

THREE NEW SPECIES OF *DYSCRITOBAEUS* PERKINS  
(HYMENOPTERA: PLATYGASTROIDEA, SCELIONIDAE)  
FROM MOZAMBIQUE

O'CONNOR, J. P.<sup>1</sup> and ASHE, P.<sup>2</sup>

<sup>1</sup>National Museum of Ireland, Kildare Street, Dublin 2, Ireland; e-mail: [jpoc25@gmail.com](mailto:jpoc25@gmail.com)

<sup>2</sup>33 Shelton Drive, Terenure, Dublin 12, Ireland; e-mail: [patrick.ashe@upcmail.ie](mailto:patrick.ashe@upcmail.ie)

*Dyscritobaeus maputanus* sp. n., *D. bicolor* sp. n. and *D. hannibal* sp. n. are described and figured based on specimens collected in the vicinity of Maputo, Mozambique. All three species belong to the *orientalis*-group.

Key words: Hymenoptera, Scelionidae, *Dyscritobaeus*, *orientalis* species-group, new species, Mozambique

## INTRODUCTION

The Scelionidae are minute insects (most less than 2.5 mm) which are endoparasitoids of insect/spider eggs, represented by numerous species from every geographical region of the world except for Antarctica. Some of them are important biocontrol agents (GAULD & BOLTON 1988). The genus *Dyscritobaeus* PERKINS, 1910, belonging to the subfamily Scelioninae, is worldwide in distribution except for Europe. The biology of the genus is unknown (CALECA & MINEO 1995, MINEO *et al.* 2009, 2010).

The *orientalis* group of *Dyscritobaeus* PERKINS, 1910, was recently defined by MINEO *et al.* (2009) for species sharing the presence of a hyperoccipital carina and praeoccipital area. The occipital carina penetrates forward into the space between the lateral ocelli up to a distance of one or two diameters behind these, delimiting a praeoccipital area that may be sculptured or unsculptured. The anterior border of this area is the hyperoccipital carina. The species group contains three Australasian (*Dyscritobaeus aspinosus*, *D. carens* and *D. orientalis*), two Oriental (*D. sulawensis* and *D. indicus*) and seven Neotropical (*D. aequatorianus*, *D. costaricanus*, *D. colombianus*, *D. dominicanus*, *D. erraticus*, *D. magnoculo* and *D. triton*) species (MINEO *et al.* 2009, 2010). In this paper, another three new species belonging to the *orientalis* species-group of *Dyscritobaeus* are described from Mozambique in Africa.

## MATERIALS AND METHODS

Anatomical terminology follows CALECA and MINEO (1995). Metasomal segments 1, 2...6 = T1–T6 and scape, pedicel and antennomeres 1, 2...10 = A1, A2...A12. Measurements: HW = head width (dorsal view); HH = head height (lateral view); HL = head length (lateral view); IOS = interorbital space; EW = eye width (lateral view); EH = eye height (lateral view); MS = malar space; MW = mesosoma width (dorsal view); ML = mesosoma length (dorsal view); MTW = metasoma width (dorsal view); MTL = metasoma length (dorsal view); IT1–IT4 = length of metasomal segments tergites T1, T2, T3, T4 (dorsal view). General observations were made with a Wild M20 Stereo-microscope at 40 × 20. Drawings were made with a Nikon Labophot compound microscope with a drawing tube.

***Dyscritobaeus maputanus* sp. n.**

(Figs 1–3)

Material examined: Holotype female: "MOZAMBIQUE, Maputo, May 1989 leg. Mrs Angela". The left antenna, wings and legs are slide mounted in Faure's medium. Holotype is deposited in the Insect Collection of Portici Università Federico II-Napoli, Italy.

Diagnosis: *Dyscritobaeus maputans* shares the reduced postmarginal vein with *D. bicolor*, differing in the unsculptured praeoccipital carina and the longer distance between the hyperoccipital carina and the lateral ocellus.

Female body length: 1.3 mm.

Colour: Head and mandible apically dark red; meso- and metasoma, A2–A12, coxae and tegula orange; mandibles proximally, scape and legs excluding coxae egg-yellow; wings white and semi-transparent.

Head: HW:HL:HH:IOS:MS = 24:5:18:18:3; EH:EW = 10:7; foramen magnum closely located to posterior margin of praeoccipital area; praeoccipital area unsculptured; distance between lateral ocellus and hyperoccipital carina equal with diameter of ocellus; central keel absent; antennal scrobe short and smooth; frons sculpture except antennal scrobe composed of regular shaped polygons with punctate margins; interantennal process strongly protruding; cheeks with radiating sulci; gena very weakly sculptured; mandible bidentate; interommatidial setae short.

Mesosoma: MW:ML = 25:22; mesoscutum sculpture composed of regular shaped polygons with punctate margins; mesoscutellum sculpture similar to that of mesoscutum, with smaller polygons; dorsellum wide, dorsal surface almost continuous with posterior mesoscutellar rim in lateral view; dorsellar spine present, small, not surpassing anterior margin of propodeal metapectal complex in dorsal view; notaulus and median mesoscutal line not marked by sculpture but darker in colour than surrounding mesoscutal areas; scuto-scutellar sulcus and posterior scutellar sulcus not foveolate; posterior ¼ of mesoscutum convex; forewing distinctly surpasses posteriormost point of metasoma; the forewing has a reduced postmarginal vein.

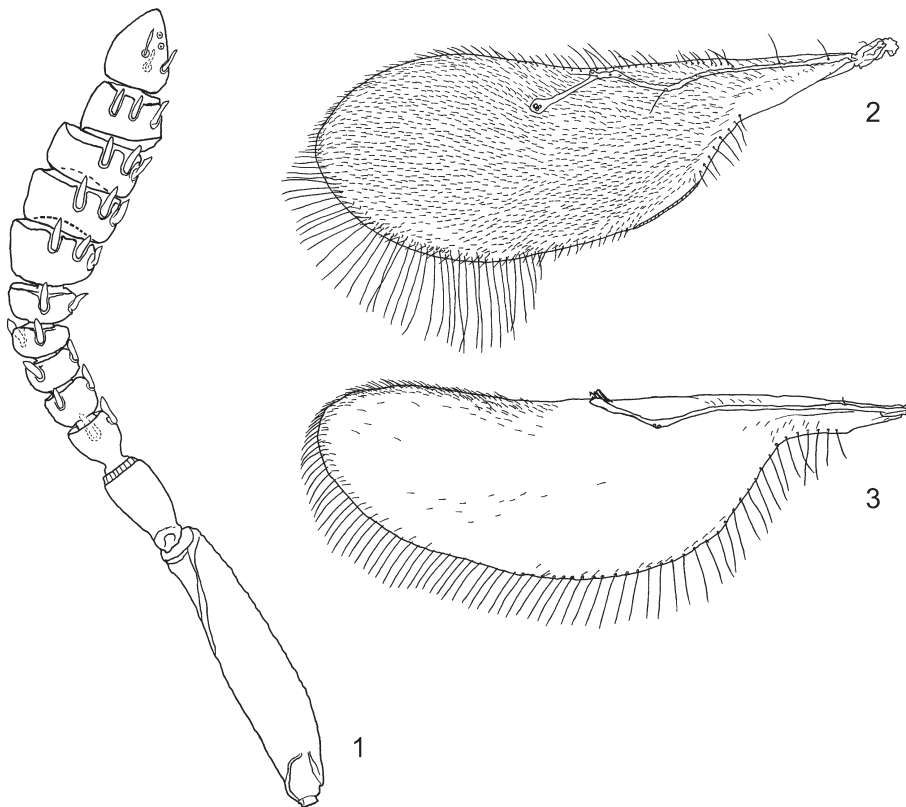
Metasoma: MTW:MTL = 27:31; IT1:IT2:IT3:IT4 = 4.5:9.0:7.0:5.0; MTL slightly longer than head+mesosoma (33:32); basal margin of T1 not raised, with ten shallow foveae; weak sulci arising from medial foveae extending to posterior margin of tergite; interfaces between sulci punctuate; paired longitudinal submedian carina on T1 present, separating densely sculptured external and

smooth internal areas; weak carina at each side with the section bordering the median part smooth while that external to the carina appears densely striated with extremely tiny elements. The apical surface of narrow, smooth area extending along posterior margin of T1 between submedial carinae; length of narrow area equals length of narrow areas extending along anterior and posterior margins of T2; specillum absent; basal foveae on T2 absent; weak longitudinal sulci arising from along posterior margin of anterior narrow smooth area reaching  $\frac{1}{4}$  of tergite; T2 and T3 sculpture composed of regular polygons similar to that of mesoscutellum but smaller in size; remaining tergites with similar but sparser sculpture; in addition, the basal  $\frac{1}{4}$  of the surface of T2 is crossed by weak costae; dorsellum wide, hardly emerging from the posterior rim of the scutellum, punctate above and terminating at the meson in a weak short spine which little surpasses the median parts of the propodeal halves. Interantennal process strongly protruding; central keel absent; scrobe very short and smooth; remaining sculpture of the frons until the vertex like that described for the mesoscutum, while that on the temples and genae is ill-defined being almost unsculptured; praeoccipital area unsculptured. Vestiture of the body consists of short greyish elements.

Male: Unknown.

Biology: Unknown.

Etymology: The species is named after the city of Maputo, Mozambique.



**Figs 1–3.** *Dyscritobaeus maputanus* sp. n. ♀: 1 = antenna, 2 = forewing, 3 = hindwing

*Dyscritobaeus bicolor* sp. n.

(Figs 4–5)

Material examined: Holotype male: "MOZAMBIQUE, Maputo, May 1989 leg. Mrs Angela". The left antenna, wings and legs are slide mounted in Faure's medium. Holotype is deposited in the Insect Collection of Portici Università Federico II-Napoli, Italy.

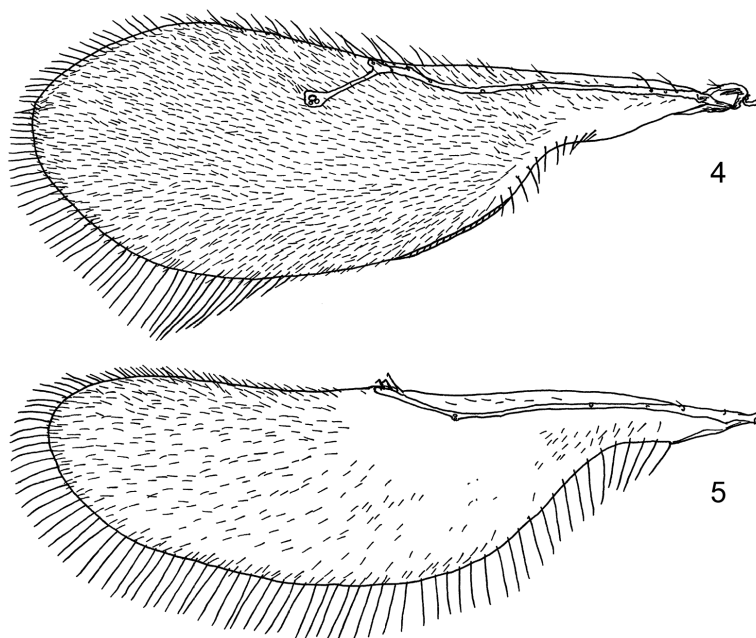
Diagnosis: *Dyscritobaeus bicolor* differs from all other *Dyscritobaeus* species of the *orientalis* species-group in having a sculptured praeoccipital area.

Male body length: 1.2 mm

Colour: castaneous head and mesosoma; castaneous scutellum with ochraceous rim; wings and legs ochraceous; T1–T3 ochraceous with remaining tergites castaneous; A1–A2 ochraceous with remainder of antenna castaneous.

Head: HW:HL:HH:IOS:MS = 22:5.5:10:14:3.8; EH:EW = 9.5:7; mandibles bidentate; A2 shortest, A12 longest of flagellomeres, the latter weakly tapering towards apex; length of A5–A11 almost quadrate in shape, length more or less equal; central keel present, slightly shorter antennal scrobe; antennal scrobe smooth, frons except for reticulate narrow areas along inner orbit and ventral margin of anterior ocellus coarsely punctuate and granulose; cheeks with radiating sulci; interommatidial setae short.

Mesosoma: MW:ML = 24.2:24.6; scutellum subrectangular, slightly longer medially at the meson; dorsellum wide, weakly spined at the meson, hardly surpassing the apical rim of the



Figs 4–5. *Dyscritobaeus bicolor* sp. n. ♂: 4 = forewing, 5 = hindwing

scutellum, not sculptured above with its rim slightly sinuate and overlapping the propodeum at the middle. Mesoscutum has reticulate sculpture with scattered punctures; mesoscutellum sculpture similar to that of the mesoscutum; notaulus and median mesoscutal line not marked; posterior ¼ of mesoscutum weakly concave; the forewing has a reduced postmarginal vein. Hind wing with sparse setae. The vestiture of the head, mesoscutum and scutellum consists of sparse short hairs.

Metasoma: MTL:MTW = 25:23; IT1:IT2:IT3:IT4 = 5:7:5:4; The specillum is absent; T1 traversed by rather dense striae and punctate among the elements; T2 for all its surface has sculpture like that on T1 and on T3 where the striae are rarer; T1–T4 each terminating into a smooth apical stripe.

Female: Unknown.

Biology: Unknown.

Etymology: The species name refers to the dichromatic body colouration.

Note: The holotype of *Dyscritobaeus bicolor* was mentioned as *Dyscritobaeus* sp. in MINEO *et al.* 2009.

### *Dyscritobaeus hannibal* sp. n.

(Figs 6, 7h, 8)

Material examined: Holotype female: “MOZAMBIQUE, Maputo, May 1989 leg. Mrs Angela”; The right forewing and hindwing are slide mounted in Faure’s medium. Paratypes 2 females same data as the holotype. Holotype is deposited in the Insect Collection of Portici Università Federico II-Napoli, Italy; paratypes are deposited in National Museum of Ireland and G. MINEO personal collection.

Diagnosis: *Dyscritobaeus hannibal* shares with *D. orientalis* the circular and posteriorly located specillum and the subequal length of the postmarginal and the stigmal veins. *D. hannibal*, however, differs from *D. orientalis* in the smaller magnitude of the angle between these two veins (30 degrees in *D. hannibal* and 50 degrees in *D. orientalis* (Figs 7o, 7h), the broader forewing, shorter setae on the posterior forewing margin (Figs 6, 9) and the coloration of A7–A12 (*D. hannibal* golden-yellow; *D. orientalis* black).

Female body length: 1.4 mm.

Colour: Mesosoma, metasoma and A7–A12 brown; head dark brown; A3–A6, coxae light brown; A1, A2 and legs excluding coxae golden-yellow; tegula light-yellow.

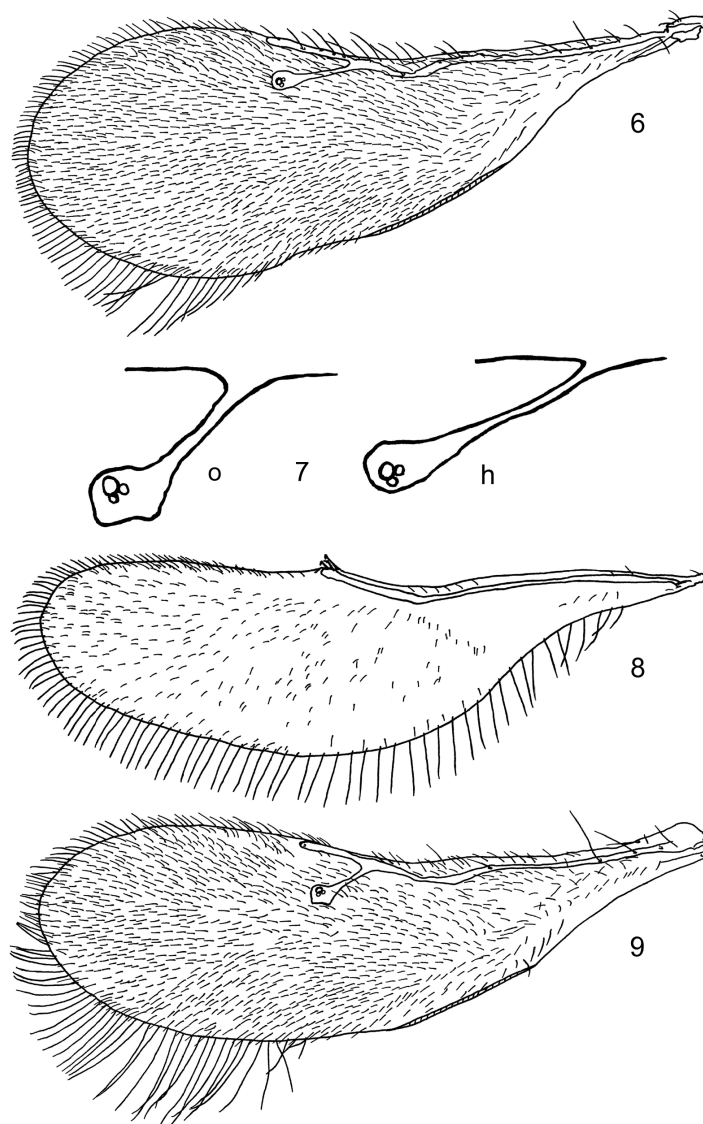
Head: Distance between lateral ocellus and praeoccipital carina is shorter than diameter of ocellus; Surface of the frons very minutely granulose from the scrobe out.

Mesosoma: MW:ML = 28:33; while the sculpture of the mesoscutum and scutellum consists of minute reticulation that is covered with a dense and short vestiture; forewings, see figs 7, 8h & 9. Posterior ¼ of mesoscutum weakly concave.

Metasoma: MTW:MTL = 20:28; MTL shorter than head+mesosoma; T1 crossed by dense and fine costae which are percurrent; the surface of T2 reticulate and transversed by dense and weak costae rather convergent to the specillum; remaining tergites with a minutely reticulate sculpture.

Male: Unknown.  
Biology: Unknown.

Etymology: *Dyscritobaeus hannibal* is named after Hannibal, the famous Carthaginian military commander.



**Figs 6–9.** 6 = *Dyscritobaeus hannibal* sp. n. ♀, forewing. 7 = Stigmal vein and its angle with the post-marginal vein. o = *D. orientalis* (Dodd); h = *D. hannibal* sp. n. 8 = *D. hannibal* sp. n. ♀, hindwing, 9 = *D. orientalis* (Dodd). ♀, forewing

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