

# IDENTIFICATION KEY TO 16 COMMON ANTS OF THE SAN FRANCISCO BAY AREA

## How to use this key:

1. Become familiar with basic ant anatomy on page 2.
2. Place ant under a dissecting microscope and turn to page 3.
3. Read each question and pick the answer that you think best describes the ant. Turn to that page.
4. Eventually, you will arrive at a page with **one** or **two** species descriptions (see *example below*) instead of questions.
5. If there are **two** ants on the page, compare pictures and determine which characters are the best match to the ant you are looking at. If there is just **one** species description, make sure these characters match your ant. If not, start over and try a different route.

## Example of species description

**Black Carpenter Ant** ← smooth rounded thorax




Photo: Antweb.org

**Camponotus quericola** (Pronunciation: kam-pō-nō-tus quer-à-cola)  
Nest sites: nest in the dead interior of living oak trees.  
**Size: 7-9 mm**

**Does your ant have all these characters?**

1. Jet black in color
2. Rounded thorax
3. No sting

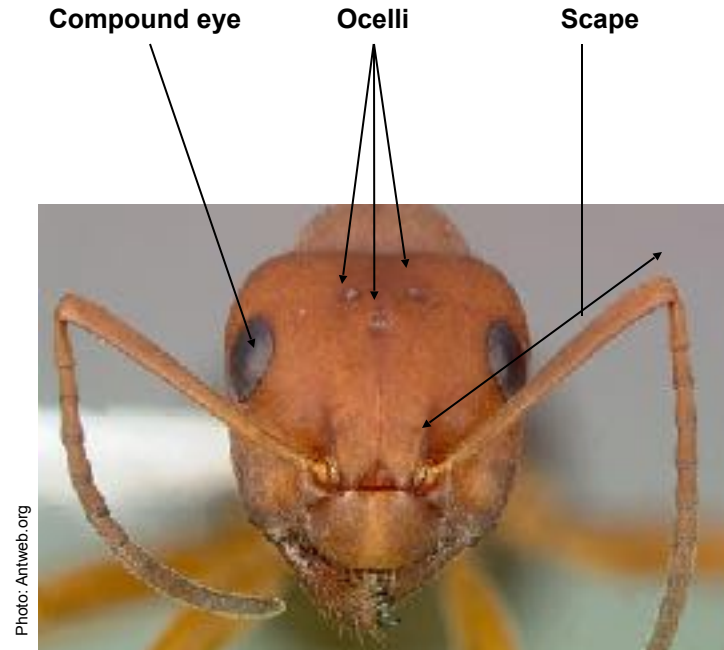
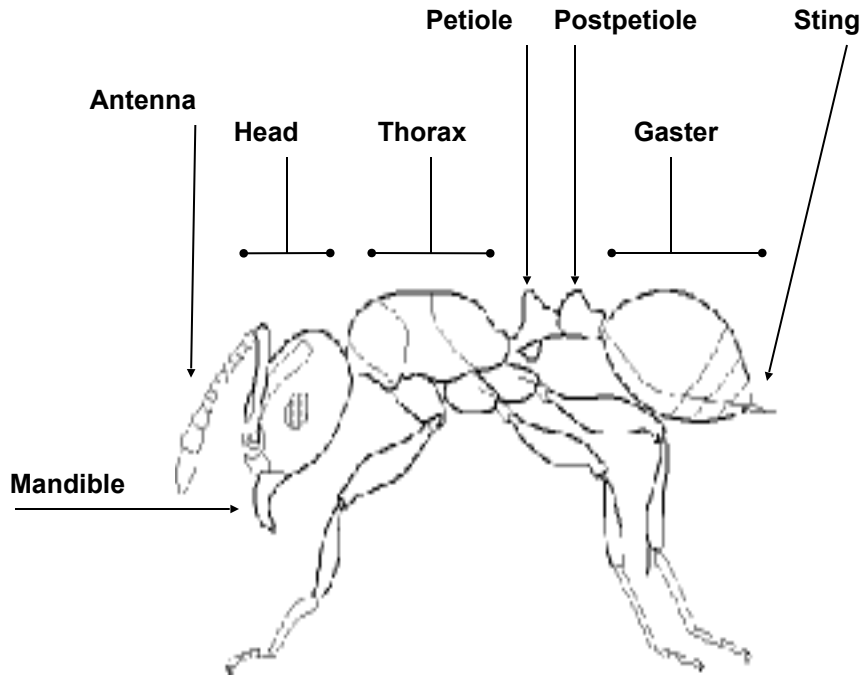
**COOL FACT:** Ants of the genus *Camponotus* are known as carpenter ants because they house their colonies in galleries they excavate in wood. They do not eat the wood during their nest-building activities, but deposit it outside the entrances to the colony in small piles.

All Pictures  
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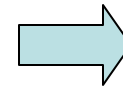
created by Kevin Clarke  
[kevin@bugunderglass.com](mailto:kevin@bugunderglass.com)

# Basic Ant Anatomy



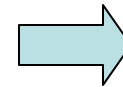
# How many petioles does the ant have?

One petiole



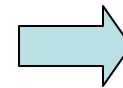
Go to page 4

Hidden petiole



Go to page 8

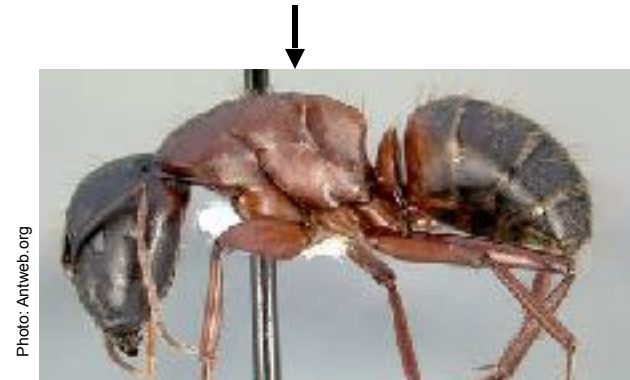
Two petioles



Go to page 14

one petiole ants

Is the thorax rounded or mostly rounded with no step-like depression in middle of thorax?



If yes, **GO TO PAGE 5**

**OR**

Is the thorax not rounded, concave-like and has a step-like depression?



If yes, **GO TO PAGE 9**

one petiole ants

Does the ant have a black head and gaster and a orange or brown thorax?

black      orange or brown      black



Photo: Antweb.org

If yes, **GO TO PAGE 6**

**OR**

Is the ant mostly one color? Either all black, brown, or yellow?



Photo: Antweb.org



Photo: Antweb.org

If yes, **GO TO PAGE 7**

## Bicolored Carpenter Ant

smooth rounded thorax



Photo: Antweb.org

***Camponotus vicinus*** (Pronunciation: kam-pō-nō-tus vi-sī-nus)  
Nest sites: Under stones or in rotten wood buried in soil.  
**Size: 8-10 mm**

one petiole ants

### Does your ant have all these characters?

1. Bicolored – head and gaster black, thorax brown or orange
2. Generally 8-10 mm--measure the ant!
3. Rounded thorax with one petiole

**COOL FACT:** This is one of the few polygynous (the colony has many queens instead of one) species of carpenter ants, and its colony size can reach 100,000 workers.

**one petiole ants**

### Dark Log Ant



- Does your ant have all these characters?**
1. Eyes are very tiny
  2. Length is around 2-3 mm
  3. Dark reddish brown
  4. Sting present--sometimes can't be seen
- COOL FACT:** Wingless males show an unusual mating behavior. They mate with the new queen still in the cocoon for up to 40 hours. This behavior is called (or termed) "mate guarding".

Photo: Antweb.org

**Hypoponera opacior** (Pronunciation: hī-pō-pō-nē-ruh ò-pas-i-òr)  
Nest sites: Under stones and in leaf litter.  
**Size: 2-3 mm**

### Black Carpenter Ant



- Does your ant have all these characters?**
1. Eyes large
  2. Jet black in color
  3. Rounded thorax
  4. No sting
- COOL FACT:** Ants of the genus *Camponotus* are known as carpenter ants because they house their colonies in galleries they excavate in wood. They do not eat the wood during their nest-building activities, but deposit it outside the entrances to the colony in small piles.

Photo: Antweb.org

**Camponotus quercicola** (Pronunciation: kam-pō-nō-tus quer-â-cola)  
Nest sites: nest in the dead interior of living oak trees.  
**Size: 7-9 mm**

## Odorous Ant

petiole hidden under gaster

hidden petiole ant



Photo: Antweb.org

***Tapinoma sessile*** (Pronunciation: tap-i-nō-muh ses-i-lē)  
Nest sites: In soil beneath rocks, but can also be found in stumps, plant cavities, insect galls, and refuse piles.  
**Size: 2-3 mm**

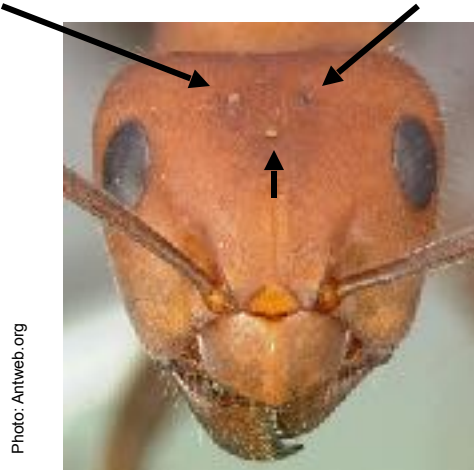
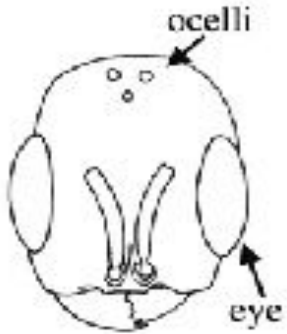
### Does your ant have all these characters?

1. Petiole hidden under gaster. Not visible
2. Length is around 2-3 mm
3. Dark brown to shiny black in color
4. Gives off musty odor when crushed--you won't smell this when they are dead
5. This ant commonly confused with Argentine Ant on page 13. Look for hidden petiole.

**COOL FACT:** This ant gets its name from the foul coconut-like odor produced when it is crushed.



Does the front, top part of the head have 3 small ocelli visible?



**Note:** This can be difficult to see on dark colored ants.

**If yes, go to  
Page 10**

**OR**

Does the front, top part of head have **NO** ocelli?



**If yes, go to  
Page 13**

one petiole ants

Is the ant all black?



Photo: Antweb.org

If yes, **GO TO PAGE 11**

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**OR**

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Is the ant two colors with gaster black and thorax orange-ish?



Photo: Antweb.org

If yes, **GO TO PAGE 12**

## Black Wood Ant

step-like depression



Photo: Antweb.org

***Formica fusca*** (Pronunciation: fore-my-kuh fūs-kuh)  
Nest sites: Wide variety of places, in forests or open areas, under rocks, logs, in soil, or in rotting wood.  
**Size: 4-6 mm**

one petiole ants

### Does your ant have all these characters?

1. No standing hairs on thorax
2. All black with no shine
3. Step-like depression
4. One petiole
5. Ocelli present on top, front of head

**COOL FACT:** One Formica colony in Japan was reported to have 1,080,000 queens and 306,000,000 workers in 45,000 interconnected nests.

## Shiny Wood Ant

tiny standing white hairs



Photo: Antweb.org

***Formica lasioides*** (Pronunciation: fore-my-kuh lā-si-oid-ēz)  
Nest sites: Commonly found in grasslands where it nests under stones or in nests that have small crater openings. Also, found in rotting wood.  
**Size: 3-5 mm**

### Does your ant have all these characters?

1. White hairs standing on thorax.
2. All black with shiny gloss
3. Step-like depression
4. One petiole
5. Ocelli present on top, front of head

**COOL FACT:** Because of their docility, these ants sometimes become slaves to species of slave-making ants.

## Bicolored Wood Ant

thorax uneven



Photo: Antweb.org

***Formica moki*** (Pronunciation: fore-my-kuh mo-ki)  
Nest sites: In soil under rocks.  
**Size: 4-6 mm**

one petiole ants

### Does your ant have all these characters?

1. Bicolored – gaster black, thorax orange-like.
2. Step-like depression on thorax
3. One petiole
4. Ocelli present on top front of head.

**COOL FACT:** Formica ants can spray formic acid from the tip of their gaster when alarmed, sometimes several feet. Formic acid is the principal irritant in the leaves of the stinging nettle.

**one petiole ants**

**Argentine Ant**

no standing hairs (bald)



Photo: Antweb.org

***Linepithema humile*** (Pronunciation: line-ē-pith-em-â hu-mil-ē)  
 Nest sites: Outdoors and indoors; in moist soil, under stones, or rotten wood.  
**Size: 2-3 mm**

- Does your ant have all these characters?**
1. No standing hairs (bald) on thorax or gaster
  2. Uniform dull brown in color
  3. Step-like depression on thorax
  4. Gives off musty odor when crushed (you won't smell this when they are dead)

**COOL FACT:** Most common ant in Bay Area. New colonies are formed by budding, which a group of queens and workers depart from their parental nest to form a new nest usually a short distance away.

**False Honey Ant**

long scapes

long hairs on head, thorax and gaster



Photo: Antweb.org

***Prenolepis imparis*** (Pronunciation: prē-nol-e-pis im-pār-is)  
 Nest sites: In soil, under stones and rotten wood. Active in winter  
**Size: around 3 mm**

- Does your ant have all these characters?**
1. Long hairs on head, thorax, and gaster
  2. Glossy, dark brown in color
  3. Antennal scapes very long
  4. Step-like depression on thorax
- COOL FACT:** *Prenolepis imparis*, is one of the few ants that is specialized for cold temperature foraging and can be found foraging even at freezing temperatures

two petiole ants

Does your ant have spines on back of thorax?



Photo: Antweb.org



Photo: Antweb.org

If yes, **GO TO PAGE 15**

**OR**

Does the ant have no spines?



Photo: Antweb.org

If yes, **GO TO PAGE 20**

two petiole ants

Are the spines very long?

Photo: Antweb.org



If yes, **GO TO PAGE 16**

**OR**

Are they short spines?

Photo: Antweb.org



If yes, **GO TO PAGE 17**

## Acrobat Ant

spines



Photo: Antweb.org

***Crematogaster coarctata*** (Pronunciation: krē-mat-ō-gas-tur kō-ark-tā-tuh)  
Nest sites: Often found under rocks.  
**Size: around 4 mm**

two petiole ants



### Does your ant have all these characters?

1. Gaster looks like a heart when viewed from the top
2. Long spines on thorax
3. Less hairy than common harvester ant
4. Step-like depression on thorax

**COOL FACT:** Acrobat ants get their name from the habit of holding their abdomens above their thorax - like acrobats - when the workers or colony are disturbed.

↑  
“heart-shaped” gaster viewed from top, looking down

## Common Harvester Ant

long spines



Photo: Antweb.org

***Messor andrei*** (Pronunciation: mess-or an-drē-ī)  
Nest sites: Under rocks and in soil.  
**Size: 5-6 mm**

### Does your ant have all these characters?

1. Very hairy
2. Long spines on thorax
3. Step-like depression on thorax

**COOL FACT:** The common harvester ant stores many seeds in a stock-piling chamber of the nest during fall so it will have food for the winter.



two petiole ants

Is the ant's thorax uneven  
(like a stair step)?

Photo: Antweb.org



Photo: Antweb.org



If yes, **GO TO PAGE 18**

**OR**

Is the ant's thorax missing a big stair-like  
step?

Photo: Antweb.org



If yes, **GO TO PAGE 19**

**two petiole ants**

**Seed Disperser Ant**

step-like depression  
short spines



Photo: Antweb.org

***Aphaenogaster occidentalis***

(Pronunciation: a-fē-nō-gas-tur ok-si-den-tuh-lis)

Nest sites: Under rocks, in soil.

Size: 3-4 mm

**Does your ant have all these characters?**

1. Brownish in color
2. Step-like depression on thorax
3. Short spines on thorax
4. Two petioles

**COOL FACT:** Some species of this genus are important in dispersing plant seeds.

**Stenamamma Ant**

step-like depression  
short spines



Photo: Antweb.org

***Stenamamma diecki*** (Pronunciation: sten-am-uh dee-key)

Nest sites: Under rocks and in leaf litter; rare to find.

Size: around 3 mm

**Does your ant have all these characters?**

1. Orange-ish in color
2. Step-like depression on thorax
3. Short spines on thorax
4. Two petioles

**COOL FACT:** Little is known of this ant's natural history. They are generalized predators on collembola (springtails) and various larvae.

## Pavement Ant

erect hairs

short spines



Photo: Antweb.org

**Tetramorium caespitum** (Pronunciation: tet-ruh-mō-ri-um ses-pi-tum)  
Nest sites: Common in parks and gardens; found under stones, leaf litter, rotten wood.  
**Size: around 3 mm**

two petiole ants

### Does your ant have all these characters?

1. Thorax mostly even in profile
2. Short spines on thorax
3. Erect hairs on thorax
4. Dark brown in color

**COOL FACT:** These ants were likely carried to the United States in the holds of merchant vessels during the 1700s to 1800s. These ships were filled with soil from Europe to provide ballast on the trip to the States. Once in port, the soil was removed, and goods were loaded on the ships to carry back across the Atlantic.

## The Thief Ant

two petiole ants



Photo: Antweb.org

***Solenopsis molesta*** (Pronunciation: Sō-len-op-sis mō-les-tuh)  
Nest sites: In soil, under stones.  
**Size: under 2 mm**

### Does your ant have all these characters?

1. Yellowish
2. Very small--under 2 mm
3. Two petioles
4. No spines

**COOL FACT:** This ant usually nests in or near nests of other ants from which they rob food and brood.

## Tiny Mono Ant

no spines



Photo: Antweb.org

***Monomorium ergatogyna***  
(Pronunciation: Mon-ō-mō-ri-um er-ga-tō-gy-na)  
Nest sites: Under stones, in soil, makes small crater nests.  
**Size: under 2 mm**

### Does your ant have all these characters?

1. Black and shiny
2. Very small--under 2 mm
3. Two petioles
4. No spines

**COOL FACT:** An ant in the *Monomorium* genus, the pharaoh ant, was given this name possibly from the mistaken idea that it was one of the plagues of ancient Egypt