THE RAFFLES BULLETIN OF ZOOLOGY 1998 **46**(2): 425-429

FRESHWATER ELASMOBRANCHS FROM THE BATANG HARI BASIN OF CENTRAL SUMATRA, INDONESIA

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ABSTRACT. - Currently, there are three species of freshwater elasmobranchs known from the Batang Hari basin in Jambi, Sumatra. They are *Carcharhinus leucas* (Carcharhinidae), *Pristis microdon* (Pristidae) and *Himantura signifer* (Dasyatidae). *Pristis microdon* appears to be the rarest elasmobranch encountered from the basin. Both *Carcharhinus leucas* and *Himantura signifer* have economic value as food fish.

KEYWORDS. - Freshwater elasmobranchs, *Carcharhinus leucas*, *Pristis microdon*, *Himantura signifer*, Sumatra.

INTRODUCTION

The Indonesian province of Jambi, located in central Sumatra, is drained mainly by the Batang Hari (Whitten et al., 1987) (Fig. 1). Originating from the Barisan Range in the Kerinci and Solok counties, the river flows eastwards through the whole of Jambi, and drains into the South China Sea. The bull shark *Carcharhinus leucas* (Carcharhinidae), the sawfish *Pristis microdon* (Pristidae) and the stingray *Himantura signifer* (Dasyatidae) are herein recorded for the first time from this basin. Taniuchi (1979) recorded the latter two species, and the dasyatid stingray *Pastinachus sephen* (as *Dasyatis sephen*) from the area of Rengat along the Indragiri River, a major drainage system just north of the Batang Hari. According to Compagno and Roberts (1982: 336), Taniuchi's *Dasyatis bennetti* is likely to be *H. signifer*.

Examples of the three elasmobranch species were obtained from the Jambi area in 1996 and 1997. An aquarium fish dealer based in Jambi was our source of information on the fishes. All specimens examined are deposited at the Zoological Reference Collection (ZRC) of the School of Biological Sciences, National University of Singapore; and voucher specimens will be sent to the Muzium Zoologicum Bogoriense (MZB), Bogor, Indonesia.

Received 23 Jan 1998 Accepted 23 Oct 1998

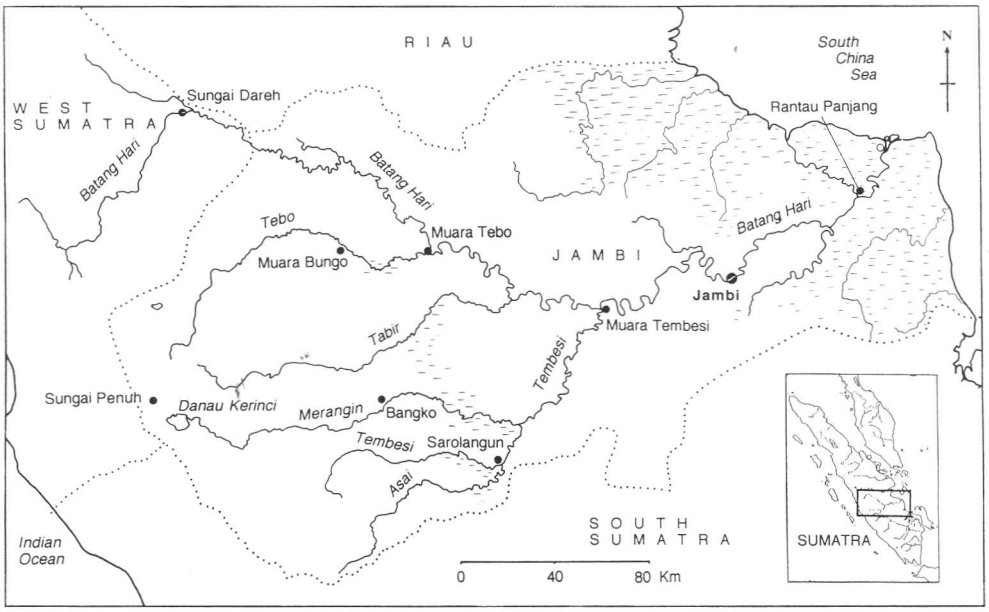

Fig. 1. Map of Sumatra showing the Batang Hari basin.

Carcharhinus leucas (Valenciennes)
(Fig. 2)

Two small examples were bought from the fish market in Jambi during the dry season in July, 1997. The 790 mm (total length) male (Fig. 2) and the 810 mm female were reportedly caught from the Batang Hari.

The ability of bull sharks to ascend rivers and tolerate low salinity to fresh water for extended periods is well known. They have been recorded in the Amazon basin some 4000 km inland, and have been known to breed in Lake Nicaragua (Last & Stevens, 1994: 245). There have been few records of bull sharks from inland localities in Southeast Asia. These include Malaysia (Sungai Perak, Sarawak), Vietnam (Dongnai), northern Java and the Philippines

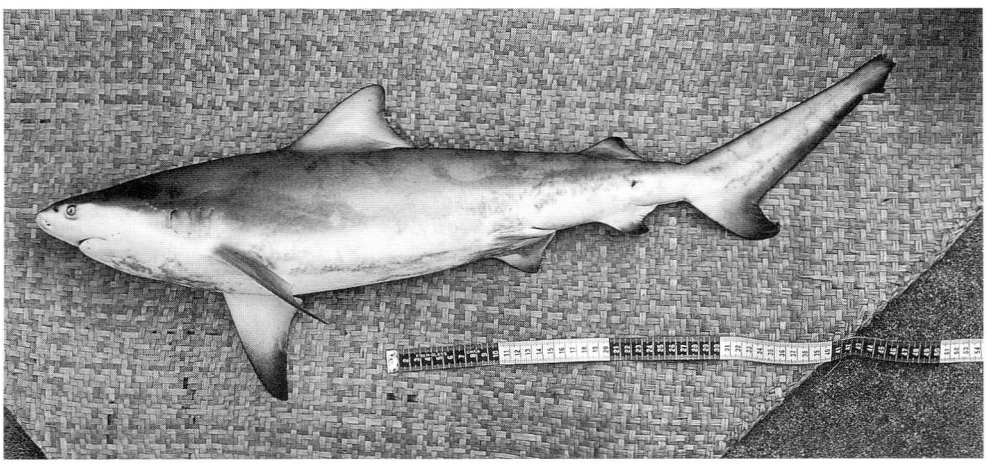

Fig. 2. *Carcharhinus leucas* : male of 790 mm total length, fresh from the market.

(Laguna de Bay, Argusan River, Saug River, Lake Naujan) (Compagno & Cook, 1995: 69). The present specimens apparently constitute the first record of this shark from within Sumatra.

Pristis microdon Latham
(Fig. 3)

There is an unconfirmed report of a three-metre long sawfish landed by a fisherman from the Batang Hari in the late 1980s (fish dealer, pers. comm.). Its identity, however, could not be ascertained as no parts of the specimen were retained and there is no photographic record.

In October and November, 1996, two specimens of *Pristis microdon* were purchased from a fish dealer based in Jambi. These specimens, a male of 870 mm total length and a female of 895 mm total length, were reportedly caught from an area along the Batang Hari near Rantau Panjang, about 40 km downstream from Jambi. Both specimens were apparently juveniles, for *Pristis microdon* is reported to attain a total length of seven metres (Last & Stevens, 1994: 364). In life, both sawfishes were a pale greyish brown above and white below. The edge of the rostrum and the rostral teeth were white. The male has 19 and 20 rostral teeth on the right and left side of rostrum respectively; and the female has 16 and 17 rostral teeth on the right and left side of rostrum respectively.

The male sawfish (Fig. 3) was maintained alive in freshwater for about seven days, during which it fed readily on deshelled marine prawns (*Penaeus* sp.). Other sawfishes held in captivity in Jambi were observed eating freshly dead fish of about 80 mm total length, mostly of the cyprinids *Rasbora dusonensis* and *Thynnichthys thynnoides*.

Sawfishes are collected for the ornamental fish trade in Jambi. They are reportedly caught with gill-nets. About six sawfishes were caught in the vicinity of Jambi in 1994, and at least 12 in 1996. These individuals were obtained during the high water season towards the last quarter of the year. They were exported mainly to Germany, Taiwan and Japan where there is demand for them as aquarium pets.

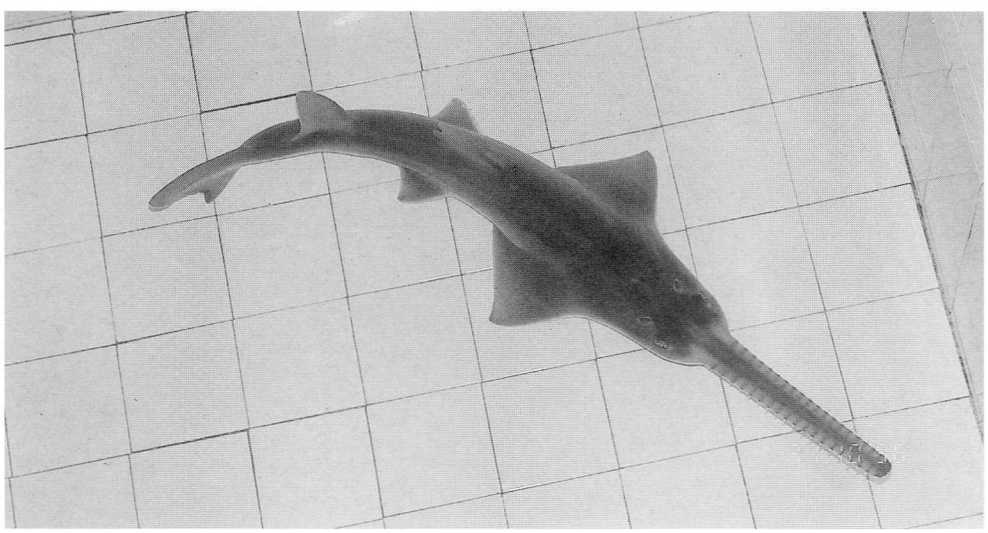

Fig. 3. *Pristis microdon* : male of 870 mm total length, alive in captivity.

In other parts of Southeast Asia, *Pristis microdon* has been recorded from inland localities in Malaysia (Sungai Perak, and possibly Sungai Tembeling and Sungai Linggi), Cambodia (Grand Lac), the Philippines (Lake Naujan, Mindoro), Kalimantan (Banjarmassin) and Thailand (?Chao Phraya River) (Compagno & Cook, 1995: 71).

Himantura signifer Compagno & Roberts
(Fig. 4)

Three specimens (a male and two females) of this freshwater stingray were purchased from fish markets at Jambi in 1996. They were most likely obtained from the Batang Hari. Freshly dead, all three specimens were greyish-brown above, with a distinct cream edge to the pectoral and pelvic fins. The white edges meet at the tip of the snout, and converge posteriorly on the tail at the base of the two stinging spines. Beyond that the tail is entirely cream with grey mottles scattered irregularly throughout. White spots are also present in front of eye and just posterior of the spiracle. This unique colour pattern is characteristic of *Himantura signifer* (see Compagno & Roberts, 1982). The largest complete specimen, a female of 328 mm disc width (ZRC.40649) (Fig. 4) has small black spots on the dorsum. More specimens were observed in the Jambi fish market during the dry season in July 1997, but their tails were all excised.

The stingrays were apparently caught by hook-and-line as suggested by the injuries on their mouths. Juvenile stingrays of about 200 mm disc width, usually available only during the low water seasons, are sometimes exported for the ornamental fish trade, Larger individuals are sold in the local markets for food. *Himantura signifer* is believed to occur only in freshwater. Described from the Kapuas basin in western Kalimantan, it is also known (outside Sumatra) from Malaysia (Sungai Perak) and Thailand (Chao Phraya, Mekong and Tapi Rivers) (Compagno & Cook, 1995: 77).

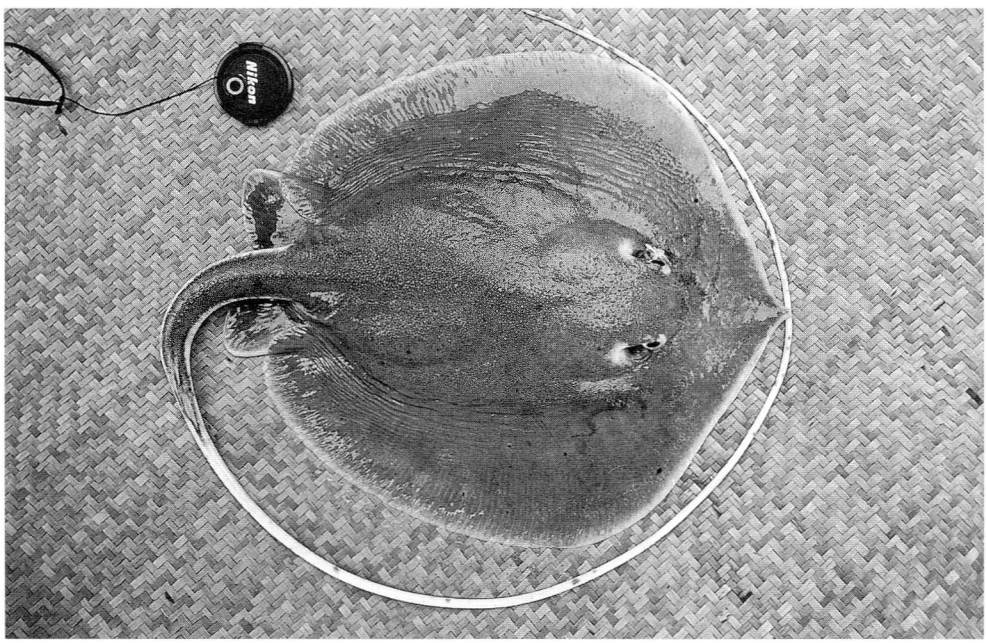

Fig. 4. *Himantura signifer* : female of 328 mm disc width, fresh from the market.

ACKNOWLEDGEMENTS

We thank Peter K. L. Ng, Mrs. C. M. Yang, Thomas and Vera Sim for their help and encouragement; and to Mabel Manjaji, S. H. Tan, H. H. Ng and Darren C. J. Yeo for their assistance. This article (contribution no. 13/97 for the Systematics & Ecology Laboratory) is partly funded by research grant RP 960314 to Peter K. L. Ng by the National University of Singapore. Peter Last examined and confirmed the identity of the specimens reported here. This is part of the ongoing higher degree research for THH.

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