




SCIENTIFIC PAPER

A NEW SPECIES OF THE GENUS *Coccobius* Ratzeburg (HYMENOPTERA: CHALCIDOIDEA: APHELINIDAE) FROM USA

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Folia Entomológica Mexicana (nueva serie), 2(3): 71–74, 2016.

Recibido: 28 de octubre 2016

Aceptado: 13 de diciembre 2016

Publicado en línea: 31 de diciembre 2016

**A NEW SPECIES OF THE GENUS *Coccobius* Ratzeburg
(HYMENOPTERA: CHALCIDOIDEA: APHELINIDAE) FROM USA**

**Nueva especie del género *Coccobius* Ratzeburg (Hymenoptera: Chalcidoidea: Aphelinidae)
de Estados Unidos de América**

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ABSTRACT. A new species of the genus *Coccobius* from the family Aphelinidae, *Coccobius pinto* Myartseva sp. nov. from the State of South Carolina, USA, is described.

Key words: Parasitoid, South Carolina, New World.

RESUMEN. Se describe una nueva especie del género *Coccobius* de la familia Aphelinidae, *Coccobius pinto* Myartseva sp. nov., del estado de Carolina del Sur, Estados Unidos.

Palabras clave: Parasitoide, Carolina del Sur, Nuevo Mundo.

INTRODUCTION

The genus *Coccobius* was discovered in 1852 (Ratzeburg, 1852). Three genera later described, *Physcus* Howard 1895, *Encyrtophyscus* Blanchard 1948 (published in De Santis, 1948) and *Physculus* Yasnosh 1977 were placed in synonymy with *Coccobius* by Hayat (1983). *Coccobius* is placed in the tribe Physcini of the subfamily Coccophaginae (Hayat, 1998) in the family Aphelinidae. This genus is rather distinctive, some species show a high degree of differences in their morphology and colour.

Species of the tribe Physcini have the following combination of characters: pronotum entire; axillae very small, triangular, and widely separated and hardly projected forwards, each axilla with one seta, side lobes small and shaped like a trapeze; mesopleuron entire. Antenna with seven segments, club two-segmented. Stigmal vein thin, shaped like a snake's head, with sensilla arranged in a specific manner – one small anterior sensillum and behind it three sensilla in one line (Hayat, 1998). Hosts are armoured scale insects of the family Diaspididae, including pests of some agricultural crops (Noyes, 2014).

Fauna of this economically important genus for biological control was studied taxonomically in South Africa (Prinsloo, 1995), India (Hayat, 1998;

Hayat and Khan, 2010), and China (Wang *et al.*, 2013). Hayat (1984) studied and redescribed types of the species from Girault and Howard, and provided the first key for 48 species of *Coccobius* from the world fauna.

Currently, *Coccobius* consists of 94 species and has worldwide distribution (Noyes, 2014). Seven species of *Coccobius* are known in the United States of America, including five species from California (Noyes, 2014). In this article is described one new species from South Carolina.

MATERIAL AND METHODS

Materials of Aphelinidae were received from the Entomological Research Museum of the University of California - Riverside, USA, in order to be taxonomically determined or identified; only one specimen belongs to the new species. It was prepared and mounted in one slide, and described as usual for aphelinids.

DESCRIPTION

Coccobius pinto sp. nov. Myartseva
(Figs. 1-4)

Female. Length of body: 0.75 mm.

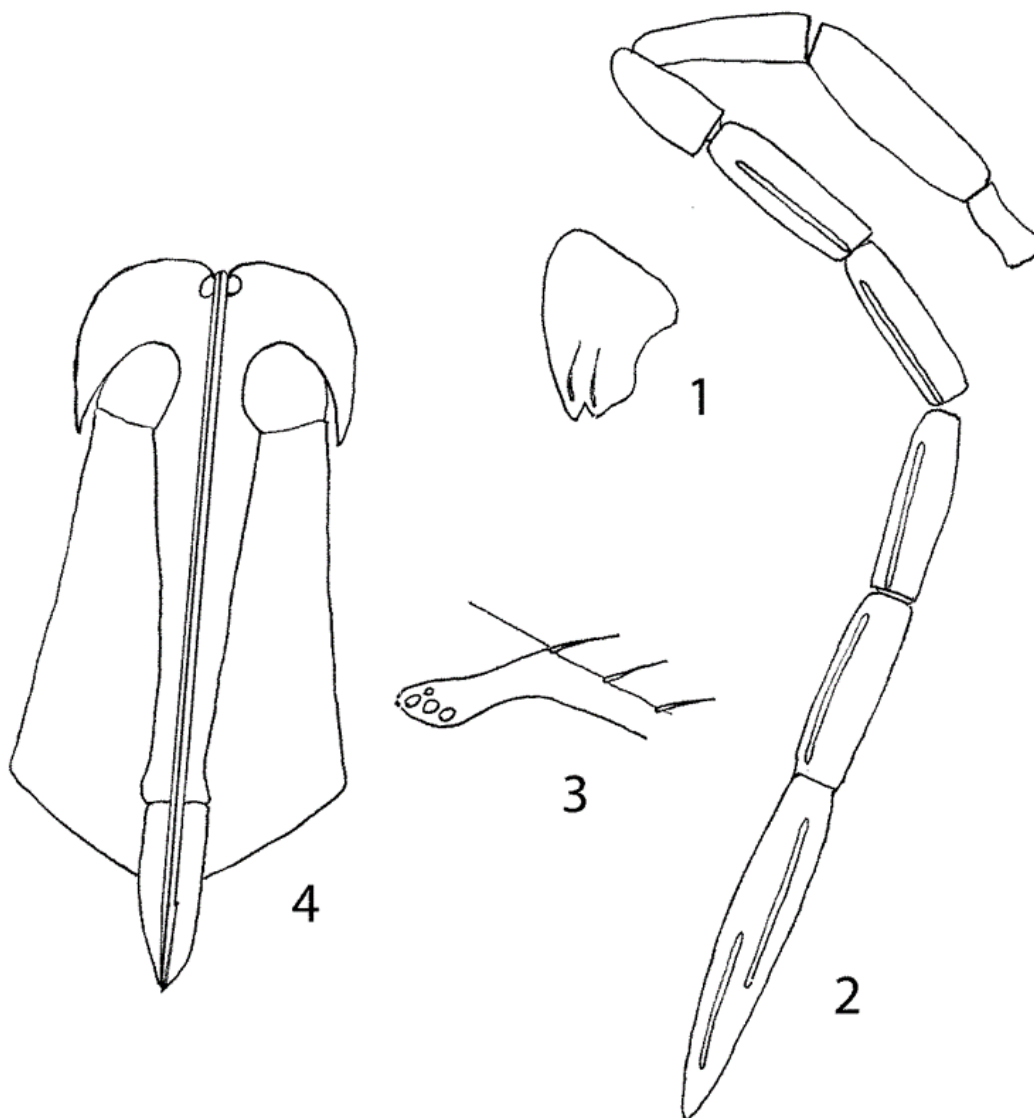
Colouration. Head brown. Antennal radicle and basal half of scape infuscate, apical half of scape,

pedicel, funicle and club whitish. Mesosoma dark brown. Fore wings hyaline. Legs brownish, about 1/3 of apical part of tibiae pale, tarsi whitish. Gaster brownish. Ovipositor brown, second valvifer yellow.

Structure. Head not wider than mesosoma, about 1.4 times as wide as high. Frontovortex 0.5 times as wide as head width, with broken transversely striated sculpture. Distance between hind ocellus and eye 0.4 times as long as distance between hind ocelli. Eyes 1.7 times as long as cheeks. Mandible (Fig. 1) with two teeth and a truncation. Antennae (Fig. 2) inserted immediately under the level of lower margin of eyes. Distance between toruli slightly shorter than distance from torulus to eye and about 1.8 times as long as distance to mouth

margin. Antennal radicle 2.4 times as long as wide. Scape 6.6 times as long as wide. Pedicel 1.8 times as long as wide and 0.7 times as long as first segment of funicle. First to third segments of funicle equal in length and width, each 3.0 times as long as wide. Segments of club insignificantly wider than funicle, basal segment 2.9 times as long as wide, apical segment 4.4 times as long as wide and 1.6 times longer than basal segment.

First-fourth segments of flagellum with two longitudinal sensilla each, fifth segment with three sensilla. Mid lobe of mesoscutum with many scattered setae and with fine elongated cellulite-reticulate sculpture. Scutellum with four setae and with distinct and more elongated cellulite-reticulate sculpture.



Figures 1-4. *Coccobius pintoii*, sp. nov. female: 1) mandible, 2) antenna, 3) stigmal vein, 4) ovipositor.

Axilla with one seta, side lobe with two setae. Fore wing 2.5 times as long as wide, its marginal fringe 0.1 times as long as wing width. Submarginal vein with six setae along its anterior margin. Marginal vein slightly longer and with eight setae along its anterior margin. Postmarginal vein absent. Stigmal vein on Fig. 3. Mid tibial spur slightly shorter than basitarsus of mid leg. Ovipositor (Fig. 4) slightly exerted, about two times as long as mid tibia; third valvula 0.3 times as long as second valvifer and 1.9 times as long as basitarsus of mid leg.

Male unknown.

Material examined. Holotype female: USA, South Carolina, Colleton Co., 2 mi. New Jacksonboro, 26.VI.1986 (col. J. D. Pinto). UCRC Ent. 54112 (Entomological Research Museum of University of California, Riverside, California, USA).

Holotype female is deposited in UCRC.

Etymology. New species is named in honour of Dr. John. D. Pinto, who collected this species.

Comments. *Coccobius pinto* sp. nov. runs to *C. aligarhensis* (Hayat) from India in keys given by Hayat (1998) and Hayat and Khan (2010), but the new species distinctly differs from this species (Table 1).

In the key given by Hayat (1984), *Coccobius pinto* sp. nov., runs also to *C. flavoflagellatus* (De Santis, 1948) from Argentina but *C. flavoflagellatus* has pedicel brownish, gaster with a yellow patch in middle of anterior half, first funicular segment 2.0 times as long as wide, and third segment 1.5 times as long as wide. In *C. pinto* sp. nov., pedicel is whitish, gaster without yellow patch, and the first and third funicular segments are 3.0 times as long as wide each.

CONCLUSIONS

One new species of *Coccobius* from USA was described. More species are expected to be found in other USA and Mexican localities.

ACKNOWLEDGEMENTS

Authors thanks to Dr. S. V. Triapitsyn (Department of Entomology, University of California - Riverside, USA) for the loan of materials from *Coccobius* collected in Mexico and USA. To PRODEP project “Estudios taxonómicos y biológicos de plagas y enemigos naturales en México”.

Table 1. Differences between *C. pinto* sp. nov. and *C. aligarhensis*.

Characters	<i>C. pinto</i> sp. nov.	<i>C. aligarhensis</i> (Hayat)
Scape	6.6 times as long as wide	4.0 times as long as wide
First and second segments of funicle	3 times as long as wide each	2 times as long as wide each
Ovipositor	2.0 times as long as mid tibia	1.3 times as long as mid tibia
Second valvifer	3.2 times as long as third valvula	2.9 times as long as third valvula
Third valvula	1.9 times as long as mid basitarsus	1.5 times as long as mid basitarsus
Gaster	fully brownish	yellow with dark brown sides

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