

THE ANTS OF SNARL AND VALENTINE CAMP By Peter Nonacs (UCLA)

In the collection are 17 species representing 3 subfamilies of ants. This is not an exhaustive survey of the region and there are likely to be at least twice as many uncollected species present in the area. Nevertheless, the collection does represent the majority of the common ants that one is likely to encounter walking around in the daytime. Those species marked with red on the label were collected at SNARL. Blue represents collection at Valentine camp. Note that this does imply that some species are found only in one place, but that this is only where they were collected.

In some species, the workers have a range of sizes and I have tried to represent this range by mounting multiple specimens. Also where available, I have mounted the sexual forms. I informally 'guarantee' my identification to genus level, but the species level is less certain. Particularly in the genus *Formica* the keys I used may be very out of date and even the authors recommend sending specimens to specialists for ID.

Species descriptions

Subfamily **Formicidae**

These species do not have stings, but generally spray formic acid for defense. The larger species can have annoying bites.

Brachymyrmex depilis: Minute, yellow ant. Small colonies are found in soil or under rocks. The species probably rarely comes to the surface, perhaps only when sexuals are flying from the colony (August).

Camponotus vicinus: Large, black carpenter ant. The largest workers (majors) are probably the largest ants in the area. Colonies are often found in and under dead logs or stumps. This species was collected at Valentine. Although I did not have a specimen to mount, I believe *C. semitestaceus* is more likely to be found at SNARL.

Formica haemorrhoidalis: Large red and black ant, although colonies have very polymorphic worker castes. Some workers can be very small. Colonies are very large and nests are varied in structure, often affiliated with stumps and logs. Sometimes thatch is placed over the nest. Colonies defended very aggressively. Foraging workers often travel along long trails. The larger workers are generally more commonly seen foraging than are smaller ones. Species is found in wetter areas, not far from streams.

Formica lasioides: Small to medium sized blackish ant. Colonies are usually very active during the day and generally spread out under a number of rocks and logs. Workers are slightly polymorphic, with the smaller workers tending to do more of the foraging.

Formica neoclara: Small to medium sized red and black ant. Colonies are usually very active during the day and nests are in the soil. Many small entrances can be found in a local area that are probably all connected to the same colony. Workers are slightly polymorphic, with the smaller workers tending to do more of the foraging.

Formica neogagates: Small to medium sized dark brown to blackish ant. Colonies are usually very active during the day and nests are in the soil. Many small entrances can be found in a local

area that are probably all connected to the same colony. Workers are slightly polymorphic, with the smaller workers tending to do more of the foraging.

Formica planipilis: Large red and black ant, although colonies have very polymorphic worker castes. Some workers can be very small. Colonies are very large and nests are thatched mounds often affiliated within a sagebrush. Colonies defended very aggressively. Foraging workers often travel along long trails. The larger workers are generally more commonly seen foraging than are smaller ones. Species is found more commonly on the slopes of the hills in SNARL than in the flatter, wetter areas. This perhaps indicates some habitat segregation with *F. haemorrhoidalis*.

Formica sibylla: Medium to large black ant. Colonies appear to be highly polydomous (many entrances to the nest) and therefore occupy large areas. Nest entrances are 'volcano' like in appearance with large entrance holes.

Formica subelongata: Medium to large black ant. Colonies are under logs or other large objects. The species does not appear to be nearly as polydomous as *F. sibylla*.

Lasius alienus: Small reddish brown to brown ant. Found in moister areas (not far from streams) under rocks and in dead wood. It is not often active above-ground when the weather is hot and dry.

Myrmecocystus testaceus: Medium-sized to larger yellow ant. Commonly known as a 'honey pot' ant because it stores nectar in the expanded abdomens of living workers in the nest. This ant (like most yellow ants) is mainly active above ground in the night. Rarely seen during the day.

Subfamily **Dolichoderinae**

Conomyrma insana: Tiny black ant. Colonies are very common, with nests openings often in the middle of excavated volcanoes. The ants also often forage in fast-moving columns.

Subfamily **Myrmicinae**

Leptothorax rugatulus: Minute red and brown ant. Colonies are very small (often < 50 ants) and are found in wooded areas, generally under stones or debris. Individual workers often forage above-ground, but because they are small and slow-moving, they are not easy to find.

Manica bradleyi: Medium-sized red and black ant. Somewhat similar to harvester ants in appearance, but more slender and move more slowly. Colonies tend not to forage on hot days, so in the middle of summer they are most active in the morning and evening. Colonies have small, inconspicuous nest openings. If the colony is not foraging, wind tends to obliterate nest openings, leaving no sign that a nest is there.

Manica mutica: Medium-sized, entirely orange-red ant. Very similar to harvester ants in color and appearance, but more slender and move more slowly. Colonies tend not to forage on hot days, so in the middle of summer they are most active in the morning and evening. Colonies have small, inconspicuous nest openings. If the colony is not foraging, wind tends to obliterate nest openings, leaving no sign of a nest. Unlike harvesters, these ants actively climb into plants and appear to be taking nectar or plant sap.

Pogonomyrmex salinus: Large, entirely orange-red ant. Commonly known as a harvester ant because its diet is predominantly seeds. Colonies have obvious entrances, with many small excavated pebbles spread about. Ants can be seen foraging during the day at any temperature, although individual colonies may go through extended periods where they do no foraging at all. Workers will sting, but colonies are not unduly aggressive. Sexualls are released in great numbers in the late spring (May and June).

Solenopsis molesta: Minute, yellow ant. Small colonies are found in soil or under rocks. Commonly known as a 'thief ant'. Colonies are suspected to be located near other species, where because of their small size, the workers can steal food. The species probably rarely comes to the surface, perhaps only when sexualls are flying from the colony (August).

KEY TO WORKERS OF SPECIES FOUND IN SNARL AND VALENTINE CAMP.

The characteristics are taken mostly from Wheeler and Wheeler (1986: The Ants of Nevada).

- 1a. Pedicel composed of 1 segment. No sting present. (go to 6)
1b. Pedicel composed of 2 segments. Sting present. (go to 2; Subfamily Myrmicinae)
- 2a. Workers are minute and characters visible only with microscope. (3)
2b. Workers are large, characters visible with naked eye. (4)
- 3a. Workers are red and brown. Epinotum armed with spines. Antenna with 11 segments.
(*Leptothorax rugatulus*)
3b. Workers are more yellowish. Epinotum unarmed. Antenna with 10 segments, the last
2 forming a distinctive club. (*Solenopsis molesta*)
- 4a. Psammophore (beard-like structure of hairs on underside of head) present.
(*Pogonomyrmex salinus*)
4b. Psammophore absent. (5)
- 5a. Worker entirely orange-red. (*Manica mutica*)
5b. Worker with head dark brown, thorax much lighter. (*Manica bradleyi*)
- 6a. Opening at posterior end of gaster (acidopore) is circular and usually surrounded by a
fringe of hairs. (7; Subfamily Formicinae)
6b. Opening at posterior end of gaster (cloacal orifice) is slit-like without fringing hairs.
(Subfamily Dolichoderinae: *Conomyrma insana*)
- 7a. Antenna with 12 segments. (8)
7b. Antenna with 9 segments, workers minute and yellow. (*Brachymyrmex depilis*)
- 8a. Profile of thorax evenly convex, epinotum not depressed below mesonotum. (9)
8b. Profile of thorax with epinotum distinctly depressed below mesonotum. (10)
- 9a. Scape of the major (largest workers) distinctly flattened at base, with flattened portion
forming a lateral lobule. (*Camponotus semitestaceus*)
9b. Scape of the major distinctly flattened at base, but without flattened portion forming
a lateral lobule. (*Camponotus vicinus*)
- 10a. Maxillary palps relatively short (not longer than head). Psammophore absent. (11)
10b. Maxillary palps longer than head, with 3rd and 4th segments being especially long.
Psammophore present. Workers are yellow. (*Myrmecocystus testaceus*)
- 11a. Larger ants (>3 1/2 mm). Epinotal spiracle a narrow slit. Ocelli prominent. (12)
11b. Smaller ants (<3 1/2 mm). Epinotal spiracle round. No ocelli. (*Lasius alienus*)
- 12a. Slender ant with epinotum rounded in profile. (13)
12b. More robust ant, with epinotum distinctly angular in profile with a clear
differentiation between basal and declivous faces. (14)
- 13a. Scape bearing numerous short, delicate, white erect hairs. (*Formica lasioides*)
13b. Scape without erect hairs. (*Formica neogagates*)

- 14a. Workers are bicolored red and black. (16)
14b. Workers are entirely black. (15)

- 15a. Erect hairs present on gula. (*Formica sibylla*)
15b. Erect hairs absent on gula. (*Formica subelongata*)

- 16a. Workers are polymorphic with a range in size from small to large. Nests often built with or containing thatch. (17)

- 16b. Workers weakly polymorphic with largest workers being medium-sized. Nests excavated in dirt or under logs. (*Formica neoclara*)

- 17a. Erect hairs on middle and hind tibiae usually abundant on all surfaces. Legs of all workers are brownish (darker than thorax). (*Formica planipilis*)

- 17b. Erect hairs on middle and hind tibiae, when present, confined to a double row on the flexor surface. Legs of workers are red like thorax. (*Formica haemorrhoidalis*)