

## BC's Coast Region: Species & Ecosystems of Conservation Concern

### Salish Sucker (*Catostomus* sp. 4)

Global: G1 Provincial: S1 COSEWIC: E, BC List: Red



Notes on *Catostomus* sp. 4: A member of the family Catostomidae (“suckers”), this species, along with Nooksack Dace is the only other Canadian representative of what is known as “Chehalis fauna”, a unique assemblage of fish that survived continental glaciation in an ice-free refuge in Washington State. As the glaciers receded, access to new watersheds became available for these species and they became established in Canada. Salish and the more common Longnose Sucker are closely related, but studies indicate the two species diverged over 12,000 years ago and there has been no gene flow since. Consequently they represent separate evolutionary lineages.

#### Description

**Length:** Up to 24 cm. Common to members of its genus, this species has a fairly long snout ending in a rounded point. The body shape is elongated and cylindrical, scales are small, the tailfin is moderately forked with rounded tips, and the anal fin is large. The sub-terminal mouth is toothless, with fleshy “lips”. The mouth and lips of suckers are designed to act like a vacuum cleaner to gather food from the stream bottom. The lips are covered with numerous papillae (minute fleshy projections), which act as sensory receptors for detecting food items. At breeding time, both males and females develop a broad rose or wine-coloured band along their sides which is most vivid in the males.

#### Diet

This species forages on benthic macroinvertebrates found in the bottom substrate, especially midge (fly) larvae.

#### Look's Like?

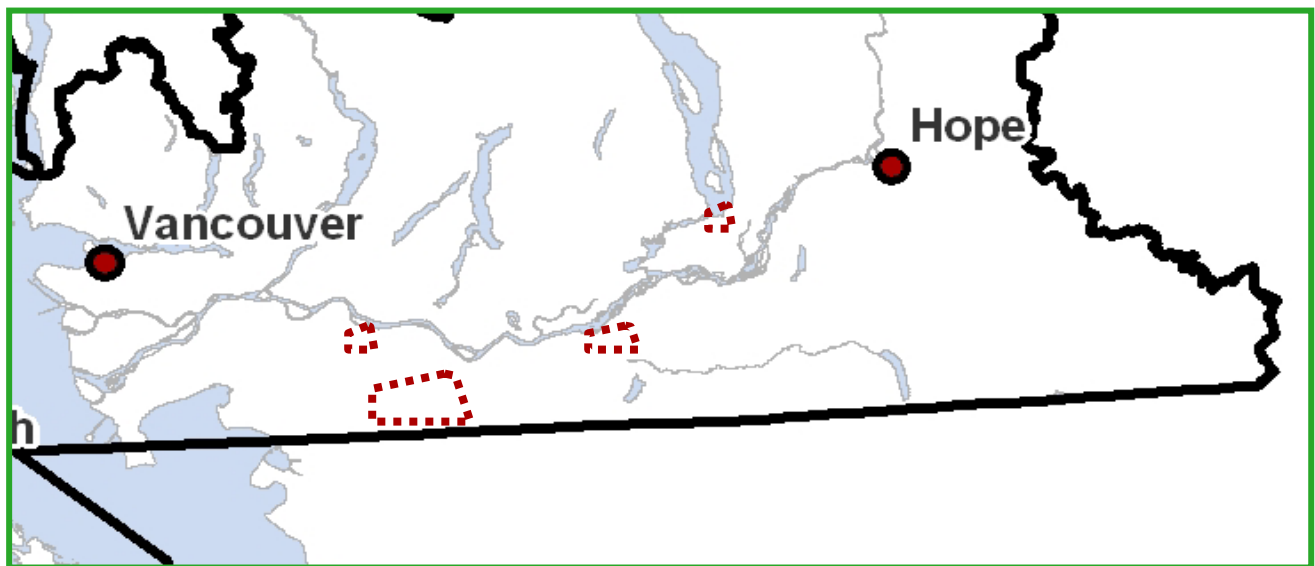
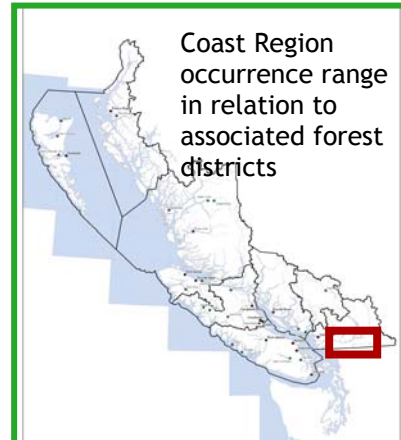
While closely related to Longnose Sucker, in Salish sucker, scales are larger, the head deeper and snout shorter. Another related species, Largescale Sucker co-occurs with Salish Sucker and is commonly confused with it. Largescale Sucker has a longer dorsal fin with more fin rays (13-15) compared to Salish Sucker (9-11).



Longnose Sucker

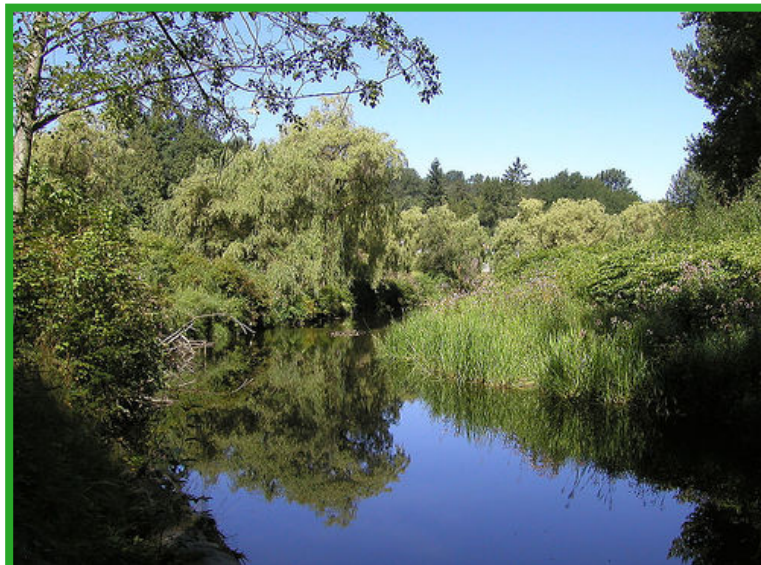
**Distribution**

*Elevations: 16-110 m.* As with Nooksack Dace, this species has a very restricted distribution in Canada/BC and is presently known to occur in a handful of systems in the Fraser Lowlands. Confirmed presence exists for the Nooksack, Salmon, Little Chilliwack, Salween, Elk, Mountain, Agassiz and Miami watersheds. A historic population in the Little Campbell River which flows to Boundary Bay (Straight of Georgia) is believed extirpated since 1976.



Salish Sucker (*Catostomus* sp. 4), known occurrence range for the Coast Region

**Habitat Preferences** Salish Sucker populations tend to be at highest densities in headwater reaches, which have slightly cooler summer water temperatures than lowland areas. Winter habitat is similar, but more use is made of off-channel areas away from the frequent high flows associated with winter rains in Fraser Lowland watersheds. Many sections of watersheds with known occurrences flow through farmland, acreages, residential subdivisions and gravel quarries.



In BC, Salish Sucker is associated with lowland streams with long, continuous areas of deep pool habitat with finely graveled riffle areas for spawning.

**Critical Features** Spawning sites in BC watersheds occur at riffles with fine gravel bottoms and velocities up to 50 cm/sec. Breeding adults migrate short distances to congregate at spawning sites, though some individuals may move more than 1 km and cross multiple obstructions (e.g. beaver dams), en route. Salish suckers are broadcast spawners. No nest is built; the eggs have adhesive properties which allow for them to stick to the surfaces and undersides of gravel and rocks.

**Seasonal Life Cycle**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
			Spawning throughout spring & summer. Fry emerge ~ 1 month after spawning									
Adults and fry active all year in natal streams.												

Males are sexually mature in their 2nd year, females in their 3rd, lifespan is no longer than 5 years.

**Threats**

- ◆ Physical destruction of habitat from floodplain dyking, stream dredging, channelization and infilling.
- ◆ Seasonal low flows in late summer, often exacerbated by reduced recharge capability or disruption of groundwater from adjacent land development reduce useable wetted habitat and increase instream temperature stress.
- ◆ Sediment deposition from agricultural or development runoff degrades habitat and infill's riffle areas.
- ◆ Beaver dams impound flows eliminating riffle habitat as well as creating further barriers to dispersal.
- ◆ Artificial barriers (culverts, diversions) prevent or inhibit fish from traversing some stream reaches. This restricts access to usable habitats and isolates individual populations increasing vulnerability to extirpation.
- ◆ Contaminants and pollution runoff events from point or non-point sources.
- ◆ Episodes of extreme low oxygen (hypoxia) from low flows or contaminated runoff cause direct mortality or reduced fitness.
- ◆ Enhancement or introduction/colonization of invasive or predacious fish species (e.g. Salmon, Bass/Sunfishes, Brown Bullhead species), increases competition and predation impacts.

**Conservation & Management Objectives**

- ◆ Apply conservation and management objectives, habitat suitability and potential for critical habitat through criteria set-out in the "Assessment of Potential Critical Habitat for Nooksack Dace (*Rhinichthys cataractae* ssp.) and Salish sucker (*Catostomus* sp.)."

- ◆ At present there are no specific standards for Inventory of this species. Applying methodologies set out in the RISC “Reconnaissance (1:20,000) Fish and Fish Habitat Inventory: Standards and Procedures” should investigate transferrable protocols found in “Guidelines for the Collection of Nooksack Dace (*Rhinichthys cataractae* spp.).

#### Specific activities should include:

- ◆ Beaver management needs to restore that species ‘natural balance’ in Salish Sucker watersheds, including specific measures of controlling beavers and their dams.
- ◆ Recovery planning and implementation should occur at the scale of individual watersheds as their populations are isolated from one another and face differing suites of threats in each watershed.
- ◆ Monitoring and evaluation of a subset of populations is required each year with the status of each population and watershed being evaluated every five years at minimum.
- ◆ Habitat degradation should be mitigated through creation and enhancement of riffle habitat in stream reaches with high potential and productivity.
- ◆ Minimize impacts of introduced competitive and predacious fish species and undertake invasive species control and management programs.
- ◆ Maintain septic fields and other potential sources of contamination to surface and ground water.
- ◆ Stormwater should be appropriately managed to attenuate and intercept runoff and pollution that may enter receiving waters. Reduce sediment entry and minimize loading of contaminants into ground and surface waters.
- ◆ Establish or maintain adequate base flow in all habitats with high potential productivity. Protect vulnerable aquifers that may be sustaining wetland and watershed hydrology.
- ◆ Clear-span crossings are preferred. Culvert crossings should be a minimum 2 m diameter with open bottoms with natural substrate, no longer than 30 m and should not have large drops that would impede small mammal (or fish) movement. On long culverts that are dark in the middle, consider the use of grates that will allow light and rain to enter.
- ◆ Encourage stewardship amongst private landowners, the general public and through land use decision making and associated maintenance activities.

This species is listed under the Federal Species at Risk Act (SARA) and is subject to protections and prohibitions under the BC Wildlife Act. Habitat for this species is also governed under other provincial and federal regulations including the Fish Protection Act and Federal Fisheries Act and potentially Regional and local municipal bylaws.

#### Content for this Factsheet has been derived from the following sources

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Every effort has been made to ensure content accuracy. Comments or corrections should be directed to the South Coast Conservation Program: [info@sccp.ca](mailto:info@sccp.ca). Content updated August 2010.

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