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

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ABSTRACT
Dryinidae (Hymenoptera: Chrysidoidea) are parasitoids of Hemiptera Auchenorrhyncha. The genus Dryinus Latreille, 1804, is present in all zoogeographical regions and about 242 species have been described. Dryinus anotaulicus sp. nov. is described from Jiujialing, Baisha County (Hainan Province, China). A check-list of Dryinidae from Hainan Province, China, is presented, and is accessible online at Supplementary material http://www.fcla.edu/FlaEnt/fe944.htm#InfoLink2.

Key Words: Dryinidae, Dryinus anotaulicus, new species, Hainan, China

MATERIALS AND METHODS
The descriptions follow the terminology used by Olmi (1984, 1994, 1999) and He & Xu (2002). The measurements reported are relative, except for the total length (head to abdominal tip, without the antennae). 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.

The types of all Oriental species of Dryinus from China were examined. The material studied in this paper and that in the checklist (Supplementary material http://www.fcla.edu/FlaEnt/fe944.htm#InfoLink2) is deposited in the following collections:

AEIC American Entomological Institute, Gainesville, Florida, USA.
AMNH American Museum of Natural History, New York, USA.
BMNH The Natural History Museum, London, United Kingdom.
BPBM Bernice P. Bishop Museum, Honolulu, Hawaii, USA.
**Systematic Accounts**

*Dryinus anotaulicus* **sp. nov.** (Fig. 1)


**Diagnosis.** Female of *Dryinus* without notauli and with enlarged claw not reduced, much longer than arolium, with one only subapical tooth and one row of lamellae, without a broad apical lamella. Because of the above characters, the new species should be included in group 2, according to the systematics of *Dryinus* proposed by Olmi (1993a); see remarks.

**Description.** Holotype female: Macropterous. Length 3.4 mm. Head black, except mandibles, clypeus and gena testaceous; antenna testaceous; mesosoma black, except lateral margins and posterior collar of pronotum testaceous; metasoma brown; legs testaceous, except hind coxa basally black and club of hind femur partly brown. Antenna clavate; antennal segments in following proportions: 8:6:22:8:7:6:5:8. Head almost flat, dull, granulated, without longitudinal keels or striae on face, except complete frontal line; occipital carina complete, laterally not reaching eyes; temple distinct; posterior ocelli almost touching occipital carina; POL = 3; OL = 4; OOL = 8; OPL = 0.5; TL = 5; greatest breadth of posterior ocelli shorter than TL (2:5). Pronotum shiny, crossed by one only strong posterior transverse furrow (anterior transverse impression absent); anterior collar and lateral regions unsculptured; disc weakly humped, granulated; posterior collar short, sculptured by longitudinal striae; pronotal tubercle not reaching tegula. Scutum, scutellum and metanotum granulated, not rugose. Notauli absent. Propodeum reticulate-rugose, without longitudinal and transverse keels; dorsal surface longer than posterior surface (22:16). Forewing with three dark transverse bands; distal part of stigmal vein longer than...
proximal part (17:7). Hindwing hyaline. Fore
tarsal segments in following proportions:
17:3:6:16:25. Enlarged claw not spatulate (Fig.
1), with one large subapical tooth and one row
of six lamellae + one bristle. Segment 5 of pro-
tarsus (Fig. 1) with two rows of 17 lamellae; dis-
tal apex with a group of at least 20 lamellae.
Tibial spurs 1/1/1.

Male. Unknown.

Hosts. Unknown.

Etymology. This specific name means that the
notauli are absent (anotaulicus = without notauli).

Remarks. The world species of Dryinus are di-
vided into four groups, according to the following
key (Olmi 1993a):

<table>
<thead>
<tr>
<th>Key</th>
<th>Description</th>
<th>Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Enlarged claw very reduced, approximately as long or slightly longer than arolium</td>
<td>Group 4</td>
</tr>
<tr>
<td></td>
<td>— Enlarged claw not reduced, much longer than arolium</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Enlarged claw without subapical tooth, or with at least 2 subapical teeth; rarely with one only subapical tooth, but then with a very broad apical lamella</td>
<td>Group 3</td>
</tr>
<tr>
<td></td>
<td>— Enlarged claw with one subapical tooth, never with a broad apical lamella</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>Notauli at least partly present</td>
<td>Group 1</td>
</tr>
<tr>
<td></td>
<td>— Notauli absent</td>
<td>Group 2</td>
</tr>
</tbody>
</table>

However, in the Oriental region only groups 1
and 3 have been recorded so far. Group 4 is only
present in the Neotropical and Nearctic regions.
Group 2 is recorded from all biogeographical re-
gions of the world, except the Oriental region.
Dryinus anotaulicus is the first Oriental species
of Dryinus belonging to group 2. This new species
is easily recognizable among all Oriental species
of Dryinus because of the characters presented in
the above diagnosis.

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REFERENCES CITED

(including references cited in the Supplemental material
at http://www.fcla.edu/FlaEnt/fe944.htm#Infolink2)
ASHMEAD, W. H. 1893. Monograph of the North Ameri-
45: 1-472.
ASHMEAD, W. H. 1904. Descriptions of new genera and
species of Hymenoptera from the Philippine Islands.
ASHMEAD, W. H. 1905. New Hymenoptera from the Phili-
ippines. Proc. United States Nat. Mus. 29(1416):
107-119.
BENOIT, P. L. G. 1951. Exploration du Parc National Al-
Dryinidae (Hymenoptera Aculeata), Evaniiidae (Hy-
BERGMAN, B. H. H. 1957. A new dryinid parasite of leaf-
DALMAN, J. W. 1823. Analecta entomologica. Typis Lin-

ESAKI, T., AND HASHIMOTO, S. 1931. Report on the leaf-
hoppers injurious to the rice plant and their natural
enemies. Publ. No. 2: 1-59, Entomol. Lab., Dept. Ag-
ric., Kyushu Imperial Univ.

ESAKI, T., AND HASHIMOTO, S. 1932. Report on the leaf-
hoppers injurious to the rice plant and their natural
enemies. Publ. No. 3: 1-42, Entomol. Lab., Dept. Ag-
ric., Kyushu Imperial Univ.

FIORI, A. 1984. Ospiti nuovi o poco noti di Imenotteri
Drinidi (Hymenoptera, Dryinidae). Frustula ento-
mol., N.S., 6(19): 1-5.

catalog of world Dryinidae (Hymenoptera: Chrysi-

GUGLIELMINO, A., AND OLMI, M. 2006. A host-parasite
catalog of world Dryinidae (Hymenoptera: Chrysi-

GUGLIELMINO, A., AND OLMI, M. 2007. A host-parasite
catalog of world Dryinidae (Hymenoptera: Chrysi-
(Ser. ii) 39: 121-129.

HE, J., AND XU, Z. 2002. Hymenoptera Dryinidae. Fa-
una Sinica 29. Science Press, Beijing, P.R. China.
464 pp.

JURINE, L. 1807. Nouvelle méthode de classer les
Hyménoptères et les Diptères, 1. Hyménoptères.
Paschoud, Genève, Switzerland. 319 pp.

KIEFFER, J. J. 1905. Description de nouveaux Proctotryp-

KIEFFER, J. J. 1906. Zwei neue Dryinidae aus Ost-Indien
(Hym.). Z. Hymenopt. Dipter. 5: 335-336.

192.

Nat. Mus. (Ser. ii) 39: 95-142.

LATREILLE, P. A. 1805. Monographie des Ordres des
Hyménoptères et les Diptères, 1. Hyménoptères.
Paschoud, Genève, Switzerland. 319 pp.

LATREILLE, P. A. 1804. Nouvelle dictionnaire d’Histoire

LATREILLE, P. A. 1805. Histoire naturelle generale et
particulière des crustacés et des insectes 13. F. Du-

LATREILLE, P. A. 1809. Genera Crustaceaum et Insec-
torum secundum ordinem naturalum in familiaris dis-
positione 4. Amand Koenig, Parisii et Argentorati. 399
pp.

LIUNG, S. J. 1810. Gonatopus, novum insectorum ge-
MITAL, T. 2009a. First description of the males of Gonatopus lucens (Olmi) and G. asiaticus (Olmi), with host records from Japan (Hymenoptera: Dryinidae: Gonatopodinae). Esakia 49: 117-120.


YANG, C. 1994. Descriptions of Dryinus lycorese n. sp. and its biological notes (Hymenoptera Dryinidae), pp. 37-42 In X. Shen and Z. Shi [eds.], Fauna and
