



Southcentral Alaska wild Dolly Varden

Ever wonder where the name **Dolly Varden** comes from? Tradition has it that a woman staying at the Upper Soda Springs Hotel on the McCloud River in California, upon seeing the fish, said it looked like a “regular Dolly Varden.”

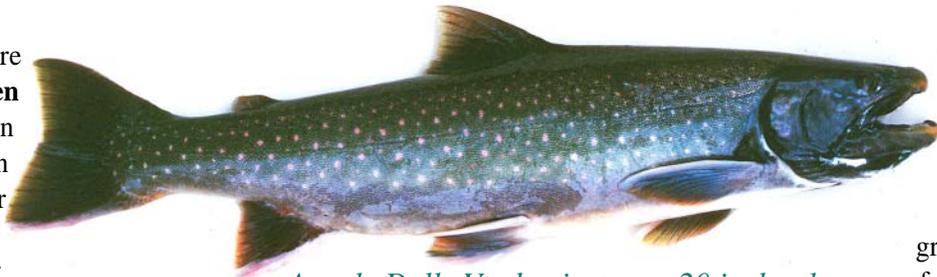
Apparently she had seen a theater presentation of Charles Dickens’ novel *Barnaby Rudge*, and was impressed by a dress worn by the character “Dolly Varden.” In any case, the name stuck.

Research efforts

Until recently, Dolly Varden char (*Salvelinus malma*) have not been researched, and many people still believe that Dollies are not of much benefit to mankind or the environment. Early observers of Dolly Varden witnessed them feeding on salmon eggs, which earned them a reputation as a predator of salmon. In fact, during the 1930s there was a federal bounty of 2.5 cents for every Dolly Varden tail, in the hopes that Dollies would be eradicated from Alaska’s precious salmon streams.

Since the 1940s, there have been numerous studies to determine whether or not Dolly Varden are serious predators of salmon eggs and young. Robert Armstrong, one of Alaska’s foremost Dolly Varden researchers, reports Dolly Varden actually do not harm salmon populations, but in fact may benefit salmon by eating drifting salmon eggs that would not have survived anyway. These eggs, if they were not eaten, would eventually die and become hosts for fungi, which could infect the remaining live eggs and alevins (salmon young).

Another possible benefit is that Dolly Varden in lakes feed heavily on freshwater snails, which are hosts for a parasite that infects the eyes of silver (coho) and red (sockeye) salmon young, eventually causing blindness. And even the competition for space between Dolly Varden and the more serious predators of salmon young, such as illegally-introduced northern pike or even natural populations of cutthroat trout,



A male Dolly Varden just over 20 inches long

may play a role in reducing predation of salmon young.

The search for a greater understanding of Dolly Varden continues. Most research has focused on anadro-

mous (sea-run) Dolly Varden, and very little work has been conducted on resident Dollies.

As our understanding of Dolly Varden and their importance to aquatic ecology increases, the need to preserve healthy Dolly Varden populations becomes more evident.

Life cycle of anadromous Dollies

Dolly Varden are olive green to dark blue or brown, with many yellow, orange, or red spots on the side. The largest spots are usually smaller than the pupil of the eye.

All char are fall spawners, with spawning in Southcentral Alaska occurring in late September or October. Spawning places great physical demands on Dolly Varden. An estimated 70% of the males and 50% to 60% of the females die after spawning. The surviving fish return to the ocean the following spring. It is generally believed that males do not spawn more than twice and females not more than three times. Those fish that spawn more than once are likely to spawn in consecutive years. This explains why fish rarely live more than nine years in Southcentral Alaska.

Sea-run Dolly Varden have complex life histories, since they travel in both fresh and salt water habitats. They may visit many freshwater streams in a single year, which may give an inaccurate impression of their numbers. This mobile lifestyle led Inupiaq Alaskans to assign Dollies different names—bright-colored fish entering a stream in summer were called *iqalukpik*. Three months later, when the same fish was seen in post-spawning coloration, they were called *pyraulik*.

Kenai River Dolly Varden have increased in popularity as a sport fish in recent years and a better understanding of how

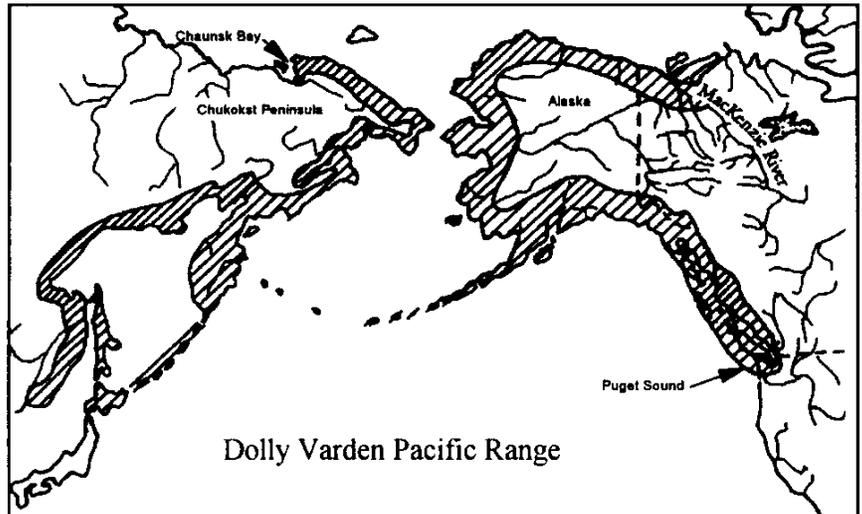
and when they breed, their migrations, and life histories is essential to managing this fishery..

Fishing for Dollies

Most people fish for Dollies from July through mid-August. During this time, Dolly Varden are entering streams from the ocean to forage, spawn, or find a suitable location to spend the winter. From July through early August, Dolly Varden are typically the only fish available for anglers to pursue on Kenai Peninsula fresh water streams south of the Kaslof River.

More anglers seem to be adopting a voluntary catch-and-release philosophy when fishing for Dollies. Anglers are currently releasing over 80% of the Dolly Varden legally caught in the Kenai River and Anchor River drainages. If released correctly, these fish have a high probability of surviving. To effectively practice catch-and-release fishing, or to release a fish which has been snagged:

1. Never handle a fish by the gills. This causes almost certain death.
2. Use flies or artificial lures. Hooking mortality in some fish is much lower if they are caught with flies or lures instead of bait.
3. Land the fish as quickly as possible. Playing the fish to complete exhaustion reduces its energy. Do not remove the fish from the water.
4. Dolly Varden have a “soft” mouth that is easily torn and should never be allowed to hang vertically from a hook and line.



5. Do not handle fish with a gloved hand or a wet hand. Gloves remove the mucus layer that protects the fish from infectious skin diseases. Death usually results within two weeks of a skin injury. Wet hands make fish extremely difficult to handle, increasing the chances of injury.
6. If the fish is hooked deeply, cut the leader and leave the hook in the fish. The hook will eventually dislodge or rust.
7. Revive the fish by pointing its head into the current. Gently hold it there until its gills are working and it swims away on its own.

To read more about Dolly Varden, we suggest

Armstrong, R.H. 1991. Dolly Varden char. Pages 266-272 in J. Stoltz and J.Schnell, editors. Trout, The Wildlife Series; 1991. Stockpole Books, Harrisburg.

Larson, L. L. 1997. Lower Kenai Peninsula Dolly Varden studies during 1995. Alaska Department of Fish and Game. Fishery Data Series No. 97-2, Anchorage.

Larson, L.L. 1991 Statistics for Dolly Varden on the Anchor River, Alaska, during 1990. Alaska Department of Fish and Game, Fishery Data Series No. 91-13, Anchorage.

Mecklenburg, Catherine W., T.A. Mecklenburg and L.K. Thorsteinson. 2002. *Salvelinus malma*. Page 200. Fishes of Alaska 2002. American Fisheries Society, Bethesda.

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