

Formicidae of Southern California

MICHEL PIJOAN

Sub-Family DORYLINAE

Eciton californicum Mayr. belonging to the group of the driver and legionary ants. The males are winged and quite wasp like; claws toothed. Occurring usually near the mountains. The nests are rarely found. Nests are near vegetation. Lower and upper Sonoran zone. (Fig. 1, pl. 1.)

Sub-Family MYRMICINAE

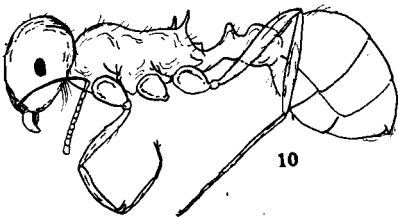
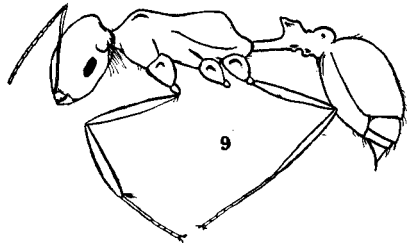
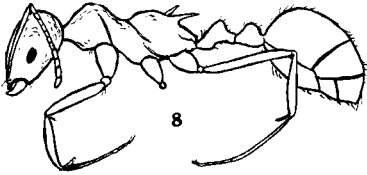
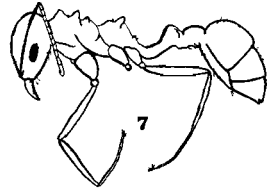
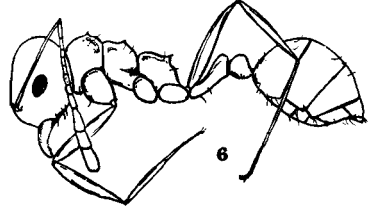
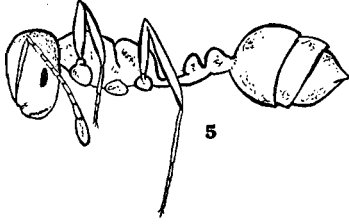
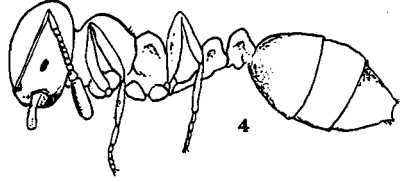
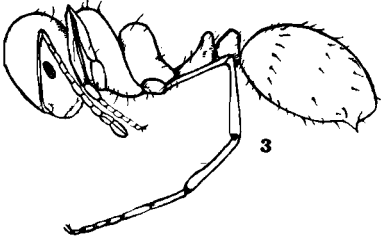
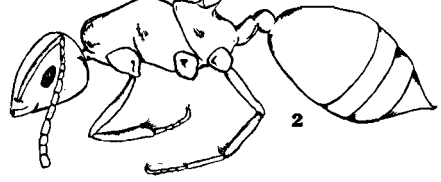
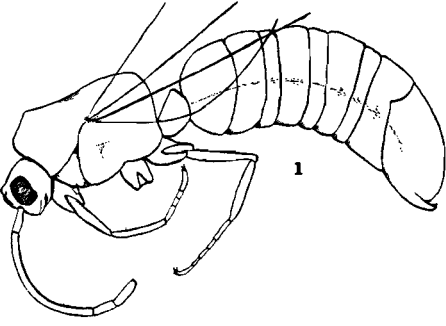
Crematogaster lineolata Say, var. *depilis*. Commonly called aerobat ant. Post petiole articulated to the dorsal surface of the following segment, posterior part of abdomen pointed to convex; cloacal glands produce an aromatic odor. Nests are usually under stones in woody or grassy places. Ants are dormant at lower temperatures. Were found to range from the San Bernardino Mountains (upper Sonoran zone), to Laguna Beach (lower Sonoran zone). (Fig. 2, pl. 1.)

Solenopsis geminata Fabr. Very common small redish yellow ant (general character). Antennae 10 jointed; epinotum unarmed; antennae with a two jointed club. Nests are usually under stones, or composed of small stones. Ants are sometimes considered a pest in orchards. Quite common in the woody or grassy places of the lower and upper Sonoran zones. (Fig. 3, pl. 1.)

Solenopsis molesta Say. Ants much smaller than *S. geminata*. They build their nests among quite small stones and grains of sand. Petiole more compressed than with *geminata*. Dorsum of meso-epinotum and epinotum not so humped as with *geminata*. Workers quite dormant at low temperatures. Found in the foothills and valleys of the lower and upper Sonoran zones of Southern California. (Fig. 4, pl. 1.)

Monomorium pharonis Linn. Thorax and petiole without any traces of teeth and spines. Clypeus armed with a pair of ridges which project forward in the form of teeth. Meso-epinotal suture marked. Pronotum never angular, petiole distinctly pedunculate. Ants small, red. They are often called the small red ant. They occur in orchards and houses of the upper and lower Sonoran zone. (Fig. 5, pl. 1.)

Pheidole hyatti Emery. Workers strongly dimorphic, usually without intermediates between the extreme forms of the *large headed soldiers* and the workers. Antennal club three jointed; sting weak; suture usually on cranium. Ants brown or brownish yellow and quite small. Nests never exposed to the sun, and occurring in the lower and upper Sonoran zones. Collected in large numbers from Catalina



Island by C. F. Baker, and from the south sides of the Mt. San Antonio by the writer. (Fig. 6, pl. 1.)

Pheidole longipes Pergande. Collected by Hilton in the Laguna hills. One worker was found at Claremont by the writer. The ants are uncommon. They bear a close resemblance to *P. hyatti*, except that they are much smaller. The epinotum is less armed than *P. hyatti*. Nests small and unobtrusive among sand grains. (Fig. 7, pl. 1.)

Messor andrei Mayr. Collected at Catalina Island by C. F. Baker and at Palm Springs, San Diego, Riverside, Claremont, and Los Angeles by the writer. Commonly called, the black harvesting ant, or, the common black ant. Genae and cranium in small ridges, epinotum well armed by two decisive spines; petiole humped and post petiole smooth, clypeus ridged and somewhat protruding. Nests are usually in smooth ground and built of chaff from *Eriogonums* and small stones. In lower and upper Sonoran zones. (Fig. 8. pl. 1.)

Pogonomyrmex californicus Buckl. Collected extensively from all over California. It is usually called, common red ant. Thoracic dorsum without any traces of suture and impression; epinotum unarmed; active poison vesicle; mandible red, denticulated portions even. Nests on the ground and exposed to the sun. Lower and upper Sonoran zones. (Fig. 9. pl. 1.)

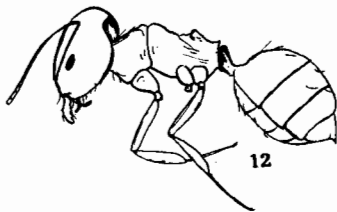
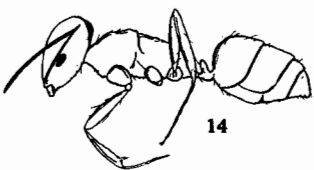
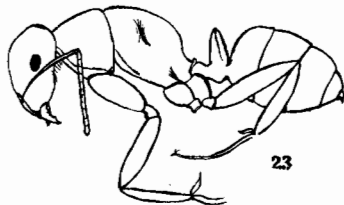
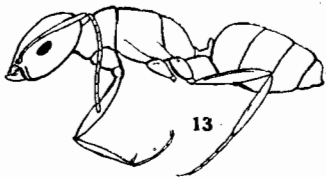
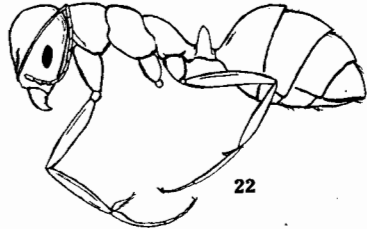
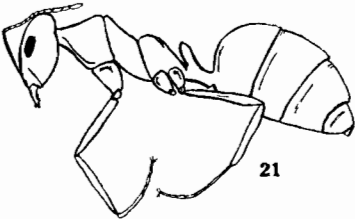
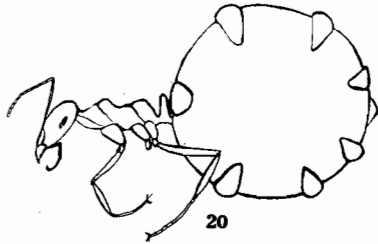
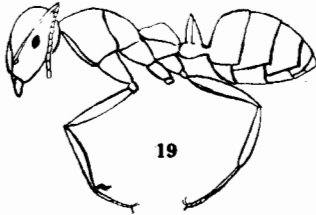
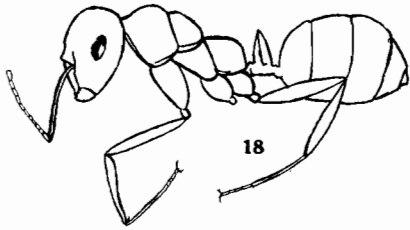
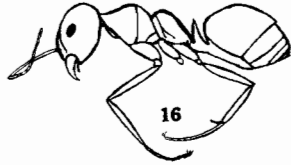
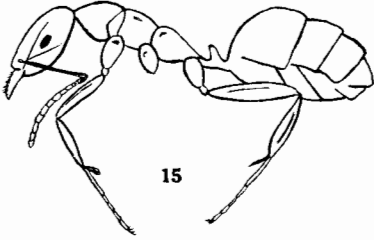
Pogonomyrmex occidentalis Cresson. Collected from only one locality in California, the Mojave desert, near Victorville by the writer. Massive genae and epicranium; mandibular denticulated portion black and irregular; epinotum armed this is one of the main distinguishing characters from *P. californicus*. Nests built in high mounds of dirt or pebbles with certain characteristic cleared areas. Upper Sonoran zone and transitional. (Fig. 10, pl. 1.)

Sub-Family DOLICHODERINAE

Tapinoma sessile Say. Common little brown ants with long thin legs. They run over the ground in short, jerky movements. Scale of petiole small; and strongly inclined forward; gizzard with depressed calyx; maxillary palps six jointed. Nests near some vegetation, and usually below the surface of the ground. Collected from the Mojave desert to Laguna Beach, Calif. Fig. 11, pl. 1.)

Dorymyrmex pyramicus Roger. Collected from all over Southern California by the writer. Epinotum with conical elevation, scale of petiole more or less inclined but well developed. Ants are a little larger than *T. sessile*, but have almost the same characteristic movements. When progressing they jerk the antennae back and forth in a nervous manner. Nests near trees or when on the desert near cottonwoods. (Fig. 12, pl. II.)

Liometopum apiculatum Mayr. subs. luctuosum Wheeler, commonly called, wood ant, or, stink ant. It occurs in woods in the upper and lower Sonoran zone. Collected from all Southern California. Ocelli



present, petiole indistinct; epicranium with vertical line; genae covered with white hairs; characteristic aromatic odor; no remarkable dimorphism in workers. Arboreal nests occur in the lower, upper and transitional zones. (Fig. 13, pl. II.)

Liometopum microcephalum, var. *occidentale* Emery. Very much like *L. apiculatum*, except with very much smaller parts; small head; ants often dormant. Collected from all over California, but not abundant. (Fig. 14, pl. II.)

Iridomyrmex humilis Mayr. Commonly called the argentine ant. Ants thin and brown. Ocelli present; anal glands which produce aromatic odor; poison sting rudimental; short gizzard; mandibles pointed. They occur all over Southern California, at least in the more settled regions, and are a serious pest in orchards and houses. (Fig. 15, pl. II.)

Sub-Family CAMPONOTINAE

Prenolepis imparis Say. Often called the little honey ant. Ants small and with large abdomen. They move about on the ground quite rapidly. Mesonotum strongly constricted and cylindrical; thorax long; head in some sort of a convex point; abdomen distends when filled with nectar. Two small spines on epinotum, petiole invisible. Nests in the ground and near vegetation. (Fig. 16, pl. II.)

Lasius flavus L. Sometimes called the yellow ant. Small and flat in appearance, with a pale yellow color. Cloacal orifice surrounded by a fringe of hairs; petiole one segment; pupae enclosed in cases; abdomen rather long; usually found in chapparal and the nests are under stones. Collected from Palm Springs, Laguna Beach, and Claremont, and found in somewhat large colonies. (Fig. 17, pl. II.)

Formica rufa L. var. *intergroides* Emery. Ants commonly found in mountains. They have a brownish yellow head and thorax, and blood red abdomen. Mandibles with broad, dentate, masticatory border, abdomen with hairs and segments barely distinguishable. Ants build nests in the form of a high mound made of small sticks and pine needles. They occur in the upper and transitional zones. Collected from the San Bernardino Mountains, and from the Sierra Madre range. (Fig. 18, pl. II.)

Formica pilicornis Emery. Commonly called the fast wood ant; dark brown in color with reddish abdomen. Mandibles with broad apical margin; thorax made up distinctly of different pressed segments. Ants run in somewhat jerky fashion; nests usually arboreal and occurring mostly in the lower Sonoran zone. (Fig. 19, pl. II.)

Formica rufiventris Emery. Ants rather uncommon in California, collected rarely from the sides of Mount San Antonio. They are more uniform in color than either *F. rufa* or *F. pilicornis*. Head small, pronounced thorax and abdomen; and the color is dark brown or a fuscous yellow.

Myrmecocystus mexicanus Wesm., var. *hortidcorum* McCooki. Commonly called, large honey ants. Workers cling to the roof of cell in the nests. Ants yellowish brown. Abdominal segments distended when filled with honey. Ocelli distinct, fourth joint of maxillary palpaе as long as fifth. Nests occur sparsely over Southern California. Collected by Dr. W. A. Hilton from Claremont. (Fig. 20, pl. II.)

Myrmecocystus mexicanus Wesm. subs. *mojave* Wheeler. Ants much thinner than *horti-deorum*, and even much yellower. Abdomen does not distend as those of *horti-deorum*. They move about with rapid strides. Eyes (compound) on the dorsad part of the genae or directly on cranium. Petiole and thorax more distinct than in *horti-deorum*. Epinotum somewhat marked. Common on both the Colorado and Mojave deserts. Nests in the sand and usually near to some cottonwoods. (Fig. 21, pl. II.)

Camponotus maculatus Fabr. subs. *vicinus* Mayr. Ants brownish red, and when moving they run in nervous strides; workers polymorphic. Petiole one segment and decidedly humped; maxillary palps six jointed; suture variable; clypeus strong and well developed. Ants around trees and rocks, with nests usually under stones or dead logs. (Collected extensively from Los Angeles to Lower California. Fig. 22, pl. II.)

Camponotus maculatus Fabr. var. *semitestaceus* Emery. Record from only a few localities, and found only rarely in Southern California. There were only two or three specimens collected from the San Bernardino Mountains.

F. *Camponotus herculcanus* L. var. *semipunctatus* De Geer. Commonly called black carpenter ant. Petiole short; no spines on thorax; soldiers and workers with powerful claws; they live in dead or fallen trees. Nests in dead trees, occur in the upper and transitional zones. (Fig. 23, pl. II.)

UNCERTAIN SPECIES

- a. *Strumigenus rostrata* Emery, from Claremont.
 - b. *Camponotus maculatus* For. subs. McCooki.
 - c. *Myrmecocystus melliger* Forel.
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