An Annotated List of the Pyramica 
(Hymenoptera: Formicidae: Dacetini) of Mississippi

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ABSTRACT: Distributions of 20 species of Pyramica (Formicidae: Myrmicinae: Dacetini) in Mississippi are reported. This list includes six new state records including Pyramica bimarginata (Wesson & Wesson), P. metazytes Bolton, P. ohiensis (Kennedy & Schramm), P. reflexa (Wesson & Wesson), P. talpa (Weber), and one introduced species, Pyramica hexamera (Brown), previously reported from Florida and Louisiana. In addition, records are provided for three rarely collected species, P. angulata (M. R. Smith), P. hyalina Bolton, and P. rohweri (M. R. Smith).

The ant genus Pyramica Roger (Myrmicinae: Dacetini) includes small cryptic species, formerly assigned to Smithistrum Brown, that occur in leaf litter and soil where they prey on various small arthropods (Hölldobler and Wilson, 1990). Nearctic species of Pyramica were originally included in Strumigenys by Emery (1895), and this generic assignment was followed in revisions by M. R. Smith (1931b, 1935), Wesson and Wesson (1939), and Creighton (1950). Brown (1948) restricted Strumigenys to species having long mandibles and erected Smithistrum to include the remaining species characterized by short mandibles. Brown (1953) subsequently recognized 24 Nearctic species of Smithistrum in his revision of the Dacetini. Bolton (1999) synonymized Smithistrum with Pyramica, which he elevated from junior synonymy with Strumigenys. Bolton (2000) revised the Dacetini and recognized 38 species of Pyramica in North America north of Mexico, of which 34 were reported from eastern United States.

The genus Pyramica is characterized by a six segmented antenna ending in a two segmented club, the usual presence of spongiform tissue on the petiole and postpetiole, and triangular to subtriangular (occasionally somewhat elongate) mandibles that lack spiniform teeth apically (as in the genus Strumigenys) (Bolton, 2000). Both Pyramica and Strumigenys are characterized by specialized erect hairs, which often are spatulate or scalelike (Brown, 1953). Species of Pyramica can be identified relatively easily with keys in Bolton (2000), which emphasize dentition and shape, size, and orientation of pilosity.

The Mississippi Entomological Museum (MEM) has been conducting surveys of ants in Mississippi since 2001 to provide baseline data on native species to complement regional imported fire ant programs initiated by the United States Department of Agriculture-Agricultural Research Service (USDA-ARS). The current list of ants of Mississippi was provided by Marion R. Smith (1924a, b, c, 1927, 1928a, b, 1931a, 1932). Smith’s surveys were made before the introduction of the imported fire ants, Solenopsis invicta Buren (Formicidae: Solenopsidini) and S. richteri Forel, in the 1930’s and subsequent control efforts, including aerial application of Mirex, heptachlor, and other insecticides during the 1960’s and 1970’s.

Methods

Most of the Pyramica collected in this study were found in soil and leaf litter samples and were extracted using Berlese funnels. Other specimens were collected in pitfall traps.
or collected by sifting litter through screens into trays for hand collecting. Records of *Pyramica* are from 36 of 82 counties in Mississippi representing 10 of the 11 physiographic regions of the state (excluding only the barrier islands) as delineated by Testa and Lago (1994).

Species determinations were made using the revision of the Dacetini (Bolton, 2000). All distributions are based on material in the MEM, except for cited published records. Specific site data are provided for new state records and uncommonly collected species, but only county records are given for species that are more common or widely distributed throughout their range. Numbers of workers and queens are given for all new state records and rare species. Distribution maps of *Pyramica* species in Mississippi can be found at the homepage of the Mississippi Entomological Museum at the following URL: http://www.msstate.edu/org/mississippientmuseum/Researchtaxapages/Formicidaepages/antspecieslist.html.

Results

Of the 20 species of *Pyramica* reported here from Mississippi, six are new state records: *P. bimarginata* (Wesson & Wesson), *P. hexamera* (Brown), *P. metazytes* Bolton, *P. ohiensis* (Kennedy & Schramm), *P. reflexa* (Wesson & Wesson), and *P. talpa* (Weber). *Pyramica bimarginata* was known previously from only Ohio and Illinois (Bolton, 2000), and the Mississippi collection represents a significant distributional record. This species is one of the few *Pyramica* that has been collected in the Black Belt Prairie in Mississippi. *Pyramica metazytes* was described only recently (Bolton, 2000) based on five workers from Kentucky and Tennessee. *Pyramica hexamera* is an introduced ant native to Japan and previously reported from Marion and Hernando Counties, Florida (Deyrup, 1988, 2003) and Iberia Parish, Louisiana (Bolton, 2000). *Pyramica talpa, P. ohiensis*, and *P. reflexa* have been reported from Louisiana and/or Alabama (Bolton, 2000), and their presence in Mississippi was not unexpected.

Additional records are provided for three species that have been rarely collected: *P. angulata* (M. R. Smith), *P. hyalina* Bolton, and *P. rohweri* (M. R. Smith). *Pyramica hyalina* was previously known from four workers and a queen from single localities in Ohio and Mississippi (Bolton, 2000). *Pyramica rohweri* has been reported from only two localities in Mississippi (Bolton, 2000; Brown, 1953). *Pyramica angulata* was known from a limited number of specimens collected in Alabama, Arkansas, Illinois, Kentucky, Mississippi, Oklahoma, and South Carolina (Bolton, 2000).

List of the *Pyramica* of Mississippi


Pyramica dietrichi (M. R. Smith). George, Lauderdale, Lowndes, Montgomery, Oktibbeha, Webster, and Winston Cos.


Pyramica laevinasis (M. R. Smith). Lauderdale and Winston Cos.


Pyramica pilinasis (Forel). George, Lee, and Oktibbeha Cos. (MEM); Winston Co. (Smith, 1931a).

Pyramica pulchella (Emery). Amite, Choctaw, Clay, George, Lowndes, Montgomery, Oktibbeha, Pontotoc, Tishomingo, and Winston Cos. (MEM); Monroe and Smith Cos. (Smith, 1931b); Bolton (2000) reported specimens from “Bond,” which could be either Neshoba or Stone Co.


Pyramica rostrata (Emery). Choctaw, George, Grenada, Harrison, Jackson, Jones, Lee, Madison, Noxubee, Oktibbeha, Prentiss, Tishomingo, Wayne, and Winston Cos.

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Literature Cited


