

A NEW SPECIES OF *COSMINA* ROB.-DESVOIDY, 1830 IRAQ
(DIPTERA : CALLIPHORIDAE)*

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ABSTRACT

This study includes a detailed morphological description of *Cosmina baghdadensis* sp. nov. from Iraq.

Many characters are used in identification especially chaetotaxy and male genitalia. Locality, host plant, and data of collection were given.

INTRODUCTION

Cosmina Rob.-Desvoidy is a small genus of family Calliphoridae which contain nine species membred by Peris, 1952; Zumpt, 1956 and Deeming, 1992. Taxonomic revision of the genus has been carried out by Rohdendorf, 1935; Kurahashi *et al.*, 1976 and Rognes, 1998.

Cosmina baghdadensis sp. nov.

Male: Dark green, body length 12.5-8.1 mm, width 3.7-2.2mm.

Head: Vertex (fig.1a) black, inner vertical bristles long, slightly curved Postvertical bristles very short, equal to one-fourth of inner ones; Eye holoptic, oval, 2.6-2.1mm length and 1.3-1.0mm weidth, occupy nearly third-fourth of anterior region of the head and with a row of postocular bristles; Ocular triangle black with slivery pollen; frontal vitta dark brown broad in the base 0.52-0.42mm and gradually tapering forward the apical and with 12-13 bristles; Parafrontal dark brown-black with silvery pollen and two rows of black setae; Face and Parafacial dark brown with slivery pollen and lower densely of setae reached to the fifth basal of eyes; Facial carinae prominent Gena dark brown-black with silvery pollen, its lower margin with long white setae; Antenna (fig.1b) redish-redish brown with silvery pollen, arista plumose on its third apical, Maxillary palp (fig.1c) club shaped , its basal half paler red and apical half dark brown-black with black setae; Mentum (fig.1d) Dark brown (fig.1d) dark brown nearly triangular shaped, with moderate densely of setae and bristles and a pair of very long bristles. Labrum-epipharynx (fig.1e) cone shaped, its apodeme slender, with cup-like apex, 0.84-0.73 length; Folds of oral lobe with moderate densely of yellow setae; Prcstomal teeth yellow and very short.

Head in female is similar to those of male except frons which is broad; Outer Vertical bristles well developed; Parafrontal with 1 proclinate, 2 reclinate Fronto-orbital bristles; Frontal vita with 12-13 bristles.

Thorax: Scutum shinnying dark brown, with slightly silver pollen; Chaetotaxy acrostichal bristles 0+2; dorsocentral bristles 0+2; Notopleural bristles 2; humeral bristles 2; posthumeral bristle 1; intra-alar bristles 0+2; post-alar bristles 2; supra-alar bristles 3; scutellum bristles 4+1; propleural bristle 1; stigmatal bristle 1; sternopleural bristles 1:1; Pleuron dark green with slightly silver pollen; Mesothracic spiracles circular dark brown-black; Anal ridge of mesopleural plate with a row of bristles and densely of

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long, fine golden setae; pteropleuron with a comb of long, thick black setae; Hypopleuron with a row of long bristles; Metathoracic spiracles dark brown-black; circular shaped; Subanal knob dark brown, kidney shaped with slightly silver pollen and without setae.

Wings: Hyaline, basicosta dark brown, subcostal sclerite orange, without setae, its dorsal surface with 7-8 setae, node with 4-3 bristles on each dorsal and ventral surface, apical cell is narrow open 0.17-0.12 mm; thoracic squama paler yellow, without setae, its hind margin with height densely in size, yellow and fine setae; upper squama is similar to that of thoracic squama but smaller.

Legs: Coxae, trochanters and femora dark green; tibiae and tarsus red-red brown; fore femora with a pair rows of long bristles on the posterodorsal surface and a row bristles on the posteroventral surface; fore tibia with a row of bristles on the anterodorsal surface; 2 bristles on the anteroventral surface; mid femur with a row of bristles on the postventral surface; mid tibia with 1 bristle on each anteroventral and posteroventral surface (fig.2a) and 2 bristles on each anterodorsal and posterodorsal surface (fig.2b); hind femur with a row of long bristles on anterodorsal surface; hind tibia with a row of bristles on the anterodorsal surface (fig.2c) and 2 bristles on anteroventral surface (fig.2d).

Abdomen:- Dark green, with white pollen, hind margin of tergites with a row of bristles, 5th tergite with numerous of long bristles; sternites in male (fig.2e) dark green with white pollen, 2nd sternite squar shaped 3rd sternite nearly triangular shaped, 4th similar to the 3rd one, sternites 4-2 with dark brown setae and numerous of long bristles; 5th sternite with deep incision posteriorly forming two oval lobes with height densely long dark brown bristles; abdomen in female (fig.2f) similar to that of male but differ from it by that of 5th sternite is rectangular shaped.

Male terminalia:- Tergite 6 (fig.3a) dark brown, its hind margin with a row of bristles; sternite 6 (fig.3b) ring shaped, its right arm long with short and does not join with right inferior of syntergosternite 7+8; syntergosternite (fig.3c) dark brown with moderate densely different length black bristles; tergite 9 (fig.3d) elongated oval shaped, its half basal surface with height densely of bristles, one-fourth of apical without bristles; sternite 9 (fig.3e) with hind margin deeply emarginated, its apodeme moderately bend, the distance among its apical 0.26-0.21mm paralobes (fig.4a) nearly cylindrical shaped, its basal half with moderate dense of setae; anal cerci (fig.4b) slightly curved, united together in half region, basal half with densely long setae, Phallus (fig.4c,d,e) 0.80-0.66 length, basiphallus nearly square shaped, 0.31-0.24 mm; Epiphallus tubely shaped, 0.28-0.21mm; paraphallus 0.49-0.42mm with pin and curved apex; hypophallus oval shaped, its outer margin toothed, acrophallus short; pregonite (fig.4f) hook-like, its outer margin with a row of short dark brown bristles; postgonite (fig.4i) cylindrical shaped, its apical with long bristle; phallopodeme (fig.4h) nearly cylindrical shaped, its anterior surface with chitinous band which occupying half of the region; Ejaculatory sclerite (fig.4i) nearly cup shaped, 0.52-0.42mm length.

Cosmina bagdadensis sp. nov. is closely related

to *C. clarpennis* Rob.-Desvoidy but differ from it by following characters Chaetotaxy:- dorsocentral bristles 4+1; posthumeral bristles 2-3; intra-alar bristles 1+2; scutellum bristles 3+0; mid tibia with 2 bristles on postventral surface, antero-lateral of basiphallus non emarginate, epiphallus shorter than basiphallus, the distance among basiphallus and paraphallus process is wide.

Host: Weed 1 ♂

1 Holotype, 4 ♀ Paratype

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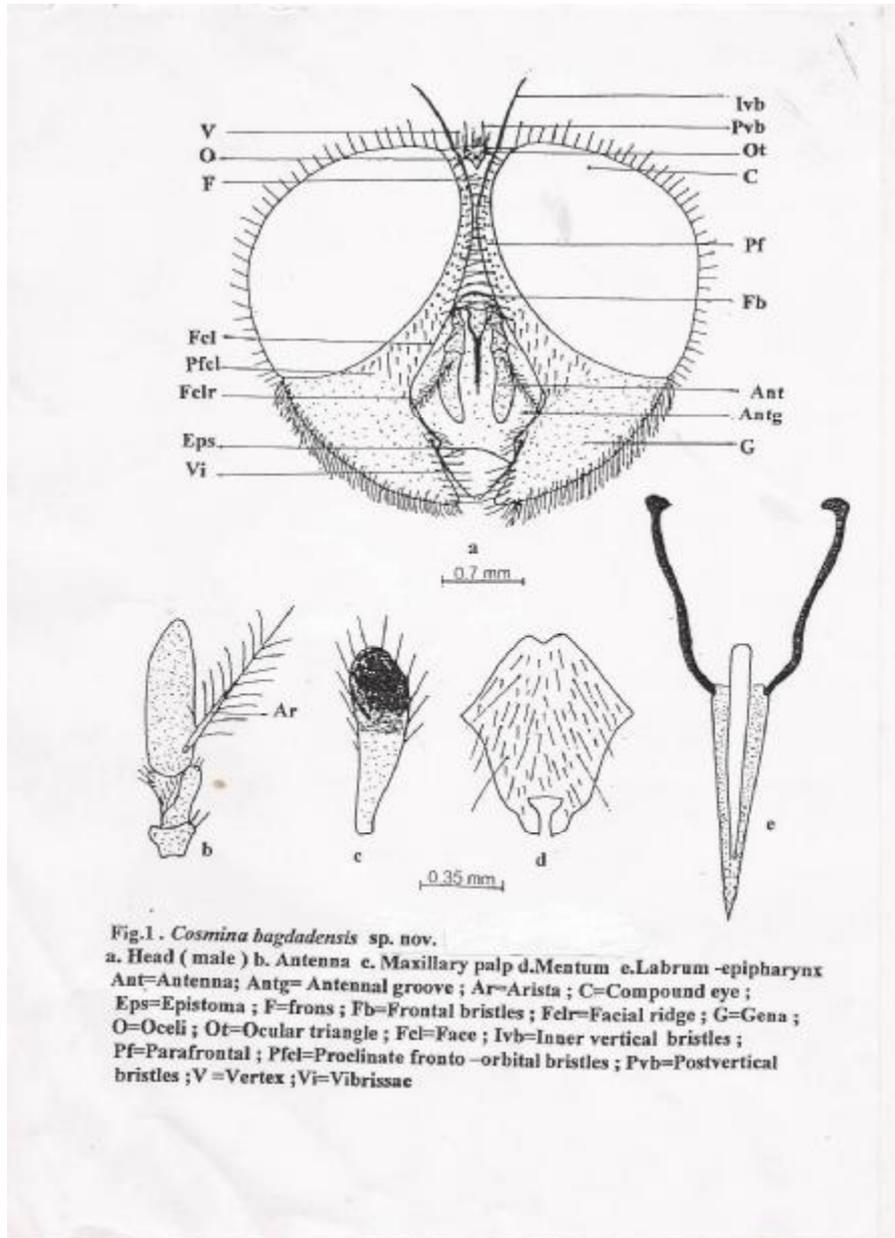
Coll. 10.5.1999, (Leg. N. A. Mawlood)

Types are deposited in Iraq Natural History Museum.

REFERENCES

- Deeming, J. C. 1996. The Calliphoridae (Diptera : Cyclorrhapha) of Oman. *Fauna of Saudi-Arabia*, 15: 264-279.
- Kurahashi, H., Benjaphongm, N., and Omar, B. 1976. Blow flies (Insecta : Diptera : Calliphoridae) of Malaysia and Singapore. *Raf. Bull. Zool.*, 5: 1-88.
- Peris, S. V. 1952. La subfamilia Rhiniinae (Diptera : Calliphoridae) *Anales de la Estacion Experimental de Aula Dei.*, 3: 1-224.
- Rognes, K. 1998. Contribution to a manual of Palaearctic Diptera. Vol 3, Higher Brachycera. Published by science Herald, Budapest, :617-648.
- Rohdendorf, B. B. 1935. Sarcophaginae. In *Lindner Fliegen der Palaearktischen Region*, Stuttgrat., 64 h :49-128.
- Zumt, F. 1956. Calliphorinae. In *Linder Fliegen der Palaearktischen, Region*. Stuttgrat., 641: 1-140.

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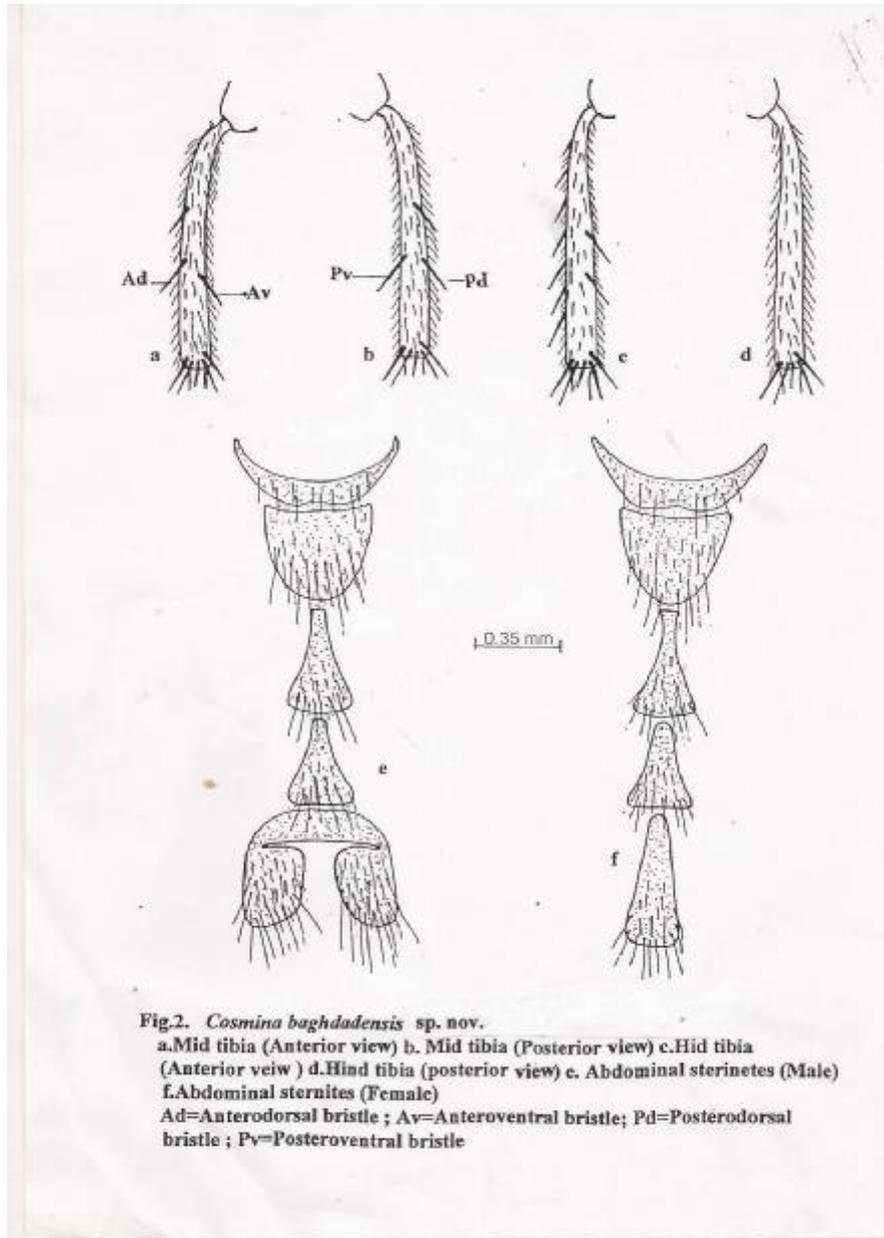


Fig.2. *Cosmina baghdadensis* sp. nov.
a. Mid tibia (Anterior view) b. Mid tibia (Posterior view) c. Hind tibia (Anterior view) d. Hind tibia (posterior view) e. Abdominal sternites (Male) f. Abdominal sternites (Female)
Ad=Anterodorsal bristle ; Av=Anteroventral bristle; Pd=Posterodorsal bristle ; Pv=Posteroventral bristle

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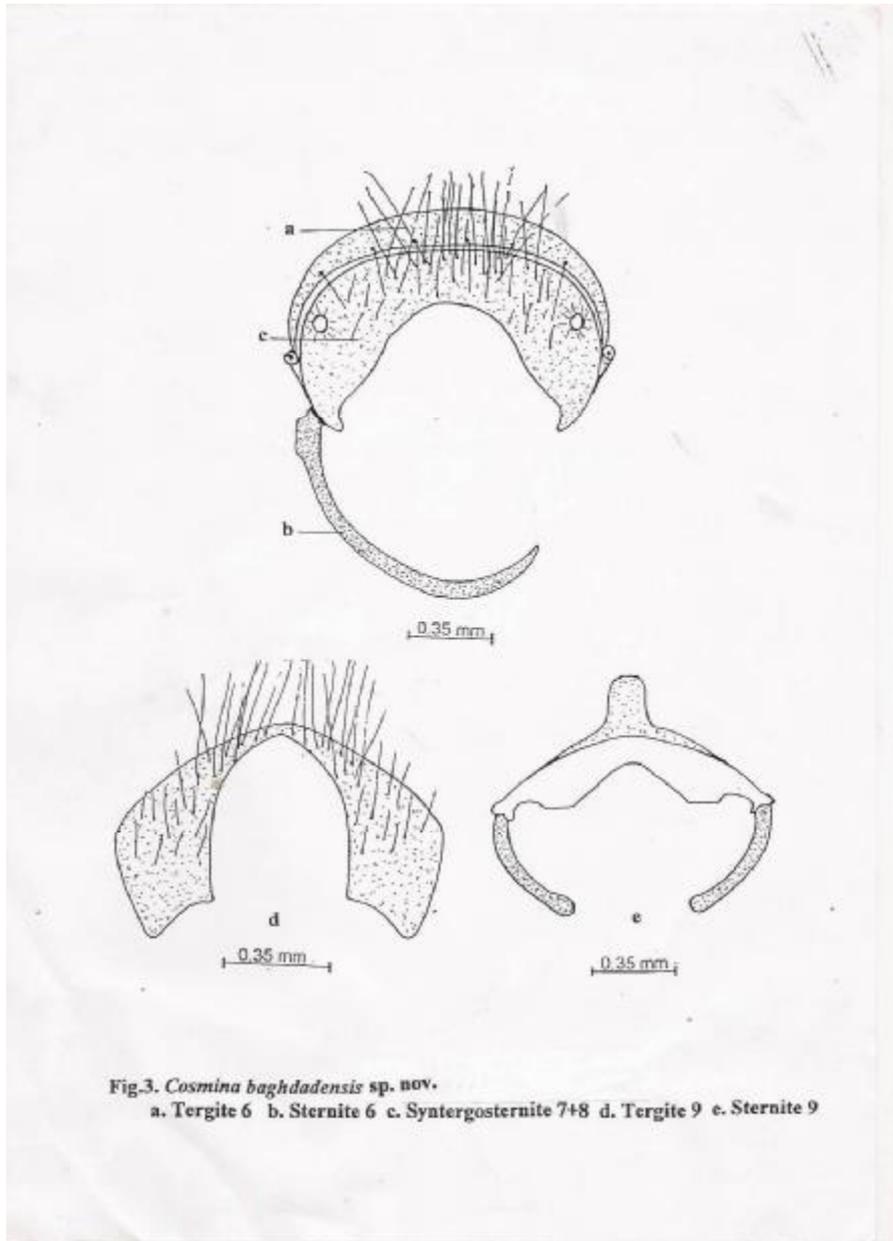
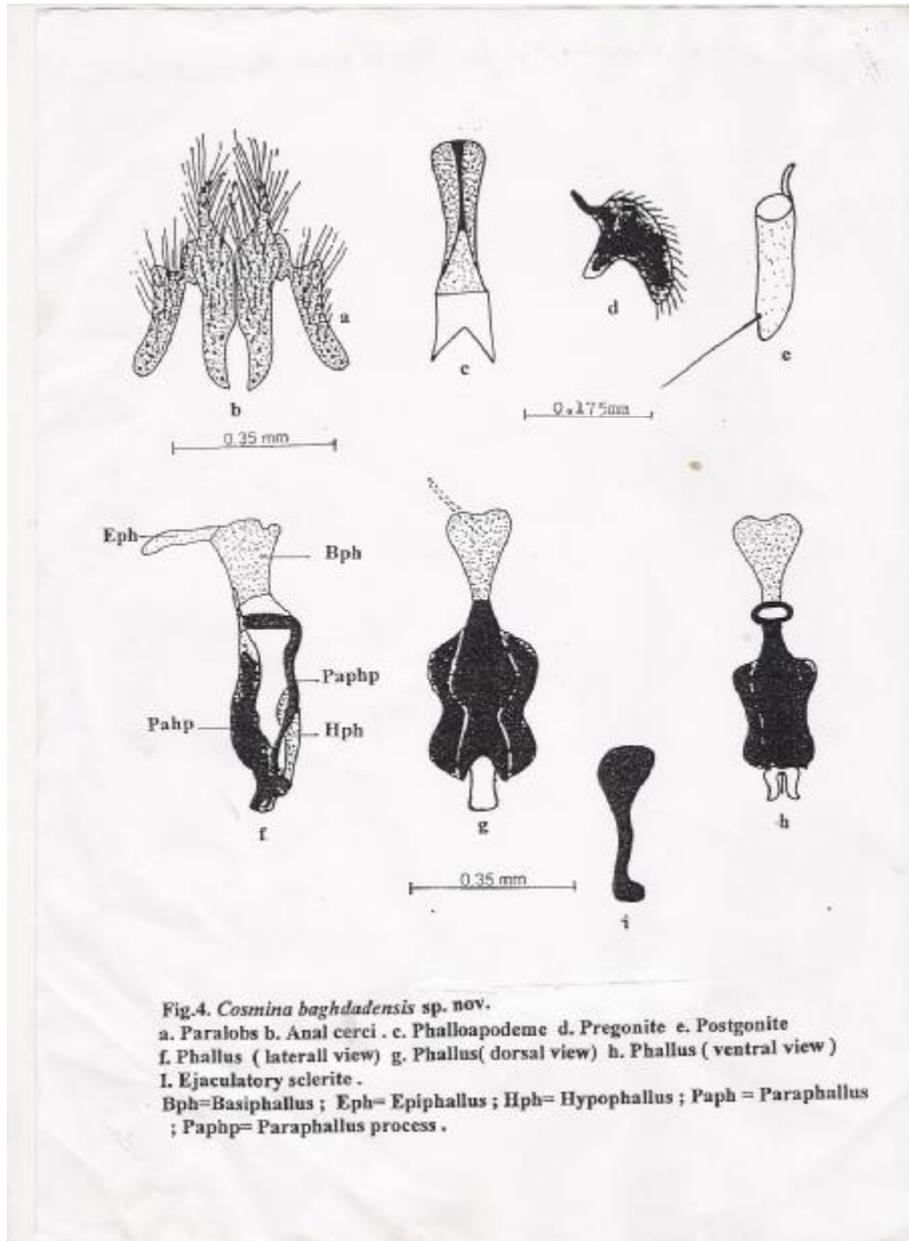


Fig.3. *Cosmina baghdadensis* sp. nov.
a. Tergite 6 b. Sternite 6 c. Syntergosternite 7+8 d. Tergite 9 e. Sternite 9



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سنة جنم يلد و نفض و

Cosmina Rob. Desvoidy, 1830 (Diptera : Calliphoridae)

قاعلي ف

أ.د. يولو ردة المدي ليز
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يقا رلي يه لايخير المفتح م / دلغ بتمماج
يلايد

خداة صلا

هدل لديد عولمي رلخا مظلماً المصفتة مضمونة لدا
Cosmina فده بنضتة
baghdadensis sp. nov. قريلا في.

ة ية لاندالم لوهو قرحا مخرج يرا تونق لمتلحه.