Jumping spiders of the genus *Phintelloides* from India, with the description of a new species
(Araneae: Salticidae: Chrysillini)

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Abstract: *Phintelloides manipur* Caleb sp. nov. is diagnosed and described from north-eastern India. *Phintelloides versicolor* (C.L. Koch, 1846) is recorded for the first time from India and Myanmar. Two new combinations are proposed: *Phintelloides singhi* (Monga, Singh & Sadana, 1989) comb. nov. transferred from *Marpissa* C.L. Koch, 1846 and *Phintelloides undulata* (Caleb & Karthikeyani, 2015) comb. nov. transferred from *Cosmophasis* Simon, 1901. The distribution of the genus in India and Myanmar is mapped.

Keywords: Manipur - Myanmar - new combinations - new record - taxonomy.

INTRODUCTION

The chrysilline genus *Phintelloides* was recently established by Kanesharatnam & Benjamin in 2019, with *Chrysilla jesudasi* (Caleb & Mathai, 2014) as its type species. Currently, the genus is represented by seven valid species. The type species is the sole representative occurring in India, six species are known from Sri Lanka, and one species, *Phintelloides versicolor* (C.L. Koch, 1846) is widespread in East and Southeast Asia (Caleb, 2019; World Spider Catalog, 2020). This paper presents the description of a new species from northeastern India, along with the proposal of two new combinations for misplaced species and new distributional records for *P. versicolor*.

Abbreviations used in the text are as follows: AER = anterior eye row length; ALE = anterior lateral eye diameter; ALT = apical lobe of tegulum; AME = anterior median eye diameter; EFL = eye field length; PER = posterior eye row length; PLE = posterior lateral eye diameter; PME = posterior median eye diameter; RTA = retrolateral tibial apophysis; TB = tegular bump. Additional abbreviations are given in the legends of Figs 7-8.

TAXONOMY

Genus *Phintelloides* Kanesharatnam & Benjamin, 2019

*Phintelloides manipur* Caleb sp. nov.

Figs 1-8

Type material: NZC-ZSI 6944/18; male holotype; India, Manipur, exact locality and collector unknown (specimen found along with other spider specimens in the Manipur State survey collections without any specific label).

Etymology: The species is named after the Indian state of Manipur where the holotype was collected. The epithet is a noun in apposition.

Diagnosis: This species is similar to other congeners in its general morphology and color pattern but can be clearly distinguished by the morphology of its male copulatory organs: the palp with a shorter embolus.
Illustrations are poor, details of genital morphology for re-examination. Since the original description and type specimen will be deposited in NZC-ZSI, it has not yet arrived there and therefore is not yet available. Haryana State. Though the authors mentioned that the holotype from the Kalesar Reserve forest in the

Remarks:

Phintelloides singhi (Monga, Singh & Sadana, 1989) comb. nov.

Marpissa singhi Monga, Singh & Sadana, 1989: 592, figs 1-2.

Remarks: This species was described from the female holotype from the Kalesar Reserve forest in the Haryana State. Though the authors mentioned that the type specimen will be deposited in NZC-ZSI, it has not yet arrived there and therefore is not yet available for re-examination. Since the original description and illustrations are poor, details of genital morphology remain unknown. The identity of this species thus remains unclear until further conspecific specimens are collected at the type locality. This species does not belong in Marpissa since no true Marpissa is yet reported in India. Therefore, a provisional placement in Phintella C.L. Koch, 1846, based on the general body form and genital morphology, was recently proposed by Prószyński & Caleb (2015). The species, however, more closely resembles members of the genus Phintelloides. The abdomen is devoid of any stripe or pattern like in P. flavovirii Kanesharatnam & Benjamin, 2019 and P. orbisa Kanesharatnam & Benjamin, 2019, and the epigyne moreover strongly resembles that of P. orbisa (Monga, Singh & Sadana, 1989: figs 1, 2 cf. Kanesharatnam & Benjamin, 2019: figs 12A, E, G, 13A). It is therefore reasonable to transfer the species to Phintelloides.

Phintelloides undulata (Caleb & Karthikeyani, 2015) comb. nov.

Cosmophasis undulata Caleb & Karthikeyani, 2015: 97, figs 1-10.

Remarks: This species was described from Maharashtra State, from the male holotype only. It was originally placed in Cosmophasis due to resemblance in palp morphology. However, the general body color pattern is clearly different, resembling that of a few members previously placed in Phintella. We propose to place this species in the recently erected genus Phintelloides since it shares a synapomorphic character, i.e. the presence of a short white moustache on the clypeus, along with other characters such as a pale white band behind the anterior eye row, abdomen with a yellowish brown median band and two lateral whitish bands, and the palp with a comparably longer, more slender embolus, the tegulum with a small posterior lobe and a tegular bump, the RTA broader at its base and narrowing apically, with a hook-shaped tip (see Caleb & Karthikeyani, 2015: figs 1, 3, 6, 9). Thus we are convinced that its transfer to Phintelloides is fully justified.

Phintelloides versicolor (C.L. Koch, 1846)

Plexipus versicolor C.L. Koch, 1846: 103, fig. 1165.

Phintelloides versicolor (C.L. Koch, 1846)

Chrysilla versicolor Prószyński, 1973: 98, figs 1-7; Žabka, 1985: 211, figs 83-96.

Phintelloides versicolor Kanesharatnam & Benjamin, 2019: 22.

For a complete list of taxonomic references see the World Spider Catalog (2020).

Specimens examined: NZC-ZSI 6945/18: 2 males, 2 females; west bank of Lacro River, 1525 m a.s.l., Moreh, Manipur, India; 13.IV.1992; leg. A.K. Hazra.
Figs 1-6. Phintelloides manipur Caleb sp. nov., male holotype. (1) Habitus, dorsal view. (2) Frontal view. (3) Chelicerae, maxillae and labium, ventral view. (4) Left male palp, prolateral view. (5) Same, ventral view. (6) Same, retrolateral view. Scale lines: 2 mm (1); 1 mm (2); 0.5 mm (3); 0.2 mm (4-6).
& party. – NZC-ZSI 7035/18; 1 female; Rain Forest Research Institute campus, 26.7824N, 94.2941E, 97 m a.s.l., Jorhat, Assam, India; 08.III.2019; leg. A. Rameshkumar. – NZC-ZSI 1542/17; 3 males, 2 females; Tharrawaddy, Myanmar (= Burma); leg. Oates; det. Thorell.

**Distribution:** India (new record), Myanmar (new record), China, Korea, Taiwan, Japan, Malaysia, Indonesia (Sumatra). Introduced to USA (Hawaii) (World Spider Catalog, 2020).

**DISCUSSION**

The Indian salticid fauna is currently represented by 257 species in 90 genera, and the tribe Chrysillini by 41 species in 12 genera (Maddison, 2015; Prószyński, 2016; Caleb, 2019). The following genera are included in the tribe Chrysillini, with the representative species numbers given in brackets: *Chrysilla* Thorell, 1887 (2); *Epocilla* Thorell, 1887 (4); *Heliophanus* C. L. Koch, 1833 (1); *Icius* Simon, 1876 (3); *Menemerus* Simon, 1868 (6); *Nandicus* Prószyński, 2016 (4); *Nepalicus* Prószyński, 2016 (1); *Okinwaiicus* Prószyński, 2016 (2); *Phintella* Strand, in Bösenberg & Strand, 1906 (11); *Phintelloides* Kanesharatnam & Benjamin, 2019 (5); *Rudakius* Prószyński, 2016 (1); *Siler* Simon, 1889 (1).

With the present study the diversity of *Phintelloides* species in India increases from a single species to five. Two of these, *P. jesudasi* and *P. versicolor*, are known from both sexes and the remaining three are known from one sex only. The new species (*P. manipur* sp. nov.) is described based on the male sex, while another species (*P. singhi* comb. nov.) is known only from the female. At the moment of writing this text, the holotype of *P. singhi* comb. nov. had not yet been received by NZC-ZSI and therefore could not be re-examined, denying us the opportunity to better characterize the species and to rule out the possibility that the male of the new species is conspecific with the female of *P. singhi* comb. nov. However, we consider it highly unlikely that the type of the new species is conspecific with the type of *P. singhi* comb. nov. since the localities of both species lie 1700 km apart, in different biogeographic zones. *Phintelloides*
singhi comb. nov. occurs in the Shivalik foothills in the northwest Himalayan region and *P. manipur* sp. nov. in the northeastern hills of the Indo-Burma biodiversity hotspot (Fig. 9). Moreover, the actual diversity of *Phintelloides* in India may be underestimated due to inadequate sampling across the Indian subcontinent. Besides, the quite short embolus of the *P. manipur* sp. nov. holotype presumably corresponds with a relatively short insemination ducts in the conspecific female, as it can be seen in *P. brunne* (see Kanesharatnam & Benjamin, 2019: figs 10 G-H, 11A-D). The epigyne of *P. singhi* comb. nov. is similar to that of *P. orbisa*, which has longer ducts than *P. brunne*, and thus it can be expected that the *P. singhi* comb. nov. male has a longer embolus than that of *P. manipur* sp. nov. Therefore we have good reasons to believe that the male holotype of *P. manipur* sp. nov. and the female holotype of *P. singhi* comb. nov. are not conspecific. This assumption must, however, be confirmed by new specimens of both sexes from their respective type localities.

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