

Varanus flavescens (yellow monitor): Thermoregulation

HASSAN AL-RAZI*, MOHAMMAD ABDUL BAKI & SHAYER MAHMOOD IBNEY ALAM.

Department of Zoology, Jagannath University, Dhaka-1100, Bangladesh

*Corresponding author email: chayan1999@yahoo.com

Varanus flavescens is one of three monitor lizard species in Bangladesh (Islam, 2009). Their distribution includes floodplains of the Indus, Ganges, and Brahmaputra rivers in Pakistan, Northern India, Nepal, and Bangladesh (Auffenberg et al., 1989; Visser, 2004; Islam 2009). Although the species is widely distributed in Bangladesh, it is considered to be endangered (IUCN, 2000; Khan, 2008). Very few behavioural records are available, because the highly secretive nature of these lizards makes them difficult to locate (Visser, 2004). Like many diurnal lizard species, yellow monitors regulate their body temperature by shifting between sunny and shady areas, hence basking is an important behaviour. In this note, we report a most unusual type of thermoregulatory behaviour exhibited by *V. flavescens*.

On 30 December 2012 at 09:28 am, an adult *V. flavescens* was observed in Mithapukur Upazilla (sub district) of Rangpur district, Bangladesh (25.651188°N, 89.174946°E, WGS 84 elev. 35 m) beside a permanent water body. It was lying on a pile of straw ash at the edge of the water (fig. 1), about one meter above the water level. The ash was moderately hot but with no fire because it had been lit by fishermen about half an hour previously. The lizard tried to place itself under the ash and seemed to absorb heat from it. The weather was very foggy, the air temperature was about 10°C and the sun had not been seen for the last three days. We observed the lizard closely but it



Figure.1 *V. flavescens* absorbing heat from a pile of ash.

remained inactive and did not appear to be afraid of us. After half an hour we found the lizard at the same place. We also found a burrow about 8 m away from it.

Yellow monitor lizards are least active between November and February (Visser, 2004). They are known to dig burrows on cold nights during this period (Auffenberg et al. 1989). Because of the cold and lack of sunshine, the lizard might have been compelled to absorb heat from the alternative source of the embers. This kind of thermoregulatory behaviour has not been recorded previously

ACKNOWLEDGEMENTS

We thank Mobasser Alam for his support during field work and Caio A. Figueiredo-De-Andrade for providing us with important information. We are also thankful to the Department of Zoology, Jagannath University, Dhaka for instrumentation support.

REFERENCES

- Auffenberg, W., Rahman, H., Iffat, F. & Perveen, Z. (1989). A Study of *Varanus flavescens* Hardwicke and Gray (Sauria, Varanidae). *Journal of the Bombay Natural History Society* 86: 286-307.
- Goin, C.J., O.B. Goin. & G.R. Zug. (1978). *Introduction to Herpetology*. W.H. Freeman and Company, San Francisco, California, USA.
- Islam, M.A. (2009). *Varanus flavescens*. In, *Encyclopedia of Flora and Fauna of Bangladesh*, Vol. 25. *Amphibians and Reptiles*. Pp. 103-104. Kabir, S.M.H., Ahmad, M., Ahmed, A.T.A., Rahman, A.K.A., Ahmed, Z.U., Begum, Z.N.T., Hassan, M.A. & Khondker, M. (Eds.). Dhaka, Bangladesh: Asiatic Society of Bangladesh.
- IUCN (2000). *Red Book of Threatened Amphibians and Reptiles of Bangladesh*. IUCN-The World Conservation Union. Bangladesh Country Office. Xii + 95 pp.
- Khan, M.M.H. (2008). *Protected Areas of Bangladesh - A Guide to Wildlife*. Dhaka, Bangladesh: Nishorgo Program. 304 pp.
- Visser, G. (2004). *Varanus flavescens*. In, *Varanoid Lizards of the World*. Pp. 179-183. Pianka, E. & King, D.R. (Eds.). Indiana: Indiana University Press.