

## **An Updated List of Ants of Alabama (Hymenoptera: Formicidae) with New State Records**

Authors: Macgown, Joe A., Booher, Doug, Richter, Heath, Wetterer, James K., and Hill, Jovonn G.

Source: Transactions of the American Entomological Society, 147(4) : 961-981

Published By: The American Entomological Society

URL: <https://doi.org/10.3157/061.147.0409>

---

BioOne Complete ([complete.BioOne.org](http://complete.BioOne.org)) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at [www.bioone.org/terms-of-use](http://www.bioone.org/terms-of-use).

Usage of BioOne Complete content is strictly limited to personal, educational, and non - commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

---

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

## An Updated List of Ants of Alabama (Hymenoptera: Formicidae) with New State Records

JOE A. MACGOWN<sup>1</sup>, DOUG BOOHER<sup>2</sup>, HEATH RICHTER,<sup>3</sup>  
JAMES K. WETTERER,<sup>4</sup> AND JOVONN G. HILL<sup>1,a</sup>

<sup>1</sup>Department of Molecular Biology, Biochemistry, Entomology, & Plant Pathology, Mississippi State University, Mississippi State, MS 39762

<sup>2</sup>Yale Center for Biodiversity and Global Change, Yale University, New Haven, CT 06520-8106

<sup>3</sup>Lubarrett Way S, Mobile, AL 36695

<sup>4</sup>Wilkes Honors College, Florida Atlantic University, Jupiter, FL 33458

<sup>a</sup>Orcid id: 0000-0002-1892-7117

### ABSTRACT

A 2005 review compiled a list of 155 ant species plus the hybrid fire ant *Solenopsis invicta* X *richteri* from Alabama. Here, we add an 38 additional species based on both published and unpublished records and revised identifications raising the total to 193 species and one hybrid. Of these, 32 species and one hybrid are considered exotic to the state. We present county level maps of species richness and collection efforts for native and exotic ants highlighting areas of special concern for conservation and invasion risks.

**Key words:** Hymenoptera, Formicidae, Alabama, U.S.A., ants, diversity, exotic species

### TRIBUTE

With the death of Dr. E.O. Wilson announced as we finalized proofs of this work we wanted to pay tribute to him with a note of remembrance, as we were all most eager to share this work and our Alabama ant-biophilia. Wilson grew up in Alabama as a pioneering naturalist, finding his love of ants after a fishing hook accident forced him into the nearsighted but expansive universe of “the little things that run the world.” Although he is famous for his work and career at Harvard as a taxonomist (he described 429 species!), theoretical ecologist, and global conservation advocate, he always remained an Alabama boy. In the latter half of his life he came back to Alabama at every opportunity—notably as his focus shifted towards conservation. An ever important sentiment shared by Wilson was that we are “still short on saving a large percentage of the species, many unknown mostly to the public” and still in an age of discovery. Wilson stated that “we’ve come to recognize that the fauna and flora are fundamental in continued human existence” and the first step in determining what areas to conserve is understanding each and every species inhabiting those areas. Historically conservation efforts have been prioritized based on charismatic flora and fauna and although the roles of invertebrates have long been known to be important among ecologists, we simply have not had the baseline knowledge of what invertebrates live where to include them in most conservation strategies. By Wilson’s estimates, ants outweigh the vertebrate fauna wherever they co-occur. Ants are ecosystem engineers, aerating the soil through nest building and planting the herbaceous understory through seed dispersal. There must be concerted biodiversity inventory efforts to understand the distribution of invertebrates in order to steward them and reap their ecological benefits. This small work on the ants of Alabama is at the heart of Wilson’s vision and supports the goals of the E.O. Wilson Biodiversity Foundation’s Half-Earth Project. Dr. E.O. Wilson is known to many of us as uncle Ed for his mentoring role and positive influence in our lives. It is our goal that by updating the ants of Alabama we provide a better base of knowledge that can be used to help prioritize conservation decisions with this most important group of terrestrial invertebrates. This one is for our ur-myrmecologist, uncle Ed.

## INTRODUCTION

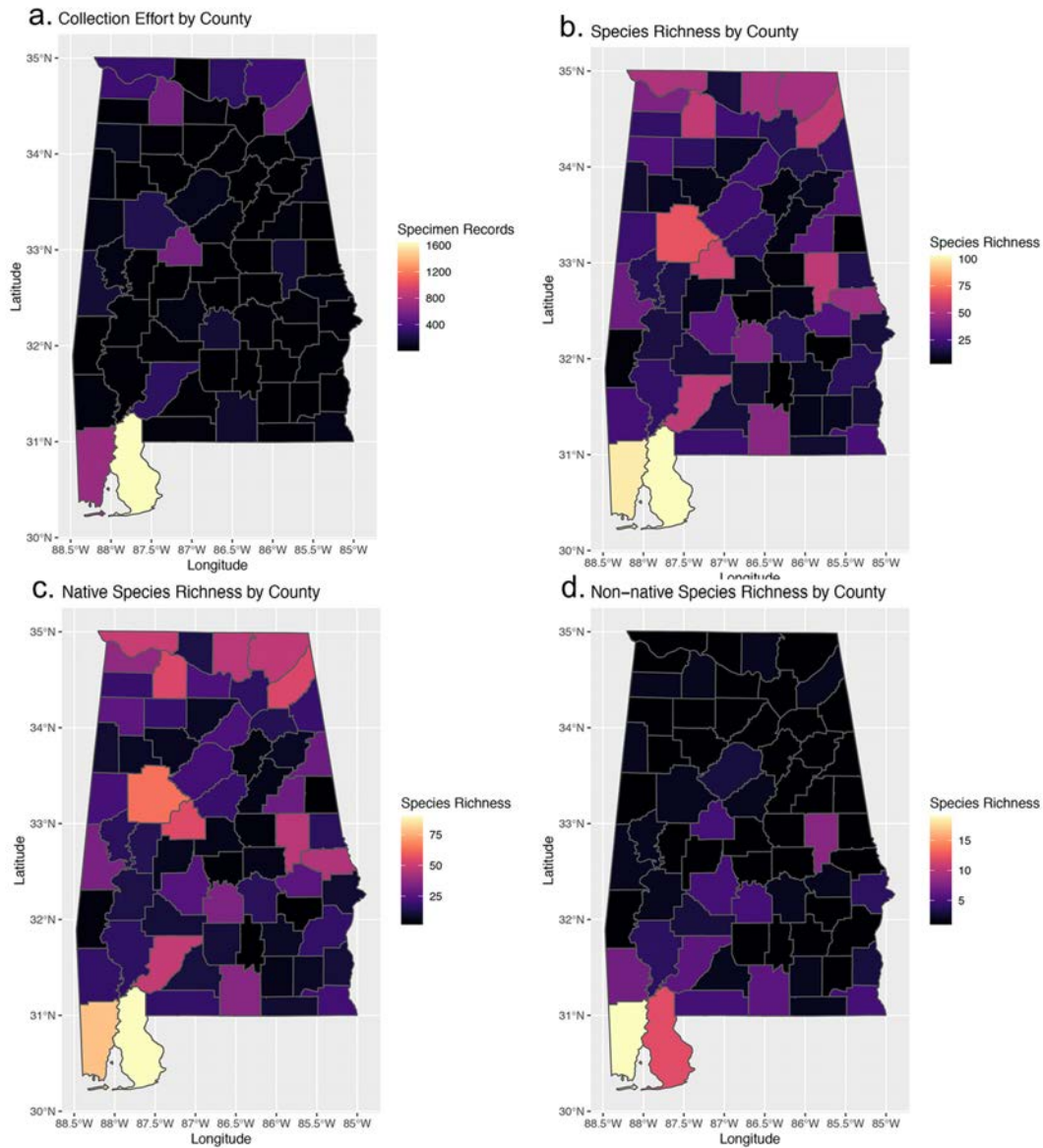
MacGown and Forster (2005) reported 155 species of ants for Alabama, which at that time added 59 new state records including 18 exotic species. Since then, the Mississippi Entomological Museum (MEM) staff and collaborators have collected additional species, and several papers have reported additional species records from the state (e.g., Pacheco 2007, Hill & Brown 2010, Deyrup 2015, MacGown 2015, 2017, MacGown et al. 2013, Wetterer 2014). We also included several published state records we previously overlooked (e.g., in Wheeler 1906, Wing 1968, Baroni Urbani & de Andrade 2003). Here we report 193 species (plus the hybrid fire ant, *Solenopsis invicta* X *richteri*) representing nine subfamilies and 41 genera. Of these, 32 species and one hybrid are considered exotic to Alabama.

Following MacGown and Forster's (2005) paper, numerous taxonomic changes have been published by various researchers from the subfamily to the species level, which necessitated this updated list reflecting these changes. The *Camponotus* subgenus *Colobopsis* was raised to generic level (Ward et al. 2016). LaPolla et al. (2010) revived *Nylanderia* from synonymy restoring it as a genus, replacing Nearctic *Paratrechina* except *P. longicornis* (Latreille). The Nearctic *Formica pallidefulva* group was revised by Trager et al. (2007), and as a result *F. dolosa* Buren was elevated from subspecies status and the species *F. schaufussi* was shown to be invalid. The undescribed species of *Formica* reported by MacGown & Forster (2005) was described by Trager et al. (2007) as *F. biophilica* Trager. Baroni Urbani & De Andrade (2007) proposed that the genus *Pyramica* be a junior synonym of *Strumigenys*. This change was later supported by a phylogenetic study by Ward et al. (2015) that showed that the tribe Dacetini was not monophyletic. In this same paper, Ward et al. (2015), also made numerous other changes that affected the relationships of Myrmicinae genera to one another. Brady et al. (2014) synonymized the subfamily Ecitoninae under Dorylinae.

Records provided on [AntMaps.org](http://AntMaps.org) (Guénard et al. 2017) indicate that *Aphaenogaster texana* (Wheeler) is native throughout the southeastern USA, and Mackay & Mackay (2017) reported

records of *A. texana* in the Southeast as well. However, all specimens identified as *A. texana* from the Southeast examined by the authors were found to be *A. carolinensis* Wheeler. Furthermore, DeMarco & Cognato (2016) analyzed DNA data from a phylogenetic study of North American *Aphaenogaster* supported the idea that *A. texana* only occurs west of the Mississippi River. Here we follow DeMarco & Cognato (2016) and do not include *A. texana* as occurring in this region. *Camponotus novaeboracensis* (Fitch) and *Crematogaster crinosa* Mayr records from [AntMaps.org](http://AntMaps.org) (Guénard et al. 2017) indicate that these species occur in Alabama; however, these records have not been published, nor have they been validated by the authors here. Their presence in Alabama seems unlikely and we do not include them here. A single record of *Dorymyrmex flavopectus* Smith is given on [AntWeb.org](http://AntWeb.org), (AntWeb 2021) but images are not provided nor was the specimen examined by the authors, so we do not include this record here. Other changes are noted in the taxonomic list below.

This species list is arranged alphabetically by subfamily, genus, and species. Scientific names follow Antcat.org. Exotic species are noted by the hashtag symbol (#). County records were obtained through several online data sources; Global Ants Biodiversity Informatics (GABI) project (Guénard et al. 2017), AntWeb (AntWeb.org 2021), Global Biodiversity Information Facility (GBIF)(GBIF.org 2021), as well as personal and institutional collections; Mississippi State Entomological Museum (MEM), Auburn University Entomological Museum (AUEM), Georgia Natural History Museum (GNHM), Archbold Biological Station (ABS), and the personal collections of Doug Booher (DBBC), Heath Richter (HRPC), and James Wetterer (JKWC). The total number of records examined include 7963 specimens, with 7963 specimens determined to species level with county records. 6608 specimen records were native and 1108 were non-native. Duplicate records identified as specimens collected with the same coordinates on the same day or those in different databases with the same specimen code identifier were removed. Specimens examined by the authors are deposited in the MEM, AUEM, GNHM, ABS, DBBC, and HRPC. County records of specimens examined by the authors are given first



**Figure 1.** Maps of collection efforts and species richness for native and exotic ants in Alabama. Figure 1a – collection efforts for each county were approximated by the total number of ant specimens collected ( $n=7938$ ) and reported here or were available through existing databases or (ABS, AntMaps.org, AntWeb.org, AUEM, DBBC, GBIF.org, GNHM, HRPC, JKWC, and MEM). Figure 1b – species richness by county of all ants, native and non-native. Figure 1c – native species richness by county of a total of 160 native species known. Figure 1d– non-native species richness by county of a total of 32 species plus the hybrid *S. invicta* X *richteri* known to occur in Alabama, Non-native specimen collections represent 14% of total collections (1108 non-native specimen collections reported).

with literature records following.

Although we raise the number of known species to 193, the ant fauna over most of Alabama is poorly understood with almost 40% of species represented by 10 or fewer records. Collection efforts are concentrated in a few counties with two counties (Mobile and Baldwin) accounting for 30% of the total databased observations reported here (Figure 1a). Species diversity (Figures 1b, 1c & 1d) closely follows collection efforts (Figure 1a), revealing collection effort is biasing our understanding of species richness across Alabama and calls for more even sampling across the state. Intensive collection efforts reveal high native species richness in three areas, the Mobile–Tensaw River Delta, Tuscaloosa County, and the Cumberland Plateau in the northern portion of the state. Non-native diversity is highest in southern Alabama, especially around the port of Mobile where known native species richness is also highest (Figures 1c & 1d). These maps help to identify knowledge gaps in Alabama’s ant diversity and identify the need to monitor the range and spread of non-native ant species that may threaten native ant communities and ecological function.

#### AMBLYOPONINAE

##### *Stigmatomma pallipes* (Haldeman).

*Distribution* — Baldwin, Bibb, Colbert, DeKalb, Franklin, Jackson, Lauderdale, Lawrence, Lee, Madison, Mobile, Tuscaloosa, and Winston Cos. (MEM, AUEM, DDBC). Reported as *Amblyopone pallipes* (Haldeman) by MacGown & Forster 2005; *Stigmatomma* resurrected as a genus by Yoshimura & Fisher 2012.

#### DOLICHODERINAE

##### *Dolichoderus mariae* Forel

*Distribution* — No county given (MacKay 1993).

##### *Dolichoderus plagiatus* (Mayr)

*Distribution* — DeKalb Co. (MEM).

##### *Dolichoderus pustulatus* Mayr

*Distribution* — Baldwin, DeKalb, Lowndes, and Marion Cos. (MEM, DBBC, Hill & Brown 2010); No county given (MacKay 1993).

##### *Dolichoderus taschenbergi* (Mayr)

*Distribution* — No county given (MacKay 1993).

##### *Dorymyrmex bureni* (Trager)

*Distribution* — Baldwin, Bibb, Blount, Cherokee, Clarke, Coffee, Covington, Dallas, DeKalb, Escambia, Franklin, Geneva, Hale, Houston, Lamar, Lee, Lowndes, Macon, Marengo, Marion, Marshall, Mobile, Monroe, Perry, Pickens, Russell, Sumter, Tallapoosa, Tuscaloosa, and Wilcox Cos. (MEM, DBBC, HRPC, Barnum 2008).

##### *Dorymyrmex flavus* McCook

*Distribution* — Baldwin, Conecuh, and Mobile Cos. (AUEM, MEM).

##### *Dorymyrmex grandulus* (Forel)

*Distribution* — Baldwin and Mobile Cos. (MEM, Trager 1988).

##### *Dorymyrmex smithi* Cole

*Distribution* — Baldwin, Covington, Geneva, Lee, Lowndes, Macon, Mobile, Sumter, and Tallapoosa Cos. (AUEM, MEM, DBBC, HRPC, Hill & Brown 2010).

##### *Forelius pruinus* (Roger)

*Distribution* — Baldwin, Bibb, Chambers, Covington, Escambia, Mobile, and Walker Cos. (MEM, DBBC, HRPC).

##### *Forelius* sp. B

*Distribution* — Baldwin, Bibb, Blount, Butler, Chambers, Cherokee, Clarke, Clay, Cleburne, Colbert, Cullman, Dallas, DeKalb, Fayette, Greene,



Jackson, Lamar, Lawrence, Lee, Limestone, Lowndes, Macon, Marion, Madison, Marion, Mobile, Monroe, Morgan, Pickens, Russell, Sumter, Tallapoosa, Tuscaloosa, Walker, and Winston Cos. (AUEM, MEM, DBBC, HRPC, Barnum 2008, Hill & Brown 2010).

*Note* — This species appears to be an undescribed, but common pale colored species in the southeastern USA. Specimens of this species collected from the southeastern USA have been variously reported in the literature as *F. analis* André, *F. mccooki* (McCook), *F. pruinosus*, and *F. pruinosus analis*. Much of the older material examined by MacGown from museum collections that matches the concept of *F. sp. B.* listed here was identified as *F. analis*, which made separation of the two described southeastern species relatively easy. However, in 2005, Ward synonymized *F. analis* under *F. pruinosus*. Unfortunately, this did not resolve the situation because there are clearly two common species in the Southeast (in addition to at least one more). Originally, *F. analis* was described as *Tapinoma anale* by André in 1893 based on specimens from Mexico. It is likely that Ward did not find enough differences between western “*pruinosus*” and western “*analis*” specimens, and thus, his synonymy made sense. It is even possible that the western “*pruinosus*” could be different from the concept of the southeastern *F. pruinosus*. Given that the original *F. analis* was described based on specimens collected from Mexico, it seems unlikely that the southeastern “*analis*” was ever actually the same species. Following Ward (2005), MacGown and others began calling the common non “*pruinosus*” form found in the Southeast *F. mccooki*, a southwestern species which it resembles. Later, after subsequent collections by the MEM of *F. mccooki* were made in the Southwest and museum specimens identified as *F. mccooki* from the Southwest were examined, MacGown found differences between the southeastern “*mccooki*” form and the western “*mccooki*” and began referring to the southeastern species as *F. sp. B.* To complicate things further, many early identifications of *F. sp. B.* were reported as *F. pruinosus*. In the southeastern USA, *F. pruinosus* appears to be restricted to sand habitats and can be separated from *F. sp. B.* by its darker blackish brown color with hints of iridescence and very limited setation as compared to the much

paler and more setose *F. sp. B.*

### #*Linepithema humile* (Mayr)

*Distribution* — Autauga, Baldwin, Barbour, Bibb, Butler, Calhoun, Chambers, Chilton, Clarke, Clay, Cleburne, Coffee, Conecuh, Coosa, Covington, Cullman, Crenshaw, Dale, Dallas, DeKalb, Elmore, Escambia, Etowah, Geneva, Greene, Hale, Henry, Houston, Jefferson, Lamar, Lauderdale, Lawrence, Lee, Lowndes, Macon, Madison, Marengo, Marion, Mobile, Monroe, Montgomery, Perry, Randolph, Russell, St. Clair, Shelby, Sumter, Talladega, Tallapoosa, Tuscaloosa, Walker, Washington, Wilcox, and Winston Cos. (AUEM, MEM, HRPC, Smith 1936, MacGown & Forster 2005).

### *Tapinoma sessile* (Say)

*Distribution* — Chambers, Cleburne, DeKalb, Etowah, Jackson, Lauderdale, Lawrence, Lee, Limestone, Macon, Madison, and Tuscaloosa Cos. (AUEM, MEM, DBBC).

### #*Tapinoma melanocephalum* (Fabricius)

*Distribution* — Franklin and Mobile Cos. (MEM, MacGown 2017).

## DORYLINAE

### *Neivamyrmex carolinensis* (Emery)

*Distribution* — Chilton, Choctaw, Etowah, and Pickens Cos. (Smith 1942).

### *Neivamyrmex nigrescens* (Cresson)

*Distribution* — Calhoun, Cherokee, Clay, Cullman, Jefferson, Lauderdale, Lee, Madison, Mobile, and Morgan Cos. (AUEM, MEM, Smith 1942).

### *Neivamyrmex opacithorax* (Emery)

*Distribution* — Mobile Co. (HRPC); no county given (Watkins 1985).

## ECTATOMMINAE

#*Gnamptogenys triangularis* (Mayr)

*Distribution* — Baldwin, Houston, Mobile, Monroe, Montgomery, Shelby, and Tallapoosa Cos. (MEM, HRPC, Wang et al. 2021).

## FORMICINAE

*Brachymyrmex depilis* Emery

*Distribution* — Baldwin, Bibb, Clay, Clarke, Colbert, Conecuh, Dallas, DeKalb, Escambia, Greene, Jackson, Lawrence, Lowndes, Macon, Marion, Marshall, Mobile, Monroe, Pickens, Tallapoosa, Tuscaloosa, and Winston Cos. (AUEM, MEM, DBBC, HRPC, Hill & Brown 2010).

#*Brachymyrmex patagonicus* Mayr

*Distribution* — Baldwin, Barbour, Bibb, Butler, Choctaw, Clarke, Coffee, Conecuh, Covington, Dale, Dallas, Escambia, Geneva, Henry, Houston, Lee, Lowndes, Macon, Marengo, Marion, Mobile, Monroe, Montgomery, Russell, Shelby, Sumter, Tallapoosa, Tuscaloosa, Washington, and Wilcox. (AUEM, MEM, HEPC, MacGown & Forster 2005, Barnum 2008, Hill & Brown 2010). Reported as *B. musculus* Forel by MacGown & Forster 2005).

*Brachymyrmex* sp. 03

*Distribution* — Tuscaloosa Co. (MEM). This yellow species differs from *B. depilis* by having a few stiff erect setae present on the mesosomal dorsum.

*Camponotus americanus* Mayr

*Distribution* — Calhoun, Clay, Cleburne, Coffee, Colbert, Covington, Cullman, DeKalb, Etowah, Jackson, Jefferson, Lauderdale, Lawrence, Lee, Madison, Mobile, Monroe, Morgan, Shelby, Tallapoosa, Tuscaloosa, and Winston Cos. (AUEM, MEM, DBBC, HRPC, Barnum 2008).

*Camponotus caryae* (Fitch)

*Distribution* — Clay, Cleburne, and Jefferson Cos. (MEM, DBBC, Murphree 1947).

*Camponotus castaneus* (Latreille)

*Distribution* — Baldwin, Bibb, Blount, Cherokee, Clarke, Covington, Dale, Dallas, DeKalb, Elmore, Etowah, Henry, Jefferson, Lauderdale, Lawrence, Lee, Limestone, Lowndes, Macon, Madison, Mobile, Monroe, Montgomery, Morgan, Perry, Pike, Shelby, Sumter, Tallapoosa, Tuscaloosa, and Wilcox Cos. (AUEM, MEM, DBBC, HRPC).

*Camponotus chromaiodes* Bolton

*Distribution* — Bibb, Blount, Butler, Calhoun, Clarke, Cleburne, Colbert, Coosa, Crenshaw, Covington, Dallas, DeKalb, Escambia, Franklin, Jackson, Jefferson, Lamar, Lauderdale, Lawrence, Lee, Lowndes, Macon, Madison, Marengo, Marion, Perry, Pike, Shelby, Sumter, Tallapoosa, Tuscaloosa, Walker, and Winston Cos. (AUEM, MEM, DBBC, HRPC).

*Camponotus decipiens* Emery

*Distribution* — Autauga, Clarke, Clay, Fayette, Greene, Jackson, Jefferson, Lee, Limestone, Lowndes, Madison, Marengo, Mobile, Pickens, and St. Clair Cos. (AUEM, MEM, DBBC, HRPC, Murphree 1947, Hill & Brown 2010).

*Camponotus discolor* (Buckley)

*Distribution* — Baldwin, Mobile, and Pickens Cos. (AUEM, HRPC, Murphree 1947).

*Camponotus floridanus* (Buckley)

*Distribution* — Baldwin, Geneva, Henry, Houston, Mobile, and Tallapoosa Cos. (AUEM, MEM, DBBC).

*Camponotus nearcticus* Emery

*Distribution* — Baldwin, Cleburne, DeKalb,

Etowah, Jackson, Lauderdale, Lawrence, Lee, Lowndes, Madison, Morgan, Mobile, and Shelby Cos. (AUEM, MEM, DBBC, HRPC, Barnum 2008).

***Camponotus pennsylvanicus* (DeGeer)**

*Distribution* — Baldwin, Bibb, Blount, Cherokee, Cleburne, Covington, Dallas, DeKalb, Elmore, Escambia, Etowah, Greene, Hale, Henry, Jefferson, Lauderdale, Lawrence, Lee, Limestone, Lowndes, Madison, Marengo, Mobile, Monroe, Montgomery, Morgan, Perry, Pickens, Randolph, Shelby, Sumter, Talladega, Tallapoosa, Tuscaloosa, Walker, Washington, and Wilcox Cos. (AUEM, MEM, DBBC, HRPC, Barnum 2008).

***Camponotus snellingi* Bolton**

*Distribution* — Baldwin, Bibb, Clarke, Cleburne, Colbert, Dallas, DeKalb, Hale, Jackson, Lauderdale, Lawrence, Lee, Madison, Mobile, Monroe, Tallapoosa, Tuscaloosa, Walker, and Washington Cos. (AUEM, MEM, HRPC).

***Camponotus socius* Roger**

*Distribution* — Baldwin and Mobile Cos. (MEM).

***Camponotus subbarbatus* Emery**

*Distribution* — Bibb, Colbert, DeKalb, Lauderdale, Lawrence, Marion, Mobile, and Tuscaloosa Cos. (AUEM, MEM).

***Colobopsis impressa* Roger**

*Distribution* — Baldwin, Barbour, Bibb, Clay, Dallas, Henry, Jackson, Lee, Lowndes, Madison, Marengo, Mobile, and Monroe. (AUEM, MEM, DBBC, Murphree 1947). Records of *C. pylartes fraxinicola* Smith from MacGown & Forster 2005 are included as *C. impressa* here.

***Colobopsis mississippiensis* (Smith)**

*Distribution* — Hale, Jackson, Lawrence, Lowndes, and Marengo Cos. (AUEM, MEM, DBBC,

Hill & Brown 2010).

***Colobopsis obliqua* (Smith)**

*Distribution* — Bibb and Pickens Cos. (MEM, DBBC). No county given (Smith 1979).

***Formica archboldi* M. R. Smith**

*Distribution* — No county given (Smith 1979).

***Formica biophilica* Trager**

*Distribution* — Bibb, Butler, DeKalb, Lowndes, Sumter, Tallapoosa, and Tuscaloosa Cos. (AUEM, MEM, HRPC). MacGown and Forster 2005 reported this species as *Formica* n. sp.

***Formica dolosa* Buren**

*Distribution* — Bibb, Butler, Clay, Colbert, Covington, Greene, DeKalb, Lauderdale, Lawrence, Lowndes, Madison, Marion, Mobile, Pickens, Sumter, and Tallapoosa Cos. (AUEM, MEM, DBBC, HRPC, Hill & Brown 2010). Reported by MacGown & Forster 2005 as *F. schaufussi dolosa* Buren.

***Formica integra* Nylander**

*Distribution* — Clay, Cleburne, DeKalb, Etowah, Lee, Marion, Morgan, and Randolph Cos. (AUEM, MEM).

***Formica pallidefulva* Latreille**

*Distribution* — Baldwin, Bibb, Clay, Cleburne, Colbert, DeKalb, Fayette, Greene, Jackson, Lauderdale, Lawrence, Lee, Limestone, Macon, Madison, Marion, Mobile, Morgan, and Tuscaloosa Cos. (AUEM, MEM, DBBC, HRPC, Barnum 2008).

***Formica rubicunda* Emery**

*Distribution* — Cleburne and DeKalb Cos. (MEM, HRPC).



***Formica subintegra* Wheeler**

*Distribution* — Clay and Jackson Cos. (MEM).

***Formica subsericea* Say**

*Distribution* — Barbour, Bibb, Cherokee, Colbert, DeKalb, Etowah, Jackson, Jefferson, Lauderdale, Lawrence, Lee, Lowndes, Madison, Shelby, and Tallapoosa Cos. (AUEM, MEM, DBBC, HRPC).

***Lasius americanus* Emery**

*Distribution* — Baldwin, Barbour, Bibb, Butler, Escambia, DeKalb, Jackson, Jefferson, Lauderdale, Lawrence, Macon, Madison, Marion, Marshall, Monroe, Morgan, and Tuscaloosa Cos. (AUEM, MEM, DBBC) Reported as *L. alienus* (Foerster) by MacGown & Forster 2005, Schar et al. 2018 found that North American specimens identified as *L. alienus* were *L. americanus*.

***Lasius aphidicola* (Walsh)**

*Distribution* — Covington, Lawrence, Macon, and Tuscaloosa Cos. (AUEM, MEM, DBBC). This species was reported as *L. umbratus* Wheeler by MacGown & Forster 2005. Schar et al. 2018 reported that North American specimens identified as *L. umbratus* were *L. aphidicola*.

***Lasius brevicornis* Emery**

*Distribution* — Tuscaloosa Co. (DBBC). No county given (Smith 1979). Reported as *L. flavus* Wilson by Smith 1979. Schar et al. 2018 reported that North American specimens identified as *L. flavus* were *L. brevicornis*.

***Lasius claviger* (Roger)**

*Distribution* — Escambia Co. (Wing 1968).

***Lasius interjectus* Mayr**

*Distribution* — Chambers Co. (DBBC).

***Lasius neoniger* Emery**

*Distribution* — Barbour, DeKalb, Limestone, Madison, and Tuscaloosa Cos. (AUEM, MEM, DBBC).

***Nylanderia arenivaga* (Wheeler)**

*Distribution* — Baldwin, Bibb, Blount, Choctaw, Dallas, Greene, Hale, Lee, Lowndes, Marion, Mobile, Pickens, and Sumter Cos. (AUEM, MEM, DBBC, Hill & Brown 2010).

**#*Nylanderia bourbonica* (Forel)**

*Distribution* — Bibb and Mobile Cos. (MEM, Trager 1984, Forster 2003).

*Nylanderia concinna* (Trager)

*Distribution* — Baldwin, Limestone, Mobile and Tallapoosa Cos. (MEM, DBBC, HRPC); no county given (Trager 1984).

***Nylanderia faisonensis* (Forel)**

*Distribution* — Baldwin, Bibb, Blount, Butler, Calhoun, Cherokee, Clarke, Clay, Cleburne, Colbert, Conecuh, Covington, Dallas, DeKalb, Escambia, Etowah, Franklin, Greene, Jackson, Lamar, Lauderdale, Lawrence, Lee, Lowndes, Macon, Madison, Marion, Mobile, Monroe, Perry, Shelby, Sumter, Tallapoosa, Tuscaloosa, Wilcox, and Winston Cos. (AUEM, MEM, DBBC, HRPC, Barnum 2008).

**#*Nylanderia fulva* (Mayr)**

*Distribution* — Baldwin and Mobile Cos. (MEM, Wang et al. 2016).

***Nylanderia parvula* (Mayr)**

*Distribution* — Bibb, DeKalb, Lee, and Russell Cos. (MEM, DBBC, Barnum 2008).

***Nylanderia phantasma* (Trager)**

*Distribution* — Baldwin and Monroe Cos. (MEM, DBBC).

***Nylanderia querna* Kallal and LaPolla**

*Distribution* — Lauderdale Co. (MEM).

***Nylanderia trageri* Kallal and LaPolla**

*Distribution* — Bibb Co. (MEM).

***Nylanderia vividula* (Nylander)**

*Distribution* — Baldwin, Bibb, Calhoun, Cherokee, Colbert, Dallas, DeKalb, Fayette, Franklin, Greene, Hale, Houston, Lamar, Lawrence, Lee, Limestone, Lowndes, Marengo, Marion, Mobile, Montgomery, Morgan, Pickens, Pike, Russell, Sumter, Washington, Wilcox, and Winston Cos. (AUEM, MEM, DBBC, HRPC, JKWC. Hill & Brown 2010).

***Nylanderia wojciki* (Trager)**

*Distribution* — Mobile and Monroe Cos. (DBBC, Trager 1984).

**#*Paratrechina longicornis* (Latreille)**

*Distribution* — Mobile and Montgomery Cos. (MEM, MCZ, USNM, Wheeler 1906); widespread, according to Murphree (1947). Trager (1984) stated that this species was present in the Gulf States but did not give more specific distributional information.

***Prenolepis imparis* (Say)**

*Distribution* — Baldwin, Bibb, Blount, Chambers, Clarke, Clay, Cleburne, Colbert, Covington, DeKalb, Elmore, Jackson, Jefferson, Lauderdale, Lawrence, Lee, Macon, Madison, Mobile, Morgan, Pike, Sumter, Talladega, Tallapoosa, Tuscaloosa, Washington, and Winston Cos. (AUEM, MEM, DBBC, HRPC, Barnum 2008).

**MYRMICINAE*****Aphaenogaster ashmeadi* (Emery)**

*Distribution* — Baldwin and Mobile Cos. (HRPC, MacKay & MacKay 2017)

***Aphaenogaster carolinensis* Wheeler**

*Distribution* — Baldwin, Bibb, Colbert, Cherokee, Colbert, DeKalb, Jackson, Lauderdale, Lawrence, Lee, Madison, Monroe, Sumter, Tallapoosa, Tuscaloosa, and Washington Cos. (AUEM, MEM, HRPC). Reported as *Aphaenogaster* sp. in MacGown & Forster 2005.

***Aphaenogaster flemingi* Smith**

*Distribution* — No county given (Smith 1958)

***Aphaenogaster floridana* M. R. Smith**

*Distribution* — Baldwin and Covington Cos. (MEM, HRPC); No county given (Smith 1979).

***Aphaenogaster fulva* Roger**

*Distribution* — Autauga, Baldwin, Bibb, Colbert, Conecuh, Cleburne, Dallas, DeKalb, Franklin, Lauderdale, Lawrence, Lee, Madison, Mobile, Monroe, Perry, Sumter, Tallapoosa, and Tuscaloosa Cos. (AUEM, MEM, DBBC, HRPC, Murphree 1947, Barnum 2008).

***Aphaenogaster lamellidens* Mayr**

*Distribution* — Bibb, Blount, Chambers, Cherokee, Colbert, DeKalb, Fayette, Lauderdale, Lawrence, Lee, Macon, Morgan, Tallapoosa, and Tuscaloosa Cos. (AUEM, MEM, HRPC).

***Aphaenogaster miamiana* Wheeler**

*Distribution* — Baldwin, Barbour, Butler, Escambia, Geneva, Houston, Macon, and Monroe Cos. (AUEM, MEM).

***Aphaenogaster picea* (Wheeler)**

*Distribution* — Clay, Cleburne, Franklin, and Jackson Cos. (AUEM, MEM, DBBC, HRPC).

***Aphaenogaster rudis* Enzmann**

*Distribution* — Cleburne and Franklin Cos.

(MEM, Umphrey 1996).

***Aphaenogaster tennesseensis* (Mayr)**

*Distribution* — Bibb, Houston, Mobile, and Sumter Cos. (AUEM, DBBC).

***Aphaenogaster treatae* Forel**

*Distribution* — Bibb, Cherokee, Clay, Covington, DeKalb, Franklin, Lamar, Lawrence, Macon, Mobile, Pickens, and Tuscaloosa Cos. (AUEM, MEM, DBBC, HRPC, Murphree 1947, Hill & Brown 2010).

***Aphaenogaster umphreyi* Deyrup & Davis**

*Distribution* — Butler and Monroe Cos. (GABI, DeMarco & Cognato 2016).

**#*Cardiocondyla minutior* Forel**

*Distribution* — Mobile Co. (Wetterer 2014, reported as *Cardiocondyla nuda* (Mayr) by MacKay 1995).

**#*Cardiocondyla venustula* Wheeler**

*Distribution* — Mobile Co. (MEM).

**#*Cardiocondyla wroughtonii* (Forel)**

*Distribution* — Mobile Co. (MEM).

***Crematogaster ashmeadi* Mayr**

*Distribution* — Baldwin, Bibb, Blount, Chambers, Cherokee, Colbert, Covington, Cullman, Dallas, DeKalb, Fayette, Geneva, Henry, Houston, Jackson, Jefferson, Lauderdale, Lawrence, Lee, Limestone, Lowndes, Madison, Marion, Mobile, Montgomery, Monroe, Pickens, Shelby, St. Clair, Talladega, Tallapoosa, Tuscaloosa, Walker, Washington, Wilcox, and Winston Cos. (AUEM, MEM, HRPC, Barnum 2008).

***Crematogaster cerasi* (Fitch)**

*Distribution* — Cleburne, Jackson, and Tuscaloosa Cos. (MEM, DBBC, HRPC, Morgan & MacKay 2017).

***Crematogaster laeviuscula* Mayr**

*Distribution* — Chambers, Jefferson, Madison, Marion, and Mobile Cos. (DBBC).

*Note* — Johnson (1988) reported this species as *Crematogaster atkinsoni* Wheeler. Morgan and MacKay (2017) synonymized *C. atkinsoni* under *C. laeviuscula*. MacGown believes that based on nest architecture and morphology that *C. atkinsoni* should be re-elevated to species. However, the authors did not examine specimens from Johnson (1988) or Morgan and MacKay (2017), and in this instance we follow Morgan and MacKay (2017).

***Crematogaster lineolata* (Say)**

*Distribution* — Barbour, Bibb, Blount, Calhoun, Chambers, Cherokee, Chilton, Choctaw, Clarke, Clay, Cleburne, Colbert, Cullman, Dale, Dallas, DeKalb, Escambia, Franklin, Greene, Henry, Jackson, Lauderdale, Lawrence, Limestone, Lowndes, Macon, Madison, Marengo, Marion, Monroe, Montgomery, Pickens, Russell, Sumter, Tallapoosa, Tuscaloosa, Wilcox, and Wilson Cos. (AUEM, MEM, DBBC, HRPC, Murphree 1947, Johnson 1988, Hill & Brown 2010).

***Crematogaster minutissima* Mayr**

*Distribution* — Baldwin, Bibb, Fayette, Lauderdale, Lawrence, Lee, Marion, Mobile, Monroe, Pike, Talladega, Tallapoosa, and Tuscaloosa Cos. (AUEM, MEM, DBBC, HRPC, Murphree 1947, Barnum 2008).

***Crematogaster missouriensis* Emery**

*Distribution* — Baldwin, Bibb, Clay, Colbert, Lauderdale, Lawrence, Madison, Mobile, Monroe, Morgan, Pickens, and Sumter Cos. (AUEM, MEM, DBBC, HRPC, Hill & Brown 2010).

***Crematogaster pilosa* Emery**

*Distribution* — Baldwin, Calhoun, Cherokee, Cleburne, Coffee, Conecuh, Cullman, Dale, Dallas, Escambia, Fayette, Franklin, Greene, Jackson, Lauderdale, Lawrence, Lee, Lowndes, Marion, Mobile, Monroe, Pickens, Shelby, Sumter, Tallapoosa, Tuscaloosa, and Washington Cos. (AUEM, MEM, HRPC, Murphree 1947, Hill & Brown 2010).

***Crematogaster pinicola* Deyrup and Cover**

*Distribution* — Baldwin, Covington, Escambia, and Mobile Cos. (MEM, HRPC).

***Crematogaster vermiculata* Emery**

*Distribution* — Baldwin, Barbour, and Lauderdale Cos. (AUEM, MEM).

**#*Cyphomyrmex rimosus* (Spinola)**

*Distribution* — Baldwin, Bullock, Conecuh, Covington, Dale, Dallas, Escambia, Henry, Houston, Lee, Lowndes, Macon, Mobile, Monroe, Montgomery, Sumter, Washington, and Wilcox Cos. (AUEM, MEM, HRPC, JKWC, Barnum 2008, Hill & Brown 2010).

**#*Monomorium floricola* (Jerdon)**

*Distribution* — Smith (1965) reported that this species was established in several localities in the state, but he did not provide specific locality information.

***Monomorium minimum* (Buckley)**

Baldwin, Bibb, Chambers, Cherokee, Clarke, Cleburne, Colbert, Covington, Dallas, DeKalb, Escambia, Etowah, Greene, Hale, Jackson, Jefferson, Lamar, Lauderdale, Lawrence, Lee, Lowndes, Madison, Marengo, Marion, Mobile, Monroe, Montgomery, Morgan, Pickens, Sumter, Talladega, Tallapoosa, and Tuscaloosa Cos. (AUEM, MEM, DBBC, HRPC, Barnum 2008, Hill & Brown 2010).

**#*Monomorium pharaonis* (Linnaeus)**

*Distribution* — Lamar, Lee, and Mobile Cos. (MEM, USNM, Hooper-Bui et al. 2002, Forster 2003); Widespread, according to Murphree (1947).

***Monomorium trageri* DuBois**

*Distribution* — Clarke Co. Database records from Global Ant Biodiversity Informatics (GABI). Specimens were collected and identified by Stefan Cover, a well-known ant taxonomist.

***Monomorium viridum* Brown**

*Distribution* — Baldwin, Chambers, and Mobile Cos. (DBBC, HRPC, Glancey et al. 1976).

***Myrmecina americana* Emery**

*Distribution* — Baldwin, Bibb, Chilton, Clay, Colbert, Conecuh, Covington, Dallas, DeKalb, Elmore, Fayette, Franklin, Hale, Henry, Houston, Jackson, Lauderdale, Lawrence, Lee, Lowndes, Macon, Madison, Marion, Marshall, Monroe, Shelby, Sumter, Tallapoosa, Tuscaloosa, and Washington Cos. (AUEM, MEM, HRPC, Barnum 2008, Hill & Brown 2010).

***Myrmecina cooperi* Deyrup**

*Distribution* — Baldwin and Houston Cos. (MEM, Deyrup 2015). This species was described by Deyrup 2015 with records from Florida and Houston County, Alabama. Additional specimens were collected by the MEM from Baldwin County in 1994.

***Myrmecina* sp. A**

*Distribution* — Lauderdale Co. (MEM). This undescribed species can be distinguished from *M. americana* and *M. cooperi* by its lack of conspicuous sculpture and reddish coloration. Fisher & Cover (2007) wrote that this rarely collected species may be a social parasite of *M. americana*.

***Myrmica americana* Weber**

*Distribution* — Baldwin, Jackson, Marshall, and Tuscaloosa Cos. (MEM, DBBC).

***Myrmica pinetorum* Wheeler**

*Distribution* — Barbour, Clay, DeKalb, Tallapoosa, and Winston Cos. (AUEM, HRPC, MacGown & Forster 2005).

***Myrmica punctiventris* Roger**

*Distribution* — Chambers, Clay, Cleburne, Coosa, DeKalb, Etowah, Jackson, Lee, Macon, Monroe, Pike, Tallapoosa, and Tuscaloosa Cos. (AUEM, MEM, DBBC, HRPC).

***Pheidole adrianoi* Naves**

*Distribution* — Baldwin Co. (MEM).

***Pheidole bicarinata* Mayr**

*Distribution* — Baldwin, Bibb, Blount, Chambers, Cherokee, Colbert, Dallas, DeKalb, Etowah, Franklin, Geneva, Greene, Jackson, Lamar, Lauderdale, Lawrence, Lowndes, Macon, Madison, Marion, Mobile, Morgan, Pickens, Shelby, Sumter, Tallapoosa, Tuscaloosa, and Winston Cos. (AUEM, MEM, Barnum 2008, Hill & Brown 2010).

***Pheidole bilimeki* Mayr**

*Distribution* — Baldwin, Covington, Mobile, and Montgomery Cos. (MEM, DDBC, HRPC). Reported as *P. floridana* Emery by MacGown & Forster 2005. Sarnat et al. 2015 wrote that specimens identified from the southeastern USA as *P. floridana* were *P. bilimeki*.

***Pheidole crassicornis* Emery**

*Distribution* — Baldwin, Barbour, Butler, DeKalb, Lee, Lowndes, and Macon Cos. (AUEM, MEM, Murphree 1947).

***Pheidole davisii* Wheeler**

*Distribution* — DeKalb Co. (Wilson 2003).

***Pheidole dentata* Mayr**

*Distribution* — Baldwin, Barbour, Bibb, Blount, Chambers, Clay, Clarke, Cleburne, Colbert, Coosa, Covington, Cullman, Escambia, Etowah, Franklin, Geneva, Greene, Hale, Houston, Jackson, Jefferson, Lawrence, Lee, Limestone, Lowndes, Macon, Madison, Marion, Mobile, Monroe, Morgan, Perry, Pickens, Shelby, Tallapoosa, Tuscaloosa, Walker, and Washington Cos. (AUEM, MEM, DBBC, HRPC, Hill & Brown 2010).

***Pheidole dentigula* M.R Smith**

*Distribution* — Baldwin, Barbour, Bibb, Calhoun, Clarke, Clay, Hale, Henry, Houston, Lawrence, Lee, Marion, Monroe, Mobile, Sumter, Tallapoosa, and Tuscaloosa Cos. (AUEM, MEM, HRPC).

***Pheidole lamia* Wheeler**

*Distribution* — Greene, Lamar, and Pickens Cos. (MEM, DBBC, Hill & Brown 2010).

***Pheidole littoralis* Cole**

*Distribution* — Baldwin Co. (MEM).

***Pheidole metallescens* Emery**

*Distribution* — Baldwin, Barbour, Covington, Mobile, Tuscaloosa, Washington, and Wilcox Cos. (AUEM, MEM, HRPC).

***Pheidole morrisii* Forel**

*Distribution* — Baldwin, Covington, Escambia, and Madison Cos. (AUEM, MEM).

**#*Pheidole navigans* Forel**

*Distribution* — Baldwin, Clarke, Coffee, Covington, Dale, Geneva, Henry, Houston, Mobile, Russell, Tallapoosa, and Washington Cos. (AUEM,



MEM, HRPC). Reported as *P. moerens* Wheeler by MacGown & Forster 2005. Sarnat et al. 2015 determined that specimens identified from the southeastern USA as *P. moerens* were *P. navigans*.

**#*Pheidole obscurithorax* Naves**

*Distribution* — Baldwin, Coffee, Covington, Dallas, Escambia, Geneva, Henry, Houston, Mobile, Monroe, and Washington Cos. (AUEM, MEM, HRPC, King & Tschinkel 2007).

***Pheidole pilifera* (Roger)**

*Distribution* — Tuscaloosa Co. (MEM).

***Pheidole tetra* Creighton**

*Distribution* — Baldwin, Madison, Marshall, and Winston Cos. (AUEM, MEM, HRPC).

***Pheidole tysoni* Forel**

*Distribution* — Clay, Colbert, Dallas, DeKalb, Lawrence, Lowndes, Montgomery, Pickens, Sumter, and Tallapoosa Cos. (AUEM, MEM, HRPC, Hill & Brown 2010).

***Pheidole* sp. A.**

*Distribution* — Bibb, Clay, Dallas, Lamar, Lauderdale, Lawrence, Marion, and Tuscaloosa Cos. (AUEM, MEM).

*Note* — This species appears to be a common, but undescribed species in the southeastern USA. Historically, specimens from the Southeast have been misidentified as *P. diversipilosa* Wheeler, a western USA species.

***Pogonomyrmex badius* (Latreille)**

*Distribution* — Autauga, Baldwin, Barbour, Coffee, Covington, Escambia, Lamar, Lee, Mobile, Montgomery, Tuscaloosa, and Wilcox Cos. (AUEM, MEM, DBBC, Murphree 1947).

***Solenopsis carolinensis* Forel**

*Distribution* — Baldwin, Cleburne, Colbert, Covington, Henry, Houston, Lauderdale, Lee, Lowndes, Macon, Madison, Monroe, Mobile, Pickens, Russell, Tuscaloosa, and Washington Cos. (AUEM, MEM, HRPC).

***Solenopsis geminata* (Fabricius)**

*Distribution* — Baldwin, Barbour, Bibb, Bullock, Coffee, Covington, Crenshaw, Dale, Escambia, Geneva, Houston, Mobile, and Pike Cos. (Creighton 1930, Murphree 1947).

*Note* — This species has not been found in many years in Alabama and was likely extirpated from the state by competition from the Imported Red Fire Ant *Solenopsis invicta* Buren.

***Solenopsis globularia* Creighton**

*Distribution* — Baldwin, Conecuh, Jackson, Mobile, and Russell Cos. (MEM, Creighton 1930, Murphree 1947).

**#*Solenopsis invicta* Buren**

*Distribution* — Baldwin, Bibb, Chambers, Covington, Dallas, DeKalb, Lawrence, Lee, Lowndes, Marengo, Mobile, Sumter, Tuscaloosa, and Washington Cos. (AUEM, MEM, HRPC); Callcott & Collins 1996 reported this species from every county in Alabama.

**#*Solenopsis invicta* X *richteri***

*Distribution* — Cullman, DeKalb, Greene, Jackson, Lawrence, Lauderdale, Madison, Pickens, and Sumter Cos. (MEM, Hill & Brown 2010, Ajayi et al. 2020); widespread, especially in north-central portion of state (Shoemaker et al. 1994).

***Solenopsis molesta* (Say)**

*Distribution* — Baldwin, Barbour, Bibb, Clay, Dallas, Franklin, Greene, Hale, Houston, Lamar, Lauderdale, Lawrence, Lee, Macon, Marion, Mobile, Morgan, Pickens, Shelby, and Tuscaloosa, Cos.

(MacGown & Forster 2005, Hill & Brown 2010).

***Solenopsis pergandei* Forel**

*Distribution* — Baldwin, Bibb, Coosa, Covington, Lauderdale, Mobile, and Tuscaloosa Cos. (AUEM, MEM, Murphree 1947).

***Solenopsis picta* Emery**

*Distribution* — Baldwin, Barbour, Mobile, Monroe, Montgomery, and Tallapoosa Cos. (AUEM, MEM, HRPC).

**#*Solenopsis richteri* Forel**

*Distribution* — Baldwin, Lawrence, Mobile, Co. (AUEM, MEM, Creighton 1930, Murphree 1947), Spring Hill and Whistler (counties unknown) (Murphree 1947); widespread, especially in the northwestern portion of Alabama (Shoemaker et al. 1994).

***Solenopsis tennesseensis* M. R. Smith**

*Distribution* — Baldwin and Mobile Cos. (MEM).

***Solenopsis texana* Emery**

*Distribution* — Baldwin, Marion, and Mobile Co. (DBBC, HRPC, Pacheco 2007).

***Solenopsis tonsa* Thompson**

*Distribution* — Baldwin and Mobile Cos. (MEM, HRPC).

***Solenopsis xyloni* McCook**

*Distribution* — Lee Co. (AUEM); Madison, Mobile and Montgomery Cos. (Creighton 1930).

*Note* — Historically this species was widespread, occurring in 154 communities in Alabama, according to Murphree (1947). This species has not been found for many years in Alabama and is thought to have been forced out of the area by the introduced fire

ants, *S. invicta*, *S. richteri*, and their hybrid.

***Stenamamma diecki* Emery**

*Distribution* — Jackson Co. (GMNH).

***Stenamamma foveolocephalum* M. R. Smith**

*Distribution* — Bibb Co. (Dubois & Davis 1998, MacGown & Forster 2005).

***Stenamamma schmittii* Wheeler**

*Distribution* — Jackson Co. (GMNH).

***Stenamamma sp. nr. impar/meridionale***

*Distribution* — Jackson, Lauderdale, Monroe, and Sumter Cos. (MEM, DBBC).

*Note* — Reported as *S. meridionale* in MacGown & Forster 2005. Collections of this morphotype may represent an undescribed new species. This relatively common ant in the Southeast does not quite fit descriptions of either *S. impar* or *S. meridionale*.

***Strumigenys angulata* (M. R. Smith)**

*Distribution* — Baldwin, Colbert, Lauderdale, Lawrence, Madison, Marshall, Monroe, and Tuscaloosa Cos. (MEM, DBBC, Bolton 2000).

***Strumigenys archboldi* (Deyrup & Cover)**

*Distribution* — Blount Co. (ABS).

***Strumigenys brevisetosa* Smith**

*Distribution* — Blount, Colbert, Lauderdale, and Monroe Cos. (MEM, DBBC); Tuscaloosa Co. (Bolton 2000).

*Note* — Reported as *S. pilinasis* Forel in MacGown & Forster 2005, *S. brevisetosa* revived as a species and *S. pilinasis* became a senior synonym of *S. ohioensis* by Booher 2019.

***Strumigenys bunki* (Brown)**

*Distribution* — Houston Co. (MEM).

***Strumigenys clypeata* Roger**

*Distribution* — Baldwin, Marshall, Monroe, Morgan, and Tuscaloosa Cos. (AUEM, MEM, DBBC, Bolton 2000).

***Strumigenys creightoni* (M. R. Smith)**

*Distribution* — Baldwin, Lowndes, Mobile, Pickens, and Sumter Cos. (MEM, DBBC, Hill & Brown 2010).

***Strumigenys dietrichi* (M. R. Smith)**

*Distribution* — Baldwin, Greene, Houston, Lawrence, Marion, Mobile, Pickens, St. Clair, Sumter, and Tuscaloosa Cos. (MEM, DBBC, Bolton 2000, Hill & Brown 2010).

**#*Strumigenys eggersi* Emery**

*Distribution* — Mobile Co. (MEM).

**#*Strumigenys epinotalis* Weber**

*Distribution* — Mobile Co. (MEM, Wetterer 2019).

**#*Strumigenys hexamera* (Brown)**

*Distribution* — Baldwin, Mobile, and Monroe Cos. (MEM, MacGown & Wetterer 2012).

***Strumigenys hyalina* (Bolton)**

*Distribution* — Jackson Co. (MEM).

***Strumigenys laevinasis* (M. R. Smith)**

*Distribution* — Bibb, Colbert, Lauderdale, Lee, Marshall, Mobile, and St. Clair Cos. (AUEM, MEM, DBBC, Bolton 2000).

***Strumigenys louisianae* Roger**

*Distribution* — Baldwin, Barbour, Bibb, Blount, Butler, Clay, Dale, DeKalb, Geneva, Henry, Houston, Jackson, Jefferson, Lauderdale, Lawrence, Lee, Limestone, Monroe, Morgan, Shelby, Sumter, Tallapoosa, Tuscaloosa, Washington, and Winston Cos. (AUEM, MEM, DBBC, HRPC, Smith 1932).

**#*Strumigenys margaritae* Forel**

*Distribution* — Baldwin, Lowndes, and Tuscaloosa Cos. (MEM, Wilson 1953, Hill & Brown 2010).

**#*Strumigenys membranifera* Emery**

*Distribution* — Baldwin, Bibb, Covington, Dallas, Escambia, Macon, Mobile, Monroe, Tallapoosa, Tuscaloosa, and Washington Cos. (MEM, HRPC, Wilson 1954, MacGown & Forster 2005, Hill & Brown 2010).

***Strumigenys metazytes* (Bolton)**

*Distribution* — Monroe Co. (MEM).

***Strumigenys ornata* Mayr**

*Distribution* — Baldwin, Bibb, Chilton, Colbert, Conecuh, Covington, Dallas, DeKalb, Henry, Houston, Jackson, Lauderdale, Lawrence, Lee, Madison, Marion, Marshall, Monroe, Sumter, Tuscaloosa, and Washington Cos. (AUEM, MEM, DBBC, Bolton 2000).

***Strumigenys pergandei* Emery**

*Distribution* — DeKalb Co. (MEM).

***Strumigenys pilinasis* Forel**

*Distribution* — Clay, DeKalb, Jackson, Lauderdale, Lawrence, Lee, Madison, Marshall, Monroe, Sumter, and Tuscaloosa Cos. (AUEM, MEM, DBBC). Reported as *S. ohioensis* Kennedy & Shramm in MacGown & Forster 2005. Boher 2019 made *S. ohioensis* a junior synonym of *S. pilinasis*.

***Strumigenys pulchella* Emery**

*Distribution* — Baldwin, Bibb, Blount, Conecuh, Covington, Limestone, Madison, Marshall, Mobile, and Morgan Cos. (MEM, DBBC, Bolton 2000).

***Strumigenys reflexa* Wesson & Wesson**

*Distribution* — Blount, Conecuh, Covington, Franklin, Jackson, Lawrence, Madison, Marshall, and Monroe Cos. (MEM, DBBC, Bolton 2000).

***Strumigenys rostrata* Emery**

*Distribution* — Baldwin, Bibb, Clay, Colbert, Franklin, Houston, Jackson, Lauderdale, Lawrence, Lee, Madison, Mobile, Monroe, Sumter, Tuscaloosa, Washington, and Winston Cos. (AUEM, MEM, DBBC, HRPC, JKWC, Bolton 2000).

**#*Strumigenys silvestrii* Emery**

*Distribution* — Baldwin and Houston Cos. (MEM, JKWC, MacGown et al. 2012).

***Strumigenys talpa* Weber**

*Distribution* — Baldwin, Bibb, Colbert, Houston, Lauderdale, Lowndes, Mobile, Pickens, and Sumter Cos. (MEM, Bolton 2000, Hill & Brown 2010).

***Strumigenys wrayi* (Brown)**

*Distribution* — Monroe Co. (DBBC).

***Temnothorax americanus* (Emery)**

*Distribution* — Madison Co. (AUEM).

***Temnothorax bradleyi* (Wheeler)**

*Distribution* — Baldwin, Jefferson, and Tuscaloosa Cos. (Murphree 1947, Wilson 1952).

***Temnothorax curvispinosus* (Mayr)**

*Distribution* — Bibb, Chambers, Clay, Cleburne, Colbert, DeKalb, Etowah, Jackson, Jefferson, Lauderdale, Lawrence, Lee, Lowndes, Madison,

Marengo, Monroe, Pickens, Shelby, Tallapoosa, Tuscaloosa, and Winston Cos. (AUEM, MEM, DBBC, Hill & Brown 2010).

***Temnothorax longispinosus* (Roger)**

*Distribution* — Clay, Cleburne, DeKalb, Jackson, Madison, and Tallapoosa Cos. (MEM, DBBC, RPC).

***Temnothorax pergandei* (Emery)**

*Distribution* — Baldwin, Blount, Cherokee, Cleburne, Colbert, Cullman, DeKalb, Lauderdale, Lawrence, Lee, Lowndes, Madison, Mobile, Morgan, and Tallapoosa Cos. (AUEM, MEM, DBBC, HRPC, Barnum 2008).

***Temnothorax schaumii* (Roger)**

*Distribution* — Baldwin, Cleburne, Colbert, DeKalb, Lauderdale, Lawrence, Madison, Mobile, Tallapoosa, and Tuscaloosa Cos. (MEM, DBBC, HRPC).

***Temnothorax smithi* (Baroni Urbani)**

*Distribution* — No county given (Smith 1979).

***Temnothorax texanus* (Wheeler)**

*Distribution* — Clay Co. (AUEM, MEM).

***Temnothorax tuscaloosae* (Wilson)**

*Distribution* — Jackson, Monroe, and Tuscaloosa Cos. (MEM, Wilson 1950).

***Temnothorax* 03**

*Distribution* — Lauderdale, Lawrence, and Madison Cos. (MEM). This species is morphologically most similar to *T. ambiguus*, which has led to misidentifications of *T. ambiguus* in the Southeast for which there are no validated records.

**#*Tetramorium bicarinatum* (Nylander)**

*Distribution* — Geneva and Mobile Cos. (MEM, HRPC); widespread, according to Murphree (1947).

**#*Tetramorium immigrans* Santschi**

*Distribution* — Limestone Co. (AUEM, MacGown & Forster 2005). Reported as *T. caespitum* (Linnaeus) by MacGown & Forster 2005.

**#*Tetramorium lanuginosum* Mayr**

*Distribution* — Dale and Houston Cos. (Murphree 1947).

**#*Trichomyrmex destructor* (Jerdon)**

*Distribution* — Tuscaloosa Co. (Wheeler 1906).

***Trachymyrmex septentrionalis* (McCook)**

*Distribution* — Baldwin, Bibb, Butler, Cherokee, Colbert, Conecuh, Covington, Hale, Houston, Jackson, Lamar, Lawrence, Lowndes, Macon, Mobile, Monroe, Pickens, Pike, Shelby, Talladega, Tuscaloosa, and Wilcox Cos. (AUEM, MEM, DBBC).

**PONERINAE****#*Brachyponera chinensis* (Emery)**

*Distribution* — Jefferson, Morgan, Madison, Marshall, Shelby, and Tallapoosa Cos. (MEM, Guénard et al. 2019, MacGown 2009).

***Cryptopone gilva* (Roger)**

*Distribution* — Baldwin, Bullock, Butler, Lauderdale, Montgomery, and Tallapoosa Cos. (AUEM, MEM, DBBC, HRPC).

***Hypoponera inexorata* Wheeler**

Baldwin, Clarke, Dallas, Greene, Hale, Marengo, Mobile, Pickens, and Tallapoosa Cos. (MEM, DBBC, HRPC, Hill & Brown 2010).

**#*Hypoponera opaciceps* (Mayr)**

*Distribution* — Baldwin, Bullock, Conecuh, Covington, Crenshaw, Dale, Dallas, Greene,

Houston, Limestone, Lowndes, Marengo, Mobile, Montgomery, Pickens, Russell, Sumter, and Tallapoosa Cos. (AUEM, MEM, HRPC, MCZ, USNM, Murphree 1947, Hill & Brown 2010).

***Hypoponera opacior* (Forel)**

*Distribution* — Baldwin, Barbour, Bibb, Blount, Butler, Chambers, Choctaw, Clay, Cleburne, Conecuh, Covington, Cullman, Dallas, DeKalb, Elmore, Escambia, Franklin, Greene, Houston, Jackson, Jefferson, Lauderdale, Lawrence, Lee, Lowndes, Macon, Madison, Marengo, Mobile, Monroe, Montgomery, Morgan, Pickens, Russell, Shelby, Sumter, Tallapoosa, Tuscaloosa, Walker, Washington, and Winston Cos. (AUEM, MEM, HRPC, Murphree 1947, Barnum 2008, Hill & Brown 2010).

**#*Hypoponera punctatissima* (Roger)**

*Distribution* — Baldwin and Mobile Cos. (MEM; MacGown et al 2013).

***Odontomachus brunneus* (Patton)**

*Distribution* — Baldwin, Houston, and Mobile Cos. (MEM, Deyrup and Cover 2004).

**#*Odontomachus haematodus* (Linnaeus)**

*Distribution* — Baldwin and Mobile Cos. (MEM). MacGown & Forster 2005 reported this as *O. ruginodis* Smith, but later MacGown et al. 2014 reported that it was *O. haematodus*.

***Ponera exotica* M. R. Smith**

*Distribution* — Baldwin, Bibb, Colbert, Lawrence, Mobile, Monroe, and Sumter Cos. (MEM, DBBC).

***Ponera pennsylvanica* Buckley**

*Distribution* — Baldwin, Bibb, Blount, Cherokee, Clay, Colbert, Dale, DeKalb, Etowah, Franklin, Hale, Jackson, Jefferson, Lauderdale, Lawrence, Lee, Macon, Madison, Marshall, Marion, Mobile,



Monroe, Sumter, Tuscaloosa, and Washington Cos. (AUEM, MEM, HRPC, Murphree 1947).  
(AUEM, MEM, DBBC, HRPC).

### PROCERATIINAE

#### *Discothyrea testacea* Roger

*Distribution* — Baldwin, Chilton, Lauderdale, Lawrence, and Lee Cos. (AUEM, MEM).

#### *Proceratium chickasaw* De Andrade

*Distribution* — Bibb, Colbert, Lauderdale, Lawrence, Mobile, Monroe, and Tuscaloosa Cos. (MEM, DBBC, Baroni Urbani and De Andrade 2003).

#### *Proceratium crassicorne* Emery

*Distribution* — Baldwin, Colbert, DeKalb, Jackson, Russell, St. Clair, and Tuscaloosa Cos. (MEM, DBBC, HRPC).

#### *Proceratium croceum* (Roger)

*Distribution* — Baldwin and Covington Cos. (MEM); DeKalb, Mobile, Montgomery, and Tuscaloosa Cos. (Baroni Urbani and De Andrade 2003).

#### *Proceratium pergandei* (Emery)

*Distribution* — Blount, Cleburne, Lawrence, and Mobile Cos. (MEM, DBBC, Baroni Urbani and De Andrade 2003).

#### *Proceratium silaceum* Roger

*Distribution* — Baldwin, Bibb, Cleburne, DeKalb, Mobile, and Tuscaloosa Cos. (MEM, Baroni Urbani and De Andrade 2003).

### PSEUDOMYRMECINAE

#### *Pseudomyrmex ejectus* (F. Smith)

*Distribution* — Baldwin, Geneva, Houston, Lee, Macon, Mobile, Monroe, and Tallapoosa Cos.

#### #*Pseudomyrmex gracilis* (Fabricius)

*Distribution* — Baldwin, Houston, and Mobile Cos. (MEM, HRPC, iNaturalist).

#### *Pseudomyrmex pallidus* (F. Smith)

*Distribution* — Baldwin, Bibb, Blount, Clarke, Dale, Dallas, Lowndes, Marengo, Marshall, Mobile, Montgomery, Shelby, Sumter, Tallapoosa, Tuscaloosa, Washington, and Wilcox Cos. (AUEM, MEM, DBBC, Ward 1985, Hill & Brown 2010).

#### *Pseudomyrmex seminole* Ward

*Distribution* — Baldwin, Dallas, Lee, and Lowndes Cos. (MEM, Barnum 2008, Hill & Brown 2010).

### ACKNOWLEDGMENTS

This research was supported in part by the National Institute of Food and Agriculture, United States Department of Agriculture, under Project No. MIS-012040 and the USDA-ARS Areawide Management of Imported Fire Ant Project (JoVonn G. Hill, Principal Investigator). Thanks to Paul Davison for his collection records, especially from Northern Alabama, which included the rarely collected *Myrmecina* sp. A and to Bill Finch, Principle Conservation Science Advisor to the E.O. Wilson Biodiversity Foundation for his support.

### LITERATURE CITED

- Ajayi OS, Appel AG, Chen L, Fadamiro HY. Comparative cutaneous water loss and desiccation tolerance of four *Solenopsis* spp. (Hymenoptera: Formicidae) in the Southeastern United States. *Insects* Jul;11(7):418.
- André E (1893) Description de quatre espèces nouvelles de fourmis d'Amérique. *Revue d'Entomologie (Caen)* 12: 148–152.
- Antcat.org (2020) Online at: [www.antcat.org](http://www.antcat.org). Accessed 9 November 2020.
- AntWeb.org (2021) Available from: <https://www.antweb.org>.

- antweb.org (accessed 21 July 2021)
- Barnum TR (2008) *Recruitment to and Defense of Aphids by Fire Ants and Native Ants and an Estimate of Their Trophic Positions Using Stable Isotopes*. Master's Thesis, Auburn University. 46 pp.
- Bolton B (2000) The ant tribe Dacetini. *Memoirs of the American Entomological Institute* 65: 1–1028.
- Brady SG, Fisher BL, Schltz TR, Ward PS (2014) The Rise of Army Ants and Their Relatives: Diversification of Specialized Predatory Doryline Ants. *BMC Evolutionary Biology* 14: 1–14.
- Baroni Urbani C, De Andrade ML (2003) The ant genus *Proceratium* in the extant and fossil record (Hymenoptera: Formicidae). *Museo Regionale di Scienze Naturali, Monografie* 36: 1–480.
- Baroni Urbani C, De Andrade ML (2007) The ant tribe Dacetini: limits and constituent genera, with descriptions of new species. *Annali del Museo Civico di Storia Naturale "G. Doria"* 99: 1–191.
- Booher DB (2019) Taxonomic clarification of two Nearctic *Strumigenys* (Hymenoptera: Formicidae). *Zootaxa* 4664 (3): 401–411. 10.11646/zootaxa.4664.3.7
- Callcott A-M, Collins HL (1996) Invasion and range expansion of imported fire ants (Hymenoptera: Formicidae) in North America from 1918–1995. *Florida Entomologist* 79 (2): 240–251. doi:10.2307/3495821.
- Creighton WS (1930) The New World species of the genus *Solenopsis* (Hymenop. Formicidae). *Proceedings of the American Academy of Arts and Sciences* 66: 3–151 (p. 59, senior synonym of *nigra*).
- Forster JA (2003) *The Ants (Hymenoptera: Formicidae) of Alabama*. Master's Thesis, Auburn University. 224 pp.
- Global Biodiversity Information Facility (2021) Available from: <https://www.gbif.org> (accessed 21 July 2021).
- Guénard B, Weiser M, Gomez K, Narula N, Economo EP (2017) The Global Ant Biodiversity Informatics (GABI) database: a synthesis of ant species geographic distributions. *Myrmecological News* 24: 83–89.
- DeMarco BB, Cognato AI (2016) A multiple-gene phylogeny reveals polyphyly among eastern North American *Aphaenogaster* species (Hymenoptera: Formicidae). *Zoologica Scripta* DOI: 10.1111/zsc.12168.
- Deyrup M (2015) A new species of *Myrmecina* (Hymenoptera: Formicidae) from southeastern North America. *Florida Entomologist*. 98: 1204–1206.
- DuBois M, Davis LR (1998) *Stenammas foveolocephalum* (= *S. carolinense*) rediscovered (Hymenoptera: Formicidae: Myrmicinae). *Sociobiology* 32: 125–138.
- Fisher BL, Cover SP (2007) *Ants of North America: A Guide to the Genera*, Berkeley: University of California Press. Published Nov 2007, 308 pp.
- Glancey BM, Wojcik DP, Craig CH, Mitchell JA (1976) Ants of Mobile County, AL., as monitored by bait transects. *Journal of the Georgia Entomological Society* 11: 191–197.
- Guénard B, Wetterer JK, MacGown JA (2019). Global and temporal spread of a taxonomically challenging invasive ant: the Asian needle ant, *Brachyponera chinensis* (Hymenoptera: Formicidae). *Florida Entomologist* 104: 649–656.
- Hill JG, Brown RL (2010) The Ant (Hymenoptera: Formicidae) Fauna of Black Belt Prairie Remnants in Alabama and Mississippi. *Southeastern Naturalist* 9: 73–84.
- Hooper-Bui LM, Appel AG, Rust MK (2002) Preference of food particle size among several urban ant species [Abstract], *Journal of Economic Entomology* 95(6): 1222–1228.
- King JR, Tschinkel WR (2007) Range expansion and local population increase of the exotic ant, *Pheidole obscurithorax*, in the southeastern United States. *Florida Entomologist* 90: 435–439.
- LaPolla JS, Brady SG, Shattuck SO (2010) Phylogeny and taxonomy of the *Prenolepis* genus-group of ants (Hymenoptera: Formicidae). *Systematic Entomology*. 35: 118–131. doi:10.1111/j.1365-3113.2009.00492.x. S2CID 86659687.
- MacKay WP (1995) New distributional records for the ant genus *Cardiocondyla* in the New World (Hymenoptera: Formicidae). *Pan-Pacific Entomologist* 71: 169–172.

- Mackay W, Mackay E (2017) The New World gypsy ants of the genera *Aphaenogaster* and *Novomessor* (Hymenoptera: Formicidae). Mauritius: LAP LAMBERT Academic Publishing, 605 pp.
- MacGown JA (2009) The Asian Needle Ant, *Pachcondyla chinensis* (Emery) (Hymenoptera: Formicidae), reported from Alabama. *Midsouth Entomologist* 2: 88–89.
- MacGown JA (2015) The Tramp Ant *Cardiocondyla venustula* (Hymenoptera: Formicidae) reported from Alabama. *Midsouth Entomologist* 8: 76–80.
- MacGown JA (2017) First report of the ghost ant, *Tapinoma melanocephalum* (Hymenoptera: Formicidae) from Alabama. *Transactions of the American Entomological Society*. 143: 533–535.
- MacGown JA, Boudinot B, Deyrup M, Sorger DM (2014) A review of the Nearctic *Odontomachus* (Hymenoptera: Formicidae: Ponerinae) with a treatment of the males. *Zootaxa* 3802 (4): 515–552.
- MacGown JA, Forster JA (2005) A preliminary list of the ants (Hymenoptera: Formicidae) of Alabama. *Entomological News* 116: 61–74.
- MacGown JA, Hill JG, Deyrup MA (2007) *Brachymyrmex patagonicus* (Hymenoptera: Formicidae), an emerging pest species in the southeastern United States. *Florida Entomologist* 90: 457–464.
- MacGown JA, Richter H (2015) The Tramp Ant *Cardiocondyla venustula* (Hymenoptera: Formicidae) reported from Alabama. *Midsouth Entomologist* 8 (2): 76–80.
- MacGown JA, Richter H, Brown RL (2013) Notes and new distributional records of invasive ants (Hymenoptera: Formicidae) in the southeastern United States. *Midsouth Entomologist* 6: 104–114.
- MacGown JA, Wetterer JK (2012) Geographic spread of *Pyramica hexamera* (Hymenoptera: Formicidae: Dacetini) in the southeastern USA. *Terrestrial Arthropod Reviews* 5: 3–14.
- MacGown JA, Wetterer JK, Hill JG (2012) Geographic spread of *Strumigenys silvestrii* (Hymenoptera: Formicidae: Dacetini). *Terrestrial Arthropod Reviews* 5: 213–222.
- Morgan CE, MacKay WP (2017) The North America acrobat ants of the hyperdiverse genus *Crematogaster*. Mauritius: LAP LAMBERT Academic Publishing, 540 pp.
- Murphree LC (1947) *Alabama Ants, Description, Distribution, and Biology, with Notes on the Control of the Most Important Household Species*. M. S. Thesis, Mississippi State College, State College. 144 pp.
- Pacheco JA (2007) *The New World ants of the Genus Solenopsis* (Hymenoptera: Formicidae). PhD dissertation, The University of Texas at El Paso. i–xxi +543 pp.
- Sarnat EM, Fischer G, Guénard B, Economo EP (2015) Introduced *Pheidole* of the world: taxonomy, biology and distribution. *ZooKeys* 533: 1–109.
- Schar S, Talavera G, Espadaler X, Rana JD, Andersen AA, Cover SP, Vila R (2018) Do Holarctic ant species exist? Trans-Beringian dispersal and homoplasy in the Formicidae. *Journal of Biogeography* 2018:1–12 (doi:10.1111/jbi.13380).
- Shoemaker DD, Ross KG, Arnold ML (1994) Development of RAPD markers in two introduced fire ants, *Solenopsis invicta* and *S. richteri*, and their application to the study of a hybrid zone. *Molecular Biology* 3: 531–539.
- Smith MR (1936) Distribution of the Argentine ant in the United States and suggestions for its control or eradication. *United States Department of Agriculture. Circular* 387: 1–39.
- Smith MR (1965) House-infesting ants of the Eastern United States, their recognition, biology, and economic importance. *United States Department of Agriculture, Technical Bulletin* No. 1326: i–105.
- Smith DR (1979) Superfamily Formicoidea [pp. 1323–1467]. In: Krombein KV, Hurd PD Jr., Smith DR, Burks BD (eds.), *Catalog of Hymenoptera in America North of Mexico, Vol. 2: Apocrita (Aculeata)*. Smithsonian Institution Press, Washington, D. C. xvi + 1199–2209.
- Trager JC (1984) A revision of the genus *Paratrechina* (Hymenoptera: Formicidae) of the continental United States. *Sociobiology* 9: 49–162.
- Trager JC, MacGown JA, Trager MD (2007) Revision of the Nearctic endemic *Formica pallidefulva* group (Hymenoptera: Formicidae: Formicinae).

- In: Snelling RR., Ward PS, & Fisher BL (editors), Advances in ant systematics. *Memoirs of the American Entomological Institute* 80: 610–636.
- Umphrey GJ (1996) Morphometric discrimination among sibling species in the *fulva-rudis* - *texana* complex of the ant genus *Aphaenogaster* (Hymenoptera: Formicidae). *Canadian Journal of Zoology* 74: 528–559.
- Wang S, Stoll AC, Richter HJ, Dandridge C, Perez RA, Doucet JT, Wetterer JK (2021) Spread of a non-native, millipede-eating ant, *Gnamptogenys triangularis* (Hymenoptera, Formicidae), in the southeastern US. *Transactions of the American Entomological Society* 147: 815–821.
- Wang Z, Moshman L, Kraus EC, Wilson BE, Acharya N, Diaz R (2016) A review of the tawny crazy ant, *Nylanderia fulva*, an emergent ant invader in the southern United States: is biological control a feasible management option? *Insects* 7(4): 77.
- Ward PS (2005) A synoptic review of the ants of California (Hymenoptera: Formicidae). *Zootaxa* 93: 6:1–68.
- Ward PS, Blaimer BB, Fisher BL (2016) A revised phylogenetic classification of the ant subfamily Formicinae (Hymenoptera: Formicidae), with resurrection of the genera *Colobopsis* and *Dinomyrmex*. *Zootaxa* 4072: 343–357.
- Ward PS, Brady SG, Fisher BL, Schultz TE (2015) The evolution of myrmicine ants: phylogeny and biogeography of a hyperdiverse ant clade (Hymenoptera: Formicidae). *Systematic Entomology* 40:61–81. doi:10.1111/syen.12090.
- Watkins JF (1985) The identification and distribution of the army ants of the United States of America (Hymenoptera, Formicidae, Ecitoninae). *Journal of the Kansas Entomological Society* 58: 479–502.
- Wetterer JK (2014) Worldwide Spread of the Lesser Sneaking Ant, *Cardiocondyla minutior* (Hymenoptera: Formicidae). *Florida Entomologist*, 97(2): 567–574.
- Wetterer JK (2019) Geographic spread of *Strumigenys epinotalis* (Hymenoptera: Formicidae). *Transactions of the American Entomological Society* 145: 413–419.
- Wheeler WM (1906) On certain tropical ants introduced into the United States. *Entomological News* 17: 23–26.
- Wilson E O (1953) The ecology of some North American dacetine ants. *Annals of the Entomological Society of America* 46: 479–497.
- Wilson EO (1954) (“1953”) The ecology of some North American dacetine ants. *Annals of the Entomological Society of America* 46: 479–495.
- Wilson EO (2003) *Pheidole* in the New World; a Dominant Hyperdiverse Ant Genus. Harvard University Press. Cambridge, Mass. 794 pp.
- Wing MW (1968) Taxonomic revision of the Nearctic genus *Acanthomyops* (Hymenoptera: Formicidae). *Memoirs of the Cornell University Agricultural Experiment Station* 405: 1–173.
- Yoshimura M, Fisher BL (2012) A revision of male ants of the Malagasy Amblyoponinae (Hymenoptera: Formicidae) with resurrections of the genera *Stigmatomma* and *Xymmer*. *PLoS ONE* 7 (3) e33325. doi:10.1371/journal.pone.0033325