



First record of *Microcerotermes lahorensis* Akhtar (Blattodea, Isoptera, Termitidae) from India

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ABSTRACT: Reports a subterranean termite species *Microcerotermes lahorensis* Akhtar from Kerala, India, for the first time. The species was only reported from the type locality Lahore, Pakistan, and was endemic to the country. This new record thus changes the endemic status of the species and reaffirms the cosmotropical nature of the genus *Microcerotermes*. © 2023 Association for Advancement of Entomology

KEYWORDS: Distribution, endemism, cosmotropical nature

Microcerotermes is one of the diverse termites genera and the third-largest genus of the infra order Isoptera (Setter and Myles, 2005). About 148 species of this genus are found worldwide (Krishna *et al.*, 2013). Except for the Nearctic region, the genus is cosmotropical in distribution (Chhotani, 1997). Forty-two species of *Microcerotermes* are found in the oriental region, out of which 29 are found in India (Das and Choudhury, 2020). India is one of the diverse countries in the world, harbouring 295 species of termites, and the state of Kerala has around 68 species of termites belonging to 30 genera and studies have reported a new record of termite species in Kerala (Ranjith and Kalleshwaraswami, 2021; Joseph *et al.*, 2022). The present taxonomic study in Kerala reports a new record of *Microcerotermes lahorensis* from India, a species that was endemic to Pakistan and found only in type locality (Chhotani, 1997). This study thus contributes to the diversity of termites in India and shows the peculiar distribution pattern of the

Microcerotermes lahorensis as it was found only type locality Lahore in 1974 (Akhtar, 1974), and later found in southern part of India after four decades. This new record shows that the species is not endemic anymore.

The samples were collected from a trunk of *Cocos nucifera* (L.) from Neendoor, Kottayam district of Kerala state and were preserved (80 % alcohol). Measurements were under a stereo zoom microscope, Labomed Luxeo 4D binocular microscope with attached camera and Micaps software at magnification of 8–35X. The species identification was done using Chhotani (1997). Specimen was deposited in Zoological Survey of India Western ghats regional centre Kozhikode repository with following registration number ZSIK No. ZSI/WGRC/I.R.-INV.22065.

Systematics:

Family Termitidae Westwood, 1840

Subfamily Amitermitinae Kemner, 1934

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Fig. 1 *Microcerotermes lahorensis* Soldier



Fig. 2 Soldier head dorsal view



Fig. 3 Pronotum of the soldier



Fig. 4 Soldier head ventral view

Genus *Microcerotermes* Silvestri, 1901
Microcerotermes lahorensis (Akhtar, 1972)

Materials examined : CMSZMAI-120, Soldier-1, 08.ii.2022, Neendoor, Kottayam, Kerala, India, 9°41'31.1"N and 76°30'14.7"E, altitude 2 m. coll. Edwin Joseph.

Diagnosis - Soldier (Figs. 1-4, Table 1): Head yellowish brown, slightly darker anteriorly; antennae yellowish; mandibles dark reddish brown; pronotum pale; legs and abdomen dirty white. Head sparsely hairy; postmentum with two pairs of hairs anteriorly. Head-capsule sub rectangular, sides bulging out behind antennae; Segment 3 of the antennae shortest. Clypeus subtrapezoidal. Labrum subpentagonal. Mandibles long, strongly incurved in distal half and coarsely serrated. Postmentum short and club-shaped arched with a strongly incurved waist. Pronotum saddle-shaped; slightly notched anteriorly, posterior margin slightly emarginate.

Distribution: Pakistan: Panjab (Lahore, type-locality), India: Kottayam (New record)

Table 1. *Microcerotermes lahorensis* - soldier morphometric

Characters	mm
Total body length	3.71
Total head length	2.20
Head length without mandible	1.43
Head width maximum	1.14
Mandible length	0.86
Pronotum length	0.32
Pronotum width	0.58
Postmentum length	0.63
Postmentum width maximum	0.38
Postmentum width minimum	0.27
Head width/ Head length Index	0.778

Remarks: According to Chhotani (1997), the *Microcerotermes* genus in the Indian region falls into two categories, species with finely serrated and species with coarsely serrated mandibles. *M. lahorensis* belongs to the category with coarsely serrated mandibles; in this category, the species *lahorensis* is separated for its strongly convexical head-sides behind antennae, but only a single soldier was available to Akhtar at the time of describing the species. The present study also has a single soldier for study, but the unique morphology of the species is very distinct. The number of antennal segments in the original description is 13 with the third segment shortest but in present study, the only specimen available had damaged antennae with incomplete number of segments, but the remaining segments were matching with the original description. The new record of this species depicts the diversity and probability of revealing new species

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(Received September 01, 2022; revised ms accepted February 02, 2023; published March 31, 2023)