

Comparison of Tags used on Arctic Cod

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At the beginning of 1959 the Bergen and Lowestoft Laboratories co-operated in tagging experiments off the Norwegian coast (mostly the Malangen Grounds) designed to aid the present studies of the population dynamics of the Arctic cod. Trawl caught cod were tagged on board the research vessels JOHAN HJORT and ERNEST HOLT. Both ships used two types of tag - the LEA tag attached in the normal Norwegian fashion in front of the first dorsal fin by a monofilament loop, and the Lowestoft plastic flag attached in the normal English manner by a braided nylon loop between the first and second dorsal fins. At the same time purse-seine caught fish were tagged on the spawning grounds inside the fjords, using LEA tags.

The experiments had two purposes. The first was to test the difference in returns from trawl caught and purse-seine caught fish, in order to discover if the more roughly treated trawl caught fish gave poorer returns, and hence if necessary to make adjustments to the results of tagging experiments on the immature trawl caught fish in the Svalbard area. The second was to compare the returns of LEA and Lowestoft tags.

Because the purse-seine caught fish were tagged in the middle of the fishery the first year returns cannot be compared with those from the trawl caught fish and only the second objective can be reported on now.

The results are given in Tables 1 and 2, giving the returns reported up to the 1st August, 1959, grouped according to time and gear of recapture and length. It appears that there is very little difference between the two types of tags as regards time at liberty, nationality, or method of recapture. Slightly more Lowestoft than LEA tags were returned - seventy-three against sixty-six, but the difference is not statistically significant. Considering the size of fish, it appears that a smaller percentage of both very large (over 100 cm) and small (under 75 cm) fish were returned. There is also a slight difference between tags in this respect. Thus for fish under 90 cm marked on the ERNEST HOLT 17% of Lowestoft and 11% of the LEA tags were returned, but for fish over 90 cm the returns were 12% and 14.5% respectively - a slight suggestion that the LEA tag (or method of attachment) was relatively better for the larger fish. However, in general the results show that tagging experiments using LEA or Lowestoft tags are closely comparable, at least for returns within six months. Later returns will be examined to see whether there are any differences, due for example to greater shedding by one or other tag.

Recaptures from ERNEST HOLF Cod Tagging off the Norway Coast, January - February, 1959

Length Group (cm)	Month of Recapture						Trawl						Gear				Total Recaptures to 1.8.59.		Total Released		% Returned																
	Jan. E	Jan. N	Feb. E	Feb. N	March E	March N	April E	April N	May E	May N	June E	June N	England E	England N	W. Germany E	W. Germany N	Norway E	Norway N	Norway E	Norway N	Net E	Net N	E	N	E	N	E	N									
45-49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50-54	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55-59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60-64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65-69	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70-74	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75-79	2	-	2	-	2	-	3	3	-	-	-	-	3	1	1	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
80-84	2	-	-	1	2	4	3	2	-	-	-	-	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
85-89	1	1	-	-	9	6	9	3	3	-	-	-	3	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
90-94	4	1	1	2	7	9	1	2	3	-	-	-	2	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
95-99	1	-	2	1	5	8	1	2	4	-	-	-	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
100-04	-	-	1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
105-09	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
110-14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
115-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
130-34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	10	2	8	7	30	33	19	16	1	0	0	1	7	6	7	4	1	2	16	15	26*	26*	68	59	473	472	14	12									

* In addition five Norwegian and eleven English tags recaptured by Norway by unknown gear; and one by purse seine