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A note on predation of a bat by a House Crow (*Corvus splendens*) from South Gujarat, India

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ABSTRACT

Although the Chiroptera is the most ecologically and taxonomically varied group of mammals, little is known about how predators and prey interact. A direct selective pressure known as predation can have an impact on the individuals, populations and communities of the prey species. House Crows (*Corvus splendens*), which eat carrion, kitchen leftovers, locusts, termites, fruit, grain, and eggs are well known for being gregarious, social, clannish, cunning and omnivorous. However, there is only one report of a House crow feeding on a bat from India and in this article, we describe the second instance of a house crow eating a bat from South Gujarat.

Keywords: Chiroptera, Corvidae, Predation

1. INTRODUCTION

House Crows (*Corvus splendens*) (Vieillot, 1817) are known to be gregarious, social, clannish, cunning and omnivorous and feed on carrion, kitchen scraps, locusts, termites, fruit, grain, eggs, or fledgling birds robbed from nests, dead sewer rat, offal, lizards, mice, gerbils, fish, land crabs and fiddler crabs (Fitzwater, 1967; Ali and Ripley, 1987; Ali, 2002). They have also been seen plunging down the baby squirrels in the air (Ali, 2002). In one incident, the House Crow was also recorded scavenging on another House Crow (Greeshma and Jayson, 2017). Much of the House crows forage by searching on the ground and opportunistically from trees (Ali, 2002). They also annoy and bully other birds by tweaking their tails, ears of sleeping cows or dogs, or toes of flying foxes hanging on their diurnal roosting trees (Ali and Ripley, 1987; Ali, 2002). Moreover, there is a record of a House Crow feeding on the bat on July 6, 2014, at Bhinai Garh (26°03'03.6"N, 74°46'19.2"E), Ajmer, Rajasthan, India (del Hoyo, 2014) and there are about eight reports of House Crow preying on the bat from different parts of the world such as Burma, India, Indonesia, Malay Peninsula, Singapore and Sri Lanka (Mikula et al., 2016). However, there is only one report of a House crow feeding on a bat from India; here we report the second such incident of a House Crow feeding on a bat from Narmada district (21°50'16.8"N, 73°44'38.4"E), Gujarat.

2. METHODOLOGY

On August 26, 2020, at 17:05 hrs, we heard a loud call from a juvenile bird while travelling through the road. From a side view from the moving vehicle, we saw a

House crow pecking at the bird (Figure 1). We stopped our vehicle and found that it was a small bat and not a bird (Figure 2). So, we took some photographs and observed the crow from a distance. At 17:07 hrs, the crow started pecking the live bat and shook it several times before releasing it (Figure 3). As a result, the wing and forearm were torn apart (Figure 4). At 17:20 hrs, another House crow attempted to take the bat, but the initial attacker didn't give away the prey to others (Figure 5). After that, six Jungle Babblers (*Turdoides striata*) also came to investigate the situation. At 17:23 hrs, again the crow started pecking and shaking it repeatedly several times until the bat died (Figure 6). The crow was about to begin feeding on the bat, but one bike crossed from the nearby road and the crow took the bat in its beak and flew away and sat on the branch of *Holoptelea integrifolia*. In the process, the crow dropped the bat to the lower branch of the tree. After about five minutes, the crow spotted the bat, picked it up and flew to the top of a nearby streetlight pole. At 17:44 hrs, it tore apart the head portion and started feeding on it (Figures 7, 8 and 9). Then at 17:50 hrs, it opened up the abdomen region and took out the digestive tract. At this moment, another House crow arrived on the pole to snatch away the prey, but the initial attacker didn't give it (Figure 10). Finally, at 18:03 hrs, the crow finished its feed and flew away with the leftover on the pole (Figure 11). As soon as the initial attacker flew away, the other crow came and took away the remaining carcass (Figure 12). From the photographs, we could identify the species of bat to be a Fulvous Fruit Bat (*Rousettus leschenaultia*) as it has brown to grey-brown colour with lighter underparts with large dark eyes.

Figure 1 House Crow pecking on the bat (Photo Credit – Ravi Patel).

Figure 2 House Crow lifting the bat from its head (Photo Credit – Ravi Patel).

Figure 3 The House crow started pecking continuously at the bat (Photo Credit – Ravi Patel).

Figure 4 The bat lay stable as the wings and forearm got injured (Photo Credit – Ravi Patel).

Figure 5 Other house crow came to steal the bat (Photo Credit – Ravi Patel).

Figure 6 The Bat died (Photo Credit – Ravi Patel).

Figure 7 House Crow started feeding on the bat (Photo Credit – Ravi Patel).

Figure 8 House crow shakes the bat to tear it apart (Photo Credit – Ravi Patel).

Figure 9 House Crow again started feeding on bat (Photo Credit – Ravi Patel).

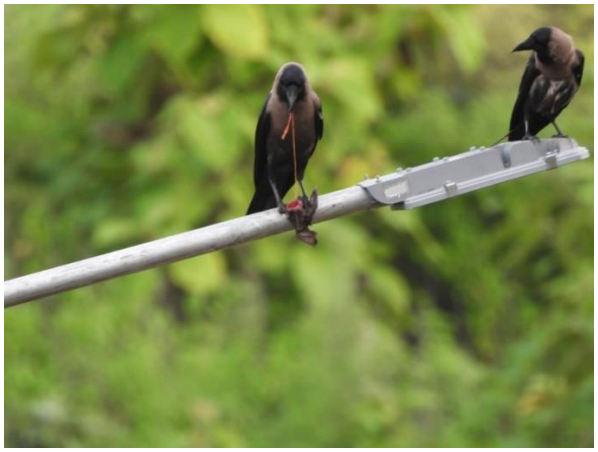

Figure 10 Other House Crow again came to steal the bat (Photo Credit – Ravi Patel).

Figure 11 Leftover carcass of Bat (Photo Credit – Ravi Patel).

Figure 12 Other House Crow came and took away the remaining carcass (Photo Credit – Ravi Patel).

3. DISCUSSION

Although the Chiroptera are the most taxonomically and ecologically diverse mammals (Kunz and Fenton, 2003), their predator-prey interactions are poorly understood (Mikula et al., 2016). Predation is a direct selective pressure that can affect prey species' individuals, populations and communities (Begon et al., 2005). Throughout the world, predations on bats by birds have been reported by many researchers (Gillette and Kimbourgh, 1970; Hernández et al., 2007) and Mikula et al., (2016) have written a review of such behaviour exhibited by birds. The latter also found that out of 28 families and 94 bat-hunting species of non-raptors, 14 families and 47 species belong to the passerine clade, and nearly 80% of the passerine species are of superfamily Corvoidea. This superfamily includes corvids, i.e., Family – Corvidae, which represents approximately 40% of the passerine predators of the bats. Because of their large-brained and opportunistic feeding behaviour, adaptation allows corvids to use bats as a food source (Mikula et al., 2016). Moreover, the Molossidae, Vespertilionidae and Pteropodidae families of bats are among the most exposed to diurnal predation by bats (Mikula et al., 2016) and our observation is also of Fulvous Fruit Bat (a member of the family Pteropodidae).

4. CONCLUSION

Given the varied diet and feeding strategies of the House Crows, our observation on the predation of a Bat by a crow may not seem shocking. However, this is the second detailed photographic observation recorded from India and will help in understanding more about the predator-prey relationship.

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Author's contribution

Hiren J Patel and Ravikumar Patel equally participated in drafting the manuscript.

Ethical approval

Predation of a bat by a House Crow (*Corvus splendens*) was studied in the work. The Animal ethical guidelines are followed in the study for species observation & identification.

Informed consent

Not applicable.

Conflicts of interests

The authors declare that there are no conflicts of interests.

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Data and materials availability

All data associated with this study are present in the paper.

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