



Short Communication

A new *Nasoonaria* Wunderlich & Song, 1995 from southern Vietnam (Araneae, Linyphiidae)

Andrei V. Tanasevitch*

A.N. Severtsov Institute of Ecology and Evolution, Russian Academy of Sciences, Moscow 119071, Russia

ARTICLE INFO

Article history:

Received 18 March 2018

Received in revised form

1 May 2018

Accepted 7 May 2018

Available online 14 May 2018

Keywords:

Arachnida

Erigoninae

Southeastern Asia

Spiders

Taxonomy

ABSTRACT

A new species, *Nasoonaria mada* sp. nov., is described based on a single male specimen from southern Vietnam. The new species seems to be most similar to the Oriental *N. sinensis* Wunderlich & Song, 1995 but is clearly distinguished by the unmodified palpal tibia, the presence of a pointed outgrowth on the tegulum, and the peculiar sclerite resembling a membrosclerum in the embolic division. The genus *Nasoonaria* Wunderlich & Song, 1995 is registered from Vietnam for the first time.

© 2018 National Science Museum of Korea (NSMK) and Korea National Arboretum (KNA), Publishing Services by Elsevier. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Introduction

The spider genus *Nasoonaria* Wunderlich & Song, 1995 was erected for a single species, *N. sinensis* Wunderlich & Song, 1995, from the Yunnan Province, southern China (Wunderlich and Song 1995). A second representative of the genus has recently been described twice almost simultaneously, one, *N. circinata* Zhao & Li, 2014, from Yunnan (Zhao and Li 2014) and the other, *N. magna* Tanasevitch, 2014, from Thailand (Tanasevitch 2014). Both have been synonymized, and it is the latter one that has priority (Tanasevitch 2016).

Checking the spider collections of the Zoological Museum, Moscow State University, Russia (ZMMU), the third new species of the genus has been found among the material from southern Vietnam. The description of the new *Nasoonaria* is the subject of the present contribution. The genus *Nasoonaria* is registered from Vietnam for the first time.

Material and methods

This article is based on spider material collected from Vietnam and preserved at the Zoological Museum, Moscow State University.

* A.N. Severtsov Institute of Ecology and Evolution, Russian Academy of Sciences, Leninsky prospekt 33, Moscow 119071, Russia.

E-mail address: tanasevitch@gmail.com.

Peer review under responsibility of National Science Museum of Korea (NSMK) and Korea National Arboretum (KNA).

Specimens preserved in 70% ethanol were studied using a MBS-9 (LZOS, Russia) stereo microscope and a Wild (M11-17352, Switzerland) compound microscope. A Levenhuk C-800 (Levenhuk, Russia) digital camera was used for the execution of some drawings. Images of multiple focal sections were combined using Helicon Focus image stacking software (Helicon Focus, Helicon Soft Ltd., ver. 5.1). The chaetotaxy is given in a formula, i.e. 2.2.1.1, which refers to the number of dorsal spines on tibiae I–IV. The sequence of leg segment measurements is as follows: femur + patella + tibia + metatarsus + tarsus. All measurements are measured using an ocular micrometer and given in millimeters. Figure numbers are given above the scale lines, and the distance is given below.

The terminology of copulatory organs mainly follows that used in the studies by Merrett (1963), Tanasevitch (1996) and Hormiga (1994, 2000).

Abbreviations

Du = duct

DSA = distal suprategular apophysis *sensu* Hormiga (2000)

Em = embolus

MM = median membrane *sensu* Helsdingen (1965) = embolic membrane *sensu* van Helsdingen (1986) and Hormiga (1994)

Me = membrosclerum *sensu* Tanasevitch (1996).

P = paracymbium

R = radix

Tml = position of trichobothrium on metatarsus I

TO = tegular outgrowth

<https://doi.org/10.1016/j.japb.2018.05.002>

pISSN2287-884X eISSN2287-9544/© 2018 National Science Museum of Korea (NSMK) and Korea National Arboretum (KNA), Publishing Services by Elsevier. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

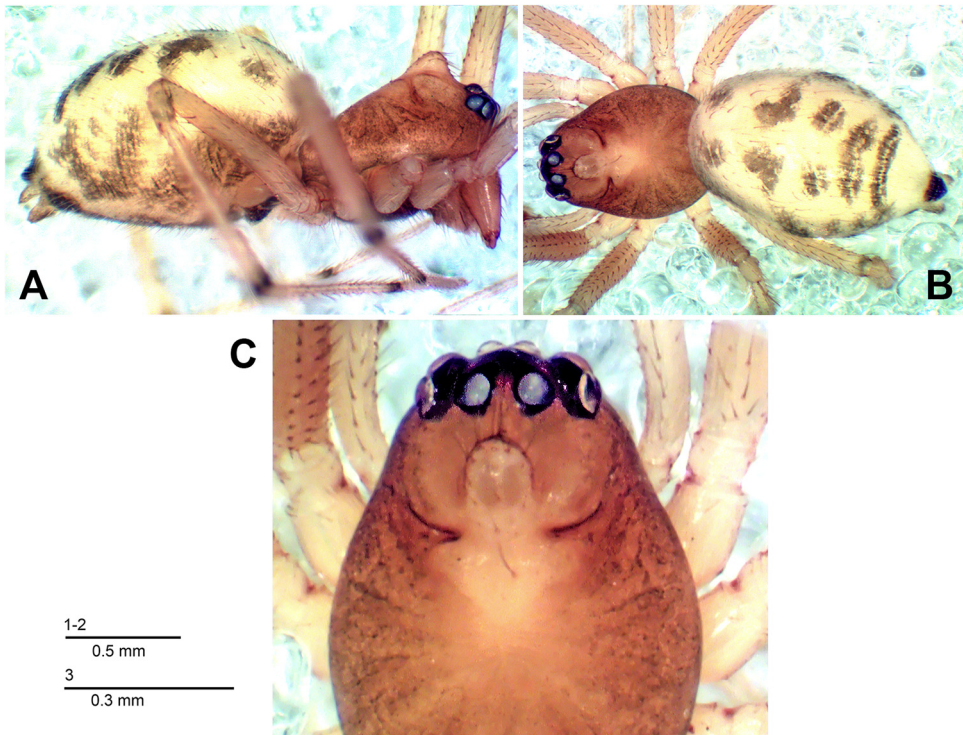


Figure 1. Photographs of *Nasoonaria mada* sp. nov., male holotype: A, body, lateral view; B, body, dorsal view; C, anterior part of carapace, dorsal view.

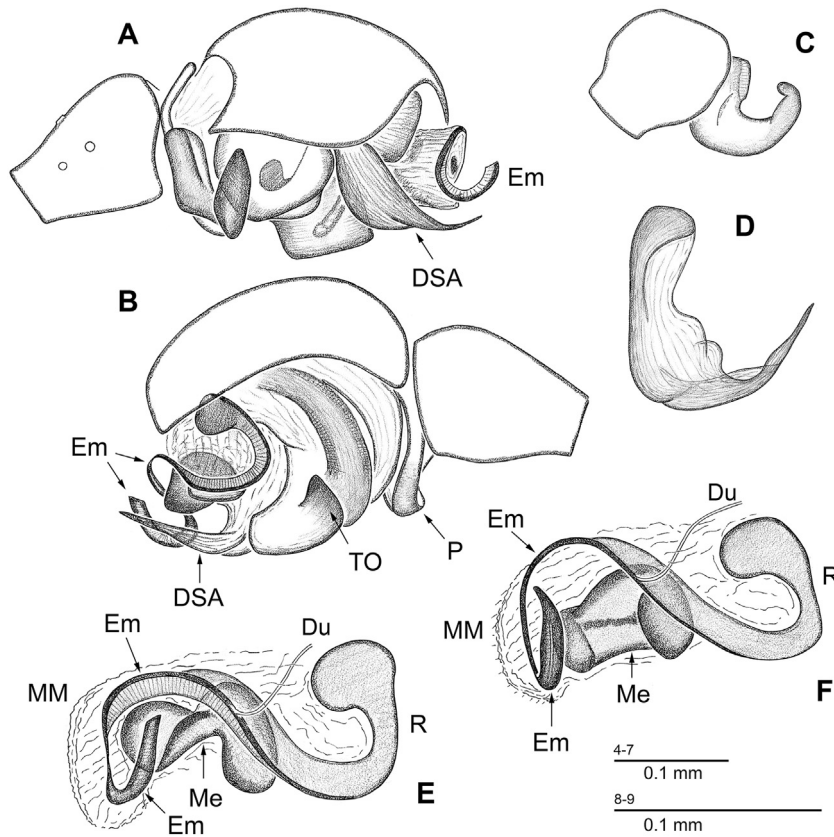


Figure 2. *Nasoonaria mada* sp. nov., male holotype: A, right palp, retrolateral view; B, right palp, prolateral view; C, palpal tibia and paracymbium, lateral view; D, distal supratergular apophysis, lateral view; E and F, embolic division, different aspects. DSA = distal supratergular apophysis sensu [Hormiga \(2000\)](#); Du = duct; Em = embolus; Me = membrsclerum sensu [Tanasevitch \(1996\)](#); MM = median membrane sensu [Helsdingen \(1965\)](#); R = radix; TO = tegular outgrowth.

Systematic accounts

Order Araneae Clerck, 1757
 Family Linyphiidae Blackwall, 1859
 Subfamily Erigoninae Emerton, 1882
 Genus *Nasoonaria* Wunderlich & Song, 1995
 Type species *Nasoonaria sinensis* Wunderlich & Song, 1995 by original designation

Nasoonaria mada sp. nov.

LSID urn:lsid:zoobank.org:act:6FDF90CF-DF17-44EC-8E60-C49D115D6234

(Figures 1 and 2)

Holotype. ♂, Ma-Da forest (=rung Ma Da), Dong-Nai Province, VIETNAM, from soil sample, 20 iv 1995 (leg. T. K. Sergeeva).

Type. The new species resembles the Oriental *N. sinensis* Wunderlich & Song, 1995 but is clearly distinguished by the unmodified palpal tibia, the presence of a pointed outgrowth on the tegulum, and the presence of an additional sclerite in the embolic division. Perhaps this sclerite is a sclerotized part of the median membrane, in which case this structure could probably be termed a membrosclerum, see Tanasevitch (1996) for details.

Description. Male holotype. Total length 2.05. Carapace modified as shown in Figure 1, 0.88 long, 0.68 wide, pale reddish brown. Anterior part of carapace with a rounded postocular outgrowth lacking special spine(s) or seta(e); sulci situated behind elevation as shown in Figure 1. Eyes slightly enlarged. Chelicerae 0.38 long, mastidion absent. Legs pale yellow, ends of tibiae and metatarsi darkened apically. Leg formula: I-II-IV-III. Leg I 3.49 long (0.93+0.23+0.90+0.88+0.55), IV 3.34 long (0.88+0.20+0.88+0.88+0.50). Chaetotaxy 2.2.1.1, length of spines about 1.5–2.5 diameters of segment. Each metatarsus with a trichobothrium. Tml 0.73. Palp (Figure 2): tibia short, unmodified. Paracymbium small, simple. Tegulum with a pointed outgrowth on prolateral side. Distal suprategular apophysis very large, L-shaped, its proximal part wide, distal part spike like. Median membrane wide. Main body of radix small, rounded, its embolic part as a long, narrow, curved stripe. A duct entering the edge of radix near middle of sclerite, running along its side toward a thickened end of embolus. A peculiar sclerite of unknown origin (perhaps a membrosclerum) surrounded by both median membrane and radix. Abdomen 1.25 long, 0.85 wide, dorsal pattern as shown in Figure 1.

Female. Unknown.

Distribution. Known only from the type locality in southern Vietnam.

Etymology. The specific name is a noun in apposition referring to the type locality, the Ma-Da forest, Vietnam.

Conflicts of interest

The author declares that there is no conflicts of interest.

Acknowledgments

The author is greatly indebted to Tatiana K. Sergeeva (Moscow) whose material was used in the present study and to Kirill G. Mikhailov for the access to the ZMMU spider collections. The author also thanks Sergei I. Golovatch (Moscow) who kindly checked the language of the advanced draft.

References

- van Helsdingen PJ. 1965. Sexual behaviour of *Lepthyphantes leprosus* (Ohlert) (Araneida, Linyphiidae), with notes on the function of the genital organs. *Zoologische Mededelingen* 41:15–42.
- van Helsdingen PJ. 1986. World distribution of Linyphiidae. In: *Proceedings of the ninth international congress of arachnology, Panama 1983*. Washington D.C: Smithsonian Institution Press. pp. 121–126.
- Hormiga G. 1994. Cladistics and the comparative morphology of linyphiid spiders and their relatives (Araneae, Araneioidea, Linyphiidae). *Zoological Journal of the Linnean Society* 111:1–71.
- Hormiga G. 2000. Higher level phylogenetics of erigonine spiders (Araneae, Linyphiidae, Erigoninae). *Smithsonian Contributions to Zoology* 609:1–160.
- Merrett P. 1963. The palpus of male spiders of the family Linyphiidae. *Proceedings of the Zoological Society of London* 140:347–467.
- Tanasevitch AV. 1996. Two new genera of the family Linyphiidae from Tuva, south Siberia, Russia (Arachnida Aranei Linyphiidae). *Arthropoda Selecta* 4 (3/4):65–69.
- Tanasevitch AV. 2014. On the linyphiid spiders from Thailand and West Malaysia (Arachnida: Aranei: Linyphiidae). *Arthropoda Selecta* 23 (4):393–414.
- Tanasevitch AV. 2016. A case of disjunct montane linyphiid species (Araneae) in the Palaetropics, with notes on synonymy and the description of a new species. *Revue Suisse de Zoologie* 123 (2):235–240.
- Wunderlich J, Song DX. 1995. Four new spider species of the families Anapidae, Linyphiidae and Nesticidae from a tropical rain forest area of SW-China. *Beiträge zur Araneologie* 4:343–351.
- Zhao QY, Li SQ. 2014. A survey of linyphiid spiders from Xishuangbanna, Yunnan Province, China (Araneae, Linyphiidae). *ZooKeys* 460:1–181.