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Predation of a *Varanus bengalensis* by *Ophiophagus hannah* in Rajaji Tiger Reserve, Uttarakhand

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ABSTRACT

This note reports on the preying of an adult *Varanus bengalensis* by an adult *Ophiophagus hannah* in the Rajaji Tiger Reserve, north India. This study is the third documented case from north India in which the king cobra has been observed swallowing the common Indian monitor. As both the species are threatened in their geographic ranges, such small case studies are needed to be documented, which would also be helpful in management and conservation of species.

Key words: *Varanus bengalensis*, *Ophiophagus Hannah*, predation, Rajaji Tiger Reserve.

INTRODUCTION

The king cobra *Ophiophagus hannah* (Cantor, 1836) (Serpentes: Elapidae) is the largest species of venomous snake in the world and has a broad distribution across India, Nepal, Bangladesh, Bhutan, Myanmar, and most of Southeast Asia (David & Vogel 1996; Stuart et al. 2012). In India, it is distributed in the Western Ghats, the Shivalik and Terai regions of Uttarakhand and Uttar Pradesh, Bihar, Odisha, West Bengal, and the Andaman Islands (Whitaker & Captain 2004). *O. hannah* is known to feed primarily on snakes including their own species, and the only other prey items reliably reported from the wild have been two species of monitor lizard: the common Indian monitor (*Varanus bengalensis*) and the water monitor (*V. salvator*) (Bhaisare et al. 2010). *V. bengalensis* occurs from southeastern Iran through south-central Asia (ranging from Afghanistan in the north as far south as Sri Lanka), and eastwards throughout Southeast Asia

as far as Java and the Anambas Islands in Indonesia (Papenfuss et al. 2010). In India, this monitor is distributed in tropical and subtropical regions where it occurs in almost all biotopes from evergreen forests to dry grasslands (Soni & Jarulla 2010).

OBSERVATIONS

On 20 June 2020 (1035 h), we observed an adult *O. hannah* (~250 cms in total length [TL]) preying upon an adult *V. bengalensis* (~90-100 cm in TL) in Motichur forest of the Rajaji Tiger Reserve (30°00'40" N; 78°11'28" E, 352m; Fig. 1). When we first saw the incident, *O. hannah* had already started swallowing the *V. bengalensis* starting from the head of the monitor. It was observed that the snake had first seized the monitor by the head and whipped it on the ground several times before it began to swallow it whole. It took about 40-50 minutes to swallow the monitor, before it retreated in the dense bushes (except the time taken by the snake

to seize the monitor). Since the king cobras are known to regurgitate the partially eaten species, if disturbed, we have not approached the spot closely and watched the incident from a safe distance without disturbing the snake. This was the third documented case from north India in which *O. hannah* have been observed swallowing the monitor. In the year 2013 and 2018, an Indian wildlife photographers and the last author of this note have observed the species consuming Indian monitor in the Corbett and Rajaji Tiger Reserves, respectively (Tankha 2013; Joshi 2018).

Both the species are threatened in their geographic ranges and are listed in Schedule I and II respectively, of the Indian Wildlife (Protection) Act of

1972, CITES Appendix I, and as Vulnerable and Least Concern in the IUCN Red List of Threatened Species. Therefore, the future survival of both the species in India largely depends on the effective management and conservation approaches. The Rajaji Tiger Reserve forms an important repository of diverse fauna and is home to several species of threatened herpetofauna. Long-term scientific studies are needed to map the distribution of both *O. hannah* and *V. bengalensis* in different habitats in north India. Moreover, monitoring the habitats and status of species and ensuring the community's participation in conservation initiative would be an effective conservation strategy.



Fig. 1. *Ophiophagus hannah* swallowing a *V. bengalensis* in Motichur forest of Rajaji National Park

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