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# First Record of Kaluga Sturgeon, *Huso dauricus*, from Japan

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Four kaluga sturgeon, *Huso dauricus* (Georgi), were caught around Hokkaido in the period between October, 1974 and May, 1975. They were from off Sarufutsu on the coast of the Okhotsk Sea, off Minami-kayabe on the Pacific coast, and off Oshoro on the Japan Sea (Fig. 1). The species of this genus are clearly distinguishable from those of the other genera in the family Acipenseridae by their wide mouth extending nearly to lateral sides of the head, coalesced branchial membrane forming a free fold below isthmus, flat barbels on the snout, etc.

Kaluga sturgeon mainly live in the fresh and brackish waters of the Amur River. Sato (1942) noted its presence in the waters around Sakhalin. Recently, Kostarev and Turnin (1970) reported a specimen from the northwestern coast of the Okhotsk Sea for the first time.

In the Far Eastern Region, two genera, *Acipenser* and *Huso*, are known among those of the family Acipenseridae. Only the species of *Acipenser*, however, have been reported from Japan, and hence this is the first note on the capture of *Huso* from Japan.

Data of specimens: HUMZ 40772 (catalogue number of Laboratory of Marine Zoology, Hokkaido University), near the coast of Kinaoshi, Minami-kayabe, Hokkaido by setnet in October, 1974; HUMZ 40773, at 2 miles off Oshoro Bay, Otaru, Hokkaido by gill net in February, 1975 (Fig. 2); HUMZ 42413, off Sarufutsu, Soya, Hokkaido by setnet in October, 1974; HUMZ 42414, off Sarufutsu, Soya, Hokkaido by setnet on May 16, 1975.

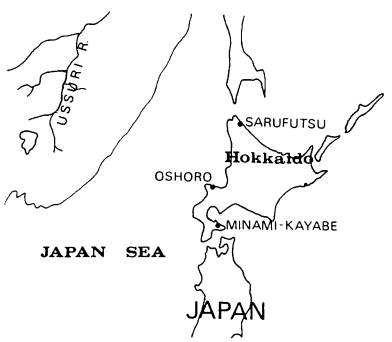


Fig. 1. Localities where present specimens of kaluga sturgeon, *Huso dauricus*, were caught (shown by dots).

Description: Counts and measurements are shown in Table 1. Scutes in five rows, with a series of small bony plates between dorsal and lateral main rows of scutes. Dorsal and ventral scutes larger than the lateral ones. Dorsal surface of head covered with several bony plates. Snout short and sharply pointed, its length before mouth shorter than mouth width. Eye very small, located immediately behind nostrils at about anterior 1/3 of head. Two pairs of flat barbels on posterior half of snout before mouth, inner two more anterior than outer ones, with about same length. Gill membranes free from isthmus and broadly connected. Anus a little behind pelvic base and much nearer to pelvic base than anal origin. Dorsal fin originating a little behind anus, its base terminating a little before posterior end of anal base. Anal fin originating below about middle of dorsal base. Pectoral fin moderate in size, extending below 9th lateral scute. Pelvic fin originating below 19th lateral scute, its tip ending at 23rd to 25th lateral scute.

Color in fresh specimen: Body dark yellowish green on dorsal side of lateral scutes, yellowish green between lateral and ventral scutes, and white on ventral side. Dorsal sides of paired fins yellowish green and ventral sides white. Dorsal and caudal fins greenish. Anal fin whitish.

Discussion: The genus *Huso* contains two species *H. huso* and *H. dauricus*. The present four specimens from Japan were identified as *H. dauricus* by the characters mentioned above, especially by number of dorsal rays, size of the 1st dorsal scute and shape of barbels. We were informed that three kaluga have been reared in the Otaru Aquarium and Wakkanai Municipal Aquarium (personal communication from Taga and Higashi).

According to Berg (1948), the kaluga in the Amur River attains 230 cm in 18 to 20 years, and spawns at this size for the first time. Therefore, the present four specimens (110 cm, 153 cm, 161 cm and 163 cm TL) may be immature.

Available data show that the kaluga inhabits

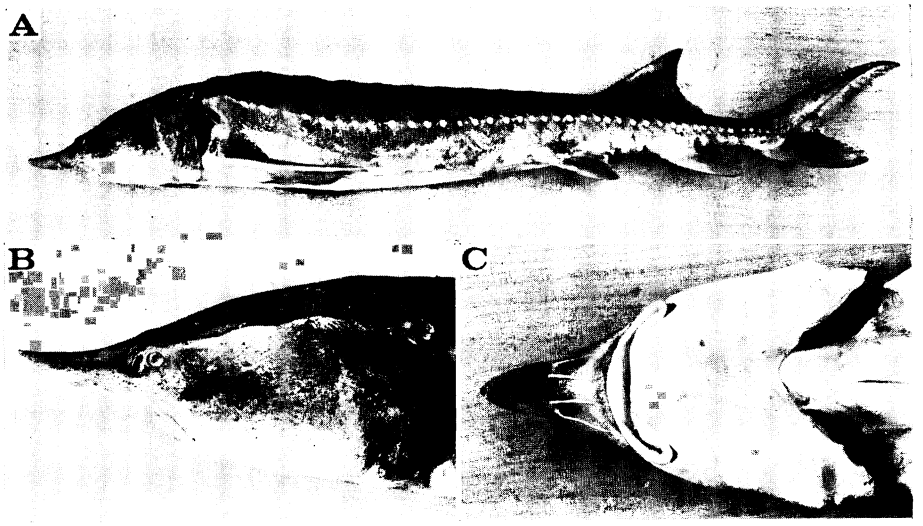


Fig. 2. Photographs of kaluga sturgeon, *Huso dauricus*, from Oshoro, Hokkaido; HUMZ 40773, 1628 mm in total length. A. Lateral view; B. Lateral view of head; C. Ventral view of head.

mainly the Amur, Ussuri and Amur Liman Rivers. Soldatov and Lindberg (1940) and Berg (1948) reported no specimen from the Okhotsk Sea except in the brackish estuary of the Amur. But in his checklist of freshwater fishes of Sakhalin, Sato (1942) noted that the species was found in the Tatar Strait and on the fishing ground off Sakhalin, though he did not state locality in detail. Recently, Kostarev and Turnin (1970) reported an immature kaluga (103 cm, 6+ years old) from Okhotsk on the northwestern coast of Okhotsk Sea, and mentioned that the several immature kaluga might have been caught in this waters. No catches of the kaluga have previously been reported from the waters around Japan. Therefore, the capture of the present four kaluga near Japan is interesting, because these fish are found far south of the rivers where they spawn.

Two forms, anadromous estuarine and river resident, which show different growth rate, are known in the kaluga of the Amur River (Berg, 1948).

Since all specimens from Okhotsk Sea and Japanese waters are juvenile, at least some of immature kaluga may temporarily leave the freshwater habitat and live under the oceanic conditions. Kostarev and Turnin (1970) also suspected that the immature kaluga might not be restricted to freshwater.

If the above supposition is correct, the kaluga may actually be common in the northern Japanese waters, especially around Hokkaido, even if they are not so numerous as *Acipenser*.

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Table 1. Measurements (mm), proportional dimensions in parentheses (% fork length), and counts of specimens of *Huso dauricus* from Hokkaido. Counts and measurements were made in accordance with Vladykov and Greeley (1963).

| | HUMZ 40772 | | HUMZ 40773 | | HUMZ 42413 | | HUMZ 42414 | |
|---|---|---|---|---|---|---|---|---|
| Locality | Minami-kayabe | | Oshoro | | Sarufutsu | | Sarufutsu | |
| Total length | 1609 | (110.7) | 1628 | (112.5) | 1529 | (111.1) | 1099 | (108.4) |
| Fork length | 1454 | (100) | 1447 | (100) | 1376 | (100) | 1014 | (100) |
| Trunk breadth | 165 | (11.4) | 181 | (12.5) | 195 | (14.2) | 128 | (12.6) |
| Trunk height | 204 | (14.0) | 184 | (12.7) | 195 | (14.2) | 129 | (12.7) |
| Head length | 365 | (25.1) | 375 | (25.9) | 348 | (25.3) | 283 | (27.9) |
| Eye diameter | 14 | (1.0) | 16 | (1.1) | 14 | (1.0) | 14 | (1.4) |
| Mouth breadth | 127 | (8.7) | 133 | (9.2) | 116 | (8.4) | 85 | (8.4) |
| Pectoral fin | 260 | (17.9) | 263 | (18.2) | 234 | (17.0) | 176 | (17.4) |
| Outer barbel | 63 | (4.3) | 55 | (3.8) | 64 | (4.7) | 54 | (5.3) |
| Inner barbel | 53 | (3.6) | 55 | (3.8) | 61 | (4.4) | 47 | (4.6) |
| Snout to: | | | | | | | | |
| anterior nostril | 106 | (7.3) | 98 | (6.8) | 102 | (7.4) | 99 | (9.8) |
| mouth | 115 | (7.8) | 100 | (6.9) | 107 | (7.8) | 100 | (9.9) |
| eye | 126 | (8.7) | 116 | (8.0) | 126 | (9.2) | 109 | (10.7) |
| dorsal origin | 1055 | (72.5) | 1049 | (72.5) | 993 | (72.2) | 746 | (73.6) |
| upper caudal origin | 1323 | (90.9) | 1320 | (91.2) | 1245 | (90.5) | 913 | (90.0) |
| pelvic fin | 928 | (63.8) | 935 | (64.6) | 887 | (64.4) | 649 | (64.0) |
| pectoral fin | 399 | (27.4) | 389 | (26.9) | 383 | (27.8) | 294 | (29.0) |
| anal origin | 1155 | (79.4) | 1132 | (78.2) | 1092 | (79.4) | 797 | (78.6) |
| Dorsal fin rays | 51 | | 53 | | 55 | | 56 | |
| Anal fin rays | 34 | | 32 | | 33 | | 34 | |
| Dorsal scutes | 12+1* | | 12+1* | | 14+1* | | 14+1* | |
| Lateral scutes | 1**+39 | | 1**+41 | | 1**+42 | | 1**+38 | |
| Ventral scutes | 10 | | 9 | | 9 | | 10 | |
| Gill rakers | 23 | | 20 | | — | | 20 | |

* a scute between dorsal and caudal fins
** a scute on supracleithrum

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## 日本で初記録のダウリアチョウザメ

尼岡　邦夫・仲谷　一宏

1974 年 10 月から 1975 年 5 月の間に，北海道を取りまくオホーツク海(猿払)，太平洋（南茅部）および日本海（忍路）の 3 海域の沿岸から 4 個体のダウリアチョウザメが捕獲された．

本種は頭部の側面まで裂けた大きい口をもつこと，左右の鰓膜はゆ合し，峡部から遊離していること，ひげは扁平であること，背鱗条数が少ないことなどの特徴でチョウザメ科の他種とは明瞭に区別される．日本では従来チョウザメ属 (*Acipenser*) の種類のみが知られていたが，ダウリアチョウザメ属 (*Huso*) の魚類の記録はない．

本種は本来アムール河の淡・汽水域に生息しているが，樺太海域やオホーツク海の奥部からも報告がある．さらに今回の捕獲によりその主要分布域のはるかに南方の北海道にも本種が分布することが初めて確認された．

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