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Front cover image: Tufted Puffin *Fratercula cirrhata* at Tatoosh Island, Washington, USA, July 2009. (Photo: Peter Hodum)



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# DIRECT FIELD OBSERVATION REVEALS WHISKERED TERNS *CHLIDONIAS HYBRIDA* PREYING ON FISH MUCH LARGER THAN THEMSELVES

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## ABSTRACT

IQBAL, M., MULYANA, D., PORMANSYAH, YUSTIAN, I., SETIAWAN, A. & ZULKIFLI, H. 2022. Direct field observation reveals Whiskered Terns *Chlidonias hybrida* preying on fish much larger than themselves. *Marine Ornithology* 50: 19–21.

A Whiskered Tern *Chlidonias hybrida*, consistent with the species' aggressive nature, was observed to catch and then consume a Great Blue-spotted Mudskipper *Boleophthalmus pectinirostris* in the Nibung River, Banyuasin Peninsula, South Sumatra Province, Indonesia. The fish was ca. 15 cm in length, which was perhaps equal to the tern's body length and more than double the size of its usual prey. The tern spent over 20 minutes eating the fish. Only direct, field observation would have revealed predation on this fish.

**Key words:** Whiskered Tern, *Chlidonias hybrida*, diet, Sumatra, mudskipper

Whiskered Tern *Chlidonias hybrida* is one of the most widely distributed among terns of the genus *Chlidonias* (del Hoyo & Collar 2014, Harrison *et al.* 2021). This bird usually forages by lunging forward to the water's surface, but the lunges are not normally steep; they may also plunge-dive (Olsen & Larsson 1995). The Whiskered Tern is fairly common in the Indonesian archipelagos (MacKinnon & Phillipps 1993, Eaton *et al.* 2021) but its diet has been little studied. In this paper, we report predation of a very large fish by a Whiskered Tern, offering new insights into this bird's capabilities.

On 09 April 2021, we spotted a Whiskered Tern flying and hovering three meters above the Nibung River on the east coast of the Banyuasin Peninsula, South Sumatra Province, Indonesia (Fig. 1A, B). The bird suddenly landed in shallow water to catch a large fish (Fig. 1C, D), later identified as a Great Blue-spotted Mudskipper *Boleophthalmus pectinirostris* (Fig. 1E, F) based on our previous experience with mudskippers in this area (Iqbal *et al.* 2018, Pormansyah *et al.* 2019, Setiawan *et al.* 2019, Pormansyah *et al.* 2021). The fish was ca. 15 cm in total length (TL), which is much longer than the bill or body of the tern; the TL of adult Whiskered Terns is typically 23–29 cm, though a significant portion of that consists of tail feathers (Gochfeld & Burger 1996). The tern spent more than 20 minutes consuming the fish (Fig. 1G, 1H, 2).

Gochfeld & Burger (1996) summarized the Whiskered Tern diet, which includes water beetles, odonate insects/larvae, grasshoppers, flying ants, spiders, frogs, tadpoles, small crabs, and small fish; however, they did not specify the size of the prey items. A diet study using the stomach contents of Whiskered Terns at a freshwater floodplain in the Alligator Rivers Region of Australia indicated that small fish and invertebrates were the most important prey items, with the largest being 4.4 cm long (Dostine & Morton

1989). Gwiazda & Ledwoń (2015) reported that vertebrates larger than 6 cm were fed to the chicks by adults. There is no previous evidence of Whiskered Terns feeding on items larger than 10 cm in length.

Studies of seabird diets provide valuable information towards understanding their natural history patterns, including trophic ecology. However, it is not easy to adequately sample seabird diets (Barrett *et al.* 2007). It was only through direct field observation that we learned of the terns' predation on Great Blue-spotted Mudskippers larger than the terns themselves. Neither stomach content analysis nor stable isotope analysis would have been able to identify this fish in the diet. Further observations are needed to determine whether the mudskipper is a regular or incidental prey item of the Whiskered Tern.

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**Fig. 1.** Whiskered Tern *Chlidonias hybrida* foraging in the Banyuasin Peninsula, Sumatra (A and B) and catching a large Great Blue-spotted Mudskipper *Boleophthalmus pectinirostris* (C and D). The tern pecked and weakened the fish (E and F), finally swallowing it whole (G and H). Photos: MI.



**Fig. 2.** A Whiskered Tern *Chlidonias hybrida* after it caught and consumed a Great Blue-spotted Mudskipper *Boleophthalmus pectinirostris*. Photo: MI.

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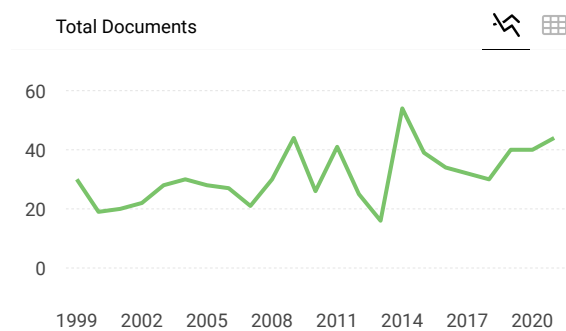
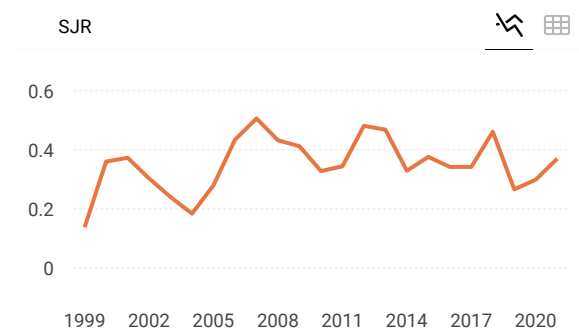
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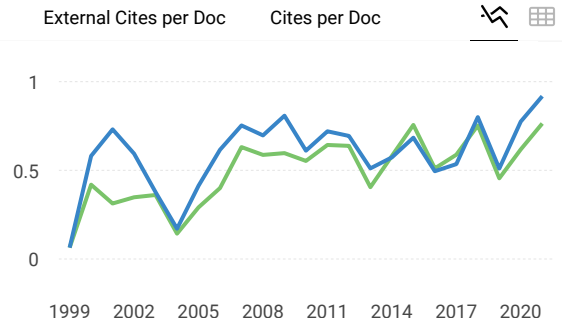
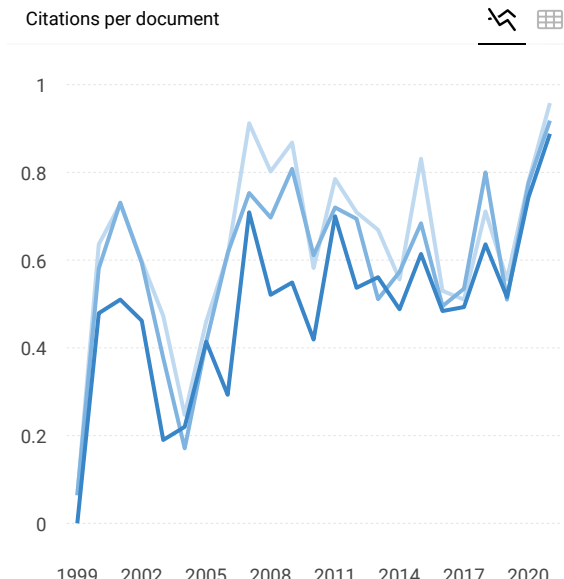
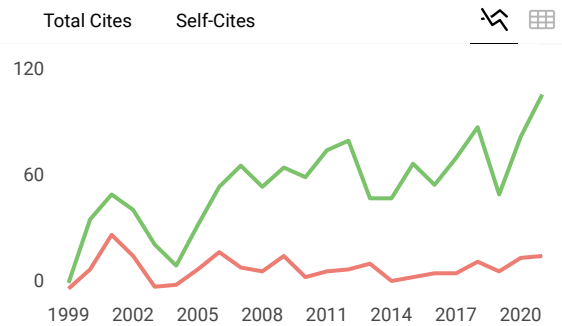
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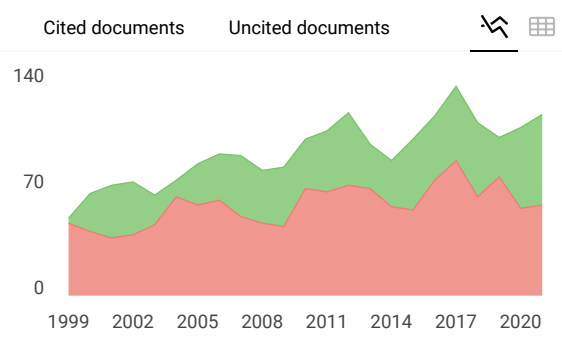
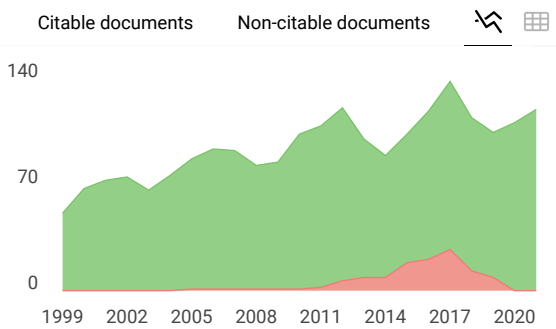
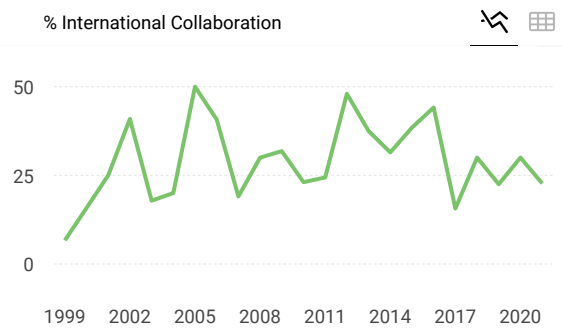
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