

# Four Species of Jumping Spiders (Areaneae: Salticidae) from China

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Key Words:

Areanea  
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One novel species, *Phaeacius yunnansis* n. sp. and three species new to China, *Brettus albolimbatus*, *Hyllus lacertosus* and *Ptocasius kinihi* of the jumping spider belonging to the family Salticidae, are described based on the materials collected from Yunnan Province, China. The new species is similar to *Phaeacius lancerarius*, but can be distinguished by secondary conductor covers on the emblius. That of the latter below the emblious, retrolateral tibial apophysis, is much more slender and with an abdominal pattern.

In China salticid spiders are very diverse and more than 270 species have been described so far. Identifying the specimens of our collections, we found a new species of the jumping spider. The new species is described herein. Holotype and two males of the paratype are deposited in the Department of Biology, Hunan Normal University, Changsha, Hunan, China.

## Materials and Methods

The specimens were fixed in 80% ethanol immediately after they were collected. The leg segments were measured in millimeter: total length (femur, tibia, metatarsus, tarsus).

Abbreviations used in this paper are: AER = eyes I width; AL = abdomen length; CW = cephalothorax width; EFL = eye field length; PER = eyes III width; TL = total length.

## Results

Family Salticidae Blackwall, 1841  
Genus *Brettus* Thorell, 1895  
*Brettus albolimbatus* Simon, 1900  
(Fig. 1. A-C)

*Brettus albolimbatus* Simon, 1900: 32  
*Brettus albolimbatus* Wanless, 1979: 189, Figs. 4A-B

Material examined: Holotype (Type No. 98-6.) 1 ♀, TL 5.5, CL 2.3, CW 2.0, AL 3.2, AW 2.1, AER 1.35, PER 1.20, EFL 0.9, Yunnan Province, August 1987, leg. Wang Jiafu.

## Description

Female: Carapace (Fig. 1) brown, with white and brown hairs; lateral sides and posterior margins encircled with a wide, white band formed by white hairs; ARE strongly recurved, PME big, almost as big as ALE and PLE; fovea dark brown, longitudinal. Sternum elongated oval with smooth margin; anterior almost as wide as the posterior one; light brown with long brown hairs. Clypeus brown, height shorter than the radius of AME, covered with white hairs, front margin with brown setae. Chelicera brown, with white and brown hairs; 3 promarginal teeth, median one smallest; 4 retromarginal. Endites and labium brown, distal ends lightly colored with dense hairs. Palp white. Legs brown, with strong spines and annuli; legs I and II dark brown except distal two segments, ventral sides with dense brush-like hairs; femora I and II with white feather-like hairs on ventral sides; tibial IV also with brush-like hairs on ventral side. Abdomen (Fig. 1) elongated oval; dorsum yellowish brown with dark brown marks formed by the same color hairs; cardiac pattern bar-shaped; two eye-shaped marks on median part, brown, two black brown, longitudinal bands on median area. Spinnerets dark brown. Epigynum (Fig. 2): two longitudinal copulatory canals clearly visible on the body. Vulva (Fig. 3): copulatory canals clearly visible on the body. Vulva (Fig. 3): copulation canals long and twisted, spermatheca invisible.

Genus *Hyllus* Koch, 1846  
*Hyllus lacertosus* (Koch, 1846)  
(Fig. 1. D-F)

*Plexippus lacertosus* Koch, 1846: 94, figs. 1157-1158  
*Hyllus lacertosus* Zabka, 1985: 306, figs. 221-223

Material examined: Holotype (Type No. 98-7) 1 ♂, TL

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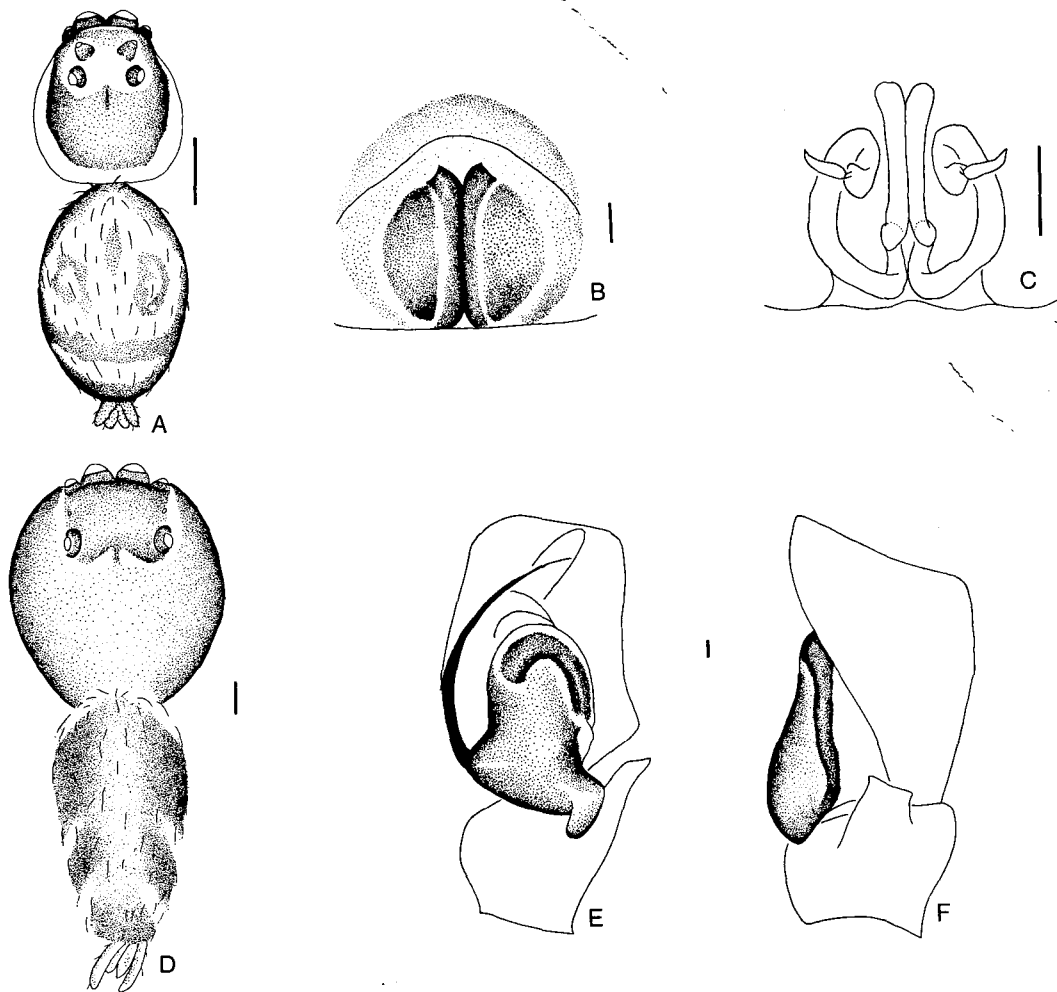


Fig. 1. *Brettus albolimbatus* (A-C), and *Hyllus lacertosus* (D-F). A, Body. B, Epigynum. C, Vulva. D, Body. E, Palpal organ, ventral. F, Ditto, retrolateral. Scale bars=0.1 mm (B, C, E, F) and 1 mm (A, D).

15.5, CL 7.0, CW 6.0, AL 7.5, AW 5.0, AER 3.3, PER 3.5, EFL 2.7, Yunnan Province, October 1987, leg. Wang Jiafu.

*Description*

Male: Carapace (Fig. 4) almost circle-shaped, brown with short white and long, brown hairs; margin darker; margin of eye field and eye base black; fovea black and longitudinal. Sternum dark brown, anterior margin about as wide as posterior one; covered with a circle of white hairs. Ciypeus brown, with short white hairs, height about the radius of AME. Chelicera, endites and labium black brown, with dense long brown setae; 2 promarginal teeth, 1 retromarginal. Legs black brown, brown hairs long and dense; distal four segments of legs I and II with brush-like hairs on ventral side. Abdomen (Fig. 4) elongated oval, slightly wider anteriorly, with white and brown hairs; dorsum with metallic lustre, 3 white marks formed by white hairs on each side; ventrally greyish black, darker on

median area; longitudinal lines formed by dots on lateral areas. Spinnerets greyish black. Palp organ (Figs. 5-6): embolus long and slender, sperm duct stout and clear, bulb with a posterior lobe, tibial apophysis wide and very short.

Genus *Phaeacius* Simon, 1900  
*Phaeacius yunnanensis* sp. n.  
 (Fig. 2. A-D)

Material examined: Holotype (Type No. 98-8) 3♂♂, TL 7.6, CL 3.8, CW 3.0, AL 3.8, AW 2.0, AER 1.8, PER 1.7, EFL 1.5, Yunnan Province, October 1987, leg. Wang Jiafu.

*Description*

Male (holotype): Carapace (Fig. 7) subcircle, anteriorly narrower, brown with darker margin, covered with white and brown hairs, eye field elevated and with denser hairs; bases of eyes black; PME at the

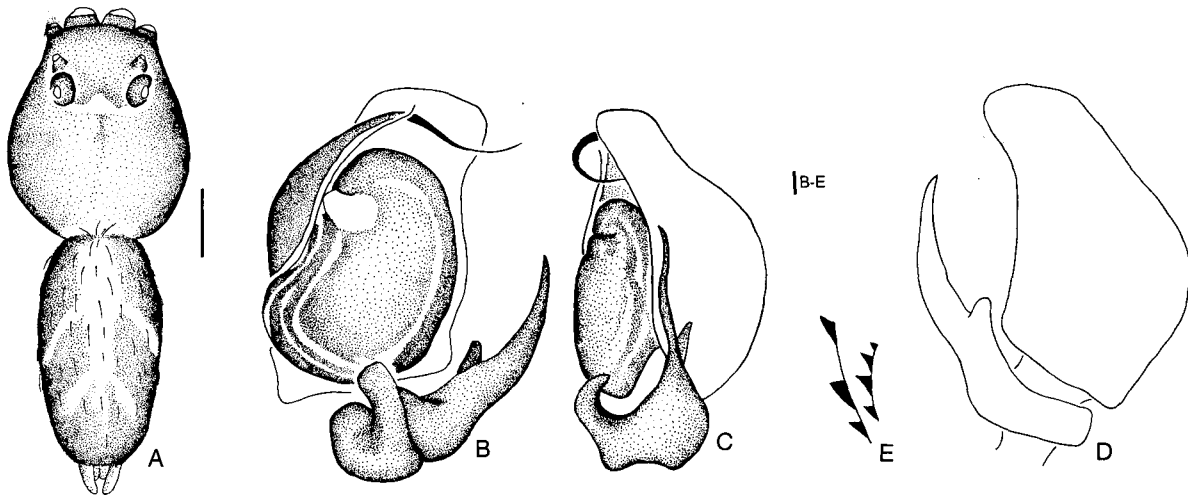


Fig. 2. *Phaeacius yunnanensis* n. sp.. A, Body. B, Palpal organ, ventral. C, Ditto, retrolateral. D, Ditto, dorsal. E, Chelicera. Scale bars=0.1 mm (B-E) and 1 mm (A).

midpoint between ALE and PLE, almost as big as ALE or PLE, with obvious base; fovea black, longitudinal. Sternum elongated oval with smooth margin; brown with white hairs; margin darker. Clypeus brown, with dense white hairs. Chelicerae brown, its base covered with dense, long white hairs, 3 promarginal teeth, 4 retromarginal. Endites brown, distal end lightly colored with dense hairs. Labium black brown with lightly colored end. Legs brown, distal four segments with greyish black annuli; spines dense, hairs sparse; measurements: I 8.7 (2.5, 3.0, 2.2, 1.0); II 8.5 (2.5, 3.0, 2.0, 1.0); III 8.3 (2.3, 2.8, 2.2, 1.0); IV 10.0 (2.8, 3.4, 2.5, 1.3); formula: 4, 1, 2, 3. Abdomen elongated cylindrical (Fig. 7); dorsum with many irregular silver squares; cardiac pattern lightly colored with two pairs of branches; ventrally light brown, a large greyish black longitudinal band on median area. Spinnerets

light brown. Palp organ (Figs. 8-10): tibial apophysis long with a wide base; secondary conductor covers on the embolus; sperm duct encircles bulb entirely; ventral tibial apophysis short and stout; retrolateral tibial apophysis long and thin, with a small dorsal prong.

**Etymology:** The specific epithet is derived from its type locality, Yunnan Province.

**Remarks:** The new species resembles *P. lancerarius* (Thorell, 1895), but can be distinguished by: (1) secondary conductor covers on the embolus, where as that of the latter below the embolus; (2) retrolateral tibial apophysis much more slender (Figs. 8-11); (3) abdominal pattern.

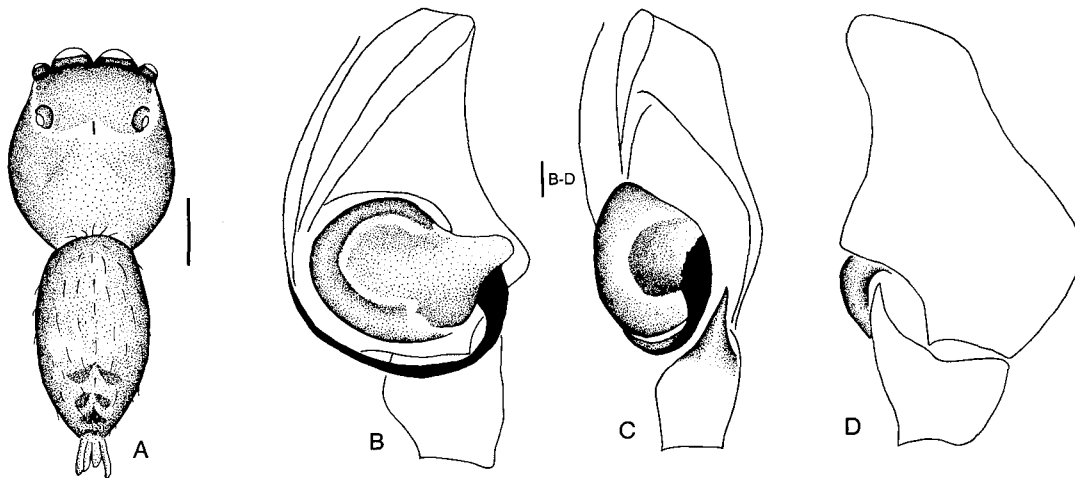


Fig. 3. *Ptocasius kinhi*. A, Body. B, Palpal organ, ventral. C, Ditto, retrolateral. D, Ditto, dorsal. Scale bars=0.1 mm (B-D) and 1 mm (A).

Genus *Ptocasius* Simon, 1885  
*Ptocasius kinhi* Zabka, 1985  
(Fig. 3. A-D)

*Ptocasius kinhi* Zabka, 1985: 440, Figs. 513-516

Material examined: Holotype (Type No. 98-9) 1 ♂, TL 6.10, CL 3.1, CW 2.4, AL 3.0, AW1.8, AER = PER 2.0, EFL1.3, Yunnan Province, October 1987, leg. Wang Jiafu.

#### Description

Male: Carapace (Fig. 12) dark brown with black margin, covered with long brown and short white hairs; eye bases black; fovea longitudinal and black. Sternum brown, anteriorly wider, margin with long brown hairs. Clypeus brown, with sparse long black setae; height shorter than half of the radius of AME. Chelicera black brown with long brown hairs; two promarginal teeth connected at the bases, one retromarginal. Endites and labium dark brown, distal

ends lightly colored with dense hairs. Legs dark brown, annuli unclear; with dense spines and hairs. Abdomen (Fig. 12) elongated oval, dorsum greyish brown, lateral area dark brown; a pair of lightly colored marks on median part; 5 chevrons on posterior part; ventrally greyish brown, with 4 longitudinal lines formed by dots. Spinnerets greyish black. Palp organ (Figs. 13-15): embolus long and thin, originating at the four o'clock; position sperm duct encircles half bulb; bulb with a small lobe toward right; tibial apophysis short with sharp end.

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