

ORIGINAL ARTICLE

Taxonomic review of the genus *Coelopisthia* Förster (Hymenoptera: Pteromalidae) from China, with four new species

Tian-Yang Jiao^{1,2}, Hui Xiao^{1*}

¹ Key Laboratory of Zoological Systematics and Evolution, Institute of Zoology, Chinese Academy of Sciences, Beijing 100101, China

² College of Life Sciences, University of Chinese Academy of Sciences, Beijing 100049, China

* Corresponding author; E-mail: xiaoh@ioz.ac.cn

Abstract The pteromalid genus *Coelopisthia* from China is studied with eight species including four new species and two newly recorded species: *C. dasycladus* **sp. nov.**, *C. gracilentus* **sp. nov.**, *C. pseudaletia* **sp. nov.**, *C. condensus* **sp. nov.**, *C. areolata* Askew and *C. caledonica* Askew. A key to Chinese species is provided. All the specimens are deposited in the Zoological Museum, Institute of Zoology, Chinese Academy of Sciences.

Key words Hymenoptera, Pteromalidae, *Coelopisthia*, new species, China.

1 Introduction

The genus *Coelopisthia* was described by Förster in a key to genera of Chalcidoidea, but without any species in 1856. Ashmead formally designated *Pteromalus cephalotes* Walker as the type species of *Coelopisthia* in 1904. However, Graham discovered that *Pteromalus cephalotes* Walker *sensu* Thomson (1878) was misidentified and actually was *Pteromalus extentus* Walker (Graham, 1956). He erected the new genus *Kranophorus* with the type species *Pteromalus extentus* Walker, and *Coelopisthia* was treated as synonym of *Pteromalus* Swederus. Subsequently, Baur and Bouček discussed on the history of the genus *Coelopisthia* in detail and published their study in 2002. In their study, *Coelopisthia* is treated as valid, *Pteromalus extentus* Walker is designated as type species of *Coelopisthia*, and *Kranophorus* become a junior objective synonym of *Coelopisthia*.

Coelopisthia is identified by the following characters given by Thomson (1878): anelli enlarged, genae broad and occiput concaved.

Thirteen species of *Coelopisthia* were reported from Holarctic region except one species from Oriental Region. Only two species has been recorded from China (Yang, 1996). In this study, four new species and two newly recorded species are studied. A key to eight Chinese species of *Coelopisthia* is also provided based on female characters.

2 Materials and methods

Materials for the present study were swept using an insect net and preserved in 75% ethanol. They were subsequently air dried, point-mounted, and examined with a Nikon SMZ1500 stereomicroscope. Photographs were taken under the

Nikon Multizoom AZ100 system, and the plates were compiled using Adobe Photoshop CS3 software. All the materials were card-mounted specimens deposited in Institute of Zoology, Chinese Academy of Sciences (IZCAS).

Morphological terminology mostly follows that of Graham (1969), Bouček (1988) and Gibson (Gibson *et al.*, 1997). Body length is excluding ovipositor and is measured in millimeters (mm). The other measurements are given in ratio. Abbreviations of morphological terms used are: Fu_n = funicular segment; POL= posterior ocellar distance; OOL= ocellocular distance; Gt_n = gastral tergum.

3 Taxonomy

Coelopisthia Förster, 1856

Coelopisthia Förster, 1856: 65. Type species: *Pteromalus extensus* Walker, 1835, by original designation.

Coelopisthia Förster: Graham, 1956: 257; Askew, 1980: 1; Bouček & Rasplus, 1991: 64; Baur & Bouček, 2000: 69.

Coelopisthus Thomson, 1878: 162. Synonymized by Ashmead, 1904.

Kranophorus Graham, 1956: 257. Type species: *Pteromalus extensus* Walker, 1835, by original designation. Synonymized by Baur & Bouček, 2000.

Diagnosis. Body dark green. Head and thorax finely reticulate; head in dorsal view stout and thicken; occiput strongly concave, posteriorly ending by acute-angular edge; gena broad and flat, occipital carina absent; face protuberant at antennal insertion; lower margin of clypeus shallowly emarginated; both mandibles four-toothed; antenna not clavate, antennal formula 11263; antenna inserted at or slightly below ocular line, both anelli or at least the second one subquadrate. Mesosoma more or less flattened, pronotum with collar not margined, mesoscutum with notauli incomplete, scutellum without frenal line, propodeum with median carina complete or incomplete; fore wing without marginal fringe, marginal vein longer than stigmal vein, post marginal vein shorter than or as long as stigmal vein. Gaster with petiole very short, transverse and invisible in dorsal view; gaster round, broader than thorax, slightly depressed dorsally; ovipositor concealed in dorsal view.

Biology. Species of *Coelopisthia* were recorded as parasitoids of Lepidoptera (Lasiocampidae, Noctuidae, Arctiidae and Nymphalidae), Hymenoptera (Tenthredinidae and Cephidae), Diptera (Cecidomyiidae) and Coleoptera (Curculionidae). In our study, *Gypsonoma minutara* Hübner (Lepidoptera, Tortricidae) and *Pseudaletia separate* Walker (Lepidoptera, Noctuidae) are reported as new host records of the genus from China.

Distribution. China (Inner Mongolia, Hebei, Beijing, Shaanxi, Gansu, Sichuan, Guizhou, Yunnan); Palearctic, Nearctic and Afrotropics Regions.

3.1 Key to the Chinese species of *Coelopisthia*

1. Marginal vein 2.5 times as long as stigmal vein (Fig. 5).....2
Marginal vein 2 times as long as stigmal vein.....3
2. Propodeum with a transverse furrow on posterior part, and at least 1/3 length of propodeum; eyes space 1.3 times as long as eye height; first anellus transverse, 0.5 times as long as wide *C. areolata*
Propodeum different, if the transverse furrow distinct, it at most 1/3 length of propodeum; eyes space 1.18 times as long as eye height; first anellus 0.75 times as long as wide *C. xinjiashanensis*
3. Postmarginal vein distinctly shorter than stigmal vein, about 0.6–0.9 times as long as stigmal vein (Fig. 31).....4
Postmarginal vein as long as stigmal vein (Fig. 14).....6
4. Gaster rounded (Fig. 20), shorter than mesosoma; propodeum with plica incomplete and middle area slightly depressed.....
..... *C. pseudaletia* sp. nov.
Gaster ovate, at least as long as mesosoma; propodeum with plica complete and middle area not depressed5
5. Antennal insertion strongly protuberance (Fig. 7); stigmal vein 1.14 times as long as postmarginal vein; Gt_1 about 2/5 length of gaster.....*C. caledonica*
Antennal insertion slightly protuberance (Fig. 29); stigmal vein 1.46 times as long as postmarginal vein; Gt_1 about 1/3 length of gaster.....*C. condensus* sp. nov.
6. Antenna slim, each funicular segment longer than its width (Fig.18); clypeal margin broadly emarginate, without distinct tooth; propodeum without median carina and plica..... *C. gracilentus* sp. nov.

- Antenna not slim, each funicular quadrate or slightly transverse; clypeal margin protrudent and slightly emarginate in the middle, with two blunt teeth; others different 7
7. Propodeum with median carina and plica complete; pedicel and flagellum combined slightly shorter than head width, about 0.97 length of head width, Fu_6 about 1.1 times as long as broad; gaster 1.3 times as long as broad *C. dasycladus* sp. nov.
Propodeum with median carina complete and plica absent; pedicel and flagellum combined distinctly shorter than head width, about 0.87 length of head width, Fu_6 about 1.33 times as long as broad; gaster as long as broad *C. qinglingensis*

3.2 Descriptions of species

Coelopisthia areolata Askew, 1980 New record to China (Figs 1–5)

Coelopisthia areolata Askew, 1980. *Sys. Ent.*, 5: 4.

Coelopisthia areolata Askew: Hedqvist, 2003. *Ent. Tidsk.*, 124 (1–2): 105.

Diagnosis. The species can be identified by the marginal vein 2.5 times as long as stigmal vein (Fig. 5) and propodeum with several large areoles on nucha (Fig. 4). The species is close to *C. xinjiashanensis* Yang, but eyes space 1.3 times as long as eye height (Fig. 3) (1.18 times in *C. xinjiashanensis*), first anellus 0.5 times as long as wide (0.75 times as long as wide in *C. xinjiashanensis*).

Specimens examined. China: 1♀, Hebei, Xinghuai (elev. 2 110 m), 24 June 1985, coll. Hua-Fu Mi; 2♀, Inner Mongolia, Alihe, 13 August 1981, coll. Ding-Xi Liao; 1♀, Inner Mongolia, Alihe, 18 August 1981, coll. Ding-Xi Liao; 1♀, Sichuan, Emei mountain (elev. 600–1100 m), 21 June 1955, coll. Le Wu; 1♀, Shaanxi, Liuba (elev. 1470–1550 m), 2 July 1999, coll. Chao-Dong Zhu.

Biology. Unknown.

Distribution. China (Inner Mongolia, Hebei, Shaanxi, Sichuan); Palearctic Region (Noyes, 2014).

Coelopisthia caledonica Askew, 1980 New record to China (Figs 6–8)

Coelopisthia caledonica Askew, 1980. *Sys. Ent.*, 5: 3. Hedqvist, 2003, *Ent. Tidsk.*, 124(1–2): 105.

Coelopisthia caledonica Askew: Sureshan, 2006. *Zoos' Print Journal*, 21(3): 2187–2188.

Diagnosis. Postmarginal vein distinctly shorter than stigmal vein (Fig. 6); propodeum with plica complete and middle area not depressed; gaster ovate, as long as mesosoma (Fig. 6), antennal insertion strongly protuberance (Fig. 7); stigmal vein 1.14 times as long as postmarginal vein; Gt_1 about 2/5 length of gaster. The species is close to *C. condensus* sp. nov., but the stigmal vein relatively longer than postmarginal vein and Gt_1 about 1/3 length of gaster in *C. condensus* sp. nov.

Specimens examined. China: 1♀, Yunnan, Fengyi (elev. 2 000 m), 1 June 1955, coll. B. Bobof; 1♀, Yunnan, Xiaguang (elev. 2050 m), 3 May 1955, coll. B. Bobof; 1♀, 1♂, Shaanxi, Zhouzhi (elev. 1350–1400 m), 24 June 1999, coll. Chao-Dong Zhu; 1♀, 1♂, Gansu, Wenxian (elev. 2150 m), 25 July 1999, coll. Chao-Dong Zhu; 1♀, Gansu, Kangxiang (elev. 1350 m), 7 June 1999, coll. Chao-Dong Zhu.

Biology. The species was reared from pupae of *Xestia alpicola* (Zetterstedt) (Lepidoptera: Noctuidae) and *Melitaea cinxia* (L.) (Lepidoptera: Nymphalidae) (Askew, 1980; Askew & Shaw, 1997).

Distribution. China (Shaanxi, Gansu, Yunnan); Palearctic Region (Noyes, 2014).

Coelopisthia qinlingensis Yang, 1996

Coelopisthia qinlingensis Yang, 1996. *Parasitic wasps on bark beetles in China*: 203.

Diagnosis. The species is close to *Coelopisthia dasycladus* sp. nov. with the postmarginal vein as long as stigmal vein, antenna with each funicular quadrate or slightly transverse, clypeal margin slightly emarginate in the middle and with two blunt teeth and. But it different with *Coelopisthia dasycladus* sp. nov. by the following characters: propodeum with median carina and plica complete, pedicel and flagellum combined slightly shorter than head width, gaster 1.3 times as long as broad.

Specimens examined. None.

Biology. The species probably parasite on larvae and pupae of *Dendroctonus armandi* Tsai & Li (Coleoptera: Curculionidae) and *Ips sexdentatus* Börner (Coleoptera: Curculionidae) on the *Pinus armandi* (Pinaceae) (Yang, 1996).

Distribution. China (Shaanxi).



Figs 1–8. *Coelopisthia areolata* and *C. caledonia*. 1–5. *C. areolata* Askew, female. 1. Body dorsal. 2. Head lateral. 3. Head frontal. 4. Thorax dorsal. 5. Fore wing dorsal. 6–8. *C. caledonia* Askew, female. 6. Body dorsal. 7. Body lateral. 8. Head frontal.

***Coelopisthia xinjiashanensis* Yang, 1996**

Coelopisthia xinjiashanensis Yang, 1996. *Parasitic wasps on bark beetles in China*: 205.

Diagnosis. The species is close to *Coelopisthia areolata* Askew with the marginal vein 2.5 times as long as stigmal vein, but it different with *C. areolata* by the following characters: propodeum without a transverse furrow on posterior part, eyes space relatively wider than that of *C. areolata*.

Specimens examined. None.

Biology. The species parasitise on larvae and pupae of *Dendroctonus armandi* Tsai & Li (Coleoptera: Curculionidae) and *Ips sexdentatus* Börner (Coleoptera: Curculionidae) on the *Pinus armandi* (Pinaceae) (Yang, 1996).

Distribution. China (Shaanxi).

***Coelopisthia dasycladus* sp. nov.** (Figs 9–14)

Female. Length 2.0 mm. Body (Fig. 9) dark green with blue reflection except gaster brown. Antenna pale brown except scape and pedicel yellowish brown. Wings hyaline with pale clouding. Legs yellowish brown except coxae concolorous with mesosoma.

Head in frontal view (Fig. 11) about 1.3 times as high as wide; head height 1.6 times of eye height, eye space 1.3 times of eye height; upper face and lower face with finely raised reticulation; scrobe shallow and reticulated densely, reaching lower anterior ocellus. Clypeus smooth and epistomal sulcus indistinct, lower margin of clypeus shallowly emarginate with two obtuse teeth. Head in lateral view (Fig. 10), face protuberant at antennal insertion, the angle of lower face with upper face about 110°; malar sulcus indistinct, malar space short; eye height 4.4 times of malar space. Antenna inserted at lower face, below lower ocular line; scape reaching lower margin of anterior ocellus, longer than eye height; pedicel and flagellum combined 0.97 times as long as head width; antenna (Fig. 10) not clavate, first anellus transverse, second anellus subquadrate; each funicular segment quadrate, bearing one row of longitudinal sensilla; clava 2 times as long as its greatest width, longer than Fu_5 and Fu_6 combined (about 1.38 times); the third claval segment with small area of micropilosity. Head in dorsal view 2 times as wide as long (Fig. 12); anterior and posterior ocelli on obtuse angle; POL 1.6 times of OOL; eye length 2.5 times as long as temple.

Thorax in dorsal view distinctly narrower than head width, head width about 1.4 times as long as mesosoma; mesosoma slightly flat in lateral view. Pronotum 1/5 length of mesoscutum, collar short and not margined. Mesoscutum 2 times as wide as long, notauli incomplete; propodeum longer than 1/2 length of scutellum, median carina and plica complete (Fig. 13), nucha short and with irregular transverse carinulae on posterior part; propodeal spiracles long circle, about 2.5 times as long as wide. Fore wing broad and sparsely hairy (Fig. 14), 2.08 times as long as wide; costal cell bare on upper surface and with a row of setae on ventral surface; basal vein and basal cell bare; speculum reaching base of stigmal vein; submarginal vein 2.17 times as long as marginal vein, marginal vein 2 times as long as postmarginal vein, postmarginal vein as long as stigmal vein.

Metasoma slightly longer than mesosoma (1.05 times of mesosoma); petiole invisible in dorsal view; gaster subcircular (Fig. 13), 1.3 times as long as wide, 1.3 times as wide as mesosoma; Gt_1 about 1/3 length of gaster.

Male. Unknown.

Specimens examined. Holotype ♀, China, Beijing, Mentougou, Xiaolongmen (39°56'N, 116°05'E) (elev. 2000 m), 4 July 2002, coll. Wen-Quan Zhen (IZCAS).

Diagnosis. We compared the new species with *Coelopisthia extenta* (Walker) (1♀, France: Vauclusei Mont Ventoux (elev. 1200 m), 24 August 1988, coll. Bouček, det. Bouček in 1988, det. Baur in 2002) and found that the new species similar to *C. extenta* (Walker), but the antenna with the first anellus transverse and the second subquadrate (two anelli quadrate in *C. extenta*).

Biology. Unknown.

Distribution. China (Beijing).

Etymology. The specific name refers to the antenna with each funicular segment as long as broad.



Figs 9–19. *Coelopisthia dasycladus* sp. nov. and *C. gracilentus* sp. nov. 9–14. *C. dasycladus* sp. nov. female. 9. Body dorsal. 10. Head lateral. 11. Head frontal. 12. Head and thorax dorsal. 13. Propodeum and gaster dorsal. 14. Fore wing dorsal. 15–19. *C. gracilentus* sp. nov. female. 15. Head frontal. 16. Body dorsal. 17. Body lateral. 18. Antenna. 19. Propodeum dorsal.

***Coelopisthia gracilentus* sp. nov.** (Figs 15–19)

Female. Length 2.0 mm. Body (Figs 16–17) dark with metallic reflection except gaster dark brown. Antenna pale brown except scape, pedicel and Fu_1 yellowish brown. Mandibles dark fuscous but teeth testaceous. Wings hyaline with pale clouding, veins yellowish brown. Legs yellowish brown except hind coxae dark, fore and mid coxae brown.

Head in frontal view (Fig. 15) about 1.3 times as high as wide; head height 1.47 times of eye height, eye space 1.23 times of eye height; upper face and lower face with densely raised reticulation; scrobe moderately deep, not reaching lower anterior ocellus. Lower face with clypeal area finely stiate; epistomal sulcus distinct, clypeal margin broadly emarginate. Head in lateral view (Fig. 17), face protuberant at antennal insertion, the angle of lower face with upper face about 110° ; malar sulcus indistinct; eye height 3 times of malar space. Antenna (Fig. 18) insertion placed on lower ocular line; scape shorter than eye height (0.9 times), not reaching lower margin of anterior ocellus; pedicel and flagellum combined slightly shorter than head width (about 0.94 times); antenna slim, first anellus transverse, second anellus quadrate; each funicular segment longer than broad respectively, bearing one row of longitudinal sensilla; clava 2.25 times as long as its greatest width; the third claval segment with small area of micropilosity. Head in dorsal view 1.67 times as wide as long; anterior and posterior ocelli on obtuse angle; POL 1.58 times of OOL; eye length 1.76 times as long as temple.

Thorax in dorsal view distinctly narrower than head width, head width about 1.32 times as long as mesosoma; mesosoma slightly convex in lateral view. Pronotum 0.88 times as wide as mesoscutum, collar short and not margined. Mesoscutum 2 times as wide as long, notauli incomplete; propodeum $1/2$ length of scutellum, median carina absent (Fig. 19), plica indistinct, nucha short and smooth on posterior part; propodeal spiracles ellipse, about 2 times as long as wide. Fore wing broad, 2.1 times as long as wide; costal cell bare on upper surface and with a row of setae at end of part on ventral surface; basal vein and basal cell bare; speculum reaching base of stigmal vein; submarginal vein 2.5 times as long as marginal vein, marginal vein 2 times as long as postmarginal vein, postmarginal vein as long as stigmal vein, stigmal slightly clavate as quadrate.

Metasoma slightly longer than mesosoma (1.1 times of mesosoma); petiole invisible in dorsal view; gaster ovate, 1.1 times as long as wide, 1.41 times as wide as mesosoma; Gt_1 about $1/3$ length of gaster, hind margin of each tergite straight.

Male. Body length 1.5 mm; head and thorax blue green, gaster brown and with metallic reflection on base part; antennae pale yellow except pedicel pale brown in dorsal view; legs yellowish brown except coxae brown. Antenna with two anelli transverse.

Specimens examined. Holotype ♀, China, Inner Mongolia, Zhongqi, 17 July 1980, ex. *Gypsonoma minutara* Hübner, coll. Xu-Chang Huang (IZCAS). Paratype 1♂, same data as holotype.

Diagnosis. The new species is somewhat similar to *C. dasycladus* sp. nov. with the marginal vein 2 times as long as stigmal vein, postmarginal vein as long as stigmal vein, but can be separated from *C. dasycladus* sp. nov. by the antenna with each funicular segment longer than its broad, clypeal margin broadly emarginated, propodeum without median carina and plica. In *C. dasycladus* sp. nov., the antenna with each funicular segment quadrate, clypeal margin with two broad teeth, propodeum with median carina and plica complete.

Biology. Reared from *Gypsonoma minutara* Hübner (Lepidoptera: Tortricidae).

Distribution. China (Inner Mongolia).

Etymology. The specific name refers to the antenna slim, each funicular segment longer than the broad.

***Coelopisthia pseudaletia* sp. nov.** (Figs 20–24)

Female. Length 2.0 mm. Body (Figs 20–21) dark green. Antenna brown. Mandibles fuscous. Wings hyaline, veins yellowish brown. Legs yellowish brown except coxae concolorous with thorax.

Head in frontal view (Fig. 22) about 1.24 times as high as wide; head height 1.52 times of eye height, eye space 1.25 times of eye height; upper face and lower face with densely raised reticulation; scrobe shallow, not reaching lower anterior ocellus. Clypeal area smooth with superficially stiate; epistomal sulcus distinct; clypeal margin protrudent and broadly emarginate. Head in lateral view (Fig. 23), face not distinctly protuberant at antennal insertion, the angle of lower face with upper face more than 120° ; malar sulcus indistinct; malar space 0.23 times of eye height. Antenna (Figs 22–23) insertion slightly below lower ocular line; scape as long as eye height, not reaching lower margin of anterior ocellus; pedicel and flagellum combined almost as long as head width; pedicel 2.5 times of its width, first anellus transverse, second anellus quadrate; each funicular segment quadrate, bearing one row of longitudinal sensilla; clava 2 times as long

as its greatest width; apex of the third claval segment with small area of micropilosity. Head in dorsal view 1.83 times as wide as long; POL 2.1 times of OOL; eye length 2 times as long as temple.

Thorax in dorsal view distinctly narrower than head width, head width about 1.22 times as long as mesosoma; mesosoma slightly convex in lateral view. Pronotum 0.86 times as wide as mesoscutum, collar short and not margined. Mesoscutum 2 times as wide as long, notauli incomplete. Propodeum (Fig. 24) 0.62 times length of scutellum; median carina only distinct on the base part, at most 1/3 length of propodeum; plica incomplete; nucha with surface transverse reticulation; propodeal spiracles ellipse, about 2 times as long as wide. Fore wing 2.3 times as long as wide; costal cell bare on upper surface and with a row of setae on ventral surface; basal vein and basal cell bare; speculum reaching base of stigmal vein; submarginal vein 2.5 times as long as marginal vein, marginal vein 3 times as long as postmarginal vein, stigmal vein, 1.5 times as long as postmarginal vein.

Metasoma distinctly shorter than mesosoma (0.83 times); petiole invisible in dorsal view; gaster circle, as long as wide, 1.21 times as wide as mesosoma; Gt_1 about 2/5 length of gaster, hind margin of each tergite straight.

Male. Body length 2.0 mm; head and thorax blue green with metallic reflection, gaster dark brown; antenna yellowish brown; legs yellowish brown except coxae brown. Antenna with two anelli transverse; petiole transverse, gaster ovate.

Specimens examined. Holotype ♀, China, Yunnan, Simao (22°48'N, 100°58'E), ex. *Pseudaletia separate* Walker, coll. Ding-Xi Liao (IZCAS). Paratypes: 4♀, 1♂, same data as holotype.

Diagnosis. The new species is somewhat similar to *C. caledonica* and *C. condensus* **sp. nov.** with the marginal vein 2 times as long as stigmal vein, postmarginal vein distinctly shorter than stigmal vein, but can be separated from *C. caledonica* and *C. condensus* **sp. nov.** by the gaster rounded and shorter than mesosoma, propodeum with plica incomplete and middle area slightly depressed. In *C. caledonica* and *C. condensus* **sp. nov.**, gaster ovate and at least as long as mesosoma, propodeum with plica complete and middle area not depressed.

Biology. Reared from *Pseudaletia separate* Walker (Lepidoptera: Noctuidae).

Distribution. China (Yunnan).

Etymology. The specific name refers to host of the species.

Coelopisthia condensus **sp. nov.** (Figs 25–31)

Female. Length 2.1–2.7 mm. Head and thorax dark green (Figs 27–28), gaster dark brown with metallic reflection. Antenna black brown except scape, pedicel and anelli yellow brown. Mandibles fuscous. Wings hyaline with veins yellowish brown. Legs yellowish brown except coxae concolorous with thorax, femur brown in middle section.

Head in frontal view (Fig. 25) about 1.32 times as high as wide; head height 1.43 times of eye height, eye space 1.2 times of eye height; scrobe deep, not reaching lower anterior ocellus. Clypeal area smooth with superficially striate; lower margin of clypeus shallowly emarginate with two obtuse teeth. Head in lateral view (Fig. 29), face not distinctly protuberant at antennal insertion; malar sulcus distinct. Antenna insertion placed on lower ocular line; scape 0.9 times of eye height, not reaching lower margin of anterior ocellus; pedicel and flagellum combined slightly shorter than head width (0.9 times); pedicel 2.3 times of its width, first anellus transverse, second anellus quadrate; Fu_1 – Fu_3 quadrate, Fu_4 – Fu_5 slightly transverse, funicular segment bearing one row of longitudinal sensilla; clava 2 times as long as its greatest width; apex of the third claval segment with small area of micropilosity. Head in dorsal view 2 times as wide as long; POL 1.77 times of OOL; eye length 2 times as long as temple.

Thorax in dorsal view distinctly narrower than head width, head width about 1.33 times as long as mesosoma; mesosoma slightly convex in lateral view, 1.55 times as long as broad. Pronotum 0.88 times as wide as mesoscutum, collar short and not margined. Mesoscutum 1.8 times as wide as long. Propodeum (Fig. 30) half-length of scutellum; median carina only distinct on the base part, at most 1/3 length of propodeum; plica complete; nucha separated from rest of propodeum by inverted V-shape carina; propodeal spiracles ellipse, about 3 times as long as wide. Fore wing (Fig. 31) 2.22 times as long as wide, with slightly densely hairy; costal cell bare on upper surface and with a row of setae on ventral surface; basal vein and basal cell bare; speculum reaching half length of marginal vein; submarginal vein 2 times as long as marginal vein, marginal vein 3 times as long as postmarginal vein, postmarginal vein shorter than stigmal vein, stigmal vein 1.46 times as long as postmarginal vein.

Metasoma slightly longer than mesosoma; gaster ovate, 1.33 times as long as broad; Gt_1 about 1/3 length of gaster, hind margin of Gt_1 slightly protudent, other tergite with hind margin straight.



Figs 20–31. *Coelopisthia pseudaletia* sp. nov. and *C. condensus* sp. nov. 20–24. *C. pseudaletia* sp. nov. female. 20. Body dorsal. 21. Body lateral. 22. Head frontal. 23. Head lateral. 24. Propodeum dorsal. 25–31. *C. condensus* sp. nov., female. 25. Head frontal. 26. Head dorsal. 27. Body dorsal. 28. Body lateral. 29. Head lateral. 30. Propodeum dorsal. 31. Fore wing dorsal.

Male. Body length 2.0 mm; head and thorax blue green with metallic reflection, gaster dark brown; antenna pale yellow; legs pale yellow except coxae concolorous with body. Antenna with the first anellus transverse, the second quadrate, each funicular segment slightly transverse except Fu_1 longer than its width, Fu_2 quadrate; petiole short, gaster ovate (1.25 times as long as broad), Gt_1 about 0.44 times length of gaster.

Specimens examined. Holotype ♀, China, Guizhou, Guiyang, Huaxi (26°27'N, 106°40'E), 5 May 2002. coll. Yan-Zhou Zhang (IZCAS). Paratypes: 1♀, 1♂, same data as holotype; 3♀, Sichuan, Wanyuan, 9 May 1980, coll. Guan-Gui Tian.

Diagnosis. The new species is similar to *C. caledonica* with the marginal vein 2 times as long as stigmal vein, postmarginal vein distinctly shorter than stigmal vein and gaster ovate, but can be separated from *C. caledonica* by the antennal insertion slightly protuberance, stigmal vein 1.46 times as long as postmarginal vein, Gt_1 about 1/3 length of gaster. In *C. caledonica*, antennal insertion strongly protuberance, stigmal vein 1.14 times as long as postmarginal vein, Gt_1 about 2/5 length of gaster.

Biology. Unknown.

Distribution. China (Guizhou, Sichuan).

Etymology. The specific name refers to the wing with relatively densely hairy.

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