An Aberrant Form of the Dog-salmon with Abnormal Scales

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Among the pacific salmonids occurring in northern Japan, mostly in Hokkaido, Kurile Islands and on Kamtchatka coasts, the dog-salmon is one of the most common and abundant forms.

The salmon ascends generally into many streams for spawning throughout Hokkaido during from the fall to winter every year. The Hokkaido Salmon Hatchery, Fisheries Agency has been, therefore, releasing considerable number of salmon fry which are artificially hatched out at its many local hatchery branches distributed in all Hokkaido, for conservation and maintenance of salmon resources including some other species.

The dog-salmon has dorsal fin rays ranged in number 13 to 15 ; anal fin rays 16 to 19 ; branchiostegals 12 to 15 ; lateral line scales 125 to 149 (usually 136 to 138) ; and gill-rakers on the first gill arch 19 to 25 (usually 22 to 23) (Fig. 1).

This aberrant form reported here was taken by a drag-net at Horokamui seashore at the mouth of Ishikari river on October 18th, 1954, and it is a female specimen

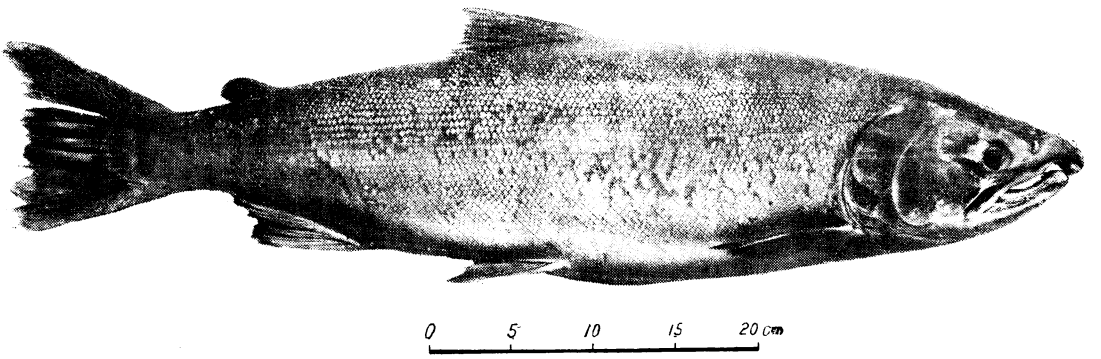

Fig. 1. A male dog-salmon, *Oncorhynchus keta*, with normal scales.

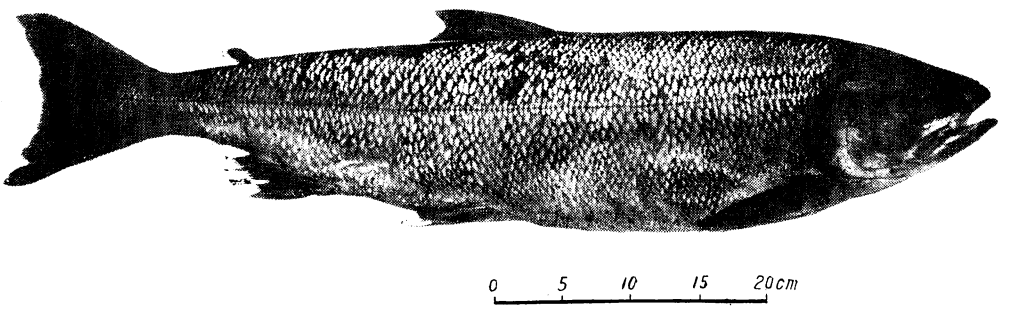

Fig. 2. A female dog-salmon, *Oncorhynchus keta*, with abnormal scales. Caught at Horokamui, Ishikari River's mouth.

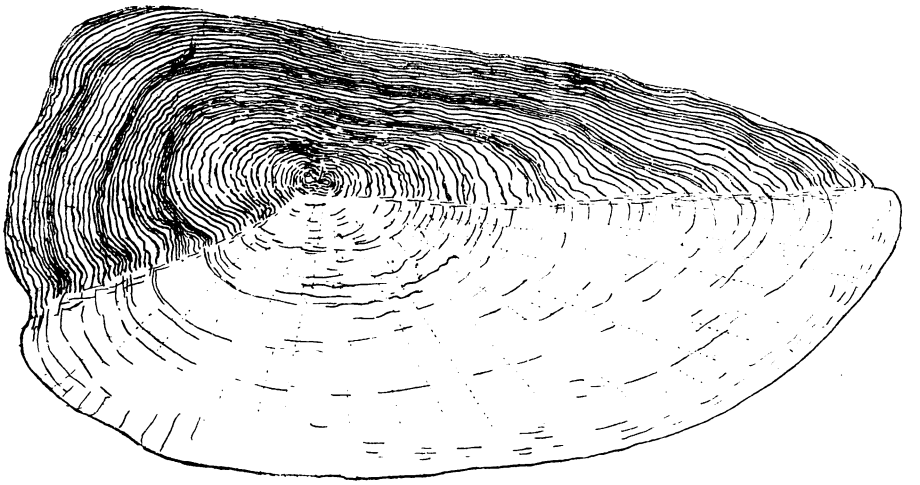

Fig. 3. Semi-diagramatical sketch of a typical abnormal scale taken just below the lateral line.
Length 0.75 cm; width 1.35 cm.

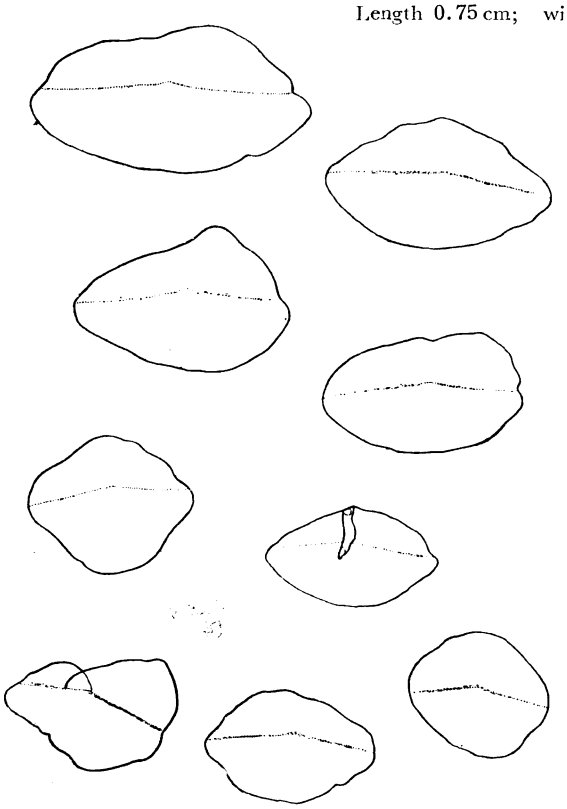

Fig. 4. Diagramatical sketches showing scale-forms of various parts of the aberrant specimen.

with completely mature ovaries, 680 mm in fork length, showing clearly 4 years age by scale reading (Fig. 2 and Fig. 3). Furthermore this salmon does not indicate prominently the secondary sex characters usually appearing in the mouth and others, but has shown a character of silvery coloration as sea migrant.

The measurements on the various parts of this specimen are as follows: dorsal fin 14 ; anal 17 ; ventral 10; branchiostegals 12 on left side and 13 on right ; gill-rakers 21 on left side and 20 on right ; and lateral line scales 127 on left side and 126 on right. These measurements lie in the range of the normal ones. The visera of this specimen is normal. The transverse scale number from anterior dorsal and anal fin ray of this specimen, however, is rather fewer than that of normal one : it is 17 and 9 in number but usually 22 and 18 in the normal salmon. Although the number of lateral series is as same as the normal, all scales containing those on the lateral lines are wider than long, especially conspicuous just below the lateral lines (Fig. 4). These scales are very coarsely distributed.

These scales have not possibly regenerated in the period of very early fingerling stage, because these scales have a forcus and a lot of circuli, the latter showing evidently some annual rings or winter bands.

The aberrant form is rarely found in waters around Hokkaido.

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