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Source: Florida Entomologist, 92(2) : 217-220

Published By: Florida Entomological Society

URL: <https://doi.org/10.1653/024.092.0204>

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TWO NEW SPECIES OF DRYINIDAE (HYMENOPTERA: CHRYSIDOIDEA) FROM CHINA

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ABSTRACT

Two new species, *Fiorianteon isoneuron* **sp. nov.** and *Anteon gaoligongense* **sp. nov.**, are described, respectively, from Xiaowutaishan Provincial Nature Reserve (Hebei Province, China) and Gaoligongshan National Nature Reserve (Yunnan Province, China). *Fiorianteon isoneuron* can be recognized from the related Palaearctic species *F. junonium* Olmi by the different shape of parameres (without a notch in dorsal view in *F. junonium*, with a deep notch in *F. isoneuron*) and stigmal vein (distal part much shorter than proximal part in *F. junonium*, about as long as in *F. isoneuron*). *Anteon gaoligongense* can be recognized from the related Oriental species *A. indicum* Olmi by the different shape of segment 5 of fore tarsus (with basal part much longer than distal part in *A. indicum*, slightly shorter than distal part in *Anteon gaoligongense*). Keys are provided for the determinations of the above species with illustrations of male genitalia and female chelae.

Key Words: taxonomy, Hymenoptera, Dryinidae, *Fiorianteon*, *Anteon*, new species, China

RESUMEN

Se describen las nuevas especies *Fiorianteon isoneuron* **sp. nov.**, proveniente de la Reserva Natural Provincial Xiaowutaishan (Provincia de Hebei, China), y *Anteon gaoligongense* **sp. nov.** de la Reserva Natural Nacional Gaoligongshan (Provincia de Yunnan, China). *Fiorianteon isoneuron* se separa de la especie paleártica más relacionada, *F. junonium* Olmi, por la morfología de los parámetros (con una muesca, en vista dorsal, en *F. junonium*, y una marcada escotadura en *F. isoneuron*), así como la de la vena estigmal (con la parte distal mucho más corta que la proximal en *F. junonium*, siendo casi iguales en *F. isoneuron*). *Anteon gaoligongense* puede ser reconocida de la especie Oriental más próxima, *A. indicum* Olmi, por la forma del quinto segmento del tarso anterior (que cuenta con una parte basal mucho más larga que la distal en *A. indicum*, siendo ligeramente más corta en *Anteon gaoligongense*). Se aportan claves para la identificación de las especies antes mencionadas e ilustraciones de la genitalia masculina y la quela de la hembra.

Translation provided by the authors.

Dryinidae (Hymenoptera: Chrysidoidea) are parasitoids of Hemiptera Auchenorrhyncha (Guglielmino & Olmi 1997, 2006, 2007). *Fiorianteon* Olmi, 1984, is a genus present in the Palaearctic and Oriental region. Only 3 species have been described from Japan and China (including Taiwan). *Anteon* Jurine, 1807, is a genus present in all zoogeographical regions. About 326 species have been described from all continents (Olmi 1999) and the genus was revised by Olmi (1984, 1991).

The species of *Fiorianteon* and *Anteon* inhabiting China were studied in the last 20 years mainly by Olmi (1991, 1995), He & Xu (2002), Xu et al. (1998, 2001), and Xu et al. (2003, 2006a, 2006b).

In 2008 we examined additional specimens of *Fiorianteon* and *Anteon* from P. R. China and have found 2 new species described herein.

MATERIALS AND METHODS

The descriptions follow the terminology used by He & Xu (2002) and Olmi (1984, 1994, 1999). The measurements reported are relative, except for the total length (head to abdominal tip, without the antennae), which is expressed in millimeters. In the descriptions, POL is the distance between the inner edges of the two lateral ocelli; OL is the distance between the inner edges of a lateral ocellus and the median ocellus; OOL is the distance from the outer edge of a lateral ocellus to the compound eye; OPL is the distance from the posterior edge of a lateral ocellus to the occipital carina; TL is the distance from the posterior edge of an eye to the occipital carina.

All material studied in this paper is deposited in the Hymenoptera collection of South China Agricultural University, Department of Entomology, Guangzhou, Guangdong, P. R. China (SCAU).

Fiorianteon isoneuron sp. nov. (Fig. 1)

Description. Holotype Male. Fully winged. Length 2.8 mm. Head black, except mandibles, clypeus and part of genae near antennal toruli testaceous-whitish; antennae brown; mesosoma black; gaster brown; legs testaceous, except mid coxae basally black and hind coxae almost totally black. Antennae filiform; antennal segments in the following proportions: 8:5:12:12:11:10:9:8:8:10. Head shiny, smooth, punctate, without sculpture among punctures; frontal line complete, very narrow in the posterior half of the face; occipital carina complete; POL = 5; OL = 2; OOL = 10; OPL = 6; TL = 11; greatest breadth of posterior ocelli longer than OL (4:2). Pronotum short, transverse, punctate, without sculpture among punctures. Scutum, scutellum and metanotum shiny, smooth, punctate, without sculpture among punctures. Notauli incomplete, reaching approximately $0.5 \times$ length of scutum. Propodeum dull, reticulate rugose, without transverse or longitu-

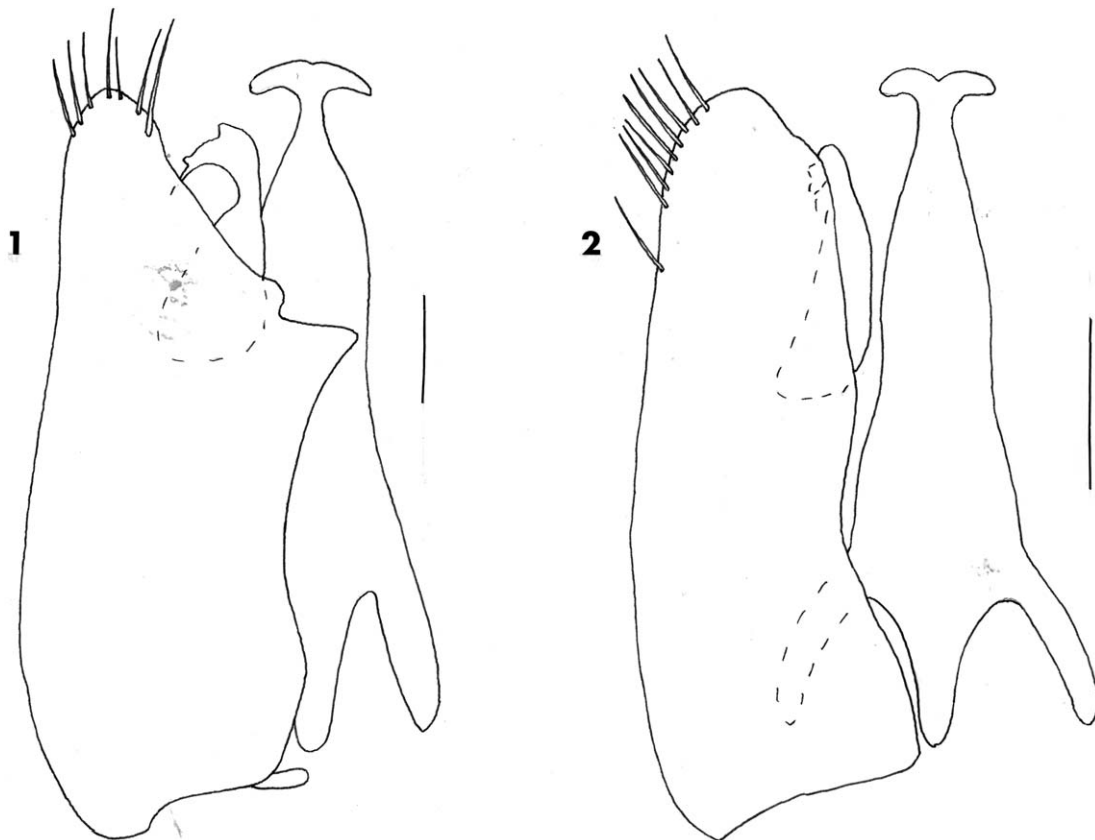
dinal keels. Forewing hyaline, without dark transverse bands; distal part of stigmal vein about as long as proximal part. Parameres with a deep notch in dorsal view (Fig. 1). Tibial spurs 1, 1, 2.

Female. Unknown.

Holotype: Male, P. R. CHINA, Hebei Prov., Zhangjiakou, Xiaowutaishan Provincial Nature Reserve, 20-22.VIII.2005, Jingxian Liu & Liqiong Weng (SCAU).

Etymology: This species is named *isoneuron* because the distal part of stigmal vein is very long and about as long as proximal part.

Remarks. *Fiorianteon isoneuron* is similar to the only known Palaearctic species *F. junonium* Olmi, 1984 (known from Japan). The above species can be recognized by the different shape of parameres (without a notch in dorsal view in *F. junonium*, with a deep notch in *F. isoneuron*) and stigmal vein (distal part much shorter than proximal part in *F. junonium*, about as long as in *F. isoneuron*), as follows:



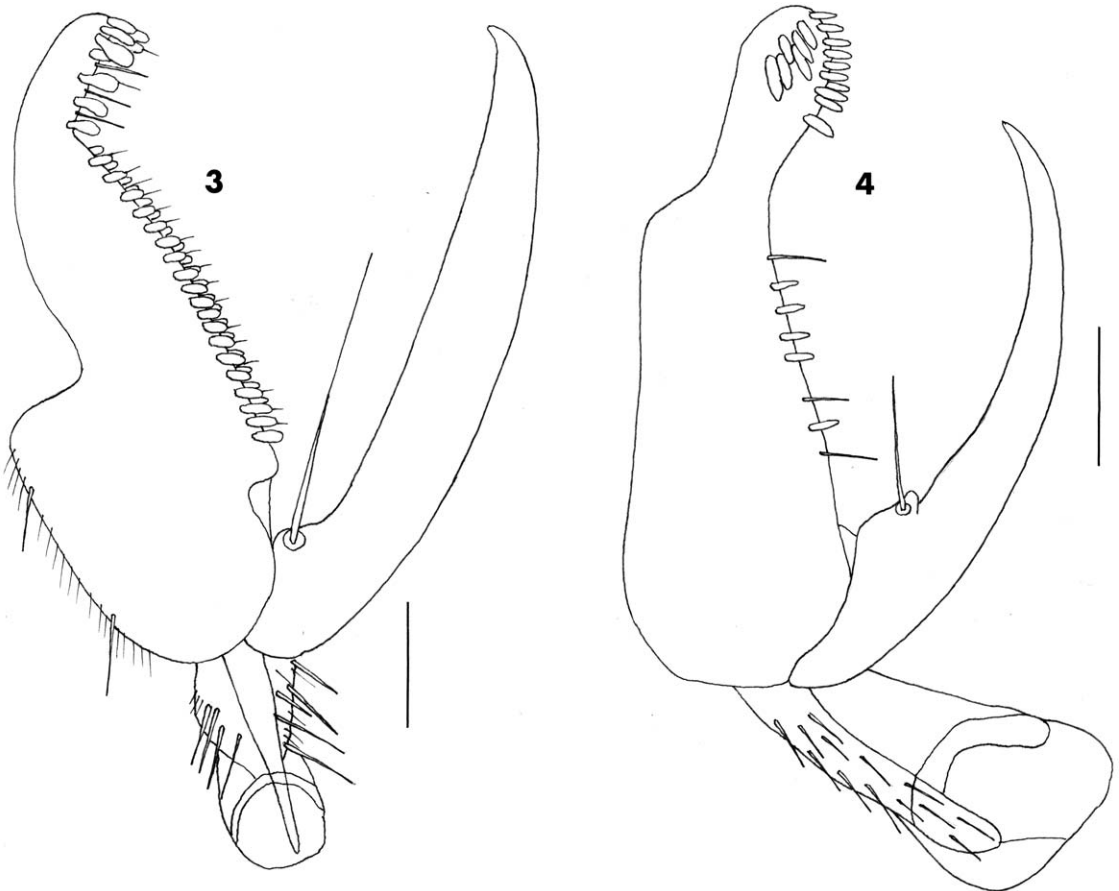
Figs. 1 and 2. Male genital armatures (in dorsal view) of *Fiorianteon isoneuron* (1; holotype; scale bar = 0.06 mm) and *Fiorianteon junonium* (2; specimen from Japan, Uradani; scale bar = 0.11 mm). Right half removed.

- 1. Parameres without a deep notch in dorsal view (Fig. 2); distal part of stigmal vein much shorter than proximal part. *F. junonium* Olmi
- Parameres with a deep notch in dorsal view (Fig. 1); distal part of stigmal vein about as long as proximal part. *F. isoneuron* **sp nov.**

Anteon gaoligongense **sp. nov.** (Fig. 3)

Description. Holotype Female. Fully winged. Length 3.3 mm. Head black, except mandibles testaceous; antennae testaceous; mesosoma black; gaster brown; legs testaceous, except basal part of hind coxae blackish. Antennae clavate; antennal segments in the following proportions: 12:8:13:13:11:10:9:8.5:8:12. Head shiny, smooth, punctate, without sculpture among punctures; frontal line absent; face without 2 lateral keels near orbits directed towards the antennal toruli; POL = 6; OL = 3; OOL = 7; OPL = 7; TL = 5; greatest breadth of posterior ocelli shorter than OPL (3:7); occipital carina complete. Pronotum shiny, with anterior surface rugose; posterior surface shiny, punctate,

without sculpture among punctures, shorter than scutum (7:21), more than twice as broad as long (27:7). Scutum, scutellum and metanotum shiny, smooth, finely punctate, without sculpture among punctures. Notauli incomplete, reaching approximately 0.6 × length of scutum. Propodeum with a strong transverse keel between dorsal and posterior surface; dorsal surface reticulate rugose; posterior surface with 2 complete longitudinal keels and median area almost completely smooth and shiny, rugose only along the lateral margins. Forewing hyaline, without dark transverse bands; distal part of stigmal vein slightly shorter than proximal part (9:11). Fore tarsal segments in the following proportions: 10:3:3.5:5:18. Enlarged claw (Fig. 3) with a proximal prominence bearing a



Figs. 3 and 4. Chelae of *Anteon gaoligongense* (3; holotype; scale bar = 0.08 mm) and *Anteon indicum* (4; holotype; scale bar = 0.08 mm).

long bristle. Segment 5 of fore tarsus (Fig. 3) with basal part slightly shorter than distal part (8:11), with 2 rows of 19 + 19 lamellae; distal apex with a group of about 9 lamellae. Tibial spurs 1, 1, 2.

Male. Unknown.

Holotype: Female, P. R. CHINA, Yunnan Prov., Gaoligongshan National Nature Reserve, 1-18.VIII.2005, Juanjuan Ma & Yali Cai (SCAU).

1. Segment 5 of fore tarsus with basal part much longer than distal part (Fig. 4) *A. indicum* Olmi
Segment 5 of fore tarsus with basal part slightly shorter than distal part (Fig. 30) *A. gaoligongense* **sp. nov.**

ACKNOWLEDGMENTS

We are grateful to Mr. Jingxian Liu (Zhejiang University), Miss Liqiong Weng, Miss Juanjuan Ma, and Miss Yali Cai (South China Agricultural University) for help in collecting dryinids in the field. This study was supported by the Ministry of Science and Technology of P. R. China (MOST grant N. 2006FY110500).

REFERENCES CITED

GUGLIELMINO, A., AND OLMI, M. 1997. A host-parasite catalog of world Dryinidae (Hymenoptera: Chrysoidea). *Contrib. Entomol. Internat.* 2: 165-298.
GUGLIELMINO, A., AND OLMI, M. 2006. A host-parasite catalog of world Dryinidae (Hymenoptera: Chrysoidea): first supplement. *Zootaxa* 1139: 35-62.
GUGLIELMINO, A., AND OLMI, M. 2007. A host-parasite catalog of world Dryinidae (Hymenoptera: Chrysoidea): second supplement. *Boll. Zool. Agr. Bachic. (Ser. ii)* 39: 121-129.
HE, J., AND XU, Z. 2002. Hymenoptera Dryinidae. *Fauna Sinica* 29. Science Press, Beijing: xii + 464 pp.
OLMI, M. 1984. A revision of the Dryinidae (Hymenoptera). *Mem. American Ent. Inst.* 37: xii + 1913 pp.
OLMI, M. 1991. Supplement to the revision of the world Dryinidae (Hymenoptera Chrysoidea). *Frustula entomol. (1989)(N.S.)* 12(25): 109-395.

Etymology: The specific name derives from the Latin adjective *gaoligongense* (inhabiting Mt. Gaoligong).

Remarks. *Anteon gaoligongense* is similar to *A. indicum* Olmi, 1984 (known from India and Taiwan). The above species can be recognized by the different shape of segment 5 of fore tarsus (with basal part much longer than distal part in *A. indicum*, slightly shorter than distal part in *A. gaoligongense*), as follows:

OLMI, M. 1994. The Dryinidae and Embolemidae (Hymenoptera: Chrysoidea) of Fennoscandia and Denmark. *Fauna Entomologica Scandinavica* 30. Brill, Leiden. 100 pp.
OLMI, M. 1995. A contribution to the knowledge of the Dryinidae of Taiwan (Hymenoptera Chrysoidea). *Boll. Zool. Agr. Bachic. (Ser. ii)* 27: 19-34.
OLMI, M. 1999. Hymenoptera Dryinidae—Embolemidae. *Fauna d'Italia* 37. Edizioni Calderini, Bologna: xvi + 425 pp.
XU, Z., HE, J., AND OLMI, M. 1998. New species of Dryinidae from China (Hymenoptera, Chrysoidea). *Phytophaga* 8: 21-37.
XU, Z., HE, J., AND OLMI, M. 2001. Descriptions of new species of Dryinidae from China (Hymenoptera Chrysoidea). *Frustula entomol. (2000)(N.S.)* 231(36): 1-22.
XU, Z., OLMI, M., AND HE, J. 2003. Three new species of Dryinidae from China (Hym., Chrysoidea). *Entomol. Monthly Mag.* 139: 233-236.
XU, Z., OLMI, M., AND HE, J. 2006a. Description of a new species of *Anteon* Jurine from the People's Republic of China and of the male of *Anteon fidum* Olmi (Hymenoptera: Dryinidae). *Zootaxa* 1164: 57-61.
XU, Z., OLMI, M., AND HE, J. 2006b. Descriptions of five new species of *Anteon* Jurine from China (Hymenoptera: Chrysoidea: Dryinidae). *J. Kansas Entomol. Soc.* 79: 92-99.