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The Norwegian Spring-spawning herring prior
to 1970 [LIFE HISTORY]

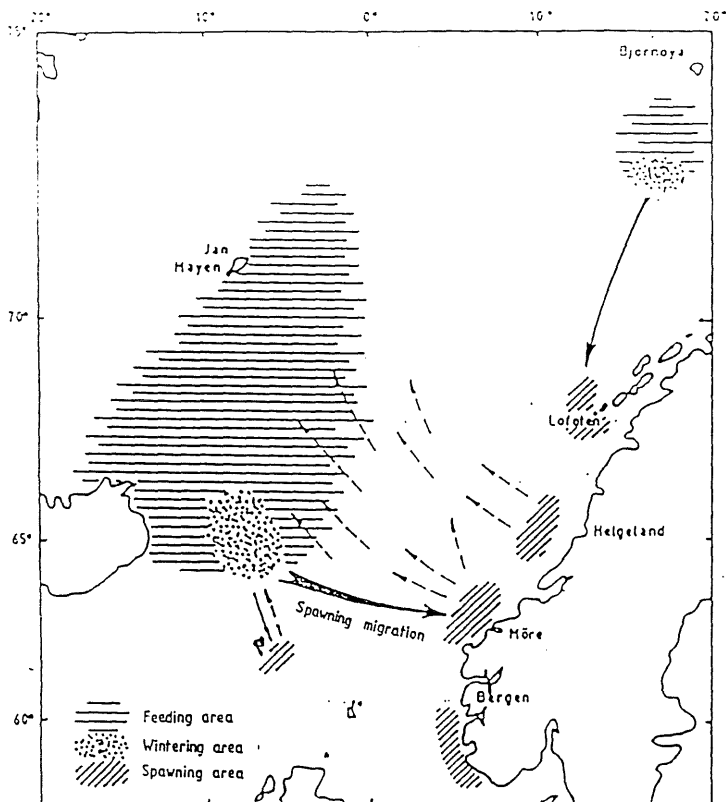
by

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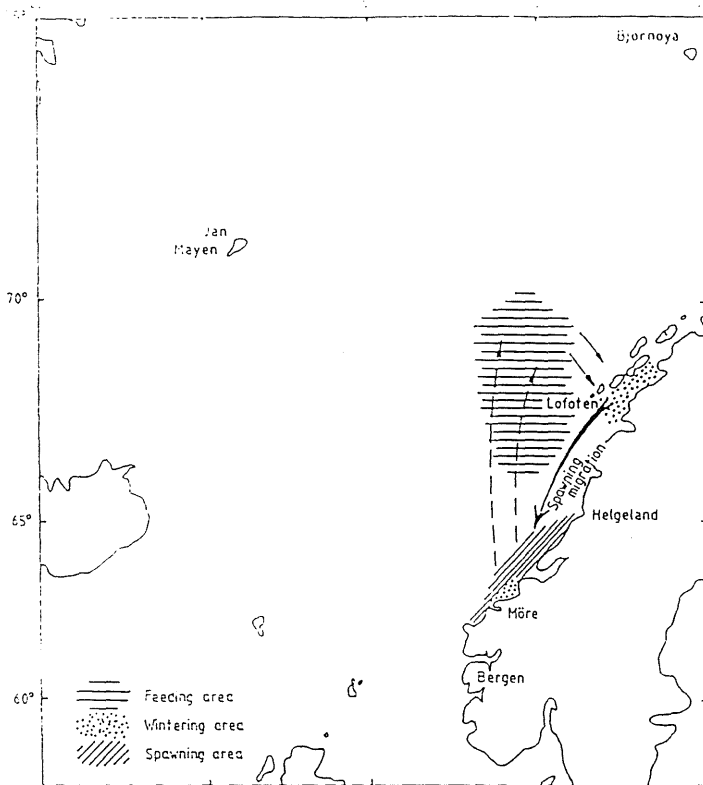
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The Norwegian spring-spawning herring was one of the world's major exploited fish stocks. Herring feed on plankton, and the adult stock harvested the very abundant plankton fauna in the Polar Front area of the Norwegian Sea. The herring spawned on the west coast of Norway, and before the fishermen started to use large ocean-going fishing vessels the stock was fished only in Norwegian coastal waters.

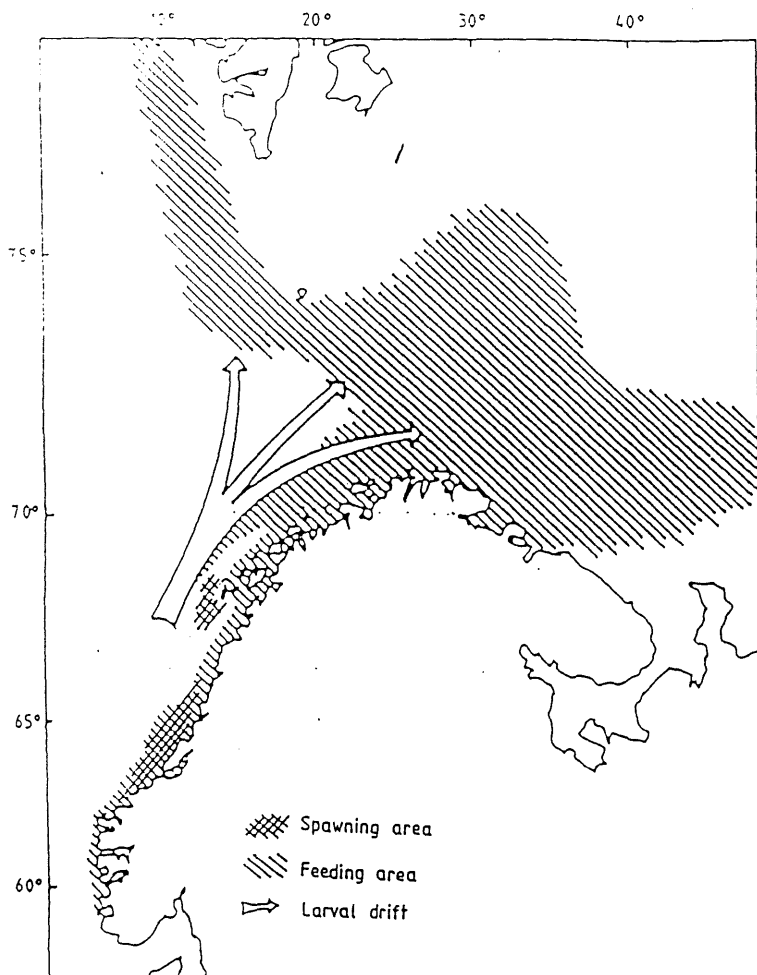
The stock biomass in the 50's is estimated to have been 10 million tonnes, equal to 50 times the weight of the Norwegian human population. This huge input of fish biomass into the coastal waters had a decisive effect on the marine life on the Norwegian shelf. Hordes of predators of fishes, sea-mammals and birds followed the herring shoals on their way to the spawning grounds, turning the Norwegian west coast into one of the most profitable fishing grounds in the world.



Distribution of adult herring prior to 1970. The interface between the inflow of Atlantic water and the Arctic water coming from the north forms the physical basis for the most abundant plankton fauna in the North-Eastern Atlantic. This Polar Front area was the feeding ground of adult herring before the stock was fished out in the late 60's. The herring fed along the Polar Front during the summer and autumn, and gathered in a wintering area east of Iceland at the end of the feeding season. By the turn of the year the prespawners had started their migration towards the Norwegian west coast. The shoals reached the coast in January/February and spawned in February/March.



Recent distribution of adult herring. The spawning stock collapsed in 1969 and no spawning migration occurred in 1970-72. Some herring of the 1969 year-class did however survive, and they spawned in 1973. The feeding migration to the Polar Front area was disrupted and has not yet been resumed. Since 1973 the adult herring have fed in coastal and offshore waters and wintered in the Norwegian fjords. But the spawning grounds have not changed to any appreciable extent.



Distribution of juvenile herring. The demersal herring eggs are hatched in April-May. The larvae float to the surface and are carried northwards by the current. In years with high current velocity, most of the fry end up in the Barents Sea. This usually coincides with strong year-classes. Otherwise the nursery areas of juveniles lie off the Norwegian coast and in the fjords. The herring mature at an age of 4 to 5 years.