

# PREDATION ON TOKAY GECKO (*GECKO GECKO*) AND COMMON HOUSE GECKO (*HEMIDACTYLUS FRENATUS*) BY ORNATE FLYING SNAKE (*CHRYSOPELEA ORNATA*) IN NORTHEASTERN BANGLADESH

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## ABSTRACT

The Ornate Flying Snake (*Chrysopelea ornata*) is a remarkable species known for its gliding abilities, which can exhibit unique predatory behaviour. In this article, we report our two observations of predation on Tokay Gecko and Common House Gecko by *C. ornata* from Northeastern Bangladesh. Although, few studies have reported predation on Tokay Gecko but here we present the first record of predation on Common House Gecko by *C. ornata*. We recommend detailed studies on diet and prey-predator interactions of Ornate Flying Snake considering its wide distribution.

**Keywords:** Predation, diet, prey, mixed-evergreen forest, northeast Bangladesh.

## INTRODUCTION

The Ornate Flying Snake (*Chrysopelea ornata*) is considered to be the most dazzling serpent because of its ability to glide through the air from one tree to another (Ingle 2010; Socha 2011). The species has a wide global distribution in South and Southeast Asian countries, although it is listed as Least Concern in Bangladesh but the global status has not been assessed (IUCN Bangladesh 2015). In Bangladesh, it is known to occur in three major forest habitat types such as – deciduous forests, mixed evergreen forests, mangroves, and even homestead vegetations (IUCN Bangladesh 2015; Ahmed et al. 2020). This predominantly arboreal and diurnal snake is known to consume small vertebrates such as frogs, lizards, small snakes, birds, bats, and rodents (Diesmos et al. 2004). In many countries, researchers have reported the predation by Ornate Flying Snake on different prey species especially lizards. In Bangladesh, the information on predation and prey species of Ornate Flying Snake is very scanty. Herein, we report two opportunistic observations of predation on Tokay

Gecko (*Gecko gecko*) and Common House Gecko (*Hemidactylus frenatus*) by Ornate Flying Snake (*C. ornata*) at Raghunandan Hill Reserve Forest, Northeastern Bangladesh.

### Observations:

During a biodiversity survey at 1745 h on 18 July 2023, we encountered an Ornate Flying Snake (*Chrysopelea ornata*) preying on an adult Tokay Gecko

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**Figure 1: Ornate Flying Snake (*C. ornata*) preying on A: Tokay Gecko (*Gecko gecko*) and B: Common House Gecko (*Hemidactylus frenatus*) in Northeast Bangladesh.**

(*Gecko gecko*) in a Banyan (*Ficus benghalensis*) tree beside Satchari National Park dormitory (24.12651667, 91.44211944). The snake was hanging with its tail coiled around a branch of *Ficus benghalensis* about ~5 m above the ground with its body twisted around the gecko to hold and immobilize it (Fig. 1A). At 1758 h, the snake started swallowing the gecko tail first and complete ingestion took ~41 min. Immediately after, the snake started moving to other branches of the same tree.

At 1528 h on 3 August 2023, we observed another *C. ornata* preying on a Common House Gecko (*Hemidactylus frenatus*) near human habitation (24.12536944, 91.44191389). The snake was hanging with its tail coiled around a bamboo fence ~3 m above the ground and had swallowed the head and both forelimb of the *Hemidactylus frenatus* (Fig. 1B). The complete ingestion took ~7 min, and ends at 1535 h. After completing the ingestion, the snake's head was hanging down for ~1 min, and then started to move through the bamboo fences towards the nearby forest patch before disappearing from our sight.

*Gecko gecko* and *H. frenatus* can be found throughout all the possible habitats of *C. ornata* (following IUCN Bangladesh 2015). Similar to our observation of the predation on *Gecko gecko* by *C. ornata* has been previously reported in different countries including Bangladesh (Babu et al 2018; Grundler 2020). Moreover, *C. ornata* has been reported to predate on *Pethia sp.* and *Hemidactylus leschenaultii* in India (Melvinsevan and Nibedita 2016; Jena et al. 2021). But, to the best of our knowledge, predation on

*Hemidactylus frenatus* by *C. ornata* is the first record in Bangladesh. It can be assumed that, *Gecko gecko* and *H. frenatus* are likely to be common in *Chrysopelea ornata* diet but poorly studied. We recommend detailed studies on *C. ornata* diet which can be interesting considering its wide distribution and habitat heterogeneity.

## CONCLUSION

The observations of predation on Tokay Gecko (*Gecko gecko*) and Common House Gecko (*Hemidactylus frenatus*) by Ornate Flying Snake (*Chrysopelea ornata*) in Northeastern Bangladesh highlight the snake's diverse diet and adaptability to various habitats. These findings, including the first recorded predation on *H. frenatus* in Bangladesh, underscore the need for comprehensive studies on *C. ornata*'s diet. Given its wide distribution and habitat heterogeneity, understanding its feeding behavior can provide insights into its ecological role and conservation needs. The documented predation events, occurring in both natural and human-modified environments, suggest that *G. gecko* and *H. frenatus* are likely common prey but remain under-researched. Future research should focus on the dietary habits of *C. ornata* to better understand its interactions within ecosystems and inform conservation strategies.

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## Conflicts of Interest

Authors declare that there is no conflict of interests regarding the publication of this paper.

## Author's Contribution

**Atikul Islam Mithu:**

Fieldwork and manuscript writing.

**Harish Debbarma:** Fieldwork.

**Shimul Nath:** Fieldwork.

**Safayat Hossain:** Fieldwork.

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