

## Four new species of the genus *Coelotes* (Araneae, Agelenidae) from China

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### Summary

Four new species of the genus *Coelotes* are described from China: *C. accidentatus*, *C. adligansus*, *C. nanyuensis* and *C. saccatus*. Type specimens are deposited in the Department of Biology, Hunan Normal University.

### Introduction

Chinese species of *Coelotes* are very plentiful. Hitherto, about 80 species have been described (Simon, 1880; Kulczynski, 1901; Chamberlin, 1924; Schenkel, 1963; Ono, 1981; Chen, 1984; Yaginuma, 1986; Hu & Li, 1987a,b; Wang & Xu, 1988; Hu & Wang, 1990; Wang *et al.*, 1990; Chen & Zhang, 1991; Wang & Zhu, 1991; Hu, Wang & Wang, 1991; Zhu & Wang, 1991; Wang, 1994). Among these authors, Associate Prof. Wang Jia-Fu (who died of cancer in 1991) and his colleagues made the most systematic study of Chinese *Coelotes* spiders, and described 55 new *Coelotes* species from China.

Recently, during a study of our collections, we identified 14 new species of the genus. Four of these are described here; seven others were described by Peng & Wang (1997), and three were described by Peng, Gong & Kim (1996). Figures of the body and genital structures, detailed descriptions, and known distribution data are given for each species. All measurements are in mm. Scale lines equal 1.0 mm for all figures of the body, and 0.5 mm for all genital structures. The sequence of leg segments in measurement data is as follows: total length (femur, patella+tibia, metatarsus, tarsus). Anatomical terms adopted are those used by Wang *et al.* (1990).

Abbreviations used: AER=anterior eye row, AL=abdomen length, AMI=anterior-medians interval, AMLI=anterior-median-lateral interval, AW=abdomen width, CL=carapace length, CW=carapace width, MEF=median eye field, PER=posterior eye row, PMI=posterior-medians interval, PMLI=posterior-median-lateral interval, TL=total length.

### *Coelotes accidentatus*, sp. n. (Figs. 1–3)

*Type material*: Holotype ♀, Huangsang, Suiling county, Hunan province, 28 May 1996, leg. Yin Chang-Min & Peng Xian-Jin. Paratype, 1♀, same data.

*Etymology*: From Latin *ac-* meaning point, and *dent-* meaning teeth, referring to the form of the epigynal teeth (Fig. 2).

*Diagnosis*: The new species is similar to *C. mastrucatus* Wang *et al.*, 1990 (figs. 128–129), but differs by: (1) epigynal teeth longer; their bases (Fig. 2) almost touching, whereas they are widely separated in *mastrucatus*; (2) atrium (Fig. 2) almost as long as wide, but

1.5 times wider than long in *mastrucatus*; (3) vulva (Fig. 3).

*Description*: *Female*: TL 10.0–14.0. Specimen of TL 10.0 measured: CL 5.5, CW 3.2, AL 4.5, AW 2.2. Both AER and PER slightly procurved; AME smallest, ALE=PLE=PME; AMI slightly wider than AMLI; PMI narrower than PMLI; MEF longer than wide, posteriorly wider. Carapace distinctly longer than wide; light brown with darker margin; cephalic region, fovea, cervical and radial grooves dark brown. Sternum brown; margin dark brown; median area light brown. Clypeus black-brown, height slightly greater than AME diameter. Chelicerae, endites and labium black-brown; 3 promarginal teeth, median one largest; 2 retromarginal teeth. Legs greyish brown; without distinct darker annuli; measurements: I 13.6 (3.6, 4.5, 3.0, 2.5); II 12.4 (3.4, 4.0, 2.8, 2.2); III 11.1 (3.0, 3.5, 2.8, 1.8); IV 15.9 (4.0, 5.0, 4.3, 2.6); formula: 4, 1, 2, 3. Abdomen elongated oval; dorsum greyish black with 5 pairs of light coloured marks (Fig. 1); ventrally yellowish brown. Spinnerets brown. Epigyne (Fig. 2) with two long pointed teeth; atrium divided into two pairs, anterior pair much larger. Vulva (Fig. 3): copulatory canals long, folded and twisted.

*Male*: Unknown.

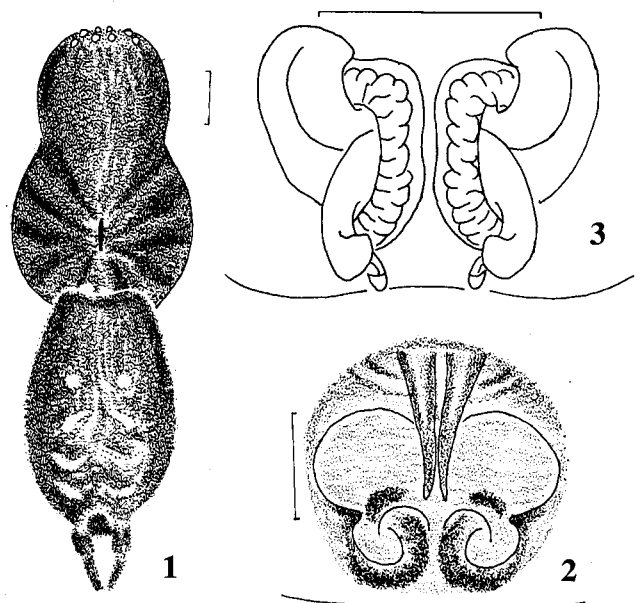
*Distribution*: China (Hunan province).

### *Coelotes adligansus*, sp. n. (Figs. 4–6)

*Type material*: Holotype ♀, Mt. Nanyue, Hunan province, 3–7 August 1995, leg. Yin Chang-Min.

*Etymology*: From Latin *adligans* meaning twine, referring to the twined copulatory canals (Fig. 6).

*Diagnosis*: The new species resembles *C. singulatus* Wang *et al.*, 1990 (figs. 39–40), but differs by: (1) epigynal teeth much shorter (Fig. 5); (2) epigyne without anterior process (Fig. 5) found in *singulatus*; (3) epigyne with a “U”-shaped septum (Fig. 5); (4) vulva.



Figs. 1–3: *Coelotes accidentatus*, sp. n., female. 1 Body; 2 Epigyne; 3 Vulva, dorsal.

*Description:* Female holotype: TL 9.8, CL 4.8, CW 2.9, AL 5.0, AW 3.2. Both AER and PER slightly procurved; AME smallest; other eyes almost same size; AMI slightly wider than AMLI; PMI slightly narrower than PMLI. Carapace brown with greyish black margin; cephalic region, cervical and radial grooves dark brown. Sternum brown with dark brown margin. Clypeus brown; covered with a row of long brown hairs; height slightly greater than twice AME diameter. Chelicerae, endites and labium dark brown; 3 promarginal teeth, median one largest; 1 retromarginal tooth. Legs brown, with faintly visible annuli; metatarsi ventrally covered with scopula; measurements: I 11.4 (3.1, 4.0, 2.4, 1.9); II 10.3 (2.8, 3.3, 2.4, 1.8); III 9.6 (2.7, 2.8, 2.4, 1.7); IV 12.9 (3.3, 4.0, 3.6, 2.0); formula: 4, 1, 2, 3. Abdomen elongated oval; dorsum greyish black with five chevrons on median area (Fig. 4); ventrally grey, with irregular dark dots. Spinnerets brown. Epigyne (Fig. 5) with a well-developed "U"-shaped septum; atrium oval, wider than long. Vulva (Fig. 6): copulatory canals twined in three visible semicircles.

*Male:* Unknown.

*Distribution:* China (Hunan province).

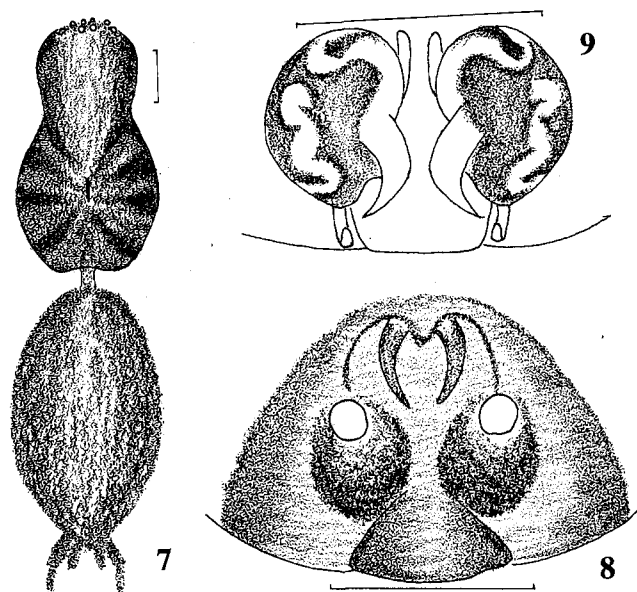
***Coelotes nanyuensis*, sp. n. (Figs. 7–9)**

*Type material:* Holotype ♀, Mt. Nanyue, Hunan province, 3–7 August 1995, leg. Yin Chang-Min.

*Etymology:* The specific name is derived from the type locality, Mt. Nanyue.

*Diagnosis:* The new species resembles *C. huizhunensis* Wang & Xu, 1988 (figs. 1–5), but differs by: (1) epigynal teeth much shorter (Fig. 8), (2) septum triangular (Fig. 8), whereas oblong in *huizhunensis*; (3) vulva without visible copulatory canal (Fig. 9), but with long, folded and looped canals in *huizhunensis*.

*Description:* Female holotype: TL 9.6, CL 4.6, CW 2.8, AL 5.0, AW 3.0. Both eye rows slightly procurved;



Figs. 7–9: *Coelotes nanyuensis*, sp. n., female. 7 Body; 8 Epigyne; 9 Vulva, dorsal.

AME smallest; AMI slightly wider than AMLI; PMI slightly narrower than PMLI; MEF wider than long, posteriorly wider. Carapace distinctly longer than wide; brown with light coloured margin; cephalic region dark brown; cervical and radial grooves darker. Sternum brown with dark brown margin; clothed with dark brown hairs. Clypeus dark brown with long brown hairs; height about twice AME diameter. Chelicerae, endites and labium dark brown; 3 promarginal teeth, median one largest; 2 retromarginal teeth. Legs brown, with distinct dark annuli; measurements: I 13.4 (3.6, 4.6, 3.1, 2.1); II 11.6 (3.1, 4.0, 2.5, 2.0); III 10.0 (3.0, 3.4, 2.0, 1.6); IV 15.0 (4.0, 5.0, 4.0, 2.0); formula: 4, 1, 2, 3. Abdomen oval; dorsum greyish brown, marks unclear (Fig. 7); ventrally greyish brown, with many scattered black dots. Spinnerets brown. Epigyne (Fig. 8) with two horn-shaped teeth; copulatory openings circular; septum triangular. Vulva (Fig. 9) sac-shaped, without visible copulatory canals.

*Male:* Unknown.

*Distribution:* China (Hunan province).

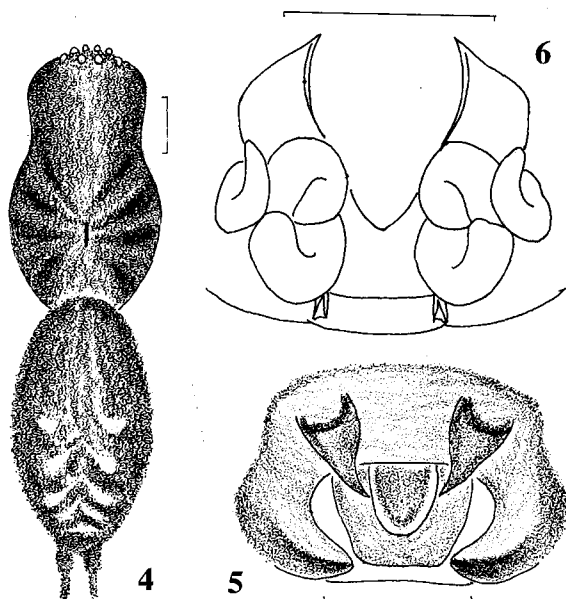
***Coelotes saccatus*, sp. n. (Figs. 10–12)**

*Type material:* Holotype ♀, Mt. Nanyue, Hunan province, 3–7 August 1995, leg. Yin Chang-Min.

*Etymology:* From Latin *saccatus* meaning sac-shaped, referring to the sac-shaped vulva (Fig. 12).

*Diagnosis:* The new species resembles *C. modestus* Simon, 1880, but differs by: (1) epigynal teeth longer and extended into atrium (Fig. 11), whereas smaller and outside the atrium in *modestus*; (2) vulva with two pairs of sac-shaped spermathecae connected by shorter copulatory canals (Fig. 12), whereas in *modestus*, vulva with only one pair of spermathecae.

*Description:* Female holotype: TL 8.0, CL 4.0, CW 2.5, AL 4.0, AW 2.5. Both AER and PER slightly procurved; AME smallest; other eyes about same size; AMI slightly wider than AMLI; PMI narrower than



Figs. 4–6: *Coelotes adligansus*, sp. n., female. 4 Body; 5 Epigyne; 6 Vulva, dorsal.

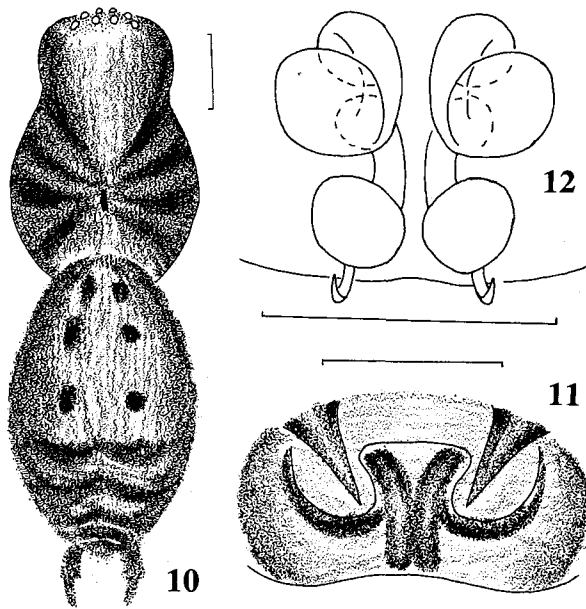


Fig. 10-12: *Coelotes saccatus*, sp. n., female. 10 Body; 11 Epigyne; 12 Vulva, dorsal.

PMLI. Carapace light brown with light coloured margin; cephalic region, fovea, cervical and radial grooves dark brown. Sternum oval, brown, with dark brown margin. Clypeus brown, height more than twice AME diameter. Chelicerae, endites and labium dark brown; both promargin and retromargin with 5 teeth. Legs brown, no distinct dark annuli; measurements: I 9.6 (2.6, 3.3, 2.1, 1.6); II 8.4 (2.2, 2.6, 2.0, 1.6); III 8.0 (2.0, 2.5, 2.0, 1.5); IV 11.2 (3.0, 3.6, 3.0, 1.6); formula: 4, 1, 2, 3. Abdomen oval; dorsum (Fig. 10) greyish brown; 3 pairs of muscle depressions distinct; six chevrons faintly visible; ventrally greyish brown. Spinnerets brown. Epigyne (Fig. 11) with two teeth extending into atrium. Vulva (Fig. 12) with two pairs of sac-shaped spermathecae.

*Male*: Unknown.

*Distribution*: China (Hunan province).

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