

Parksville – Qualicum Fish & Game Association



Newsletter sent May 25, 2021

Newsletter Update

Volunteers Needed for a Critical Hatchery Project

Volunteers are needed for help with the installation of sandbag stabilization at the Marion Baker Fish Hatchery on French Creek in late June/July. The work involves the placing of bags weighing 90 pounds each in the creek below the hatchery building, on the streambed, at low water. This work is critical to the survival of the hatchery and volunteers capable of this work are badly needed!

Persons interested in helping can contact Peter Spruit at 250 752 0455 for further information and schedules.

The Marion Baker Fish Hatchery is run by volunteers and releases thousands of coho and chum salmon juveniles into French Creek every year. The hatchery is a part of the Parksville-Qualicum Fish and Game Association.

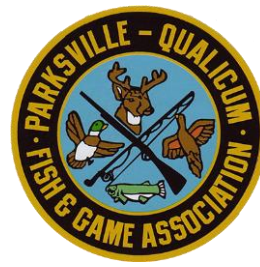
The following interesting article was submitted for the newsletter by club member Eric Miller.

Thank you Eric!

Ling Cod Egg Mass Survey

Ling Cod - scientific name *Ophiodon elongatus*, is a member of the greenling family Hexagrammidae. It is both a desired commercial and sport fish species here on the west coast. Its flaky white meat is quite delightful, and I personally consider it amongst the best eating of all locally available fish species.

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The status of ling cod populations is monitored yearly by a group called Ocean Wise Research. In the late 1980's populations fell to 3 to 5 percent of historical levels, with Howe Sound stocks falling to 1 percent of historical levels. The Department of Fisheries & Oceans (DFO) banned commercial fishing for ling cod in 1990.

In 2002, all sport fishing for lingcod was banned in the Strait of Georgia and surrounding waters. This ban was lifted on the east coast of Vancouver Island in 2006 but remains in place for the Vancouver area

In 2007 DFO established 164 Rockfish Conservation Areas (RCAs) in British Columbia, to provide protection for B.C.'s inshore rockfish populations, which are severely depleted following decades of unsustainable harvesting, (Yamanaka and Logan 2010). These RCA's also provide protection for and assist in the recovery of local lingcod populations.

Lingcod spawn from December through to early April in the Strait of Georgia, with peak egg mass abundance in late February. The males guard the egg masses, which resemble Styrofoam, for over a month until hatching. The behavior of the guarding male and the distinctive appearance of the egg masses are easily identified by SCUBA divers. Divers from all over the island and lower mainland are invited to participate in "citizen science" documenting information on the egg masses.

Egg masses can range in size from a grapefruit to a watermelon. The bigger the egg mass, the older the female that is laying them. The egg masses are usually found in a secure crevice but can also be found lying in the open on the bottom. While there is usually just one male guarding each egg mass, occasionally there will be one male guarding two or more egg masses.

Eggs incubate for 5-11 weeks depending on temperature and current flow (Cass et al., 1990). Hatch success varies with strength of currents: egg mortality occurs from respiratory failure in low flows. Newly hatched larvae swim rapidly to the surface, orient into currents and swim offshore by selecting stronger currents.

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This takes them into tidal current drift and rapidly disperses them through the spawning area.

As a scuba diver I have been able to take part in the annual survey for the past few years. For a period of five to six weeks from late January until early March my focus is on locating and documenting egg masses in our local waters. The information I record is location, GPS co-ordinates of the location, dive time, size of egg mass, color of the eggs, whether they are secure in a crevice or out in the open, and whether there is a male present. This information is then sent on-line to Ocean Wise who correlates all the reports they have received and produces a report on the status of the ling cod populations.



Fig. 1 Large egg mass being guarded by male.

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Fig 2. Large egg mass, secure in crevice, being guarded by male.

Over the course of 27 years of surveying spawning lingcod populations in British Columbia's south coast, there is little indication of an increase in lingcod abundance. The 27-year average abundance of egg masses across all areas surveyed on B.C.'s south coast is 4.19 egg masses per hour of survey. The 2020 survey results are well-below the long-term average with divers recording an average of 2.16 egg masses per hour of survey.

The two main threats to lingcod population recovery are illegal fishing practices and predators, including seals and sea lions. Lingcod populations face pressure from recreation fishing likely due to a combination of lack of knowledge of fishing restrictions and difficulty of enforcement by the DFO. In addition to illegal fishing pressures, populations of harbor seals have increased in the past decade and are a potential contributor to the continued suppression of lingcod spawning numbers.

References:

Ocean Wise Research - British Columbia 2020 Lingcod Egg Mass Survey

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Yamanaka, K. L. and G. Logan. 2010. Developing British Columbia's Inshore Rockfish Conservation Strategy, Marine and Coastal Fisheries, 2:1, 28-46.
Cass, A.J., R.J. Beamish, and G.A. McFarlane. 1990. Lingcod (*Ophiodon elongatus*).
Can. Spec. Publ. Fish. Aquat. Sci. 109: 40 p.

Contributed by Eric Miller - P Q F & G Member

Newsletter Editor Needed

We are still looking for a volunteer to take on the newsletter editing role, someone who is familiar with Mail Chimp, or willing to learn, and has a desire to facilitate club communications. Please let us know of your interest at info@pqfg.org.

Call for Newsletter Articles

Do you have material we can include in the monthly newsletter? The PQFG club is looking for your ideas! Please e-mail us at info@pqfg.org. Bouquets/special thanks to club members, photos of your latest fishing or gaming adventure, upcoming events of interest to our club members... please send us your ideas!