Materials and methods

Specimens were hand collected from tree bark. Live specimens were photographed by means of Nikon D90, 18-55 mm. Then the specimens were preserved in 70% ethanol and examined under a Leica S8APO stereo-scapic microscope. Micro-photographs were obtained by means of a Leica MC120 HD camera attached to the stereoscopy microscope, with the LAS core software package. All measurements are in millimeters. Leg measurements are given as follows: total length (femur, patella, tibia, metatarsus, tarsus).

Type specimens are deposited in the National Centre for Biological Sciences, Bengaluru, Karnataka, India (NCBS) and Zoological Survey of India, Kolkata, West Bengal, India (ZSI-CDT).

Abbreviations used in the text are as follows: ALE — anterior lateral eye, AME — anterior median eye, PLE — posterior lateral eye, PME — posterior median eye, RTA — retrolateral tibial apophysis.

Taxonomy

Icius Simon, 1876

Type species: Icius hamatus C.L. Koch, 1846.

DIAGNOSIS. For diagnostic features and redescription of the genus, see Alicata, Cantarella [1994].

Icius kumariae sp.n.

Figs 1–19, Map.

Introduction

The jumping spider genus Icius was erected by Simon in 1876. In the world fauna, it currently consists of 34 species, including 18 species from Asia, 16 from Africa, 7 from America and one from the Sunda Shelf [WSC, 2017]. To date, the genus has not been formally recorded from India. This paper presents a description of a new species Icius kumariae sp.n. (♀♂) that was discovered in the vicinity of Thirumullaivoyal near Arapath Lake, Chennai and NCBS campus, Bengaluru, South India. A new combination is also proposed for Phintella alboterminus Caleb, 2014 originally described and known from the same region.

KEY WORDS: Diagnosis, distributional map, new combination, South India.

КЛЮЧЕВЫЕ СЛОВА: Диагноз, карта распространения, новая комбинация, Южная Индия.

ABSTRACT. The genus Icius is recorded from India for the first time. A new species of jumping spiders, Icius kumariae sp.n. (♀♂), is described from South India. A detailed description and illustrations of both sexes are provided. A new combination is proposed: Icius alboterminus (Caleb, 2014) comb.n., ex Phintella.


РЕЗЮМЕ. Род Icius отмечается в фауне Индии впервые. Из Южной Индии описан новый вид пауков-скакуний Icius kumariae sp.n. (♀♂), для которого приведется детальное описание и рисунки обоих полов. Предлагается новая комбинация: Icius alboterminus (Caleb, 2014) comb.n., ex Phintella.

Introduction

The jumping spider genus Icius was erected by Simon in 1876. In the world fauna, it currently consists of 34 species, including 18 species from Africa, 7 from Asia (3 species are known from China, one from Afghanistan, one from Sumatra, one from Japan and one is a widespread Palearctic species), five from Europe (including one recorded from the lower reaches of Volga River in Russia), three from the Americas and one from Micronesia [WSC, 2017]. To date, the genus has not been formally recorded from India. This paper presents a description of a new species Icius kumariae sp.n. (♀♂) that was discovered in the vicinity of Thirumullaivoyal near Arapath Lake, Chennai and NCBS campus, Bengaluru, South India. A new combination is also proposed for Phintella alboterminus Caleb, 2014 originally described and known from the same region.
Fig. 1–6. General appearance of *Icius kumariae* sp. n. 1–3 — male, dorsal, lateral and frontal views; 4–6 — female, dorsal, lateral and frontal views.

Рис. 1–6. Общий вид *Icius kumariae* sp. n. 1–3 — самец, виды сверху, сбоку и спереди; 4–6 — самка, виды сверху, сбоку и спереди.


ETYMOLOGY. The new species is dedicated to my wife, Kumari Caleb.

DIAGNOSIS. The new species can easily be distinguished from its sympatric congener *Icius alboterminus* (Caleb, 2014) comb. n., by the general dorsum pattern having no white spots (abdomen with two pairs of distinct white spots in *I. alboterminus*; cf. Figs 1 and 4 with figs 1 and 6 in Caleb [2014]). Both species also differ significantly in their copulatory organs (embolus short and thick; RTA single; epigyne with anteriorly placed copulatory openings and longer insemination ducts in *I. alboterminus*, cf. Figs 16–19 herein with figs 9–12 in Caleb [2014]). By the palpal morphology, the new species seems to be similar to *Icius rugosus* Suguro et Nagano, 2015, from which it can be separated by the broader embolic base and the lightly bent embolus (Figs 10, 16), as well as by the unique shape of RTA, with two projections of almost equal heights (Figs 11, 12, 17). The female of *Icius kumariae* sp. n. can be easily distinguished from those of other congeners in having the closely placed, postero-median copulatory openings (Figs 13, 15, 18) and the insemination ducts short, making a single loop before reaching the spermathecae (Figs 15, 19).

DESCRIPTION. MALE (holotype). Total length: 2.15, carapace: 1.03 long, 0.68 wide; abdomen: 1.12 long, 0.69 wide. Carapace black, covered with greyish hairs; sparse hairs tinged with golden to rusty brown present along the lateral eye margin (Figs 1, 2). AMEs are surrounded by reddish orange orbital setae in the upper half and white orbital setae in the lower half. About 6–7 elongated leaf-like long hairs present behind AMEs; similar series of short hairs present behind AMEs. Clypeal region blackish (Figs 3), two parallel thin patches of white hairs extend shortly backwards from the cheek region to the lateral margins below PLEs. Outer edge of carapace with a thin stripe of white hairs. Eye measurements: AME 0.17, ALE 0.09, PME 0.02, PLE 0.06. AME-AME 0.01, ALE-PME 0.11, PLE-PLE 0.42, PME-PME 0.48, PME-PLE 0.08. Clypeus height 0.05. Sternum oval, dark brown, covered with greyish hairs. Chelicerae unidentate, dark brown; labium and maxillae brownish (Fig. 9). Legs yellowish with brownish annulations on the proximal part of each segment; white patches of hairs at distal ends. Femur I blackish, femur II–IV with...
On the genus *Icius* from India

Figs 7–15. General appearance and copulatory organs of *Icius kumariae* sp.n. 7 — male, dorsal view; 9 — male chelicerae, retrolateral view; 10 — male palp, ventral view; 11 — ditto, ventro-lateral view; 12 — ditto, retrolateral view; 8 — female, dorsal view; 13 — epigyne, paratype (NCBS, AW265), ventral view; 14 — spermathecae, dorsal view; 15 — epigyne, paratype (NCBS, AW269), ventral view. Scale bars: 1 mm (7, 8); 0.1 mm (9–15).

Рис. 7–15. Общий вид и копулятивные органы *Icius kumariae* sp.n. 7 — самец, вид сверху; 9 — хелицера самца, вид сзади-сбоку; 10 — левая пальпа самца, вид снизу; 11 — тоже, вид снизу-сбоку; 12 — тоже, вид сбоку-сзади; 8 — самка, вид сверху; 13 — эпигиная, паратип (NCBS, AW265), вид снизу; 14 — сперматека, вид сверху; 15 — эпигина, паратип (NCBS, AW269), вид снизу.

Масштаб: 1 мм (7, 8); 0,1 мм (9–15).
Figs 16–19. Copulatory organs of Icius kumariae sp.n. 16 — male left palp, ventral view; 17 — ditto, retrolateral view; 18 — epigyne, ventral view, 19 — spermathecae, dorsal view. Scale bars: 0.1 mm (16–19). Abbreviations: CO — copulatory opening, E — embolus, FD — fertilization duct, RTA — retrolateral tibial apophysis, SD — seminal duct, T — tegulum.


Map. Collecting records of Icius species in India: Icius alboterminus (Caleb, 2014) (blue circle) and I. kumariae sp.n. (blue circle and red square).

Карта. Точки находок видов Icius в Индии: Icius alboterminus (Caleb, 2014) (голубой кружок) and I. kumariae sp.n. (голубой кружок и красный квадрат).
On the genus *Icius* from India

From the vicinity of Araabath Lake, Thirumullaivoyal. It was incorrectly placed in the genus *Phintella* by Caleb [2014]. Prószyński & Caleb [2015] provisionally proposed a transfer of this species to *Icius*, based on general body morphology and the conformation of the copulatory organs. A new combination is thus formally proposed here.

**Acknowledgements.** I thank Dr. Krushnamegh Kunte of the National Centre for Biological Sciences (NCBS) for allowing me to use their stereomicroscope facility and to deposit the studied specimens. Special thanks go to Rajesh Sanap for initiating field collecting at the NCBS campus, Bengaluru. I thank the American Arachnological Society for an Arachnological research grant from the Herbert Levi fund (HLMFAR). Finally, I am greatly indebted to my parents, David and Udaya Prasanna for their constant encouragement and financial support. Sincere thanks go to Dr Dmitri Logunov (Manchester, UK) for providing constructive comments on the ms that helped to improve it.

**References**


**Icius alboterminus** (Caleb, 2014) **comb. n.**

*Phintella alboterminus* Caleb, 2014: 605, Figs 1–12 (description of male & female) (type deposited in ZSI-SRC, examined [Reg. no. ZSI-SRC-ISP 10–11])

**Remarks.** *Phintella alboterminus* Caleb, 2014 was described on the basis of the specimens collected from the vicinity of Araabath Lake, Thirumullaivoyal. It was incorrectly placed in the genus *Phintella* by Caleb [2014]. Prószyński & Caleb [2015] provisionally proposed a transfer of this species to *Icius*, based on general body morphology and the conformation of the copulatory organs. A new combination is thus formally proposed here.

**DISTRIBUTION.** India: Tamil Nadu (Thirumullaivoyal), Karnataka (Bengaluru) (Map).

**ICIIUS ALBOTERMINUS (Caleb, 2014) COMB. N.**

From the vicinity of Araabath Lake, Thirumullaivoyal. It was incorrectly placed in the genus *Phintella* by Caleb [2014]. Prószyński & Caleb [2015] provisionally proposed a transfer of this species to *Icius*, based on general body morphology and the conformation of the copulatory organs. A new combination is thus formally proposed here.

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