



Photo credit: NMFS.

## KEY INFORMATION

### Areas of Concern

Central Oregon to central Baja California and Guadalupe Island, Mexico.

Year Identified as “Species of Concern”  
2004

### Factors for Decline

- Overfishing
- Bycatch

### Conservation Designations

IUCN: Not Evaluated

American Fisheries Society: Vulnerable

### Brief Species Description:

The cowcod is one of the largest rockfish species, reaching almost 39 inches (1 m) in total length and living up to 55 years (Butler et al. 2003). They are desired by fisherpeople for their color and large size. It is an ambush predator of the deep shelf and upper slope, living in depths of 65 to 1600 feet (20 to 500 m). Females mature at 13 inches length (32cm). Southern California has been recognized as the center of distribution of the species since the 1880s (Figure 1). They prefer high-relief rocky habitat. Oil platforms have become somewhat important artificial habitats for this species (Love and York 2006). Like other species of their genus, cowcod are internal fertilizers. Reproduction occurs in winter an early spring, and larvae spend about 100 days as plankton. Adults eat other fishes, octopus, and squid. Juvenile cowcod eat small shrimp and crabs. They are generally solitary, but occasionally aggregate.

### Rationale for “Species of Concern” Listing:

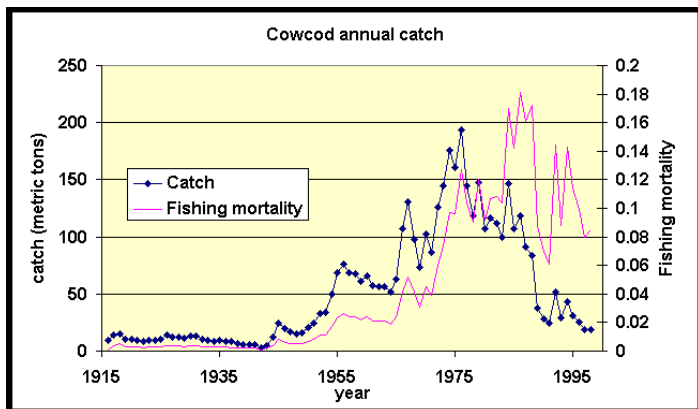
#### Demographic and Genetic Diversity Concerns:

Peak catch was in 1976 and was about 194 mt (biomass was ~1665 mt). In 1998 catch was down to 19 mt (biomass was ~238 mt). The species was estimated to be at 4 to 7% of its unfished biomass in 2000. They cannot be caught and released due to swimbladder damage and mortality. They were declared overfished in 2000. At current population levels, it will take on the order of 75 to 100+ years to recover the species (with a modest 2 - 4 mt of harvest/bycatch per year).

#### Factors for Decline:

Cowcod have been overfished in the commercial rockfish fishery and are also **bycatch** in other commercial fisheries. An **overfished** declaration was made under the Magnuson-Stevens Act; the Pacific Fisheries Management Council adopted a revised Rebuilding Plan in 2006.

**Status Reviews/Research Underway:** The program recently funded a project to assess stock structure and population bottlenecks in the species.





# Species of Concern

NOAA National Marine Fisheries Service

## Data Deficiencies:

A dedicated survey effort is needed to obtain good biomass estimates. Population structure data are lacking.

## Existing Protections and Conservation Actions:

California Fish & Game has closed 5,100 square nautical miles off southern California to all bottom-fishing as cowcod conservation areas, and prohibited all cowcod catch. There are stringent catch regulations. The Pacific Fish management Council implements species specific area closures to ensure rebuilding for this species.

## Video:

Fish 300 feet deep (1:00)

<http://www.youtube.com/watch?v=XL8EVqzEMKc>

## References:

Butler, J.L., L.D. Jacobson, J.T. Barnes, and H.G. Moser. 2003. Biology and population dynamics of cowcod (*Sebastes laevis*) in the southern California Bight. Fishery Bulletin 101:260-280.

Love, M.S. and A. York. 2006. The relationships between fish assemblages and the amount of bottom horizontal beam exposed at California oil platforms: fish habitat preferences at man-made platforms and (by inference) at natural reefs. Fishery Bulletin 104:542-549.

## Cowcod SOC Range

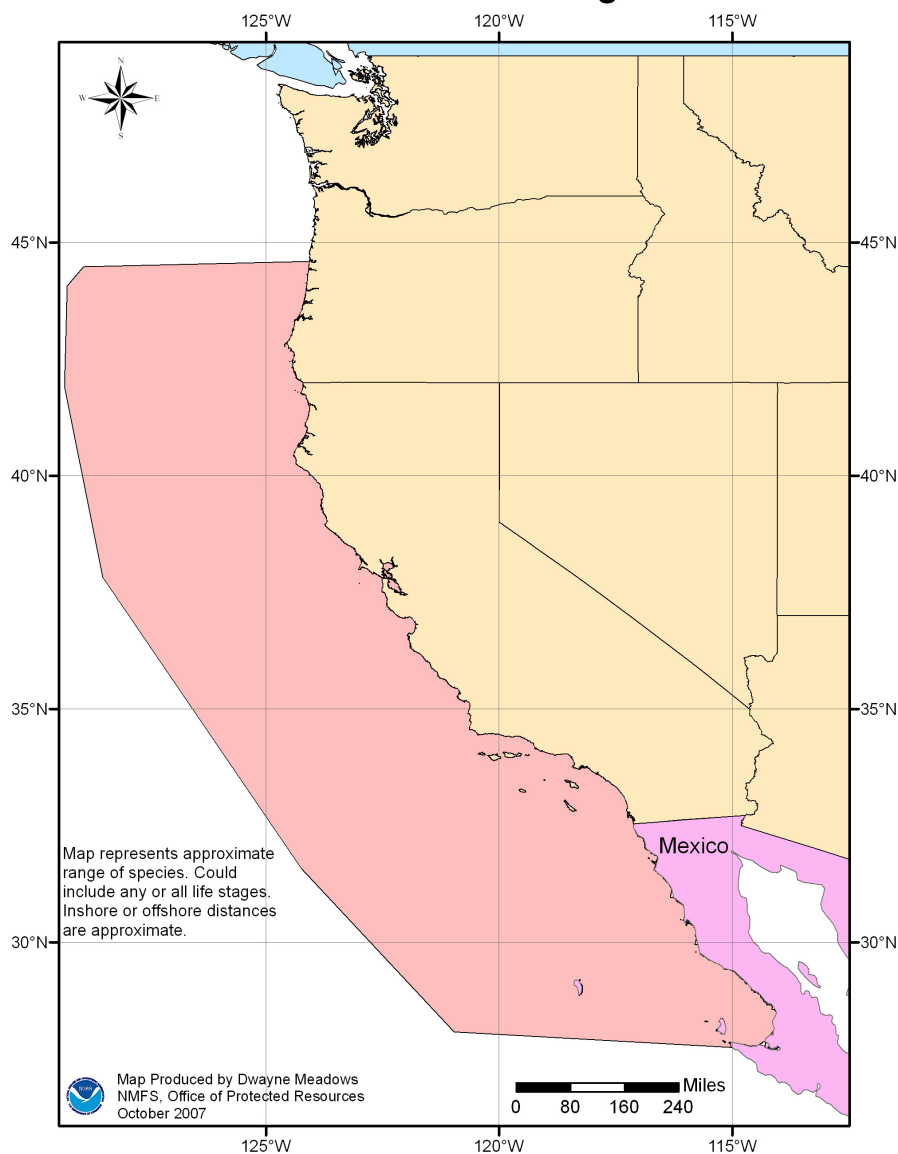


Figure 1. Range of the cowcod species of concern

## Point(s) of contact for questions or further information:

For further information on this Species of Concern, or on the Species of Concern Program in general, please contact NMFS, Office of Protected Resources, 1315 East West Highway, Silver Spring, MD 20910, (301) 713-1401, [soc.list@noaa.gov](mailto:soc.list@noaa.gov); <http://www.nmfs.noaa.gov/pr/species/concern/>, or Dr. Scott Rumsey, NMFS, Northwest Region, Protected Resources Division, 1201 NE Lloyd Blvd, #1100, Portland, OR 97232, (503) 872-2791, [Scott.Rumsey@noaa.gov](mailto:Scott.Rumsey@noaa.gov).