

**Description of a new species of the genus *Coccygidium* de Saussure, 1822
(Hymenoptera: Braconidae: Agathidinae) from Saudi Arabia.**

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ABSTRACT

Coccygidium hebabi sp. nov., (Hymenoptera, Braconidae, Agathidinae) is described from Saudi Arabia. Morphological diagnostic characters of the new species were figured and compared with those of the related species *Coccygidium arabica* Ghramh, 2011.

Key words: *Coccygidium hebabi* sp. nov.; *Coccygidium arabica* Garamah; new species, Saudi Arabia, Hymenoptera, Braconidae, Agathidinae.

INTRODUCTION

Members of *Coccygidium* de Saussure, 1892 are usually pale colored with rather large ocelli and nocturnal in nature. The most striking feature of *Coccygidium* is the presence of long, style-like, foretibial spur, which is unique amongst the members of subfamily Agathidinae. All members of genus *Coccygidium* with known biology are internal koinobiont parasitoids of larval Noctuidae (Sharkey *et al.*, 2009).

The genus is represented by 26 species from the world and by two species from Middle East (Yu *et al.*, 2005). In the present paper a new species namely *Coccygidium hebabi*, sp. nov., is described and illustrated.

MATERIAL AND METHODS

The specimens were collected from Khamis Mushyat, Saudi Arabia by using sweeping net. The material were examined and imaged under a Nikon SMZ1200 stereomicroscope. The terminology used in this work is that of Achterberg (1993).

The types of new species are deposited in Department of Biology, King Khalid University, Abha, KSA and King Saud Museum of Arthropods (KSMA).

Abbreviations used in the text:

C: Costa

SC: Subcosta

R: Radius

r: Transverse radial vein

SR1: First sectio radii

2-SR: Second sectio radii

3-SR: Third sectio radii

M: Media

r-m: Transverse radio-medial vein

M+CU: Medio-cubital vein

POL: Postocellar line

OD: Maximum diameter of ocelli

OOL: Ocelo-ocular line

KSMA: King Saud University Museum of Arthropods, Riyadh.

RESULTS AND DISCUSSION

Description:

Coccygidium hebabi, sp. nov.

Female: Holotype, ♀, length of body 6.2 mm, of fore wing 5.7 mm.

Colour: Brownish-yellow; antenna (but scapus yellow basally), apex of vein C+SC+R and pterostigma dark brown (basal one third yellowish); legs with the same colour of body; hind tarsi black or blackish brown; metasoma yellowish entirely; wings slightly infuscate apically

Head: Antennal segments 39; third segment 1.2 x as long as fourth segment; length of third, fourth and penultimate segments 2.3, 2.0 and 1.5 x as long as their width, respectively; penultimate segment as long as apical segment with distinct long spine; antenna glabrous except scape; length of maxillary palp 0.8 x as long as height of head; in dorsal view length of eye 10 x temple (Fig. 2); ocelli large, POL:OD:OOL = 6:8:5; malar space about as long as basal width of mandible (Fig. 1); face distinctly punctate; frons shiny and smooth with lateral carinae; vertex shiny with sparse fine punctures; pair of crests between antennal sockets almost reaching upto median ocellus, occipital flange medium-sized, its ventral margin convex (Fig. 2).

Mesosoma: Length of mesosoma 1.5 x its height; subpronope small, deep; side of pronotum smooth, upper side with sparse fine punctures; area near lateral carina of mesoscutum smooth; mesoscutum shiny with sparse distinct punctures; notauli deep and crenulate; scutellar sulcus with three carinae and 0.8 x as long as dorsal part of scutellum; scutellum ruglose-punctate; subposterior crest curved; precoxal sulcus rather wide and strongly crenulate; mesopleuron below and above precoxal sulcus with sparse and distinct fine punctures; upper side of metapleuron rugose, lower side with strong rugae; propodeum with long pentagonal areola and a short basal carina; propodeal spiracle small, round, twice as long as wide; distance between spiracle and lateral carina 1.2 x as long as width of spiracle.

Wings: Fore wing: second submarginal cell narrow anteriorly, without ramellus (Fig. 3); r: 3-SR: SR1 = 5:3:80; 2-SR+M: 2-SR: r-m = 8:3:9; vein cu-a of fore wing is distinctly antefurcal. Hind wing: M+CU 0.7 x as long as 1-M.

Legs: Length of hind femur, tibia and basitarsus 3.3, 5.0 and 5.5 x as long as their width, respectively; outer side of hind coxa punctate; outer side of apex of hind tibia with two pegs, and upper peg twice as long as lower peg; fore tibial spur curved and about 0.8 x as long as fore basitarsus; outer and inner spurs of middle tibia 0.5 and 0.8x as long as middle basitarsus, respectively; length of outer and inner spurs of hind tibia 0.5 and 0.7 x hind basitarsus.

Metasoma: First tergite rather long almost parallel-sided; first tergite 2.0 x as long as its apical width; length of second tergite subequal to its apical width; second metasomal suture developed; ovipositor sheath densely setose, 2.1 x as long as hind basitarsus.

Male: Unknown.

Etymology: The new species is named after type locality.

Distribution: Saudi Arabia: Khamis Mushyat.

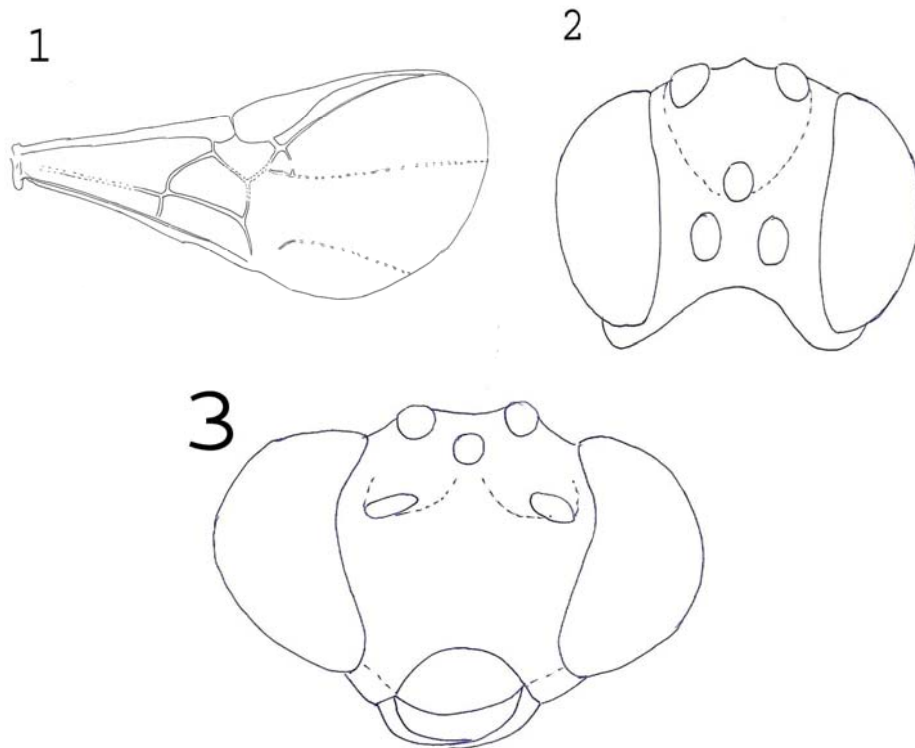
Host: Unknown.

Material examined: Holotype: Female (on card), (KSMA), Khamis Mushyat, Hebab, Saudi Arabia 10.vii.2008; coll., Hamed; Paratypes: 3 females (on card) with same data as holotype.

Discussion: The new species is closely related *Coccygidium angostura* (Bhat and Gupta, 1977) and *Coccygidium arabica* Ghramh, 2011. However, it differs from the first species in having: mesostoma yellowish almost entirely, antennae glabrous except scape, ovipositor sheath 2.0 x as long as hind basitarsus, hind tibia yellowish and basal fourth of pterostigma yellowish. The new species can be differentiated from *C. arabica* as follows:

Forewings hyaline, antenna glabrous except scape, ovipositor sheath 2.1 x as long as hind basitarsus, hind tibia yellowish *Coccygidium hebabi* sp.nov.

Forewings infusate apically, antenna densely setose, ovipositor sheath 1.6 x as long as hind basitarsus, hind tibia brownish *Coccygidium arabica* Ghramh, 2011.



Legends: *Coccygidium hebabi* sp.nov. (holotype, female)

Fig. 1: Fore wing

Fig. 2: Head dorsal view

Fig. 3: Head frontal view

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