

Guide to Habitat Preferences and Seasonal Patterns of Pacific Salmon

	COHO	CHINOOK	PINK	CHUM	SOCKEYE
General distribution	<ul style="list-style-type: none"> widest geographic range of all Pacific salmon most easily seen fry during active growing season Adults are good jumpers and can pass over many types of natural obstacles, vertical leaps of over 2m are possible 	<ul style="list-style-type: none"> inhabit moderate to large sized streams 	<ul style="list-style-type: none"> inhabit lower reaches of small coastal streams but may ascend larger rivers for several hundred km. Adults are generally not adept at leaping waterfall and negotiating cascades or short high-velocity barriers, often the upstream limit for spawning in coastal streams is a waterfall or rapids that other Pacific salmon are capable of passing. 	<ul style="list-style-type: none"> Present in lower reaches of most coastal streams but may occur further up larger tributaries Adults are capable of swimming in moderate to high velocity currents but generally not proficient at leaping great heights or for long distances 	<ul style="list-style-type: none"> Found in coastal streams having accessible lakes
Adult entry into spawning streams/rivers	<ul style="list-style-type: none"> August - November 	<ul style="list-style-type: none"> Northern/interior populations: May-June Southern/coastal populations: September-October 	<ul style="list-style-type: none"> July -September 	<ul style="list-style-type: none"> Enter just before spawning begins, July - September 	<ul style="list-style-type: none"> June - September
Spawning	<ul style="list-style-type: none"> Variable, usually November - January 	<ul style="list-style-type: none"> Northern/interior pop: July-September Southern/coastal pop: November-January 	<ul style="list-style-type: none"> September – October 	<ul style="list-style-type: none"> August in northern areas and October-January in southern areas 	<ul style="list-style-type: none"> September – October
Habitat preferences of mature adults	<ul style="list-style-type: none"> Spawn in almost all coastal rivers and streams accessible to them Least particular of all Pacific salmon but generally prefer small streams with gravel Spawning can occur in clear or silted water and substrate may vary from fine gravel to coarse rubble Redds usually located at head of riffle area where there is good supply of oxygenated water through the gravel 	<ul style="list-style-type: none"> Capable of spawning in deeper, faster flowing water than other Pacific salmon due to their large size Can spawn in a variety of types of habitat: shallow or deep, slow or fast flowing and coarse or fine gravel but there is a preference for good subgravel flow 	<ul style="list-style-type: none"> Prefer clean coarse gravel with a few large cobbles, a large mixture of sand and minimal amounts of silt adults avoid quiet, deep water, pools, areas with slow currents or silt-covered streambeds Adults may spawn in intertidal areas 	<ul style="list-style-type: none"> Spawn only in coastal streams, sometimes in intertidal areas Prefer to spawn immediately above turbulent areas Preferred substrate is gravel with minimal fine sediments and some upwelling 	<ul style="list-style-type: none"> Spawn in lake inlet streams or lake outlets Adults may spawn on groundwater-fed shoal/beach areas on lake shores
Fry emergence	<ul style="list-style-type: none"> April - May 	<ul style="list-style-type: none"> March - April 	<ul style="list-style-type: none"> April - June 	<ul style="list-style-type: none"> March - May 	<ul style="list-style-type: none"> April - May
Rearing	<ul style="list-style-type: none"> 1-2 yrs in freshwater fry may move upstream or downstream to rear, often occupying areas which are not accessible to adult coho some may move into lakes to rear, occupying neashore shallows. 	<ul style="list-style-type: none"> few months – 1 yr in freshwater use main channel in streams also rear in estuaries of larger rivers 	<ul style="list-style-type: none"> least freshwater rearing of all Pacific salmon 	<ul style="list-style-type: none"> minimal freshwater rearing, juveniles have usually left freshwater by early June depend on estuarine waters, tidal creeks, sloughs for rearing up to 3 weeks 	<ul style="list-style-type: none"> 1-2 yrs in freshwater lakes

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Juvenile habitat preferences	<ul style="list-style-type: none"> • more structurally complex streams with boulders, logs, bushes and streamside vegetation support larger numbers of coho fry • after a few days post-emergence, fry tend to remain close to banks, using any cover that is available • fry typically gather in quiet backwaters, side channels and small creeks especially in shady areas with overhanging branches • fry can be found in both pool and riffle areas however they are best adapted to holding in pools • when water temperature is less than 6°C, juveniles will seek cover under debris piles and under cut banks • in winter, seasonally wetted areas, off-channel sloughs and swamps are used as rearing grounds • when water is 2°C, fry move into low velocity areas (deep pools, side channels) with overhanging logs as cover • in mainstem of larger rivers juveniles often occupy margins, debris piles and undercut banks 	<ul style="list-style-type: none"> • capable of occupying midstream, high velocity areas • usually found in more riverine habitats, rarely in beaver ponds or off-channel sloughs • when migrating in larger rivers greater than 3m, prefer to occupy river edge at the surface 		<ul style="list-style-type: none"> • often occupy exposed areas, near water's surface • can be found in current or along bank 	<ul style="list-style-type: none"> • fry can be found in great numbers along the shores of rivers as they migrate to nursery lakes
Juvenile seaward migration	<ul style="list-style-type: none"> • May - June 	<ul style="list-style-type: none"> • Timing is highly variable: some fry begin seaward migration soon after emergence (July), some migrate after a few months in freshwater (November-December), others migrate to sea in April – May of the following yr 	<ul style="list-style-type: none"> • juveniles migrate to sea immediately after emergence 	<ul style="list-style-type: none"> • juveniles migrate downstream very soon after emergence and go directly to sea • timing varies from early spring (March) to midsummer (June) according to latitude, stream length and interaction with other species (eg. Pink) 	<ul style="list-style-type: none"> • May – July • after emergence, fry migrate directly to nursery lakes which may be either upstream or downstream from spawning area