

## New species of *Chrysidea* Bischoff and a key to the Madagascan species (Hymenoptera: Chrysididae)

by

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Two new species of the chrysidid genus *Chrysidea* Bischoff (*brooksi* and *zimmermanni*) are described from Madagascar. A key to the 12 known species from the island is presented.

### INTRODUCTION

*Chrysidea* Bischoff is a genus in the Chrysidini and is characterized by the nearly always incomplete discoidal cell; marginal cell with posterior vein evenly rounded and practically reaching the costal margin; propodeal tooth sharp; tergum III with an apicolateral tooth or denticle, and apicomediaally simple to denticulate or subtruncate, and sternum II with well separated black spots. The microridged scapal hollow is topped by a convex or biconvex transverse frontal carina. Above it is a second carina which is weaker. In addition the gonocoxa is apically notched, so as to appear double, a unique characteristic.

Nearly all chrysidid species of Madagascar are endemic and occur nowhere else. *Chrysidea* is represented there by 12 known species, the most of any genus in the family. In the following key and descriptions abbreviations used are: F-I etc., flagellomeres; TFC, transverse frontal carina; T-I etc., terga; S-I etc., sterna; MOD, median ocellus diameter.

### Genus *Chrysidea* Bischoff

***Chrysidea*** Bischoff 1913: 34.

Type-species: *Chrysis pumila* Klug 1945: tab. 45, fig. 13. Original designation.

Primary types have been examined for all Madagascan species except *agnata* (Zimmerman) (= *minor* Buysson, preoccupied). Type material has been borrowed from major museums in Paris, Berlin, and Budapest. Also helpful was a sizeable collection from the University of Kansas, Lawrence, U.S.A.

### Key to the Madagascan *Chrysidea*

- |   |  |   |
|---|--|---|
| 1 | Discoidal cell complete, veins strong .....                  | 2 |
| — | Discoidal cell incomplete, at least anterior vein weak ..... | 3 |

- 2 T-II medial punctures larger than those on scutum, body length 6,0-6,5 mm ..... *bellula* Guérin)
- T-II medial punctures fine, close, smaller than those on scutum, body length about 5 mm ..... *agnata* (Zimmermann)
- 3 Parapsidal furrow of scutum deeply impressed opposite tegula ..... 4
- Parapsidal furrow weakly indicated, if at all ..... 5
- 4 Scutal area adjacent to tegula strongly raised, distal margin of T-III not medially subtruncate, metanotum not posteriorly produced in lateral view ..... *bicallosa* (Buysson)
- Scutal area adjacent to tegula not much raised but separated by deep parapsidal furrow, T-III medially subtruncate, metanotum produced posteriorly into a point ..... *zimmermanni* spec. nov.
- 5 Malar space about 2,5 MOD, T-III without traces of a median carina, and angled but not toothed laterally ..... *bucculenta* (Mocsáry)
- Malar space about 1 MOD or less, other characters various ..... 6
- 6 T-III with a small but distinct median apical point or tooth ..... 7
- T-III not toothed apicomediaally ..... 8
- 7 Femora and tibiae reddish distally, tarsi straw-colored ..... *phoebe* Zimmermann
- Femora and tibiae blue-green distally, tarsi brown ..... *dido* Zimmermann
- 8 T-III, as well as T-II, with a well developed median longitudinal carina ..... 9
- T-III, at least, without a definite median longitudinal carina ..... 11
- 9 Sterna bright coppery, forewing nearly clear except for marginal cell, T-II apicad and T-III extensively coppery, midocellus not larger than some areolae below it, tarsi pale reddish ..... *brooksi* Bohart
- Sterna green with slight coppery tints, forewing a little stained, tergal coloration various, midocellus much larger than pits below it, tarsi dark ..... 10
- 10 Midocellus about 3 diameters from compound eye, F-I 2,5 × as long as broad, pronotum strongly constricted lateromedially in dorsal view, female length 8 mm. . . *antiopae* Zimmermann
- Midocellus about 4 diameters from compound eye, F-I 1,7 × as long as broad, pronotum with a moderate medial constriction laterally in dorsal view, female length 6 mm ..... *rhodopis* Zimmermann
- 11 Thorax in dorsal view fully twice as long as broad at pronotum, terga extensively coppery gold, female body length 5,5 mm ..... *aurata* (Bischoff)
- Thorax in dorsal view 1,5-1,7 × as long as broad at pronotum, terga not extensively coppery gold, body length various ..... 12
- 12 Terga blue to purple with bright green posterior border on T-II or T-I-II, thorax in dorsal view about 1,7 × as long as broad at pronotum, female body length 4 mm (occurs also in Nigeria and South Africa) ..... *pumiloides* Zimmermann
- Terga all green, thorax in dorsal view about 1,5 × as long as broad at pronotum, female body length 6 mm ..... *phragmaticola* Zimmermann

### *Chrysidea brooksi*, spec. nov.

Holotype female; length 5,5 mm; green, extensively infused with gold to copper, terga toward posterior margin and sterna reddish coppery; ocellar triangle, middle section of scutum, tegula, greenish blue; tarsi light brown; wings nearly clear, outer veins of discoidal cell faint.

Punctuation mostly moderate and close, larger below midocellus (in frontal rectangle) and laterally on scutum.

F-I 2,2 × as long as broad; malar space 0,7 MOD; subantennal space 1 MOD; subgenal triangle prominent, least interocular distance about equal to length of F-I to III; TFC strong, slightly convex, upper carina partial; pronotum with a moderate medial constriction in dorsal view; parapsidal furrow weak, outwardly margined by a

carina which ends anteriorly at pronotum, cutting off an anterolateral portion of scutum; metanotum bulging but not produced posteriorly.

T-II-III with prominent median longitudinal ridge; T-III a little swollen before well defined pit row, apicolateral tooth of III obtuse; S-II spots oval, 1.5 MOD apart.

MATERIAL EXAMINED. Female holotype (University of Kansas, Lawrence, USA), MADAGASCAR: Tuléar Prov., Beza Mahafaly Reserve, xi-16-84 (R. W. Brooks).

This species is most similar to *antiope* but it is smaller, F-I is shorter, the face and thorax are extensively golden, and the venter is bright reddish coppery. It is named in honour of my friend, Robert Brooks, who collected many chrysidids on Madagascar in 1984.

*Chrysidea zimmermanni* spec. nov.

Holotype female; length 7 mm mostly green to blue-green; deep purple in ocellar area, a transverse pronotal band, midsection of scutum and parapsidal furrow; terga with weak golden tinges; tarsi dark; wings weakly stained, outer veins of discoidal cell obsolete.

Punctuation moderately coarse and close.

F-I 2 X as long as broad; malar space 0.5 MOD; subantennal space 1 MOD; subgenal triangle prominent; least interocular distance about equal to length of F-I-III: TFC biconvex and stronger than upper carina; pronotum with a moderate medial constriction in dorsal view; parapsidal furrow deep, bordered outwardly by a punctate ridge which stops short of pronotum; metanotum with a short but strong posterior point.

T-II-III with prominent median longitudinal ridge; T-III a little swollen before well defined pit row, apical margin with strong lateral tooth, middle half a produced and slightly trilobed truncation; S-II spots small, oval, 2 MOD apart.

MATERIAL EXAMINED. Female holotype (University of California, Davis, USA), MADAGASCAR.

The pointed metanotum, deep parapsidal furrow, and subtruncate middle half of the T-III apex distinguish *zimmermanni*. The species is named in honour of Stephan Zimmermann, who contributed much to our knowledge of Madagascan Chrysididae.

REFERENCE

BISCHOFF, H. 1913. Genera Insectorum, Hymenoptera, Chrysididae. Fasc. 151: 1-86, 46 figs.

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