

AN ANNOTATED LIST OF LINYPHIID SPIDERS
(ARANEI: LINYPHIIDAE) OF LAOS

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Summary. An annotated list of 20 species from 12 genera of Linyphiidae spiders of Laos is given. Three species, *Batueta voluta* Locket, 1982, *Ceratinopsis orientalis* Locket, 1982 and *Nasoonaria magna* Tanasevitch, 2014, are recorded from this country for the first time. The illustrations of male palp are given for three poorly known species.

Key words: Araneae, Erigoninae, fauna, new records, Southeast Asia.

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Резюме. Приведен аннотированный список 20 видов из 12 родов пауков линифид Лаоса. Три вида (*Batueta voluta* Locket, 1982, *Ceratinopsis orientalis* Locket, 1982 и *Nasoonaria magna* Tanasevitch, 2014) указаны как новые для фауны Лаоса, а для трех недостаточно изученных видов приведены иллюстрации палпы самца.

INTRODUCTION

Linyphiidae is the second largest family of spiders with 4571 extant species belonging to 608 genera (World Spider Catalog, 2018). Although linyphiid spiders are highly diverse family, they are poorly represented in tropical regions. Diversity of Linyphiidae in the most of Southeast Asian countries does not exceed 20 species (Tanasevitch, 2018). So far, 17 species of Linyphiidae are known from Laos, 15 of them have been recorded or described from the country by Tanasevitch (2014a) based on the collections of the Senckenberg Museum. Goal of this paper is to provide complete check-list of linyphiid spiders of Laos.

Spiders were collected in Laos by first and second authors in 2013–2017. Specimens were photographed using Nikon DS-Ri2 camera attached to Nikon SMZ25 stereomicroscope at

Biodiversity and Marine Biological Resources Department of the Far Eastern Federal University. Photographs were taken in dishes with glass beads on the bottom and filled with alcohol. The epigynes were macerated with NaOH solution. All measurements are in mm. Stacking of images was performed by using Combine ZP software. All material is deposited in the Far Eastern Federal University (FEFU). Distribution data are given according to World Spider Catalog (2018) with some changes.

LIST OF THE SPECIES

Asiagone perforata Tanasevitch, 2014

Asiagone perforata Tanasevitch, 2014a: 72, figs. 7-14 (♂).

Asiagone perforata: Zhao & Li, 2014: 9, figs. 1A-D, 2A-E, 3A-F, 4A-D (♂♀).

DISTRIBUTION. Southern China, Laos.

Asiagone signifera Tanasevitch, 2014

Asiagone signifera Tanasevitch, 2014a: 69, figs. 1-6 (♂).

DISTRIBUTION. Laos.



Figs 1–2. Male palp of *Atypena cirrifrons*. 1– lateral view; 2 – retrolateral view.

Atypena cirrifrons (Heimer, 1984)

Figs 1–2

Paranasoona cirrifrons Heimer, 1984: 87, figs. 1-8 (♂♀).

MATERIAL EXAMINED. **Laos:** Vientiane Prov., environs of Nam Lik Eco-Village, 18°38'N 102°19'E, pitfall traps at lake bank, 24–27.XI.2013, ♂. (M. Omelko).

DISTRIBUTION. China, India, Laos, Thailand, Vietnam.

***Bathyphantes floralis* Tu et Li, 2006**

Bathyphantes floralis Tu & Li, 2006: 104, figs. 1A-J (♂♀).

DISTRIBUTION. Laos, Vietnam.

NOTES. According to Tanasevitch (2014a) this species is probably a junior synonym of *Bathyphantes robustus* Oi, 1960.

***Bathyphantes paracymbialis* Tanasevitch, 2014**

Bathyphantes paracymbialis Tanasevitch, 2014a: 73, figs. 15-23 (♂♀).

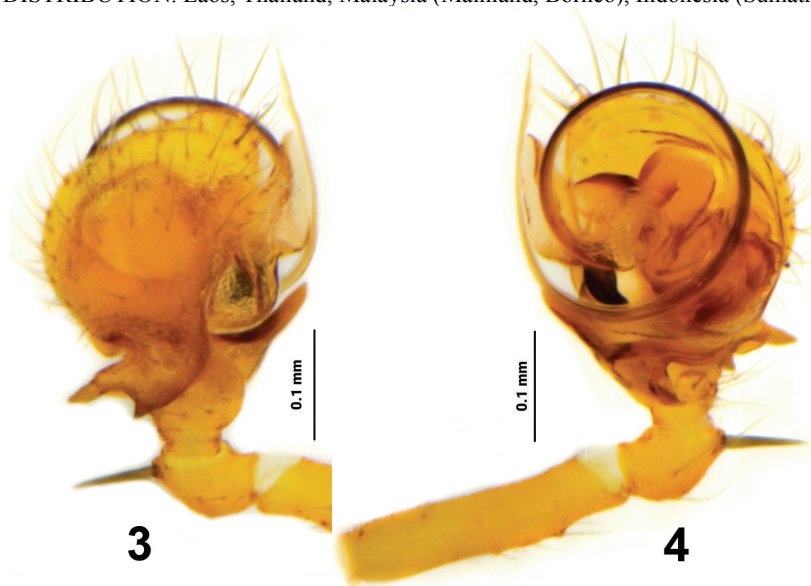
Bathyphantes paracymbialis: Zhao & Li, 2014: 11, figs. 5A-D, 6A-E, 7A-F, 8A-D (♂♀).

DISTRIBUTION. Laos, Southern China, Myanmar, Thailand, Malaysia, Indonesia (Sumatra).

***Batueta baculum* Tanasevitch, 2014**

Batueta baculum Tanasevitch, 2014b: 401, figs. 29-31, 33-34 (♂♀).

DISTRIBUTION. Laos, Thailand, Malaysia (Mainland, Borneo), Indonesia (Sumatra).



Figs 3–4. Male palp of *Batueta voluta*. 3 – dorsal view; 4 – ventral view.

***Batueta voluta* Locket, 1982**

Figs 3–4

Batueta voluta Locket, 1982: 372, figs. 55-63 (♂♀).

Batueta voluta: Tanasevitch, 2014b: 401, figs. 32 (♂).

MATERIAL EXAMINED. **Laos:** Vientiane Prov., environs of Nam Lik Eco-Village, 18°38'N 102°19'E, litter sifting in forest, 18.VI 2017, 1 ♂ (A.A. Komisarenko)

DISTRIBUTION. Laos (new record), Vietnam, Thailand, Malaysia, Singapore.

***Ceratinopsis orientalis* Locket, 1982**

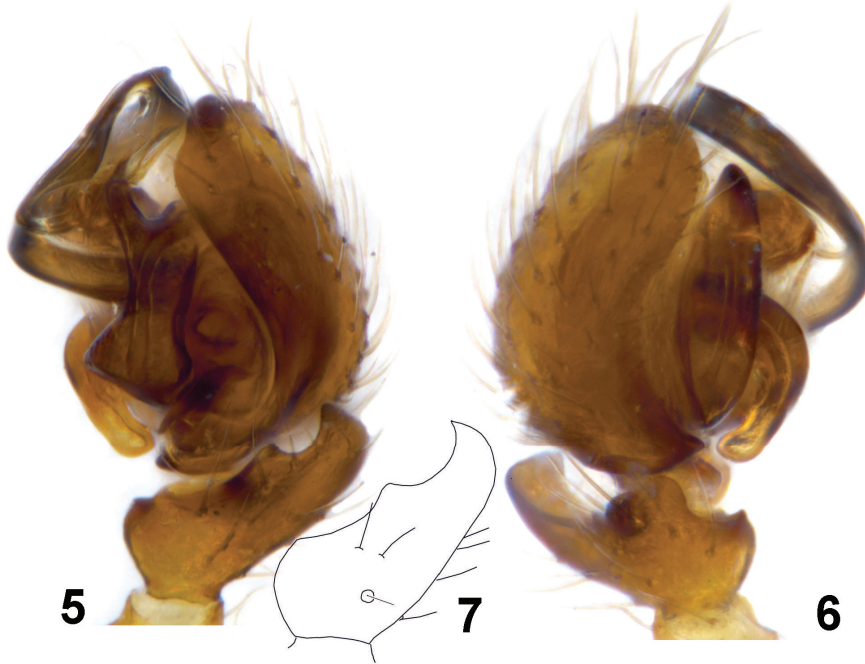
Figs 5–7

Ceratinopsis orientalis Locket, 1982: 361, figs. 2-5 (♂♀).

MATERIAL EXAMINED. **Laos:** Vientiane Prov., environs of Nam Lik Eco-Village, 18°38'N 102°19'E, pitfall traps at lake bank, 24-27.XI 2013, 1 ♂ (M.M. Omelko)

DISTRIBUTION. Laos, Malaysia (mainland), Indonesia (Java).

NOTES. Palp of specimen examined is slightly differs from described by Locket (1982). Original figures are not detailed enough to recognize if it is *C. orientalis* or a new species, but figure of male palpal tibia well fit to those in our specimen. Possibly this male is a new species, but more material is required for verification.



Figs 5–7. Male palp of *Ceratinopsis orientalis*. 5 – lateral view; 6 – retrolateral view; 7 – patella (after Locket, 1982).

***Hylyphantes graminicola* (Sundevall, 1830)**

Hylyphantes graminicola: Tu & Li, 2003: 211, figs. 3A-F (♂♀).

DISTRIBUTION. Palearctic region and Southeast Asia including Laos.

***Laogone cephal* Tanasevitch, 2014**

Laogone cephal Tanasevitch, 2014a: 76, figs. 26-32 (♂).

DISTRIBUTION. Laos.

***Nasoona asocialis* (Wunderlich, 1974)**

Oedothorax asocialis Wunderlich, 1974: 172, figs. 6-7 (♀).

Nasoona asocialis: Tanasevitch, 2014a: 78, figs. 33-38, 44-50 (♂♀).

MATERIAL EXAMINED. **Laos**: Vientiane Prov., environs of Nam Lik Eco-Village, 18°38'N 102°19'E, litter sifting in forest, 07.VII 2017, 5 ♂♀ (A.A. Komisarenko).

DISTRIBUTION. Southern China and India, Nepal, Myanmar, Laos, Thailand, Malaysia (mainland), Indonesia (Bali, Java).

***Nasoona crucifera* (Thorell, 1895)**

Nasoona eustylis: Tu & Li, 2004: 426, figs. 6A-I, 7A-F (♂♀).

DISTRIBUTION. Laos, Southern India and China, Taiwan, Hong Kong, Myanmar, Vietnam, Thailand, Singapore, Malaysia (mainland, Borneo), Indonesia (Borneo).

***Nasoona prominula* Locket, 1982**

Nasoona prominula Locket, 1982: 366, figs. 22-32 (♂♀).

DISTRIBUTION. Laos, Thailand, Malaysia (mainland), Singapore, Taiwan.

***Nasoonaria magna* Tanasevitch, 2014**

Nasoonaria magna Tanasevitch, 2014b: 407, figs. 52-57 (♂).

Nasoonaria circinata: Zhao & Li, 2014: 32, figs. 58A-D, 59A-E, 60A-F, 61A-D (♂♀).

MATERIAL EXAMINED. **Laos**: Vientiane Prov., environs of Nam Lik Eco-Village, 18°38'N 102°19'E, litter sifting in forest, 18.XI 2013, 1 ♂ (M.M. Omelko).

DISTRIBUTION. Laos (new record), China, Thailand.

NOTES. *Nasoonaria magna* is senior synonym because Tanasevitch (2014b) published his papers 2 days earlier than Zhao & Li (2014).

***Nasoonaria sinensis* Wunderlich et Song, 1995**

Nasoonaria sinensis Wunderlich & Song, 1995: 347, figs. 11-18 (♂♀).

Nasoonaria sinensis: Tanasevitch, 2014b: 408, figs. 58-63 (♂♀).

MATERIAL EXAMINED. **Laos**: Vientiane Prov., environs of Nam Lik Eco-Village, 18°38'N, 102°19'E, litter sifting in forest, 01.VII 2017, 4 ♂♀ (A.A. Komisarenko); the same locality, litter sifting in forest, 18.XI 2013, 1 ♂ (M.M. Omelko).

DISTRIBUTION. Laos, Southern China, Thailand, Indonesia (Sumatra).

***Nematogmus asiaticus* Tanasevitch, 2014**

Nematogmus asiaticus Tanasevitch, 2014a: 83, figs. 51-58 (♂♀).

DISTRIBUTION. Laos, Thailand, Indonesia (Sumatra).

***Neriere birmanica* (Thorell, 1887)**

Linyphia birmanica Thorell, 1887: 99 (♀).

Neriere birmanica: Tanasevitch, 2014a: 84, figs. 59-65 (♂♀).

DISTRIBUTION. Laos, Northern India, Myanmar, Southern China, Indonesia (Bali).

***Neriene macella* (Thorell, 1898)**

Linyphia macella Thorell, 1898: 319 (♂).

Neriene macella: Tanasevitch, 2014a: 85, figs. 66-74 (♂♀).

DISTRIBUTION. Laos, Southern India and China, Myanmar, Thailand, Malaysia (mainland), Indonesia (Sumatra), Philippines.

***Neriene oxycera* Tu et Li, 2006**

Neriene oxycera Tu & Li, 2006: 109, figs. 4A-F (♂).

DISTRIBUTION. Laos, Thailand, Vietnam.

***Theoa hamata* Tanasevitch, 2014**

Theoa hamata Tanasevitch, 2014a: 88, figs. 75-80 (♂).

DISTRIBUTION. Laos, Thailand, Indonesia (Sumatra).

DISCUSSION

Currently 157 species of Linyphiidae are known from the entire Southeast Asia (Tanasevitch, 2018). It is fewer than in small Estonia (205 species), or Czech Republic (295), Tuva Republic in Russia (223), or Washington State in USA (286 species) (Marusik *et al.*, 2000; Helsdingen, 2018). At least two local fauna in the Palaearctic region, Tvärminne (Southern Finland) and Aborigin Field Station (Northeastern Siberia), have more species, 176 and 198 respectively (Marusik, 1988; Marusik & Koponen, 2002). There are 69 species of Linyphiidae in Indonesia (Tanasevitch, 2018). Diversity of Linyphiidae in other Southeast Asian countries does not exceed 20 species (Tanasevitch, 2018). For example, the 20 species of linyphiid spiders from 12 genera are recorded from Laos in present paper. Small number of reported species is partly caused by the lack of taxonomic works on this family, high level of endemism (Tanasevitch, 2014a), minute size of species and very complex copulatory organs that is very difficult to study. However, it seems that low number of Linyphiidae in Southeast Asia is a real fact.

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