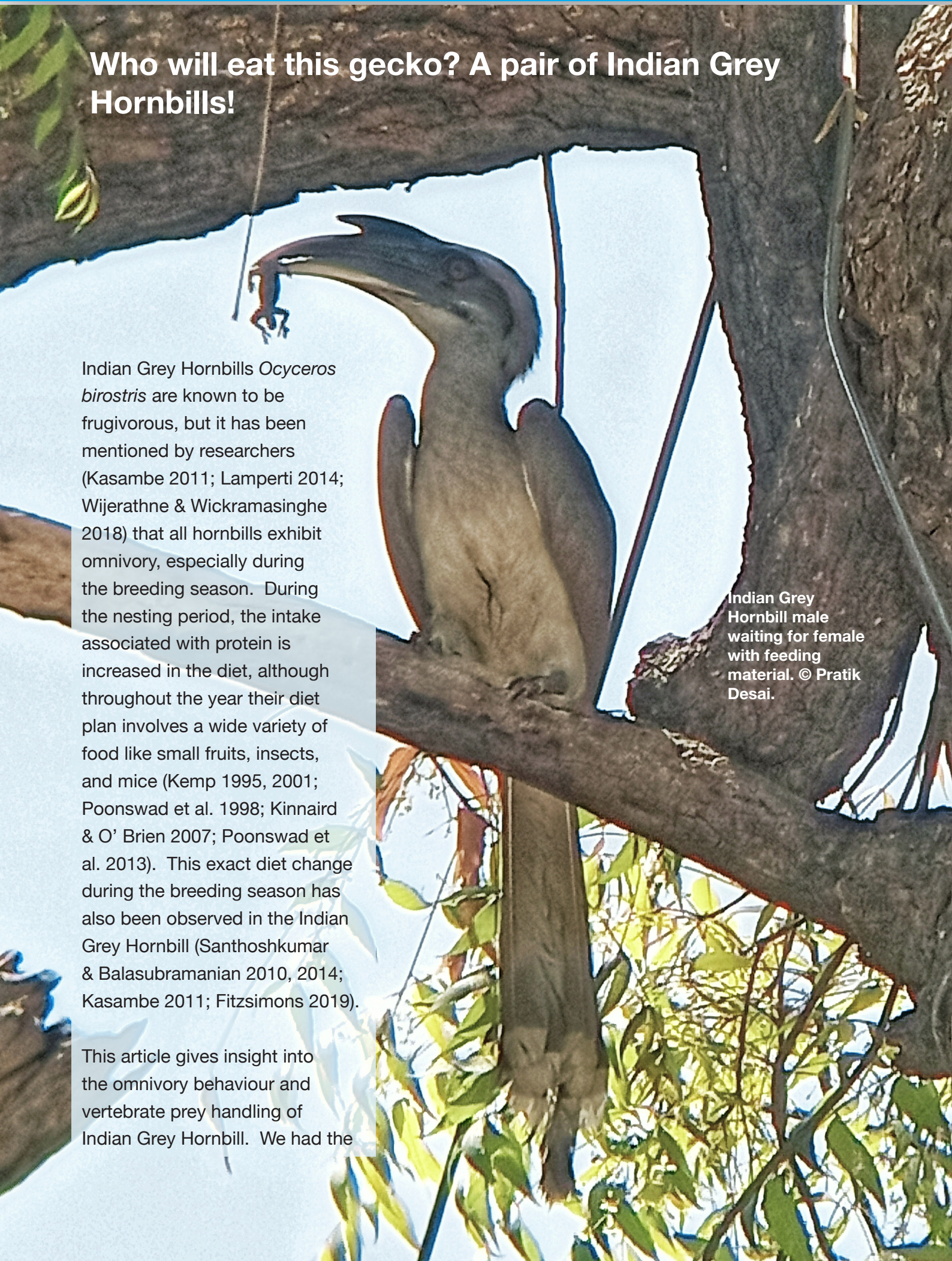


Who will eat this gecko? A pair of Indian Grey Hornbills!

Indian Grey Hornbills *Ocyrceros birostris* are known to be frugivorous, but it has been mentioned by researchers (Kasambe 2011; Lamperti 2014; Wijerathne & Wickramasinghe 2018) that all hornbills exhibit omnivory, especially during the breeding season. During the nesting period, the intake associated with protein is increased in the diet, although throughout the year their diet plan involves a wide variety of food like small fruits, insects, and mice (Kemp 1995, 2001; Poonswad et al. 1998; Kinnaird & O' Brien 2007; Poonswad et al. 2013). This exact diet change during the breeding season has also been observed in the Indian Grey Hornbill (Santhoshkumar & Balasubramanian 2010, 2014; Kasambe 2011; Fitzsimons 2019).

This article gives insight into the omnivory behaviour and vertebrate prey handling of Indian Grey Hornbill. We had the

Indian Grey Hornbill male waiting for female with feeding material. © Pratik Desai.



opportunity to observe this interaction in the first week of April, which is considered the initial stage of their breeding season (Ali & Ripley 1983; Charde et al. 2011). The observation was conducted on 02 April 2021, at Hemchandracharya North Gujarat University Campus, Patan, Gujarat, India (23.8586°N, 72.1332°E).

A pair of Indian Grey Hornbills (an adult male and female) was sighted perching on an old Neem *Azadirachta indica* tree at the university campus at around 1100 h. The hornbills were observed for approximately an hour using a pair of binoculars (Olympus 10x50). The interaction between this pair was also documented by capturing pictures and videos. A house gecko *Hemidactylus* sp. was held by its neck in the bill of the hornbill. As the prey did not move, we presumed that the prey had died beforehand, and as we were using both the camera and binoculars for better inspection of the situation, we saw that the head portion of the prey was crushed. As the male was sighted first, we concluded that the male hunted the gecko; we also noticed that the male rubbed the gecko's head against the branch while waiting for the female. About 15 minutes later, we observed that the female came into the scene and perched on the same branch as the male.

A few minutes later, the male offered the gecko to the female; after receiving the gecko, the female also exhibited the same action of rubbing the gecko's head against the branch. Later, the female gave the gecko back to the male, and this exchange of passing the dead prey among themselves



A pair of Indian Grey Hornbills perching. © Purva Mhatre.

carried on for a while until the male flew to the opposite branch whilst the female feasted on the dead prey. We concluded that this behaviour of rubbing the lizard's head against the branch and offering the prey to each other might be a display of courtship. Kasambe (2011) also mentioned such courtship behaviour, where the male kept offering the female fruits, Garden Lizards *Calotes versicolor*, pieces of bark or mud pellets. The male was seen carrying fruit in its bill, ready to be delivered to the female. Even when the female did not accept anything offered, the male kept offering the food to the silent female. The pair also indulged in play behavior, such as passing food to each other without consuming, passing bark pieces, bill grappling, touching bills, and even pulling each other's tail.

Hemidactylus sp. is also known as a common gecko in India; some previous studies have also reported Garden Lizard as a food source of Indian Grey Hornbill during the breeding season. Animal preys are essential source of protein and both male and female hornbills were observed eating animals (Kasambe 2011). Fitzsimons (2019) and Lowther (1942) observed male Indian Grey Hornbills giving the Garden Lizard to the female in the breeding season, which was similar to this reported observation; however, Patel et al. (1997) did not agree with the formerly mentioned observations.

According to Santhoshkumar & Balasubramanian (2014), the Garden Lizard constitutes 0.06-0.10% of their diet in the breeding season. This observation helped understand the multifaceted dietary preference and feeding behaviour of Indian Grey Hornbill in the breeding season, where males deliver food (primarily vertebrates) to the female or young nestlings.

Indian Grey Hornbills have a versatile diet repertoire ranging from fruits to small animals; this wider feeding niche have helped the population of Indian Grey Hornbill to expand its distribution range from dry-deciduous forests to semi-arid regions of Gujarat State.

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