

Ants of Jasper Ridge

Linepithema humile (the Argentine ant)

These ants usually (but not always) forage in crowded trails, often on trees or on cleared paths. They are small, and may appear brown, grey, or black. From the side, the thorax looks quite slim and smooth. Their abdomens are usually about the size of their heads, but sometimes become enlarged and translucent. From above, their heads look somewhat triangular.



top left: AntWeb; bottom left and right: Alex Wild, size about 2 -3 mm

Prenolepis imparis (the winter ant)

Like Argentine ants, these ants often forage using trails on trees, but single *Prenolepis* foragers are not uncommon. Their main distinguishing feature is their large, teardrop-shaped abdomen, which rises above the thorax. They are black and noticeably shiny, with lighter-colored legs and antennae. Some *Prenolepis* workers have a large, transparent abdomen.



left and right: Alex Wild; middle: Peter Hollinger , size about 3 – 4 mm

***Formica* species** (field ants) (most commonly *Formica moki*)

These ants are much larger than the Argentine ant. It is easy to confuse them with ants in the genus *Camponotus* (see below). Both *Camponotus* and *Formica* workers often forage alone or in scattered groups, rather than well-defined trails. There are several traits that distinguish *Formica* from *Camponotus*: *Formica* workers run with a fast, jerky motion, spider-like, and are very difficult to catch; the most common species' abdomen is grayish and striped, with a matte appearance; and the thorax has two well-defined "humps"; they also have large eyes. *F. moki* is red and blackish-grey (matted), *F. subpolita* is brown and black (and not matted).



Left: *F. moki*, Right *F. subpolita*, pictures by Alex Wild,
size about 4 – 6 mm

***Camponotus* species (carpenter ants)** (often *Camponotus semitestaceus* or *vicinus*)

This are classic big ants (~ 8 -10 mm). Like *Formica*, these ants are large and often forage alone or in scattered groups. Most are reddish & black, but some are all brown or black. They move more slowly than *Formica*, so they might be easier to catch or to observe while they forage. They have a smooth, glossy appearance, with a smooth-single humped thorax, a big head, and conspicuous mandibles. There are at least 5 species at Jasper Ridge and some are relatively small (~ 5 mm)(not much larger than *P. impairs*).



left: *C. semitestaceus*; right: *C. laevigatus*, another species you might see
pictures by Alex Wild,
size about 6 – 10 mm

You might confuse the ants on this page with Argentine ants if you don't look carefully. You should be able to tell them apart if you keep your eyes open for details and pay attention to behavior.

***Temnothorax* species** (formerly *Leptothorax*)

These are small ants. *Leptothorax* means "slim thorax", and although they're now called *Temnothorax*, it's still a good description. These ants have very round heads and abdomens, connected by a long, narrow thorax. They move very slowly, and usually travel alone. You will most often find them standing still on a leaf or a tree trunk, or sometimes on the ground. There are at least 3 species and they vary in size and color from brown to black to red. They are more common in wooded, shaded areas.



left: Alex Wild, right: AntWeb ,
size about 2 mm

Tapinoma sessile (the banana cream-pie ant, or odorous house ant)

These ants look very similar to Argentine ants, but they are smaller, rounder, darker, and slower-moving. They forage in trails on trees, but the paths of these trails often follow deep bark cracks, so the trails can be hard to spot. The most distinctive characteristic of this species is the smell: if you pick up a *T. sessile* worker and sniff it, you will smell a banana cream-pie odor or lemon odor. (You might have to crush the ant to produce the smell, but often it's enough just to pick it up.) If you have a cold, you will have to rely on the shape of the abdomen: notice how the front of the abdomen hangs over the petiole. This is the only local ant with that characteristic.



both pictures: Alex Wild , size about 3 mm

Crematogaster coarctica (acrobat ants)

You may confuse these small, shiny black ants with *Prenolepis imparis*. They often forage on plants, usually in groups. You might also find single *C. coarctica* workers, and you might see them on the ground (usually at the base of plants.) The easiest way to tell *C. coarctica* from *P. imparis* is to look at the abdomen. *C. coarctica* has a flat, heart-shaped abdomen, from the side it looks flat, whereas *P. imparis* has a humped, teardrop-shaped abdomen, which is raised from the side. Also *C. coarctica* has a very round head (like a bowling ball) and it often will curl its abdomen straight up in the air (hence the name acrobat).



left: Alex Wild; right: AntWeb
size about 4 mm

Liometopum occidentale (the velvety tree ant)

Superficially, these ants look like *Formica moki* and act like Argentine ants. They form crowded trails on the ground or on trees, and they have a very distinctive gait. The "velvet" in their common name comes from the whitish, fuzzy appearance of their abdomen. Their eyes are small and placed low on their heads, unlike *F. moki*, which has large eyes high on the head. The workers come in a variety of sizes, from very small to moderately large, and workers of different sizes often travel together.



left: Antweb; right: Alex Wild,
size varies from 3 – 6 mm

Both ants on this page are very small reddish ants.

Pheidole californica

These are tiny grassland and chaparral ants. They have two very distinctive castes: minors and majors. Majors are much bigger than minors, and their heads are disproportionately large. Minors are more normally proportioned, and you may have trouble distinguishing them from *Solenopsis invicta*, if you don't see a major. *P. californica* has a square head, prominent eyes, 12 antenna segments, and two small spikes on the rear of the thorax. Often the way to find these ants is to observe their tiny nests on trails. They are seed harvesters like *Messor*, so they build small circular nests, with a midden pile around the top. The nests are very small (diameter ~ 4 cm).



right: minor workers; left: minor and major; both pictures by Alex Wild,
size less than 2 mm

***Solenopsis molesta* (thief ant)**

These are shiny, tiny yellowish-red ants – some people maybe have heard them called “piss ants”. As a type of fire ant they can sting. To distinguish these ants from *P. californica*, look particularly at the thorax and at the number of antenna segments. The thorax is smooth, and the antennae each have 10 segments with a distinctive club shape at the end. In the field, these ants are often found in soil, and they do not have conspicuous nests, or major and minor workers.



left: Benoit Guenard; right: AntWeb,
size less than 2 mm

Messor andrei (harvester ants)

This species is quite unlike other ant species at Jasper Ridge. They live in open, grassy areas and do not spend their time on trees or brush. You will spot the ants themselves most easily when their trails go along roads or other cleared areas. They are large, black ants with big, square heads, and they forage in groups. Sometimes, you will see a *M. andrei* nest with no ants present. You can recognize the nest by the midden pile of seeds around the nest opening, which is usually a different color than the surrounding soil and often more sparsely vegetated. If you look closely at the midden pile, you might also see *Camponotus* heads among the seeds. *Messor* moves often, so to tell if a nest is active, you can insert a stick into the center hole and try to fish out some ants. (note - this trick works for all types of ant nests).



left: a *M. andrei* forager carrying a seed; right: a *M. andrei* nest, with a Nalgene bottle for scale

These next ants are more rare on the preserve



Photo by Alex Wild, size ~ 4 mm

Aphaenogaster occidentalis (seed disperser ant)

These are beautiful ants, with long legs and antennae. They have a distinctive, slender thorax and petiole, which make



***Stenamma* sp.**

Rare to find, live under rocks and in leaf litter. This is an orange-ish ant, with very small eyes because it mostly lives under the ground. If you found, you would likely just find one

Cardiocondyla mauritanica



This is a worldwide invasive ant, though unlike the Argentine ant it does not have a big ecological impact, probably because it is a more submissive type of ant. Solitary forager (at most tandem foraging) and has smaller colony sizes. This ant is common in urban areas and characterized as a “tramp” ant. It can excrete a substance from its abdomen that is very effective in defense. It has been discovered on the northeast side of the preserve near the edge, foraging in and out of *Messor* nests. *C. mauritanica* is an inconspicuous ant. It has a two-segmented waist like *Pheidole* and *Solenopsis*, which gives it a rather narrow look. Overall, what is most noticeable is its bi-colored, has a very slender appearance, a rather pronounced post-petiole. It is noticeably smaller than Argentine ants. (~ 2 mm long)

