

Repeated aerial diving, and aerial ingestion of small schooling fish, probably *Bilih Mystacoleucus padangensis*, by Brahminy Kite

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Ringkasan. Perilaku makan Elang Bondol *Halistur indus* berikut dengan deskripsi makanannya telah banyak dipublikasikan sebelumnya. Pada November 2015, seekor Elang Bondol teramati melakukan aktifitas makan-sambil-terbang dengan mangsa ikan *Bilih Mystacoleucus padangensis* yang merupakan endemik di Danau Singkarak, Sumatera Barat, Indonesia. Teramati sembilan kali rangkaian perilaku memangsa yang terdiri dari terbang melayang sambil mengintai, menyambar mangsa, membawa mangsa ke udara dan memakannya di udara dalam waktu kurang lebih 10 menit.

On 7 November 2015, while driving along the eastern side of Singkarak Lake (00°33'N, 100°32'E) in Tanah Datar Regency, 40 km northeast of Padang, West Sumatra, I observed a raptor gliding above the shallow edge of the lake, so I stopped the vehicle to have clearer view of it. After thorough observation from 20-30 m without binoculars, I identified the raptor as an adult Brahminy Kite *Halistur indus*. Within 10 minutes of my first noticing it, the kite started foraging, so I continued watching.

After hovering for a few seconds, the bird dived down to the lake surface, and swiftly snatched a fish from the water in its claws. It then regained height to 10-15 m above the lake surface with strong wing beats, and transferred the prey from its feet to its bill by swinging the feet forward and lowering the head, before quickly swallowing the prey. It then resumed hovering for a few seconds before the next dive. It performed nine such dives over c. 10 min, each dive yielding one prey item, then flew away. The kite was most likely feeding on *bilih Mystacoleucus padangensis*, a small, but abundant endemic fish species in Singkarak Lake (Kottelat *et al.* 1993; Nofrita *et al.* 2015). The *bilih* in this lake reach 8-9 cm in body length and 5.6 g in weight (Nofrita, pers. comm.). The species is found in large schools in most parts of this large (107 km²) volcanic lake, preferring the shallows and near-surface (Febriani 2010; Patriono *et al.* 2010).

As *bilih* are well known for their aggregating habits, it is interesting that the kite took just one fish with each dive, instead of taking two or more fish simultaneously. This technique contrasts with that of a Bald Eagle *Haliaeetus leucocephalus* in coastal British Columbia which, in a single swoop, caught 10 individual sand lances *Ammodytes hexapterus*, each at least 10 cm in length, while feeding on the fish aggregation (Ellis & Nelson 2010). One possible explanation for the Kite taking one *bilih* individual in each dive is that the shoal scatters quickly upon the image of a bird rapidly enlarging as it draws closer to the surface. Such scattering would make it difficult for the bird to capture more than one individual at a time. It may also be difficult to eat more than one fish on the wing without dropping them. Consuming the prey immediately while on the wing seems a more efficient use of energy than taking the prey to a perch some distance away. It also avoids the risk of kleptoparasitism, as the Brahminy Kite is occasionally robbed by larger raptor species (Kalsi & Kaul 1992; Ferguson-Lees & Christie 2001), such as the White-bellied Sea-eagle *Haliaeetus leucogaster*, which also occurs at Singkarak Lake (pers. obs.).

The Brahminy Kite lives mainly in coastal areas but is also locally common on large inland lakes up to 3,000 m above sea level (van Marle & Voous 1988; MacKinnon *et al.*

2000; Ferguson-Lees & Christie 2001). Its diet varies widely between geographic regions but small fish and insects are major food items. In addition, it sometimes consumes crustaceans (e.g. crabs), frogs, lizards, freshwater turtles, small birds, carrion and small mammals, including rodents, bats and juvenile macaques *Macaca fascicularis* (Plate 1; Bell 1985; Manakadan & Natarajan 1991; Ferguson-Lees & Christie 2001; Sivakumar & Jayabalan 2004; Lutter *et al.* 2006; Indrayanto *et al.* 2011; Rourke & Debus 2016). Most prey eaten on the wing are small, i.e. weighing less than 20 g (Bell 1970; Ali & Ripley 1968; Storer 1977; Ferguson-Lees & Christie 2001), but Iqbal *et al.* (2009) observed a large fish c. 20-30 cm in length, probably weighing at least 400 g, being eaten in the air. They did not speculate on the question of why the fish was eaten on the wing. My observation of many small fish being eaten in succession suggests that aerial ingestion was a means of saving energy while capitalizing on a clumped resource.



Plate 1. Brahminy Kite eating small fish in flight, Chennai, Tamil Nadu, India, September 2015 (courtesy of Gnanaskandan Kesava Bharathi)

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