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A Report of Asian Long Tailed Tree Mouse *Vandeleuria oleracea* (Bennett 1932) In Agroecosystem of Surban Village, Gondia, Maharashtra

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| Received: 20 January 2022 | Accepted: 07 April 2022 | Published Online: 11 April 2022 |

How to cite: Paliwal G, Bhandarkar S, Bande S. 2022. A Report of Asian Long Tailed Tree Mouse *Vandeleuria oleracea* (Bennett 1932) In Agroecosystem of Surban Village, Gondia, Maharashtra. J New Biol Rep 11 (1): 4–6.

ABSTRACT

The small mammal found nearly all ecosystems, plays an important role in the environment which fills an important ecological niche. As a primary consumer in food chain they have impact on plant sources, also they become a food source for predators. The diversity of rodents and their distribution always be different habitats and depend on the different environmental factors. From the several reports it is seen that the rodent's abundance found to be high in modified habitat. The present report is based on the sighting of rodents in agro ecosystem of Surban village in Gondia district of Maharashtra in December 2021. The observation on the occurrence of Asian long tailed tree mouse, *Vandeleuria oleracea* reveals that the species prefer a specific habitat and spent its life span using complex environmental measures that define a particular habitat.

Key words: Vandeleuria, Rodentia, Agroecosystem, Gondia, Maharashtra.

INTRODUCTION

Rodentia is a largest order of Mammals comprising 2277 species in 481 genera under 33 families (Wilson & Reeder 2005). Rodents include squirrels, rats, mice voles, gerbils, hamsters, dormices, porcupines etc. They are all mainly herbivores and their modes of feeding habits include gnawing, scraping or nibbling. Rodents are economically important as some of them are serious pests destroying crops, fruit gardens, orchards, stored food grains. They have high breeding rate and many show periodic increase in the population with the availability of food. Rodents are important link in food chain between plants and the carnivorous predators hence it plays an important role in ecosystems. One of the important things in the rodent species they always prefer a specific habitat throughout its life span using the complex environmental measures that define a particular

habitat. Hence, these can be used as indicator monitoring the distribution as well as the density to indicate the health of biotic system (William & Lidickes 1989). Out of 33 families of rodents found in the world, seven families namely Sciuridae, Dipodidae, Platacanthomyidae, Spalacidae, Cricetidae, Muridae and Hystricidae occur in India. Family Muridae is the largest family represented in India by 21 genera and 56 species followed by family Sciuridae having 13 genera and 27 species (Pradhan & Talmale 2009). Reports of rodents are scanty, only with few reports such as Pradhan, 1994; Paliwal & Bhandarkar 2015 documented 14 species of rodents from Navegaon National Park and its surroundings. In the present observation, the organism was found in the agriculture field particularly at junction box. On its occurrence, its morphology, habitat, distribution and treats is discussed in the paper.

MATERIALS AND METHODS

Gondia district is a forest dominated district located in the eastern vidarbha region and is one of the rice producing districts in the state. The district falls in high rainfall zone and in XIth agro climatic zone which is characterized by average rainfall of 1400 mm. In

the field surveys were in December 2021 the *Vandeleuria oleracea* sighted in a specific habitat. The observation of the organism was identified by direct sightings, hearing calls and photographs taken instantly on spot. Rodent species were identified with the help of standard literature of Ellerman (1961), Prater (1971) & Agrawal (2000).



Fig. 1. The sighting area (white circle) of *Vandeleuria oleracea* in agroecosystem of Surban.



Fig. 2. *Vandeleuria oleracea* (left) and Junction box (right) in agroecosystem of Surban

RESULTS AND DISCUSSION

A specimen of *Vandeleuria oleracea* was sighted and collected from the nest in the junction box, 5 feet

above the ground on an electric pole in the agricultural field situated at Surban village. The electric pole was in the heavily watered mono-cultivated paddy field.

Specimen description: Head and body length is 7-9 cm. Reddish brown upper parts, grading on the sides to light yellowish brown. Underparts are light brownish white. Tail is long and dark, slender with no tuft at the tip. This species has been known to be species dwelling in the forest and scrubby habitats. It was surprising to find a forest dwelling species in the cultivated fields. It appears from the occurrence of a long tailed tree mouse from cultivated field, the species have such an adaptive power to survive under changed environmental conditions.

Habitat: They are found almost all types of forest. They generally preferred tree hollows, cracks and crevices in the tree or bamboo. Habitat degradation is estimated due to deforestation.

Distribution: The organism is globally reported from the Thailand, Vietnam, Myanmar, Bhutan, China, Bangladesh, Nepal and India. In India, it is reported from Karnataka, Gujarat, Tamilnadu and Maharashtra (TTMS, 2011).

Threats: vast agriculture practices, encroachment, grazing of livestock, deforestation, poisoning and unburden mortality by climatic factors are responsible for loss of habitat.

As this organism found in the junction box is an adaptive feature of its habitat to inhabit diverse ecological niches. The available food source, shelter, heterogeneity in habitat, seasonal variation and climatic conditions and predator therein the habitat and other factors influences the distribution and abundance of rodents (Datiko & Bekele 2014; Massawe et al. 2006). The selection of habitat is an important factor considered in population dynamics of rodents. Though some restricted to a specific habitat but others live in wide range of habitats (Fitzherbert et al. 2006; Kasso et al. 2010). The occurrence of this rodents as modified niches, underlines the need for more in-depth assessments in this region for poorly understood small mammals and the initiation of conservation programs.

ACKNOWLEDGMENTS

The authors would like to express their thanks to the member of AWF for survey. Authors are also thankful to workers in the field for their valuable support for

assisting in the careful sighting and observation during the study.

REFERENCES

- Agrawal VC. 2000. Taxonomic studies on Indian Muridae and Hystricidae (Mammalia: Rodentia). Rec. Zool. Surv 180.
- Datiko D, Bekele A. 2014. Habitat association and distribution of rodents and insectivores in Chebera-Churchura National Park, Ethiopia. Tropical Ecology 55(2), 221–229.
- Ellerman JR. 1961. The Fauna of India including Pakistan, Burma and Ceylon. Mammalia. Vol 3 (Rodentia), Part I & II. Govt of India, Delhi 884 pp.
- Fitzherbert E, Gardner T, Caro T, Jenkins P, 2006. Habitat preferences of small mammals in Katavi ecosystem of western Tanzania. Afr. J. Ecol 45, 249–257.
- Kasso M, Bekele A, Hemson G. 2010. Species composition, abundance and habitat association of rodents and insectivores from Chilalo–Galama Mountain range, Arsi, Ethiopia. Afr. J. Ecol 48, 1105–1114.
- Lidickes WZ. 1989. Rodents: A world Survey of Species of Conservation. IUCN/SCC Rodent Specialist Group. Occasional paper of IUCN Species Survival Commission (SSC) No 4.
- Massawe AW, Rwamugira W, Leirs H, Makundi RH, Mulungu LS. (2006). Do farming practices influence population dynamics of rodents? A case study of the multimammate field rats, *Mastomys natalensis*, in Tanzania. African Journal of Ecology 45, 293–301.
- Paliwal GT, Bhandarkar SV. 2015. Study on Rodent Diversity in and around Navegaon National Park, Gondia District of Maharashtra, India. Small mammal mail 7(1):7-9.
- Pradhan MS, Talmale SS. 2009. A checklist of valid Indian Rodent Taxa (Mammalia: Rodentia), Zoological Survey of India, Kolkata, India 13 pp.
- Pradhan MS. 1994. Report on Collection of a long-tailed tree mouse *Vandeleuria oleracea* from cultivated fields around Ujani wetland, Maharashtra. Science and Culture 607-12:123.
- Prater SH. 1971. The book of Indian Animals 3rd Ed. Bombay Natural History Society, Mumbai 324 pp.
- TTMS, 2011. Zoo Outreach Organization and Wildlife Information Liaison Development, Coimbatore, India.
- Wilson DE, Reeder DM. 2005. Mammal species of the world, 3rd Edition, Johns Hopkins University press, Baltimore, M.D 2: 2141 pp.