

# Predation of an Enggano Flying Lizard (*Draco modiglianii* Vinciguerra, 1892) (Squamata: Agamidae) by a Collared Kingfisher (*Todiramphus chloris*) on Enggano Island, Indonesia

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Enggano is a small island (area = 39,587 ha) located ca. 100 km southwest off the coast of Sumatra in the Indian Ocean. Politically, it is part of Bengkulu Utara District, Bengkulu Province, Indonesia (Regen, 2011; Maryanto et al., 2017). Although the island is relatively close to Sumatra, it is thought that it island has never had a land connection to the mainland of Sumatra (Whitten et al., 2000). There are ten reptiles reported to occur on Enggano, including the geckos *Cnemaspis modiglianii* (as *Gonatodes kandianus*), *Cyrtodactylus marmoratus* (as *Gymnodactylus marmoratus*), *Gehyra mutilata*, *Lepidodactylus lugubris* (as *L. ceylonensis*), and *Gekko kuhli* (as *Ptychozoon homalocephalum*), the Enggano Flying Lizard *Draco modiglianii*, the Common Water Monitor *Varanus salvator*, the skinks *Eutropis multifasciata* (as *Mabuia multifasciata*) and *Lipinia relictica* (as *Lygosoma relictum*), and the Amboina Box Turtle *Cuora amboinensis* (as *Cyclemys amboinensis*) (Roi, 1915; Das, 2015; Iskandar et al., 2017).

*Draco modiglianii* is endemic to Enggano and the only species of flying lizard known to occur there (Roi, 1915; Lawalata, 2011). This species shares two primary similarities with species in the *D. lineatus* group, namely,

its small body size (*D. modiglianii* is one of the smallest *Draco* species, with males reaching a maximum snout–vent length of only 67 mm) and the lack of enlarged scales on the distal terminus of the dewlap (Roi, 1915; McGuire et al., 2007).

During a field survey on 2 March 2020 at 14.50 h, we observed a Collared Kingfisher (*Todiramphus chloris*) with lizard prey in its bill (Fig. 1) in a garden bordering a forest in Banjar Sari Village, Enggano Subdistrict, Bengkulu Utara District, Bengkulu Province, Indonesia (0.7017°S, 89.3883°E). The bird sat with the prey held in its bill for about 2 min before flying off with the prey item. *Todiramphus chloris* is one of the most distinct and the largest of the three kingfisher species (Alcedinidae) present on Enggano. It is identified by blue plumage above and underparts of the body white (Fig. 1), and a typical loud and harsh “kee-kee-kee” call repeated several times. It shares the island with *Alcedo atthis* and *A. meninting* (Holmes, 1994). The prey was identified as *D. modiglianii*, the only flying lizard species occurring on Enggano, by its overall small to medium size and slim body, and the presence of a tail twice the length of SVL (estimated SVL = 60 mm, estimated tail length = 120 mm; Roi, 1915; Lawalata, 2011). The estimation of SVL and tail length of *D. modiglianii* is based on the proportional of length of *T. chloris*. Lengths of *T. chloris* have been reported around 230–250 mm (Fry et al., 1999).

*Todiramphus chloris* has been reported feed on a variety of prey, including small crabs, shrimps, fishes (particularly mudskippers), cicadas, beetles, carpenter bees, wasps, grasshoppers, earthworms, snails, land crabs, spiders, frogs, snakes, mice, and small bird eggs (Fry et al., 1999). Additionally, *T. chloris* has been reported to feed on lizards from the families Agamidae, Gekkonidae, and Scincidae, as well as snakes up to 110 mm total length (Wells, 1988; Fry et al., 1999; Woodall, 2001). As Enggano is a small and remote island rarely visited by herpetologists and other researchers, information on its herpetofauna is severely lacking.

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**Figure 1.** Predation of an Enggano Flying Lizard (*Draco modiglianii*) by a Collared Kingfisher (*Todiramphus chloris*) near Banjar Sari Village, Enggano Island, Indonesia. Photo by Muhammad Iqbal.


Our observation on the predation of *D. modiglianii* by *T. chloris* likely constitutes the first record of this interaction. Iskandar and Erdelen (2006) stated that habitat destruction and the resulting fragmentation of populations are the most significant factor affecting the indigenous reptile species of Indonesia, including poorly known lizard species such as *D. modiglianii*. Further research investigating the impacts of predation by larger animals and habitat destruction on *D. modiglianii* is needed in order to better understand population trends and the global status of this endemic flying lizard species.

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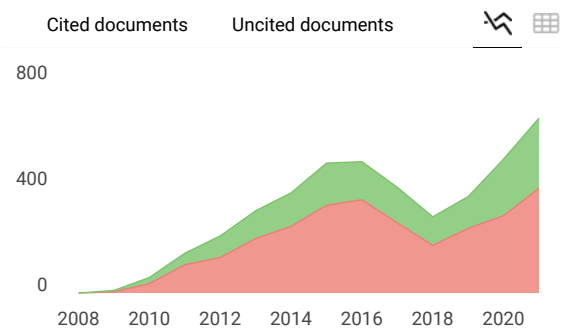
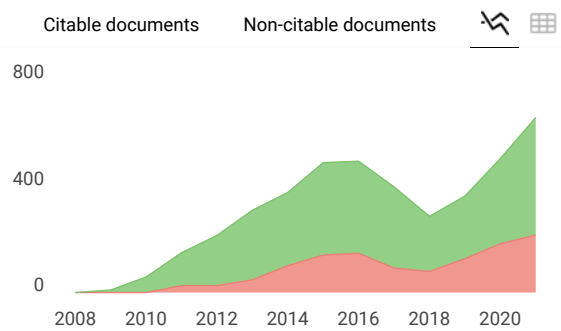
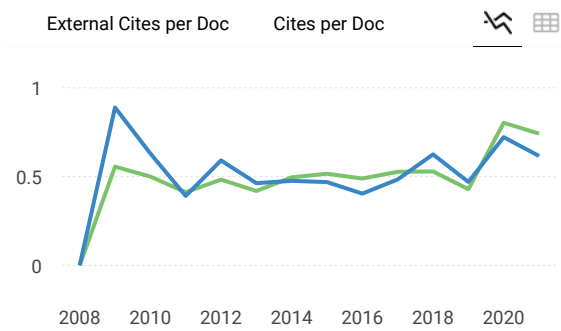
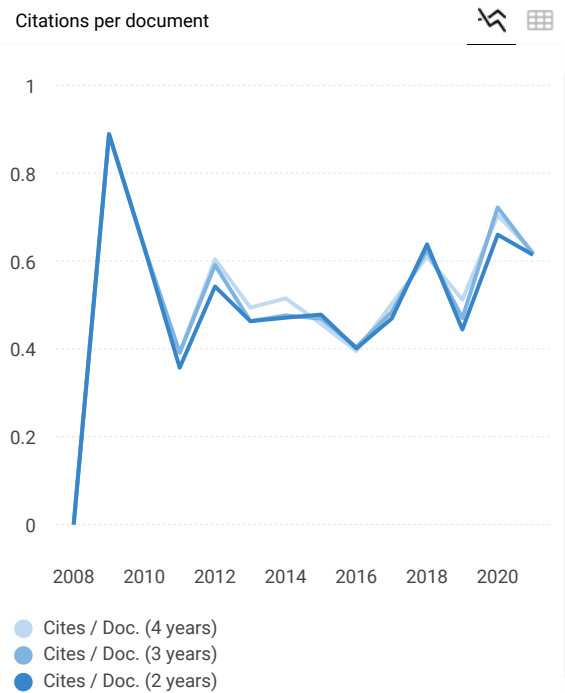
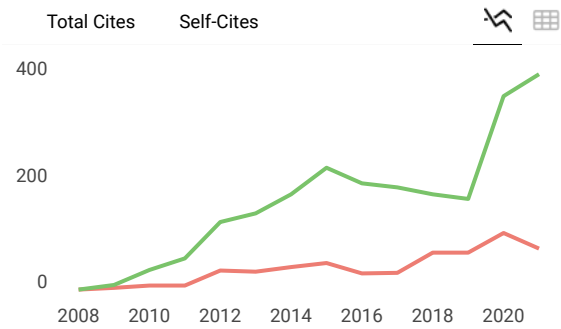
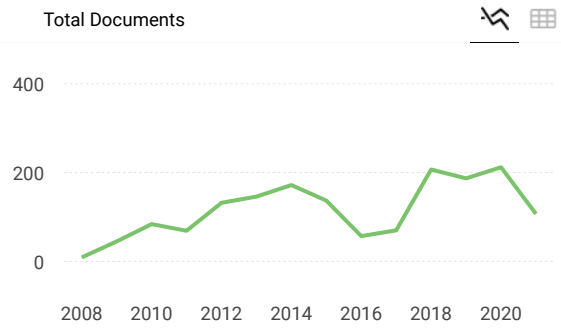
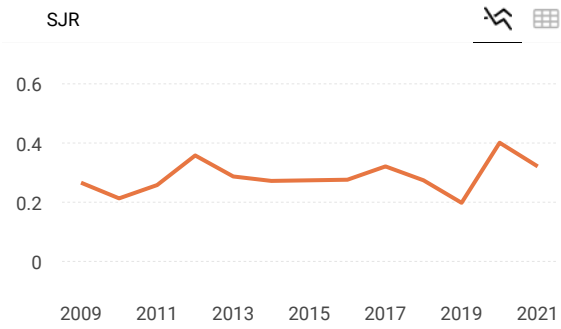
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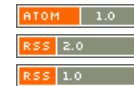


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