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

**N. A. Mawlood and ***M. S. Abdul-Rassoul
** College of Education, Diyala University
***Iraq Nature Museum History

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 Rohdendrof, 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: Vertx (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 tappering 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 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; Preptomal 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 procline, 2 reclinate Fronto-orbital bristles; Frontal vita with 12-13 bristles.

Thorax: Scutum shinning 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; Mesothoracic spiracles circular dark brown-black; Anal ridge of mesopleural plate with a row of bristles and densely of

* Part of Ph.D. Thesis
A New Species of Cosmina

long, fine golden setae; pteropleuron with a comb of long, thick black setae; Hyponopleuron with a row of long bristles; Metathoracic spiracles dark brown-black, circular shaped; Subanal knob dark brown, kidney shaped with slightly sliver 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 posteroventral surface and a row bristles on the posteroventral surface; for tibia with a row of bristles on the anterodorsal surface; 2 bristles on the anterocentral 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 posteroventral 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 sequar 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 dose not join edith right inferior of syntergosternite 7-8; syntergosternite (fig. 3c) dark brown with moderate densely different length black bristles; tergite 9 (fig. 3d) elongated ovaly 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 paralobs (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 sequar shaped, 0.3 1-0.24 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; phalloapodeme (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 baghdadensis 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
N. A. Mawlood and M. S. Abdul-Rassoul

Coll. 10.5.1999, (Leg. N. A. Mawlood)
Types are deposited in Iraq Natural History Museum.

REFERENCES


A New Species of *Cosmina*

![Diagram of *Cosmina*](image)

**Fig. 1. Cosmina kagadensis* sp. nov.**

- **a. Head (male)**
- **b. Antenna**
- **c. Maxillary palp**
- **d. Mentum**
- **e. Labrum**
- **f. Labium**
- **g. Antennal groove**
- **h. Arista**
- **i. Compound eye**
- **j. Epistoma**
- **k. Frontal grooves**
- **l. Facial ridge**
- **m. Genae**
- **n. Ocelli**
- **o. Ocellar triangle**
- **p. Facial face**
- **q. Inner vertical bristles**
- **r. Parafacial**
- **s. Proximate frontal orbital bristles**
- **t. Postvertical bristles**
- **u. Vertex**
- **v. Vibrissae**

*Fig. 1 shows the anatomical features of *Cosmina kagadensis*. The labels indicate various morphological structures, including the head, antennae, and other parts of the insect.*
Fig. 2. *C. 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 = Anterolateral bristle; Pd = Posterodorsal bristle; Pv = Posterolateral bristle.
A New Species of Cosmina

Fig. 3. Cosmina bagdadensis sp. nov.
- a. Tergite 6
- b. Sternite 6
- c. Synergosternite 7+8
- d. Tergite 9
- e. Sternite 9

54
Fig. 4. Casmea baghdadensis sp. nov.

f. Phallus (lateral view) g. Phallus (dorsal view) h. Phallus (ventral view)
i. Ejaculatory spine

Bph=Basiphallus; Eph=Epiphallus; Hph=Hyposphallus; Paph=Paraphallus
Paphp=Paraphallus process.
A New Species of Cosmina


A New Species of Cosmina

*Cosmina* Rob. Desvoidy, 1830 (Diptera : Calliphoridae)

A New Species of *Cosmina* baghdadensis sp. nov.