

## Yellowtail Rockfish

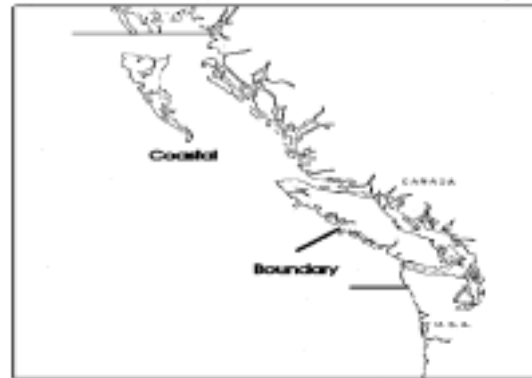
### Background

The yellowtail rockfish (*Sebastes flavidus*) is an important component of the rockfish catch in the commercial trawl fishery off British Columbia. Yellowtail rockfish range from southern California to the Gulf of Alaska. The principal area of commercial abundance is northern California to northern B. C.

Yellowtail rockfish are treated as two stocks in British Columbia. The southern or "boundary" stock is shared with the United States fishery and is assumed to extend from northern Washington State to central Vancouver Island. The "coastal" stock includes the area from central Vancouver Island to the Alaska border. Commercial catches are made in depths of 100-200 m using bottom and midwater trawls. Minor landings (<100 tonnes/year) are produced by the hook-and-line fishery.

Yellowtail rockfish begin recruiting to the fishery at age five but can live to over 50 years of age. Young are born alive. Mating takes place in mid-fall and free-swimming larvae are released in late winter, early spring. Males and females mature between age five and 14.

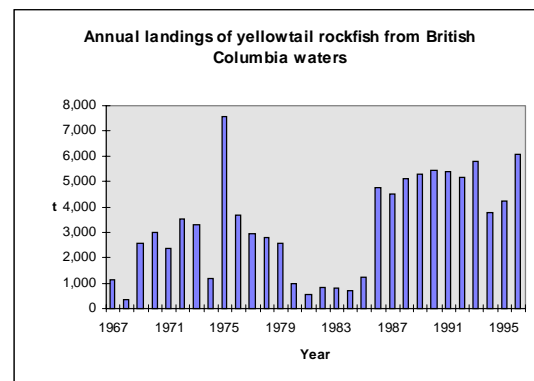
Total annual Canadian landings have recently averaged about 5,000 tonnes. Most landings come from the central coast of B.C. (Queen Charlotte Sound) and the south and central coast of Vancouver Island. Larger than average landings in 1975 resulted from an unregulated Polish midwater fishery. Since 1980, managers have used a combination of coastwide or area quotas in combination with trip limits. Annual quotas are usually filled. Individual vessel quotas have been in place since 1997.



**COASTAL (AREAS 3D, 5A-5E) and  
SOUTHERN BOUNDARY (3C)  
YELLOWTAIL ROCKFISH**

### The Fishery

Reliable landings data for the commercial fishery for yellowtail rockfish are available starting in the late 1960s. Landings increased from about 1,000 t in the 1960s to over 5,000 t in the early 1990s. The average annual coastwide landings of yellowtail rockfish between 1967-1995 were about 3,300 t. Yellowtail rockfish are caught in a directed trawl fishery and are also a bycatch component of the fisheries for hake, other rockfishes and lingcod.



The fishery involved both Canadian and U.S. vessels until 1977 when Canada declared extended jurisdiction over offshore resources. The U.S. component then declined such that the fishery has been exclusively Canadian since 1981.

Off the southwest coast of Vancouver Island, U.S. and Canadian trawlers exploit, in their respective zones, what is perceived to be one stock of yellowtail rockfish. Total landings from this have varied around 4,041 t since 1979. Much of the landings for this stock is incidental to the midwater fishery for hake by both nations. A small percentage is captured as bycatch in the U.S. shrimp trawl fishery.

Landings from the rest of the coast, central Vancouver Island and north, are assumed to come from a second stock, the "Coastal" stock. These have averaged 2,800 t since 1967, but since 1987, have averaged 4,000 t.

Although some preliminary genetics research provides a basis for stock separation between northern Washington and more southern populations, stock delineation of populations is poorly understood.

### ***Resource Status***

The southern boundary stock appears to be declining in abundance principally owing to poor recruitment in recent years. The assessment is based on biomass estimates from U.S. triennial trawl surveys, hake by-catch indices from the Canadian joint-venture fishery, and catch-at-age information. Quota recommendations from both nations were lowered for 1997 and 1998.

The "Coastal" stock also appears to be declining in abundance. It is also assessed using catch-at-age analysis.

### ***Outlook***

Stock abundance indices for both stocks of yellowtail rockfish stock are declining. It is unclear, however, whether they have declined below average biomass levels for the whole period of exploitation (1967-1995). Assessment is hampered by lack of a reliable indices of relative abundance.

Scientists are currently exploring the use of hydroacoustic estimation for improving stock assessment procedures.

### ***For More Information***

Contact: Rick Stanley  
Stock Assessment Division  
Pacific Biological Station  
Nanaimo, B.C. V9R 5K6

Tel: (250) 756-7134

Fax: (250) 756-7053

E-Mail: [stanleyr@dfo-mpo.gc.ca](mailto:stanleyr@dfo-mpo.gc.ca)

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Pacific Biological Station  
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Phone: (250) 756-7208  
Fax: (250) 756-7209  
Email: [miltond@dfo-mpo.gc.ca](mailto:miltond@dfo-mpo.gc.ca)

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