

***Megachile (Pseudocentron) jerryrozeni*, a New Species of
Leafcutting Bee (Hymenoptera: Megachilidae) from the
Cayman Islands**

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ABSTRACT: A new species of leafcutting bee, *Megachile (Pseudocentron) jerryrozeni* is described from Grand Cayman Island and Cayman Brac, West Indies. It is closely related to *M. poeyi*, from which it can be distinguished by pubescence and integumental color.

KEY WORDS: Bee, *Megachile*, Cayman islands, new species

The Cayman Islands lie in the Caribbean Sea South of Cuba and more or less equidistant from Cuba and Jamaica. They are composed of three islands: Little Cayman, Cayman Brac and Grand Cayman. The insect fauna of the Cayman Islands has been studied considerably (Askew, 1980, 1994; Baranowski and Slater, 1998), although all groups have not received equal attention. Butterflies and beetles are the better known. In Hymenoptera, the wasps have been identified to species but bees have not had the same treatment. The bee fauna is sparse and information is only available to the genus level; none of the bees have been identified to species.

Nine species of bees are known from the Cayman Islands, among them the *Megachile (Pseudocentron)* sp. (Askew, 1994) that is described in this paper.

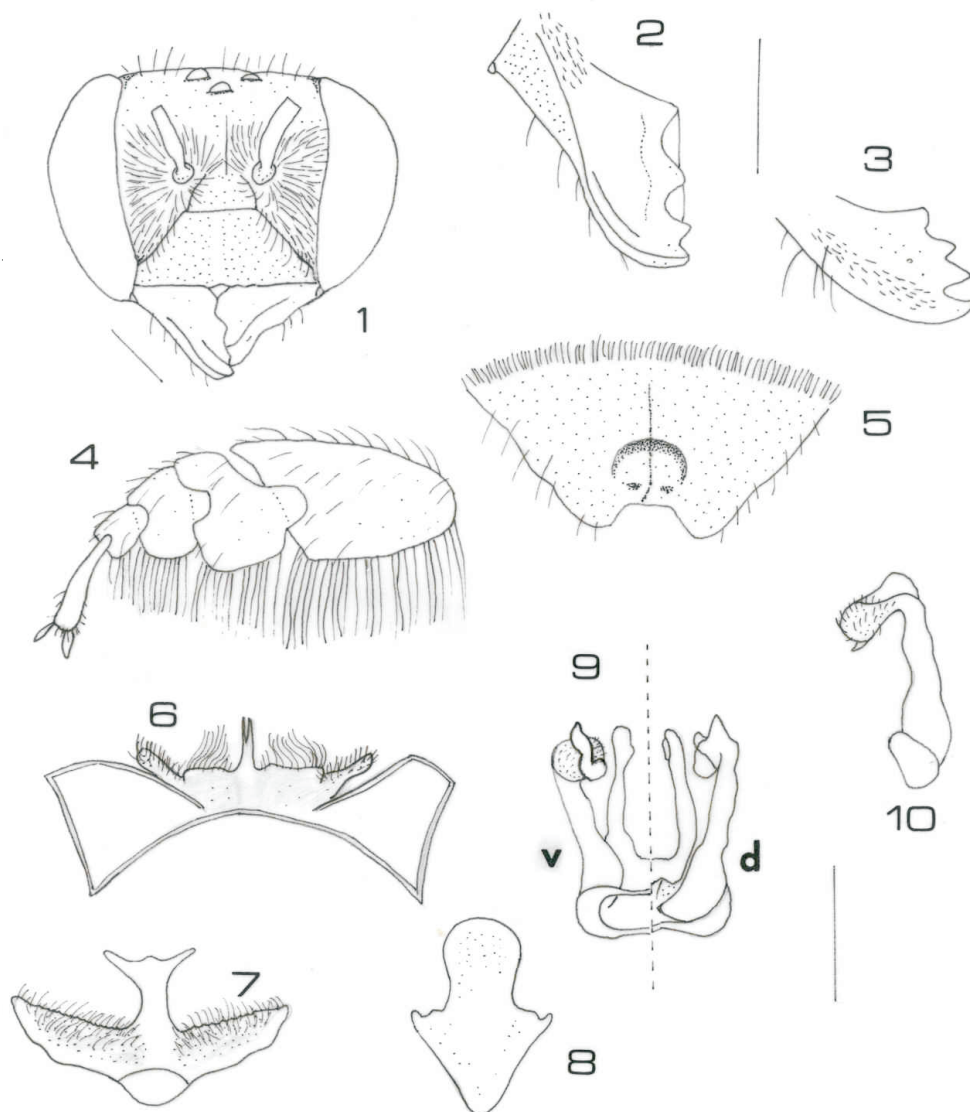
Megachile is a common genus present in all climatic zones (Michener *et al.*, 1994; Michener, 2000), and a major Neotropical subgenus, *Pseudocentron*, has been formed on the Cayman Islands. Friese (1911) listed West Indian species and gave a short description of each. Mitchell (1927) described new species from the West Indies, but some of them were synonyms of previously known species (Genaro, 1998). Mitchell (1937, 1943) revised the Nearctic species of *Pseudocentron* and related subgenera. Mitchell (1980), Michener *et al.* (1994) and Michener (2000) published about the taxonomy of the genus, giving keys.

Systematics

***Megachile (Pseudocentron) jerryrozeni*, new species**

DIAGNOSIS: Black, female with pubescence mostly white except black on vertex, scattered black hairs on supraclypeal area, scutum, scutellum, metasomal terga between the fasciae, dorsal surfaces of tarsi, spots of hairs at sides of sterna III–V, on sterna IV–V; male with scattered black hairs on dorsal surface of head and mesosoma, and short, dense on metasomal terga. It is closely related to *Megachile poeyi* Guérin, but in this species the legs are red and the pale pubescence is ochraceous. The color of pubescence and integument distinguish *Megachile jerryrozeni* n. sp. from other species of the subgenus *Pseudocentron*.

DESCRIPTION: **Female.** Total body length: 10.9–13.4 mm ($N = 7$). Forewing length: 8.0–10.0 mm ($N = 7$). Structure. Head broad, eyes slightly converging below (Fig. 1); mandible broad, four-dentate, a straight cutting edge between the two inner teeth, and another between the two middle teeth, both complete between the teeth (Fig. 2). Clypeus



Figs. 1-7. *Megachile jerryrozeni* n. sp: 1, Frontal view of female head; 2, Dorsal view of female mandible; 3, Dorsal view of male mandible; 4, Front tarsus of male; 5, Tergum VI of male metasoma; 6-8, Male metasomal sterna 5th, 6th and 8th, respectively; 9, Dorsal (d) and ventral (v) views of male genitalia; 10, Lateral view of gonostylus and gonocoxite. Scale lines 1.0 mm.

slightly depressed toward the apical margin. Apical margin of the clypeus slightly denticulate (Fig. 1). Tibia with two apical tubercles. Metasoma ovoid.

Color and pubescence. Integument black, flagellum of antenna and tegula reddish brown. Pubescence mostly white on body (ochraceous in *M. poeyi*). Long, erect, scattered black hairs, among white hairs, on supra-clypeal area, vertex, scutum and scutellum; a few black hairs laterally on sterna III-V. Wings brown, darker apically, nervures dark brown. Legs with short black hairs on tarsi. Metasomal terga with narrow white apical fasciae; black, short, erect hairs between them.

Punctuation. Supraclypeal area and clypeus coarsely punctate, rather sparsely so medially, clypeus with impunctate median line (Fig. 1). Mandible sparsely punctate above. Vertex deeply punctured, punctures close behind ocelli, otherwise well separated. Genal area closely punctated. Scutum, scutellum and propodeum densely and finely punctured, punctures coarser and well-separated on central area of mesepisternum. Tegula with punctures of lesser size. Metasoma finely and closely punctured.

Male. As described for the female with the following additions. Total body length: 10.4–11.5 mm ($N = 2$). Forewing length: 7.0–7.4 mm ($N = 2$). Clypeal apical margin entire; surface of clypeus with dense, long pubescence; punctures close, more coarse and sparse near basal margin. Mandible 4-dentate with broad, basal, inferior process occupying basal half or more of mandible (Fig. 3). Front tarsus modified, broadly dilated, except segment V; posterior fringe dense with hairs (pale yellow with dark apices) as long as width of basitarsus (Fig. 4), tarsi with integumental color yellow. Lower margin of front femur strongly keeled and surface bright ivory color. Metasoma somewhat parallel-sided; tergum VI with dorsal surface vertical in position, rugose punctation above carina, the carina with rounded emargination, otherwise entire, apical margin slightly carinate on either side of middle, and with a small, sharp lateral tooth on each side beyond the carina, one male with longitudinal median carina on tergum VI, reaching margin of transverse carina (Fig. 5). Metasomal sterna V, VI and VIII as in figures 6–8, respectively.

Genitalia with gonocoxite not protuberant at base, constricted above it; gonostylus enlarged and modified, flexed and excavated, setose at sides (Fig. 9). Genitalia in lateral view as in figure 10.

HOLOTYPE FEMALE: **Grand Cayman.** Eastern Dist. (Interior), 20.v.1981, coll. J. F. G. Clarke [United States National Museum, Smithsonian Institution (USNM)].

PARATYPES: One male allotype (USNM) and paratypes (five females, one male), same data as holotype [USNM, Museo Nacional de Historia Natural de Cuba (MNHNCu), Natural History Museum, Division of Entomology, University of Kansas (NHMUK)]; males visiting flowers of *Croton linearis* Jacq. (Euphorbiaceae). **Cayman Brac**, 27.v.1981, coll. J. F. G. Clarke (one female; USNM).

ETYMOLOGY: The species is named for Jerry Rozen, who has contributed greatly to the systematic knowledge of bees.

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