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New Records and the Male of *Megachile ventrisi* ENGEL 2008 (Hymenoptera: Megachilidae)

Michael S. ENGEL & Maximilian SCHWARZ

Abstract

The male of *Megachile* (*Eutricharaea*) *ventrisi* ENGEL 2008 (Megachilinae: Megachilini) is described and figured for the first time and new records are provided for this interesting Arabian leaf-cutter bee. The species is newly recorded from Yemen and Oman.

Zusammenfassung

Das Männchen von *Megachile* (*Eutricharaea*) *ventrisi* ENGEL 2008 (Megachilinae: Megachilini) wird erstmalig beschrieben und abgebildet, neue Nachweise dieser arabischen Blattschneiderbiene werden vorgestellt. Die Art wird konnte neu für Jemen und Oman nachgewiesen werden.

Introduction

Despite the ancient allure of the Arabian Peninsula and its flora and fauna, the diversity of bees from this region have received little attention relative to that of the bordering areas in the Middle East and Africa. However, during the last decade several small forays

have been made into particular groups of this fauna (e.g., ENGEL 2004, 2008, 2009b; ENGEL & DATHE 2011; DATHE 2009) and some genera are particularly well documented (e.g., KUHLMANN 2004; ENGEL 2009a; PESENKO & PAULY 2009; SCHWARZ 2010), although the region's bee biota remains largely in need of considerable revision. The megachiline fauna of this region is certainly no exception to this overall pattern and the species remain challenging to determine, particularly in diverse lineages such as the leaf-cutter bee subgenus *Eutricharaea* THOMSON where many species can be exceedingly similar in general appearance. Thus, any work attempting to clarify the status, identity, and/or provide further information on the morphology or biology of these bees is of considerable utility.

Herein we provide a description for the hitherto unknown male of *Megachile* (*Eutricharaea*) *ventrisi* ENGEL 2008, a relatively uncommon leaf-cutter bee in western Saudi Arabia and now known from Yemen (herein), and as a small contribution toward understanding this fascinating fauna. The Yemen material, and particularly the male, was first recognized by M.S. and subsequently confirmed by M.S.E. The female was thoroughly characterized by ENGEL (2008). Morphological terminology generally follows that of ENGEL (2001) and MICHENER (2007) and the format for the description that typically used elsewhere for species of *Megachile* (e.g., BAKER & ENGEL 2006; ENGEL 2008; ENGEL & BAKER 2006; GONZALEZ et al. 2010).

Repository abbreviations are

SEMCSnow Entomological Collection, Division of Entomology, University of
Kansas Natural History Museum, Lawrence, Kansas, USA
MSCA.....Maximilian Schwarz Collection, Ansfelden, Austria

Systematics

Megachile (*Eutricharaea*) *ventrisi* ENGEL 2008 (Figs 1-9)

Megachile (*Eutricharaea*) *ventrisi* ENGEL 2008 - Act Entomol. Slov. **16**: 152 [♀].

♂: As described for the female (vide ENGEL 2008) and typical for *Eutricharaea* except as follows: total body length 9.64-9.88 mm; forewing length 5.71-5.77 mm. Head wider than long [width 3.39-3.54 mm, length (as measured from top of vertex to apical clypeal margin) 2.40-2.55 mm]; compound eyes slightly converging below, upper interorbital distance 2.03-2.08 mm, lower interorbital distance 1.67-1.72 mm; vertex relatively short, distance from posterior border of lateral ocellus to rounded preoccipital ridge about two times median ocellar diameter. Intertegular distance 2.24-2.29 mm. Sixth tergum with apical spines prominent, much longer than in *M. walkeri*, those spines bordering medial concavity, if not fused, with lengths three times their basal width and subsidiary spines about as long; male terminalia as in figures 7-11.

Sculpturing as in female except punctures of mesosoma somewhat coarser.

Integument of head dark brown, nearly black except labrum and labiomaxillary complex brown, mandible black except apical two thirds of outer surface dark reddish brown; antenna dark reddish brown. Mesosoma black except tegula and legs dark brown, with

pro- and mesotarsi lighter; wing membranes hyaline, veins dark brown. First metasomal tergum orange; second metasomal tergum largely orange except mottled with dark brown on disc, most notably laterally; third and fourth metasomal terga orange with prominent dark brown transversely on disc, thicker on fourth than on third; fifth metasomal tergum dark brown to black on disc, with orange apical margin; sixth and seventh metasomal terga dark brown to black; sterna orange.

Face largely covered with dense, tawny, subappressed, plumose setae obscuring integument including clypeus (Figs 3, 6); basal clypeus, supraclypeal area, and upper face with suberect to erect more tawny setae prominent; vertex and gena with such setae intermingled with lightly fuscous setae. Setae of profemora and protibiae more tawny than in female (cf. Figs 1, 2). First metasomal tergum with relatively numerous, elongate, erect yellowish orange to tawny setae on dorsal-facing and lateral surfaces; remaining terga with scattered yellowish-orange to tawny setae, becoming more fuscous on apical terga and either black or nearly so on fifth tergum (Figs 1, 3), terga with distinct but relatively thin apical fasciae composed of dense yellowish-orange or tawny setae; sixth metasomal tergum covered with off-white to pale tawny tomentum; sternal setae largely white to yellowish-orange.

♀: vide ENGEL (2008) (Figs 2, 4, 5).

M a t e r i a l e x a m i n e d : ♀, Saudi Arabia, Taif, 2000 m, 8.iv.1980 [8 April 1980], K.M. Guichard (SEMC, holotype, visum); 2♀ ♀, 1♂, Yemen, East, Hawf NE Albhaydah, 200-730 m, 14.x.2005 [14 October 2005], 16°40'N, 53°05'E, J. Halada (SEMC); 1♂, Yemen, West, 20 km NW Dhawran, 1800 m, 29.x.2005 [29 October 2005], 14°40'N, 44°13'E, J. Halada (SEMC); 8♀ ♀, Yemen, East, Hawf NE Albhaydah, 200-730 m, 14.x.2005 [14 October 2005], 16°40'N, 53°05'E, J. Halada (MSCA); 1♀, 1♂, Yemen, SW, 20 km S Taizz, 1200m, 13°30'N, E 43°57'E, 14.x. 2005 [14 October 2005] (MSCA); 4♀ ♀, Yemen, SW, Lawdar NE Aden, 1140m 13°53'N, 45°48'E, 28.x.2005 [28 October 2005] (MSCA); 3♀ ♀, 3♂ ♂. Yemen, W, Jabal Bura, NNE Al Hudayah, 200-800m, 14°52'N, 43°24'E, 30.x.-1.xi.2005 [1 November 2005], J. Halada (MSCA); 1♂, Yemen, W, 20km NW Dhawran, 14°40'N, 44°13'E, 1800m, 29.x.2005 [29 October 2005], J. Halada (MSCA); 1♂, Oman: [unreadable], 600m, 16°15'N, 53°43'E, 12. September 1989, M.D. Gallagher, Gibb. (MSCA).

Discussion

The male of *M. ventrisi* is, like the female, superficially quite similar to the male of *M. walkeri* DALLA TORRE. The genitalia of the two species are quite different, with the gonostyli of *M. ventrisi* being bluntly rounded and simple (Figs 9-11) while the gonostyli are apically divided and lobed in *M. walkeri*. In addition, the two species differ in the more tawny face of *M. ventrisi* (Figs 3, 6) (more white in *M. walkeri*), the thinner metasomal fasciae (thicker in *M. walkeri*), the relative absence of tomentum on the disc of the fifth metasomal tergum (some tomentum covering postgradular disc of tergum basally in *M. walkeri*), the more prominent dark fuscous to black setae on the fifth metasomal tergum (Figs 1, 3) (fuscous and thinner on *M. walkeri*), and the longer and more prominent apical spines on the sixth metasomal tergum (length of most prominent spines bordering medial concavity at least three times basal width, if not fused; such spines 0.8–1.5 times basal width in *M. walkeri* and subsidiary spines much shorter).

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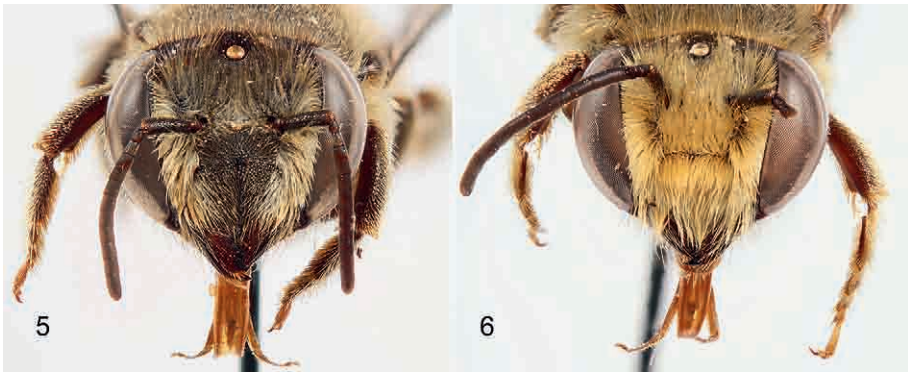
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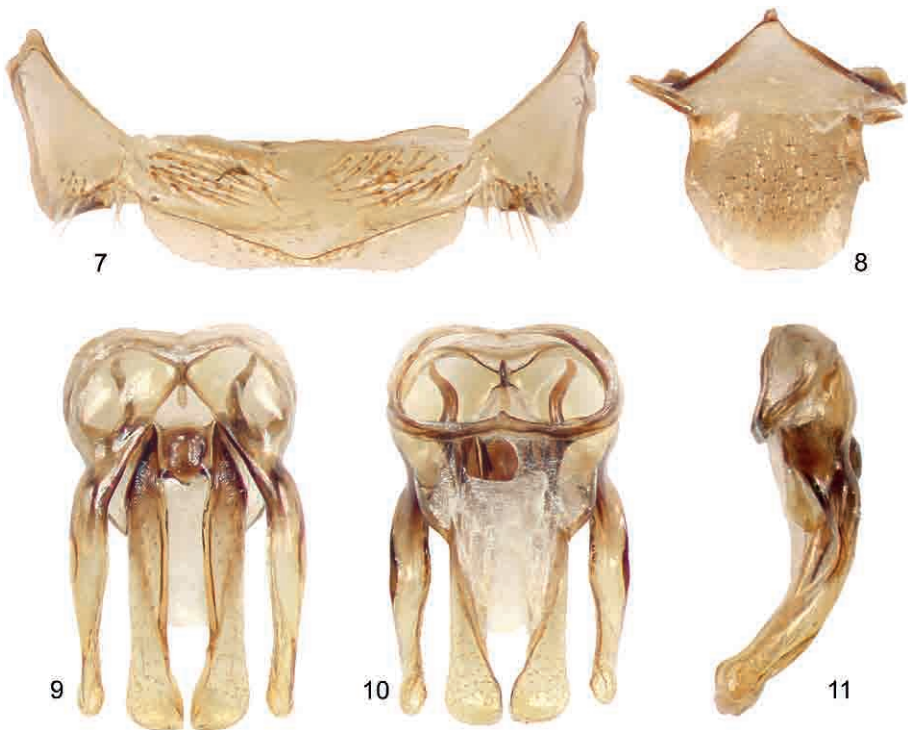
Figs 1-2: Photomicrographs of *Megachile (Eutricharaea) ventrisi* ENGEL 2008, lateral habitus. (1) male; (2) female.



Figs 3-4: Photomicrographs of *Megachile (Eutricharaea) ventrisi* ENGEL 2008, dorsal habitus. (3) male; (4) female.



Figs 5-6: Photomicrographs of *Megachile (Eutricharaea) ventrisi* ENGEL 2008, facial aspects. (5) female; (6) male.



Figs 7-11: Male terminalia of *Megachile (Eutricharaea) ventrisi* ENGEL 2008. (7) hidden sternum VII; (8) hidden sternum VIII; (9) dorsal aspect of genital capsule; (10) ventral aspect of genital capsule; (11) lateral aspect of genital capsule.

Addresses of the authors:

Michael S. ENGEL

Division of Entomology

1501 Crestline Drive – Suite 140

University of Kansas

Lawrence, Kansas 66049-2811, USA

E-mail: msengel@ku.edu

Maximilian SCHWARZ

Eibenweg 6

4052 Ansfelden, Österreich

E-mail: maximilian.schwarz@liwest.at

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Maximilian SCHWARZ, Konsulent f. Wissenschaft der Oberösterreichischen Landesregierung, Eibenweg 6, A-4052 Ansfelden, E-Mail: maximilian.schwarz@liwest.at.

Redaktion: Erich DILLER, ZSM, Münchhausenstraße 21, D-81247 München;
Roland GERSTMEIER, Lehrstuhl f. Tierökologie, H.-C.-v.-Carlowitz-Pl. 2, D-85350 Freising
Fritz GUSENLEITNER, Lungitzerstr. 51, A-4222 St. Georgen/Gusen;
Wolfgang SCHACHT, Scherrerstraße 8, D-82296 Schöngesing;
Wolfgang SPEIDEL, MWM, Tengstraße 33, D-80796 München;
Thomas WITT, Tengstraße 33, D-80796 München.

Adresse: Entomofauna, Redaktion und Schriftentausch c/o Museum Witt, Tengstr. 33, 80796 München, Deutschland, E-Mail: thomas@witt-thomas.com; Entomofauna, Redaktion c/o Fritz Gusenleitner, Lungitzerstr. 51, 4222 St. Georgen/Gusen, Austria, E-Mail: f.gusenleitner@landesmuseum.at

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