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THE STEELHEAD AND RAINBOW TROUTS

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The steelhead and rainbow trouts generally have been considered distinct species. However, the late Prof. J. O. Snyder in "The Trouts of California" (California Fish and Game, vol. 26, no. 2, 1940, pp. 96-138), after many years of study, came to a different conclusion.

Professor Snyder recognized only two groups or "great races" of native trout (excepting the charrs), one he referred to as the "Rainbow Series" and the other as the "Cut-throat Series." In describing these series, Professor Snyder said, "The cut-throats are more boreal or alpine, while the rainbows are the more austral, and more generally distributed. The cut-throats are characterized by having smaller scales, a somewhat more complete dentition, more numerous black spots, and usually a red streak beneath the mandible, from the presence of which their name is derived."

That it sometimes is difficult even to distinguish the individuals of the two large groups recognized is brought out by Snyder in the following paragraph:

"As in the case of some peoples, American Indian and Asiatic Mongols for example, so with the trouts, cut-throat and rainbow alike, the distinguishing traits which separate them are difficult to set down in writing. Yet when one becomes familiar with them they may usually be recognized with certainty. The shape of the head and body, the dentition, the red throat mark, the squamation, the habits, etc., are not in each case always to be depended upon. Large acquaintance with them will demonstrate the futility of attempting an identification of their species by artificial keys or brief descriptions."

According to Professor Snyder, steelhead trout are sea migrants of the rainbow as well as the cut-throat trouts, that is, they may in some rivers at least consist of two species, and therefore are not entitled to a binominal name as a steelhead trout. This conclusion is expressed in the extract from Professor Snyder's paper that follows:

"Some observers hold to the belief that the steelhead is a distinct species of trout somewhat intermediate between the cut-throat and the rainbow. Such is not the case, and this statement is supported by a mass of observational and experimental evidence. A steelhead is a sea migrant of the particular species inhabiting the stream, and in our (California) waters it may be either a cut-throat steelhead or a rainbow steelhead, and there is no occasion to apply a Linnean binominal name to a steelhead as such."

Professor Snyder stated further, "The steelhead is a fish that has come from the sea and entered a river to spawn. The resulting young live in the stream for from one to three years as rainbow or cut-throat trout and then migrate to the ocean. Some individuals appear to remain in fresh water during life."

The difficulty of separating and defining the various species and races of western trout has long been recognized. The problem has been made more complex by the artificial distribution by fish culturists of some of the species, or even of hybrids. Because of the complexity of the taxonomy of western trouts, no brief descriptions with keys, such as are used in identifying most groups of fish, can be offered.