Occurrence of the giant freshwater stingray Urogymnus polylepis in Sumatra, Indonesia (Chondrichthyes: Dasyatidae)

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Occurrence of the giant freshwater stingray *Urogymnus polylepis* in Sumatra, Indonesia (Chondrichthyes: Dasyatidae)

Muhammad Iqbal* and Indra Yustian**

Urogymnus polylepis is known from several drainages in Southeast Asia but had not been reported from Sumatra. We compile records of *U. polylepis* from local newspapers, internet and interview with local people; supported with photographs and other evidence. There are 12 confirmed records between 2008 and 2016, from estuaries to about 170 km inland.

Introduction

Several species of stingrays of the family Dasyatidae are known to enter or to live permanently in freshwaters in Asia (Kottelat, 2013). One of them is the giant *Urogymnus polylepis*. The species was first described from freshwaters in 1990 from the Chao Phraya River in Thailand as *Himantura chaophraya* (Monkolprasit & Roberts, 1990). Later, Last & Manjaji-Matsumoto (2008) compared material from Java, Thailand, Sabah and India and found that *H. polylepis* (Bleeker, 1852) is the valid name of the species. Last et al. (2016) revised the classification of the family Dasyatidae and the species is now called *Urogymnus polylepis*.

Urogymnus polylepis belongs to a group of species found mainly in fresh water and characterized by large body size, reportedly attaining more than 600 kg and 2 m disc diameter (Monkolprasit & Roberts, 1990; Kottelat et al., 1993). The species is assessed by IUCN as Endangered A2bcd (Vidthayanon et al., 2013). This species is known from several disjunct freshwater localities in South and Southeast Asia, from India to eastern Indonesia (Last et al., 2010), although the presence and identity of some of the reported populations requires confirmation (Vidthayanon et al., 2013).

In Indonesia, *U. polylepis* is recorded from Java (type locality: Batavia [Jakarta], most likely from the Ciliwung drainage) and Kalimantan (Monkolprasit & Roberts, 1990; Last et al., 2010; Vidthayanon et al., 2013). It is unknown in Sumatra. For example, fish surveys in Batanghari drainage did not report this species (Tan & Lim, 1998; Tan & Kottelat, 2009). In this paper, we compile the records of *U. polylepis* in Sumatra.

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Materials and methods

Records of *U. polylepis* were obtained from local newspapers and internet supported with photographs or other evidence. We screened all records, and unconfirmed or ambiguous records were rejected. In addition, field visits to Lematang drainage (26–27 December 2015) and Musi drainage (2–3 April 2016) were made to collect further information from local people.

Results and discussion

We found 12 confirmed records of *U. polylepis* in Sumatra between 2008 and 2016. Their geographic origin is shown in Figure 1. The identification of this species is based on the combination of large size, freshwater habitat and its colouration (dorsal surface of disc uniformly brownish or grayish brown (Figs. 2–3), ventral surface with broad black marginal band (Fig. 4); Monkolpra-

Table 1. Records of *Urogymnus polylepis* between 2008 and 2016 in Sumatra, Indonesia. Records are listed form north to south. Numbers refer to localities on Figure 1.

	drainage	sites	coordinates	date of capture	approximative distance from sea	remarks	source
1	Guntung river	Riau province, Indragiri Hilir district, Kateman subdistrict, Sari Mulya village	0°16'57"N 103°35'56"E	1 October 2013	10 km	weight 35 kg	Mukrin, 2013
2	Indragiri river	Riau province, Indragiri Hilir district, Tembilahan Hulu subdistrict	0°19'59"S 103°08'47"E	16 September 2011	40 km	weight 250 kg	Anonym, 2011
3	Indragiri river	Riau province, Indragiri Hilir district, Tanah Merah subdistrict, Kuala Enok village	0°23'40"S 103°31'59"E	12 October 2015	10 km		Anonym, 2015
4	Batanghari river	Jambi province, Batanghari district, Pemayung subdistrict, Kubu Kandang village	1°39'42"S 102°47'24"E	9 November 2008	100 km	weight 150 kg, total length estimated 4.5 m, disc width about 2 m	Anonym, 2008
5	Bungin river	South Sumatra province, Banyuasin district, Banyuasin II subdistrict, Sungsang village	2°15'12"S 104°50'04"E	2 April 2016	0 km	weight 350 kg	Our survey, information from local people, skin
6	Musi river	South Sumatra province, Musi Banyuasin district, Babat Toman subdistrict, Mangun Jaya village	2°43'21"S 103°26'00"E	24 August 2012	130 km	fish released to river, weight not recorded, guessed to be around 180–200 kg	Yafiz, 2012
7	Musi river	South Sumatra province, Musi Banyuasin district, Sanga Desa subdistrict, Ngulak village	2°46'45"S 103°23'50"E	20 August 2012	140 km	Weight 100 kg, total length 2 m (tail possibly broken), disc width 1.5 m	Ridwan, 2012
8	Musi river	South Sumatra province Rantau Panjang village, Lawang Wetan subdistrict, Musi Banyuasin district	2°46'57"S 103°40'13"E	7 September 2011	115 km	weight 100 kg	Adiasaputro, 2011
9	Musi river	South Sumatra province, Near Musi Dua bridge, Palembang city	3°01'05"S 104°43'08"E	4 March 2016	80 km	weight 200 kg	Our survey, information from local people
10	Lematang river	South Sumatra province, Penukal Abab Lematang Ilir district, Tanah Abang subdistrict, Sedupi village	3°18'57"S 104°10'16"E	21 February 2014	125 km	weight 200 kg	Haris, 2014
11	Lematang river	South Sumatra province, Penukal Abab Lematang Ilir district, Tanah Abang subdistrict, Sedupi village	3°19'41"S 104°11'02"E	21 February 2016	130 km	weight 200 kg	Ajiman, pers. com.
12	Lematang river	South Sumatra province, Muaraenim district, Muara Enim subdistrict, Kepur village	3°37'29"S 103°45'59"E	16 August 2015	170 km	weight 80 kg, total length 2 m	Stefanus, 2015; Zuhri, 2015

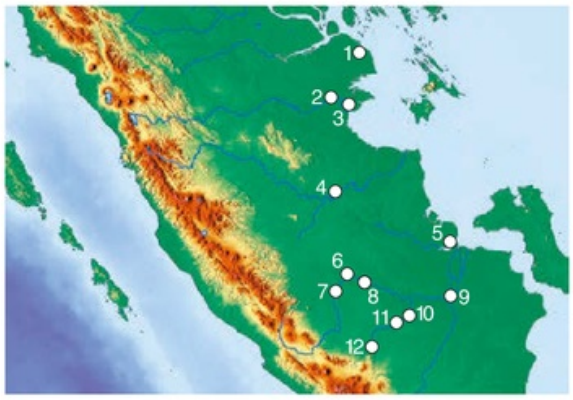

Fig. 1. Distribution of *Urogymnus polylepis* on Sumatra. Numbers refer to record number in Table 1.

sit & Roberts, 1990; Kottelat et al., 1993; Last & Steven, 1994; Vidthayanon et al., 2013; Last et al., 2010). Details of sites, coordinates, dates and other remarks are in Table 1.

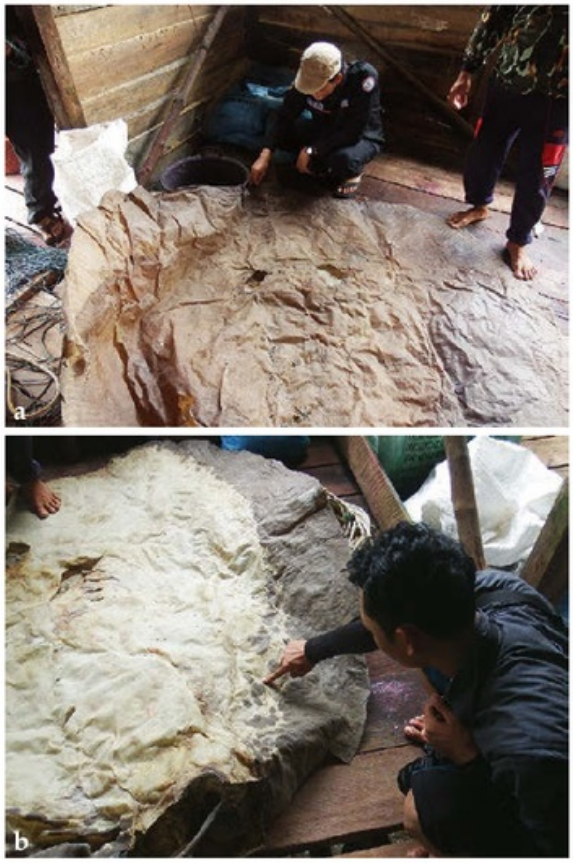

Fig. 3. Skin of dorsal (**a**) and ventral (**b**) surfaces of *Urogymnus polylepis* caught on 2 April 2016 in Bungin drainage, Banyuasin district, South Sumatra (photographs by Muhammad Iqbal).

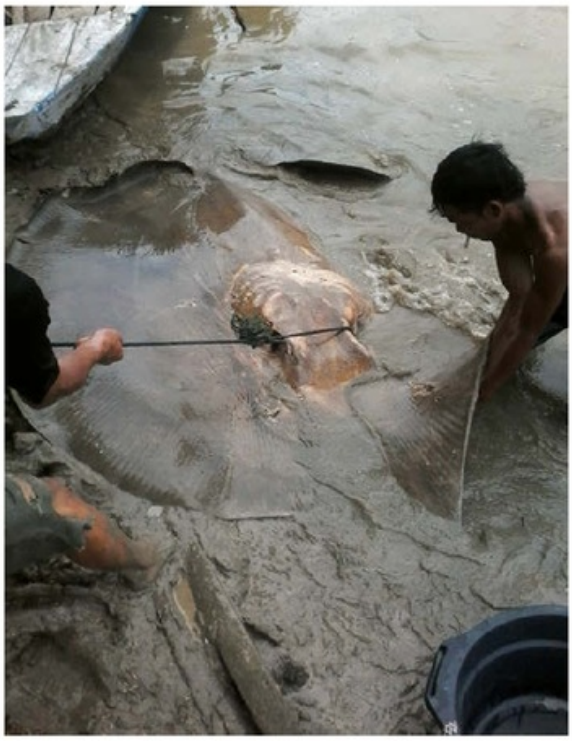

Fig. 2. *Urogymnus polylepis* caught by local fisherman on 21 February 2016 in Lematang drainage, South Sumatra province (photograph by Ajiman).

Urogymnus polylepis is known in Sumatra from Guntung drainage (Riau Province) in the north to Lematang drainage (South Sumatra province) in southern part of the island. The weight of the recorded individuals ranged from 35 to 250 kg. Information on total length and disc width are available only for the individual caught in Musi river on 20 August 2012, reported to be 2 m total length and 1.5 m disc width (Ridwan, 2012). However, this total length could be inaccurate or the tail is possibly broken. Local people along the Lematang reported that they have also caught individuals up to 500 kg (Haris, 2014). *Urogymnus polylepis* reaches at least 2 m disc width and 5 m total length, and can possibly grow larger (Last et al., 2010; Kottelat et al., 1993), with reports from the Mekong and Chao Phraya Rivers of individuals weighing 500–600 kg (Monkolprasit & Roberts, 1990).

Urogymnus polylepis is mainly a freshwater species found in large rivers with a muddy or sandy bottom, although there have been records of the species from estuarine waters (Vidthayanon et al., 2013). Records from Sumatra show the occurrence of this species from estuarine to

about 170 km inland. The movement pattern of the species within and between river systems is not known and requires further research (Vidthayanon et al., 2013).

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