

RESEARCH ARTICLE

The oriental rat, *Rattus tanezumi* from Manipur

D.H. CHINGANGBAM, SHABIR HUSSAIN WANI, J.M. LAISHRAM, BRAJENDRA N. SINGH, CHINGAKHAM B. SINGH, YANNICK CHAVAL AND GAUTHIER DOBIGNY

ABSTRACT..... The oriental rat or *Rattus tanezumi* is not common in the valley of Manipur and seem to be exclusively concentrated on the small hillock called, Karang located on the famous lake called The Loktak Lake of Manipur. Fifteen live specimens were trapped using Sherman's wire traps from the area and brought to the laboratory as soon as possible. Morphometric, skull study was carried from nine specimens and cytological work was done using bone marrow cells by conventional colchicines-hypotonic-air drying techniques with fifteen live specimens. Morphologically this species is very closed to *Rattus rattus*. Cytologically the species comprised of acrocentrics from chromosome numbers 1 to 13, small metacentric from chromosome numbers 14 to 20 in autosomes; and both X and Y were also acrocentrics and Y was the smallest in the genome. Only polymorphic chromosomes were numbers 15, 16 and 19 due to metacentric and submetacentrics. According to the karyotype of the rat, *Rattus tanezumi* is much primitive to the *Rattus rattus* species. This species is synonymous to either *brunneusculus* or *sikkiminensis* that has been reported from Manipur.

KEY WORDS..... *Tanezumi*, Oriental rat, Polymorphic, Metacentric, *Rattus tanezumi*

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Author for Correspondence -

SHABIR HUSSAIN WANI
Farm Science Centre (KVK)
Hengbung, SENAPATI (MANIPUR)
INDIA

Email: shabirhwani@rediffmail.com

See end of the article for Coopted authors'

INTRODUCTION.....

Manipur is one of the small hilly states of North East India which lies in the Indo-Burma biodiversity Hotspot region (Myers *et al.*, 2000). This region has 7000 endemic plants (2.233% of the global total of 3000, 000), and 528 endemic vertebrates (1.33% of 27,298). Rich diversity indicates high genetic plasticity and divergence, which is the key to species differentiation. Cytogenetic survey of the living organisms of north-east India should yield valuable data on chromosome evolution. But due to speedy rate of forest degradation in the names of habitation and development, numerous plants and animals are being destroyed before being thoroughly studied or being properly named. Assessments of endemic species and records of exotic animals are done by state forest department as well as Zoological Survey of India. A research work to assists the above concern was undertaken to record

the endemic species of rats in Manipur.

RESEARCH METHODS.....

Fifteen live specimens (7 males and 8 females) of *Rattus tanezumi* were caught from Karang hillock located on the Loktak Lake with help of Sherman live trap. Before undergoing any works each specimen was given a code of PBG with numbers and deposited the skull and skin in the University Museum after the purposed works. The morphological studies were carried out according to Agrawal (2000) and Alferd (2005). The skull preparation was done and chromosomes were harvested from the bone marrow cells of femur using standard colchicine-hypotonic-air drying technique. For identification, a representative skull and a piece of liver muscle in 96 per cent alcohol of the specimen was sent for barcoding to Centre de Biologie et de Gestion des Populations Campus International