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Article:

REPORT OF KERALA MUD SNAKE *DIEUROSTUS DUSSUMIERII* FROM A BEACH IN KOCHI, KERALA

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The Kerala mud snake *Dieurostus dussumierii* (Duméril, Bibron & Duméril, 1854) is a little-known Homalopsid water snake endemic to southwestern Indian coastal plains (Chandramouli et al., 2012; Kumar & Captain, 2011; Kumar *et al*., 2012). Precise locality records are from Thrissur to Thiruvananthapuram. Based on a recent molecular study (Kumar *et al*., 2012), its generic allocation was reassessed and was changed from *Enhydris* to *Dieurostus*. It is locally known as "kanda pampu" (paddy snake) in southern Kerala and "cheli kutta" (mud snake) in the north, suggesting its affinity towards inhabiting freshwater marshlands and water-logged paddy fields (Chandramouli et al., 2012; Kumar & Captain, 2011). In this note, I report my record of Kerala mud snake from a sandy beach stretch adjoining the seacoast in Kochi, Kerala.

During a visit to Fort Kochi beach (9°58'4.00"N 76°14'26.09"E- 3 m asl) on 28th October 2012 at 17.30 hours a dead Kerala mud snake was sighted on the sandy beach (see Figure). It was found only 2-3 meters away from the sea. The body appeared shrunken suggesting that the snake might have died before one or two days. An exhaustive questionnaire with the locals revealed that the snake was not thrown there by people who killed it elsewhere. Thus it is of interest that this species actually inhabits sandy beaches and seacoasts.

Recent study on this species' habitat associations (Kumar et al., 2012) revealed that this species is salt-tolerant, an adaptation that is found only in a few Homalopsids, as many species will actually die within a day or two when exposed to full seawater (Murphy, 2007). Kumar *et al*. (2012) remarked "Salt tolerance has evolved a limited number of times in extant snakes: once in the acrochordids, at least twice in the front-fanged sea snakes (Hydrophiinae), at least twice, possibly more in the natricids, at least once in the dipsidids, and at least once in homalopsids. The total number of living snakes inhabiting saline environments is approximately 110 species comprising 3% of extant snakes."

Although salt tolerance is an adaptation, it does not infer that this species cannot survive in freshwater habitats. Recent sightings of this species have all been in freshwater lakes (Chandramouli et al., 2012; Kumar & Captain, 2012). Kumar et al. (2012) remark "For salt-tolerant snakes, following the coast would be much more probable than over-land dispersal. In this scenario, fresh water would remain available from rivers and rainfall and the snakes could shuttle between fresh and saltwater habitats for osmoregulation." Therefore, it appears that this species can inhabit both fresh and saltwater marshes but has thus far been sighted only from freshwater lakes. Therefore, the present sighting of a freshly-dead individual in Kochi beach further reconfirms the veracity of molecular studies made by Kumar et al. (2012) based on specimens caught from a freshwater lake.

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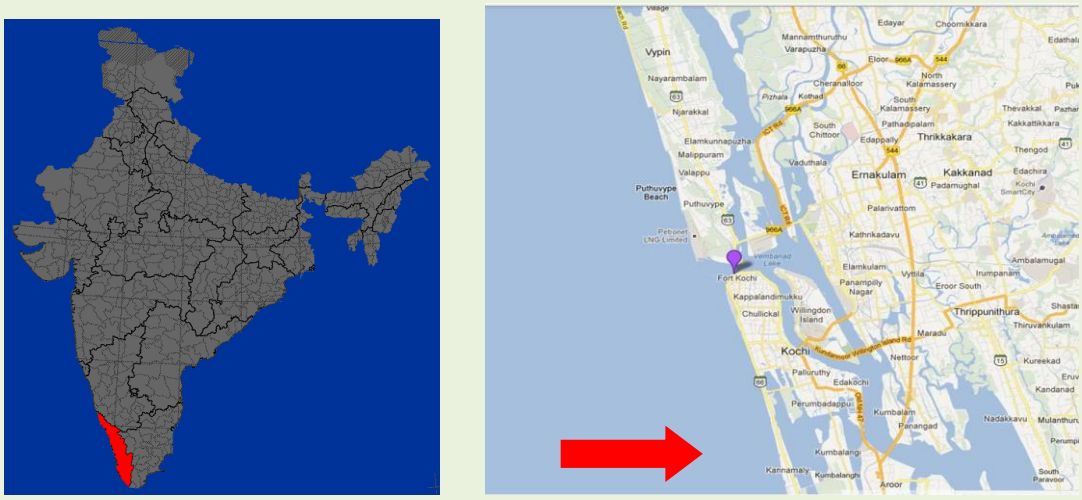
REFERENCES

Chandramouli, S.R., Baiju., Sebastien, J.J. & Ganesh, S.R. 2012. Expanded description of *Enhydris dussumierii* (Duméril, Bibron & Duméril, 1854) (Reptilia: Colubridae: Homalopsinae). *Taprobanica* 4(1):

Kumar, A.B., & Captain, A. 2011. Recent records of the endemic Kerala mud snake, *Enhydris dussumierii* (Duméril, Bibron & Duméril, 1854) from India. *Current Science*,100(6):.

Kumar, A. B., K. L. Sanders, S. George, J.C. Murphy. 2012. The status of *Eurostus dussumierii* and *Hypsirhina chinensis* (Reptilia, Squamata, Serpentes): with comments on the origin of salt tolerance in Homalopsid snakes. *Systematics and Biodiversity* 10:479-489.

Murphy, J.C. 2007. *Homalopsid Snakes: Evolution in the Mud*. Krieger Publishing, Malabar, Florida, 249 pp.



Location where the Kerala mud snake is sighted

Dead Kerala mud snake (*Dieurostus dussumierii*) from Kochi beach, Kerala