

Salticidae from the Himalayas. The Genus *Thyene* Simon 1885 (Arachnida: Araneae)*

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Abstract — One new species of the jumping spider genus *Thyene* Simon 1885: *T. typica* sp. n. is described from the Nepal Himalayas. *Thyene bivittata* Xie & Peng 1995 and *T. yuxiensis* Xie & Peng 1995 are recorded for the first time from the Himalayas. Diagnoses, descriptions and drawings of diagnostic characters for those species are given.

Key words — *Thyene*, new species, jumping spiders, Salticidae, Himalayas, Nepal.

Introduction

During the last 30 years, the salticid fauna of the Himalayas has been extremely attractive as a model for taxonomic, zoogeographic and evolutionary research. The Himalayas, being under Oriental and Palaearctic influence, offer a huge variety of habitats and climatic conditions. These variable natural conditions result in abundance of species in many groups of animals and plants.

The aim of the present serial studies is to provide a complete taxonomic account of the Himalayan salticid fauna and its zoogeographical and phylogenetic analysis. This paper deals with the genus *Thyene*, as a part of the series.

Material and Methods

Material for this study was provided by Naturmuseum und Forschungsinstitut Senckenberg, Frankfurt a. M. (SMF) and Prof. Jochen Martens, Mainz.

Abbreviations used: AEW = anterior eye width, AL = abdomen length, CL = cephalothorax length, CW = cephalothorax width, EFL = eye field length, PEW = posterior eye width, pm = prolateral metatarsal spines, pt = prolateral tibial spines, rm = retrolateral metatarsal spines, rt = retrolateral tibial spines. The format of leg spination follows Platnick & Shadab (1975). All measurements are in mm.

Descriptions of species

Genus *Thyene* Simon 1885

Thyene Simon 1885, p. 4; Żabka 1985, p. 454; Xie & Peng

1995, p. 104; Prószyński 2003a, p. 171.

The genus *Thyene* was established by Simon 1885 for *Attus imperialis* Rossi 1846 and consists of 42 species and 4 subspecies (Wesołowska 1981a, b; Żabka 1985; Prószyński 1989, 1992, 2003a, b; Prochniewicz 1989; Peng et al. 1993; Wesołowska & van Harten 1994; Xie & Peng 1995; Song & Li 1997; Metzner 1999; Song et al. 1999; Wesołowska & Russell-Smith 2000; Platnick 2005).

The genus is distributed mainly in the Afrotropical Region, but few species are also found in Oriental Region (Żabka 1985; Prószyński 1992; Peng et al. 1993; Xie & Peng 1995; Song et al. 1999) and a single species expands its range to Palearctic (*T. imperialis* Rossi 1846). The genus has not been recorded from the Himalayas, so far.

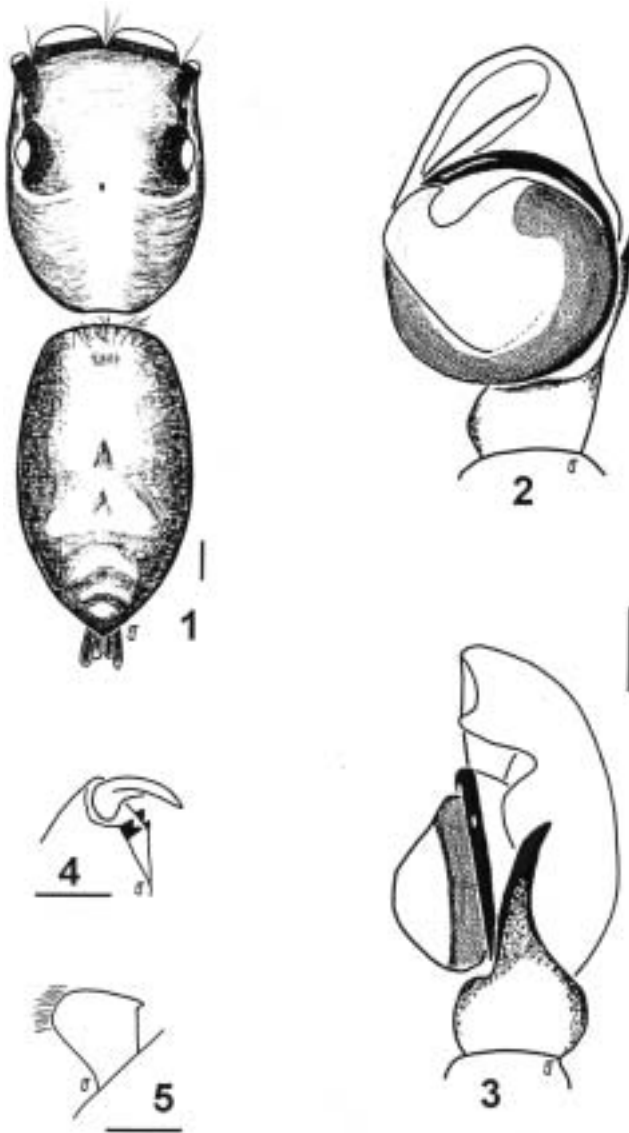
Prószyński (1976), on the basis of morphological characters, placed this genus into subfamily Plexippinae. Maddison & Hedin (2003), who provided the first comprehensive account of the molecular phylogeny of the whole range of Salticidae based on 5 sequenced genes (28S, 16S, EF1- α , CO1, ND1), also placed the genus *Thyene* in the same subfamily together with *Plexippus* C. L. Koch 1846, *Telamonia* Thorell 1887, *Hyllus* C. L. Koch 1846 and some other genera.

Thyene bivittata Xie & Peng 1995
(Figs. 1-5)

Thyene bivittata Xie & Peng 1995, p. 105, fig. 1; Song et al. 1999, p. 562.

Material. Nepal: 1M (SMF) Kathmandu City, 1350 m, Ganabahal, 13-17 May 1980, J. Martens & A. Ausobsky leg. 1M (SMF) Kathmandu-Tal: Ganabahal u. Baneshwar, 1350 m,

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Figs. 1–5. *Thyene bivittata* Xie & Peng 1995, male (Ganabahal, the Himalayas). 1. Cephalothorax and abdomen, dorsal view; 2. Palpal organ, ventral view; 3. Same, lateral view; 4. Cheliceral dentition; 5. Maxilla. Scales: 0.2 mm.

Kulturland, 16–20 August 1980, J. Martens & W. Schawaller leg.

Diagnosis. The species could be recognized by having the hook-shaped membranous outgrowth on the upper-lateral part of bulbus (in *T. typica* sp. n. the outgrowth is triangular, on the central-lateral part of bulbus; in *T. imperialis* and *T. yuxiensis* outgrowth is longer, slightly curved, and blunt; in *T. yuxiensis* on the central part of bulbus). Embolus originating from the upper-lateral part of bulbus (in *T. typica* sp. n. from the lower-lateral part of bulbus; in *T. imperialis* from the upper part of bulbus and coiled twice around bulbus).

Description. Male. Surroundings of eyes: anterior part

brown, posterior part black. Eye field and middle of thoracic part light brown, the rest of cephalothorax brown. Abdomen dirty brown, with longitudinal, wide, pale pattern, in posterior part two transverse, narrow, white spots. Spinnerets light grey. Clypeus light brown. Chelicerae light brown dirty covered. Maxillae and labium light brown with white hairs, its tips white, the first with small lateral process. Sternum pale yellow. Venter white, with longitudinal, narrow, grey belt. Pedipalps light brown, tip of cymbium white. Bulbus oval. Membranous outgrowth hook-shaped, on the upper-lateral part of bulbus. Embolus elongated, coiled around bulbus. Tibial apophysis flat, pointed, curved upwards. Legs becoming lighter from I (brown) to IV (light brown); tarsi and metatarsi lighter. All covered with a few brown hairs and spines.

Leg spination: tI: p1-1-1 r1-1-1; mI: p1-1 r1-1; tII: p1-1-1 r1-1-1; mII: p1-1 r1-1.

Measurements: CL 1.59, CW 1.17, EFL 0.66, AEW 1.17, PEW 1.17, AL 1.77.

Female unknown.

Thyene yuxiensis Xie & Peng 1995
(Figs. 6–10)

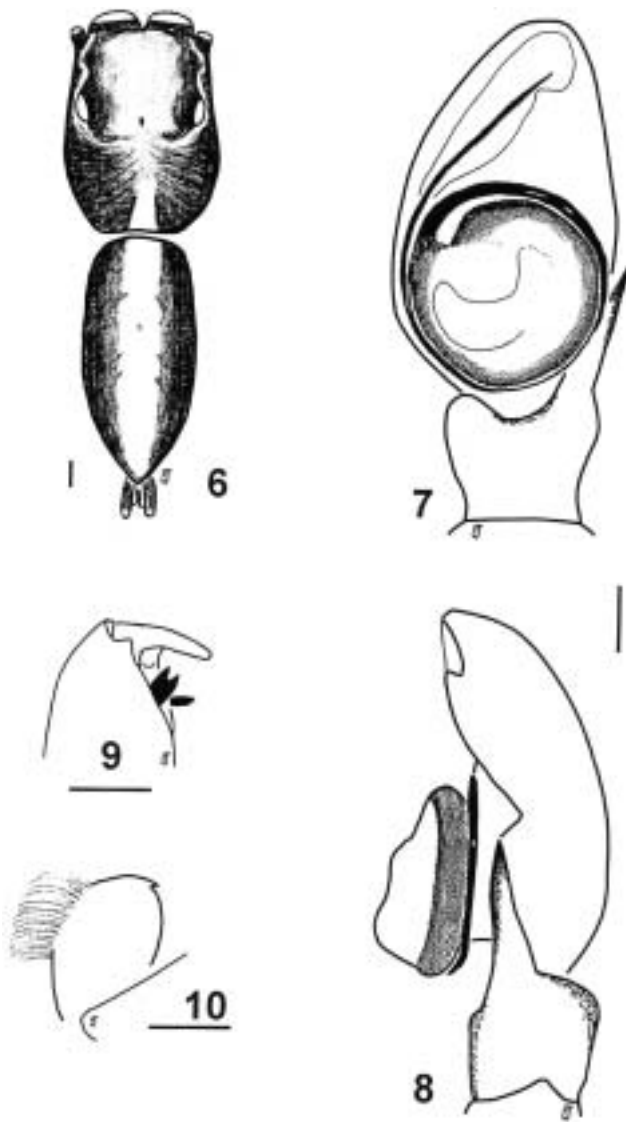
Thyene yuxiensis Xie & Peng 1995, p. 106, fig. 4; Song et al. 1999, p. 563.

Material. Nepal: 1M (SMF) Tanhu Distr., Marsyandi, 500–600 m, Turture-Purkot, 8 April 1980, J. Martens & A. Ausobsky leg.

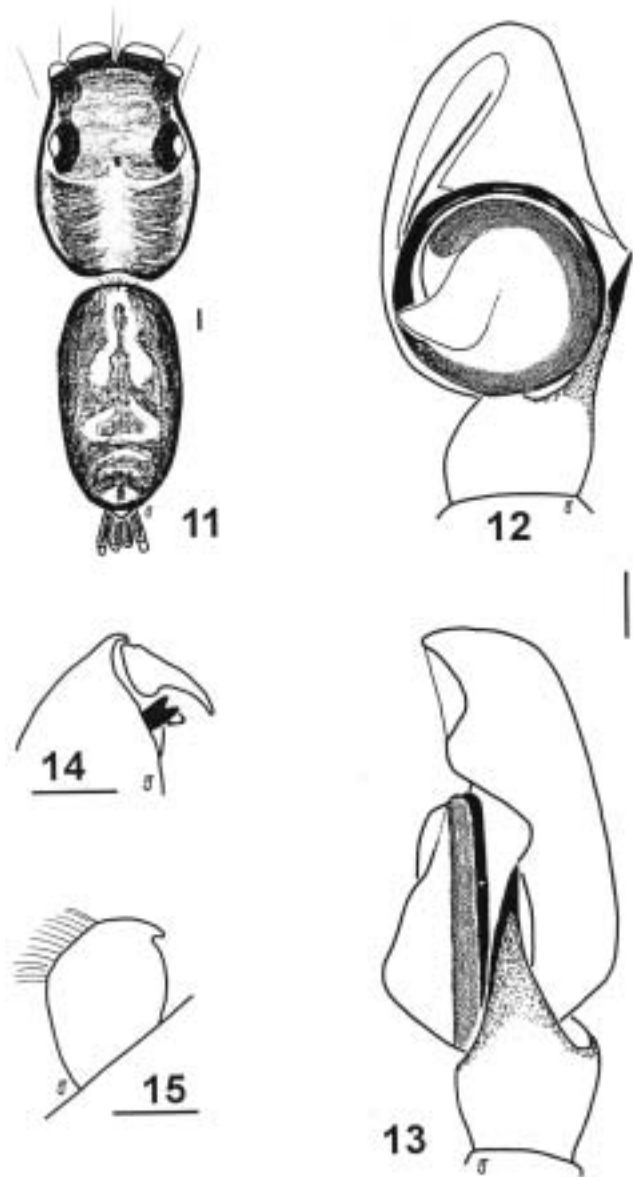
Diagnosis. The species could be recognized by having the blunt, curved, finger-shaped membranous outgrowth of bulbus which situated in the central part (in *T. imperialis* and *T. bivittata* outgrowth placed in the lateral part of bulbus; in *T. bivittata* smaller; in *T. typica* sp. n. outgrowth triangular, placed in the central-lateral part of bulbus). Embolus originating from the upper-lateral part of bulbus (in *T. imperialis* from the upper part of bulbus and coiled twice around bulbus).

Description. Male. Eye field brown covered with sparse, short white hairs. Thorax dark brown, with lighter central part. Cephalothorax with belts of dense, short, white hairs along thoracic part and lateral sides. Abdomen slender, dark brown with longitudinal wide, anterior yellow belt and grey posterior. Abdomen covered with a few, white hairs. Spinnerets dirty brown with brown hairs. Clypeus dark brown with a few white hairs. Chelicerae dark brown. Maxillae and labium brown, their tips lighter, the first with small lateral process. Sternum pale yellow. Venter of abdomen light grey. Pedipalps brown with a few white hairs, tip of cymbium white. Bulbus oval. Outgrowth of bulbus blunt, curved, finger-shaped, situated in the central part of bulbus. Embolus elongated, coiled once around bulbus. Tibial apophysis straight, flat, pointed. Legs dark brown, tarsi lighter, covered with brown hairs and spines.

Leg spination: tI: p1-1-1 r1-1-1; mI: p1-1 r1-1; tII: p1-1-1



Figs. 6–10. *Thyene yuxiensis* Xie & Peng 1995, male (Marsyandi, the Himalayas). 6. Cephalothorax and abdomen, dorsal view; 7. Palpal organ, ventral view; 8. Same, lateral view; 9. Cheliceral dentition; 10. Maxilla. Scales: 0.2 mm.



Figs. 11–15. *Thyene typica* sp. n. (holotype, male). 11. Cephalothorax and abdomen, dorsal view; 12. Palpal organ, ventral view; 13. Same, lateral view; 14. Cheliceral dentition; 15. Maxilla. Scales: 0.2 mm.

r1-1-1; mII: p1-1 r1-1.

Measurements: CL 2.60, CW 1.88, EFL 1.08, AEW1.72, PEW 1.80, AL 2.92.

Female unknown.

***Thyene typica* new species.**

(Figs 11–15)

Etymology. The specific epithet refers to the species appearance, which is typical for the genus.

Type series. Holotype male: Nepal: 1M (SMF) Sankhua Sabha Distr., below Karmarang to Hedangna, 950–1350 m, tree-rich cultural land, 5 June 1988, J. Martens & W. Schawaller leg.

Other specimen examined. Nepal: 1M (SMF) Taplejung/Theratum Distr., zw. Mitilung u. Dumhan, 750–950 m, Flußufer,

Gebüsch, 15 September 1983, J. Martens & B. Daams leg.

Diagnosis. The species could be recognized by having the triangular membranous outgrowth of the bulbus, which pointed and situated in the central-lateral part (in *T. imperialis*, *T. bivittata* and *T. yuxiensis* outgrowth finger-shaped, in *T. imperialis* and *T. bivittata* placed in the lateral part of bulbus, in *T. yuxiensis* in the central part of bulbus). Embolus originating from the lower-lateral part of bulbus (in *T. yuxiensis* and *T. bivittata* from the upper-lateral part of bulbus, in *T. imperialis* from the upper part of bulbus).

Description. Male (holotype). Surroundings of eyes dark brown. Cephalothorax with yellow belts along lateral

sides and middle of thoracic part. The rest of cephalothorax light brown. Abdomen dirty brown with longitudinal pattern of yellow spots and dots. Spinnerets and clypeus light brown. Chelicerae brown, maxillae and labium brown with white and brown hairs. Tips of maxillae and labium white, the first with lateral process. Sternum white. Venter light grey. Pedipalps dirty brown, cymbium lighter with white tip. Bulbus oval, with triangular, pointed membranous outgrowth situated in the central-lateral part of bulbus. Embolus elongated, coiled once around bulbus. Tibial apophysis of the male palp flat, pointed, with wide base, slightly curved upwards. Legs dark brown, but tarsi lighter. All covered with brown hairs and spines.

Leg spination: tI: p1-1-1 r1-1-1; mI: p1-1 r1-1; tII: p1-1-1 r1-1-1; mII: p1-1 r1-1.

Measurements: CL 2.48, CW 1.88, EFL 1.04, AEW 1.68, PEW 1.68, AL 2.68.

Female unknown.

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