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THREE NEW SPECIES OF *DRYXO* ROBINEAU-DESVOIDY, 1830 FROM AFRICA,
WITH A KEY TO THE SPECIES OF THE AFROTROPICAL REGION
(INSECTA, DIPTERA, EPHYDRIDAE)

Riassunto. Tre nuove specie africane di *Dryxo Robineau-Desvoidy*, 1830 con una chiave per le specie della regione afrotropicale (Insecta, Diptera, Ephydridae).

Vengono descritte tre nuove specie di *Dryxo* Robineau-Desvoidy, 1830: *Dryxo pseudornata* n. sp., che differisce dall'affine *Dryxo ornata* (Macquart, 1844) per la presenza di tre setole al margine posteriore dell'anepisterno, per l'assenza di setole al basitarso posteriore del maschio, per la maculazione dell'addome e per la morfologia dei terminali maschili; *Dryxo obscura* n. sp., che differisce dall'affine *D. ornata* per la macchia parafacciale presente fino all'area genale, la presenza di due setole dorsocentrali posteriori, la maculazione dell'addome e per la morfologia dei terminali maschili; *Dryxo fusca* n. sp., che differisce dall'affine *D. ornata* per la parafaccia interamente bruna, per la maculazione dell'addome e per la morfologia dei terminali maschili.

Summary. Three new species of *Dryxo* Robineau-Desvoidy, 1830 are described: *Dryxo pseudornata* n. sp. related to *Dryxo ornata* (Macquart, 1844), from which it differs in having anepisternum with 3 setae on posterior-margin, hind basitarsus of male lacking posterodorsal setae, as well as for the maculation of abdomen, besides the male terminalia morphology; *Dryxo obscura* n. sp. related to *Dryxo ornata*, from which it differs in having the parafacial with a golden brown spot reaching genal area, the presence of two posterior dorsocentral setae, the maculation of abdomen, as well as the male terminalia morphology; *Dryxo fusca* n. sp. related to *Dryxo ornata*, from which it differs in having parafacial entirely brown with dark spot reaching genal area, for the maculation of abdomen, as well as the male terminalia morphology.

Keywords: Diptera, Ephydridae, *Dryxo*, key, new species, Africa.

INTRODUCTION

While examining some material of *Dryxo* Robineau-Desvoidy, 1830, deposited in the collection of the Venice Natural History Museum (MSNVE), I found some specimens belonging to three new species, which are here described.

The genus *Dryxo* currently includes nine species; seven of them (including the new species described herein) occur in the Afrotropical Region and can be identified using the following key. Taxonomy according to MATHIS & ZATWARNICKI (2002).

KEY TO THE AFROTROPICAL SPECIES OF *DRYXO* ROBINEAU-DESVOIDY (1830)

- 1 Abdomen with some brown to black spots on tergites: tergite 1 with a median patch of short, dorsally erect setulae; katepisternal seta well developed, its length subequal to that of the notopleural seta3
- Abdomen uniformly brown to black, unspotted, at most with a thin dark area along the posterior margin; tergite 1 with sparse, inconspicuous, dorsally erect setulae; katepister-

- nal seta strongly reduced, or lacking, if present, then distinctly weaker than notopleural seta2
- 2 Postsutural supra-alar seta greatly reduced or absent; anepisternum lacking moderately long, slender setae along posterior margin*freidbergi* Mathis & Zatwarnicki
 Postsutural supra-alar seta well developed; anepisternum bearing 1 or 2 moderately long, slender setae along posterior margin.....*woodi* Cresson
- 3 Postpronotal seta absent; R stem vein bearing about 6 long thin setulae along the posterior margin of the humeral crossvein.....*margaretae* Cogan
 - Postpronotal seta well developed; R stem vein bearing 2 or 3 long, thin setulae along the posterior margin of the humeral crossvein.....4
- 4 Face, parafacial and gena with grey microtomentum; parafacial with a golden brown stripe or maculation5
 - Face, parafacial and gena with brown to blackish microtomentum; parafacial with dark maculation.....*fusca* n. sp.
- 5 Dorsocentral setae absent; anepisternum and katepisternum lacking postero-marginal setae; hind basitarsus of the male with long posterodorsal setae*ornata* (Macquart)
 - Dorsocentral setae present; anepisternum and katepisternum with postero-marginal setae; hind basitarsus of the male lacking posterodorsal setae6
- 6 One dorsocentral seta; parafacial with grey microtomentum, with transverse golden brown stripe at the level of the antennal base; anepisternum with 3 long postero-marginal setae; katepisternum with 5 well developed postero-marginal setae; tergite 2 brown; tergite 3 with 1 apical spot; tergite 4 with 2 lateral spots; tergite 5 with 2 basal and 1 apical spots.....*pseudornata* n. sp.
 - Two dorsocentral setae; parafacial with golden brown spot reaching genal area; anepisternum with 7 well developed postero-marginal setae; katepisternum with 2 long postero-marginal setae; tergite 2 with 1 lateral spot; tergite 3 with 1 lateral and 1 apical spots; tergite 4 with basal spot; tergite 5 with one basal spot*obscura* n. sp.

Dryxo pseudornata n. sp.

Type material. Holotype ♂, 7 paratypes ♂♂ and 1 paratype ♀ from Sierra Leone, Northern Province, F. Seli, 16.II.1994; 1 paratype ♂ from Sierra Leone, Western Area, Sussex, 27.X.1991; 1 paratype ♀ from Sierra Leone, Western Area, 27.X.1991; 2 paratypes ♀♀ from Sierra Leone, Western Province, near Bumbuna, 12/13.V.1991; 1 paratype ♂ from Sierra Leone, Western Province, 12.III.1993, all of them collected by Walter Rossi. All specimens are deposited in the collection of the Venice Natural History Museum.

Holotype and paratypes are micropinned dorsally; abdomen and terminalia of the holo-

type preserved in a separate plastic microtube, pinned below the specimen.

Description of the male

Body length: 8.1-8.2 mm.

Head densely microtomentose; frons mostly grey to pale brown, with some blackish to brown maculation (1 posterior and 1 anterior spot); inner vertical seta subequal or slightly longer than the outer vertical seta; antenna brown, with grey to pale brown microtomentum dorsally; arista white, bearing 14 dorsal rays; face, parafacial, gena and microtomentose portion of the clypeus concolorous, whitish grey; face bare except for a few series of setulae parallel to frontal suture; parafacial with a transverse, golden brown stripe at the level of the antennal base; eye slightly higher than wide; gena concolorous with the face and parafacial; gena/eye ratio 0.64-0.66.

Thorax: scutum mottled, partially to mostly brown, with a blackish brown longitudinal stripe, along acrostichal and dorsocentral tracks; scutellum blackish brown, with a median dark brown stripe; pleura grey; chaetotaxy of thorax: 1 well developed postpronotal seta; acrostichal setulae poorly developed, inconspicuous, in 2 rows; anterior dorsocentral setae absent, 1 posterior dorsocentral; 1 notopleural seta; 1 well developed supra-alar; posterior margin of scutellum truncate, with 1 apical and 1 basal pair of setae; katepisternum with 1 well developed seta, its length subequal to notopleural seta and 5 long postero-marginal setae; anepisternum with 3 well developed postero-marginal setae. Wing infuscate; vein R1 setulose; halter yellowish. Legs with femora brown, tibiae and tarsi yellowish; fore basitarsus normally developed, similar to basitarsomeres of mid- and hindlegs; hindtibia and hindbasitarsus of male lacking long posterodorsal setae, only with sparse hair-like setulae.

Abdomen: tergite 1 with medial patch of short, dorsally erect setulae; tergite 3 with an apical spot; tergite 4 with two lateral spots; tergite 5 with two basal and one apical spots. Terminalia: epandrium, in posterior view, similar to a narrow pointed arch, dorsally narrow and rounded; epandrial arms broad, apically rounded; cercus subtriangular, wider subventrally; presurstylus in posterior view, narrowly ovoidal; hypandrium, in ventral view, narrow furcate, with phallopodeme short and rounded.

Female. Similar to male.

Comparative remarks. *Dryxo pseudornata* sp. nov. is externally similar to *Dryxo ornata* (Macquart, 1844), in having tergites with dark spots, postsutural supra-alar and katepisternal setae well developed. It differs from the latter species mainly by the following characters: anepisternum with 3 developed postero-marginal setae (lacking in *D. ornata*); hind tibia and hind basitarsus of male lacking long posterodorsal setae (long setae are present in *D. ornata*); different pattern of maculation of abdomen; epandrium dorsally rounded and phallopodeme short and rounded (figs. 1-2, 7-8).

Etymology. The species epithet, *pseudornata*, refers to the morphological similarity with the closely allied *Dryxo ornata* (Macquart, 1844).

***Dryxo obscura* n. sp.**

Type material. Holotype ♂, 2 paratypes ♂♂ and 1 paratype ♀ from Sierra Leone, Northern Province, F. Seli near Bumbuna, 18.II.1994; 1 paratype ♂ from Sierra Leone, Northern Province, near Bumbuna, 12.III.1993, all of them collected by Walter Rossi. All specimens are deposited in the collection of Venice Natural History Museum.

Holotype and paratypes are micropinned dorsally; abdomen and terminalia of holotype preserved in a separate plastic microtube, pinned below the specimen.

Description of the male

Body length: 7.1-7.2 mm.

Head densely microtomentose; frons mostly to almost entirely grey to pale brown, with some blackish brown maculation (1 posterior, at the level of ocellar triangle, and 1 anterior-medial spot); inner vertical seta subequal or slightly longer than outer vertical seta; antenna black, dorsally covered with grey to pale brown microtomentum; arista brown, bearing 14 dorsal rays; face, parafacial, gena and microtomentose portion of the clypeus concolorous, whitish grey; face bare except for a few series of setulae parallel to the frontal suture; parafacial with golden brown spot reaching genal area; eye slightly higher than wide; gena grey microtomentose; gena/eye ratio 0.65-0.66.

Thorax: scutum mottled, partially to mostly brown, with a blackish brown longitudinal stripe along the acrostichal track; scutellum blackish brown, with a median brownish stripe; pleura grey; anepisternum partially infuscate; chaetotaxy of thorax: 1 well developed postpronotal seta; acrostichal setulae poorly developed, inconspicuous, in 2 rows; anterior dorsocentral setae absent; 2 posterior dorsocentral; 1 notopleural seta; 1 well developed supra-alar; posterior margin of the scutellum truncate, with 1 apical and 1 pair of setae; katepisternum with 1 well developed seta, its length subequal to that of the notopleural seta and 7 long postero-marginal setae; anepisternum with 2 developed postero-marginal setae and 3 setulae poorly developed. Wing infuscate; vein R1 setulose; haltere yellow. Legs with femora grey, tibiae and tarsi yellowish; fore basitarsus normally developed, similar to basitarsomeres of mid- and hindlegs; hindtibia and hindbasitarsus of male lacking long posterodorsal setae, with a row of ventral setulae.

Abdomen: entirely dark-brown, with dark spots; tergite 1 with medial patch of short, dorsally erect setulae; tergite 2 with a lateral spot; tergite 3 with 1 lateral and 1 apical spot; tergite 4 with a basal spot; tergite 5 with a basal spot. Terminalia: epandrium, in posterior view, similar to a narrow pointed arch, very narrow and rounded dorsally; epandrial arms wider dorsocentrally, ventrally becoming sinuous, apically rounded; cercus narrow and elongated, presurstylus subtriangular in posterior view; hypandrium, in ventral view, narrow, furcate, with phallopodeme short and rounded.

Female. Similar to male.

Comparative remarks. *Dryxo obscura* n. sp. is similar to *Dryxo ornata*, in having tergites with dark spots, postsutural supra-alar and katepisternal setae well developed. It differs from the latter species mainly in the following characters: parafacial with golden brown spot reach-

ing genal area (uniformly grey in *D. ornata*), two posterior dorsocentral setae (absent in *D. ornata*), different pattern of maculation of the abdomen, epandrium dorsally very narrow, phallopodeme short and rounded (figs. 3-4, 7-8).

Etymology. The epithet *obscura* refers to the dark brown coloration of the abdomen.

***Dryxo fusca* n. sp.**

Type material. Holotype ♂, 1 paratype ♀ from Sudan, Liria, 31.I.1982, leg. G. Rallo; 1 paratype ♂ from Sierra Leone, Northern Province, F. Seli near Bumbuna, 16.II.1994, leg. W. Rossi. All deposited in the collection of Venice Natural History Museum.

Holotype and paratypes are micropinned dorsally; abdomen and terminalia of a paratype preserved in a separate microtube, pinned below the specimen.

Description of the male

Body length: 7.2-7.3 mm.

Head densely microtomentose; frons mostly to entirely brown to pale brown, with blackish maculation (1 posterior, at the level of ocellar triangle, and 1 antero-medial spot); inner vertical seta subequal or slightly longer than the outer one; antenna brown, dorsally covered with brown to pale brown microtomentum; arista white, bearing 12 dorsal rays; face, parafacial, gena and microtomentose portion of the clypeus blackish; face bare except for a few setulae parallel to the frontal suture; parafacial with black spot reaching genal area; eye slightly higher than wide; gena brown microtomentose; gena/eye ratio: 0.59-0.60.

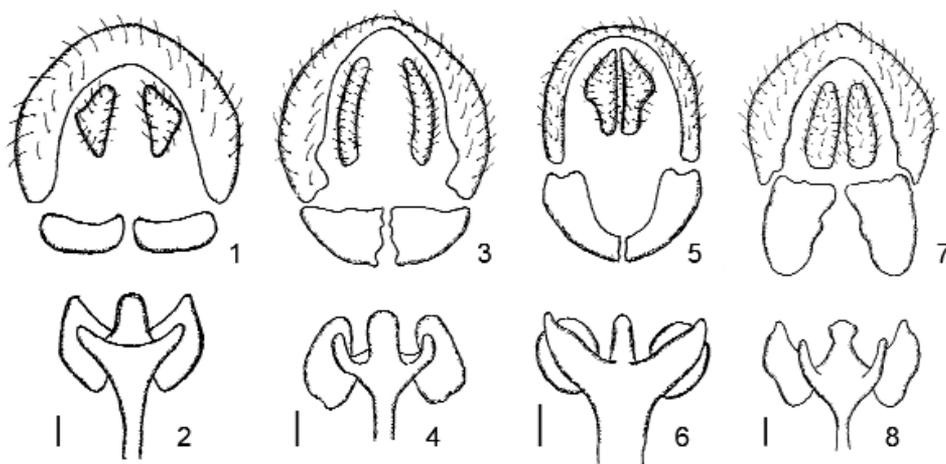
Thorax: scutum brown in the presutural area, black in the postsutural one; scutellum blackish brown, with a lateral dark strip; pleura brown; chaetotaxy of the thorax: 1 well developed postpronotal seta; acrostichal setulae poorly developed, inconspicuous, in 2 rows; anterior dorsocentral setae absent, 1 posterior dorsocentral; 1 notopleural seta; 1 well developed supra-alar, 1 well developed postalar; posterior margin of the scutellum truncate, with 1 apical and 1 basal pair of setae; katepisternum with 1 well developed seta, its length subequal to that of the notopleural seta, and 3 long postero-marginal setae; anepisternum with 4 well developed marginal posterior setae. Wing infuscate; vein R1 setulose; haltere yellow-brownish. Legs with femora brown, tibiae and tarsi yellow-brownish; fore basitarsus normally developed, similar to basitarsomeres of mid- and hindlegs; hindbasitarsus of the male with long posterodorsal setae.

Abdomen: entirely brown; tergite 1 with medial patch of short, dorsally erect setulae; tergite 2 and 3 each with a basal dark spot; tergite 4 with a dark postero-marginal stripe; tergite 5 grey-brown. Terminalia: epandrium, in posterior view, rounded, very narrow dorsally and laterally; presurstylus, in posterior view, elongate and very large superiorly; epandrial arms very narrow dorsocentrally; cercus large and sinuous laterally; hypandrium, in ventral view, furcate, with broad arms; phallopodeme very short and rounded.

Female. Similar to male, except for hindbasitarsus, lacking posterodorsally setae and for tergite 5, brown.

Comparative remarks. *Dryxo fusca* n. sp. is similar to *Dryxo ornata*, in having tergites with a dark band, postsutural supra-alar and katepisternal setae well developed. It differs from the latter species mainly in the following characters: parafacial brown with dark spot reaching genal area (grey in *D. ornata*), different pattern of maculation of abdomen, epandrium dorsally and laterally very narrow, hypandrium with broad arms; phallopodeme very short and rounded (figs. 5-6, 7-8).

Etymology. The species epithet, *fusca*, refers to the brown coloration of parafacial.



Figs 1-8. External male terminalia (epandrium in ventral view, above) and internal male terminalia (hypandrium and phallopodeme, below) of *Dryxo* sp. **1-2:** *D. pseudornata* n. sp. (holotype); **3-4:** *D. obscura* n. sp. (holotype); **5-6:** *D. fusca* n.sp. (holotype); **7-8:** *D. ornata* (Macquart, 1844) (Sierra Leone, W.Area, Sussex). Scale bars: 0.1 mm.

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