NOAA Fisheries Service
Alaska Fisheries Science Center

Golden King Crab
Lithodes aequispinus

Width 140 mm (5.7 in) legal
Weight 1.4 kg (22 oz) legal
Age unknown (maximum)

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

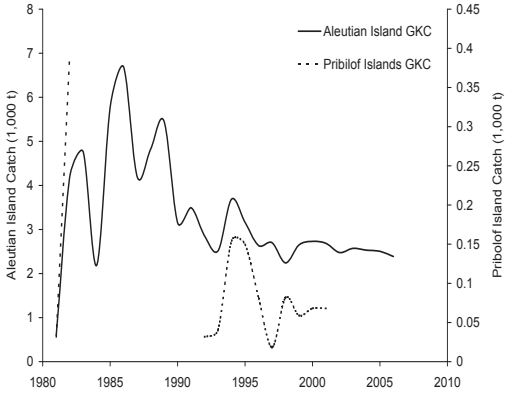
Range/Habitat
Golden king crab (GKC) are found in the Bering Sea, the Gulf of Alaska, along the slope habitat off western North America as far south as San Diego and in Japanese waters. Adults are typically found on the continental slope between 200 and 400 m. They are often associated with complex habitat such as boulders or soft corals.

Diet/Role in Ecosystem
The diet of GKC is mostly unknown but is likely similar to other king crab species. As opportunistic omnivores, they likely eat such things as bivalves, sea stars, polychaete worms, and sand dollars.

Reproduction
GKC have a 20 month asynchronous reproductive cycle. Females molt and mate year-round and brood their eggs for 12 months. Because their larvae are non-feeding, they require more yolk to sustain them than other king crab species. Thus GKC have fewer but larger eggs than other species of king crab, typically between 10,000 and 30,000.

Population
Fishery and Catch History

GKC were initially taken as an incidental harvest by the red king crab fishery, but since 1981 a directed pot fishery has harvested the stock. The harvest level has not fluctuated as much as other Bering Sea crab fisheries. Since 2005 the fishery has been managed according to the Crab Rationalization program under which qualified participants are issued individual fishing quotas.



Resource Status
GKC are not surveyed annually and thus there is no good estimate of stock size. However, the current level of harvest has been sustained for nearly two decades, indicating that the stock is likely stable.

Stock Assessment
The stock is assessed based primarily on fisheries landings and by fishery observers. This, however, does not allow for estimates of stock size or mature male biomass.

RESEARCH

Little research is being done on GKC. Currently, researchers for the Alaska Fisheries Science Center at the Kodiak Laboratory are examining embryonic and larval development of GKC under laboratory conditions. Additional experiments are examining the effects of ocean acidification on mature adult female GKC. Much research, however, needs to be done in order to understand the basic biology and life history of this species.

Management

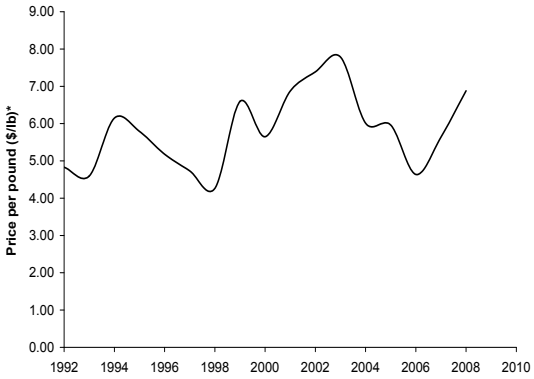
GKC stocks in the Bering Sea are cooperatively managed by NMFS and the State of Alaska through the North Pacific Fishery Management Council's (NPFMC) fisheries management plan (FMP) for Bering Sea/ Aleutian Islands (BSAI) King and Tanner crabs. State harvest regulations comply with the FMP and the national standards of the Magnuson-Stevens Act. Two stocks of GKC are actively managed in the Bering Sea/Aleutian Islands (BSAI) region: The Aleutian Islands and Pribilof stocks. The State of Alaska institutes minimum size and sex restrictions, vessel registration, licenses and permits, observer coverage, and gear requirements.

The Crab Rationalization program applies to the BSAI GKC fisheries, and was implemented in 2005 by the NPFMC to limit access by decreasing fishing capacity (number of vessels and processors in Alaska) to improve conservation and management. In addition, the community development quota (CDQ) program allocates 10 percent of the total allowable catch to CDQ groups (community interests), and is managed by the State of Alaska with federal oversight.

State of Alaska regulations for BSAI crab fisheries include vessel registration with the State of Alaska and a requirement of licenses and permits; registration for each fishery and each area; observer coverage; and gear restrictions such as pot limits, degradable escape mechanisms, and web specifications. Season opening dates are set to maximize meat yield and minimize handling of softshell crabs. Current minimum legal size for the Pribilof District BKC is 6" and for Aleutian Islands area is 5.5"(140 mm) in carapace width.

Economics

The average product price for golden king crab products from 1992 to 2005 was $7.11/lb. The 2005 price was $5.96/lb, which is lower than the historical average. The golden king crab is much smaller than the red or blue king crabs, and therefore commands alower price in the market. The primary product of golden king crabs is shellfish sections; other products include shellfish meat and whole crabs.



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

For more information

Most recent stock assessment:
http://www.fakr.noaa.gov/npfmc/SAFE/SAFE.htm

Research:
http://www.afsc.noaa.gov/RACE/shellfish/default_sf.php

Management:
http://www.fakr.noaa.gov/sustainablefisheries/crab/default.htm

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Questions or Comments?
email: **afsc.outreach@noaa.gov**