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Record of association of an Indian Flapshell Turtle with freshwater jawless leeches at Pune, Maharashtra, India

The Indian Flapshell Turtle *Lissemys punctata* (Bonnaterre, 1789) is a soft-shell turtle belonging to the family Trionychidae of the order Testudines. It is a freshwater turtle found in ponds, rivers and lakes all across India and also distributed to other parts of the Indian subcontinent (Aengals et al. 2018). It is an omnivore, feeds mainly on aquatic vegetation, plant leaves, fruits, and small aquatic animals (Bhupathy et al. 2014). The Indian Flapshell Turtle is protected under Schedule I Part II of Indian Wildlife (Protection) Act, 1972 as amended up to 2023.

On 26 November 2020 at 1605 h, Mr. Ganesh Phalke, snake catcher located a turtle on the



Indian Flapshell Turtle *Lissemys punctata*. © Ganesh Phalke.

middle of Thugaon-Kamshet road (18.7088N, 73.5606E) abutting a runnel near Baur village, Pune, Maharashtra. The runnel is a tributary of Pawana River which flows from Mawal Taluka to Pimpri-Chinchwad City. En route to his residence, Mr. Phalke promptly removed the turtle

from the road thereby saving it from possible road kill. The author was informed about the same and at the same time the photographic evidences were collected. We observed that its Carapace length was around c. 11 cm in length and femoral flaps on plastron were intact. Limbs



Freshwater jawless leeches of the family Glossiphoniidae removed from Indian Flapshell Turtle. © Ganesh Phalke.



The heavily parasitized Indian Flapshell Turtle with freshwater jawless leeches on the neck. © Ganesh Phalke.

and forehead not scaled while three clawed fore- and hind-limbs were webbed. Lack of scutes on the shell and carapace was covered with skin. The colour was olive brown above with large black spots and greenish head with several black spots and lines.

From the key characters like femoral flaps, nasal septal ridges and shell closure mechanism, we confirm it as Indian Flapshell Turtle *Lissemys punctata*. Furthermore, its carapace was depressed and oval in shape indicating a possible juvenile (Hanfee 1999; Bhupathy & Kurt 2010).

After close examination it was noticed that the leeches on the body were ovate and flattened, and not cylindrical. Anterior sucker was ventral and fused with the body while lateral branchiae and pulsating vesicles were absent. Hence, Leeches were identified from their diagnostic characters as freshwater jawless leeches of the family Glossiphoniidae (Vaillant, 1890) (Harding & Moore 1927; Chandra 1982).



Glossiphoniidae is a family within the Rhynchobdellida order of true leeches, which are equipped with a proboscis. These flattened leeches are characterized by an indistinct anterior sucker, as noted by Chandra (1991). Most leech species are ectoparasites that feed on the blood of hosts, often specializing in specific groups of vertebrates. The Piscicolidae family, for instance, primarily feeds on fish blood, although some also consume invertebrates such as oligochaetes and freshwater snails. Conversely, Ozobranchidae leeches prefer aquatic reptiles, amphibians, crocodylians, and aquatic turtles but are known to opportunistically feed on humans as well (Chandra 1991). The perusal of literature revealed that there is no specific record of association of Indian Flapshell Turtle with jawless freshwater leeches. Here, we report first ever record of association of an Indian Flapshell Turtle *Lissemys punctata* (Bonnaterre, 1789) with freshwater jawless leeches of the family Glossiphoniidae (Vaillant, 1890) at Pune, Maharashtra, India. What effect leeches have on turtles is unknown to best of our understanding. Whether the relation is parasitic or symbiotic remains to be examined, in this regard, further study is needed on effects of leeches on turtle.

Subsequently, we also noticed that the turtle was heavily parasitized with leeches on its neck. Using a pair of tweezers all the leeches were carefully removed. The leeches count was 25. Later, the turtle was released in nearby Pawana River. Subsequently, the Forest Department of Maharashtra, Pune Division was informed about the rescue and release of the turtle.

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