



Tanner Crab

Tanner crabs (*Chionoecetes bairdi* and *C. opilio*) are two of the four species of the genus *Chionoecetes* occurring in the eastern North Pacific Ocean and Bering Sea. They form the basis of a thriving domestic fishery from southeastern Alaska north through the Bering Sea. These crabs are also marketed under their trade names: snow crab (*C. opilio*) and Tanner crab (*C. bairdi*).

General description: Tanner crabs are brachyuran (meaning short-tailed) or true crab and constitute some of the most highly specialized of all crustaceans. The body is composed mainly of a chitinous shell or carapace with a small abdominal flap. They have five pairs of legs with the first pair equipped with pincers. Tanners may live to an estimated maximum age of 14 years. Males of commercial size usually range from 7 to 11 years of age and vary in weight from 1 to 2 pounds for *opilio* and 2 to 4 pounds for *bairdi* crabs.

Life history: Females mate with an adult male for the first time during her last molt (maturity molt). The male crab is attracted by a chemical attractant (pheromone) released by the female. Females molt to sexual maturity and mate in the softshell condition while grasped by the male. Older hardshelled females are also mated by adult males, but in the absence of a male they are capable of producing an egg clutch with sperm stored from a previous mating. A female Tanner crab may deposit 85,000 to 424,000 eggs in a clutch.

Fertilization is internal, and the eggs are usually ovulated (extruded) within 48 hours onto the female's abdominal flap where they incubate for a year. Hatching occurs late the following winter and spring with the peak hatching period usually during April to June. This is normally the peak of the spring plankton bloom, so egg hatch coincides with the high availability of food for the larvae crab.

The young, free-swimming larvae molt many times and grow through several distinct stages. Growth during this period is usually dependent on water temperature but lasts about 63 to 66 days, after which the larvae lose their swimming ability and settle to the ocean bottom. After numerous molts and several years of growth, females mature at approximately 5 years of age. Males will mature at about 6 years.

Food habits: Tanner crabs feed on a wide assortment of marine life including worms, clams, mussels, snails, crabs, other crustaceans, and fish parts. They are fed upon by bottomfish, pelagic fish, and humans. Migration patterns are not well understood; however, it is known that the sexes are separated during much of the year and move into the same areas during the reproductive season.

Commercial fishing: The Alaska Tanner crab fishery began in 1961 and has grown into fisheries of major commercial importance. Record domestic harvests amounted to over 123 million pounds in 1978 for Tanner crabs (*C. bairdi*) and 332 million pounds 1991 for snow crabs (*C. opilio*).

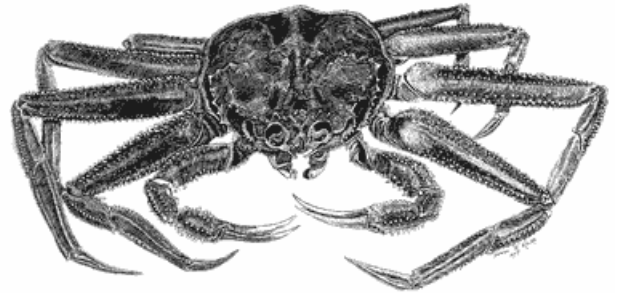
Crabs are taken by vessels ranging from small inshore vessels to new "super crabbers" in the Bering Sea. Fishing gear consists primarily of pots similar to those used for king crab. Most pots are baited with chopped herring and then soaked from one to three days.

Historically, Tanner crabs were harvested by both domestic and foreign fleets, with the Japanese and Soviet fleets concentrating their efforts in the Bering Sea. By the early 1970s, allocations for foreign vessels were being sharply reduced. The Magnuson Fishery Conservation and Management Act of 1976 (the 200-mile limit) has limited foreign fishing in United States waters.

Text: Commercial Fisheries Management and Development Staff

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