REPTILES & AMPHIBIANS

An Asian Chameleon (*Chamaeleo zeylanicus*) (Laurenti) from High-elevation Shola Vegetation in Upper Nilgiris, Tamil Nadu, India

Anbazhagan Abinesh[1] and Sreedharan Nair Vishnu[2]

[1]Centre for Ecological Sciences, Indian Institute of Science, Bangalore–560012, India
[2]Wildlife Institute of India, Chandrabani, Dehradun–248002, India (vishnusreedharannair@gmail.com)

The Asian Chameleon (*Chamaeleo zeylanicus*) is distributed across much of India, northwestern Sri Lanka, and extreme southeastern Pakistan, where it occurs in scrubland, dry deciduous and secondary forests, and even desert areas at elevations to 1,200 m asl (Tilbury 2010; Srinivasulu et al. 2014; Uetz et al. 2021).

The Nilgiri Hills, which are part of the Western Ghats, have a mean elevation in the Nilgiri District of Tamil Nadu of 2,500 m asl (Cordero et al. 2018). At the higher elevations dominated by montane grasslands (Karunakaran et al. 1998), rain falls throughout the year (mean annual rainfall 500 mm), with peaks in June–July and October–November, and temperatures range from 16 °C to 37 °C (Kumar et al. 2014).

At 1230 h on 26 July 2018, while recording roadkills on upper Nilgiri roads passing through the shola (stunted tropical montane forest), we encountered a road-killed Asian Chameleon (*Chamaeleo zeylanicus*) near the Chamraj Estate, Nilgiris, India (11.29836°N, 76.67966°E; elev. 1,842 m asl) (Fig. 1). A photographic voucher was deposited in the Wildlife Museum of the Kerala Forest Research Institute, Thrissur, Kerala, India (KFRI-WLM-P001/2022), and the identity of the specimen was confirmed from the photograph by Dr. P. Balakrishnan, Scientist, Kerala Forest Research Institute. Asian Chameleons have not previously been found in shola vegetation and, to the best of our knowledge, this is a new elevational record for the species.

Many species appear to adapt to rising temperatures associated with climatic changes by shifting their ranges to higher latitudes or elevation (Chen et al. 2011). Although we cannot determine whether this new record is an example of a species moving to higher elevations or merely incomplete sampling at higher sites, we suggest that additional surveys searching for other species previously associated with lower elevations would be worthwhile.

Fig. 1. A road-killed Asian Chameleon (*Chamaeleo zeylanicus*) (left) from high-elevation shola vegetation (right) in the upper Nilgiris, Tamil Nadu, India. Photographs by Anbazhagan Abinesh.

Reptiles & Amphibians ISSN 2332-4961
https://doi.org/10.17161/randa.v29i1.16393

Acknowledgement

We thank Mr. Prince. P for his support during the fieldwork, and Dr. Peroth Balakrishnan for confirming the identity of the road-killed chameleon.

Literature Cited

Chen, I.C., J.K. Hill, R. Ohlemüller, D.B. Roy, and C.D. Thomas. 2011. Rapid range shifts of species associated with high levels of climate warming. *Science* 333: 1024–1026. https://doi.org/10.1126/science.1206432.

Cordero, R.L., M. Suma, S. Krishnan, C.T. Bauch, and M. Anand. 2018. Elements of indigenous socio-ecological knowledge show resilience despite ecosystem changes in the forest-grassland mosaics of the Nilgiri Hills, India. *Palgrave Communications* 4: 1–9. https://doi.org/10.1057/s41599-018-0157-x.

Karunakaran, P.V., G.S. Rawat, and V.K. Uniyal. 1998. *Ecology and Conservation of the Grasslands of Eravikulam National Park, Western Ghats*. Wildlife Institute of India, Dehra Dun, India.

Kumar, K., N. Balakrishnan, and A.K. Sharma. 2014. Studies on the vertical distribution of ticks of domestic animals and their public health importance in Nilgiri Hills and adjoining areas of Tamil Nadu State (India). *International Journal of Zoology* 2014: 1–6. https://doi.org/10.1155/2014/359812.

Srinivasulu, C., B. Srinivasulu, P. Mohapatra, G. Shankar, A. Das, B.H.C.K. Murthy, A. Aengals, and R. Somaweera. 2014. *Chamaeleo zeylanicus*. *The IUCN Red List of Threatened Species* 2014: e.T172657A1360663. https://dx.doi.org/10.2305/IUCN.UK.2014-3.RLTS.T172657A1360663.en.

Tilbury, C.R. 2010. *Chameleons of Africa: An Atlas, Including the Chameleons of Europe, the Middle East and Asia*. Edition Chimaira, Frankfurt am Main, Germany.

Uetz, P., P. Freed, R. Aguilar, and J. Hošek. 2021. *The Reptile Database*. <http://www.reptile-database.org/>.