Megachile sculpturalis Smith - A New Bee for Michigan (Hymenoptera: Megachilidae)

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Michigan has seen an increasing number of discoveries of alien species of insects over the past two decades. While many of the notable species have undesirable attributes, several appear to be benign or at least are found in sufficiently small numbers to have exhibited no detrimental effect. One species that appears to fall in the latter category is the Giant Resin Bee, *Megachile sculpturalis* Smith (Hymenoptera: Megachilidae), an Asian species that has only recently become established in North America (Mangum and Brooks 1997, Mangum and Summer 2003, Paiero and Buck 2003, Hinojosa-Diaz et al. 2005). We report on the first specimens collected in Michigan.

Collection Data

We now report the first Michigan records of *Megachile sculpturalis* Smith from the following localities:

MICHIGAN: Cheboygan Co., Douglas Lake area, University of Michigan Biological Station (UMBS), N45.561° x -84.676° July 5, 2007, on everlasting pea flowers (*Lathyrus latifolius*), Adrienne O'Brien, coll. 1 female (Fig. 1 and Fig. 2).

MICHIGAN: Wayne Co., Detroit River International Wildlife Refuge, Humbug Marsh Unit, N42.1149° x -83.1867°; 8 August 2007, nectaring on flowers of *Lythrum salicaria*, Julie Craves, coll. 1 male. In addition, a female bee was photographed in Dearborn, MI, on the same day, nectaring at flowers of *Veronicastrum virginicum* (http://www.flickr.com/photos/craves/1055129065/).

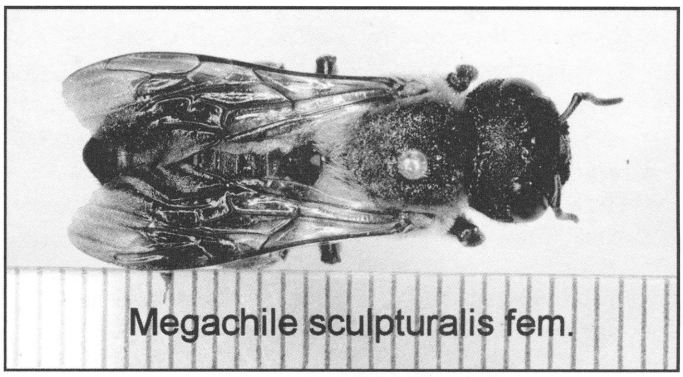

Figure 1. Dorsal view of *Megachile sculpturalis* female, 1 mm divisions on ruler. Specimen from UMBS in Cheboygan Co., MI.

Both specimens are deposited in the Museum of Zoology at the University of Michigan.

Comments

The fact that these two specimens were collected at extreme ends of the lower peninsula of Michigan in the same year indicates that it is highly likely that the Giant Resin Bee is established in Michigan and has been resident for several years. It is already well-established in the eastern United States, and recently found in southern Ontario, Canada. (Paiero and Buck 2003). It has spread rapidly since its initial discovery in North Carolina in 1994 (Mangum and Brooks 1997). According to the analysis of Hinojosa-Diaz, et al. (2005), it is predicted that Giant Resin Bee will be distributed over the eastern half of North America and into the Great Plains, as well as the west coast. The senior author has observed *M. sculpturalis* nesting in old Carpenter Bee (*Xylocopa virginica* (Linn.) burrows in wood structures at Hyde Park, New York, and the bees were quite a spectacle when flying around the nest sites with male bees trying to mate with incoming females. The large size (2.0 cm) and heavily sculptured integument of the females (Fig. 1, 2) make them hard to confuse with any other bee, and additional records will very likely be soon forthcoming.

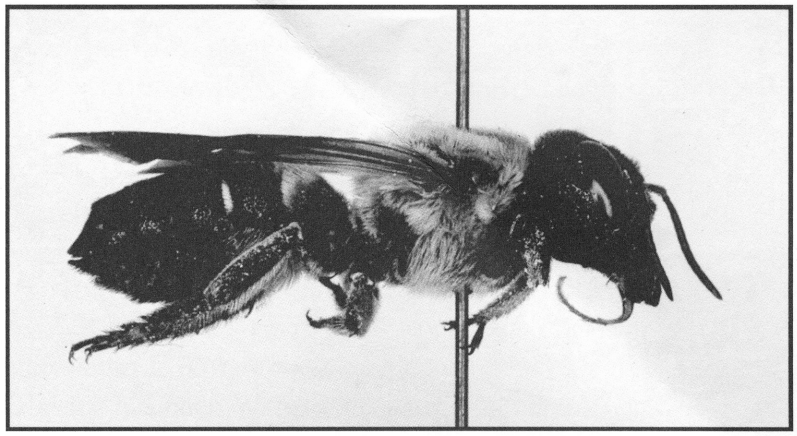

Figure 2. Lateral view of *Megachile sculpturalis* female, same specimen.

References

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