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FISH FARMING AND OTTERS IN FINLAND

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Abstract: The results of a questionnaire sent to all fishfarmers in Finland are presented; 45% replied. There appear to be good otter populations in Finland. Frequency and amount of damage to stocks is discussed. An electric fence system that has been found useful in excluding otters from fish farms is described. Only a few farmers consider otters a grave pest. The major threat to otters in Finland seems to be traffic accidents as car numbers increase. Further information is needed to confirm the findings, and to ensure confusion with mink does not occur.

INTRODUCTION

Fish farming in Finland has very much increased in the 1980s. Rainbow trout (*Salmo gairdneri*) is the main (99%) product with a record yield of 13,000 metric tons in the year 1988. At the same time our natural catch of salmonids was much lower (1.2 metric tons in 1986) (Anonymous, 1988; 1989).

Otters are not protected at fish farms and the Finnish state does not yet compensate for losses. Therefore in early 1980 a questionnaire was sent by WWF to all known fish farmers (n = 778) to determine how many otters have been killed and how great have been the financial losses. Other questions were also included. Some 45% of the farmers returned the form.

RESULTS

1. Distribution of Otters in Finland

Because there are fish farms all over the country, the present data probably describe the main distribution of otter populations in Finland. Otters are rare or absent in the coastal regions (Figure 1) while there are good populations in inland, central and eastern parts of the country. Also populations in southern and western Lapland seem to be viable, even though it is difficult to determine what constitutes a viable population.

2. Frequency of Visits

Most fishfarmers (69%) reported that otters visit in autumn and winter. Mostly they stay for a couple of days twice a month. However, sometimes otters lived on the farms almost continuously round the whole year. But 61 persons wrote that otters never visited the farms although they lived on the adjacent areas. There was no correlation with e.g. the latitude and the frequency of visits.

3. Numbers of otters killed on the fish farms.

Altogether at least 76 otters were killed in the 1980s (Figure 1). Most of them (at least 42%) were shot while only 16% were killed with traps. The rest were caught e.g. in live-traps, drowned in fish traps or killed by dogs. Only 23 otters were killed before the year 1980 in fish farms. This may reflect both the increasing population of otters and the growth of fish farming.

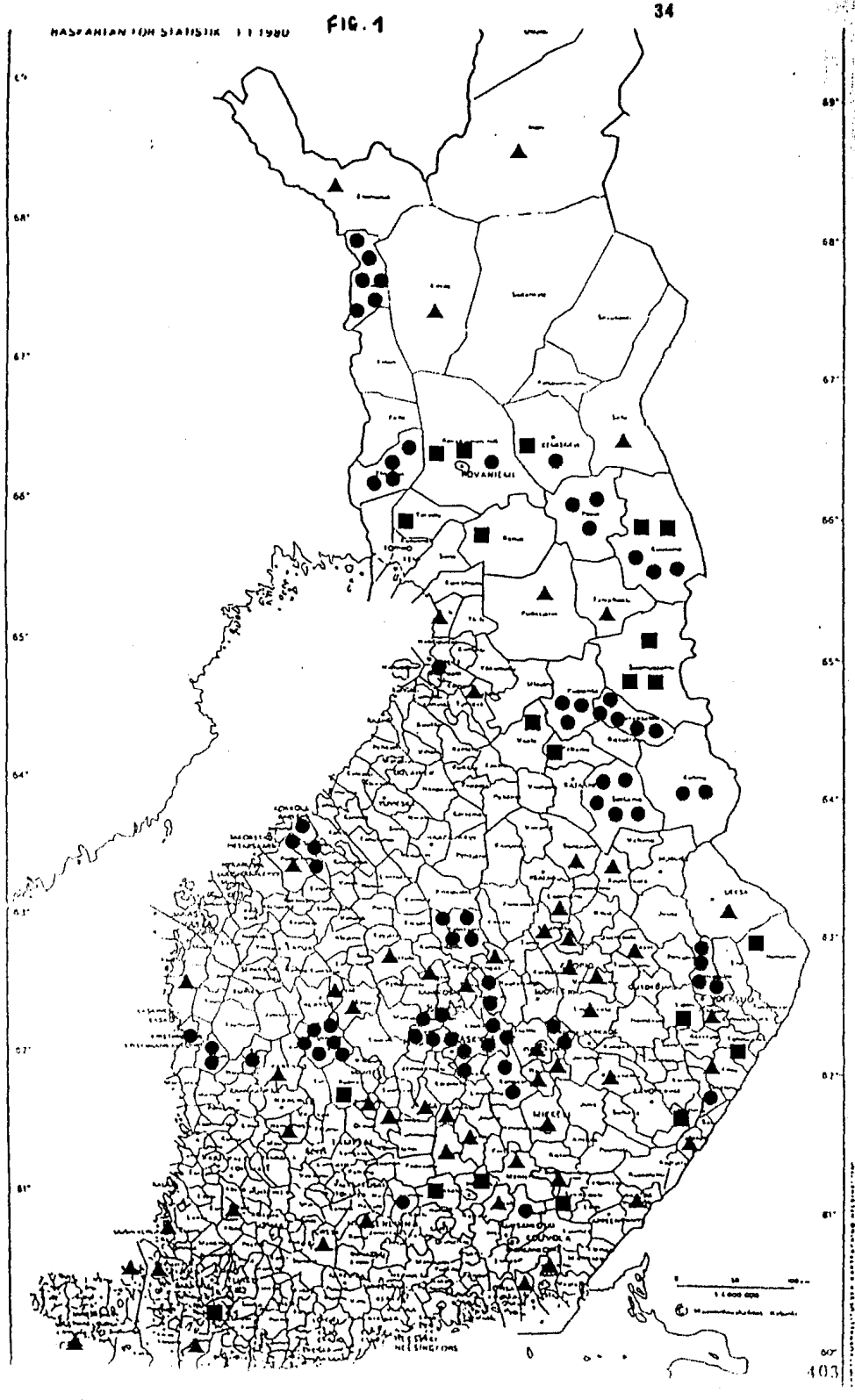


Figure 1: The main populations of otters in Finland in the 1980s according to fish farmers.
● = one otter killed in fish farms.
■ = fish farm reporting damage by otters.
▲ = no damage but otters were present in 1988-1989.

4. Damage done by Otters in Fish Farms

The total yearly losses were about 75,000 US dollars. One third of them was reported from the Oulu province (Figure 1) but occasionally otters caught much fish elsewhere too. In an extreme case, in the year 1988, two otters ate 4500-5000 trout of two years age . Their value was estimated as 7500 US dollars.

Sometimes surplus killing was apparent. Once in late winter seven trout of 1kg were found in snow. Each of them had been bitten in the throat. There were only otter tracks on the river bank. Likewise in autumn 1988 altogether 19 trout of 1.5kg were once found in western Lapland on a 200m length of river bank. They had not been eaten, only bitten in the throat. There was no snow at that time, thus the killer could have been a mink. But up to five otters were seen together there.

5. How to prevent the Damage

Several fish farmers have tested different fences to prevent otters coming in. Possibly one of the best is a 50cm high, 20-50mm mesh metal fence made of 1mm wire. Five cm above it is a low voltage electric wire normally used to constrain cattle (Figure 2). After snow storms, the snow along the fence was trampled under foot.

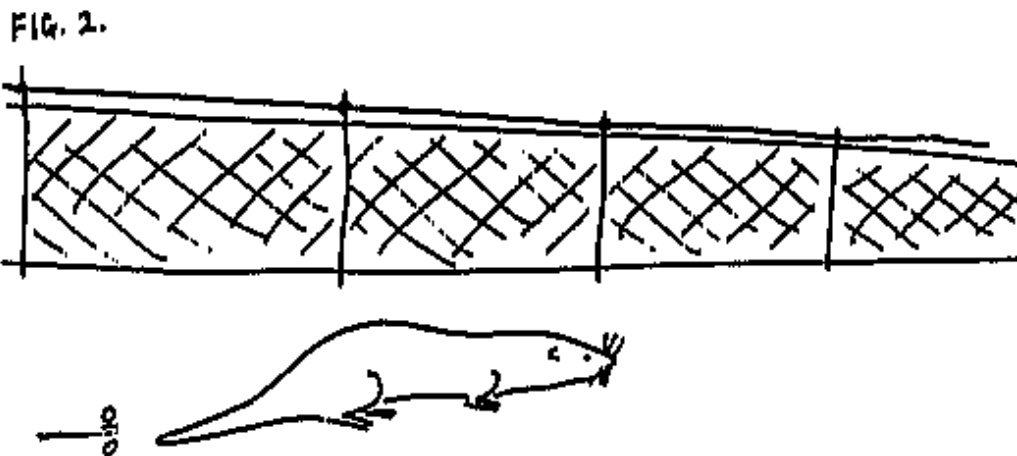


Figure 2: An electric fence preventing otters intruding into fish farm

In snowless areas, a 15 cm high fence suffices. This fence consists of light glass fibre stakes and two electric cattle-wires 10 and 15cm from the surface of the earth.

An old man was once looking out of the window when an otter came its usual way into the fish farm without knowing that there was now a new, low electric fence. It ran into the fence, jumped up and returned quickly. Later the otter always went round the fence at a distance of 100m.

6. Attitude to Otters

Over one hundred fish farmers said they would, in principle, give the trapped otters to WWF in order to transport them to other areas. But the problem remains to find a place remote enough from fish farms. Some wrote that it is nice to see otters and the damage they do is not too great. Only a few farmers consider otters as serious pests and curse that it is very difficult to get rid of these intelligent animals. Many farmers would give the carcasses of killed otters to zoologists if collection was organized.

7. Discussion

Certainly additional data are needed to clarify the distribution of otters in Finland. According to the map of Vikberg et al (1989) otters should also be found in several places on the coastal area. In the present material there are two reports even on the Åland Islands which are otterless according to both Kaikusalo (1984a) and Vikberg et al (1989). It is possible that there is some confusion with mink - or otters are returning to the archipelago.

Many otters are probably killed each year in Finland. Certainly many cases are not reported at all. At least 180 otters were brought to Finnish museums in the 1980s (pers. comm.). A minimum of 256 otters were killed in Finland during the last ten years.

Kaikusalo (1984b) estimated, based on questionnaires that tens of otters die annually in Finland in fish traps and traffic accidents. The last named are an increasing menace because the number of cars grows rapidly. At the same time, hunters demand the restarting of otter hunting.

In Sweden, otter populations seem to be low even in the best areas. Dead otters are given to Naturhistoriska Riksmuseet in Stockholm. Between 1965-85 altogether 65 otters were received (Olssen et al, 1985).

Vikberg et al (1989) suggested that the growing fish farming has been a *benefit* to otters because they now get plenty of food. However, otters are also killed in fish farms. The increasing fish farming cannot be the reason for increasing numbers of otters in the 1980s, because salmonids form only a minor part of the food of otters thus far studied in Finland (Skarén, unpublished data).

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