

What is a bee?



A bee has hair on its body, two pairs of wings, and collects pollen. Females have a stinger.

What is not a bee?

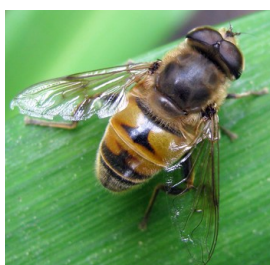
Wasps (including yellow jackets and hornets):

A wasp is almost hairless, often shiny, has two pairs of wings, and is generally carnivorous. Wasps do not collect pollen. Females have a stinger.



Flies:

A fly has pronounced eyes, short antennae, one pair of wings, and no stinger. Flies may pollinate when visiting flowers for nectar.



Non-Pollinating Bees

“Cuckoo” bees are parasitic on other bees. They lay their eggs in nests of other bee species and larvae feed on pollen collected by the ‘host’ bees.

Coelioxys species

- Abdomen distinctly pointed with black and white hair bands
- 7-10mm in length
- Parasites of Megachilids



Sphecodes species

- Hairless abdomen usually red
- 4-12mm in length
- Parasites of Halictids

Nomada species

- Nearly hairless
- Red or black, possibly with yellow markings
- 8-12mm in length
- Parasites of Andrenids



Comparing Honey Bee and Bumble Bee Colonies

Honey bee colonies are large with several thousand workers. The colony can continue growing for years, replacing the queen when necessary. Additional queens might also disperse to begin new colonies. Honey bees produce wax and honey.



Bumble bee colonies do not become as large as honey bee colonies since the colony dies every winter. New queens produced in the fall overwinter alone and start their own colonies in the spring. Bumble bees do produce wax but do not make honey.



Additional Resources

Bumble Bees of the Western United States:

http://www.xerces.org/wpcontent/uploads/2008/09/Western_BB_guide.pdf

Discover Life (Bee photos, info and ID guides):

<http://www.discoverlife.org/20/q?search=Apoidea#identification>

Guide to Common Pollinators in the Willamette Valley in Western Oregon



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Social Bees

Honey Bees (*Apis mellifera*)



- Hairy body with a mix of yellow-orange and black
- ~15mm in length
- Non-native but became naturalized throughout North America
- Most hives are man-made and managed, but feral colonies may be found nesting in tree hollows

Bumble Bees (*Bombus* species)



- Bumble Bees are robust and hairy
- Black with varying colors of yellow, orange and white
- 10-25+mm in length
- Nest in rodent burrows, or in man made structures such as bird houses, building insulation and compost piles

B. appositus

B. californicus

B. griseocollis

B. melanopygus



B. mixtus

B. nevadensis

B. vosnesenskii

Solitary Bees

Digger Bees (*Anthophora* species)



- Head, thorax and legs covered in dense hair
- Mainly light colored with bands on abdomen, or mainly black with areas of yellow
- 12-18mm in length
- Nest underground



Sunflower Bees (*Eucera* species)

- Hind legs with medium-long hairs
- Head and thorax covered in dense hair
- Males have long antennae
- Females have wide white bands on abdomen
- 12-16mm in length



Long-horned Bees (*Melissodes* species)



- Hind legs have distinctly long hair
- Males have long antennae
- Cream bands on abdomen
- Head and thorax covered in dense hair
- 9-14mm in length
- Nest underground



Mining Bees (*Andrena* Species)

- Head and thorax covered in dense hair
- With white hair bands or completely black on abdomen
- 8-14mm in length
- Nest underground



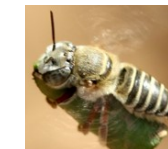
Wool-carding Bees (*Anthidium* species)



- Moderate hair on head and thorax
- Hairless abdomen with yellow and black markings
- 11-14mm in length

Leaf-cutting Bees (*Megachile* species)

- Large serrated mandibles
- Underside of female abdomen with prominent long hair
- Narrow white bands on abdomen
- 7-12mm in length
- Nest in holes in wood or plant stems



Mason Bees (*Osmia* Species)

- Body often metallic blue or green
- Have hair on underside of thorax
- Head, thorax and abdomen similar in size
- 8-12 mm in length
- Nest in holes in wood or plant stems



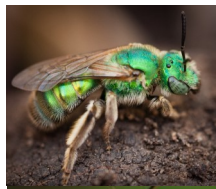
Sweat Bees (*Halictus* and *Lasioglossum* species)



- May have thin white bands on abdomen
- Some have a weak metallic shine
- Long slender abdomen
- 2-13mm in length
- Nest underground

Metallic Green Sweat Bees (*Agapostemon* species)

- Head and thorax metallic green
- Yellow or white bands on abdomen, or completely metallic green
- 8-11mm in length
- Nest underground



Small Carpenter Bees (*Ceratina* species)

- Body dark blue-green with a weak metallic shine
- Abdomen thick (not tear-shaped)
- 3-6mm in length
- Nest in holes in wood or plant stems



Yellow-masked Bees (*Hylaeus* species)



- Black bees with yellow to white markings on face, thorax and legs
- Nearly hairless with weak shine
- 3-7mm in length
- Nest in dead twigs or plant stems