An Annotated List of the Ants of Mississippi (Hym.).

By M. R. SMITH, A. and M. College, Mississippi.

The need for lists of insects common to certain localities is becoming more appreciated each day. Not only are accurate lists almost indispensable to the systematist but they are also the source of much help to the economic entomologist. This list, although not complete by any means, is being published with the idea that it will make known to some extent the characteristic ant fauna of the Gulf States; an area in which there has never been any consistent collecting for ants until recently. The ant fauna of the South Eastern and the South Western States is fairly well known, so this list will tend to bridge the intervening gap.

The genera best represented in Mississippi are *Pheidole, Crematogaster* and *Camponotus,* others such as *Myrmica, Pogonomyrmex, Tapinoma,* etc., have only one species.

Of the 76 species, subspecies and varieties recorded in this paper, 7 are imported species, namely: *Monomorium pharaonis, Tetramorium guineense, Prenolepis longicornis, Iridomyrmex humilis, Solenopsis rufa, Pheidole floridana* and *Camponotus socius.* Two of the species mentioned, *Iridomyrmex humilis* and *Monomorium pharaonis* are of considerable economic importance as house ants.

This list also includes two new species of *Colobopsis* and one new variety of *Aphaenogaster* which have recently been found in Mississippi.

The writer could enlarge this list by adding species which will no doubt be taken in the state in later years, but since there are always chances for errors in doing this, he prefers to list only the species which are definitely known to occur in Mississippi.

The species here listed, include specimens collected by the writer, those given him by friends, and specimens in the collections of the Mississippi A. and M. College. The writer particularly wishes to acknowledge here the kind assistance of Mr. Andrew Fleming, who has furnished numerous specimens and notes.

Dr. W. M. Wheeler has very kindly aided the writer by determining a number of the more difficult species. Professor R. W. Harned has offered much encouragement and been very generous in the allotment of time for such work.

Family FORMICIDAE.

Subfamily PONERINAE.

1.—**Ponera trigona** Mayr. var. **opacior** Forel.

A. and M. College. This uniform, brownish colored species has been taken a number of times here at the college; no doubt it occurs throughout the state. *P. opacior* nests under logs in the woods where there is plenty of moisture available. The ants are very timid and not always easy to capture.

This ant may be distinguished from the other species of the genus by the worker having her eyes located near the anterior fourth of the head; joints 3-6 of the antennal funiculi are much broader than long.

2.—**P. coarctata** Latr. subsp. **pennsylvanica** Buckley.

This ant has been reported by Mayr to occur in Mississippi, but so far the writer has not been able to take it in the state, although he has collected in various localities.

P. pennsylvanica is somewhat larger than the species mentioned above and may be distinguished from it by the very distinct punctation of the head and by the darker color of the body, usually black. It is a very common ant in the Northern and North-eastern States where it lives under stones, logs, or leaf mold in the woods in the presence of abundant moisture.

Subfamily MYRMICINAE

3.—**Pseudomyrma brunnea** F. Smith.

Gulfport; Sibley; Ocean Springs. This ant has been found nesting in the twigs of white ash, *Fraxinus americana,* and in the twigs of the so-called China berry tree, *Melia Azedarach.* Very little is known concerning its habits but it is believed to feed principally on honey dew. This and the other species of *Pseudomyrma* appear to occur only in the lower part of the state.

P. brunnea, as its name indicates, is a brownish colored species which may be easily distinguished by its distinct coloration.

4.—**P. pallida** F. Smith.

Pascagoula; Union City; Sibley. This ant has been found to nest in the twigs of China berry trees also. It most probably nests in the stems of other trees and plants.

The writer has for some time believed that this and the following species are the same, *flavidula* being nothing more than a nest variety. Specimens from numerous nests show considerable variation in color, ranging from the pale yellow of *pallida,* without spots at the base of the abdomen, to the distinct yellow of *flavidula* which has a definite black spot on each side of the base of the abdomen. If these two species should prove to be the same, *flavidula* would become a synonym of *pallida* since the latter species was described at an earlier date.

5.—**P. flavidula** F. Smith.

Bay St. Louis; Gulfport; Sibley. Nests of this ant have been found in the twigs of China berry, pecan, swamp dogwood, white ash, etc. The habits of this species are like those of the two *Pseudomyrmae* mentioned above.

6.—**Leptothorax curvispinosus** Mayr.

A. and M. College; Fulton; Tupelo. This species usually nests in galls or twigs but has been reported to nest in decaying wood. Workers are very often seen licking up honey dew on the leaves of trees and plants. It is one of the most common species of *Leptothorax* in Mississippi.

L. curvispinosus is a small, yellowish ant with characteristic, long, curving, thoracic spines from which the ant gets its name. A dark spot is present near the base on each side of the first gastric segment.

7.—**L. fortinodis** Mayr.

A. and M. College; Okolona; Rara-Avis; Tupelo; Sibley. Without doubt this is the most common species of *Leptothorax* in Mississippi. The ants nest in oaks and other trees and can be found crawling up and down the trunks or entering small holes in the bark.

This species can be distinguished from the other species of *Leptothorax* here mentioned by its dark or blackish color, absence of the meso-epinotal constriction, the presence of short,

dentiform, thoracic spines and the rather prominently enlarged petiole.

8.—**L. schaumi** Roger.

A. and M. College. This pretty, yellowish red species has been taken on numerous occasions here at the College. The ants have been collected from oak logs and oak trees. Evidently this species has the same nesting habits as *L. fortinodis*.. A nest found in a niche of a dead cottonwood tree contained 31 workers, 2 queens, and a number of larvae.

L. schaumi is closely related to *fortinodis* in general appearance and habits. It may be separated from the latter by its yellowish red color, and its much smaller petiole. *Schaumi* like *fortinodis* has no distinct meso-epinotal constriction.

9.—**L. (Dichothorax) pergandei** Emery.

A. and M. College. This is distinctly a ground-nesting species, the workers of which may be easily confused with the workers of *Pheidole* upon superficial examination. Because the workers forage singly their nest is hard to locate.

L. pergandei can be distinguished from the other ants of this genus by its 12-jointed antennae, pronounced meso-epinotal constriction, and by the abundance of long white hairs covering the body.

10.—**Aphaenogaster treatae** Forel.

A. and M. College; Rara-Avis. Nests of this ant are constructed in the ground in shady places. The workers forage singly, feeding on smaller insects, etc. Because of their slender build they can run very rapidly and for that reason are exceedingly hard to capture.

The worker is easily recognized by the prominent lobe at the base of the antennal scape.

11.—**A. treatae** subsp. **harnedi** Whlr.

Caesar. This subspecies, which was named for Professor R. W. Harned, is distinguished from *treatae* by its much shorter and narrower antennal lobes and by the more opaque coloration of the thorax, petiole, post-petiole and basal half of the first gastric segment.

12.—**A. fulva** Roger.

Meehan Junction; Rara-Avis. Nests of this species are built in rotten logs in dense forests. This species does not seem to be as common in Mississippi as *treatae*.

A. fulva is a slender, reddish brown ant with epinotal spines which are about one half the length of the base of the epinotum.

13.—**A. mariae** Forel.

Rara-Avis. Only one specimen of this rare species has been taken in the state. *A. mariae* is thought to be parasitic on *A. fulva* and its varieties.

This species can be distinguished from any of the other *Aphaenogasters* by the base of the first gastric segment being longitudinally striated.

14.—**A. lamellidens** Mayr. var. **nigripes** Smith.

A. and M. College; Columbus. This variety has nesting habits similar to those of *A. lamellidens*.

This is a variety of the species which may be easily recognized by its distinctly dark colored legs.

15.—**Monomorium minimum** Buckley.

A. and M. College; Greenville; Yazoo City; Sibley. This little, shining black species is very widely distributed throughout the state. It may be found nesting in the soil, trees, rotten logs, and houses. The workers feed on honey dew and on smaller insects. "The tiny black ant," as it is called, is one of the most common house-infesting species that we have in Mississippi. According to housekeepers, the ants show a preference for greasy foods, such as meat, lard, butter, etc.

16.—**M. pharaonis** Linn.

Columbus; A. and M. College. This imported species is well distributed throughout the state. Unlike *minimum*, it lives only in greenhouses, dwellings, stores, etc., and is never found nesting in the open, so far as the writer knows. It is a very common house-infesting ant.

M. pharaonis can be easily separated from *minimum* by its distinct, pale yellowish color. It is commonly called "the tiny red ant," or "Pharaoh's ant." There is an infuscated spot on

each side of the base of the first abdominal segment. This species bears a superficial resemblance to *Solenopsis molesta* but may be distinguished from that species by its larger size and by the fact that it possesses a three-jointed antennal club instead of a two-jointed club like *molesta*.

17.—**Trachymyrmex septentrionalis** subsp. **obscurior** var. **seminole** Whlr.

Columbus; A. and M. College. This is the only fungus-growing ant known in the state and is easily recognized by the numerous tubercules and spines on the body of the workers. Nests are constructed in sandy soils in shady locations. The nests, which are most common in the early spring months, can be identified by the crescentic shaped mass of excavated earth which is placed from a foot to a foot and a half from the entrance to the nest. Oak catkins, caterpillar excrement, etc., is used by the workers on which to cultivate the fungus and, so far as is known, the ants depend entirely on this as a source of food. Later in the year the extreme hot weather causes the ants to plug the gallery to their nests in order to prevent evaporation of the moisture, since the ants and the fungus are entirely dependent on excessive moisture for their growth and development.

18.—**Myrmica scabrinodis** subsp. **schencki,** var. **emeryana** Forel.

Rara-Avis. This is the only species of *Myrmica* known to occur in Mississippi. A number of workers were collected in a low, damp spot in the hilly northeastern section of the state.

This species can be easily recognized by its very distinct rugose head and thorax and by the exceedingly large lobes at the base of the antennal scapes.

19.—**Pogonomyrmex badius** Latr.

Lucedale; Gulfport; Laurel; Star; Clara; Ocean Springs. This ant is commonly known as "The Florida Harvester" because of the fact that the workers feed principally on seeds. It is the only species of *Pogonomyrmex* known to occur in Mississippi. The nests are fairly large mounds usually constructed

in sandy areas. The workers can sting severely and this species is without doubt our worst stinging ant. This ant seems to be confined altogether to the central and southern part of the state.

"The Florida Harvester" is a large reddish ant with heavily striated head and thorax. The epinotum is bare of spines.

20.—**Pheidole pilifera** Roger.

A. and M. College. This is not a very common ant in this locality being more strictly a northern form. Nests are built in pastures or grassy spots in fields. The workers are known to store seed in the nest for food.

Soldiers of this species have exceedingly large heads, so large that their heads are out of proportion to their bodies; this will serve to distinguish them from any of the other *Pheidoles* which occur in Mississippi. They bear a closer resemblance to *P. sitarches rufescens* than to any other species of the genus in Mississippi.

21.—**P. sitarches** subsp. **rufescens** Whlr.

A. and M. College. This is a much more common species than the one just mentioned above. *Sitarches,* although resembling *pilifera* somewhat in color and structure, lacks the exceedingly large head which is common to *pilifera.* This is also a soil nesting species, with habits similar to those of *pilifera.*

Sitarches is a reddish, opaque colored species with head, thorax, petiole and post petiole bearing abundant, closely set punctures.

22.—**P. morrisi** var. **vanceae** Forel.

Starkville; Sturgis. Nests of this species are always built at the base of clumps of grass, usually of the genus *Andropogon.* When the nest is disturbed, numerous workers and soldiers rush forth angrily. Occasionally they get on the collector's hands and when they nip the flesh in a tender place the bite is rather noticeable. It is by far the most courageous species of *Pheidole* in Mississippi.

The soldiers of this species can be easily recognized by the vestigial spines on the epinotum and by the presence of long, abundant hairs over all portions of the body.

23.—**P. crassicornis** Emery.

McHenry. This does not seem to be a common species in Mississippi, at least not in the eastern part of the state, where the writer has done most of the collecting. It probably nests under stones and logs and feeds on insects.

P. crassicornis, as its name indicates, may be distinguished from the other species of *Pheidole* in this state by the distinctly flattened antennal scapes and by the deep reddish color of the head and thorax of the soldier.

24.—**P. vinelandica** Forel.

A. and M. College; Tunica; Decatur. This is one of the smallest members of the genus in Mississippi, and one of our most common ants. Nests are constructed in the soil and the earth thrown out to form a small crater, which is about an inch in diameter. The workers feed on insects and small seeds.

Because of her small size there is no danger of confusing the soldier of *vinelandica* with the soldier of any other *Pheidole* except *floridana.* The latter species has a deeply punctate thorax which *vinelandica* does not have. *Vinelandica* has a much larger and broader head in proportion to the body and also has very prominent thoracic angles.

(To be continued)