

"SEALHUNTING IN SWEDEN AND FINLAND DURING THE 20th CENTURY"

by

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1. The populations.

Three species of seals occur in the Baltic area, viz. the grey seal (Hali-choerus grypus), the ringed seal (Pusa hispida botnica) and the harbour seal (Phoca vitulina vitulina).

The grey seal entered the Baltic area about 10 000 years ago, during the stage of the Baltic, which with quarternary-geological terminology is called the Yoldia-sea. The Yoldia-sea developed, as the ice got withdrawn, into the Ancylus-lake. The Ancylus-lake was succeeded by the Litorina-sea and the Lymnaea-sea, of which the latter is roughly the same as the present Baltic sea. Although the grey seals in the Baltic thus has been isolated from the northeast-Atlantic population for a long time, they are not regarded as a subspecies. There are anyways certain ecological differences between the Baltic and the northeast-Atlantic populations. E.g. the former breeds in the ice during the early spring, while the latter breeds on rocky islands in the autumn. The Baltic grey seal is today most abundant in the Central Baltic, but the species occurs in the whole Baltic area. Communication between the two populations has not been recorded!

The ringed seal in the Baltic is a glacial relict, i.e. it was present already in the Baltic ice-lake, the stage of the Baltic sea, that preceded the Yoldia-sea. During the different stages of the Baltic sea it has developed into a sub-species, which is now known as "botnica". This species is today most abundant in the Gulf of Bothnia and the Gulf of Finland, and has no connections with the population in the Arctic ocean. Immature animals do occasionally occur in the southern Central Baltic. Probably these young seals originate in the Gulf of Finland.

The harbour seal is the youngest and least numerous of the species in the Baltic area. This seal occurs only in the southern part of the Central Baltic. On the contrary it is the most abundant species on the west-coast of Sweden and Denmark. Communication between the populations might occur.

(During the Yoldiasea- and Ancyluslake-periods harp seals (Pagophilus groenlandicus) also occurred in the Baltic. The harp seal is nowadays extinct in this area.)

The total number of seals that is present in the Baltic today is very uncertain. The estimated (or rather "guesstimated") numbers published consequently vary between 200 000 and 10 000 animals. Those extreme figures indicate how utterly difficult it is to determine the actual size of the populations.

2. The hunting.

Our knowledge about the hunting for seals today is mainly based on the annual statistics on bounty payments. In the diagrams (Fig. 1 and 2) have been stated the number of seals for which bounties have been paid out in Sweden and Finland during the twentieth century. - It should be observed that the diagrams show the intensity of hunting and not fluctuations in the size of the populations.

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Now we face the question how well do these figures reflect the real hunting per year. How long does the hunter wait before he cash the bounty for the seals he has killed? E.g. the figures for 1969 show that during this year bounties were paid in Sweden for in total 350 seals. How many of these seals had been killed during the same year, and how many had been killed earlier? To solve this problem, the statements that the hunters have given, when they got their bounties during the years 1966-1969 have been investigated. The paper that the hunter has to sign to get the bounties, informs of his name and address, the number of seals of each species for which bounties have been paid out, and the time and place for the killing of the animals.

The number of Swedish hunters, who during the years 1966-1969 have received bounties is shown in table A ~~(Fig. 3)~~. The average number of seals for which bounties have been paid out per hunter has been stated in table B. From Fig. 1 and 2, and table A it appears that the number of seals for which bounties have been paid, as well as the number of hunters receiving bounties decreased after 1967. The same thing is valid for the average number of seals for which bounties have been paid per hunter (table B). Does this depend on that the new hunting-law, which came into force 1 January 1968, led to a reduction of the number of active hunters, or are the seal-tribes so diminished that the prey per hunter because of this has decreased? The new law permits only active fishermen to hunt seals on other peoples hunting-grounds. Formerly this right was provided to all Swedish citizens.

By means of the statements given by the Swedish hunters, the number of active hunters per year, and the number of seals actually killed per year has been calculated. (See table C-1 and D-1)

When reading these figures it appeared that the number of hunters, who waited both one and two years before they cashed their bounties was very high. (See table E.) In table F have been reproduced the corresponding figures for the lag concerning the seals for which the bounties have been paid.

Because of this, the statements given in table C-1 and D-1, concerning the number of active hunters respectively seals killed in Sweden during the years 1966-1969 must be corrected (counted forward) with the corresponding "lagging-factors" in order to make them comparable. The figures thus received are shown in the tables C-2 and D-2. From these figures it appears on one hand that the number of hunters decreased when the new law came into force, on the other hand that the number of seals killed decreased, probably because of the same reason.

The number of seals killed in Sweden has, however, proportionally decreased slightly a little more than the number of active hunters, i.e. the extent of the prey per hunter shows a certain decline. (See table G.) The decrease has been rather moderate as concerning the grey seal, and when regarding the ringed seal a little increase (1969) is discernible.

The corrected figures are valid under the postulation that the lagging is the same every year. This is probably the case during the 1960's. Likely the lagging, however, has less importance during earlier decades when the seal-hunting was a valuable contribution to the house-keeping, and the bounties were comparatively more worthwhile.

The hunting-intensity is not solely depending on the supply of seals. Also other factors, as the size of the bounty, climatical conditions and social circumstances are important.

In the year 1900 was the bounty, paid by public funds, in Sweden 3 Sw.cr. for every seal killed. The amount has later successively been raised, and in 1913 the bounty was 4 Sw.cr. In 1925 it was raised to 6 Sw.cr., 1928 to 10 Sw.cr., 1948 to 15 Sw.cr. and 1965 to 30 Sw.cr. In the latter case the raising only concerned adult seals. For pups killed before May 1, the bounty is still 15 Sw.cr. This does not, however, protect the harbour seal pups, as they are born in June-July.

Also in Finland bounties are paid by public funds. During the years 1909 to 1918 the amount was 5 Fmk. for each seal killed. In 1924, after the end of the civil war, the bounty was raised to 30 Fmk. In 1928 it became 50 Fmk. From 1943 50 Fmk. was paid for seals producing less than 20 kg. blubber, and 150 Fmk. for seals producing more. In 1963 the bounty became 20 Fmk. (I.e. new Finnish marks. From 1.1.1963 100 "old" Fmk. are equivalent to 1 "new" Fmk.) During the years 1964-1968 the bounty was doubled, i.e. 2x20 Fmk. were paid. From 1969 20 Fmk. are paid for grey seals, and 40 Fmk. for ringed seals.

The social circumstances in Sweden influence - because of the fluctuations in the market conditions of the forest-industry - especially the sealhunting in the northern counties, which in its turn at first hand affects the hunting for ringed seals, but also to a certain degree the hunting for grey seals. With the background of troublesome situation on the labour-market in the beginning of the 1910's and 1930's in mind, the high hunting-figures during these periods seem quite logical. The hunting of that time mainly took place during the months February - April, when the seals gather in the ice for pupping and breeding. This form of hunting, which forced the participants to stay away from home for weeks, while searching for the seals, is now almost completely abandoned by the Swedish hunters, who instead mostly carry out their hunting during the summer and autumn. The Swedish sealhunting of today mainly takes place by chance, and is carried out by fishermen as a form of protection. On the contrary the hunting on ice is still sometimes practised by the crews of Finnish trawlers in the Central Baltic (south of the Åland sea).

World War I (1914-1918) caused for obvious reasons a notable decrease in the Finnish sealhunting, at the same time as the hunting towards the end of the war gradually increased in Sweden. The total economical value of a seal (blubber, skin and bounte) was during the first year of the war in Sweden 15:50 Sw.cr. In 1918 this value had raised to 200 Sw.cr!

The figures for 1919-1923 are missing in Finland because of the civil war.

During the later part of the 1930's the economical conditions got better in Sweden, and the interest in going out hunting for seals decreased. The lowest point was reached during the first years of World War II, when the military calling-ups had reduced the number of hunters. A series of very cold winters also made the hunting difficult. A change came in about 1942, when the rationing on meat and fat had successively got perceptible in Sweden. Seal-meat and trainoil became valuable contributions to the housekeeping, and the hunting-intensity increased again. One single seal was then paid with 115 Sw.cr., while it was only worth 15 Sw.cr. in the years before the war. The intensity of hunting was high right to the end of the 1940's, for which the remaining rationing surely had a certain responsibility.

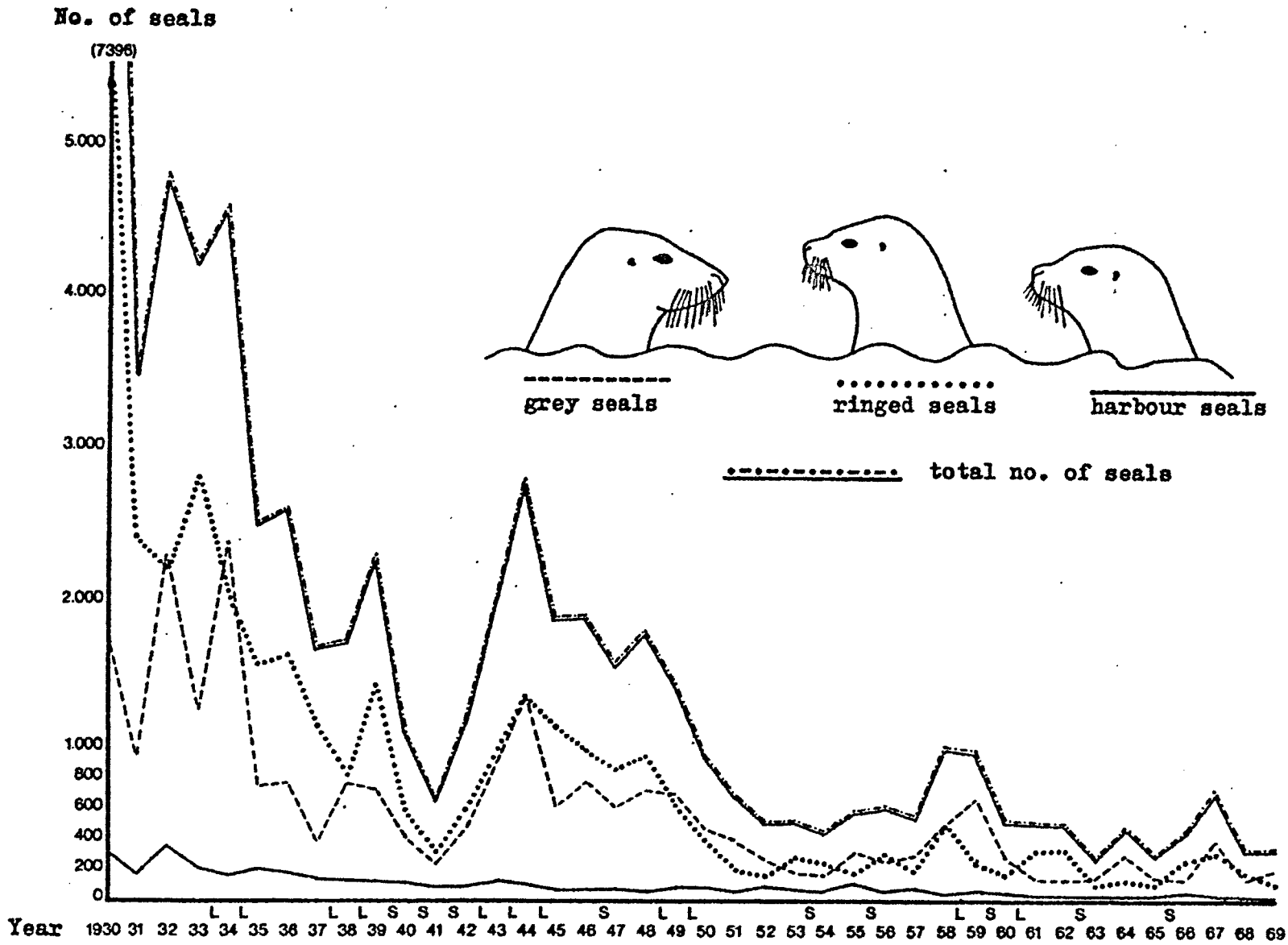
The beginning of the 1950's are in Sweden characterized by a boom period at the labour-market, and consequently the seal-hunting declines. This

tendency has since then on the whole continued, with small divergences caused by changes in the hunting-laws, etc.

The conditions in Finland have been more unstable, which is reflected in the highly fluctuating curve over bounty-payments.

Incidentally it may be mentioned that the cease of the Swedish (and to a certain degree the Finnish) winter-hunting on the ice in the Gulf of Bothnia and the Gulf of Finland seems to have favoured the reproduction of the ringed seal. During the 1960's the number of ringed seals in the Central Baltic has increased remarkably. In 1969 two ringed seals were shot as far south as at Karlskrona.

It has very often been stated that the ice-situation is very important for the results of the sealhunting at large. Because of this the huntingstatistics in ~~table 1~~<sup>2</sup> are reproduced on a diagram showing the maximum ice-coverage of the Baltic during the years 1900-1970. (These figures have kindly been communicated to me by Mr. Erkki Palosuo at the Institute of Marine Research in Helsinki, Finland.) From the diagram it appears that years with little supply of ice, very often corresponds to high hunting-figures, while severe ice-winters seem to cause meagre profit. The antithesis of this can, however, also be seen in the diagram, and thus one must remember that the influence of ice-conditions is only one of the factors that affect the hunting for seals.



No. of seals for which bounties have been paid out in Sweden  
from 1930.

Fig. 1

No. of seals  
in thousands

No. of seals for which bounties have been paid out in Sweden and Finland  
during the 20th century, compared with the maximum icecoverage of the Baltic

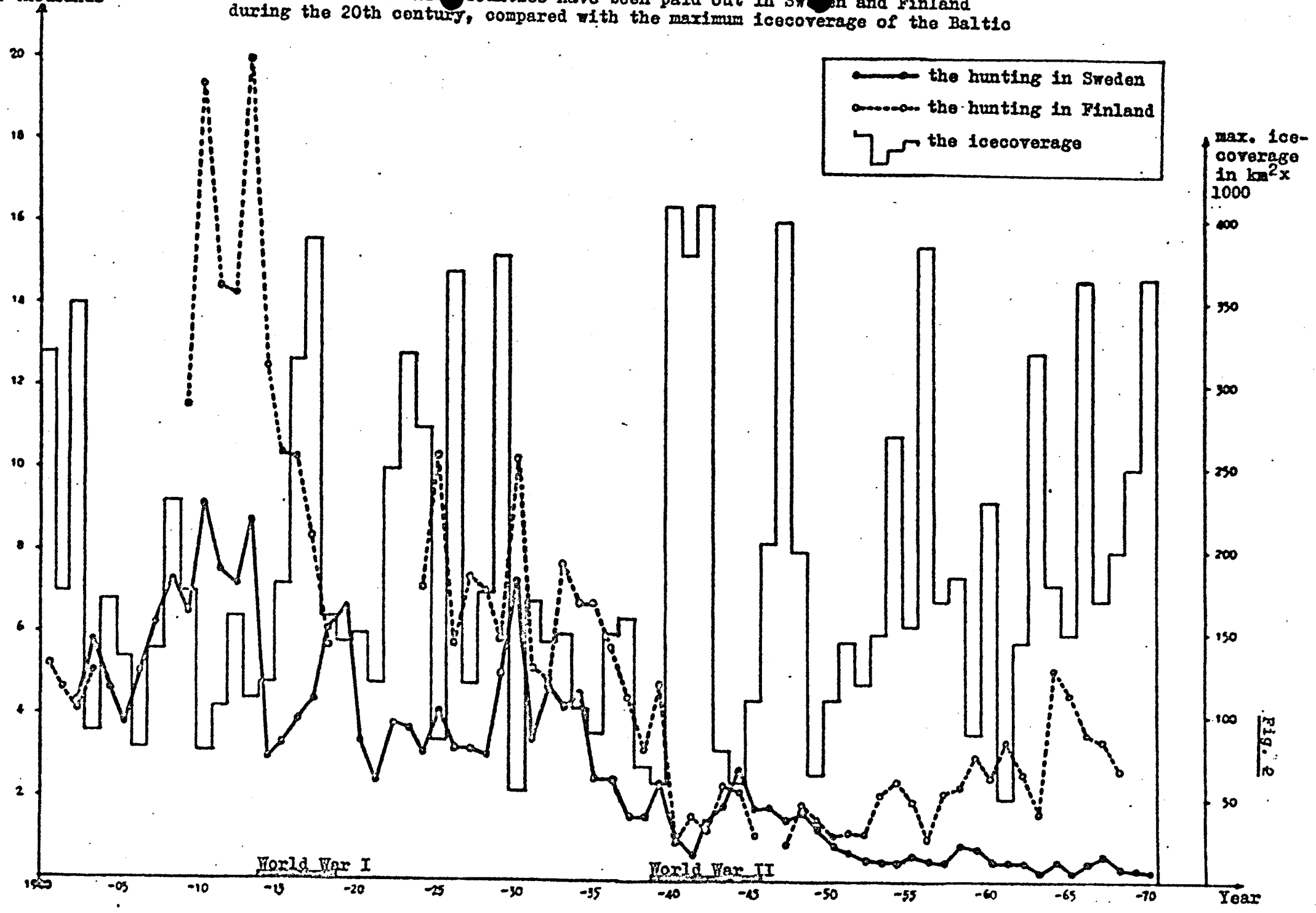


Fig. 2

Table A. No. of hunters who have cashed bounties for seals per year:

	1966	1967	1968	1969
for grey seals	61	89	55	61
for ringed seals	44	70	48	34
for harbour seals	12	7	5	2
Total no. of hunters	106	126	91	79

Table B. No. of seals for which bounties have been paid per hunter and year:

	1966	1967	1968	1969
grey seals per hunter	2,37	4,47	2,85	3,33
ringed seals per hunter	6,11	4,61	3,83	4,03
harbour seals per hunter	2,67	3,00	1,60	4,00
Tot. no. of seals per hunter	4,20	5,89	3,88	4,40

Table C. No. of active hunters in Sweden:

	1. According to statistics of bounties paid out.				2. Corrected figures of bounties paid out.			
	1966	1967	1968	1969	1966	1967	1968	1969
on grey seals	82	95	47	42	82	95	50	72
on ringed seals	71	66	42	16	71	67	45	37
on harbour seals	12	6	4	1	12	6	4	1
Total no. of active hunters	142	140	77	53	142	141	82	110

Table D. No. of seals killed in Sweden.

	1. According to statistics of bounties paid out.				2. Corrected figures of bounties paid out.			
	1966	1967	1968	1969	1966	1967	1968	1969
grey seals	269	316	145	124	269	316	153	220
ringed seals	321	260	118	61	321	261	124	115
harbour seals	31	22	10	1	31	22	10	1
Tot. no. of seals	621	598	281x	186	621	599	291x	336

x. In the total sum is included 4 seals, for which the determination of species is missing.

(cont.)

Table E. Percentage no. of hunters to whom bounties have been paid out during:

	for grey seals	for ringed seals	for harbour seals	for all three species
the year of hunting	58%	43%	71%	51%
1 year afterwards	36,5%	51%	29%	43%
2 years afterwards	5,5%	5%	0%	5,5%
3 years afterwards	0%	1%	0%	0,5%

Table F. Percentage no. of seals for which bounties have been paid out during:

	grey seals	ringed seals	harbour seals	all three species
the year of hunting	56,5%	53%	82%	57%
1 year afterwards	38%	42%	18%	38%
2 years afterwards	5,5%	4,5%	0%	5%
3 years afterwards	0%	0,5%	0%	0%

Table G. No. of seals killed per active hunter.  
(Calculated on the corrected figures from table C and D.)

	1966	1967	1968	1969
grey seals	3,28	3,33	3,06	3,06
ringed seals	4,52	3,90	2,76	3,11
harbour seals	2,58	3,66	2,50	1,00
Tot. no. of seals per hunter	4,37	4,24	3,55	3,05