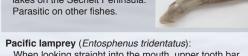
Lampreys (Petromyzontidae) "Eel-like" body shape; lack of paired fins, Green sturgeon (Acipenser Distribution: Sporadically found in Strait of mouth in the form of a circular disc with



of a "hood" rather than a circular disk, no teeth. Difficult to distinguish among species; filter feeders. Transformed/adult forms: Mouth in the form of a Derek Tan circular disc with teeth: well-developed eves.

*Vancouver lamprey (Entosphenus macrostomus): Width of mouth (when looking from underneath) is markedly wider than head. Typically less than 30 cm in total length. Distribution: Cowichan and Mesachie lakes and tributary streams on southeastern

Vancouver Island, A similar form occurs in Ruby and Sakinaw lakes on the Sechelt Peninsula.



When looking straight into the mouth, upper tooth bar has three prominent cusps or points. May exceed 1 m in length, typically 40 to 70 cm. Distribution: Widespread in coastal rivers

up to several hundred km from the sea: anadromous (sea-run, but spawn in fres water) and parasitic on fishes.

Western river lamprey (Lampetra ayresii): "Silvery" colouration; well-developed teeth; when looking into the mouth, centre pair **Distribution:** Widespread in coastal

of lateral teeth with two prominent rivers, up to about 150 km from the sea: "points" or cusps. Up to 16.2 cm anadromous and parasitic.

Very similar to western river lamprey, but reaches a smaller size (typically less than 15 cm) and teeth are blunt.

most of coastal British Columba north to and including the Stikine River. Permanent resident of fresh water (non-anadromous), non-parasitic.



and tip of snout; double row of 4 to Fraser River and Vancouver Island. 8 scutes between pelvic fins and anal fin. Largest freshwater fish in Canada; up to 6 m in length.

than distance between barbels rivers. Occasionally found in marine waters off the



and the mouth is **shorter** than Taku, and Stikine rivers. between barbels and tip of snout. Single row of 1 to 4 bony scutes between pelvic fins and anal fin. Up to about 2 m in length.

medirostris): Greenish colour to Georgia, off the west coast of Vancouver Island. back, distance between the barbels only rarely in the lower Fraser, Skeena, Nass,



eyes absent or poorly-developed, mouth in the form Mooneves (Hiodontidae) Laterally-compressed fishes with large scales; anal fin more than twice as long as the base of the dorsal fin. Relatively large eyes and no spines in fins.

> Goldeye (Hiodon alosoides): Silvery; anal fin much longer than length of dorsal fin base, large eye. To about 50 cm max length. Distribution: In BC, found only in the Mackenzie River basin (lower

Peace and lower Liard rivers).



families of freshwater fishes. No teeth

Herrings and shads (Clupeidae) Silvery fishes with no teeth in jaws, no spines; "upturned" upper jaw; scales on the belly in the form of a sharp saw-like keel, large scales.

American shad (Alosa sapidissima): Silvery; large scales, bluish back; one or more prominent dark spots on "shoulder" and along back. Prominent "keel" on belly. Up to 80 cm total length.

Distribution: Native to east coast of North America, introduced to Sacramento River. CA, and spread to lower Columbia River i.e., in US) where they number in the millions. Occasionally encountered in BC in lower Fraser, central coast, Skeena, Nass, Taku, Stikine, Alsek rivers, and

Common carp (Cyprinus carpio): Dorsal

fin much longer than head, single spine

Goldfish (Carassius auratus): Similar to

of mouth. Brownish to brilliant orange

common carp, but **no barbels** at corner

associated marine waters.



goldfish, fathead chub) there are no minnows on Vancouver Island or Haida Gwaii.

Distribution: Native to Eurasia, but widely introduced in North America, Found in

lakes and occasionally rivers in lower and middle Fraser River system, Vancouver

Island, lower Kootenay, lower Columbia (in Canada), Kettle, and Okanagan drainages.

Carps and minnows (Cyprinidae) Globally, one of the most diverse

Western brook lamprey (Lampetra richardsoni): Note: A divergent form of the western in jaws, no spines in fins (but see carp), mouth typically small and not "upturned"; upper brook lamprey (the *Morrison Creek jaw is "protrusible". With very few exceptions (e.g., peamouth, and introduced carp, lamprey) occurs in Morrison Creek, a tributary of the Puntledge River on

eastern Vancouver Island. Distribution: Streams throughout

at leading edge of dorsal fin; prominent single barbel at corner of mouth, large scales and a "deep" back. Brownish-gold in colour, Largest recorded (in Europe) was more than 45 kg, but typically in the 2 to 10 kg range (40 to 80 cm).

*White sturgeon (Acipenser Distribution: Throughout Fraser and Columbia transmontanus): Brownish-black- rivers (and the Kootenav River downstream of the grey back, distance between the Creston area), and perhaps the Skeena River; barbels and the mouth is **greater** only rarely in Vancouver Island or Haida Gwaii





Distribution: Native to east Asia, but widely introduced to North America from the aguarium trade. Found in lower Fraser River, Thompson River drainage, lower Columbia and Okanagan drainages. Occasionally in brackish waters.

Tench (*Tinca tinca*): Typically dark colouration over body, especially the fins, no barbels at corner of mouth; dorsal fin base shorter than head, caudal peduncle ("wrist" area just ahead of caudal fin) very deep greater than half the length of the head. May reach 70 cm, but most

Distribution: Native to Eurasia. Introduced to the lower Columbia, lower Kootenay, Pend d'Oreille, and Okanagan systems.

Redside shiner (Richardsonius balteatus): Dorsal fin located more than halfway along body; caudal peduncle narrow, typically less than one-half head length. Typically less than 10 cm in length. Distribution: Found in lakes and rivers throughout much of BC

except Vancouver Island, Haida Gwaii, the Flathead River.

Distribution: Restricted in BC to Peace and Liard rivers

barbels, mouth large, reaches to at Haida Gwaii).

(Ptychocheilus oregonensis): and most coastal rivers north to and including

Pectoral fins shorter than head; no the Nass River (but not on Vancouver Island or

Liard, Stikine, Alsek, Taku, and upper Yukon rivers.

Flathead chub (Platygobio gracilis)

Dorsal fin positioned well **ahead**

of anal fin; outer pectoral rays very

fins; top of head is "flat", prominent

barbels at corner of mouth. Up to

below Liard and Peace canyons.

least anterior margin of eye; young

with prominent black spot at base

Distribution: Widespread in lakes

and streams in the Fraser River

system, the upper and lower Peace

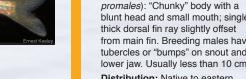
coast). Widespread in Fraser and

of caudal fin. Up to 65 cm.

15 to 20 cm in length.

Northern pikeminnow

long, almost reach origin of pelvic



lower jaw. Usually less than 10 cm. Distribution: Native to eastern North America: introduced to the lower Fraser River, southern Vancouver Island, and the lower Peace River area.

athead minnow (Pimephales

than 20 cm.



lower Kootenay, Kettle, Okanagan, and

Similkameen rivers (below barriers).

Longnose dace (Rhinichthys cataractae): Slightly dorsally compressed body; snout clearly overhangs mouth; no barbels, snout connects directly to upper jaw (no groove between upper lip and upper jaw); thick caudal peduncle; uniform brownish colouration and often with lateral dark stripe. Typically less than 10 cm.

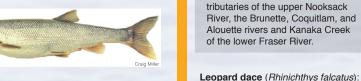
Chiselmouth (Acrocheilus alutaceus): Distribution: A disjunct distribution in

is "chisel-like", almost straight across; and West Road (Blackwater) rivers,

When viewed from below, lower jaw BC; found in the middle Fraser (Chilcotin

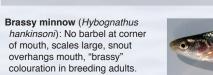
Distribution: Widespread in BC; found in riffle habitats in Fraser, Skeena, Columbia (except Flathead River), and Mackenzie river systems. Absent from coastal islands and upper Yukon River. A very

similar and related form, the *Nooksack dace, is found in BC tributaries of the upper Nooksack River, the Brunette, Coguitlam, and Alouette rivers and Kanaka Creek of the lower Fraser River.



Slightly dorsally compressed body, Peamouth (Mylocheilus caurinus): snout only slightly overhangs Small mouth, does not reach anterior Columbia rivers (except Flathead), lower mouth; conspicuous barbels at margin of eye; tiny barbel at corner Laird and Peace, and most coastal rivers corner of mouth; obvious groove of mouth, two dark horizontal stripes north to and including the Nass River. along body. Breeding adults with red Absent from Haida Gwaii and upper lips and sides. Typically 20 cm or Yukon River. less, but may exceed 30 cm. Distribution: The only minnow native to Vancouver Island (east coast and Kennedy Lake on west

(but not the Liard), Columbia (but not Flathead),



P - preserved specimen, colours may not be as shown

Typically less than 20 cm. Distribution: Sloughs and backwaters of the lower Fraser River, a few localities in central BC (Horsefly River area), scattered in ponds and small lakes of the upper Parsnip (Peace) River (area north of Prince George).

between upper lip and upper jaw. Dark blotches along body and narrow caudal peduncle. Hind edges of dorsal and anal fin tend to be concave or "falcate" in shape. Typically less than 8.0 cm.

Speckled dace (Rhinichthys osculus): Distribution: In BC, known only from the

Kootenay, or Flathead rivers).

Distribution: Found in riffle habitats in the

lower and middle Fraser River and Columbia

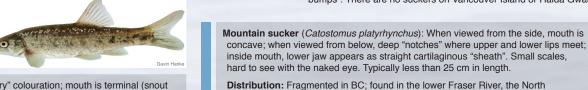
River (but not the upper Columbia, upper

Kettle River (Columbia River) system. Dorsal fin originates at mid-body (almost above anterior tips of pelvic Commonly a riffle-dweller. fins); mouth terminal (snout does not overhang mouth); no barbels (except in US populations). Dorsal and anal fins with rounded margins speckling on body less pronounce than in leonard dace. Typically les

P - preserved specimen, colours may not be as shown

margin of eye. Usually less than 10 cm, but may reach 16 cm. Distribution: In BC. Found only in

*Umatilla dace (Rhinichthys Distribution: Found only in the Columbia River umatilla): Barbels at corner of system (but not the upper Columbia and Kootenay Suckers (Catostomidae) Mouth sub-terminal (on underside of head), no teeth, Catfishes (Ictaluridae) mouth are inconspicuous (do rivers above major barriers and not in Flathead River). "bumps". There are no suckers on Vancouver Island or Haida Gwaii.



Spottail shiner (Notropis hudsonius): "Silvery" colouration; mouth is terminal (snout does not overhang mouth); prominent black spot at base of caudal fin. Silvery midlateral band. Typically less than 10 cm.

Distribution: In BC, native only to Maxhamish Lake of the lower Liard River, Introduced into Charlie Lake near Fort St. John and now spread to lower tributaries of Peace River. Emerald shiner (Notropis atherinoides):

not protrude beyond corner of

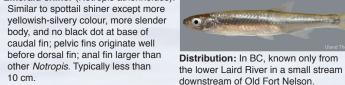
mouth): otherwise similar in

form to speckled and leopard

dace. Commonly encountered

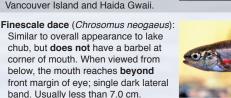
than 10 cm

in riffle habitats. Typically less



Lake chub (Couesius plumbeus): Small, conical barbels visible at corner of mouth. Snout more pointed than in similar-looking fish (northern pearl, finescale, and northern redbelly dace). Typically less than 10 cm, but may reach 20 cm. Distribution: One of the most widespread freshwater fishes in Canada. Found

throughout the Fraser (above Hell's Gate). Columbia (except upper Columbia upper Kootenay, and Flathead rivers), Mackenzie, Yukon, and coastal rivers north to the Stikine. Absent from



Distribution: In BC, found only in the lower Liard and lower Peace River drainages (Mackenzie River).

Northern redbelly dace (Chrosomus Note: The finescale and northern redbelly eos): Similar in overall apearance to dace often hybridize, making identification lake chub, but **does not** have a barbel especially difficult. at corner of mouth. When viewed from below, mouth does not reach front margin of eye; two dark lateral bands. Typically less than 6.0 cm.

Distribution: In BC, Found only in the lower Liard and lower Peace River drainages (Mackenzie River). Northern pearl dace (Margariscus nachtriebi): A "flap-like" barbel slightly ahead of corner of mouth, may be difficult to see with naked eye and occasionally missing in some individuals. Caudal peduncle deep (deeper than in the three species above), usually at least a deep as the distance between the tip of the snout and the hind

the lower Liard and lower Peace River drainages (Mackenzie River). Note: The norther pearl dace and the lake chub may hybridize making identification difficult.



thick "fleshy" lips with numerous papillae or fleshy

scales, strong spines in dorsal fin and pectoral fins, and a "fleshy" adipose fin between the dorsal fin and caudal fin. All catfishes are **non-native** to BC.

Yellow bullhead (Ameiurus natalis): Barbels on chin vellow or white in colour. Less than 50 cm. Distribution: Native to eastern

North America. Introduced and spread to sloughs and backwaters of the lower Fraser River (e.g., Westham Island).

nebulosus): All barbels are dark in colour; strong "hooks" at end of pectoral fin spines. Usually less than 50 cm. Bridgelip sucker (Catostomus columbianus): Similar to mountain sucker except

> North America. Introduced to southern Vancouver Island, Lasqueti Island, lower Fraser River, and perhaps to portions of the Columbia River system.

> > other and located just ahead of caudal fin.

Black bullhead (Ameiurus melas): Barbels dark in colour: no strong "hooks" at tip of pectoral spine; shorter anal fin than in brown bullhead (usually fewer than 21 anal rays). Up to 66 cm in length.

Northern pike (Esox lucius):

There is only one species of

pike in BC and it is instantly

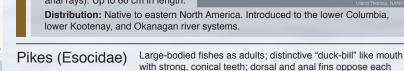
recognizable by the features

listed above, plus the many

the body. To 150 cm

River near Castlegar.

light-colured oval spots along



Largescale sucker (Catostomus Distribution: Widespread in the Fraser, Colum macrocheilus): No deep notches (except the Flathead River), upper and lower where upper and lower lips meet Peace River, and large coastal rivers north to the when viewed from below. Mouth Nass River. Absent from the upper Yukon River. appears as flat line when viewed from side. Caudal peduncle narrow, typically half length, or less, of dorsal fin base. Deep "cleft" between lobes of lower lips scales are large and easy to see Up to 60 cm.

lower Kootenay, Okanagan, and Similkameen rivers.

Thompson River area (near Clearwater, BC), and the Similkameen River

much less pronounced notches at corner of mouth and cleft between upper and

viewed from below); scales small and hard to see. Typically less than 30 cm.

Distribution: Found in the lower and middle Fraser, Thompson, lower Columbia,

lower lips is shallow (at least two rows of papillae between cleft and lower jaw when

(Columbia River drainage).



overhangs mouth when viewed from side. Typically three distinct black spots along body in young fish. Up to 65 cm. Longnose sucker (Catostomus

catostomus): Caudal peduncle A morphologically similar, but smaller-bodied deep, at least as deep as half the form form, the *Salish sucker, is found in BC length of dorsal fin base; small tributaries of the Nooksack River and in some scales, not easily seen by eye tributaries of the lower Fraser Valley, and the except in large specimens; snout Little Campbell River. very pointed, clearly overhangs mouth. Up to 65 cm.

Distribution: Found throughout the Fraser, Columbia (except the Flathead River), Mackenzie, uppe Yukon, Skeena, Nass, Stikine. Taku, and Alsek rivers.

Brown bullhead (Ameiurus

Distribution: Native to eastern

Four pairs of long barbels around the mouth, no thaleichthys): Pectoral fins ve long and fan-like, reaching to the origin of the dorsal fin. Pectoral and anal fins longer than head. To 20 cm.

and anal fin shorter than head; present in other north coastal rivers. prominent canine teeth on tongue; lower jaw long-extends to hind margin of eye. To 35 cm, typically less than 20 cm.

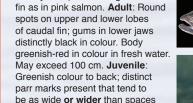
than 15 cm.

Distribution: Lower Fraser,

Rainbow (Arctic) smelt

Surf smelt (Hypomesus pretiosus): No strong teeth on tongue; mouth short, does not reach past front margin of eye; prominent dark band along side of body. To 30 cm, typically less

Distribution: Lower Fraser River, including Pitt Lake, and adjacent marine waters.



Coho salmon (Oncorhynchus

kisutch). Hind margin of anal fin as

in pink salmon. Fewer than 30 gill

rakers on first arch. Adult: Spots

on upper half of caudal fin only;

distinctive white gums. Up to 100

cm, but usually less than 80 cm.

distinctive oval parr marks along

is typically equal to or narrower

side of body. Width of parr marks

than the spaces between them. Fish

between 3 and 6 cm with distinctive

Juvenile: brownish backs with

Salmon, trout, char, whitefishes. Adipose fin, small fleshy lobe between dorsal fin and caudal and grayling (Salmonidae) fin, **present** (may be missing in hatchery-produced fish) Distinguished from smelts by the **presence of an axillary process** (small fleshy appendage

Distribution: Known from the lower Stikine River.

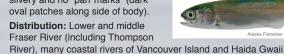
located where pelvic fin meets the body). Salmon, trout, and char may be sea-run and reshwater resident. Whitefishes and grayling are permanent residents of fresh water. Where possible, images below depict spawning adults and juveniles (less than 1 year of age).

Skeena, and Taku rivers, marine waters adjacent to Vancouver Island. Freshwater-

(Osmerus dentex): Pectoral offshore waters of Vancouver Island. May be

resident populations present in Pitt and Harrison lakes of the lower Fraser River area.

Pink salmon (Oncorhynchus gorbuscha): Hind margin of anal fin slants backwards towards caudal fin. Adult: distinct oval black spots on upper and lower lobes of caudal fin. To 76 cm. **Juvenile**: typically no longer than 5 cm in freshwater, silvery and no "parr marks" (dark **Distribution:** Found in quiet waters of the upper and lower Liard, the lower Peace. oval patches along side of body). the upper Yukon, and the Taku and Alsek rivers. Recently reported from the Columbi



Distinctive green head and red body

when spawning, spots on tail round,

permanent residents of fresh water

and rarely exceed 30 cm. Juvenile:

As in pink salmon, but faint parr marks

(dark oval bars along side of fish) that

bisect the lateral line. Rarely greater

than 5 cm in streams, but may exceed

20 cm in lakes. Sockeye salmon and

kokanee also typically have more than

30 gill rakers (bony protuberances on

gill arch).

not oval. To 85 cm. Kokanee are

Smelts and eulachon (Osmeridae) Silvery fishes of modest body size; BC central coast. Skeena. Nass. Stikine. Taku. Alsek rivers. adipose fin present. Appear similar to small trout, but they lack an axillary process (small fleshy appendage located where pelvic Sockeve salmon and kokanee fin meets the body in salmon and trout). Sea-run and enter lower portions of streams to spawn. (Oncorhynchus nerka): Hind margin of anal fin as above. Adult:

*Eulachon (Thaleichthys pacificus): Concentric marks visible as striations on operculum ("cheek bone"). To 30 cm, but typically under 25 cm

Distribution: Lower portions of major coastal rivers such as Fraser, Klinaklini, Nass River, Skeena, Kitimat, Bella Coola, Taku, Stikine, Alsek

rivers, and marine waters around Vancouver Island and Haida Gwaii.

Background image by Nevit Dilmen CC BY-NC-SA 2.0

Indicates the species is at some level of risk (Endangered. Threatened, or Special Concern) under Canada's Species at Risk Act. See www.sararegistry.gc.ca for more details. Maximum and typical sizes are based on Fishbase (www.fishbase.org).

Island, Haida Gwaii, and all coastal rivers north to and including the Alsek River. Absent from Columbia, Mackenzie, and upper Yukon systems in BC. *Chinook salmon (Oncorhynchus tshawvtscha): Hind margin of anal

"sickle-shaped" anal fin, white leading edges to dorsal and anal fin. Pectoral and

Distribution: Widespread throughout the Fraser River, streams on Vancouver

pelvic fins may have orange tint. Typically, less than 20 cm in fresh water.

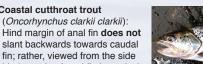
between them. Typically less than 20 cm in fresh water.

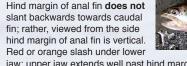
Distribution: Widespread throughout the Fraser River, streams on Vancouver Island, Haida Gwaii, and all coastal rivers north to and including the Alsek River, and upper Yukon River, Found in the Okanagan River (Columbia River) below Okanagan Falls. Freshwater resident forms reported from Osoyoos Lake. Extirpated from other regions of Canadian portion of the Columbia River.

Chum salmon (Oncorhynchus keta): Hind margin of anal fin as in pink salmon. Adult: lack of distinct spots on caudal fin; greenish colouration with purple-black "splotches" on sides. To 80 cm. Juvenile: Verv similar to sockeye salmon/kokanee but eye is smaller and parr marks are mostly **above** lateral line. Usually no greater than 5 cm

in freshwater Distribution: Found in the lower Fraser River, streams on Vancouver Island, Haida Gwaii, and all coastal rivers north to and including the Alsek River, the upper Yukon River







Distribution: Sockeye salmon and kokanee are widespread in the Fraser. Columbia (except Flathead River), central coast rivers, Vancouver Island, Haida Gwaii, Skeena River north to the Alsek River. Kokanee are also native to the headwaters of the Peace River (e.g., Thutade and Arctic lakes), and have been introduced to Williston Reservoir and have spread to the lower Peace River.









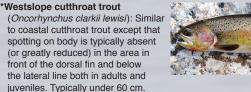


tongue) usually present. Adult: Heavy black spotting along body; tail yellowish with black spots. Typically under 60 cm. Juvenile: Tail usually well marked with black spots Distribution: Found in streams and some lakes in lower and middle Fraser River, Thompson River, coastal streams on Vancouver Island, Haida Gwaii, and numerous streams on the central coast and north to at least the Taku River.

- preserved specimen, colours may not be as shown

Salmonidae (continued)

*Westslope cutthroat trout (Oncorhynchus clarkii lewisi): Similar to coastal cutthroat trout except that spotting on body is typically absent (or greatly reduced) in the area in front of the dorsal fin and below the lateral line both in adults and



Distribution: Found in some eastern headwater tributaries of the South Thompson River (Fraser River drainage), the upper and lower Columbia River, upper and lower Kootenay River, the Flathead River, and introduced into the Similkameen River and lower Peace River.

Rainbow and steelhead trout

(Oncorhynchus mykiss): Hind marg of anal fin does not slant backwards towards caudal fin: rather, viewed from the side hind margin of anal fin is vertical. No red/orange slash under lower jaw. Upper jaw shorter than in cutthroat trouts, but may extend to hind margin of eye in adults. Adult: Red shading or "sheen" along lateral line often visible in fish larger than 20 cm. Lake-dwelling rainbow trout and

steelhead trout (anadromous rainbow

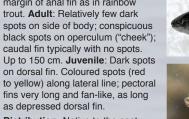


trout) often bright silver. To 120 cm, but typically less than 60 cm. Juvenile: White tips to dorsal, anal and pelvic fins upper jaw typically reaches to, or just beyond, front margin of eye.

Distribution: Widespread in the Fraser River, Columbia River, coastal streams north to and including the Alsek River, the upper Liard, and upper Peace rivers. Absent from the upper Yukon River in BC.

(e.g., Tsitika River, Salmon River) in and around Vancouver Island.

Atlantic salmon (Salmo salar): Hind margin of anal fin as in rainbow trout. Adult: Relatively few dark spots on side of body; conspicuous black spots on operculum ("cheek"); caudal fin typically with no spots. Up to 150 cm. Juvenile: Dark spots on dorsal fin. Coloured spots (red to yellow) along lateral line; pectoral fins very long and fan-like, as long



Distribution: Native to the east coast of North America. Extensive net pen culture in BC; escaped fish commonly encountered in many coastal streams

Brown trout (Salmo trutta): Hind margin of anal fin as in rainbow trout. Adult: Many black spots on body and some red or orange; black spots may be surrounded by light "halos". To 100 cm, but BC fish typically less



Distribution: Native to Eurasia, introduced to Cowichan River and upper Adam River (some are anadromous here) on Vancouver Island and in the Kettle and Similakmeen rivers of the Columbia River drainage.

fin, red or pale spots along lateral line. Adipose fin usually with orange tinge

Definitions of acronyms:

CSIRO - Commonwealth Scientific and Industrial Research Organisation, Australia FDA - Federal Department of Agriculture, USA NANFA - North American Native Fishes Association, North America

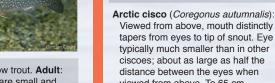
NOAA - National Oceanographic and Atmospheric Administration, USA USFWS - United States Fish and Wildlife Service, USA

Brook trout (Salvelinus fontinalis): Hind margin of anal fin as in rainbow trout. Adult: Dorsal fin with black "wayv" bands (vermiculations), red spots on sides surrounded by yellow or blue halos. Upper jaw extends well past hind margin of eye. Up to 86 cm. Juvenile: Large, "blocky" parr marks, light spots (yellow, red) not in single line along lateral line.

Distribution: Native to eastern North America, introduced to southern Vancouver Island, the lower and middle Fraser River, the Thompson

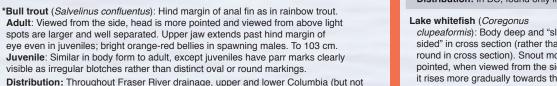
Lake trout (Salvelinus namaycush): Hind margin of anal fin as in rainbow trout. Caudal fin deeply forked, light-coloured spots all over body and head and on both lobes of caudal fin (usually white or faint yellow). Large head and well-developed teeth on both jaws. Adult: Large head and well-developed teeth especially apparent. To 150 cm. **Juvenile**: Dorsal fin may be dusky, but typically lacks conspicuous dark spots or wavy lines (as in brook trout).

Distribution: Lakes and streams of the middle and upper Fraser River (including Thompson River), upper Liard River, upper and lower Peace River, Skeena, Stikine, Taku, Alsek, and upper Yukon rivers. Introduced to the Okanagan and lower Kootenay river systems, and to Alouette Lake in the lower Fraser valley



Dolly Varden (Salvelinus malma): Hind margin of anal fin as in rainbow trout. Adult Viewed from the side, head is blunt, viewed from the top, light spots are small and crowded together. Upper jaw typically does not extend beyond hind margin of eye except in some spawning adults: bright red-orange bellies in spawning males. Typically less than 60 cm. **Juvenile**: Similar in body form to adult, except juveniles have parr marks clearly visible as irregular blotches rather than distinct oval or round markings Distribution: Lower Fraser River, streams and some lakes on Vancouver Island.

Haida Gwaii, central coastal streams north to and including Alsek River, upper Peace River, upper Liard River. Often hybridizes with bull trout where they co-occur (e.g., Skagit River,



in Kettle, Similkameen, or Okanagan rivers), upper and lower Kootenay River, upper and lower Liard, upper and lower Peace River, Skeena River, and some coastal streams (Squamish. Holmathko, Klinaklini rivers), Stikine, Taku, and upper Yukon rivers (Teslin



Salmonidae: Whitefishes Silvery fishes with large scales, easy to count, teeth in jaws absent Coregonus, Stenodus, Prosopium) or only weakly developed.

Inconnu (Stenodus leucichthys): Mouth large, viewed from above, mouth does not taper to become distinctly pointed as in other whitefishes; with mouth closed, lower jaw projects beyond upper jaw and upper jaw extends to hind margin of eve To 150 cm

Distribution: In BC, found only in the lower Liard River (Mackenzie River system) and the upper Yukon River.

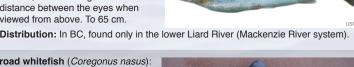
Cisco (Coregonus artedi): Viewed from above, mouth distinctly tapers from eyes to tip of snout. Pelvic fins inserted far back, distance from tip of snout to insertion of pelvic fins (solid black line in image) is greater than distance from insertion of pelvic fins to base of caudal fin (dashed black line). To 57 cm.



Distribution: In BC, found only in the lower Liard River (Mackenzie River drainage).

Least cisco (Coregonus sardinella): Viewed from above, mouth distinctly tapers from eyes to tip of snout. Pelvic fins inserted forward, distance from tip of snout to insertion of pelvic fins is less than distance from insertion of pelvic fins to base of caudal fin. To 47 cm.

Distribution: In BC, found only in the upper Yukon River system.



width To 61 cm

Distribution: In BC, found only in the Teslin Lake system (upper Yukon River).

sided" in cross section (rather than it rises more gradually towards the dorsal fin. Upper jaw at least twice a



Mackenzie River systems (Peace and Liard rivers), the Skeena and Alsek rivers. the upper Yukon River, and introduced into the lower Kootenay River system and Okanagan Lake

Pvamv whitefish (Prosopium coulterii):



*Indicates the species is at some level of risk (Endangered, Threatened, or Special Concern) under Canada's Species at Risk Act. See www.sararegistry.gc.ca for more details. Maximum and typical sizes are based on Fishbase (www.fishbase.org).

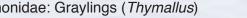
Round whitefish (Prosopium cylindraceum): Similar in appearance to pygmy whitefish, especially juveniles. Body round in cross section, juveniles and occasionally adults

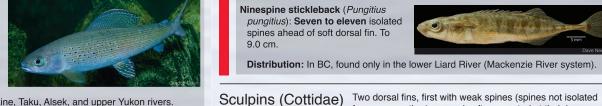
Sticklebacks (Gasterosteidae) Two to eleven isolated spines ahead of soft have parr marks along sides. When viewed from above or side, snout is pointed; adipose fin small, its base about

equal to eye diameter. To 60 cm. Distribution: Found in the upper and lower Liard River (Mackenzie River system), Taku Alsek, and upper Yukon rivers.

Iountain whitefish (Prosopium williamsoni): Body round in cross section, juveniles and occasionally adults have parr marks along sides.

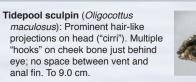
When viewed from the side, snout is pointed. Similar in appearance to other Prosopium, but adipose fin large, its base more than 1.5 times eve diameter. To 70 cm





Introduced into the Flathead (Columbia River system) River.

Sharpnose sculpin (Clinocottus acuticeps): Prominent hair-like pelvic fins. Adipose fin present, single spine at projections on head ("cirri"). Single leading edge dorsal fin, upper jaw protractile. "hook" on cheek bone just behind



hreespined stickleback

(Gasterosteus aculeatus): Two to three

Marine (silvery with green-grey back,

isolated spines ahead of soft dorsal fin.

upper) and freshwater (mottled brown

with red throats. Distinct "benthic" and

"limnetic" and *"lake" and *"stream

southwestern BC Typically 5-6 cm

length, but may reach more than

0.0 cm in some populations.

Ninespine stickleback (Pungitius

pungitius): Seven to eleven isolate

spines ahead of soft dorsal fin. To

noticeable space between vent ar

under tidal influence on Haida Gwaii.

anal fin. To 6.4 mm.

Distribution: In BC, found only in the lower Liard River (Mackenzie River system).

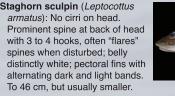
Large, broad head. No scales, but may be small hair-like projections or "prickles" on body

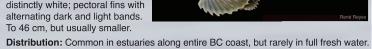
Distribution: A marine fish, found occasionally in lower portions of streams

from one another), second soft, separated at their base.

in colour, lower) forms. Breeding males

Distribution: A marine fish, found in lower portions of streams under tidal influence





distinctly longer than head; single dark spot at back end of first dorsal fin sometimes tinged with orange. Hair-like projections ("prickles") well developed on sides (except in some coastal lake populations). To 30 cm. Distribution: Lakes and streams in the lower and middle Fraser. Thompson River. below barriers in the lower Columbia, lower Kootenay, Kettle, Okanagan, and Similkameen rivers, coastal lakes and streams of Vancouver Island, Haida Gwai central coast and north to at least the Taku River, upper and lower Peace River

(Mackenzie River drainage). Sometimes found in brackish water.

Prickly sculpin (Cottus asper): No cir

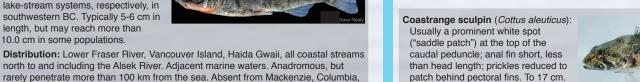
just behind eye; belly light in colour.

but not distinctly white; body typically

golden brown in colour. Pectoral fins

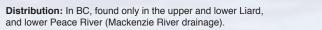
with narrow, dark bands. Anal fin long

on head: single hook on cheek bone



Distribution: Found in the lower and middle Fraser (but not Thompson River), Vancouver Island, Haida Gwaii, and all coastal rivers, including brackish areas, north to at least the Taku River, A distinctive, pelagic form of the coastrange

Spoonhead sculpin (Cottus ricei): No white spot at top of caudal peduncle; prickles conspicuous on side and back; spine on cheek bone clearly "hooked", head broad and flat To 13.4 cm



sculpin, the *Cultus pygmy sculpin, is found in Cultus Lake, lower Fraser River.

Torrent sculpin (Cottus rhotheus): Head very large (fits fewer than three times into length from tip of snout to base of caudal fin); body heavily prickled (except in some above waterfall populations): distinctive b and white alternating shading along

body; caudal peduncle narrow, less than distance between the eyes. To 15.5 cm. Distribution: In the North Thompson River (Fraser River), throughout the Columbia

River (but only below barriers in the Kettle, Okanagan, and Similkameen rivers, and not in the Flathead River).

hubbsi): Head moderately sized, fits about three or fewer lower Columbia (below Hugh Keenleyside Dam), times into length from tip of lower Kettle River (below Cascade Falls), and snout to base of caudal fin; Similkameen River. prickles, if present, reduced to small patches behind pectoral fin. "Chunky" fish usually with striking black and white patchy shading. To 11.2 cm.

*Columbia sculpin (Cottus



Shorthead sculpin (Cottus confusus): Slim aspect to body: head fits at least three times into distance from tip of snout to base of caudal fin, lateral line incomplete, does not reach base of caudal fin. To 15 cm.

Cascade Falls, in the Columbia River and tributaries below Hugh Keenleyside Dam, and in the Kootenay River below Bonnington Falls, absent from the Okanagan, Similkameen, and Flathead rivers.

Rocky Mountain sculpin (Cottus "bondi"): A yet to be formally described species. Distinguished from the slimy sculpin with which it sometimes co-occurs by its "chunkier" body and presence of palatine teeth (occuring in paired patches on roof of

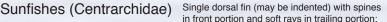
mouth). To 11 cm.

Distribution: In BC, found only in the Flathead River and tributaries (Columbia River

Slimy sculpin (Cottus cognatus): Distinguished by its smooth head, lack of palatine teeth, slim aspect to body; general lack of body prickling, and small anal fin (usually fewer tha 12 supporting rays). To 12 cm.

Distribution: Very widespread. Middle and upper Fraser, Thompson, Columbia, upper and lower Liard and upper and lower Peace rivers, upper Yukon River, Stikine, Taku, and Alsek rivers. Absent from mid- and south coastal drainages.

Island, lower Kootenay and lower Columbia rivers, Kettle and Okanagan drainages



umpkinseed (Lepomis gibbosus)

in front portion and soft rays in trailing portion; anal fin with 3 to 9 spines.

Pelvic fins reach to, or behind. vent; three spines in anal fin; distinctive black opercular flap with light margins and red/orange rear margin; anal fin distinctly smaller than dorsal fin. To 40 cm. Distribution: Native to eastern North America. Introduced and spread to

sloughs and backwaters of lower Fraser River, southern Vancouver

> Bluegill (Lepomis macrochirus): Pelvic fins reach to, or behind, vent; three spines in anal fin; distinctive black opercular flap without light margins or red/orange rear margin;

"dusky" shading at rear margin of second (soft) dorsal fin. To 41 cm. Distribution: Native to eastern North America and introduced into Osoyoos

Lake (Columbia River system).

Distribution: Found only in the Columbia River drainage: lower Kootenay (below Bonnington Falls Black crappie (Pomoxis nigromaculatus): Pelvic fins reach to. or behind, vent; six spines in anal fin, no black opercular flap; anal and dorsal fins about same length. To 47 cm.

Distribution: Native to eastern North America. Introduced to sloughs and backwaters of lower Fraser River, and the lower Okanagan River system.

America. Introduced to the lower

Fraser River area, southern Vancouver Island, lower Kootenay and lower Columbia rivers, the Okanagan River system, and the Kettle River (below Cascade Falls).

smallmouth bass (Micropterus dolomieu): Pelvic fins do not reach back to vent; mouth small, reaches only to about mid-eye; eye is red-orange; 68 or more lateral line scales. To 69 cm.

Distribution: Native to eastern

North America. Introduced to southern Vancouver Island, lower Kootenay, Kettle (below Cascade Falls), and Okanagan River system. Recent reports from the Quesne River system (middle Fraser River).

Two dorsal fins separated by a distinct gap. Spines in Perches (Percidae) first dorsal fin and in leading edge of second dorsal fir

'ellow perch (Perca flavescens): In adults, 6 to 9 dark vertical bars; no prominent canine teeth in jaws; no distinct white spot at base of caudal fin. To 50 cm. **Distribution:** Native to eastern North

America, Introduced to southern Vancouver Island, lower Kootenav River, upper and lower Columbia River, Okanagan, and Similkameen rivers,

and small lakes in the South Thompson River area. Also present in the lower Peace River where it may be native (it is native in adjacent portions of Alberta).

Valleye (Sander vitreus): In adults, no dark vertical bars (sometimes irregular ones in juveniles); well-developed canine-like teeth; golden-brown shading; eye may appear "cloudy"; lower lobe of caudal fin with distinct white edging. To 107 cm. Distribution: Native to the lower Liard

and lower Peace rivers (Mackenzie River system). Introduced to the lower Columbia River, upper Kootenay River, and Kettle River (below Cascade Falls).

Loaches (Cobitidae) Long, slender body, head short relative to body length,

Oriental weatherfish (Misgurnus anguillicaudatus): Long, slender body; brownish with green to grey-brown marbling along the back. Small mouth, oriented ventrally, This guide is intended as a guick reference for the small eye. To 28 cm, but typically much smaller.

three pairs of barbels around mouth.

Distribution: Native to east Asia, but appear to be established in the South Alouette River (lower Fraser River) likely from aquarium releases.



Righteye flounders (Pleuronectidae)

Extreme dorso-ventrally flattened body; one side of body dark, the other light eyes on same side of head; pelvic fins originate ahead of pectoral fins.

Starry flounder (Platichthys stellatus) Distinct, dark and light alternating shading on dorsal, anal, and caudal fin. To 91 cm. **Distribution:** A marine fish that may

occasionally be found in tidal areas of the Fraser River and coastal rivers and streams north to and including the Alsek River.



Freshwater Fishes of British Columbia

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identification of freshwater fishes of British Columbia It includes 69 native species occurring in fresh water, 4 native marine species sometimes encountered in fresh water, and 17 introduced species. The guide describes the general body form features and the geographic distribution of each species which should be used together for identification. For more complete information please refer to McPhail, J.D. 2007. The Freshwater Fishes of British Columbia, University of Alberta Press Edmonton. Alternatively, send images or specimens to

The Fish Collection Beaty Biodiversity Museum University of British Columbia 2212 Main Mall, Vancouver, BC, V6T 1Z4

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River, the lower Columbia, lower Kootenay, Okanagan, Kettle, Similkameen, and the upper and lower Peace Rivers.

Viewed from above, mouth distinctly tapers from eyes to tip of snout. Eye typically much smaller than in other ciscoes; about as large as half the distance between the eves when viewed from above. To 65 cm.

> Broad whitefish (Coregonus nasus): Body deep and "slab-sided" in cross section (rather than round in cross section). Head blunt, brow rounded and rises steeply towards dorsal fin when viewed from the side. Upper jaw is short, length less than twice its

clupeaformis): Body deep and "slabround in cross section). Snout more pointed, when viewed from the side

long as wide. To 100 cm.

Distribution: Found in the middle and upper Fraser River, Thompson River, the

Body round in cross section, iuveniles and occasionally adults have parr marks along sides. When viewed from above or side, the snout is blunt and rounded at tip. To 50 cm in some lakes near Quesnel, but most are less than

Distribution: Found in middle and upper Fraser, Thompson River, upper and lower Columbia, upper and lower Kootenay rivers. Okanagan Lake (but not Flathead. Kettle, or Similkameen rivers), Skeena River, Alsek River, upper Liard River, upper and lower Peace River, upper Yukon River.

Distribution: Found in the Fraser River, Columbia, Skeena River, upper and lower rarely penetrate more than 100 km from the sea. Absent from Mackenzie, Columbia, Liard and Peace rivers, Stikine River, central coast rivers north to and including the Nass River. Brook stickleback (Culaea inconstans): Five to six isolated spines ahead of soft dorsal fin. To 8.7 cm. almonidae: Graylings (Thymallus Distribution: Found in fresh water only: found in the lower Liard and Recognizable by the very large dorsal fin, longer than head length lower Peace rivers (Mackenzie and with distinctive blue and light spots in adults. River system).

Arctic grayling (Thymallus arcticus): Perhaps BC's most beautiful fish. Large dorsal fin, longer than head length and with distinctive blue and light spots in adults: 8 to 20 or more distinct black spots between gill cover and pelvic fin. Juveniles with parr marks along body. To 76 cm.

Distribution: Found in the upper and lower Liard and Peace rivers. Stikine, Taku, Alsek, and upper Yukon rivers.

Frout-perches (Percopsidae) Tips of pectoral fins extend well past origin of

rout-perch (Percopsis omiscomaye Parr marks typically visible; head large in lateral profile; spine in leading

edge of dorsal fin; pectoral fins high up on side of body and long, extend past origin of pelvic fins: adipose fin present. To about 10 cm.

Distribution: In BC, found only in the lower Liard and lower Peace rivers (Mackenzie River system).

Cods (Gadidae) Single barbel on chin; pelvic fins originate under pectoral fins; two

dorsal fins, first short, second very long, about one-half body length

Burbot (Lota lota): Single barbel on chin; pelvic fins originate under pectoral fins; two dorsal fins, first sho second very long, about one-half body length. To 152 cm.

Distribution: Found in the middle and upper Fraser, Thompson, Columbia (except Kettle and Flathead rivers), upper and lower Liard and Peace rivers, Stikine, Alsek, Skeena, Nass, and upper Yukon rivers.



dorsal fin. Large, fan-like pectoral fins set

high on side of body; pelvic fins as single sharp spines.

ribution: Found only in the Columbia River system: in the Kettle River below

argemouth bass (Micropterus back to vent; mouth large, reaches past hind margin of eye; 60 to 68 lateral line scales. To 97 cm.

salmoides): Pelvic fins do not reach Distribution: Native to eastern North