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Updating Status of The Distributional Records of Giant Freshwater Stingray *Urogymnus polylepis* (Bleeker, 1852) in Indonesia

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Abstract. The Giant Freshwater Stingray *Urogymnus polylepis* (Bleeker, 1852) has been known from several drainages in Sunda land (Sumatra, Kalimantan and Java). We compiled most recent update records of *U. polylepis* in Indonesia based from local social media and internet supported with photographs or other evidences. There are 42 total records of *U. polylepis* in Indonesia. From those reports, there are 13 new records of *U. polylepis* in Sumatra between 2016 and 2019, four new reports in Kalimantan between 2018-2019, and no recent update information from Java.

INTRODUCTION

Many iconic groups of fishes known collectively as the 'ray' (Myliobatiformes) occur in Southeast Asia, particularly in Indonesian waters [1, 2]. One of 'ray' is stingrays (family Dasyatidae), groups of small to very large myliobatiform fishes (adults from 22 cm to 260 cm disc wide) and distinguished by the following combination of characters: body variably depressed with a well-formed oval, circular or rhombic disc that fully incorporates head; snout angular to obtuse and sometimes very elongate; nasal curtain well developed, skirt-shaped, rectangular or bilobed; five gill slits; oral papillae usually present on floor of mouth; tail moderately stout to slender-based and more or less elongated (sometimes very elongate and whip-like); dorsal surface variably covered with dermal denticles, thorns and/or tubercles, smooth to very spiny and often with a median thorn row and/or a median denticle band; no dorsal or caudal fins; 1-4 prominent caudal stings, positioned on tail well posterior to pelvic fins; skin folds variably developed on the ventral and sometimes dorsal midline of tail; dorsal surface plain to strongly patterned, usually darker than ventral surface [2, 3, 4]. Stingrays are highly adapted and successful fishes that occur in marine, estuarine and freshwater habitat in temperate and tropical areas worldwide [3].

One of stingrays is the giant *Urogymnus polylepis* (Bleeker, 1852). The species was first described from freshwaters in 1990 from the Chao Phraya River in Thailand as *Himantura chaophraya* [5]. Later, compared material from Java [6], Thailand, Sabah and India and found that *H. polylepis* (Bleeker, 1852) is the valid name of the species. Revised the classification of the family Dasyatidae and the species is now called *Urogymnus polylepis* [4].

Urogymnus polylepis is recently assessed by IUCN as Endangered A2bcd [7]. This species is known from several disjunct freshwater localities in South and Southeast Asia, from India to eastern Indonesia [8], although the presence and identity of some of the reported populations requires confirmation [7]. Good documentation of *U. polylepis* in Indonesia has been provided for Sumatra and Kalimantan [9, 10]. In this paper, we summarize the most recent distributional records of *U. polylepis* in Indonesia after previous known reports.

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METHODS

Records of *U. polylepis* in Indonesian waters were compiled from local social media (mainly Facebook group of local anglers) and internet supported with photographs or other evidence (e. g. location, habitat type, morphology and description from fishermen); provide an extension to the known distribution of this species and from unpublished data collected by us. All records included herein were verified (Figs. 1-3); and unconfirmed or ambiguous records were rejected. The identification of this speciesis based on the combination of its large size, freshwater habitat and the following morphological characters: snout very broad with enlarged narrow apical lobe; disc slightly longer than wide, length about 1.1 times width; coloration of dorsal surface of disc uniformly brownish or greyish brown (Fig. 4), and ventral surface with a broad black marginal band around the disk (Fig. 5) [2, 5, 8, 9]. Details of sites, coordinates, dates and other remarks are provided in Table 1 and Figure 1-3.

RESULTS AND DISCUSSION

Comprehensive account of detail information on most recent update of distributional records of *U. polylepis* in Indonesia are presented in Table 1. There are 42 records of *U. polylepis* in Indonesian waters, reported from Sumatra, Kalimantan and Java. Previous known reports of *U. polylepis* have been summarized [9, 10]. After these reports, there are 13 new records of *U. polylepis* in Sumatra between 2016 and 2019; and four new reports in Kalimantan during 2018-2019.

TABLE 1. Distributional records of *U. polylepis* in Indonesian waters. New recently localities are highlighted with bold characters.

No	Drainage	Sites	Coordinates	Date of capture	Distance from sea	Remarks
1	**Sungai Pasir river**	**Kepuluan Riau province, Karimun district, Meral subdistrict**	**01°00'23' N 103°23'10''E**	**24.10.2016**	**0 km**	**weight 300 kg**
2	**Carang river**	**Kepuluan Riau province, Tanjungpinang district, Tanjungpinang Kota subdistrict, Tanjungpinang estuary**	**00°55'35''N 104°27'40''E**	**13.07.2016**	**0 km**	
3	Guntung river	Riau province, Indragiri Hilir district, Kateman subdistrict, Sari Mulya village	00°16'57'N 103°35'56"E	01.10. 2013	10 km	weight 35 kg
4	Indragiri river	Riau province, Indragiri Hilir district, Tembilahan Hulu subdistrict	00°19'59"S 103°08'47"E	16.09.2011	40 km	weight 250 kg
5	Indragiri river	Riau province, Indragiri Hilir district, Tanah Merah subdistrict, Kuala Enok	00°23'40"S 103°31'59"E	12.10. 2015	10 km	
6	**Indragiri river**	**Riau province, Indragiri Hilir district, Tanah Merah subdistrict, Kuala Enok**	**00°31'34''S 103°26'16'' E**	**21.05.2017**	**0 km**	**Weigth 300 kg**
7	**Berbak river**	**Jambi province, Tanjung Jabung Timur district,**	**01°07'20''S 103°50'43''E**	**18.04.2012**	**10 km**	
8	**Berbak river**	**Jambi province, Tanjung Jabung Timur district, Kuala Jambi subdistrict, Kampung Laut village**	**01°02'19''S 103°48'47''E**	**17.12.2016**	**5 km**	
9	Batanghari river	Jambi province, Batanghari district, Pemayung subdistrict, Kubu Kandang village	01°39'42"S 102°47'24"E	09.11.2008	100 km	weight 150 kg
10	**Belinyu river**	**Bangka-Belitung province, Bangka district, Belinyu subdistrict, Belinyu eastuary**	**01°38'23''S 105°45'14'' E**	**30.10.2018**	**0 km**	

TABLE 1. Contd'

No	Drainage	Sites	Coordinates	Date of capture	Distance from sea	Remarks
11	Bungin river	South Sumatra province, Banyuasin district, Banyuasin II subdistrict, Sungsang village	02°15'12"S 104°50'04"E	02.04.2016	0 km	weight 350 kg
12	Musi river	South Sumatra province, Near Musi Dua bridge, Palembang city	03°01'05"S 104°43'08"E	04.03.2016	80 km	weight 200 kg.
13	**Musi river**	**South Sumatra province, Palembang city**	**02°58'33''S 104°46'31''E**	**20.08.2017**	**80 km**	
14	**Musi river**	**South Sumatra province, Palembang city**	**02°58'33''S 104°46'31''E**	**25.08.2017**	**80 km**	
15	**Musi river**	**South Sumatra province, Musi Banyuasin district, Sekayu subdistrict, Lumpatan village**	**02°53'59''S 103°54'11''E**	**23.08.2018**	**120 km**	**Weight 83 kg**
16	Musi river	South Sumatra provinceRantau Panjang village, Lawang Wetan subdistrict, Musi Banyuasin district	02°46'57"S 103°40'13"E	07.09.2011	115 km	weight 100 kg
17	Musi river	South Sumatra province, Musi Banyuasin district, Babat Tomansubdistrict, Mangun Jaya village	02°43'21"S10 3°26'00"E	24.08.2012	130 km	fish released to river, weight not recorded, guessed to be around 180–200 kg
18	Musi river	South Sumatra province, Musi Banyuasin district, Sanga Desa subdistrict, Ngulak village	02°46'45"S 103°23'50"E	20.08. 2012	140 km	Weight 100 kg, total length 2 m (tail possibly broken), disc width 1.5 m
19	Lematang river	South Sumatra province,Penukal Abab Lematang Ilirdistrict, Tanah Abang subdistrict, Sedupi village	03°18'57"S 104°10'16"E	21.02.2014	125 km	weight 200 kg.
20	Lematang river	South Sumatra province,Penukal Abab Lematang Ilir district, Tanah Abang subdistrict, Sedupi village	03°19'41"S 104°11'02"E	21.02.2016	130 km	weight 200 kg
21	**Komering river**	**South Sumatra province,Ogan Ilir district, Lubuk Keliat subdistrict,Kasih Raja village**	**03°30'01"S 104°39'13''E**	**16.07.2018**	**120 km**	**weight 80 kg**
22	**Komering river**	**South Sumatra province, Ogan Komering Ulu Timur district, Cempaka subdistrict, Sukabumi village**	**03°41'38''S 104°41'06''E**	**23.12.2016**	**120 km**	**weight *c.* 150 kg, disc diameter *c.* 2 m, and total length *c.* 5 m**
23	Lematang river	South Sumatra province,Muaraenim district, Muara Enim subdistrict,Kepur village	03°37'29"S 103°45'59"E	16.08.2015	170 km	weight 80 kg, total length 2 m
24	**Lematang river**	**South Sumatra province, Lahat district, Merapi Timur subdistrict, Muara Lawai village**	**03°38'48''S 103°44'23''E**	**06.01.2017**	**175 km**	**weight *c.* 200 kg**

TABLE 1. Contd'

No	Drainage	Sites	Coordinates	Date of capture	Distance from sea	Remarks
25	**Komering river**	**South Sumatra province, Ogan Komering Ulu Timur district, Madang Suku I subdistrict, Rasuan village**	**03°57'08''S 104°33'32''E**	**08.08.2018**	**200 km**	
26	Tarakan estuary	North Kalimantan province, Tarakan, Tarakan island	03°17'59" N 117°34'27" E	12 Apr 2018	0 km	**weight *c.* 200 kg**
27	Kayan river	North Kalimantan province, Bulungan district, Tanjung Palas Tengah subdistrict Salimbatu village	02°57'08" N 117°21'14" E	19 Nov 2017	30 km	
28	Kayan river	North Kalimantan province, Bulungan district, Tanjung Selor subdistrict	02°50'28"N 117°34'44"E	06.01.2018	10 km	
29	Berau river	East Kalimantan province, Berau district, Tanjung Redep subdistrict	02°09'51"N 117°29'42"E	12.05.2014	50 km	
30	Berau river	East Kalimantan province, Berau district, Tanjung Redep subdistrict	02°09'51"N 117°29'42"E	30.06.2017	50 km	
31	Talisayan river	East Kalimantan province, Berau district, Talisayan subdistrict	01°36'30"N 118°10'38"E	12.06.2018	0 km	
32	Kapuas river	West Kalimantan province, Sekadau district, Sekadau Hilir subdistrict,Seberang Kapuas village	00°01'43"N 110°53' 28"E	19.03.2016	200 km	
33	Mahakam river	East Kalimantan province, Kutai Kartanegara district, Kota Bangun subdistrict, Pela village	00°14'53"S 116°31'49"E	20.07.2018	80 km	
34	Mahakam river	East Kalimantan province, Kutai Kartanegara district, Muara Wis subdistrict, Melintang village	00°18'37"S 116°24'11" E	18.01.2019	80 km	
35	Mahakam river	East Kalimantan province, Samarinda district, Samarinda Utara subdistrict, Tanah Merah village	00°30'18"S 117°08'24"E	19.10.2017	50 km	
36	Mahakam river	East Kalimantan province, Kutai Barat district	00°19'25"S 116°03'47"E	06.03.2015	200 km	100-200 kg
37	Mahakam river	East Kalimantan province, Kutai Kartanegara district, Muara Jawa subdistrict, Handil village	00°44'41"S 117°17'14"E	07.01.2018	15 km	
38	Pasir river	East Kalimantan province, Paser district, Long Kali subdistrict, Muara Talake village	01°37'11"S 116°32'54"E	14.11.2017	0 km	
39	Barito river	South Kalimantan province, Banjar district, Aluh Aluh subdistrict, Muara Aluh estuary	03°31'19"S 114°30'30"E	11.06.2019	0 km	
40	Sampit river	Central Kalimantan province, Katingan Kuala district, Pagatan Hilir subdistrict	03°16'23"S 113°20'09"E	23.10.2017	0 km	300 kg
41	Mentaya river	Central Kalimantan province, Kota Waringin Timur district, Mentaya Hilir Selatan subdistrict, Ujung Pandaran estuary	03°10'10"S 113°01'45"E 06°10'30"S	14.12.2017	0 km	100 kg
42	Ciliwung river	Jakarta province, Jakarta Utara district, Pademangan subdistrict, Ciliwung	106°51'54"E	1852 (undated)		

Most recent update records of *U. polylepis* in Sumatra between 2016 and 2019 revealed that *U. polylepis* not only occur in mainland Sumatra, but also presence in satellite islands (Fig. 1). *Urogymnus polylepis* reported at three new localities in satellite islands of Sumatra: Karimun island, Batam island and Bangka island. Two additional recent records of *U. polylepis* in Lematang and Komering river of South Sumatra province suggest *U. polylepis* reach more inland in Sumatran drainage systems (c. 170-200 km). This species has previously been considered as either an obligate freshwater species or presumed to be a freshwater species found in large rivers with muddy or sandy bottom [5, 11], despite records from coastal marine and brackish habitats in parts of Indonesia [4].

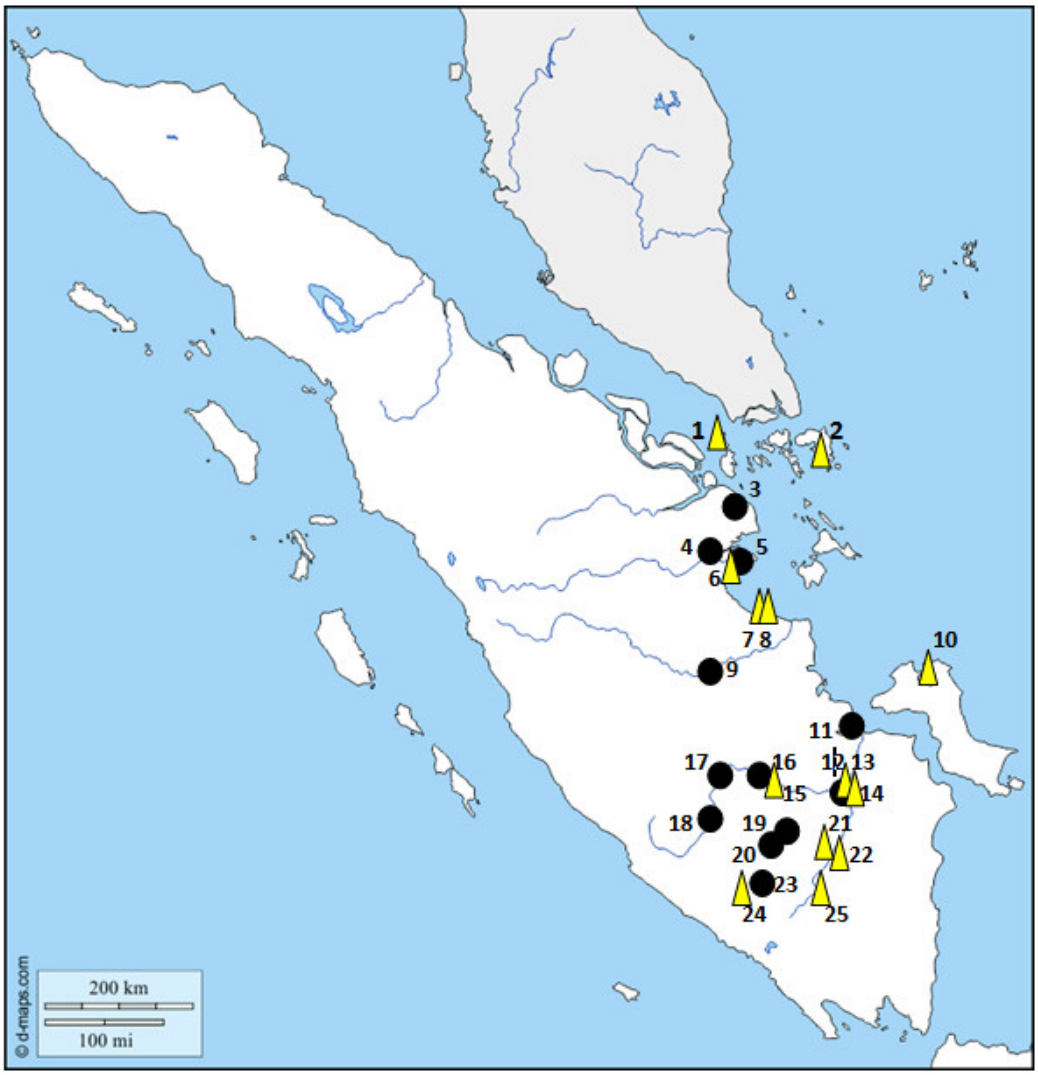

Figure 1. Map of update distributional records of *Urogymnus polylepis* in Sumatra. Recent records shown by yellow triangles, and previous records after Iqbal & Yustian (2016) shown by black circles. umbers refer to Table 1.

In Kalimantan, there are four new records of *U. polylepis* in 2018-2019, located in East Kalimantan and South Kalimantan province (Fig. 2). Records of *Urogymnus polylepis* between 2011 and 2019 in Kalimantan indicate the occurrence of this species from estuarine waters to inland drainage system.

Record of *U. polylepis* in Java are based the holotype locality (given as "Jakarta [Batavia]", most likely from the Ciliwung River drainage). There are no recent records of the species from Java and recent surveys of both the Ciliwung and Cisidane drainages have reported a very high level of decline in fish diversity (Fig. 3). Further survey in coastal areas of Java is required to confirm the species presence [7].

Urogymnus polylepis is one of five species having high prioritize for conservation in Indonesia [12]. Most individuals of *U. polylepis* taken by fishermen incidentally, and many of them consumed by local. Conducting research is required to confirm the presence, population trend, and taxonomic status of populations of the species from all parts of its known distribution in South Sumatra province. Without further action, it is presumed this species gone extinct very soon, unless we receive significant scientific information that provides strong justifications as to why this endangered largest freshwater vertebrate need to be conserved in Indonesian waters.

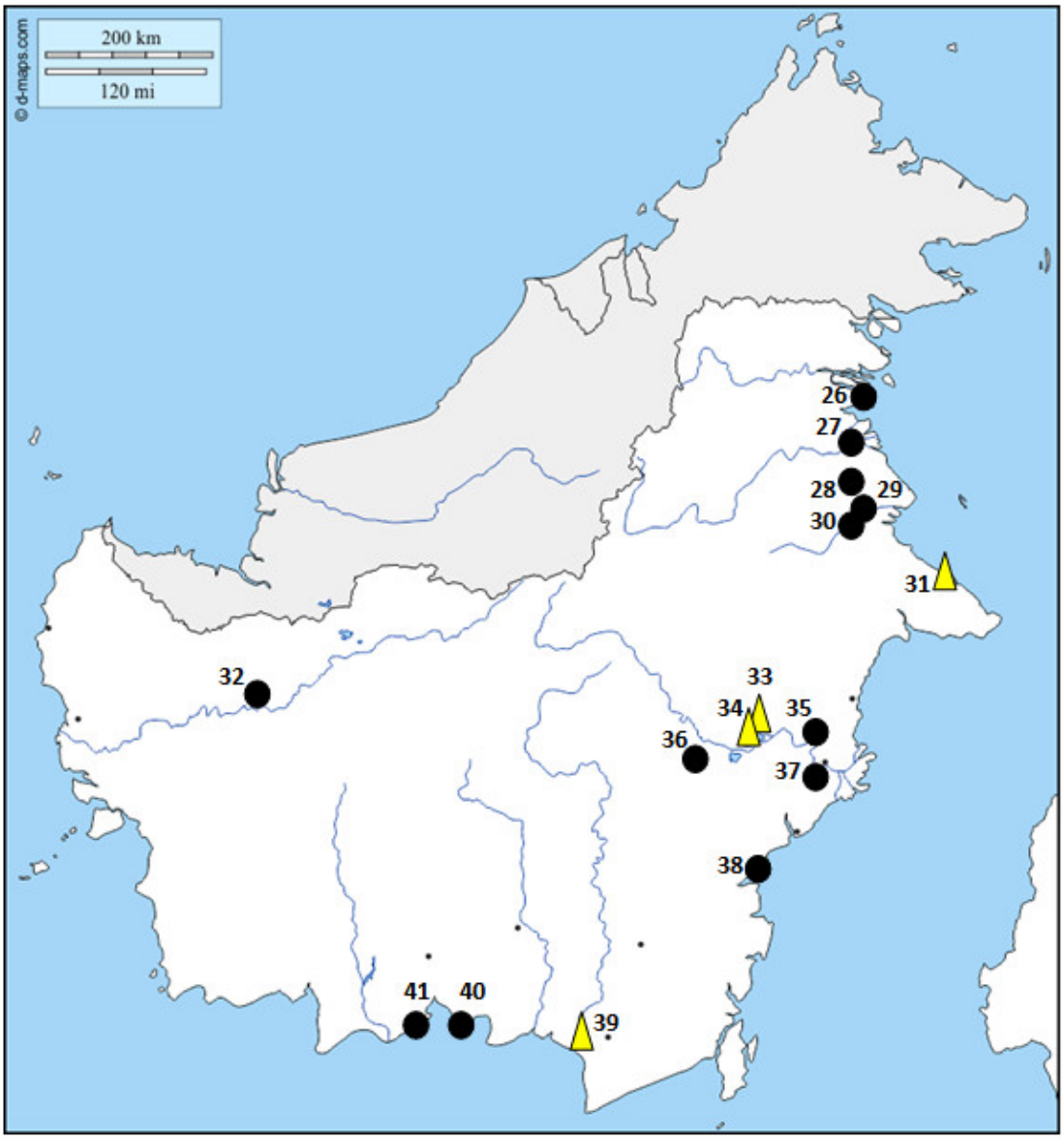

Figure 2. Map of update distributional records of *Urogymnus polylepis* in Kalimantan. Recent records shown by yellow triangles, and previous records after Windusari et al. (2018) shown by black circles. Numbers refer to Table 1.

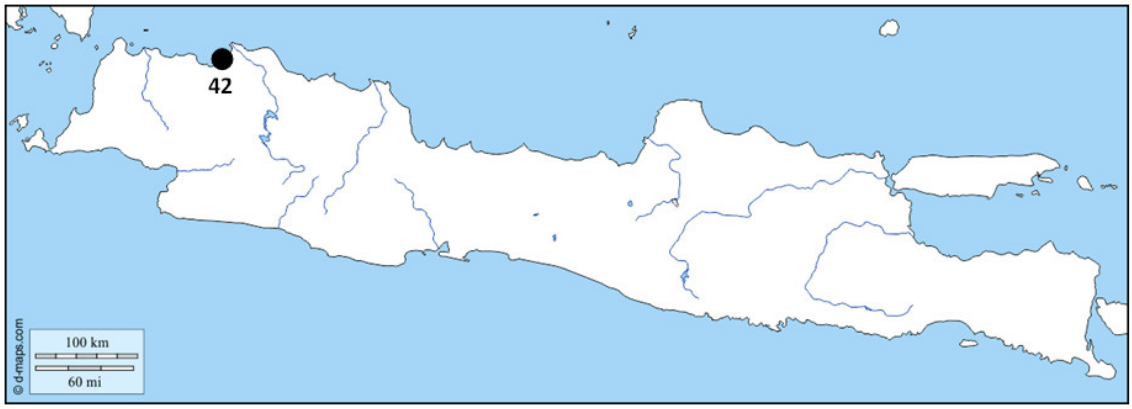

Figure 3. Map of distributional records of *Urogymnus polylepis*in Java. There is no recent update information. Numbers refer to Table 1.

(A) **(B)**

Figure 4. An Individual Stingray: (A) *U. polylepis* with dorsal view, Musi river, Lumpatan village, Musi Banyuasin, South Sumatra province (photograph by Thendy Aditya), (B) *U. polylepis* with ventral view, Tanjung Pinang estuary, Batam island, Kepulauan Riau province (photograph by Noerasiah).

CONCLUSION

More recent update records of *U. polylepis* in Sumatra and Kalimantan indicate some new localities, but no update information available from Java. Additional new records from Sumatra and Kalimantan suggest that distributional range of *U. polylepis* could be extended than expected before.

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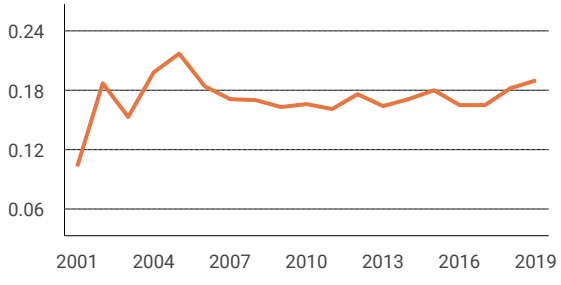

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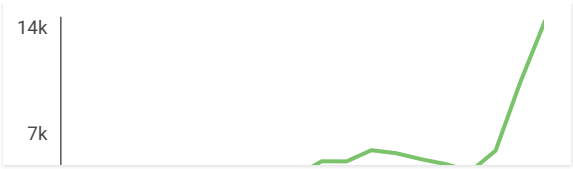

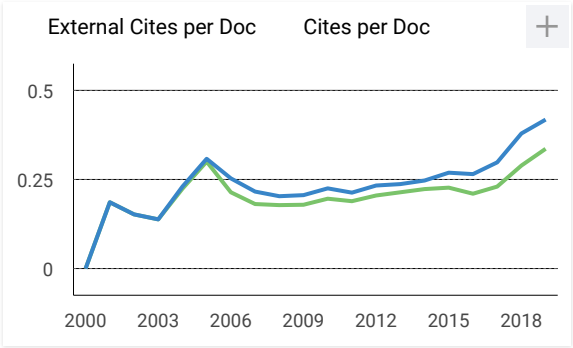

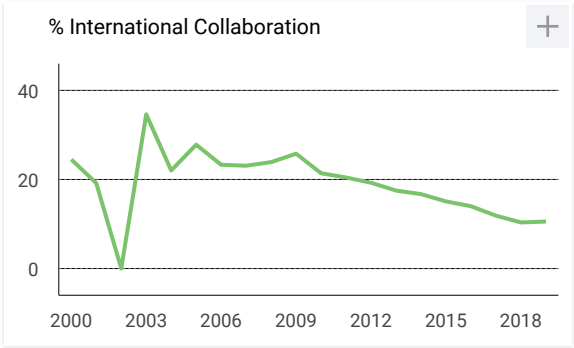

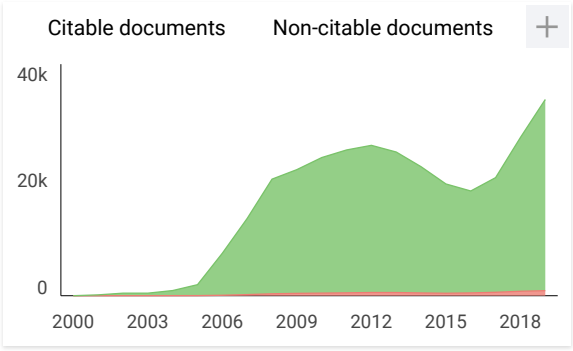

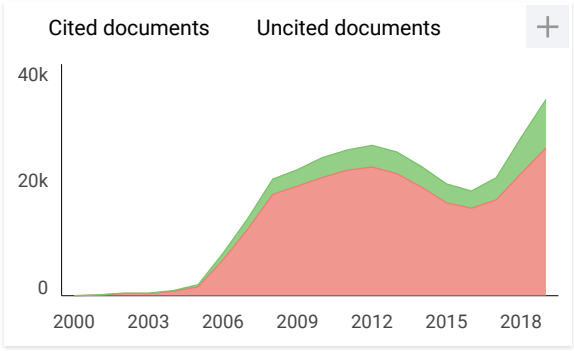

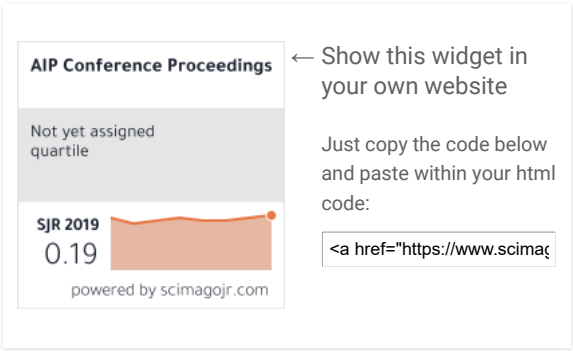

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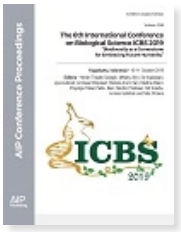

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Updating Status of The Distributional Records of Giant Freshwater Stingray *Urogymnus polylepis* (Bleeker, 1852) in Indonesia

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Abstract. The Giant Freshwater Stingray *Urogymnus polylepis* (Bleeker, 1852) has been known from several drainages in Sunda land (Sumatra, Kalimantan and Java). We compiled most recent update records of *U. polylepis* in Indonesia based from local social media and internet supported with photographs or other evidences. There are 42 total records of *U. polylepis* in Indonesia. From those reports, there are 13 new records of *U. polylepis* in Sumatra between 2016 and 2019, four new reports in Kalimantan between 2018-2019, and no recent update information from Java.

INTRODUCTION

Many iconic groups of fishes known collectively as the 'ray' (Myliobatiformes) occur in Southeast Asia, particularly in Indonesian waters [1, 2]. One of 'ray' is stingrays (family Dasyatidae), groups of small to very large myliobatiform fishes (adults from 22 cm to 260 cm disc wide) and distinguished by the following combination of characters: body variably depressed with a well-formed oval, circular or rhombic disc that fully incorporates head; snout angular to obtuse and sometimes very elongate; nasal curtain well developed, skirt-shaped, rectangular or bilobed; five gill slits; oral papillae usually present on floor of mouth; tail moderately stout to slender-based and more or less elongated (sometimes very elongate and whip-like); dorsal surface variably covered with dermal denticles, thorns and/or tubercles, smooth to very spiny and often with a median thorn row and/or a median denticle band; no dorsal or caudal fins; 1-4 prominent caudal stings, positioned on tail well posterior to pelvic fins; skin folds variably developed on the ventral and sometimes dorsal midline of tail; dorsal surface plain to strongly patterned, usually darker than ventral surface [2, 3, 4]. Stingrays are highly adapted and successful fishes that occur in marine, estuarine and freshwater habitat in temperate and tropical areas worldwide [3].

One of stingrays is the giant *Urogymnus polylepis* (Bleeker, 1852). The species was first described from freshwaters in 1990 from the Chao Phraya River in Thailand as *Himantura chaophraya* [5]. Later, compared material from Java [6], Thailand, Sabah and India and found that *H. polylepis* (Bleeker, 1852) is the valid name of the species. Revised the classification of the family Dasyatidae and the species is now called *Urogymnus polylepis* [4].

Urogymnus polylepis is recently assessed by IUCN as Endangered A2bcd [7]. This species is known from several disjunct freshwater localities in South and Southeast Asia, from India to eastern Indonesia [8], although the presence and identity of some of the reported populations requires confirmation [7]. Good documentation of *U. polylepis* in Indonesia has been provided for Sumatra and Kalimantan [9, 10]. In this paper, we summarize the most recent distributional records of *U. polylepis* in Indonesia after previous known reports.

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METHODS

Records of *U. polylepis* in Indonesian waters were compiled from local social media (mainly Facebook group of local anglers) and internet supported with photographs or other evidence (e. g. location, habitat type, morphology and description from fishermen); provide an extension to the known distribution of this species and from unpublished data collected by us. All records included herein were verified (Figs. 1-3); and unconfirmed or ambiguous records were rejected. The identification of this speciesis based on the combination of its large size, freshwater habitat and the following morphological characters: snout very broad with enlarged narrow apical lobe; disc slightly longer than wide, length about 1.1 times width; coloration of dorsal surface of disc uniformly brownish or greyish brown (Fig. 4), and ventral surface with a broad black marginal band around the disk (Fig. 5) [2, 5, 8, 9]. Details of sites, coordinates, dates and other remarks are provided in Table 1 and Figure 1-3.

RESULTS AND DISCUSSION

Comprehensive account of detail information on most recent update of distributional records of *U. polylepis* in Indonesia are presented in Table 1. There are 42 records of *U. polylepis* in Indonesian waters, reported from Sumatra, Kalimantan and Java. Previous known reports of *U. polylepis* have been summarized [9, 10]. After these reports, there are 13 new records of *U. polylepis* in Sumatra between 2016 and 2019; and four new reports in Kalimantan during 2018-2019.

TABLE 1. Distributional records of *U. polylepis* in Indonesian waters. New recently localities are highlighted with bold characters.

No	Drainage	Sites	Coordinates	Date of capture	Distance from sea	Remarks
1	**Sungai Pasir river**	**Kepuluan Riau province, Karimun district, Meral subdistrict**	**01°00'23' N 103°23'10''E**	**24.10.2016**	**0 km**	**weight 300 kg**
2	**Carang river**	**Kepuluan Riau province, Tanjungpinang district, Tanjungpinang Kota subdistrict, Tanjungpinang estuary**	**00°55'35''N 104°27'40''E**	**13.07.2016**	**0 km**	
3	Guntung river	Riau province, Indragiri Hilir district, Kateman subdistrict, Sari Mulya village	00°16'57'N 103°35'56"E	01.10. 2013	10 km	weight 35 kg
4	Indragiri river	Riau province, Indragiri Hilir district, Tembilahan Hulu subdistrict	00°19'59"S 103°08'47"E	16.09.2011	40 km	weight 250 kg
5	Indragiri river	Riau province, Indragiri Hilir district, Tanah Merah subdistrict, Kuala Enok	00°23'40"S 103°31'59"E	12.10. 2015	10 km	
6	**Indragiri river**	**Riau province, Indragiri Hilir district, Tanah Merah subdistrict, Kuala Enok**	**00°31'34''S 103°26'16'' E**	**21.05.2017**	**0 km**	**Weigth 300 kg**
7	**Berbak river**	**Jambi province, Tanjung Jabung Timur district,**	**01°07'20''S 103°50'43''E**	**18.04.2012**	**10 km**	
8	**Berbak river**	**Jambi province, Tanjung Jabung Timur district, Kuala Jambi subdistrict, Kampung Laut village**	**01°02'19''S 103°48'47''E**	**17.12.2016**	**5 km**	
9	Batanghari river	Jambi province, Batanghari district, Pemayung subdistrict, Kubu Kandang village	01°39'42"S 102°47'24"E	09.11.2008	100 km	weight 150 kg
10	**Belinyu river**	**Bangka-Belitung province, Bangka district, Belinyu subdistrict, Belinyu eastuary**	**01°38'23''S 105°45'14'' E**	**30.10.2018**	**0 km**	

TABLE 1. Contd'

No	Drainage	Sites	Coordinates	Date of capture	Distance from sea	Remarks
11	Bungin river	South Sumatra province, Banyuasin district, Banyuasin II subdistrict, Sungsang village	02°15'12"S 104°50'04"E	02.04.2016	0 km	weight 350 kg
12	Musi river	South Sumatra province, Near Musi Dua bridge, Palembang city	03°01'05"S 104°43'08"E	04.03.2016	80 km	weight 200 kg.
13	**Musi river**	**South Sumatra province, Palembang city**	**02°58'33"S 104°46'31"E**	**20.08.2017**	**80 km**	
14	**Musi river**	**South Sumatra province, Palembang city**	**02°58'33"S 104°46'31"E**	**25.08.2017**	**80 km**	
15	**Musi river**	**South Sumatra province, Musi Banyuasin district, Sekayu subdistrict, Lumpatan village**	**02°53'59"S 103°54'11"E**	**23.08.2018**	**120 km**	**Weight 83 kg**
16	Musi river	South Sumatra provinceRantau Panjang village, Lawang Wetan subdistrict, Musi Banyuasin district	02°46'57"S 103°40'13"E	07.09.2011	115 km	weight 100 kg
17	Musi river	South Sumatra province, Musi Banyuasin district, Babat Tomansubdistrict, Mangun Jaya village	02°43'21"S10 3°26'00"E	24.08.2012	130 km	fish released to river, weight not recorded, guessed to be around 180–200 kg
18	Musi river	South Sumatra province, Musi Banyuasin district, Sanga Desa subdistrict, Ngulak village	02°46'45"S 103°23'50"E	20.08. 2012	140 km	Weight 100 kg, total length 2 m (tail possibly broken), disc width 1.5 m
19	Lematang river	South Sumatra province,Penukal Abab Lematang Ilirdistrict, Tanah Abang subdistrict, Sedupi village	03°18'57"S 104°10'16"E	21.02.2014	125 km	weight 200 kg.
20	Lematang river	South Sumatra province,Penukal Abab Lematang Ilir district, Tanah Abang subdistrict, Sedupi village	03°19'41"S 104°11'02"E	21.02.2016	130 km	weight 200 kg
21	**Komering river**	**South Sumatra province,Ogan Ilir district, Lubuk Keliat subdistrict,Kasih Raja village**	**03°30'01"S 104°39'13"E**	**16.07.2018**	**120 km**	**weight 80 kg**
22	**Komering river**	**South Sumatra province, Ogan Komering Ulu Timur district, Cempaka subdistrict, Sukabumi village**	**03°41'38"S 104°41'06"E**	**23.12.2016**	**120 km**	**weight *c.* 150 kg, disc diameter *c.* 2 m, and total length *c.* 5 m**
23	Lematang river	South Sumatra province,Muaraenim district, Muara Enim subdistrict,Kepur village	03°37'29"S 103°45'59"E	16.08.2015	170 km	weight 80 kg, total length 2 m
24	**Lematang river**	**South Sumatra province, Lahat district, Merapi Timur subdistrict, Muara Lawai village**	**03°38'48"S 103°44'23"E**	**06.01.2017**	**175 km**	**weight *c.* 200 kg**

TABLE 1. Contd'

No	Drainage	Sites	Coordinates	Date of capture	Distance from sea	Remarks
25	**Komering river**	**South Sumatra province, Ogan Komering Ulu Timur district, Madang Suku I subdistrict, Rasuan village**	**03°57'08''S 104°33'32''E**	**08.08.2018**	**200 km**	
26	Tarakan estuary	North Kalimantan province, Tarakan, Tarakan island	03°17'59" N 117°34'27" E	12 Apr 2018	0 km	**weight *c.* 200 kg**
27	Kayan river	North Kalimantan province, Bulungan district, Tanjung Palas Tengah subdistrict Salimbatu village	02°57'08" N 117°21'14" E	19 Nov 2017	30 km	
28	Kayan river	North Kalimantan province, Bulungan district, Tanjung Selor subdistrict	02°50'28"N 117°34'44"E	06.01.2018	10 km	
29	Berau river	East Kalimantan province, Berau district, Tanjung Redep subdistrict	02°09'51"N 117°29'42"E	12.05.2014	50 km	
30	Berau river	East Kalimantan province, Berau district, Tanjung Redep subdistrict	02°09'51"N 117°29'42"E	30.06.2017	50 km	
31	Talisayan river	East Kalimantan province, Berau district, Talisayan subdistrict	01°36'30"N 118°10'38"E	12.06.2018	0 km	
32	Kapuas river	West Kalimantan province, Sekadau district, Sekadau Hilir subdistrict,Seberang Kapuas village	00°01'43"N 110°53' 28"E	19.03.2016	200 km	
33	Mahakam river	East Kalimantan province, Kutai Kartanegara district, Kota Bangun subdistrict, Pela village	00°14'53"S 116°31'49"E	20.07.2018	80 km	
34	Mahakam river	East Kalimantan province, Kutai Kartanegara district, Muara Wis subdistrict, Melintang village	00°18'37"S 116°24'11" E	18.01.2019	80 km	
35	Mahakam river	East Kalimantan province, Samarinda district, Samarinda Utara subdistrict, Tanah Merah village	00°30'18"S 117°08'24"E	19.10.2017	50 km	
36	Mahakam river	East Kalimantan province, Kutai Barat district	00°19'25"S 116°03'47"E	06.03.2015	200 km	100-200 kg
37	Mahakam river	East Kalimantan province, Kutai Kartanegara district, Muara Jawa subdistrict, Handil village	00°44'41"S 117°17'14"E	07.01.2018	15 km	
38	Pasir river	East Kalimantan province, Paser district, Long Kali subdistrict, Muara Talake village	01°37'11"S 116°32'54"E	14.11.2017	0 km	
39	Barito river	South Kalimantan province, Banjar district, Aluh Aluh subdistrict, Muara Aluh estuary	03°31'19"S 114°30'30"E	11.06.2019	0 km	
40	Sampit river	Central Kalimantan province, Katingan Kuala district, Pagatan Hilir subdistrict	03°16'23"S 113°20'09"E	23.10.2017	0 km	300 kg
41	Mentaya river	Central Kalimantan province, Kota Waringin Timur district, Mentaya Hilir Selatan subdistrict, Ujung Pandaran estuary	03°10'10"S 113°01'45"E 06°10'30"S	14.12.2017	0 km	100 kg
42	Ciliwung river	Jakarta province, Jakarta Utara district, Pademangan subdistrict, Ciliwung	106°51'54"E	1852 (undated)		

Most recent update records of *U. polylepis* in Sumatra between 2016 and 2019 revealed that *U. polylepis* not only occur in mainland Sumatra, but also presence in satellite islands (Fig. 1). *Urogymnus polylepis* reported at three new localities in satellite islands of Sumatra: Karimun island, Batam island and Bangka island. Two additional recent records of *U. polylepis* in Lematang and Komering river of South Sumatra province suggest *U. polylepis* reach more inland in Sumatran drainage systems (c. 170-200 km). This species has previously been considered as either an obligate freshwater species or presumed to be a freshwater species found in large rivers with muddy or sandy bottom [5, 11], despite records from coastal marine and brackish habitats in parts of Indonesia [4].

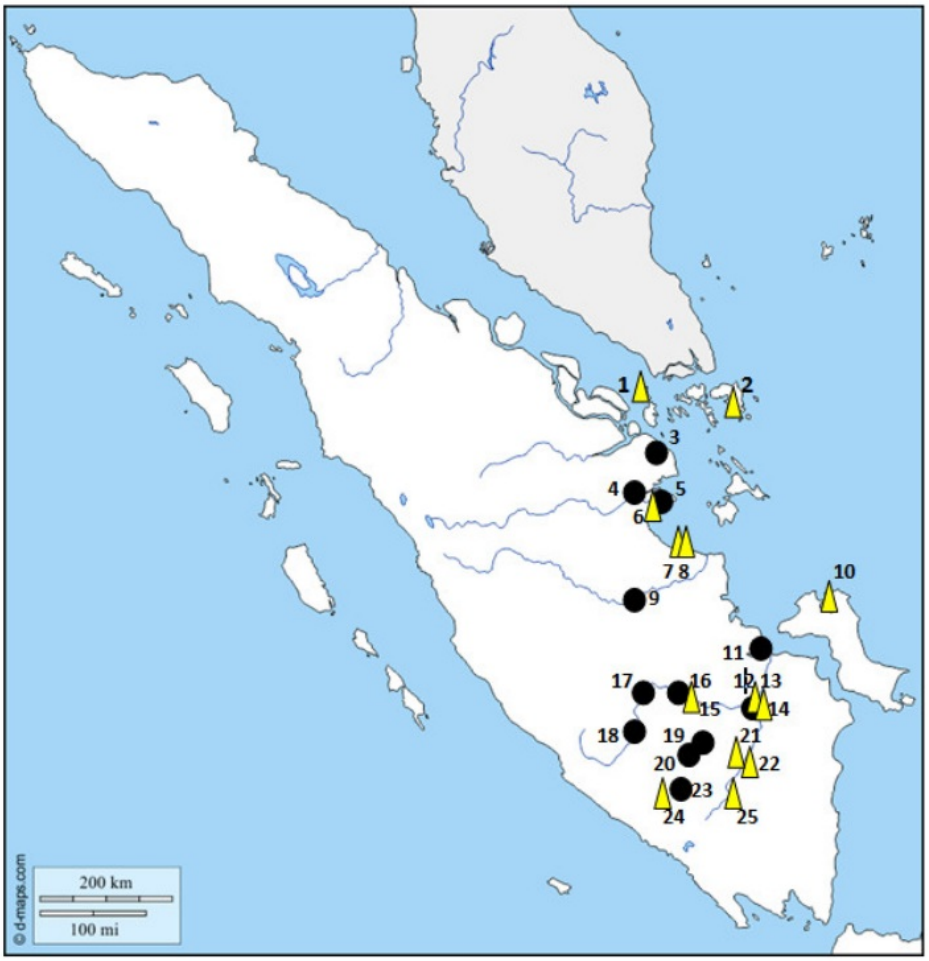

Figure 1. Map of update distributional records of *Urogymnus polylepis* in Sumatra. Recent records shown by yellow triangles, and previous records after Iqbal & Yustian (2016) shown by black circles. umbers refer to Table 1.

In Kalimantan, there are four new records of *U. polylepis* in 2018-2019, located in East Kalimantan and South Kalimantan province (Fig. 2). Records of *Urogymnus polylepis* between 2011 and 2019 in Kalimantan indicate the occurrence of this species from estuarine waters to inland drainage system.

Record of *U. polylepis* in Java are based the holotype locality (given as "Jakarta [Batavia]", most likely from the Ciliwung River drainage). There are no recent records of the species from Java and recent surveys of both the Ciliwung and Cisidane drainages have reported a very high level of decline in fish diversity (Fig. 3). Further survey in coastal areas of Java is required to confirm the species presence [7].

Urogymnus polylepis is one of five species having high prioritize for conservation in Indonesia [12]. Most individuals of *U. polylepis* taken by fishermen incidentally, and many of them consumed by local. Conducting research is required to confirm the presence, population trend, and taxonomic status of populations of the species from all parts of its known distribution in South Sumatra province. Without further action, it is presumed this species gone extinct very soon, unless we receive significant scientific information that provides strong justifications as to why this endangered largest freshwater vertebrate need to be conserved in Indonesian waters.

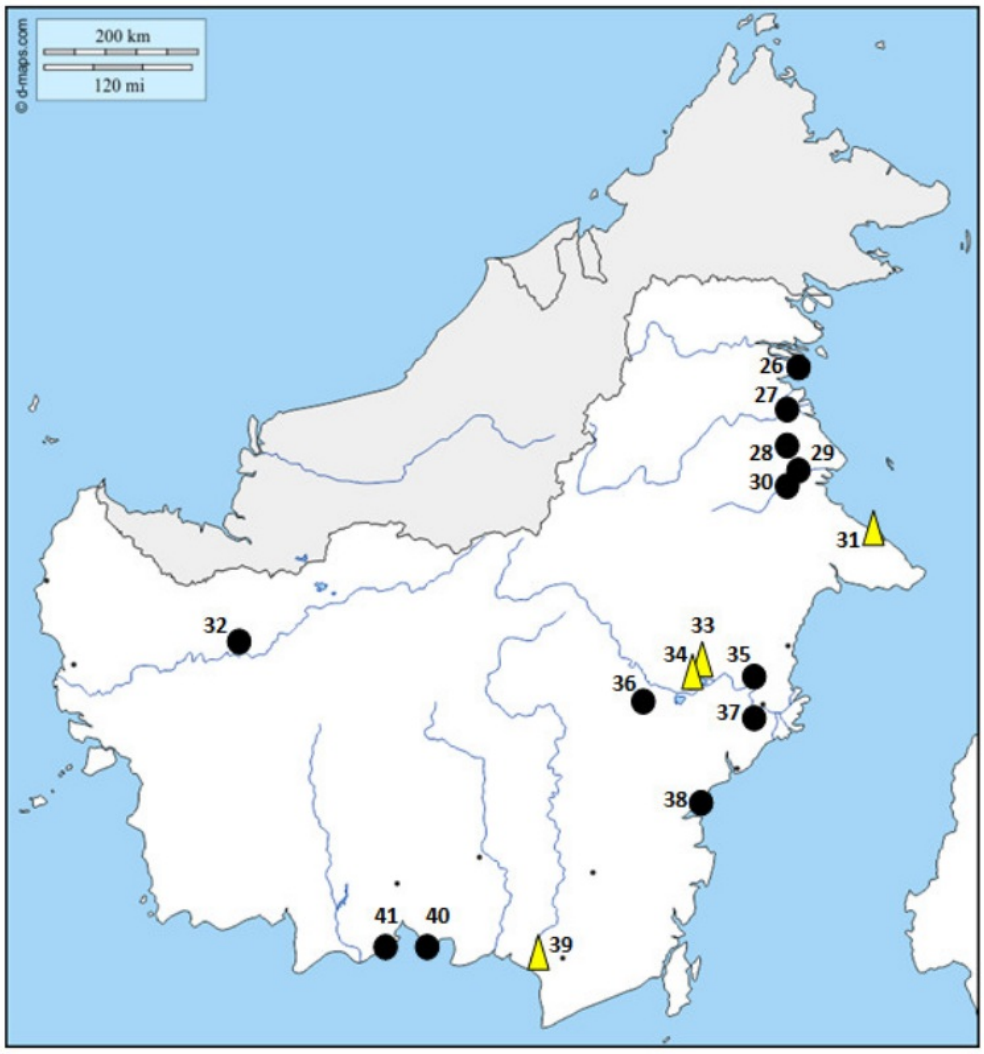

Figure 2. Map of update distributional records of *Urogymnus polylepis* in Kalimantan. Recent records shown by yellow triangles, and previous records after Windusari et al. (2018) shown by black circles. Numbers refer to Table 1.

Figure 3. Map of distributional records of *Urogymnus polylepis*in Java. There is no recent update information. Numbers refer to Table 1.

(A) **(B)**

Figure 4. An Individual Stingray: (A) *U. polylepis* with dorsal view, Musi river, Lumpatan village, Musi Banyuasin, South Sumatra province (photograph by Thendy Aditya), (B) *U. polylepis* with ventral view, Tanjung Pinang estuary, Batam island, Kepulauan Riau province (photograph by Noerasiah).

CONCLUSION

More recent update records of *U. polylepis* in Sumatra and Kalimantan indicate some new localities, but no update information available from Java. Additional new records from Sumatra and Kalimantan suggest that distributional range of *U. polylepis* could be extended than expected before.

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Judul Karya Ilmiah : Updating Status of The Distributional Records of Giant freshwater Stingray Urogymnus polylepis (Bleeker, 1852) in Indonesia
Jumlah Penulis : Muhammad Iqbal, **Arum Setiawan**, Yuanita Windusari, Indra Yustian, and Hilda Zulkifli
Identitas Prosiding :
a. Nama Prosiding : AIP Conference Proceeding 2260, 020003 (2020) (Scopus), The 6th International Converence on Biological Sciences ICBS 2019
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Kelengkapan dan Kesesuaian Unsur	Paper berisi mengenai informasi sebaran ikan pari air tawar raksasa Stingray Urogymnus polylepis di Indonesia. Isi paper sudah memenuhi kaidah-kaidah karya ilmiah , sesuai dengan bidang biologi konservasi
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Jabatan/Pangkat : Guru Besar/ Pembina Utama Madya

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(*PEER REVIEW*) KARYA ILMIAH: PROSIDING

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Yogyakarta, 6 September 2020
Penilai 2

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