

TAGGING OF POLLACK ON THE NORWEGIAN WEST COAST IN 1979

by

Tore Jakobsen
Institute of Marine Research
P.O.Box 1870, 5011 Bergen-Nordnes,
Norway

ABSTRACT

In August 1979, 160 3-4-year-old pollack were tagged on the Norwegian west coast at about 60°N. Recaptures were mostly within 5 nautical miles and not more than 20 nautical miles from the tagging locality. The recapture rate of 23 per cent indicates considerable exploitation locally. The results give no indication of connection between the coastal pollack and the pollack in the North Sea. There may be local stocks of pollack along the Norwegian west coast.

INTRODUCTION

For human consumption, the pollack (Pollachius pollachius (L.) is considered to be of at least the same quality as saithe. However, total European nominal catch has rarely exceeded 10 000 tonnes, and even allowing for inadequate landing statistics, unreported by-catches, and fishing for domestic use, the catches must be small compared to the major gadoid species. This relatively low commercial status also means that scientific investigations on pollack have been rare, and most of the current knowledge about the biology has been obtained as by-products of research on other species. A review of the biology of the pollack is given by Reinsch (1976).

In Norway, annual landings of pollack have been 1000-3000 tonnes, mostly taken on the southwest coast. Knowledge about the biology is generally poor, and virtually nothing is known about migration and stock structure. There is no directed research on pollack in Norway, and the tagging experiment presented here was not planned in advance, but was carried out during a saithe tagging cruise where some live pollack became available.

MATERIAL AND METHODS

During a saithe tagging cruise in 1979, live saithe were obtained from commercial purse seine catches, and among the fish bought from one of these catches, approximately 25 per cent proved to be pollack. Most of the pollack, 160 individuals, were tagged and released together with 439 saithe (Jakobsen 1985) 28 August in the position N60°00'E05°28' (Figure 1). Hydrostatical tags of Lea's type were used, fastened to the fish with a gut in front of the anterior dorsal fin. Otoliths were taken from the 11 remaining pollack. The tagged pollack were 28-52 cm (Figure 2).

The data include all recaptures reported by the end of 1984.

RESULTS AND DISCUSSION

A total of 37 recaptures, 23 per cent of the number tagged, have been reported. There were 10 recaptures in 1979, 11 in 1980, 15 in 1981, 1 in 1982, and none in 1983 and 1984. Only four recaptures were evidently from localities more than 5 nautical miles from the tagging locality (in six cases, information about the locality of recapture was inadequate or lacking). Two individuals were recaptured (March and July 1981) about 10 nautical miles northwest of the tagging locality, and two individuals had migrated about 20 nautical miles to southeast (January 1981) and southwest (1982, month unknown) respectively.

The gear used was reported for 33 of the recaptures. Two thirds (22) had been caught by various types of gill net, the rest by anglers (4), hand line (3), seine nets (3) and trap nets (1). The catches were mostly from small depths, frequently less than 10 m. The deepest catch was at 65 m.

The age readings (11 otoliths) indicated that most of the pollack was 3 or 4 years old, and there was no clear distinction in size between the two age groups.

The length frequency distribution (at tagging) of the recaptured fish was similar to that of all the tagged fish, except that pollack less than 32 cm at tagging were not recaptured. This indicates that the smallest individuals may have been subject to mortality caused by the tagging.

The recapture rate of 23 per cent is higher than the 15 per cent in the experiment on saithe carried out at the same time (Jakobsen 1985). This difference is probably not real. The number of recaptures from tagging experiments on saithe is generally less than would be expected from the exploitation. One reason for this may be the extensive purse seine fishery where the individual fish is not usually handled by the fishermen and tags recovered in fish plants are less likely to be reported. The recapture rate of 23 per cent for pollack is still surprisingly high and shows that the exploitation is considerable, at least in this area.

The geographical distribution of the recaptures indicates that the pollack is considerably less migratory than saithe. By 1984 probably most of the tagged pollack would have reached maturity, but there is no evidence of spawning migration. According to Reinsch (1976), pollack spawn on the Norwegian west coast south of 60°N. The tagging experiment supports this and it seems that the pollack on the Norwegian coast is separated from the North Sea pollack population. The lack of evidence of long-range migration along the coast in the experiment indicates that the pollack on the west coast of Norway may be split into local stocks.

REFERENCES

- Jakobsen, T. 1985. Tagging of Saithe on the Norwegian coast in 1978-1980. Coun. Meet. int. Coun. Explor. Sea, 1985 (G:23): 1-12.
- Reinsch, H. H. 1976. Kohler und Steinkohler. 158 pp. A. Ziemsen Verlag. Wittenberg Lutherstadt 1976.

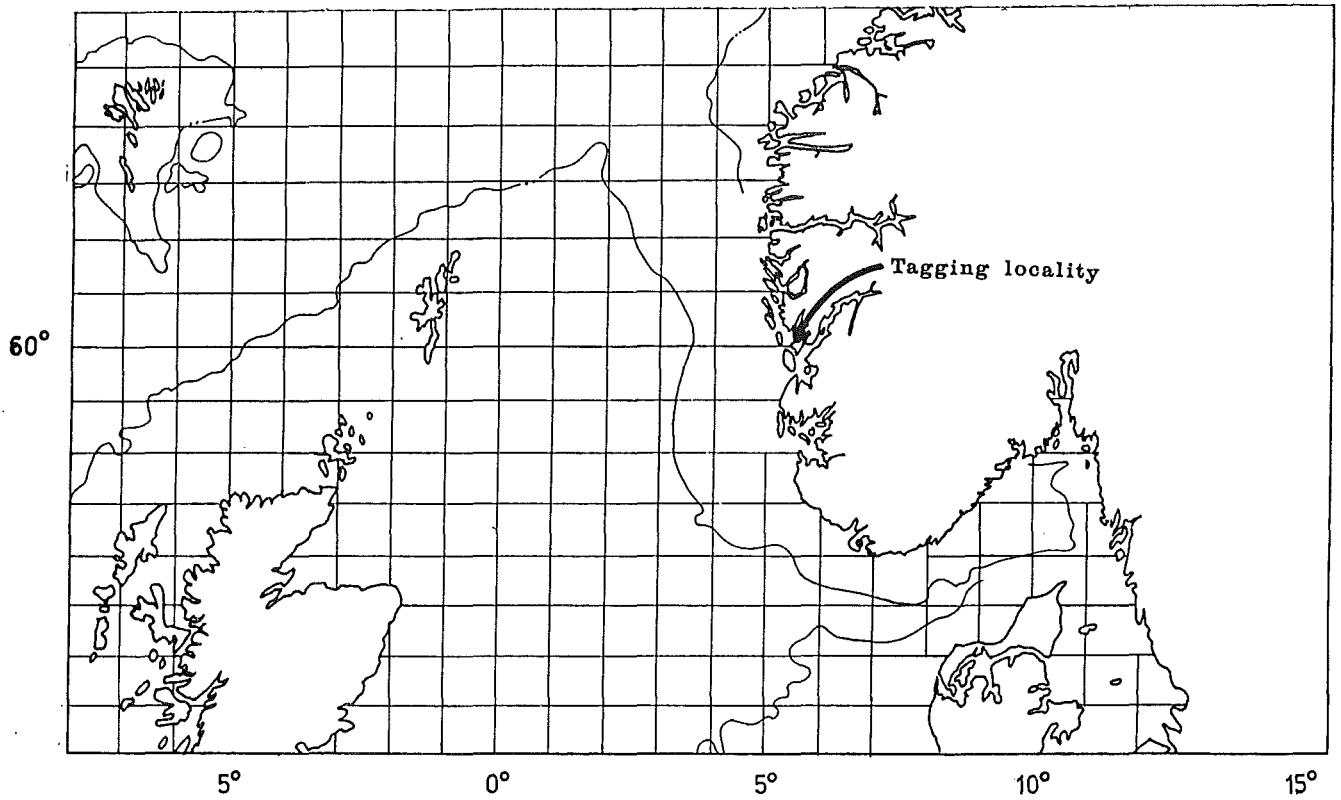


Figure 1. Map showing the tagging locality

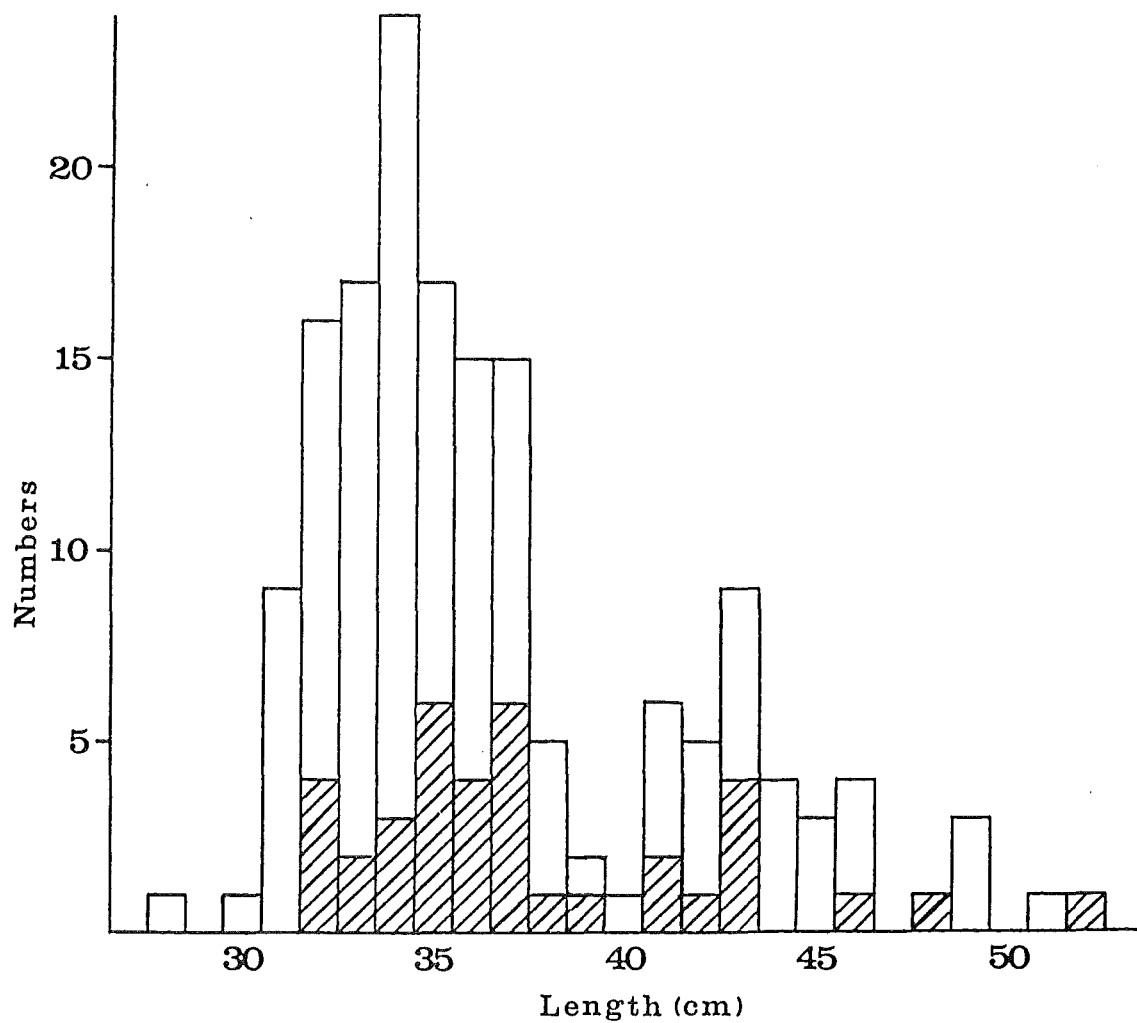


Figure 2. Length distribution at tagging of tagged (open columns) and recaptured (hatched columns) pollack.