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Report of *Neoheterophrictus chimminiensis* Sunil Jose, 2020 (Araneae: Theraphosidae) from the Nelliyampathy forest region of Western Ghats, India

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ABSTRACT: *Neoheterophrictus chimminiensis* Sunil Jose, 2020 was previously only found in the Chimmini forest area, but it has recently been found in the Nelliyampathy forest region of Western Ghats, indicating its distribution. Taxonomic description illustrations and measurements of *N. chimminiensis* are added.

KEY WORDS: Endemic theraphosid, distribution, tarantula, mygalomorph, rastellum

Neoheterophrictus includes *N. amboli* Mirza & Sanap, 2014, *N. bhori* Gravely, 1915, *N. crurofulvus* Siliwal, Gupta & Raven, 2012, *N. madraspatanus* Gravely, 1935, *N. sahyadri* Siliwal, Gupta & Raven, 2012, *N. smithi* Mirza, Bhosale & Sanap, 2014, *N. uttarakannada* Siliwal, Gupta & Raven and *N. chimminiensis* Sunil Jose, 2020 (Gravely, 1915; Siliwal *et al*., 2007, 2012; Mirza *et al.,* 2014; Sunil Jose, 2020; World Spider Catalog, 2021). Recently Sunil Jose (2020) reported *N. chimminiensis* its occurrence from Chimmini wildlife Sanctuary of Kerala. The majority of current records on the distribution of this genus come from Karnataka, with only a few records of its presence in Kerala.

During the field trips *N. chimminiensis* was observed in the Nelliyampathy forest range of Western Ghats in Kerala. The specimens collected in 70 per cent ethyl alcohol were deposited in the Biodiversity Museum, Deva Matha College, Kuravilangad, Kerala. The whole body including legs and eye measurements and photographs were taken using LASX application suite X software. Spermathecae was cleared in clove oil. Leg measurements except claws were recorded. Measurement of chelicerae was taken after dissecting out separately. All measurements are in mm. Specimens are observed using in Leica Automontage stereozoom microscope attached with FLEXACAM1-C1 camera. Abbreviations used: AME - Anterior median eye; ALE - Anterior lateral eye; PME-Posterior median eye; PLE - Posterior lateral eye; ² - ²V- first Leg to fourth leg; mt – Metatarsus; ti - tibia, ta - tarsus, lt - lateral, v - ventral.

***Neoheterophrictus chimminiensis* Sunil Jose, 2020 (Figs. 1-4)**

DMCK 13/135, Holotype, Coll. Sunil Jose in 2013, Chimmini Wildlife Sanctuary. Other material examined: DMCK 20/367, coll. Karthika K, Aswathy S and Linta Joseph, Nelliyampathy forest range.

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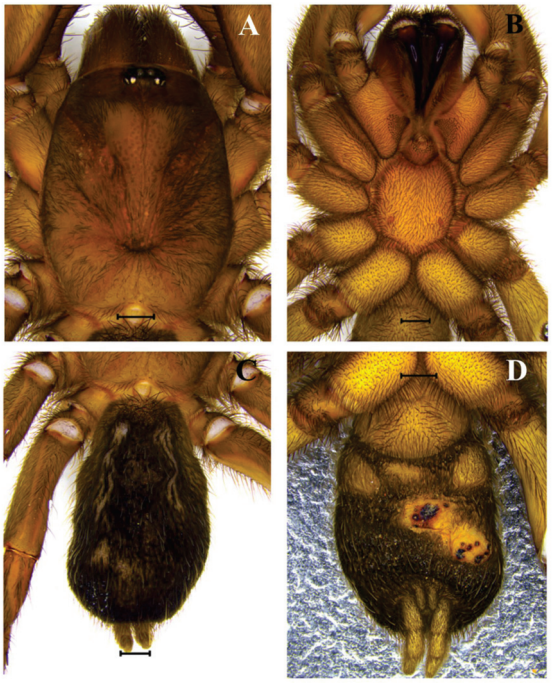

Fig. 1A. *N. Chimminiensis* Carapace dorsal view, B. Sternum, C. Abdomen dorsal view and D. Abdomen ventral view

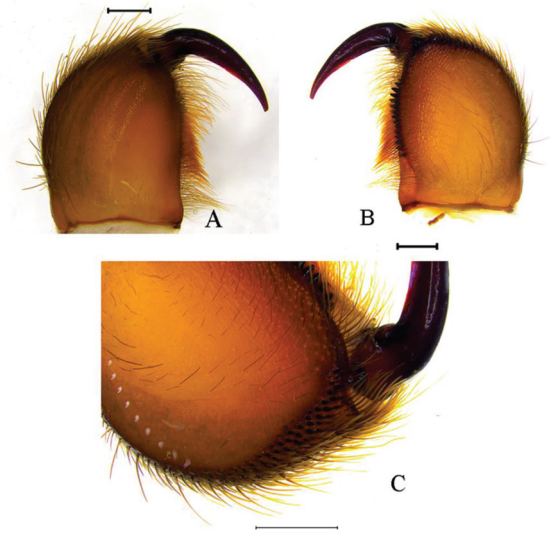

Fig. 2 *N. Chimminiensis* Chelicerae; Prolateral view, B. Retrolateral view, C. Antero-ventral view showing Rastellum

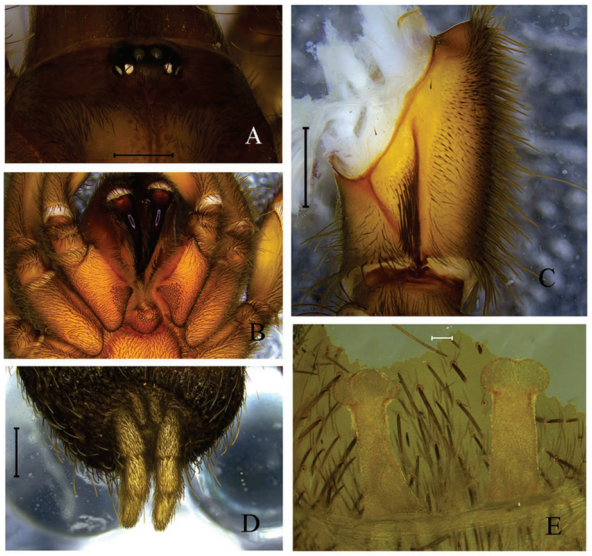

Fig. 3A. Eye, B. Maxillae, labium, C. Coxae I retro-lateral view, D. Spinneret E. Spermatheca.

Fig. 4a. *N. chimminiensis* in their habitat

Fig. 4b. Collection site at Nelliyampathy forest range

Diagnosis: Multilobed spermathecae with equally spaced four lobes present in *N. chimminiensis* differs from *N. bhori* having six spermathecal lobes and a straight coxal suture, while slightly curved suture present in *N. bhori.* Rastellum present on the anterodorsal chelicerae of *N. chimminiensis.* Further it differs in the presence of stridulatory setae in prolateral side of coxae I.

Colour: The entire body is solid black, with light yellow long thin hairs interspersed across the abdomen. There are no distinct markings on the

abdomen, which is oval or circular in shape. Legs were thick black in colour.

Measurements (mm): Total length: 17.46, carapace length: 5.08 long and 4.10 wide, Abdomen: 12.38 long and 4.52 wide. Chelicerae: 3.97 long and 3.08 wide. Eyes: Interdistance: AME-AME 0.10, PLE-PME 0.07, ALE-PLE 0.12, AME-PME 0.12. Eye Diameter: AME 0.21, ALE: 0.14, PLE0.8 PME-0.13. Measurements of leg: I- 3.60, 1.64, 2.78, 1.43, 1.21; II- 2.75, 1.11, 2.23, 1.34, 1.34; III- 2.52, 1.76, 1.38, 2.03, 1.38; IV-3.56, 2.31, 2.77, 3.57, 1.79; Palp- 2.61, 1.04, 1.79, 1.54; Spinneret PME-0.78, PLE-3.61 long. PLE-Basal segment- 1.39, Median segment - 0.95, Posterior segment 1.27 long.

Description: Female: Cephalothorax (Fig. 1 A) - Longer than wider, plain Caput. Fovea is slightly procurved. Brown thoracic streaks arise from the fovea covered with hairs. Clypeus is absent or reduced. Eyes (Fig. 2 A) - ocular area - 1.79 wide and 1.00 length. AME is larger than rest. ALE is the smallest. Maxillae (Fig. 2 B) – with cupules (around 150) on the anterior triangular corners. Retrolateral face armed with Orangish yellow bush of hairs. Prolateral face covered with black hairs. Chelicerae (Fig. 3 A-C) -14 prolateral teeth. Retrolateral teeth much reduced or absent. Retrolateral face has no hairs. Rastellum present antero dorsally as small stout spines. Sternum (Fig. 1 B) - oval in shape, covered with black hairs. Anterior end is concave. Posterior end pointed separates the coxae ²V. Sigillae - Three pairs, posterior with a diameter of 0.18, median 0.14, anterior comparatively small, 0.07. Posterior sigillae are 0.65 away from median, sub central and median to anterior distance is 0.60, close to the margin. Leg: 4123, Tarsus and metatarsus of I and ²² is covered its ¼th with thin layer of scopulae while III and IV having scopulae covered the entire length of metatarsus and tarsus ventrally. In palp the tibia covers this thin layer of scopulae. Spines: No spines on the leg I. Leg II; ta-lt-2,v-1,mt-0, Leg III: mt-lt-4,v-6 ,ti-lt-2,v-3, Leg IV; ti-lt-2,v-4,mt-lt-4,v-6. Palp; ti- v-1.Coxae: Coxae ² (Fig. 2D) is characterised with suture on the retrolateral side. Presence of stridulatory spine below the suture. Coxae ²² – ²V stridulatory spines absent. Abdomen (Fig. 1 C-D) is black in colour somewhat oval in shape. Along pale yellow hairs intermixed with black hairs. Ventrally epigynal furrow is clear and paired book lungs. Spinneret (Fig. 2C) - two pairs. PLE larger than PME. Spermathecae (Fig. 3 E) - multilobed and transparent structures diverged to opposite side. Specifically four lobes attached to a stalk arising from the epigynal furrow.

The spider was found under a stone in a semi-evergreen forest (Figs. 4a-b). It attempted to hide beneath the rock in a little burrow-like hollow during capture. The spider kept in a terrarium (a habitat similar to their natural habitat, maintaining the temperature and moisture), was observed to feed on cockroach nymphs and crickets in captivity. Inside the terrarium, no burrowing behaviour was noted. The observation of *N. chimminiensis* in Nelliyampathy forest range adds to the range of extension of this species over Western Ghats of Kerala.

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