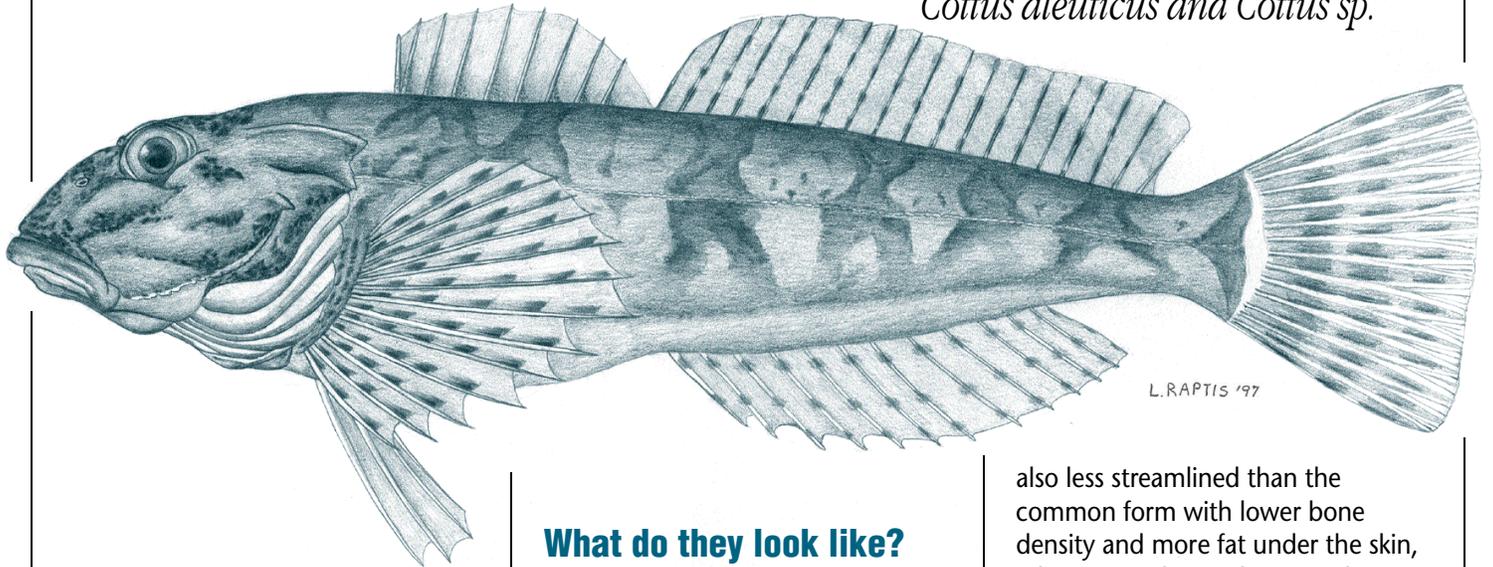


B.C. Fish facts

Coastrange Sculpin and Cultus Lake Sculpin

Cottus aleuticus and *Cottus* sp.



Other common names:

For coastrange sculpin:
Aleutian sculpin

For Cultus Lake sculpin:
dwarf coastrange sculpin,
Cultus pygmy sculpin.

Coastrange sculpin

Typical range in length for adults: 5 - 10 cm
Maximum length: 13.5 cm
Typical range in weight for adults: 1.3 - 10 g
Maximum weight: 30 g

Cultus Lake sculpin

Typical range in length for adults: 2.9 - 4.5 cm
Maximum length: 5 cm
Typical range in weight for adults: 0.3 - 1 g
Maximum weight: 1.5 g

What do they look like?

The coastrange sculpin is mottled brown to light blue-grey. The back is darker and the belly is white. This colour pattern makes it very difficult to see this fish against the bottom of streams and lakes. It has a large white spot on its back in front of the tail fin and a line along its side, the lateral line, which runs all the way from the gill plate to the tail fin. Larger fish often show dark banding on their dorsal (back), pectoral (front side) and tail fins. The head is large and the body tapers from the head to the tail fin. It has no scales but may have a patch of prickles behind its pectoral fin.

The Cultus Lake sculpin is a dwarf form of the coastrange sculpin that may in fact be a separate species. In addition to remaining small in size, the Cultus Lake sculpin retains features of a larval sculpin into its adult life. For example, they do not develop markings on their fins. It is

also less streamlined than the common form with lower bone density and more fat under the skin, adaptations that make vertical migrations within the lake easier.

Where do they live?

The coastrange sculpin is often found in swift riffle areas over gravel bottoms in streams and rivers. They will move downstream to estuaries and can tolerate brackish water. They can also be found in lakes over sandy or muddy bottoms. The coastrange sculpin is found from southern California to Bristol Bay, Alaska with a disjunct population on the Aleutian Islands, Alaska. In B.C., it occurs in streams, rivers, estuaries and lakes, along the entire coast including Vancouver Island and the Queen Charlotte Islands. It can occur quite far inland, as seen in the Fraser and Skeena systems.

The Cultus Lake sculpin is found only in Cultus Lake in B.C. It spends its whole life in the deeper waters of

the lake, not even moving to a stream to spawn.

What do they eat?

The coastrange sculpin feeds mainly on bottom dwelling insect larvae and other invertebrates like molluscs. It will also eat salmonid eggs when they are available.

The Cultus Lake sculpin appears to feed mainly on small bottom invertebrates and zooplankton, which it gets by migrating to the lake surface at night.

What is their life cycle like?

Coastal stream populations of the coastrange sculpin make annual downstream migrations to the estuary to spawn. Inland populations make shorter movements remaining in fresh water to spawn. Spawning occurs from February to mid-June. A larger female can lay 800 eggs. Eggs are usually laid in a sticky mass under a rock and are guarded by the male. More than one female will deposit eggs in a single nest. After hatching, during the hours of darkness, the larvae move up into the water column and drift before settling to the bottom in quiet water or the estuary to metamorphose into fry.

This is one of the few freshwater fish species that has a true larval stage. The adults move back upstream after spawning. They can live more than 4 years and possibly as long as 7.

The Cultus Lake form appears to spawn from late May to early September. It is assumed to spawn in the lake since they have not been observed in any of the tributary streams. The evidence indicates that it reaches maturity at 3 years of age and does not live beyond 4 years.

How are they doing?

The coastrange sculpin is widely distributed and is not a species at risk in the province.

The Cultus Lake sculpin has evolved from the coastrange sculpin. It occurs only in Cultus Lake in southwestern B.C. Because of this confined distribution, it is on the Red List in B.C. and is considered to be at risk from ecosystem change. The federal listing organization, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) has listed the Cultus Lake sculpin nationally as vulnerable.

How you can help:

- Learn to appreciate the diversity of native fishes in your area and support aquatic ecosystem protection.
- Never transport live fish or other organisms from one body of water to another. This could transfer diseases and parasites from one ecosystem to another, or upset the natural balance in the ecosystem where they are released.
- Be aware that what you dump down the sink or into your septic tank, roadside storm drains or sewers may

find its way into streams. Help keep water quality high by using detergents and soaps minimally and by not dumping harsh chemicals, such as bleach, paint thinners, or antifreeze into drains.

- Form a group of water stewards and volunteers to monitor local water quality and the quality of riparian habitats.

No kidding!

- Some people have expressed concern about predation on salmon eggs by the coastrange sculpin. However it works both ways. One large char had 100 Cultus Lake sculpins in its stomach.
- Nearly all our samples of the Cultus Lake sculpin are from the gut contents of char.
- Another population of sculpins in Lake Washington has also adapted to life in the deep part of a lake, like the Cultus Lake sculpin. Similar conditions in the two lakes probably allowed these two different populations of deep-water sculpins to evolve.
- Coastrange sculpins, like other sculpins that live in fast flowing water, use their very large pectoral fins like hydrofoils to keep from being swept downstream. By tilting their fins into the current they are held against the bottom. They have also lost their swim bladder, an organ that allows other fish to float.
- The family of sculpins includes a large number of bottom dwelling marine and freshwater species.

