

Widow Rockfish

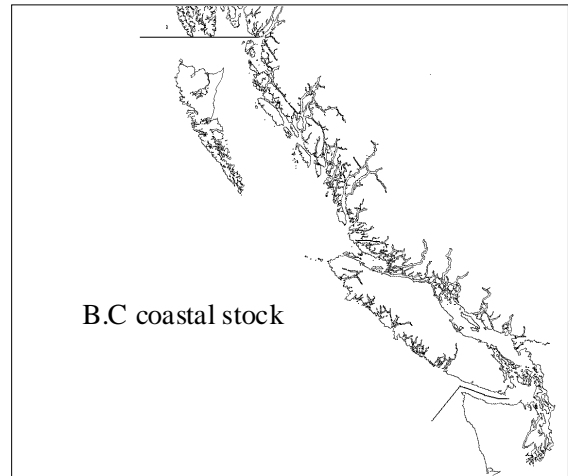
Background

The widow rockfish (*Sebastes entomelas*) is an important component of the rockfish catch in the commercial trawl fishery off British Columbia. It ranges from southern California to the Gulf of Alaska and is found over bottom depths of 50 to 375 metres, although schools are occasionally observed over deep ocean waters off the continental shelf. The principal area of commercial abundance is the coastal area of northern California to central B.C.

For stock assessment and management purposes, widow rockfish are treated as one coastal stock in British Columbia and another in the California-Washington region. Commercial catches are made in depths of 100 to 200 metres with midwater trawls in Canada. They are often caught with yellowtail rockfish (*S. flavidus*), as both species appear to favour bottoms of high relief near the edge of the continental shelf.

Widow rockfish begin recruiting to the fishery at age 5 and can live to up to 58 years. Mating takes place in late fall and free-swimming larvae are released in late winter or early spring. Males and females mature between the ages of 5 and 14. The species appears to feed on euphausiids and small fish, including herring.

The Canadian fishery began in the mid 1980s. Total annual Canadian landings have averaged about 2,500 tonnes over the last 10 years. Most landings come from the northwest coast of Vancouver Island and the Queen Charlotte Sound region of the central B.C. coast. Since 1993, managers have used a combination of a coastwide quotas in combination with trip limits. Annual quotas are not always landed. Individual vessel quotas have been in place since 1997.

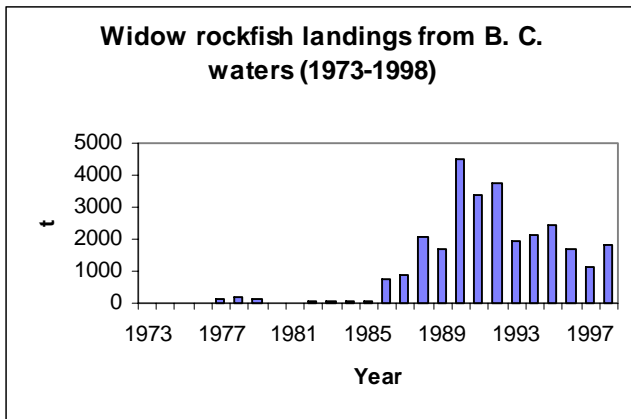


Summary

- Landings of the widow rockfish stock were 1,137 tonnes in 1997, lower than the historical average of 2,462 tonnes and lower than the 1997 total allowable catch of 2,358 tonnes. It is not known whether the failure to reach the TAC is the result of the introduction of individual vessel quotas or reduced availability.
- Stock status is poorly known. No relative abundance index has been developed, and the lack of a long time series of biological samples hampers stock assessment.
- Current harvest recommendations are precautionary partly because of a “boom-and-bust” exploitation history for this species in the U. S. A.
- Current assessment work includes experimental acoustic biomass estimation in addition to routine collection of landings data and biological data.

The Fishery

The commercial widow rockfish fishery started in 1986. Landings peaked at about 4,500 tonnes in 1990, with an average annual coastwide landing since 1987 of 2,250 tonnes. Most commercial landings come from mid-water trawl fishing. There is reported to be a significant “nuisance” by-catch in the salmon troll fishery, as well.



While widow rockfish is a valuable food fish, it does not keep as long as other rockfishes, a characteristic that tends to reduce demand. Fishers also report that its distribution is difficult to predict and thus landings are highly variable. Major fishing grounds include the area west of Triangle Island off the northwest coast of Vancouver Island in the winter and the Goose Island bank in central Queen Charlotte Sound in the summer.

Resource Status

The stock dynamics are poorly understood. The current quota recommendation of 1,100-3,000 tonnes is intended as an interim yield until a time-series of age composition data is available. It also reflects the lessons learned from the “boom-and bust” fishery in the U.S., where an unrestricted fishery led to landings of 28,000 tonnes in the early 1980s, only to be followed by a rapid decline. Quotas were implemented in 1983 and have been lowered steadily to the point where current recommendations are for less than

6,000 tonnes. The U.S. stock appears to be suffering from a sustained period of poor recruitment.

Current assessment work has focused on acoustic estimates of a large mid-winter aggregation near Triangle Island off the northwest coast of Vancouver Island. In 1998, this aggregation was estimated to be up to 2,200 tonnes of widow rockfish. This was not sufficient to raise coastwide yield recommendations from the current precautionary levels. The aggregation will be assessed again in 1999.

Outlook

No change in the level of the harvest is expected. The stock is probably close to maximum exploitation at present but its actual status remains unknown.

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