

dungeness crab

SNOHOMISH COUNTY MARINE FACT SHEET



For more information on this topic or to learn how you can help, please call Snohomish County Public Works, Surface Water Management at 425-388-3464 (TTY: 425-388-3700) or check www.co.snohomish.wa.us/mrc.htm

Description

Dungeness crab (*Cancer magister*) are crustaceans, having an exterior skeleton or shell. The shell is purple-tinged, grayish-brown on the back, with white tipped claws. They average six to seven inches across the back. Dungeness crab are found from Alaska to Mexico. They are most abundant in Puget Sound north of Seattle, in Hood Canal, and along the coast.

Life cycle

- **Mating and egg development (0-4 months)**—Mating occurs between hard-shelled males and newly molted, soft-shelled females from the spring to the fall. Male crabs are polygamous—each male crab may mate with more than one female crab. This may be an important factor in maintaining the reproductive viability of this species since only male crabs can be harvested. The female crab stores the sperm until her eggs are fully developed. Fertilization of the eggs occurs when the female extrudes them under her abdomen where they are carried several months until hatching. Large females can carry over 2.5 million eggs.
- **Larval stage (4-12 months)**—Crab larvae are dispersed by currents and progress through a series of stages in which their appearance changes considerably.
- **Juvenile stage (1-2 years)**—After one year the juvenile crab resembles the adult form and settles on the bottom of shallow intertidal areas and estuaries. Crabs reach an

average size of 1 3/4 inches across the back a year after the crab takes up bottom life. As they grow, they tend to move into progressively deeper water. (Small black or gray shore crabs found on the beach should not be confused with young Dungeness crabs).

- **Adult stage (3-8 years)**—Adults grow by shedding their rigid exterior skeleton (or shell). During this process (called “molting”) a crab backs out of its hard shell with a new, soft shell already in place. Crabs tend to molt about seven times during the first year of bottom life and then about once a year after that. Molting periods vary within Puget Sound. In the Port Gardner and Port Susan area, crabs molt from early January to mid-April. Crabs with soft shells are vulnerable to predation, so they tend to hide in the sand or mud on the bottom. It takes about 2 months for them to form another hard shell. Crabs are sexually mature after their second year and reach legal harvest size (6 1/4 inches across the back) in about 4 years.

Habitat

Larvae are subject to dispersal by currents. Juveniles remain in intertidal and shallow subtidal areas, hiding beneath or among plants, rocks, shell debris and eelgrass beds. Adults prefer eelgrass beds and sandy or muddy substrate. Breeding occurs in nearshore areas and females may move to deeper water to hatch eggs. Threats to crab habitat include modifications to the shoreline from development (bulkheads), disruption of eelgrass beds, and pollution.



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Food

Dungeness crab prey includes clams, snails, eggs from fish or crabs, crustaceans, marine worms, squid and fish.

Predators

Natural predators of Dungeness crab include: octopus, halibut, other Dungeness crab, dogfish, hake, lingcod, salmon, shorebirds and waterfowl.

Harvest

The Dungeness crab is an important commercial, recreational and tribal fishery. In Puget Sound, harvest has increased steadily from over 2 million pounds in 1992-1993 to a record 7.7 million pounds in 1999-2000. The increased harvest is due to increased numbers of recreational crabbers, easy access to crabbing areas, and the switch to crabs from dwindling fish species. Crabs are harvested using traps (crab pots), ring nets, by hand (scuba divers) or dip nets. They are also taken or harmed unintentionally when gillnetting for salmon, trawling for bottomfish, and dredging to maintain ship channels.

Protection efforts

The Tribes and the Washington Department of Fish and Wildlife manage crab fisheries to maintain a 50/50 allocation of the harvestable crabs between tribal and non-tribal fisheries.

- **Commercial management**—Closures during the year limit harvest and protect softshell crabs during molting periods. Other conservation measures include biodegradable escapement devices to prevent derelict traps from “ghost fishing” and escape holes to allow undersized crab out of traps.



- **Recreational management**—Estimates of sustainable harvest levels are made during each season. Closures occur during molting periods and when necessary to limit catch levels. Phone surveys, voluntary catch records and buoy counts are used to estimate catch levels. Based on historical results, the average catch for recreational crabbers is 0.5 to 2.5 crab kept per trap per day.
- **Tribal management**—Tribes limit the amount of fishing and use other conservation measures to protect crab populations. Each tribe can determine the number of commercial tribal fishermen allowed to participate.
- **Local protection efforts**—The Snohomish County Marine Resources Advisory Committee (MRC) wants to protect Dungeness crab and habitat. The MRC is investigating potential crab habitat and issues related to Dungeness crab along the Snohomish County shoreline.

Status

Along the Snohomish County shoreline, the Dungeness crab population appears to be healthy despite pressure from the fisheries described above. However, harvest pressure is likely to increase and threats to crab habitat from shoreline development and pollution are expected to continue.

How you can get involved

The MRC was formed to recommend remedial actions to local authorities and build local awareness of the issues and support for remedies. The MRC meets on a monthly basis and welcomes public participation.

Resources

- WDFW Shellfish Hotline: (360) 796-3215
- WDFW web site: www.wa.gov/wdfw
- MRC web site: www.co.snohomish.wa.us/mrc.htm

Sources

- Washington Department of Fish and Wildlife
- Tulalip Tribes



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