

## **Five new species of the genus *Coelotes* (Araneae: Agelenidae) from China**

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### **ABSTRACT**

The present paper reports five new species of the genus *Coleotes* from Zhejiang, China. They are *Coleotes chaiqiaoensis* sp. nov., *C. maculatus* sp. nov., *C. pseudolunofromis* sp. nov., *C. rufuloides* sp. nov., and *C. tiantongensis* sp. nov.

Key words: Araneae, Agelenidae, *Coleotes*, new species, China

### **INTRODUCTION**

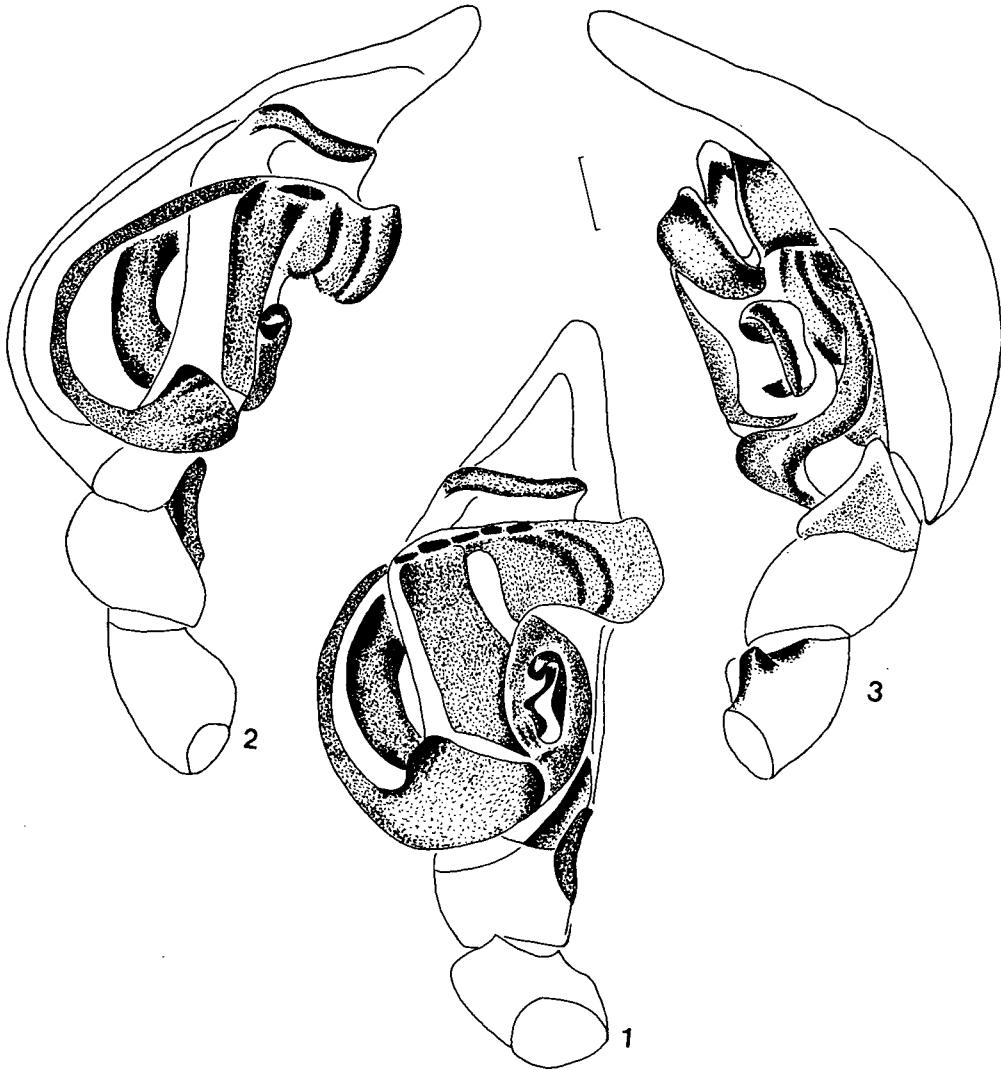
As of 1991, 97 species of the genus *Coleotes* (Agelenidae) are known on the earth (Platnick, 1991). We found five new species of *Coleotes* among specimens collected in Zhejiang, China from 1988 to 1996, and describe them with illustrations in this paper. All type specimens are deposited at the Department of Biology, Hunan Normal University. Measurements are in millimeter. The scale in figures are 0.10 mm.

### **DESCRIPTION**

#### ***Coleotes chaiqiaoensis* sp. nov. (Figs. 1-3)**

**Measurement:** Male (holotype): total length 10.84, abdomen 5.36 × 2.76, carapace 5.48 × 3.68; leg I 14.88 (3.88, 1.78, 3.36, 3.68, 2.18), leg II 13.96 (3.62, 1.72, 2.78, 3.78, 2.06), leg III 11.74 (3.36, 1.66, 2.42, 3.12, 1.18), leg IV 15.48 (4.18, 1.66, 3.34, 4.48, 2.18) formula 4,1,2,3.

**Holotype:** 1 ♂, Ningbo City, Zhejiang Province, Nov. 20, 1991, Zhang Yong-Jing.



**Figs. 1-3.** *Coleotes chaiqioensis* sp. nov., palp organ: 1, mesal; 2, prolateral; 3, retrolateral

**Description:** Male: AER slightly recurved. PER almost straight,  $AME < PME < PLE < ALE$ , AMEs further from each other than ALEs, PMEs closer to each other than to PLEs, MEA wider than long with narrower promargin. Carapace reddish brown. Chelicera dark brown, 3 promarginal and 2 retromarginal teeth. Endites and labium dark brown, cardiac pattern light brown, behind it are 6 chevrons; ventrally light brown, median area with 2 longitudinal striae.

Female: unknown

**Distribution:** China (Zhejiang).

**Remarks:** The new species resembles *C. shuangpaiensis* Peng, Gong et Kim, 1996 (Peng *et al.*, 1996: 20. Figs.15-18) in the structures of male palp organ, but differs in: (1) in mesal view, conductor bigger and wider, flange-shaped in the former (Fig.1), while triangular in the latter (cf. Fig. 17); (2) in retrolateral view, the former with two short and conic patellar apophyses (Fig.3), while the latter with a long finger-shaped one (cf. Fig.18); (3) apical structure of bulb also different.

**Etymology:** The specific name is derived from its type locality.

***Coleotes maculatus* sp. nov. (Figs. 4-5)**

**Measurement:** Female: total length 9.38, carapace  $4.48 \times 3.04$ , abdomen  $4.90 \times 3.32$ ; leg I 13.46 (3.36, 1.38, 3.54, 3.36, 1.82) leg II 13.06 (3.58, 1.38, 3.08, 3.18, 1.84); leg III 11.74 (3.16, 1.28, 2.54, 3.12, 1.64); leg IV 14.80 (3.96, 1.38, 3.48, 4.24, 1.74); formula 4,1,2,3.

**Holotype:** 1 ♀, Mt. Tiantong, Ningbo City, Chaigiao, Zhejiang Province, Jan.22, 1988, Zhang Yong-Jing.

**Description:** Female (holotype): AER recurved, PER slightly procurved, AME < PME < PLE < ALE, AMEs further from each other than ALEs, PMEs closer to each other than to PLEs, MEA almost as long as wide with narrower promargin. Carapace reddish brown with light margins. Chelicera reddish brown. Legs reddish brown, 3 promarginal and 2 retromarginal teeth. Endites, labium and sternum light reddish brown. Legs reddish brown, femora with two dark annuli. Abdominal dorsum yellowish white, cardiac pattern brown, behind it 4 brown chevrons, lateral areas with irregular brown marks: ventrally light brown with many scattered brown marks.

Male: Unknown.

**Distribution:** China (Zhejiang).

**Remarks:** The new species is similar to *C. nanyuensis* Peng et Yin, 1997, but differs in: (1) The former's epigynum without epigynal teeth, while the latter's with two; (2) the former's spermathecae merged and trapeziform, while the latter's separated and oval.

**Etymology:** The specific name is derived from the clear marks on the abdomen of the new species. Latin 'macu'-means spots.

***Coleotes pseudoluniformis* sp. nov. (Figs. 6-7)**

**Measurement:** Female: total length 7.42, carapace  $3.16 \times 2.18$ , abdomen  $4.26 \times 3.68$ ; leg I 8.86 (2.48, 1.06, 2.28, 2.26, 0.78); leg II 8.36 (2.46, 0.92, 1.96, 2.04, 0.98); leg III 7.72 (2.22, 0.76, 1.64, 2.04, 1.06); leg IV 10.76 (2.54, 0.94, 2.66, 3.14, 1.48); formula 4,1,2,3.

**Holotype:** 1 ♀, Mt. Tiantong, Ningbo City, Zhejiang Province, Jan. 20, 1988, Zhang Yong-Jing.

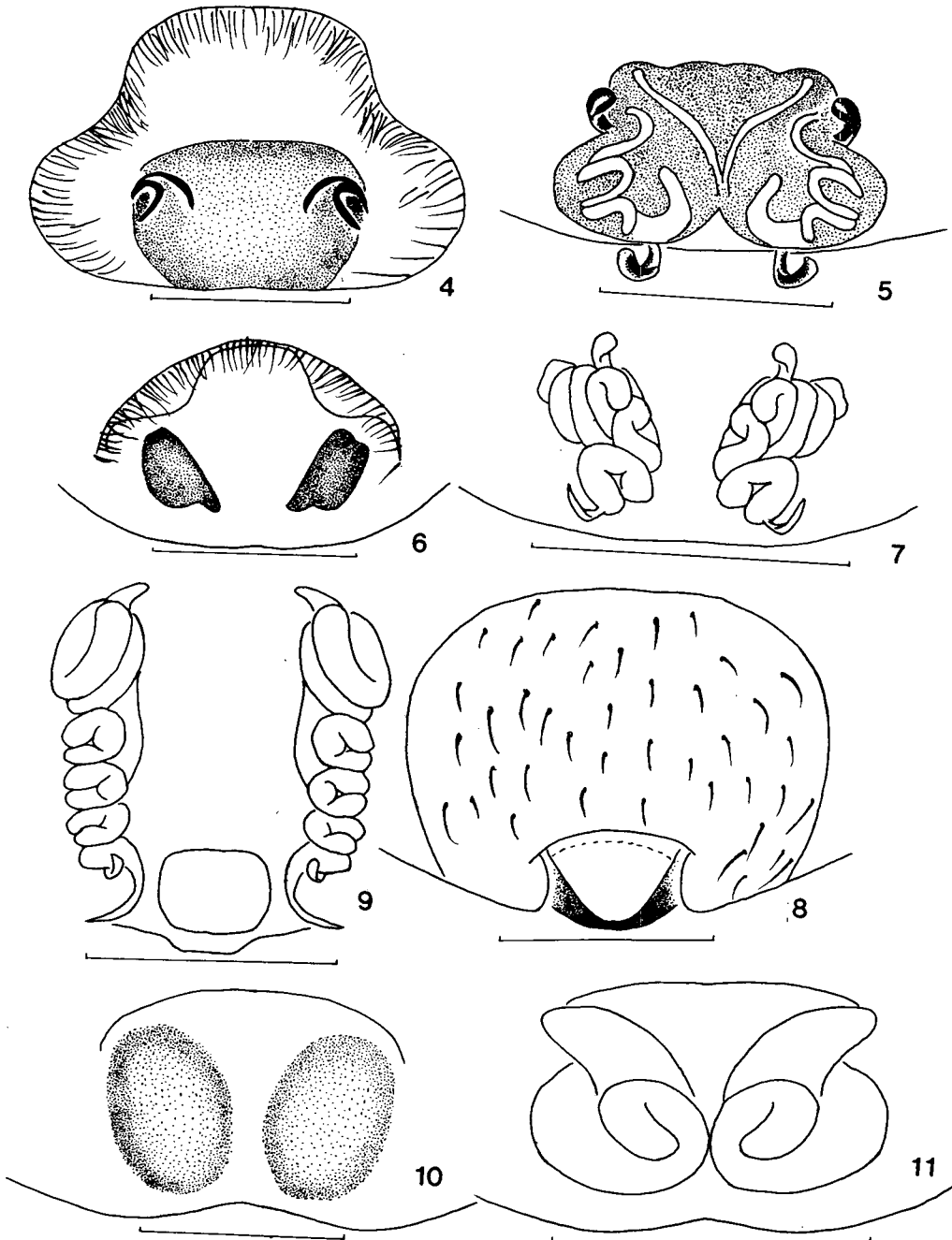
**Description:** Female (holotype): AER slightly recurved, PER straight, AME < PLE < ALE = PME, AMEs further from each other than from ALEs, PMEs also further from each other than from PLEs, MEA longer than wide. Carapace, chelicerae, endites, labium, sternum and legs reddish brown. 4 promarginal and 4 retromarginal teeth. Abdominal dorsum light brown, cardiac mark unclear, behind it pairs of yellowish white chevrons; ventrally light brown.

Male: unknown.

**Distribution:** China (Zhejiang).

**Remarks:** The new species is allied to *C. luniformis* Zhu et Wang, 1994 (Zhu et Wang, 1994:39, Figs.5-6), but differs in: (1) the former's epigynum without epigynal teeth (Fig.6) found in the latter's (cf. Fig.5); (2) structure (Fig.7) found in the latter's (cf. Fig.6); (3) the course of copulatory canals also different.

**Etymology:** The specific name is derived from its similarity to *C. luniformis*.



**Figs. 4-11.** 4-5, *Coleotes maculatus* sp. nov.: 4, epigynum; 5, vulva; 6-7, *Coleotes pseudoluniformis* sp. nov.: 6, epigynum; 7, vulva; 8-9, *Coleotes rufuloides* sp. nov.: 8, epigynum; 9, vulva; 10-11, *Coleotes tiantongensis* sp. nov.: 10, epigynum; 11, vulva

***Coleotes rufuloides* sp. nov. (Figs. 8-9)**

**Measurement:** Female (Holotype): Total length 8.38, carapace 3.56 × 2.30, abdomen 4.83 × 3.06; leg I 8.50 (2.48, 1.14, 1.82, 1.92, 1.14); leg II 7.92 (2.38, 1.24, 1.62, 1.62, 1.06); leg III 7.14 (2.02, 1.12, 1.24, 1.72, 1.04); leg IV 9.78 (2.72, 1.24, 2.08, 2.68, 1.06); formula 4,1,2,3

**Holotype:** 1 ♀, Mt. Tiantong, Ningbo City, Zhejiang Province, Jan. 22, 1988, Zhang Yong-Jin.

**Description:** Female: AER recurved, PER slightly recurved, AME < PME < PLE < ALE, AMEs further from each other than from ALEs, PMEs closer to each other than to PLEs, MEA almost as wide as long with narrower promargin. Carapace light reddish brown. Chelicerae dark reddish brown, 3 promarginal and 2 retromarginal teeth. Endites, labium, sternum, and legs light reddish brown. Abdominal dorsum brown, cardiac pattern greyish white.

Male: unknown

**Distribution:** China (Zhejiang).

**Remarks:** The form of epigynum of the new species resembles that of *C. rufulus* (Wang *et al.*, 1990:195, Figs. 44-45), but differs in: 1. copulatory canal relatively much shorter; 2. the course of canals also different (Fig. 9, cf. Fig. 45).

**Etymology:** The specific name is derived from its similarity to *C. rufulus*.

***Coleotes tiantongsis* sp. nov. (Figs. 10-11)**

**Measurement:** Female (holotype): total length 7.75, carapace 3.22 × 2.16, abdomen 4.53 × 2.96; leg I 9.42 (2.38, 1.08, 2.46, 2.22, 1.28); leg II 8.58 (2.22, 1.02, 2.12, 1.96, 1.26); leg III 8.54 (2.48, 0.92, 2.02, 1.86, 1.26); leg IV 11.62 (2.78, 1.02, 2.82, 3.62, 1.38); formula 4,1,2,3.

**Holotype:** 1 ♀, Mt. Tiantong, Ningbo City, Zhejiang Province, Jan. 20, 1988, Zhang Yong-Jin.

**Description:** Female: AER slightly recurved, PER straight, AME < ALE = PME < PLE, AMEs further from each other than from ALEs. PMEs also further from each other than from PLEs, MEA wider than long with narrower promargin. Carapace, endites, labium, sternum, and legs tan. Chelicerae reddish brown, 4 promarginal and 4 retromarginal teeth. Abdominal dorsum light brown; cardiac pattern tan, its two lateral areas with tan marks, its posterior white.

Male: unknown

**Distribution:** China (Zhejiang).

**Remarks:** This species is similar to *C. adligansus* Peng et Yin, 1997, but differs in: (1) The former's epigynum lacks epigynal teeth found in the latter's; (2) also lacks epigynal septum found in the latter's; (3) the course of copulatory canals different.

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

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### 중국산 거미 *Coelotes*속(거미목: 가계거미과)의 5신종

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### 적 요

저자들은 중국의 Zhejiang 지역에서 채집한 가계거미과(Araneae: Agelenidae)의 가계거미속(*Coleotes*)에 속하는 5신종 *Coleotes chaiqiaoensis* sp. nov., *C. machulatus* sp. nov., *C. pseudouniformis* sp. nov., *C. rufuloides* sp. nov., *C. tiantongensis* sp. nov.을 발표한다.