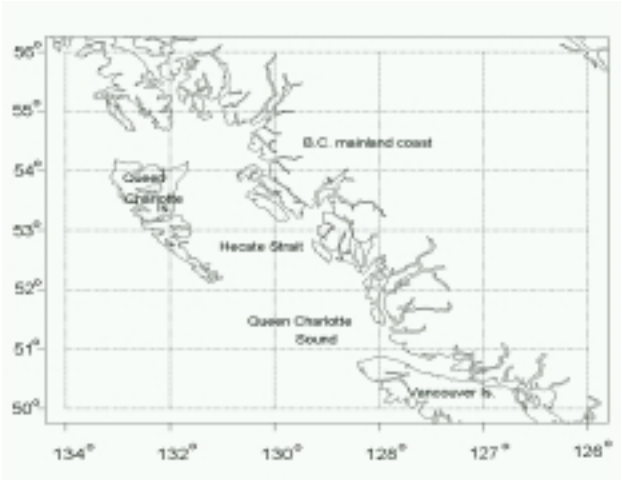


Dover Sole West Coast Vancouver Island (Areas 3C,D) To Queen Charlotte Islands (Areas 5A-E)

Background

The Dover sole (Microstomus pacificus), one of four flatfish species caught in the commercial trawl fishery off British Columbia, ranges from Baja California to the Bering Sea. However, the species is near the northern limit of its commercial abundance off B.C.

Two discrete populations have been identified in B.C. waters. The southern population occupies the area off the west coast of Vancouver Island (Areas 3C, D) while the northern population occupies Queen Charlotte Sound, Hecate Strait and the west coast of the Queen Charlotte Islands (Areas 5A-E).

Dover sole can live for 45 years and are first available to the commercial fishery at about 6 to 7 years of age. They spawn annually in winter in deepwater, between 800 and 1,000 metres. Males begin to spawn at 4 years of age while females begin to spawn at 5.

Summary

- Annual coastwide landings of Dover sole increased dramatically in the 1990s with expansion of this fishery to deepwater (below 500 metres).
- Both stocks were being fished near the maximum sustainable yield in 1997.
- Fishing mortality for both stocks was near $F_{0.1}$ in 1997.
- With fishing mortality at the 1997 level, the risk of overfishing is negligible.

The Fishery

Directed fishing for Dover sole takes place at fishing grounds throughout the B.C. coast, with the exception of the Strait of Georgia. The fishery was regulated using area quotas until 1996, when managers introduced individual vessel quotas.

The fishery for Dover sole takes place in deepwater (400 to 1,000 metres) off the west

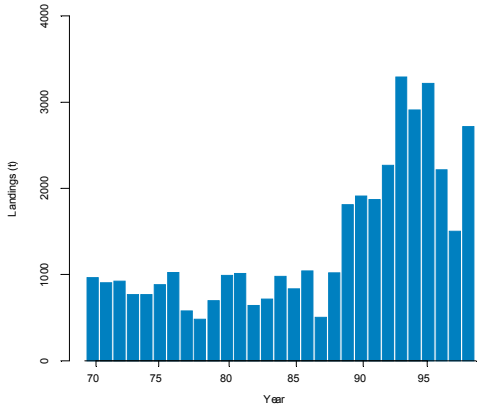
Canada

coasts of Vancouver Island and the Queen Charlotte Islands during late fall and winter and at depths of between 100 and 200 metres in Hecate Strait, Queen Charlotte Sound and off the west coast of Vancouver Island during the spring and summer months. The winter fishery occurs predominately on spawning concentrations. The fishery in the north was initiated in the 1970s, while that off the west coast of Vancouver Island was initiated in the late 1980s.

From 1970 to 1987 coastwide landings of Dover sole ranged between 500 and 1,000 tonnes. Landings for that period came almost exclusively from grounds inhabited by the northern stock. Coastwide landings increased significantly between 1988 and 1998 with the development of the deepwater trawl fishery off the west coast of Vancouver Island.

Resource Status

In recent years both the northern and southern stocks have been exploited near the maximum sustainable yield. Dover sole abundance has declined in recent years, possibly due to the high exploitation rates of the late 1980s and early 1990s. In 1996 and 1997 individual vessel quotas were reduced to avert the declines in abundance. However, in 1998 landings increased because the fishery area expanded.



Annual landings of Dover sole from the B.C. trawl fishery, 1970-98.

Management Considerations

Management of the fishery in recent years has been based on the target fishing mortality reference point of $F_{0.1}$. The individual vessel quotas and fishery observer program established by management have helped to control the harvest of these stocks. In addition the observer data provide more comprehensive information that can be used for stock assessment, especially for the developing fishery in the south.

Outlook

The species is moderately long-lived and has a relatively slow turnover rate. The abundance of both populations should stabilize with the lower quotas applied in recent years.

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References

Fargo, J. 1998. Flatfish stock assessments for the west coast of Canada for 1998 and recommended yield options for 1999. Can. Stock. Assess. Sec. Res. Doc. 98/36

Fargo, J., S.J. Westrheim and M. Stocker. 1985. Results of the September 1979 Dover sole tagging experiment in northern Hecate Strait, through 1984. Can. MS. Rep. Fish. Aquat. Sci. 1845: 57 p.

Kramer, D.E., W.H. Barss, B.C. Paust and B.E. Bracken. 1995. Guide to northeast Pacific Flatfishes. Alaska Sea Grant College Program Marine Advisory Bulletin No. 47: 104 p.

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