Abstract

Knowledge about distribution, migration and other life history traits of fish populations is necessary to be able to identify and conserve stock components and thus genetic variability. Compared to other gadoid species, little is known about life history traits of saithe (Pollachius virens), pollock in the NW-Atlantic, or its stock components in the NE-Atlantic. In 2000-2004, nearly 16000 saithe (mostly juvenile) were tagged and released at various locations around Iceland (including 133 data storage tags). With information from traditional tagging we can get information about distribution patterns and length of migration while data gained with DST allows us to examine habitat preferences on individual fish level. Here we compare data from three different release sites around Iceland. These sites differ considerably in terms of bottom topography and hydrography of surrounding water masses. By comparing hydrographic measurements with depth and temperature profiles of recaptured saithe we were able to obtain a broad view of migration patterns of saithe in Icelandic waters. The object of this research was to explore if saithe tagged at different locations around Iceland showed variable behaviour or distribution pattern.

Main currents around Iceland (red = warm Atlantic current, blue = cold Arctic current and green coolish current) and potential temperature on four standard hydrographic sections around Iceland in January 2003 and Stokksnes 20055. Blue dots represent tagging locations.

Summary

Recaptures from saithe tagged off Öndverárnesi showed a broader distribution compared with saithe tagged at the other two release sites and data from DST indicated different preferences of individual saithe with regards to depth and temperature.

DST-data from saithe tagged off Norðfjardarhorn indicated two different strategies. Some recaptures from saithe tagged off Halsasvædi showed a broad distribution compared with saithe tagged at the tagging location.

We thus conclude that individual saithe shows variation in their habitat preferences, both among and within certain sites. This plasticity is significant and may provide an adaptive advantage for fish living in variable environments.

References

http://www.hafro.is/Sjora/


Hafrannsoknastofnun Fjolrit, 126. 190pp. (in Icelandic with English summary).