

Birth of a Fishery

A grooved Tanner crab fishery emerges off northern California

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photo by Isaac Standen

Dome-type crab traps on deck during the experimental tanneri fishery

Over the past few years, a leggy crab living off the California coast known as the grooved Tanner crab (*Chionoecetes tanneri*) has been receiving a bit more attention than usual. Under the authority of an experimental permit, fishermen have been landing the crab while Department of Fish and Game (DFG) biologists evaluate the fishery. After analyzing two years' worth of landings and other scientific data, the DFG and the California Fish and Game Commission (Commission) are on the brink of permitting a new fishery for grooved Tanner crab off the California coast.

These spidery-looking, deep-sea crabs are cousin to our southern California sheep crab, and relatives of the more gastronomically desirable Alaskan snow crab and true Tanner crab. The grooved Tanner crab, or "tanneri", is the only member of the genus whose range extends south to California. Tanneri can be found from the Pribilof Islands in Alaska to the California-Mexico border, on soft sea floor at depths of up to 5,400 feet.

Although the life span for tanneri is not currently known, other species of Tanner crab live for an estimated 15 to 19 years, with an accompanying low natural mortality rate as adults. By comparison, Dungeness crab live for a maximum of six to eight years. Most female tanneri reach maturity in their fifth year, at about 3 1/3 inches in carapace (shell) width; males are thought to mature in their sixth year at about 4 1/2 inches carapace width.

Fishery Beginnings

Local interest in tanneri emerged in 1997 when a crabber based in Seattle began exploring the potential for a fishery off Eureka and Crescent City, with assistance from a DFG biologist. The first experimental permit to trap tanneri off California was issued in 2001. Although the permit was renewed each year for four consecutive years (the limit prescribed by Fish and Game Code), it was only fished in 2003 and 2004.

The permit limited fishing activities such as the number of traps fished, the depth at which traps could be fished, and the size and sex of crabs that could be taken. Fishermen were also required to take an observer on fishing trips. Although other individuals and companies approached the Commission to obtain permits to fish for tanneri, these were denied pending the outcome of the fishery's experimental phase.

Fishermen landed approximately 212,000 pounds of tanneri in 2003 and nearly 461,000 pounds in 2004, all from northern California waters. Landings fetched from \$1.05 to \$1.50 per pound in 2004, with most of the crab ending up in the export market or on casino buffet tables.

Biomass, Harvest Limits, and Fishery Concerns

The DFG analyzed information from a number of state and federal fishery management agencies to

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determine the status of tanneri populations. The tanneri population off California averaged an estimated 48 million pounds between 1998 and 2003, including about 18 million pounds of harvestable male crabs. Analyses indicate that tanneri could sustain only a low harvest rate; therefore, the DFG has recommended an annual catch limited to about 15 percent, or 2.8 million pounds, of male crabs measuring 5 inches or greater in carapace width.

Tanner crabs are not as robust as king crabs or crabs of the genus *Cancer* (such as Dungeness crabs), and succumb to handling mortality more frequently than those hardier species. Studies show that from 4 to 20 percent of snow crabs die as a result of handling and discard (known as 'deadloss'). In 2003, deadloss accounted for a little over 10 percent of the catch in the experimental tanneri fishery. Deadloss dropped to about 6 percent in 2004.

Because tanneri live very deep on the soft sea floor where not many other fished species live, bycatch of non-targeted species was minimal during the experimental tanneri fishery. Only 309 pounds of sablefish were landed in 2003 as bycatch, and the fish were kept and sold according to the terms of the experimental permit.

California trawlers take tanneri incidentally in the slope bottomfish fishery. Bycatch has been estimated at about three-quarters of a million pounds annually. This is a significant catch, and indicates that about 1½ percent of the population is already being fished and discarded, with a very low survival rate.

Proposed Management Elements

After analyzing fishery data, reviewing other emerging tanneri fisheries in Alaska and British Columbia, and determining that the experimental



*Grooved Tanner crab, on ice
photo courtesy Alaska DFG*

tanneri fishery met the definition of an emerging fishery under the terms of California's Marine Life Management Act, the DFG presented tanneri fishery management recommendations to the Commission in February, 2005. The next step will be for the DFG to refine the tanneri regulatory package and bring it before the Commission again at the May 2005 meeting, thus beginning the process of adopting regulations for the new fishery. 🦀

Abalone Recovery and Management Plan Slated for Adoption in May 2005

The Abalone Recovery and Management Plan (ARMP) is nearing completion. The Department of Fish and Game (DFG) is now finalizing the plan for adoption at the May 2005 Fish and Game Commission meeting.

In preparing the ARMP for adoption, DFG has revised the document based on public comment received during 2004. Currently the document is undergoing final editing to make sure the Commission is given a clean, concise and error-free version of the plan. The final document will be available for viewing once it is sent to the Commission. The ARMP will be posted on the Marine Region Web site (www.dfg.ca.gov/mrd/armp/index.html), and hard copies will be available at all Marine Region offices and regional headquarters. 🦀



Proposed Management Elements for a Grooved Tanner Crab Fishery

- Annual harvest limit
- Observer requirement
- Trap logbook
- Vessel-based permit requirement
- Minimum fishing depth
- Trap limit
- Male crabs only, with 5-inch minimum size limit