

existing population so that the seals, on which the whole culture depends, may be used rationally and over a wider area. This process was started with the deliberate formation of the Scoresby Sund settlement in 1924. There are plenty of further opportunities for dispersion, and planning is needed in order to provide new centres with store and catechist. The second main conclusion is that there is need for international agreement to maintain the area in isolation. Where formerly geography and sea ice were ample, now new barriers must be maintained against harmful personal contacts with tourists, hunters and possible traders. Parallel with this is the need for international rational conservation of the stocks of seals in the North Atlantic. The present progressive decreases of stock have both direct and indirect detrimental effects on the East Greenland culture. It is pointed out that such conservation will be to the eventual advantage of Europeans no less than of the East Greenlanders.

It is stated in conclusion that faults have been recognised, but "nevertheless we are persuaded that this work has been characterised by an unselfish desire to protect and help a small and primitive people, which without this assistance would undoubtedly have perished". The Danes have nobly carried out a worthy and congenial task, and it remains the view of the Greenland Administration that isolation and protection should continue.

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THE LAPPS OF WEST BOTHNIA, SWEDEN

[Review of paper "On the History and Conditions of Life of the West Bothnian nomad Lapps, their Food and Health Conditions", by S. Ekvall. *Acta Medica Scandinavica*, Vol. 105, Fasc. 4, 1940, pp. 329-59.]

This useful paper is based on a lecture given in 1938 at the annual meeting of the Swedish Association of Medicine by S. Ekvall, the Medical Superintendent of the Central Hospital at Umeå, Sweden. It is the story of the gradual transition of the Lapps from the nomadic to the settled life. This transition in our days represents the speeding up of a long-term trend.

The Lapps now number around 30,000. In 1920 it was estimated that there were about 20,000 in Norway, 7000 in Sweden and about 1500 in Russia and the same in Finland. The most recent count (1937) gives a total of 6481 Lapps in Sweden, of whom 2824 kept reindeer, "only 1135 (17.5 %) however, subsisting entirely on reindeer-raising". The number of Lapps at that date in the province of West Bothnia, the author's particular concern, was 1923, of whom 353 kept reindeer.

The settling of the nomad Lapps, and the recent speeding up of the process, is typical of the present condition throughout the world of nomad races who are dependent mainly on a single species of domestic animal. The camel-raising Bedu of the Middle East afford an almost exact parallel. For long there have been settled and semi-settled Lapps, and likewise Bedu, retaining more or less of their original culture but living in permanent habitations among the fringes of their neighbours. The present causes accelerating the process of Lapp

settlement are the gradual closing of political frontiers, the pressure of cultivation, a growing money economy and a partial failure in the markets for the products of the herds. A stage in the transition from nomadic life, dependent almost entirely on the herds, is the change from the intensive to the extensive system of reindeer culture. In the former the animals are made to yield meat, milk, skins and other lesser products for the welfare of the Lapp and his family. Under the extensive system of reindeer culture, the animals are kept almost entirely for slaughter as marketable meat.

While the Lapps of Sweden have shown a gradual increase in their numbers, at least since the end of the eighteenth century, the numbers of their reindeer vary greatly from year to year, according to weather conditions and the incidence of epidemics. The total of Swedish reindeer in 1921 was estimated at some 162,000, in 1925 at 235,000 and in 1933 at nearly 300,000. This was followed by a considerable decline in numbers. In 1940 the number of reindeer in West Bothnia was believed to be about 33,000. An individual may be the owner of as many as 1000 animals; usually, however, it is a few hundreds, sometimes less.

As the nomads settle there is danger of a "poor Lapp" problem, but this seems not to be important. Most find employment in small-scale fishing or forestry work, or as minor craftsmen. Some raise cattle. The acceptance of an agricultural mode of life takes longer, but some Lapps have attained it. The settled Lapp retains a part of his original diet, but in impoverished form, lacking often those small but important extras, whether obtained from the interstices of the reindeer's carcass, or selected from among the local flora. In comparison with the diet of the Swedish cultivating peasant, that of the settled Lapp is poor, because what the latter has lost in the transition he has not yet made good by the practice of cultivation. The author, whose interest is mainly medical, considers the settled Lapps still a healthy group but showing signs of deterioration in the increasing incidence of dental caries and tuberculosis, to mention but two examples. This deterioration is directly connected with the impoverishment of their diet. The author draws parallels with the same tendency for an increase of caries and other disorders among the Eskimo of East Greenland, following a similar increase in the use of imported food and lessened reliance on a nearly pure meat diet.

The author concludes that the gradual settlement of the Lapps can proceed without excessive harm to the group so long as care and helpfulness are forthcoming from the central Government, and special stress is laid on education in its various forms, dietary and hygienic no less than formal.

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