

Arctic grayling, continued

FISH TALK by Bill Hauser

Arctic grayling spawning migrations begin in streams in the spring before or immediately after ice-out. Spawning begins when the water temperature is 43 degrees Fahrenheit and intensifies as it warms to 50 degrees Fahrenheit. Some spawning runs may be as long as 100 miles. Males establish a territory and attempt to attract females with a courtship that includes erecting their dorsal fin for display. They do not make a redd, but, rather, usually just spawn over gravelly areas. The orange eggs are about a tenth of an inch in diameter. Fecundity is about 5,500 or more eggs per pound of female. Hatching time requires about 11 to 21 days, depending on water temperature. Newly hatched Arctic grayling are nearly transparent and about three-tenths of an inch long. They have been described as a piece of white thread attached to two eyes.

Early growth is fast and by the end of the first summer, the fry are about two and one-half to four inches long. In five years, they are about 12 inches long and weigh about one-half pound.

Arctic grayling are highly territorial and hierarchical. After spawning they migrate to feeding areas and during summer, they occupy pools where the biggest and strongest fish hold and defend the choicest position near the head of the pool. Territories are defended against challengers.. Establishment of territories within a pool is important because Arctic grayling feed almost entirely on drifting terrestrial and aquatic insects, usually on or close to the water surface. Where available, however, they also feed on eggs, fry, and flesh of salmon and small fish. The best territories provide the best opportunity for the most efficient feeding location. Arctic grayling appear to be faithful to preferred locations. One study showed that fish tagged in one year were found in the same area a year later and many were caught more than once at the same location.

Migration to overwintering areas occurs between the end of August and the end of December depending on the area and distance. Most Arctic grayling move to deep pools in larger rivers during winter. Lakes and ponds may be used by some populations.

Age and size at maturity are highly variable depending on conditions. Maturity may be as young as four years and length at maturity is about 9 to 10 inches. Adult Arctic grayling may grow about 5 to 11 years; however, one fish from the Seward Peninsula was determined to be 32 years of age.

Arctic grayling, of course, have a reputation as not a very large fish. In many populations, they rarely exceed about 15 inches in length and a pound in weight. A 24-inch long Arctic grayling weighing four pounds would be considered quite large, but the new record for Arctic grayling in Alaska was caught from Fish Creek, near Nome, in 2008. It weighed in at five pounds, one ounce and 22 ⁵/₈ inches in length. (If you wish, you can see pictures of that fish at: <http://www.twinpeaksadventures.com/2008-08-17.htm>.) The largest—although unverified—reported Arctic grayling was about 30 inches in length and weighed nearly six pounds. It was caught in 1967 in a tributary to Great Slave Lake, Canada.

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Bill has published *Fishes of the Last Frontier, Life Histories, Biology, Ecology, and Management of Alaska Fishes* and *Letters from Alaska, The Inside to the Outside*.

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