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A Record of a Great Siberian Sturgeon, *Huso dauricus*, off Niigata, Sea of Japan (Osteichthyes: Acipenseridae)

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In recent years, the occurrence of sturgeons, family Acipenseridae, has become less common worldwide. With regard to Japanese waters, Honma (1988), who compiled records and distributional notes on sturgeons along the coast of the Japanese archipelago, noted that sturgeons had not been reported since 1980. He especially noticed the biogeographical significance of two comparatively recent records: the first of a great Siberian sturgeon, *Huso dauricus*, from the coast of Hokkaido (Amaoka and Nakaya, 1975) and a record of a green sturgeon, *Acipenser mediostris*, in the Sea of Japan off Aomori Prefecture, on 19 May, 1979 (Shiogaki, 1982). Further, Shiogaki (1990) reported briefly on a great Siberian sturgeon caught in a gill net for salmon off the coast of Wakinosawa, Mutsu Bay, Aomori Prefecture, the most northern part of Honshu Island, on 26 January, 1989.

The present short paper dealts with a recent record of a great Siberian sturgeon caught from the coast of Niigata, Sea of Japan.

Material

On 17 April, 1994, a medium-sized sturgeon was caught by a motor trawler, fishing for olive flounder, *Paralichthys olivaceus*, 6.4 km off Neya Village, Sanpoku Town, northern part of Niigata Prefecture, central west Honshu Island (Fig. 1). After exhibition at a fish festival (early May) at that fishing village, the frozen specimen was kindly presented through the courtesy of the fisherman, Mr. Z. Tamura, to Niigata Prefectural Fisheries Experimental Station.

Description

Measurements and counts are shown in Table 1. The fish, with 5 rows of unique scutes and 2 pairs of long barbels attached to the undersurface of the snout, had a heterocercal caudal fin and a strongly curved (semicircular), ventrally positioned mouth, reminiscent of sharks. The left and right gill (opercular) membranes were free from the isthmus and broadly connected with each other. As the operculum does not cover perfectly the branchial cavity, gill filaments are visible without difficulty by the naked eye (Fig. 2). The ventral fins were situated posteroventrally near the cloaca, the latter being somewhat closer to the ventral fin bases than the anal fin origin.

The color when fresh was dark grayish-green dorsally and white ventrally. All scutes and the anterior margin of the pectoral fins were white.

Discussion

Amaoka and Nakaya (1975) reported 4 individuals of *Huso dauricus* from waters around Hokkaido, one, which was caught by gill net 2 miles off Oshoro Bay in February 1975, being the first record from the Sea of Japan. Since only 5 individuals have been documented from the north-eastern waters of Japan, it is very likely that the present specimen marks not only the southern extreme of the species distribution in the Sea of Japan, but also for the Japanese archipelago.

Miyadi (1940) illustrated *H. dauricus* from the Songhua River, and mentioned further localities, *viz.* the Amur River, Ussuri River and Lake Khanka. Mori (1936) and Berg (1948/1962) also noted these localities, emphasizing the Amur Basin. Sato (1942) listed the species from Sakhalin Island, and Kostarev and Turnin (1970) obtained several immature specimens from the coast of the Okhotsk Sea. Previously, Soldatov and Lindberg (1930), Taranetz (1937), Schmidt (1950), Andriashev (1954) and Lindberg and Legeza (1965) had no records documented from the Okhotsk Sea.

Regarding the present specimen, considered to be immature male (subadult), it seems probable that immature great Siberian sturgeon migrate in coastal waters of the northern part of the Sea of Japan and western Okhotsk Sea, before entering Russian Far East rivers for spawning (Berg, 1948/1962; Kostarev

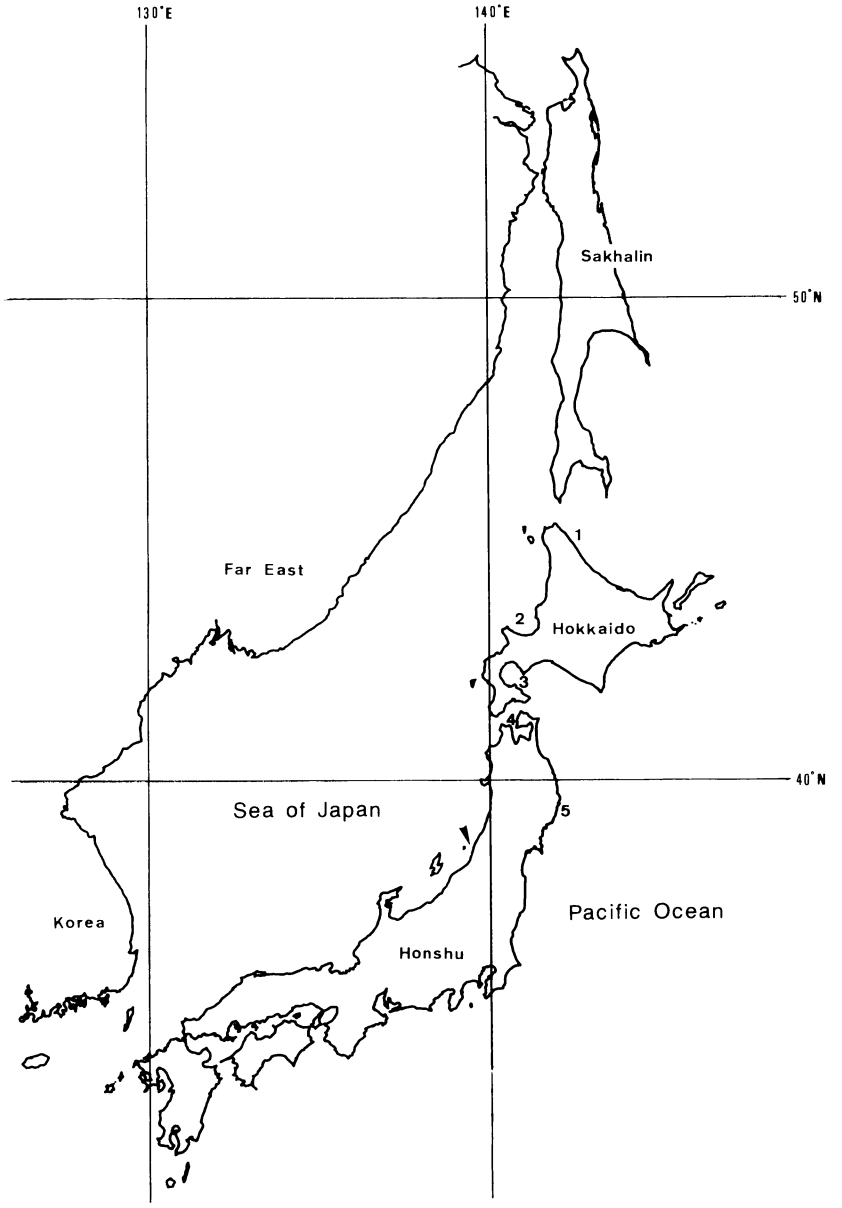

Fig. 1. Map of Niigata Prefecture, Sea of Japan, showing the collection site (*arrowhead*) of a great Siberian sturgeon, kaluga, *Huso dauricus*. Other known localities in Japanese Islands: *1*—Sarufutsu, *2*—Oshoro, *3*—Minami-kayabe, *4*—Wakinosawa, *5*—Sanriku.

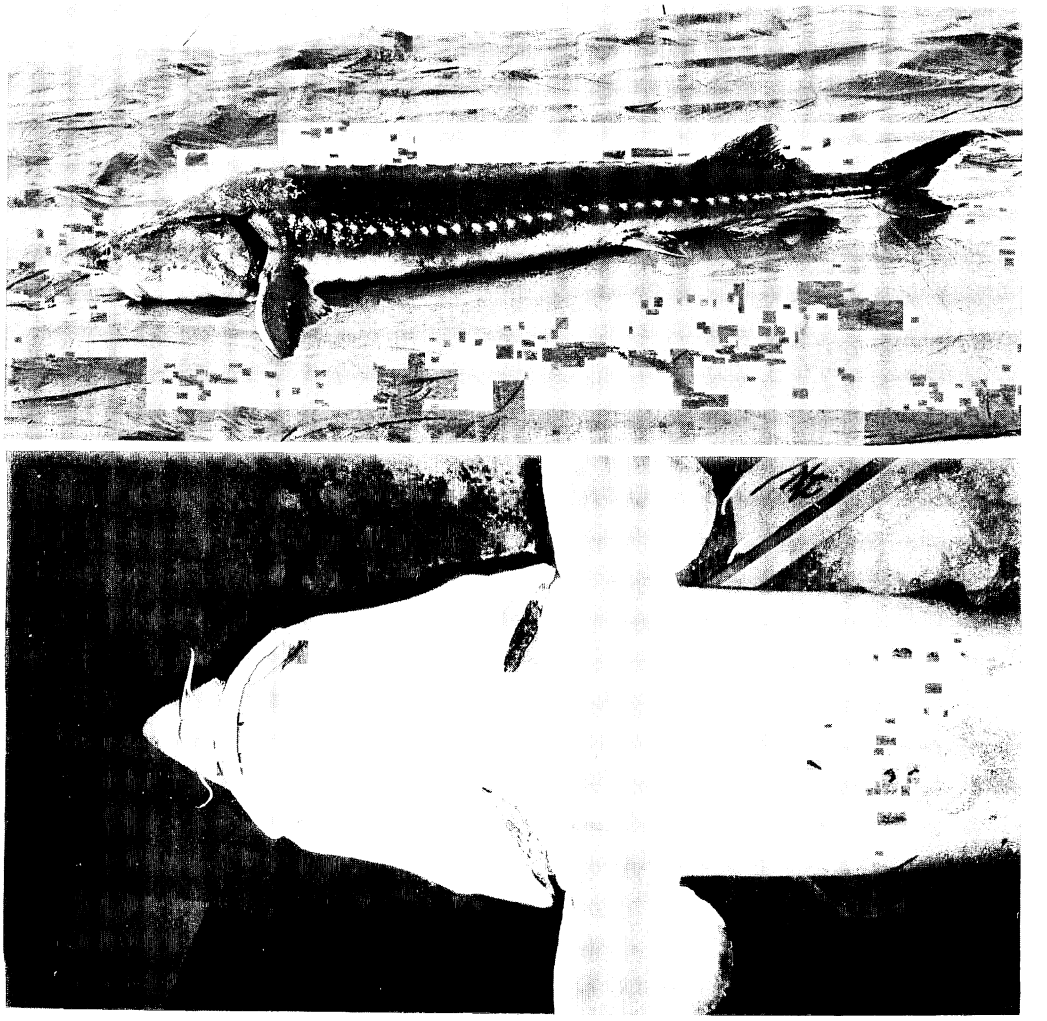

Fig. 2. Side (*top*) and ventral (*below*) views of a great Siberian sturgeon, *Huso dauricus* (1619 mm in fork length), caught by motor trawler, off the coast of Sanpoku Town, Niigata Prefecture, Sea of Japan. Note rows of scutes, 2 pairs of barbels, strongly curved mouth and gill membranes free from the isthmus.

and Turnin, 1970). It is also likely that very few individuals move into the middle regions of the Sea of Japan, such as Niigata, via the coast of southern Hokkaido and northern Honshu.

For the records of sturgeons in Niigata district, subsequent to Tanaka's original description of *Acipenser multiscutatus* and further notes (1908, 1933, 1936), Honma (1952, 1988, 1992) tentatively added this species to his ichthyofaunal list of Niigata Prefecture. The specimen in question was caught off Naoetsu, southernpart of Niigata Prefecture. In addition, a further undetermined specimen reported by Saito et al. (1958) from off the coast of Kakizaki, near Naoetsu, might have been *A. multiscutatus*. Although the identity of the latter specimens is doubtful (Nakabo, 1993), it appears that two sturgeon species belonging to different genera, *Acipenser* and *Huso*, have been collected from the Niigata region. As was mentioned above, their migration routes may have followed the west coast of Sakhalin Island, Hokkaido and northern Honshu in the cold water condition.

Table 1. Measurements and counts of the present specimen of a male *Huso dauricus*

	mm		
Total length	1765	Dorsal fin rays	49
Fork length	1619	Anal fin rays	32
Approximate body length	1554	Pectoral fin rays:	
Body depth	222	Left	49
Body breadth	261	Right	49
Greatest girth	747	Ventral fin rays:	
Head length	382	Left	27
Eye diameter:		Right	28
Left	17	Caudal fin rays	33+63
Right	15	Dorsal scutes	13
Mouth width	171	Lateral scutes:	
Pectoral fin length	250	Left	43
Outer barbel length:		Right	46
Left	64	Ventral scutes:	
Right	65	Left	11
Inner barbel length:		Right	8
Left	56		
Right	58	Body weight	32.564 kg
Snout:		Testis weight:	
to eye	111	Left	162.3 g
to anterior edge of mouth	77	Right	173.2 g
to operculum	271	GSI (Tw/Bw×100)	1.03
to cloaca	1138	Liver (Hepatic) weight	2398.4 g
Dorsal fin length	158	HSI (Lw/Bw×100)	73.65
Caudal fin lower lobe length	189		

Acknowledgments

The referee kindly informed us a record of *Huso dauricus* caught by the set net from the coast of Sanriku-chou, Iwate Prefecture, Northeastern District of Honshu, the Pacific side, on 20 May, 1984.

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新潟県山北町（日本海）から得られたダウリアチョウザメの記録

本間義治・板野英彬

1994年4月17日に，本州西海岸，新潟県北部の山北町寝屋沖でダウリアチョウザメ1尾が底曳網に入った．この標本は尾叉長161.9cm，体重32.56kgの雄亜成体と思われ，左右の鰓膜が峡部で連続して，峡部から離れていること，口が大いに湾曲して半月形をなしていることで，容易に本種と同定される．また，日本海側の南限のみならず，本種分布の南限の記録として注目される．

（本間：〒950–21 新潟市五十嵐2の町8050　新潟大学理学部；板野：〒950–21 新潟市五十嵐3の町13098–8　新潟県水産試験場）