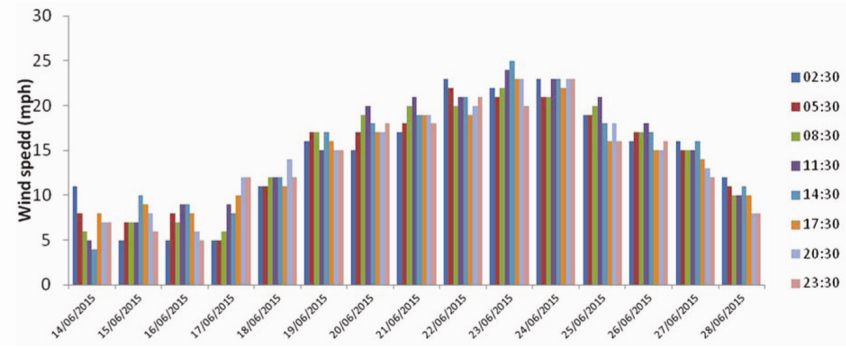

Figure 2. Wind speed in mph for a 24-hour period during 14 to 28 June 2015 (Source: www.worldweatheronline.com/malvan-weather-history/Maharashtra/IN.aspx).

Figure 3. Seahorses *Hippocampus kuda* on Achara beach, Maharashtra.

region has good amount of rocky outcrops, mangroves and corals that form the natural habitat for the sea horses[8]. However this is the first observational record of seahorses thrown by the sea waves onto sandy shore.

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An unusual diet of *Ichthyophis* caecilians (Amphibia: Gymnophiona)

Gymnophiona (caecilians) constitute one of the three extant orders of Lissamphibia, the other two orders being Anura (frogs and toads) and Caudata (newts and salamanders). The 207 nominate caecilian species[1] described to date under 10 families[2] are confined to certain tropical and subtropical regions of South America, Africa and Asia[3]. The habitat of most caecilians is moist and porous soil that is rich in humus and organic matter. Whereas members of the South American Typhlonectidae include aquatic and semiaquatic forms[3]. A detailed understanding of caecilian biology and behaviour has remained elusive because of their fossoriality[3]. The scanty account of their ecology is essentially based on incidental observations made on a small number of caecilians in the captive settings such as in laboratory or museum collections[4].

Caecilians are considered as generalist predators[5]. They feed primarily on soil ecosystem engineers: ants, termites and earthworms[6]. Occasionally they feed on dipteran larvae, centipedes, antlions, thrips and slugs[7] and very rarely on vertebrates such as scolecophidian snakes (*Schistometopum thomense*)[8], lizards (*Dermophis mexicanus*)[9], small fishes (*Chthonerpeton haydee*)[10] and frogs (*Chthonerpeton indistinctum*)[11]. The major reported predators of caecilians are snakes[3,12] with occasional records of carnivorous birds, fishes, turtles, frogs, dogs and aquatic mammals[6]. However, there are no reports of caecilians preying on other caecilians.

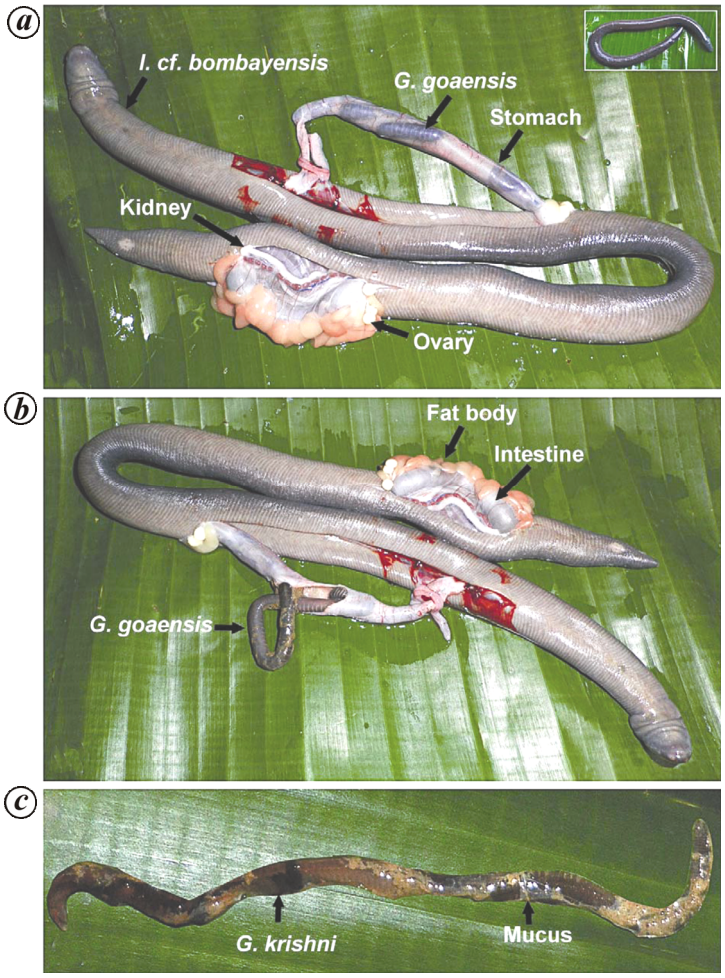

Figure 1. Intergeneric predation in ichthyophiid caecilians. ***a***, Dissected out stomach of *I.* cf. *bombayensis* displaying of the ingested prey (*G. goaensis*): Live specimen of *I.* cf. *bombayensis* (inset); ***b***, Enlarged portion of the head first ingested prey (*G. goaensis*); ***c***, Partially digested *G. krishni* procured from the intestine of *I. kodaguensis*.

We report here two instances of unusual feeding behaviour observed in *Ichthyophis* caecilians.

In the first instance, a femaile unstriped ichthyophiid caecilian *Ichthyophis* cf. *bombayensis* was collected by digging (10 cm deep) the moist soil (temperature 24°C, pH 6.72) surrounding the banana plants owned by Rajendra P. Kerkar of Keri village (15°36.80′N, 74°04.46′E), Sattari taluk, North Goa district, Goa between 1600 and 1700 h on 1 November 2014. The specimen was euthanized using MS 222 within 2 h of capture and stored in 70% ethanol. Dissection of *I.* cf. *bombayensis* with the aid of a stereo-zoom microscope on the next day of field collection revealed the presence of a head first ingested male indotyphlid caecilian *Gegeneophis goaensis* in the stomach that was folded along its long axis in several places with several severe bite marks on its head. Pieces of earthworms and invertebrate insect larvae that were beyond recognition due to advanced stage of digestion were also procured from the gut of the prey. Both the specimens (prey and predator) are deposited in the museum of Department of Zoology, Bangalore University, Bengaluru bearing the vouchers BUB1317 and BUB1319 respectively.

In the second instance, a striped mature male *Ichthyophis kodaguensis* (BUB1273) was collected from Bolamudi estate, Mercara about 20 km from its type locality[13,14] on 23 November 2010 between 1600 and 1700 h. *I. kodaguensis* was maintained in the laboratory in a terrarium containing soil brought from its site of collection mixed with soil from local garden along with colchicine-treated *Gegeneophis krishni* collected from a garbage pit, behind the KSRTC depot, Mangaluru town and about 30 earthworms of the genus *Pheretima* collected from local garden. Incidentally during the dissection of *I. kodaguensis* that was to follow by anaesthetizing using MS 222 essentially for chromosomal preparation after 12 h of colchicine treatment as a pretreatment solution has revealed the presence of a female *G. krishni* (BUB 1281) in the posterior part of small intestine. The prey (*G. krishni*) was found to be with open mouth, highly twisted around 4–5 places along its long axis, with several bite marks along its body and severe wounds near the anterior end of the body. All along its length, the

body of the prey was coated with a thick layer of soil mixed with mucus (probably released by the earthworms after being digested by the predator).

In both the cases, a predator–prey situation is encountered despite abundant availability of their natural diet in the form of soil ecosystem engineers.

The present study was approved by the Institutional Animal Ethics Committee, Bangalore University, Bengaluru, India.

To our knowledge, this report of caecilians preying on other caecilians appears the first case of intergeneric predation in these endogeic amphibians. The larger body size of the predator (*I.* cf. *bombayensis* or *I. kodaguensis*) enables to engulf the small body-sized prey (*G. goaensis* or *G. krishni*). How prevalent is this reported behaviour of intergeneric predation among the caecilians is not known in view of inadequately documented predator–prey relationships due to their subterranean existence. Whether this unusual feeding behaviour is restricted to *Ichthyophis* caecilians alone, and/or a common situation implying to other caecilians needs to be addressed. That this report alone it seems inadequate to imbibe this kind of prevalence may warrant and address towards expanding to whole of caecilians.

Further studies on this unusual feeding behaviour among caecilians need to be probed since, predator–prey interactions are widely recognized and seem to bear important implications on problems pertaining to population dynamics[15]. Identifying predators of caecilians is important in the context of the virtuality of caecilian decline, because predation may serve as a pointer to already declining populations that in lower concurrence leading towards extinction[16,17].

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