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STRUMIGENYS ROGERI, AN AFRICAN DACETINE ANT NEW TO THE U.S. (HYMENOPTERA: FORMICIDAE)

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ABSTRACT

The African dacetine ant *Strumigenys rogeri* is reported from 3 localities in Broward Co. and Highlands Co., Florida. *S. rogeri* is illustrated and a key to the known *Strumigenys* species in Florida is provided.

RESUMEN

La hormiga africana "dacetine" es reportada en 3 lugares en los condados de Broward y Highland de la Florida. Se ilustra *S. rogeri* y se provee una clave de la especie *Strumigenys* ya conocida en la Florida.

Members of the dacetine ant genus *Strumigenys* may be recognized by their very long porrect mandibles with apical tines (Fig. 1-3). *Strumigenys* species are small (under 3 mm), slow-moving ants, almost never seen in the open. These ants are predators of small soil arthropods, particularly Collembola. *Strumigenys* species may occasionally be numerous enough to affect detritivore populations, but they are of no economic importance.

One widely distributed native *Strumigenys*, *S. louisianae*, is known from Florida; two apparently exotic neotropical species, *S. eggersi* and *S. gundlachi*, have been reported from southern Florida (Smith 1979). We first collected *S. rogeri* in 1982, at the Archbold Biological Station in Highlands County.

Strumigenys rogeri is a tramp species of African origin now found in the West Indies, British Guiana, various Pacific Islands, and greenhouses in Britain (Brown 1962). The Florida population is presumably derived from West Indian stock.

The ecological relationships between *S. rogeri* and other Florida dacetines remain obscure. *S. rogeri*, like other Florida dacetines, feeds primarily

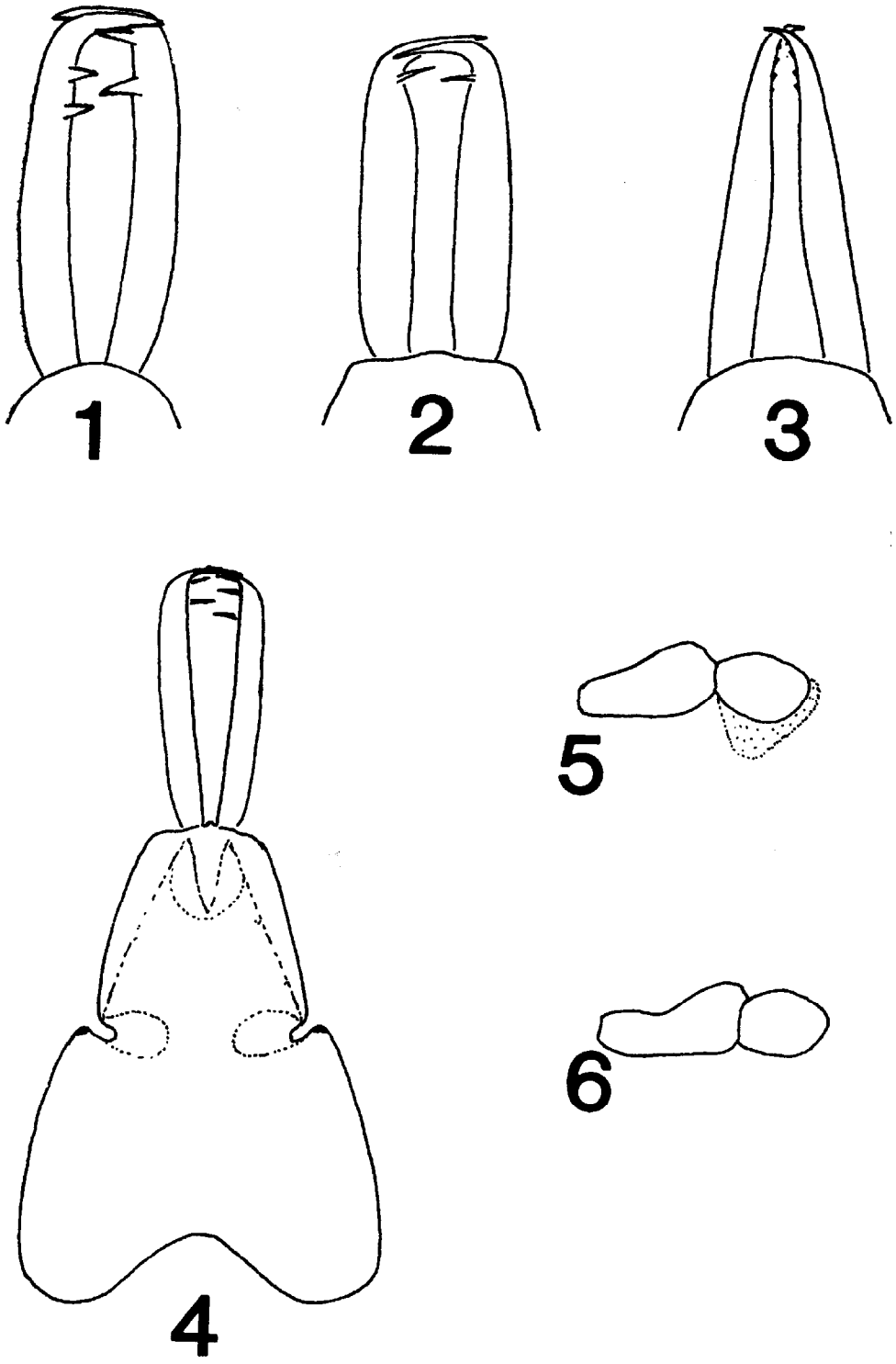

Fig. 1-6. Various physical features of Strumigenys: 1) *S. rogeri,* mandibles, 2) *S. louisianae,* mandibles, 3) *S. eggersi,* mandibles, 4) *S. rogeri,* ventral view of head, 5) *S. gundlachi,* petiole and postpetiole, 6) *S. eggersi,* petiole and postpetiole.

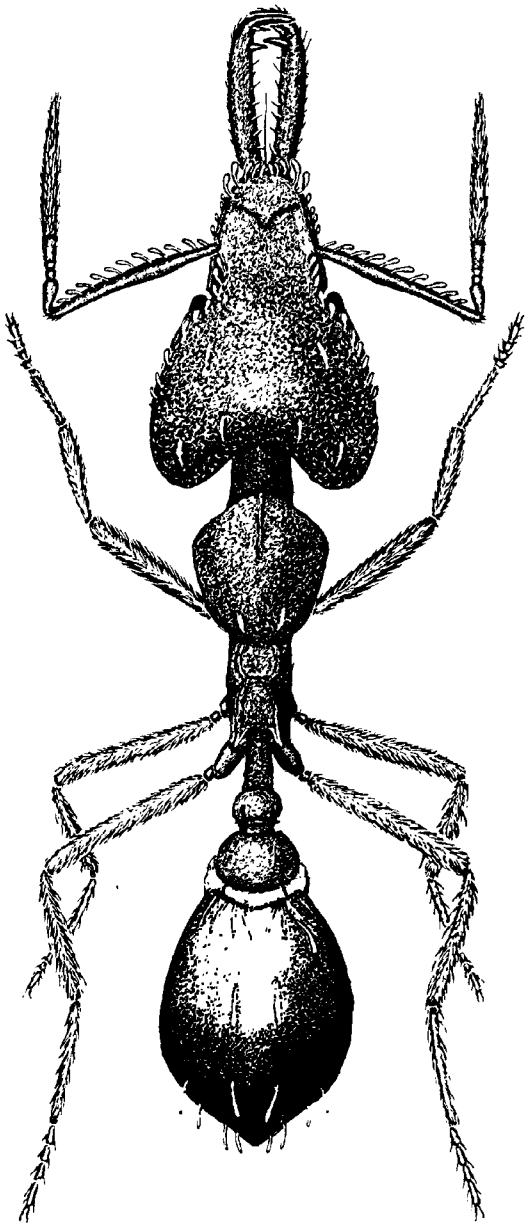

Fig. 7. *Strumigenys rogeri*, dorsal view.

on entomobriid Collembola (Wilson 1953, Brown 1954). At the Archbold Biological Station *S. rogeri* is separated from other dacetines by habitat, as *S. rogeri* is almost completely restricted to moist bayheads. *S. eggersi* and *Quadristruma emmae* (Emery) also occur occasionally in bayheads, but range much more widely into dry woodlands, grass tussocks in seasonal ponds, and cultivated areas. At the Archbold Biological Station, native dacetines, including *S. louisianae* and 4 species of *Smithistruma*, have not

been found in bayheads, though we have found some of these species in bayheads elsewhere. *S. rogeri* produces remarkably dense populations in bayheads, and may well be excluding other dacetines from this habitat. The native species of *Smithistruma* may be particularly affected by invasions of *Strumigenys* species: Brown (1953) considers *Smithistruma* species less efficient predators than *Strumigenys* species; Wilson (1953) found among the dacetines he studied the *Smithistruma* species were less aggressive than the *Strumigenys* species.

We hope over the next few years to obtain more precise information on the distribution of exotic species of *Strumigenys* in Florida. At present we are not even able to say whether these species are widespread or confined to few localities. It is also quite possible that additional species of *Strumigenys* are even now consolidating their populations around various centers of Florida's exotic plant trade. We append our meager collecting records of Florida *Strumigenys*. Specimens of all species have been placed in the Florida State Collections of Arthropods, Gainesville.

S. eggersi: Highlands Co. (Archbold Biological Station, Highlands Hammock St. Pk.), Martin Co. (Jonathan Dickinson St. Pk.), Polk Co. (Lake Wales), Lee Co. (Olga), Broward Co. Davie), Monroe Co. (Key Largo).

S. gundlachi: Dade Co. (Paradise Key, Long Pine Key, Mahogany Hammock, Matheson Hammock Pk.), Monroe Co. (Key Largo)

S. louisianae: Highlands Co. (Archbold Biological Station), Marion Co. (Ocala Nat. Forest), Alachua Co. (Gainesville), Dade Co. (Long Pine Key), Gadsden Co. (Quincy), Polk Co. (Lk. Kissimmee St. Pk.), Leon Co. (Tall Timbers Res. Sta.)

S. rogeri: Highlands Co. (Archbold Biological Station, Highlands Hammock St. Pk.), Broward Co. (Davie)

The following key serves to separate species of Florida *Strumigenys*.

Key to Workers and Queens of Florida *Strumigenys*

1. Mandibles with 1 or 2 large subapical teeth (Fig. 1, 2), without a series of small subapical teeth, mandibles nearly parallel in closed position 2

1′. Mandibles with several small subapical teeth (Fig. 3), mandibles usually convergent in closed position 3

2(1). Mandibles with 2 subapical teeth (Fig. 1); sides of head dissected by a deep cleft in front of eyes, most obvious in ventral view (Fig. 4); dorsal surface of head with only a few flattened hairs, spoon-shaped hairs limited to the sides of the head ..... *S. rogeri*

2′. Mandibles with single subapical tooth (Fig. 2); no deep cleft in front of eyes; dorsal surface of head covered with evenly spaced enlarged ends of spoon-shaped hairs ..... *S. louisianae* Roger

3(1′). Postpetiole with a small membranous ventral flange (Fig. 5) ..... *S. gundlachi* (Roger)

3′. Postpetiole without a ventral flange (Fig. 6) ..... *S. eggersi* Emery

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DISTRIBUTION OF *MISCHOCYTTARUS (MONOCYTTARUS) MEXICANUS CUBICOLA* IN THE UNITED STATES

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ABSTRACT

Mischocyttarus mexicanus cubicola has been found nesting in Florida, Alabama, Georgia and South Carolina in the U. S. In the southernmost part of its range it nests throughout the year, while in more temperate climates it hibernates during the winter period. This subspecies has also been reported from Cuba, the Bahamas and Puerto Rico.

RESUMEN

Mischocyttarus (Monocyttarus) mexicanus cubicola ha sido encontrada anidando en la Florida, Alabama, Georgia y South Carolina. En el sur de la Florida esta avispa anida durante todo el año, mientras en áreas más templadas este insecto entra en un período de inactividad durante el invierno. Esta especie ha sido reportada en Cuba, las Bahamas y Puerto Rico.

Mischocyttarus mexicanus cubicola (de Saussure) is known to occur in the U.S. in Florida, Georgia and Alabama, and outside the U.S. in Cuba and the Bahamas (Bequaert 1933, Krispyn and Hermann 1977, Krombein et al. 1979, Litte 1977, Richards 1945, 1978). The nominate subspecies, *M. m. mexicanus* (Richards 1978), occurs in Texas, Mexico and other parts of Central America.

M. mexicanus is one of 2 species in this genus that occurs in the U.S. (Krombein et al., 1979). *M. flavitarsis* occurs in the western half of the U.S. from Texas to Washington (Litte 1979). The genus, primarily Neotropical in its distribution, is the largest of the social wasp genera, with 189 species and 15 subspecies (Richards 1978).