

No. 7.—*Chinese Ants.*

By WILLIAM MORTON WHEELER.

CONTRIBUTIONS FROM THE ENTOMOLOGICAL LABORATORY OF THE BUSSEY  
INSTITUTION, HARVARD UNIVERSITY, No. 151.

WITHIN the past months I have received several small collections of Chinese ants. Some of them were made in Soochow, Mokanshan, and other localities by Prof. N. Gist Gee, one was made in Hong-kong by Mr. Terry and contributed by Dr. F. X. Williams, of Honolulu, one in various localities in southern China by Mr. F. Muir, and one in Canton by Prof. C. W. Howard. Although several species of Formicidae have been recorded from China, their distribution is so imperfectly known that it seems advisable to publish a list of my specimens, especially as everything pertaining to the fauna and flora of eastern Asia is of interest in connection with recent discussions of the problems of geographical distribution. Most of the ants received from Professor Gee, including several singular new species and some heretofore known only from Japan, belong, of course, to the Palaearctic fauna, whereas those from southern China are mostly identical with well-known species from India, Burma, and Siam and therefore belong to the Indomalayan fauna.

FORMICIDAE: PONERINAE.

1. *STICTOPONERA MENADENSIS* Mayr subsp. *BICOLOR* Emery.

A single worker from Hong-kong (Terry). Known from India, Burma, Tenasserim, the Malay Peninsula, and China.

2. *DIACAMMA RUGOSUM* (Le Guillou) subsp. *GEOMETRICUM* (F. Smith)  
var. *ANCEPS* Emery.

Three workers and an imperfect male from Hong-kong (Terry), the type-locality.

3. *BOTHROPONERA RUFIPES* (Jerdon).

Two workers from Hong-kong (Terry). A well-known form from the Himalayas (up to 4,000 ft.), India, Ceylon, Burma, and Tenasserim.

18. *CREMATOGASTER ROGENHOFFERI* Mayr.

A single worker from Lo-foo-shan, 100–1,000 ft. (Muir), two workers from Soochow (Gee), and several from Canton (C. W. Howard). Known from India, Ceylon, Burma, and Cochin.

19. *CREMATOGASTER LABORIOSA* F. Smith.

Several workers from Soochow (Gee). Previously known only from Japan.

20. *MESSOR LOBULIFER* Emery.

Workers, males and females, from Soochow, "nesting on the university campus," Foochow and Mokanshan (Gee). Known from Mongolia and Shanghai.

21. *APHAENOGASTER GEEI*, sp. nov.

*Worker.* Length, 6.5–7.5 mm.

Head, including the mandibles, broadly and regularly elliptical, longer than broad, rounded behind, with marginate occipital border. Vertex with a distinct impression in the median line. Eyes moderately large, convex, at the middle of the sides of the head. Mandibles rather long, with straight lateral borders, three large apical and several smaller and more irregular basal teeth. Anterior border of clypeus rather broadly and sinuately emarginate in the middle. Frontal area large, triangular, impressed. Antennae slender; scapes extending scarcely more than  $\frac{1}{2}$  their length beyond the occipital border of the head, at the base furnished with a flattened lobe resembling that of the North American *A. treatae* Forel, but smaller; all the funicular joints decidedly longer than broad, the terminal joints not forming a distinct clava. Thorax slender, narrower than the head, with pronounced mesoëpinotal constriction. Pronotum and anterior portion of mesonotum forming together a hemispherical mass, with evenly rounded dorsal and lateral surfaces; posterior portion of mesonotum sloping backward to the short mesoëpinotal constriction. Epinotum longer than broad or high, its base horizontal, feebly and evenly convex in profile and much longer than the vertical declivity, armed with two rather acute spines, which are scarcely longer than broad at the base and directed upward, backward, and outward. Petiole slender, its peduncle nearly as long as the node, which is somewhat conical in profile, with subequal anterior and posterior slopes. Postpetiole nearly twice as broad as the petiole, slightly longer than broad, with very convex, rounded node. Gaster of the

usual shape, rather large. Legs long, fore coxae somewhat swollen as are also the middle portions of the femora.

Legs, including the coxae, mandibles, clypeus, frontal area, scapes, upper surfaces of the nodes, in some specimens, and gaster, shining; remainder of body nearly opaque. Mandibles sharply and densely striate. Clypeus longitudinally rugose. Head densely punctate and rugose, the rugae concentric around the antennal foveae, coarser, diverging and more or less anastomosing on the front, longitudinal on the sides of the head, coarse above and very fine below the eyes. Thorax, petiole, and postpetiole very finely and densely punctate, and with the exception of the mesopleurae very finely and indistinctly rugulose; base and declivity of epinotum very finely, transversely rugulose. Extreme base of first gastric segment above opaque, finely and densely punctate. Legs and remainder of gaster very smooth and shining, with very sparse, minute, piligerous punctures.

Hairs on the body yellowish, moderately abundant, coarse, and erect, not longer nor more abundant on the gaster than on the head and thorax; more numerous, shorter, finer, and subappressed on the scapes and tibiae.

Castaneous red; upper surface of head, except behind and in front, blackish; gaster black, except its tip. The latter, the trochanters, and bases of the femora more yellowish.

*Female.* Length, 9–10 mm.; wings, 10–10.3 mm.

Head, excluding the mandibles, scarcely longer than broad, distinctly broader behind than in front, with distinct, though rounded posterior corners. Antennae with the scapes lobed at the base as in the worker, but reaching only about  $\frac{1}{5}$  their length beyond the posterior corners. Thorax very robust, broader than the head and as high as long. Epinotum steep, with distinct basal and declivous surfaces and with very stout, straight spines, which are distinctly longer than broad at their bases. Petiole and postpetiole similar to those of the worker, but stouter, with their nodes more compressed antero-posteriorly and each bearing a small, blunt tooth at the anterior end on the ventral surface. Gaster voluminous, broadly elliptical. Wings with a complete discoidal and two cubital cells.

Sculpture like that of the worker but much coarser. Pro- and epinotum transversely, pleurae, mesonotum, paraptera, and scutellum longitudinally rugose; mesopleurae partly smooth and shining and mesonotum with a median shining streak on its anterior half. Basal third of gaster opaque and densely punctate, the sparse, piligerous punctures on the remainder of the surface larger and more conspicuous than in the worker.

Pilosity like that of the worker, but the hairs more deeply yellow.

Nearly black; mandibles, cheeks, clypeus, appendages, posterior borders of gastric segments, and wing articulations, castaneous red. Wings colorless, with yellow veins and dark brown pterostigma.

*Male.* Length, 5–5.5 mm.

Head small, flattened above and below, including the eyes longer than broad and produced posteriorly. Cheeks very short. Mandibles with oblique

apical borders bearing two larger terminal and three or four minute basal teeth. Clypeus with entire, broadly rounded anterior border. Scapes of antennae very short, not longer than the first two funicular joints together, broader at the base than at the tip; funicular joints all longer than broad. Thorax resembling that of the European *A. gibbosa* Latr., but more extreme, the posterior extension of the epinotum being nearly as long as the more anterior portion of the thorax and the constriction separating the two being more pronounced. The epinotal spines are reduced to a pair of minute teeth. Mesonotum extremely convex, in profile with a vertical, rounded, anterior and horizontal, rounded posterior surface. Nodes of the petiole and postpetiole very low, the peduncle of the former cylindrical, constricted anteriorly, the postpetiole campanulate. Gaster subtriangular. Legs, including the coxae, very slender, the middle and hind femora sinuately bent.

Smooth and shining; head opaque, finely and densely punctate, slightly shining about the ocelli. Pronotum very sparsely and rather coarsely punctate.

Hairs longer and much sparser than in the worker.

Black; legs piceous; mandibles, antennae, and tarsi dull yellowish. Wings colored as in the female, but the pterostigma is paler.

Described from eighteen workers, nine females and ten males taken from a single colony at Soochow by Prof. N. Gist Gee, to whom the species is dedicated. Also workers from Foochow. It is related to the Japanese *A. famelica* F. Smith, of which only the worker is known. This form is more brownish and less reddish, smaller and more slender, with longer head and antennae, and the scapes have no lobe at the base; the sculpture is feebler, the head behind and the pronotum, petiole, and postpetiole are smoother and shining, the transverse rugae on the base of the epinotum are more pronounced and the epinotal spines are smaller and more erect. The pro- and mesonotum above are not so high and rounded as in *geei*. The workers of the latter were compared with three workers of *famelica* from Saitama, Japan, in my collection.

## 22. *APHAENOGASTER EXASPERATA*, sp. nov.

*Worker*. Length, 5.5–6 mm.

Head oval, without posterior corners, less than  $1\frac{1}{2}$  times as long as broad, with marginate occipital border. Eyes convex, at the middle of the sides. Mandibles with slightly concave external borders, with three large apical and several smaller basal teeth. Clypeus rather flat in the middle, its anterior border indistinctly notched. Frontal carinae erect, lobular, prominent. Frontal area large, triangular, impressed. Antennal foveae large. Antennae