NOAA Fisheries Service
Alaska Fisheries Science Center

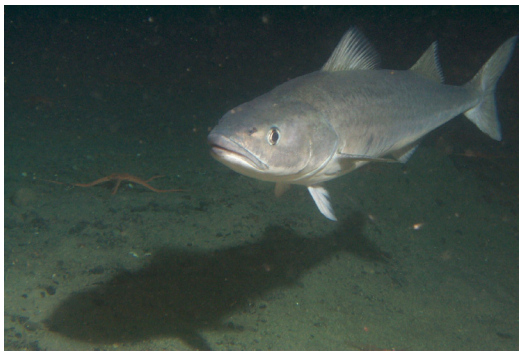
Protecting
Conserving
Managing
Marine Resources
in
Alaska

The **Alaska Fisheries Science Center** is a scientific research organization responsible for the development and implementation of NOAA's scientific research on marine resources in Alaska waters. Our research focuses on more than 250 fish and 42 marine mammal stocks off the coasts of the Bering Sea, Gulf of Alaska and Aleutian Islands.

National Marine Fisheries Service
National Oceanic and Atmospheric Administration
U.S. Department of Commerce

Sablefish
Anoplopoma fimbria

Length female 110 cm (43 in)*
male 88 cm (35 in)*
Weight female 14 kg (31 lbs)*
male 6.8 kg (15 lbs)*
Age 94 years old*
*maximum



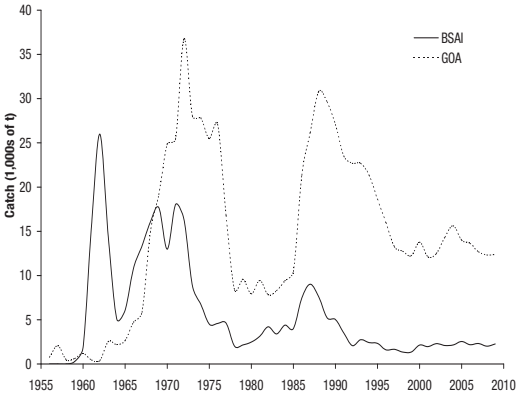
Range/Habitat
Sablefish occur in the North Pacific Ocean, the Bering Sea, and adjacent waters from Hokkaido, Japan to Baja, California, with the greatest abundance in the Gulf of Alaska. Adult sablefish occur along the continental slope, shelf gullies, and in deep fjords commonly in depths between 366 m to 914 m (1,200 to 3,000 feet).

Diet/Role in Ecosystem
Adult sablefish are opportunistic feeders, preying on fish (including pollock, eulachon, capelin, herring, sand lance, and Pacific cod), squid, krill, and jellyfish. Yearling sablefish feed primarily on krill.

Reproduction
Females are sexually mature at 69 cm (6.5 years), whereas males are mature at 57 cm (5 years). Spawning is pelagic at depths of 300-500 m near the edges of the continental slope, with eggs developing at depth and larvae developing near the surface as far offshore as 180 km. Near the end of the first summer, pelagic juveniles less than 20 cm long drift inshore and spend the winter and following summer in inshore waters, reaching 30-40 cm by the end of their second summer. After their second summer, they begin moving offshore, typically reaching their adult habitat, the upper continental slope, when 4 to 5 years old.

Population
Fishery and Catch History
1960s–early 1980s: The sablefish fishery in Alaska is historically a small boat fishery using mainly fixed gear. Heavy fishing by foreign vessels during the 1970s led to a substantial decline in sablefish stocks in Alaska, which prompted fishery regulations and sharply reduced catches.

1980-1989: The U.S. longline fishery began expanding in 1982 in the Gulf of Alaska (GOA), and in 1988 harvested all sablefish taken in Alaska, except minor joint venture catches.



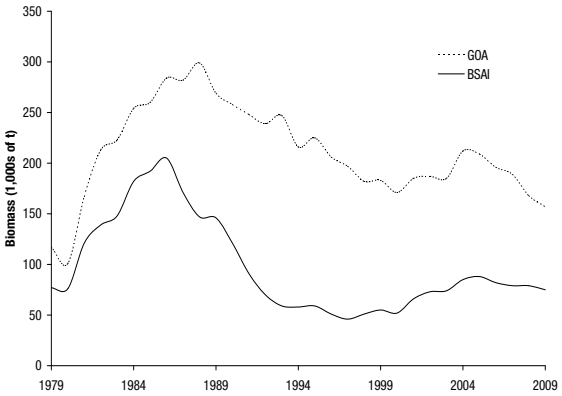
Since 1990: Since 1992, approximately 90% of sablefish has been caught using longline gear with the remaining 10% divided between trawl and pots. Recently, pots have taken a larger portion of the remaining 10% than in previous years. The federally managed fishery in Alaska went to Individual Fishing Quota (IFQ) management in 1995. Quota shares were assigned initially to vessel owners or leaseholders who made at least one landing in the years 1988-1990. Each year, IFQs are assigned to individuals by multiplying the percentage of quota share they own by the annual harvest limit set for the sablefish fishery. Recent quotas have been near 20,000 tons. Pot fishing is banned in the GOA but is allowed in the Bering Sea and Aleutian Islands (BSAI) and accounts for nearly half of the IFQ catch in those areas.

RESEARCH

Scientists at the AFSC are conducting research to increase their knowledge about sablefish in Alaska. Ongoing studies include a project that will improve the current estimate of how old sablefish are when they become reproductively mature; a joint project with NASA that will integrate satellite derived environmental data such as sea surface temperature with early life history data of sablefish to improve the estimation of sablefish recruitment in the current stock assessment model; development of a migration model to help determine geographical movements of sablefish through tag returns; and a sperm whale depredation project to help quantify how many sablefish are taken from longline gear by sperm whales.

Resource Status

Sablefish are not overfished and are not approaching an overfished condition. Several above average year classes recently have returned spawning biomass close to the target of 40% of unfished biomass.



Stock Assessment

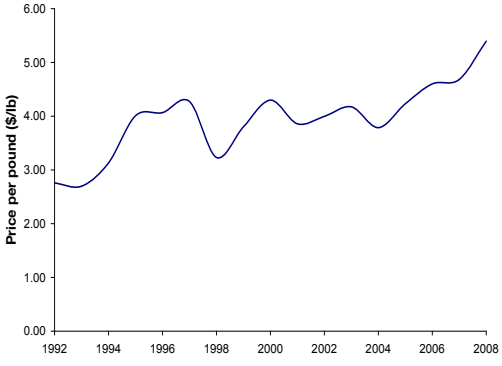
The Alaska Fisheries Science Center models the entire federally managed Alaska sablefish fishery as one stock, integrating data from the Bering Sea, Aleutian Islands, and the Gulf of Alaska. The model incorporates data from a variety of sources such as the historical Japanese longline survey and fisheries, the annual domestic NMFS longline survey, the biennial NMFS bottom trawl survey in the Gulf of Alaska, and the domestic fixed and trawl gear fisheries. The data provided by these sources include catch, relative abundance, age and length compositions, size-at-age, and maturity-at-age.

Management

Although sablefish is assessed as one stock throughout Alaska, total allowable catch (TAC) is set for each of the Bering Sea/Aleutian Islands and Gulf of Alaska management subareas. As described above, the majority of the sablefish TAC is allocated to individual pot and longline fishermen under the IFQ program. In the Bering Sea/Aleutian Islands, a portion of the sablefish TAC is allocated to the trawl fishery, comprising 50% in the Bering Sea and 25% in the Aleutian Islands. In the Gulf of Alaska, the trawl allocation accounts for sablefish bycatch in other directed fisheries.

Economics

Sablefish is the highest valued finfish per pound in the commercial fisheries off Alaska. Prices have remained fairly stable over the years. In 2008, prices were $5.40/lb. The average product price from 1992 to 2008 was $3.94/lb. Primary products are headed and gutted (eastern cut), whole fish, and headed and gutted (western cut).



The inflation-adjusted prices shown in the graph are 1st wholesale (2008 U.S. currency). Numbers are from NMFS and ADF&G production and price data.

For more information

Most recent stock assessment
http://www.afsc.noaa.gov/REFM/Stocks/assessments.htm

Research at AFSC:
http://www.afsc.noaa.gov/ABL/MESA/mesa_sa_sable.php

Management:
http://www.alaskafisheries.gov/npfmc

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Questions or Comments?
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