

## A revision of the *Erigone* species described by T. Thorell from Burma (Aranei: Linyphiidae)

### Ревизия видов *Erigone*, описанных Т. Тореллем из Бирмы (Aranei: Linyphiidae)

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КЛЮЧЕВЫЕ СЛОВА: Пауки, Linyphiidae, тип, новый синоним, новая комбинация, Мьянма.

**ABSTRACT.** Revision of the types of the linyphiid spiders described by T. Thorell in *Erigone* from Burma (=Myanmar) revealed that *Erigone chiridota* Thorell, 1895 = *Linyphia chiridota* (Thorell, 1895), comb.n.; *Erigone birmanica* Thorell, 1895 = *Hylyphantes birmanicus* (Thorell, 1895), = *H. fasciata* (Thorell, 1898), syn.n. (both comb.n. ex *Erigone*); *Erigone crucifera* Thorell, 1895 = *Nasoona crucifera* (Thorell, 1895), = *N. occipitalis* (Thorell, 1895), = *N. gibbicervix* (Thorell, 1898) (all comb.n. ex *Erigone*), = *Trematocephalus eustylis* Simon, 1909, all syn.n.; while *Erigone bhamoensis* Thorell, 1898 is a nomen dubium. *Erigone mollicula* Thorell, 1898 = *Nesticella mollicula* (Thorell, 1898), comb.n., being transferred to Nesticidae.

**РЕЗЮМЕ.** Ревизия типов пауков-линифиид, описанных Т. Тореллем в роде *Erigone* из Бирмы (Мьянма), показала, что *Erigone chiridota* Thorell, 1895 = *Linyphia chiridota* (Thorell, 1895), comb.n.; *Erigone birmanica* Thorell, 1895 = *Hylyphantes birmanicus* (Thorell, 1895), = *H. fasciatus* (Thorell, 1898) (оба comb.n. из *Erigone*); *Erigone crucifera* Thorell, 1895 = *Nasoona crucifera* (Thorell, 1895), = *N. occipitalis* (Thorell, 1895), = *N. gibbicervix* (Thorell, 1898) (все comb.n. из *Erigone*), = *Trematocephalus eustylis* Simon, 1909, все syn.n.; а *Erigone bhamoensis* Thorell, 1898 — nomen dubium. *Erigone mollicula* Thorell, 1898 = *Nesticella mollicula* (Thorell, 1898), comb.n., и является представителем семейства Nesticidae.

#### Introduction

Thorell [1895, 1898] described eight species of *Erigone* Audouin, 1826 from Burma (Myanmar): five species from Tharrawaddy: *E. birmanica* Thorell, 1895, *E. chiridota* Thorell, 1895, *E. crucifera* Thorell, 1895, *E. occipitalis* Thorell, 1895 and *E. bhamoensis* Thorell, 1898; two from Bhamo: *E. fasciata* Thorell, 1898 and

*E. gibbicervix* Thorell, 1898, and one, *E. mollicula* Thorell, 1898, from Asciiu Cheba, Mt. Corin. Even though Thorell's descriptions are highly detailed, they remain nearly useless for species identification because they contained no illustrations whatsoever.

In addition to these *Erigone* species, Thorell [1898] described from Burma two *Linyphia*: *L. macella* Thorell, 1898, and *L. multidentis* Thorell, 1898, both revised by Helsdingen [1969].

The present paper is revision of the type material of *Erigone* spiders described by Thorell [1895, 1898] from Burma.

#### Material and methods

The types of Thorell from Burma is shared between two museums: these described in 1895 are deposited in the Natural History Museum, London, UK (BMNH), those described in 1898 are housed in the Museo di Storia Naturale "Giacomo Doria", Genova, Italy (MSNG). All of the above types were examined, except for the holotype of *E. bhamoensis* which was not relocated and is presumably lost. For comparative purposes, material from the author's personal collection (CAT) was restudied as well.

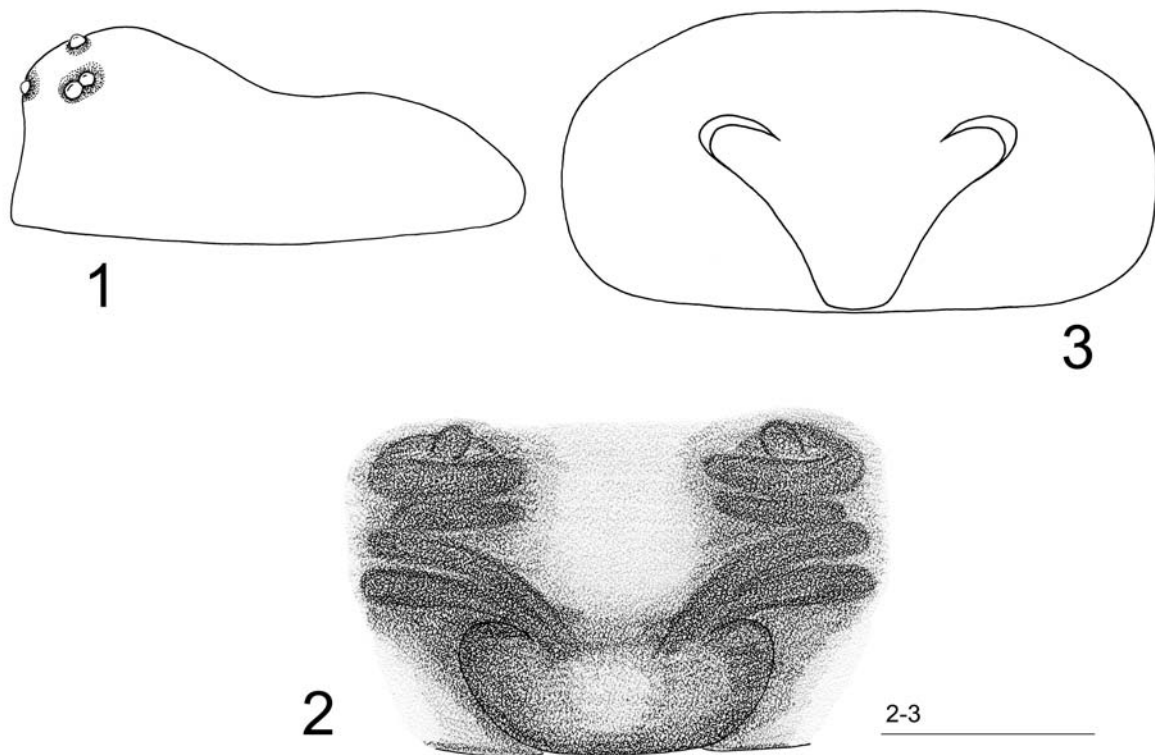
#### Results

*Linyphia chiridota* (Thorell, 1895), **comb.n.**  
Figs 1–3.

1895 *Erigone chiridota* Thorell: 108, ♀.

**TYPE MATERIAL EXAMINED.** BMNH: A vial labeled "1895.9.21.275; *Erigone chiridota*, Thorell, ♀, type; Tharrawaddy, Burma", contains a female carapace with legs partly broken off, and a separated abdomen.

**REMARKS.** There is no doubt that this long-legged linyphiid is not a representative of the genus *Erigone*.



Figs 1–3. *Linyphia chiridota* (Thorell, 1895), comb.n., ♀ lectotype: 1 — carapace; 2, 3 — epigyne, ventral and posteroventral views, respectively.

Рис. 1–3. *Linyphia chiridota* (Thorell, 1895), comb.n., лектотип ♀: 1 — карапакс; 2, 3 — эпигина, соответственно вид снизу и сзади и снизу.

The chaeto- and trichobothriotaxy of the specimen is dubious, as neither spines nor trichobothria have been found. The epigyne of *L. chiridota*, comb.n., shown in Figs 2 & 3, bears some resemblance to that of the members of the Indonesian genus *Ketambea* Millidge et Russell-Smith, 1992, but the absence of the corresponding male makes the identity of this species unclear. Therefore, its transfer to the genus *Linyphia* Latreille, 1804 is only provisional.

*Nasoona crucifera* (Thorell, 1895), **comb.n.**

- 1895 *Erigone crucifera* Thorell: 110, ♀.  
 1895 *E. occipitalis* Thorell: 114, ♂, **syn.n.**  
 1898 *E. gibbicervix* Thorell: 315, ♂, **syn.n.**  
 1909 *Trematocephalus eustylis* Simon: 98, ♂, **syn.n.**  
 2004 *Nasoona eustylis*. — Tu & Li: 426, ♂ & ♀.  
 2008 *N. eustylis*. — Han & Zhu: 207, ♂ & ♀.

TYPE MATERIAL EXAMINED: BMNH: A vial labeled “1895.9.21.276-295 (part); *Erigone crucifera*, Thorell, types; Tharrawaddy, Burma; 1971/50”, contains 7 ♀♀ (lectotype and 6 paralectotypes, designated herewith) and a separated female carapace.

REMARKS. All these females appear to belong to *Nasoona* Locket, 1982 and are conspecific not only to each other, but also to *E. occipitalis* Thorell, 1895, *E. gibbicervix* Thorell, 1898, and *Nasoona eustylis* (Simon, 1909), the latter trio thus representing junior sub-

jective synonyms of *Nasoona crucifera* (Thorell, 1895), comb.n. The species has recently been redescribed and illustrated in due detail by Tu & Li [2004] and Han & Zhu [2008], being referred to as *N. eustylis*.

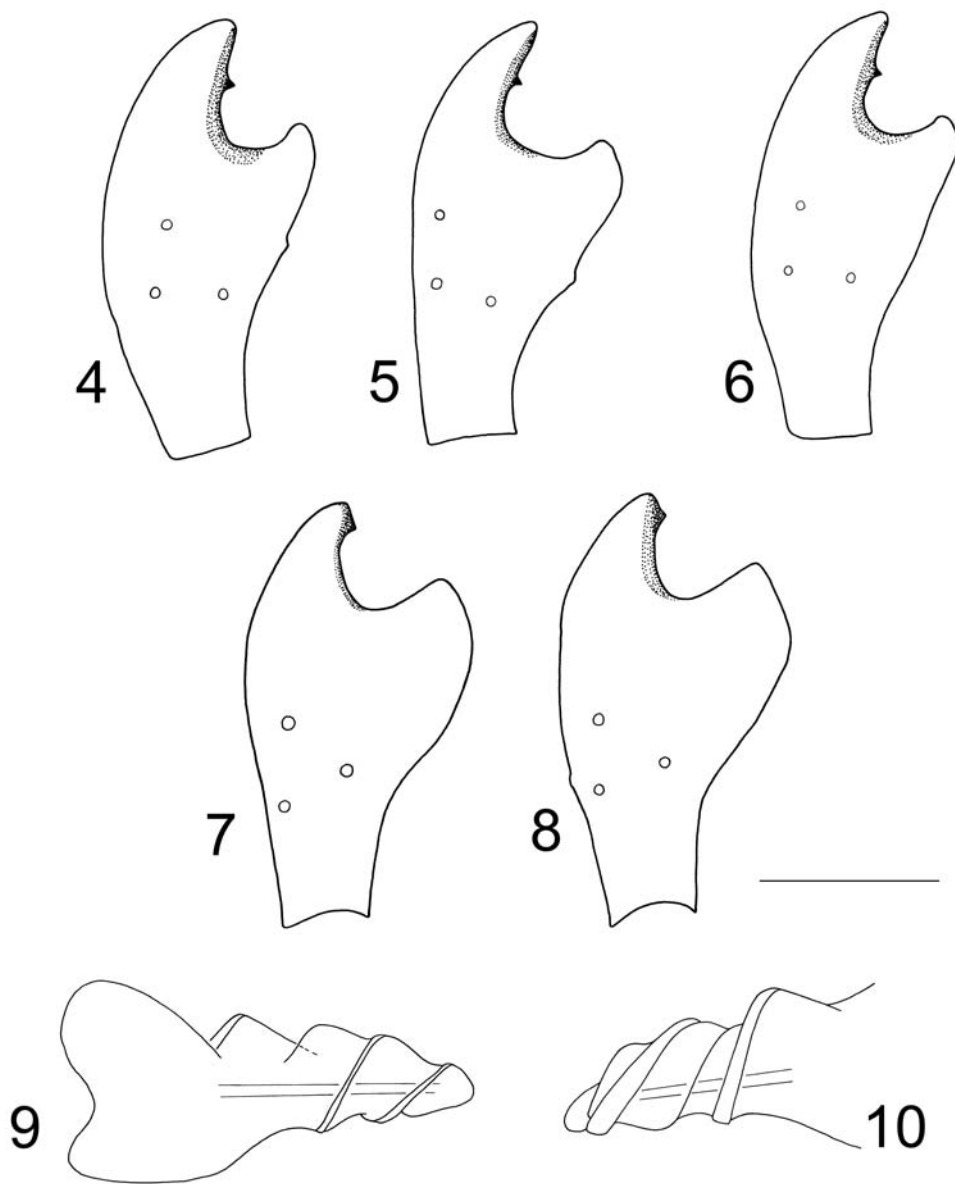
*Hylyphantes birmanicus* (Thorell, 1895), **comb.n.**  
 Figs 4–6, 9, 10.

1895 *Erigone birmanica* Thorell: 111, ♂ & ♀.

1898 *E. fasciata* Thorell: 316, ♀, **syn.n.**

TYPE MATERIAL EXAMINED. BMNH: A vial labeled “1895.9.21.276-295 (part); *Erigone birmanica*, Thorell, ♂, types; Tharrawaddy, Burma; 1971/51”, contains 9 ♂♂ (lectotype and 8 paralectotypes, designated herewith). A second vial labeled “1895.9.21.276-295 (part); *Erigone birmanica*, Thorell, ♀ types; Tharrawaddy, Burma; 1971/52”, comprises 38 ♀♀, as well as 7 female abdomens and 14 carapaces, all separated, and all designated as paralectotypes.

REMARKS. All males and females appear to belong to *Hylyphantes* Simon, 1884 and are conspecific not only to each other, but also to *Erigone fasciata* Thorell, 1898, the latter species becoming a junior subjective synonym of *Hylyphantes birmanicus* (Thorell, 1895), comb.n. The Oriental *H. birmanicus* is very similar to its Palearctic vicariant, *H. gramnicola* (Sundevall, 1830), but differs by the position of a small but distinct tooth on the male palpal tibia (cf. Figs 4–5 and 7 & 8). The



Figs 4–10. Details of ♂ palp structure of *Hylyphantes birmanicus* (Thorell, 1895), comb.n., paralectotype (4–6, 9, 10), and *H. graminicola* (Sundevall, 1830), specimen (CAT) from the Norskiy Nature Reserve, Amur Area, Russia (7, 8): 4–8 — left palpal tibia, dorsal view, different aspects; 9, 10 — embolus (not to scale).

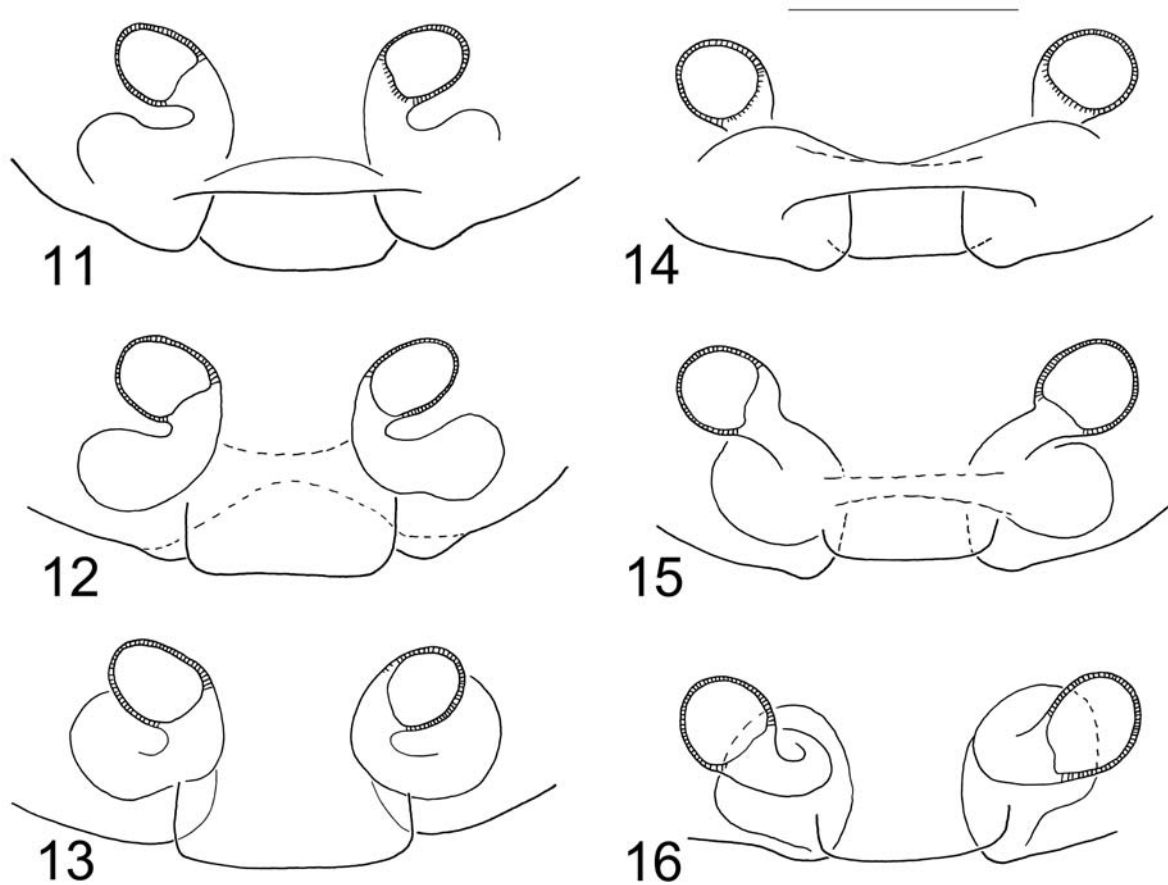
Рис. 4–10. Детали строения пальпы самца *Hylyphantes birmanicus* (Thorell, 1895), comb.n., паралектотип (4–6, 9, 10), и *H. graminicola* (Sundevall, 1830), экземпляр (CAT) из Норского заповедника, Амурская обл., Россия (7, 8): 4–8 — голень левой пальпы, вид сверху; 9, 10 — эмболюс (без масштаба).

females can be distinguished by the shape and direction of the receptacles (cf. Figs 11–13 and 14–16).

**VARIABILITY.** The type series of *H. birmanicus* shows strong variability in size, ranging from 1.90 to 3.25 mm in ♂♂, and from 2.15 to 3.60 mm in ♀♀. The size and position of the tooth on the male palpal tibia is quite stable. Modest variation is also observed in the shape of the edge of the posterior median plate in the epigyne.

*Nasoona occipitalis* (Thorell, 1895), **comb.n., syn.n.**

- 1895 *Erigone crucifera* Thorell: 110, ♀.
- 1895 *E. occipitalis* Thorell: 114, ♂.
- 1898 *E. gibbicervix* Thorell: 315, ♂.
- 1909 *Trematocephalus eustylis* Simon: 98, ♂.
- 2004 *Nasoona eustylis*. — Tu & Li: 426, ♂ & ♀.
- 2008 *N. eustylis*. — Han & Zhu: 207, ♂ & ♀.



Figs 11–16. Structure of the vulva of *Hylyphantes birmanicus* (Thorell, 1895), comb.n., paralectotype (11–13), and *H. graminicola* (Sundevall, 1830), specimen (CAT) from the Norskiy Nature Reserve, Amur Area, Russia (14–16): 11, 14 — ventral view; 12, 15 — dorsal view; 13, 16 — anterodorsal view.

Рис. 11–16. Эндогина *Hylyphantes birmanicus* (Thorell, 1895), comb.n., паралектотип (11–13), и *H. graminicola* (Sundevall, 1830), экземпляр (CAT) из Норского заповедника, Амурская обл., Россия (14–16): 11, 14 — вид снизу; 12, 15 — вид сверху; 13, 16 — сверху и спереди.

TYPE MATERIAL EXAMINED. BMNH: A vial labeled “1895.9.21.276-295 (part); *Erigone occipitalis*, Thorell, types; Tharrawaddy, Burma; 1891/53”, contains a ♂ with both palps, two male carapaces and two male abdomens, separated. One the syntypes with an intact left palp, the other without palps, but one right palp (separated) is also available.

REMARKS. All these ♂♂ belong to *Nasoona*, being conspecific not only to each other, but also to *E. crucifera*, described from females in the same paper [Thorell, 1895] only a few pages earlier, as well as to *N. occipitalis* (Thorell, 1895), comb.n., thus both these species becoming junior subjective synonyms of *N. crucifera*.

*Nasoona gibbicervix* (Thorell, 1898), **comb.n.**, **syn.n.**

- 1895 *Erigone crucifera* Thorell: 110, ♀.  
 1895 *E. occipitalis* Thorell: 114, ♂.  
 1898 *E. gibbicervix* Thorell: 315, ♂.  
 1909 *Trematocephalus eustylis* Simon: 98, ♂.  
 2004 *Nasoona eustylis*. — Tu & Li: 426, ♂ & ♀.  
 2008 *N. eustylis*. — Han & Zhu: 207, ♂ & ♀.

TYPE MATERIAL EXAMINED. MSNG: A vial labeled “Type ♂, *Erigone gibbicervix*; Bhamo, Burma”, contains a male with both palps.

REMARKS. The holotype belongs to *Nasoona* and is also conspecific to *N. crucifera* (Thorell, 1895). So *N. gibbicervix* (Thorell, 1898), comb.n., becomes another junior subjective synonym of *N. crucifera*.

*Hylyphantes fasciatus* (Thorell, 1898), **comb.n.**, **syn.n.**

- 1895 *Erigone birmanica* Thorell: 111, ♂ & ♀.  
 1898 *E. fasciata* Thorell: 316, ♀.

TYPE MATERIAL EXAMINED. MSNG: A vial labeled “*Erigone fasciata*; Burma, Bhamo; type ♀”, contains a female which appears to be conspecific to *H. birmanicus* (Thorell, 1895), thus also becoming its new junior subjective synonym.

*Erigone bhamoensis* Thorell, 1898, **nom.dub.**

- 1898 *Erigone bhamoensis* Thorell: 314, ♂.

REMARKS. Unfortunately, the holotype of *Erigone bhamoensis* Thorell, 1898 (♂, 1.5 mm long) has

been found neither in MSNG nor in BMNH, presumably to be considered as lost. The original description by Thorell [1898], however detailed, was not accompanied by any illustrations. Because an unequivocal identification of this species thus becomes impossible, *E. bhamoensis* must be referred to as a nomen dubium.

*Nesticella mollicula* (Thorell, 1898), **comb.n.**, family Nesticidae

1898 *Erigone mollicula* Thorell: 318, ♂ & ♀.

TYPE MATERIAL EXAMINED. MSNG: A vial labeled "Types, *Erigone mollicula*; Burma, M. Corin, Asciiu Cheba", contains two ♀♀: an entire ♀ (lectotype, designated herewith), as well as a female carapace and a separated abdomen (paralectotype, designated herewith).

REMARKS. Both these females are conspecific to each other and belong to the nesticid genus *Nesticella* Lehtinen et Saaristo, 1980.

NOTE. The above type material of *E. mollicula* contain two females, while its original description is based on both sexes (1 ♂, 1 ♀). In the description of the male, Thorell wrote: "Bulbus parvus, non multo complicatus", which means "bulbus small, not much complicated". The ♂ could have been misplaced or lost, while Thorell might have originally omitted or later added one of the ♀♀.

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## References

- Han G.X., Zhu M.S. 2008. One new record species of the genus *Nasoona* from China (Arachnida: Araneae: Erigoninae) // J. Hebei Univ. (Nat. Sci. ed.). Vol.28. No.2. P.206–208.
- Heldsingen P.J. van. 1969. A reclassification of the species of *Linyphia* Latreille based on the functioning of the genitalia (Araneida, Linyphiidae), 1 // Zool. Verh. Leiden. No.105. P.1–303.
- Thorell T. 1895. Descriptive catalogue of the spiders of Burma. London. 406 p.
- Thorell T. 1898. Viaggio di Leonardo Fea in Birmania e regioni vicine. LXXX. Secondo saggio sui ragni birmani. II. Retitelariae et Orbitelariae // Ann. Mus. civ. Stor. Nat. Genova. Vol.2. No.19. P.271–378.
- Tu L. H., Li S. Q. 2004. A preliminary study of erigonine spiders (Linyphiidae: Erigoninae) from Vietnam // Raffles Bull. Zool. Vol.52. No.2. P.419–433.