

*Short Communication.*

# Records of the genus *Coccygidium* Saussure (Hymenoptera: Braconidae: Agathidinae), with description of a new species from Saudi Arabia

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***Coccygidium arabica* sp. nov.**, (Hym., 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 angostura*. The genus *Coccygidium* Saussure is recorded for the first time from Saudi Arabia.

**Key words:** *Coccygidium*, Hymenoptera, Braconidae, new records, new species, Saudi Arabia.

## INTRODUCTION

Members of *Coccygidium* Saussure are usually pale colored with rather large ocelli and nocturnal in nature (Sharkey, 2004). The most striking feature of *Coccygidium* is the presence of long, style-like, foretibial spur (Figure 3), which is unique amongst the members of subfamily Agathidinae. The members of the genus may be recognized by the following combination of characters: cleft claws, serrate ridge on hind basitarsomere, short and ventrally curved ovipositor, longitudinal carina in the hind trochantellus and pointed apical antennal segment (Achterberg and Long, 2010; Sarmiento and Sharkey, 2005). All members of the 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, but is yet to be recorded from Saudi Arabia (Yu et al., 2005). In this paper, the genus *Coccygidium* was recorded for the first time from Saudi Arabia with the description of a new species namely *Coccygidium arabica*, sp. nov. These types of new species are deposited in the Department of Zoology, King Khalid University, Abha, KSA pending transfer to Natural History Museum, London later.

## MATERIALS AND METHODS

The specimens were collected from Jeddah, Saudi Arabia by using sweeping net. The material were examined and imaged under a

Nikon SMZ1200 stereomicroscope. The terminology for morphology followed that used by Achterberg (1993).

## DESCRIPTION

***Coccygidium arabica*, sp. nov.**

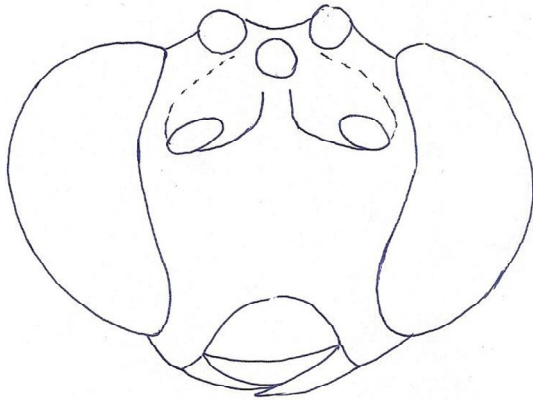
### *Female*

Holotype, ♀; length of body 6.2 mm and fore wing 5.7 mm.

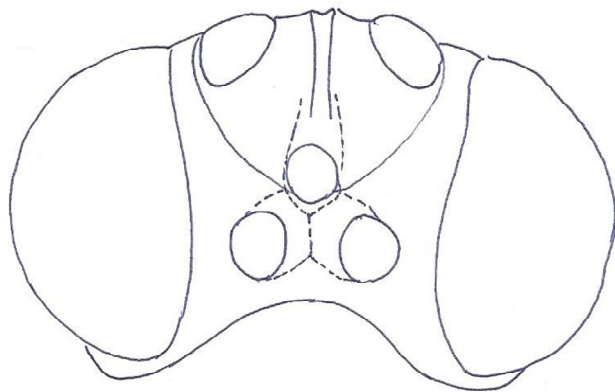
**Colour:** Honey-yellow; antenna (but scapus yellow basally), apex of vein C+SC+R and pterostigma dark brown (basal one third yellowish); legs with the same colour of body; hind tarsi black or blackish brown; wings infusate apically.

**Head:** Antennal segments 41; length of third segment 1.1 times as long as fourth segment; length of third, fourth and penultimate segments 2.3, 2.0 and 1.5 times their width, respectively; penultimate segment as long as apical segment with distinct long spine; antenna densely setose; length of maxillary palp, 0.8 times as long as height of head; in dorsal view length of eye 10 times temple (Figure 2); ocelli large, POL:OD:OOL = 7:8:5; malar space about as long as basal width of mandible (Figure 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 up to median ocellus, occipital flange medium-sized, its ventral margin convex (Figure 2).

**Mesosoma:** Length of mesosoma 1.7 times its height; subpronope



**Figure 1.** Head frontal view of *Coccygidium arabica* sp.nov. (holotype, female).

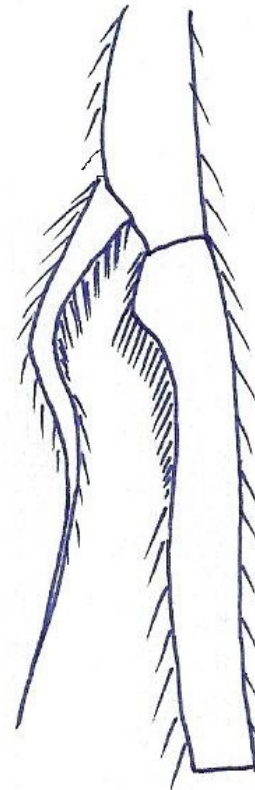


**Figure 2.** Head dorsal view of *Coccygidium arabica* sp.nov. (holotype, female).

small and 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 five carinae and 0.8 times as long as dorsal part of scutellum; scutellum ruglose-punctate; sub-posterior 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, short basal carina; propodeal spiracle small, round, twice as long as wide; distance between spiracle and lateral carina 1.2 times as long as the width of the spiracle.

**Wings:** Fore wing (Figures 4 and 5): second submarginal cell narrow anteriorly, without ramellus (Figure 4);  $r:3-SR:SR1 = 5:3:67$ ;  $2-SR+M:2-SR:r-m = 12:6:9$ ;  $1-R1: 2-R1 = 40:15$ ; vein cu-a of fore wing was distinctly antefurcal.

**Legs:** Length of hind femur, tibia and basitarsus were 3.3, 5.1 and 6.0 times 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 0.9 times as long as fore basitarsus (Figure 3); outer and inner spurs of middle tibia 0.5 and 0.8 times as long as middle basitarsus, respectively;



**Figure 3.** Hind basitarsus of *Coccygidium arabica* sp.nov. (holotype, female).

length of outer and inner spurs of hind tibia 0.4 and 0.6 times hind basitarsus.

**Metasoma:** First tergite rather long almost parallel-sided; length of first tergite 2.0 times its apical width; length of second tergite subequal to its apical width; second metasomal suture developed; ovipositor sheath densely setose, 1.6 times as long as hind basitarsus.

#### **Male**

Unknown.

**Distribution:** Saudi Arabia, Jeddah.

**Host:** Unknown

**Material examined:** Holotype: female (on card), 15.xi.2009; Saudi Arabia, Jeddah, coll. Hamed; paratypes: 2 females (on card) with same data as holotype (presently in the personal collection of first author and will be deposited in BMNH, London).

**Etymology:** The species name was derived from its type locality.

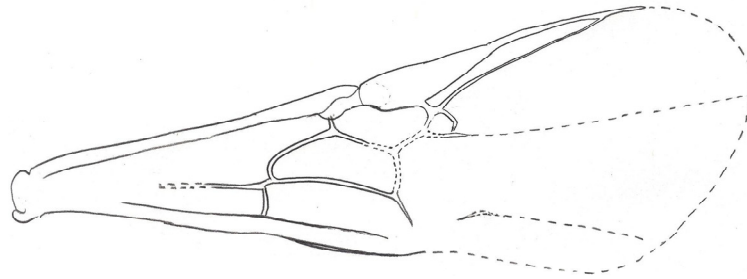


Figure 4. Fore wing of *Coccygidium arabica* sp.nov. (holotype, female).



Figure 5. Fore wing (photograph).

## DISCUSSION

The new species was closely related to the oriental species *Coccygidium angostura* (Bhat and Gupta, 1977). However, it differs from other species because it had 10 times temple as the length of the eye in the dorsal view (temple 3 times as the length of the eye in dorsal view in *C. angostura*), a hind tibia that is yellowish in colour (apical one-fourth of hind tibia blackish in *angostura*), basal one-fourth of pterostigma that is yellowish in colour (basal half of pterostigma yellowish in *C. angostura*) and an apically infuscated forewing (forewing hyaline in *C. angostura*).

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