in Finland in the 1870s.

Proper scientific anthropology began only with the Medical Councillor, Dr F. W. Westerlund, who personally examined 5661 young Finnish soldiers in 1898-99. Published data for the whole country, however, were limited to the cephalic index and pigmentation. In order to collect more material on stature, Westerlund studied the mustering rolls for eight draft years (1885-92) — altogether no fewer than 131,700 men. Containing information from every parish in Finland, the work was published in 1900, with the anthropometric data arranged according to the 70 recruiting districts. This study showed that the West Finns were much taller than the East Finns, and also somewhat less brachycephalic. Both groups were very light in pigmentation, with the eastern group being just a shade darker.

Then followed for Finland the eventful decades of 1900-1920, during which there could naturally be little anthropological research. But by 1923, shortly after the return of more peaceful conditions, the young and active professor of anatomy, Y. Kajava, president of the Academy of Science (who, unfortunately, died a premature death in 1929), initiated a comprehensive investigation of adults of both sexes (men aged 25-49, women aged 20-49) and of all tribes of the country. For the purpose of the investigation, Finland was divided into about 50 districts according to the history of settlement. An attempt was made to obtain as much data as possible from natives of each district, according to a rather elaborate system embracing a minimum of 26 body and 19 head and face measurements, as well as hair color and eye color (but without color charts), and often also considerable morphological

data. At least nine indices were calculated, and usually many more. For example, 23 indices were calculated for the southernmost province of Finland (Nyland). Following this, a detailed monograph was prepared and printed for each of the eight (with Lapland, nine) provinces of the country, at the expense of the Finnish Academy of Science. The monographs contained an introduction on the history of settlement, and a comprehensive presentation of the material collected, but almost no conclusions, maps, or pictures (these were supposed to be presented in a final volume, which has not yet appeared). The material was collected chiefly in the years 1924-30 (some of it, however, much later). The first provincial monograph appeared in 1931 and the last in 1957. Naturally, the work was again delayed by the new period of difficult times for Finland.

It is an imposing series of volumes with a total of 1155 pages (plus 200 pages on Lapland); 1015 tables (plus 74), most of them large; and many diagrams, *etc.* This work led an outstanding non-Scandinavian anthropologist to describe Finland as perhaps the best-studied nation.

On closer look, however, it becomes apparent that the project was much too ambitious for Finland's still under-developed anthropological research. The investigators, often young medical men, frequently lacked the necessary training. In addition, the large number of measurements and other data that had to be collected usually compelled extreme limitation in the number of subjects. Also, investigator and publisher were frequently different persons. Thus the total number of subjects adds up to only 8518: 6724 Finns and 1794 Swedes. (There were 3755 Finnish and 802 Swedish men; 2969 Finnish and 992 Swedish women.) In addition, the investigators examined 664 Lapps (not discussed here) of whom more than half were children. The distribution of the areas investigated was very uneven, so that more accurate maps could not be produced from the data. On a provincial basis, however, the figures are acceptable after weighting.

III

Here we shall discuss only those measurements and indices* which appear to me trustworthy. Unfortunately, the data on pigmentation are not reliable (see above), likewise the data on morphology. In addition, the latter data have been published for only a few provinces. I have confined myself almost entirely to the male material, with the female material being used only in a

* It is not possible, however, to deal individually with the absolute components of the indices, even though they were presumably arrived at in a correct manner.

few cases after conversion to male values. On the other hand, I have occasionally referred, by way of comparison or complementation, to Westerlund's material (designated as "W", the rest as "A"), and for the cephalic index a few times to Sievers (1927).

The average male stature for all Finland is given by Westerlund as 5 ft. 5 in. (167.0 cm.) and by the Finnish Academy as 5 ft. 5½ in. (169.1 cm.). The latter figure, however, was not obtained from subjects of the same age groups but from those born roughly between 1875 and 1910, a time during which there was a large increase in stature in Finland (B. Lundman, 1940). In spite of this, there is — not so much in the individual diagram for all Finns, as in diagrams of district means of both studies (W. and A.) prepared by the author — a very pronounced bimodal distribution with the national average exactly in between the two peaks. On the left is the peak representing the mean stature of the shorter East Finns and on the right that of the taller West Finns and Swedes. The two latter groups merge almost imperceptibly, even though the Swedes, on the average, are somewhat taller. The two peaks are particularly well defined in the older, more comprehensive study.

The two maps of stature show approximately the same values, even though that of 1890 with its 130,000 male subjects is probably more accurate as to details. There is a general decrease in height from southwest to northeast. At least as regards the older map this corresponds approximately to the cultural slope of that time, which could suggest an environmental influence. There is, however, a very noticeable jump along the boundary between the west and east Finns, running directly across the Lacustrine Shield (*i.e.*, the Finnish flat country covered with lakes) with its almost uniform economic conditions — obviously the result mainly of different tribal inheritance. We may also point to the — admittedly rather small — increase in stature along the Swedish boundary far up north.

Since the data on the cephalic index compiled by Westerlund and the Finnish Academy (as well as the few observations by Sievers) do not raise the slightest suspicion of diverging techniques, I have incorporated them into one map. This map shows in a striking manner the uniformity as well as the relatively low value of the index over the entire Shield. The even lower cephalic index in the southwest is of course due almost entirely to Swedish influence. Most of the persons examined still speak Swedish. The somewhat higher values in parts of southern Karelia are in good agreement with similar values in the adjoining areas of Russia and in eastern Estonia. The even higher index in the north appears to radiate from the very short-headed community of Kuusamo and

environs. This, however, is not certain, for the latter area is an exception. The entire northward increase in the index is most likely due to Lapp influence. Nevertheless, the population of the Kuusamo district is neither darker nor of lower stature than that of the surrounding area — rather the opposite. The high index in Kuusamo may therefore be due to an old highly inbred local type that need not have much Lapp admixture. The small dolichocephalic enclaves in southern Ostrobothnia and in southern Karelia, however, are probably to be explained by historically demonstrated migrations of settlers from the southwest.

The ear-length-height index of the head given in the study by the Finnish Academy is not comparable with the data from other countries, since the height of the head (following the proposal of Kajava) was taken to mean the perspective elevation between the planes of the tragus of the ear and the crown (bregma) of the head. The uniformity of the results, however, ought to convince any doubter that the purpose of the measurements was achieved easily and gracefully. (The method should therefore be tried elsewhere and it may well solve the current difficulties of measuring ear-height on living persons.) The map shows lower values along the western south coast (as well as in Lapland which is not considered here), and higher values partly in the southeast and partly in the north, just south of Finnish Lapland. This agrees with the data on the (basion-bregma) height-length index of the cranium from about a dozen cranial series reported in the anthropological literature.

The zygomatic arch is absolutely smaller in some narrower faced Swedish groups in the west and southwest and in the short East Finns. This, however, does not hold for the equally short North Finns mixed with the very broad-faced Lapps. These groups have an absolutely larger zygomatic arch, along with the medium-sized West Finns and the very tall island Swedes. The whole picture is thus far from clear. The very small values along Lake Ladoga are physiognomically noticeable, thus providing the only definite basis for Haartman's "Bedouin hypothesis." This trait may hark back to old remnants of East-Mediterranean Russian and Gypsy immigrants, of whom there were at one time fairly large numbers in this area (see map in Thesleff, 1910).

IV

Let us, lastly, turn to a consideration of the blood-group data collected by the great serologist Oswald Strengh (who later called himself Osmo Renkonen) and his school, above all Eero Mustakallio. Carried on very actively during the thirties, Finnish blood-group research declined in the postwar years and has only

recently started up again. Therefore, we cannot give much more than the geographical distribution of the ABO system — this, however, with a fairly high degree of accuracy. Only for North Finland do we, unfortunately lack almost all data.

Unique characteristics are exhibited above all by the population in the East Finnish portion of the Lacustrine Shield, with relatively little r , but on the other hand as much p as q . This is without any close similarity to the distribution in the surrounding areas. (It appears to resemble, most of all, the distribution among the low-vaulted Kola Lapps.) Along the south and west coast mean q values are almost everywhere lower than in the rest of the country, which is probably due to the modern Swedish and, farther eastward, to the ancient Swedish influence. The high q content in the interior of the southwest, similar to that of Estonia, agrees well with the general view of the prehistorians that the ancestors of the modern "true" Finns came from there around the beginning of the Christian era. As an ethnographical parallel we might mention that the use of draft oxen was common as late as the twentieth century both in Estonia and in the Finnish southwest, while it was lacking in the rest of Finland (Vielkuna, 1936). The few data for North Finland as well as the figures for the adjacent territory in Sweden (Beckman, 1957) show fairly low q values, caused perhaps by Scando-Lapp and — in the border area — by Swedish strains.

As far as pigmentation is concerned we can use only Westerlund's data, which show very light colors for almost the entire country. The north of Finland, however, is slightly darker (see above).

V

To summarize: The twofold anthropological division of the Finnish national territory (as it existed between the two world wars) is more or less clearly delineated on our maps. The newer and older Swedish strains give a somewhat special character to most of the coastal regions of West Finland. In north Finland (south of the area now populated by the Lapps) we find, apart from the Swedish strain along the border, a Scando-Lapp element with hypsiccephalic crania and low q values. The modern Finnish Lapps indicate a locally variable mixture of chamaecephalic and higher- q value East Lapps, which we cannot explore further here. The fluctuating history of South Karelia is reflected anthropologically in the checkered racial geography, a fact indicated by several observations in this article.

We must further emphasize that the pronounced chamaecephaly of the inhabitants of the western south coast, as well as their somewhat lower stature, is probably due to the migration

of east-central Swedes in the fourteenth century. In contrast to these migrants, the Swedes in East Bothnia appear to have mixed more thoroughly with the Finns, a view that has geographical and historical support. The island Swedes resemble the population of southern Norrland in Sweden in their tall stature, but their cranial height is much greater and similar to that of the Finns. Possibly their basic stock is very old and the result of an ancient and unique mixture of a large number of Swedes and a small number of Finns, a hypothesis that can be fitted into the history of settlement. From the anthropological viewpoint the difference between the Swedes and West Finns seems to be generally less than that between the West Finns and East Finns, even though the Finnish Swedes on the whole are clearly distinct from the West Finns. Biogeographically speaking they inhabit that part of the west Finnish area which is facing towards Sweden. In the interior regions of Finland, however, we find fewer and fewer quasi-Swedish "clines" (in Julian Huxley's sense).

This would seem to sum up the most important data from published sources. I have therefore avoided all racial labels and have referred almost exclusively to population and ethnic groups. Much more, of course, could be said if we really knew the racial geography of Finland, both as regards the always important morphological as well as the physiological aspect, as for example in respect of the other blood-group systems. Here almost everything still remains to be done, despite a good deal of diligent labor: and it ought to be done before the picture is obscured by increased inner migrations.

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Red Indians and Religion

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The Great Plains comprise a vast shimmering area of low relief and wide horizons, the dry and almost treeless heartland of the North American continent. From the foothills of the Rockies eastwards the grasslands roll some seven hundred miles towards the Mississippi and the Great Lakes. They stretch out like a slumbering giant, with blond head in southern Canada and tawny, sun-tanned toes within a few hundred miles of the warm Gulf of Mexico. Altogether they touch or completely cover ten states, a fifth of the area of the American nation, and five and a half million North Americans swarm all over them like Lilliputians on the pegged-down Gulliver. At least that is how many there were in 1950. How many Indians there were in 1750 or 1850 is anybody's guess. About 109,000 is suggested for 1780; that is, before European influence on the Plains had been profoundly felt. By 1851 it is reckoned there were as many as 250,000 or even 300,000.

That Indians have inhabited the Plains for thousands of years is now accepted. Until quite recently, however, it was believed that the western Plains were a "prehistoric uninhabited region" only "nibbled at" here and there by hunting groups from the mountains to the west or by more venturesome semi-agricultural peoples from the river valleys to the east. Since the beginning of systematic archaeological work over the last four decades, these older views are no longer tenable. Though they lacked the large village sites of the middle Missouri or the burial mounds found further east, the western Plains nevertheless contained ample evidence of long occupation by man, an occupation that began with the early big-game hunters of as long ago as 10,000 years.

In summer the Great Plains bask under white-hot skies and a broiling sun. Temperatures can exceed 110 degrees Fahrenheit, but there are frequent strong cooling winds, occasional thunder storms, and pelting showers of hail. Normally the summer temperature ranges more comfortably from 60 degrees to 80 degrees. It never gets very wet. Precipitation is scanty, with just over 15 inches in the north, higher in the isolated hills, and as little as six inches in the Big Horn valley. Most of it falls in early summer to the benefit and joy of the parched and thirty grama and buffalo grasses and sagebrush which are just then beginning their comparatively short growing season. In winter, under a thick dazzling blanket of snow, which lies for as many as 120 days in the north, the average temperature increases southwards from