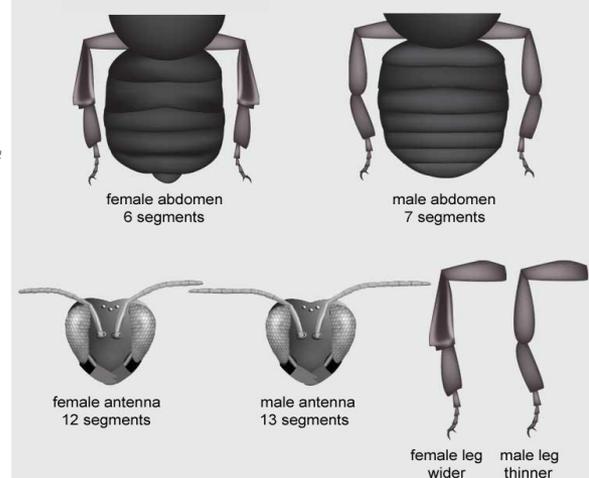
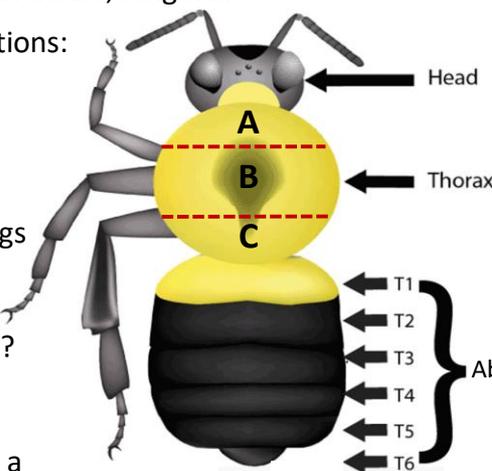


Steps for Identifying a Bumble Bee:

- After determining you have a bumble bee (not a carpenter bee, wasp or fly) check to see if it is a female or a male, and if it is a cuckoo bee.
 - Female: pollen basket on hind leg (shiny, hairless zone); 6 tergites
 - Male: No pollen basket on hind leg; 7 tergites; some with bulgy eyes
 - Cuckoo: No pollen basket on hind leg, instead with dense, long hair

- Examine the **hair color and pattern** on the following sections:

- Head:
 - Front of the face
 - Top of the head
- Thorax:
 - Front of (A), between (B), and behind (C) the wings
 - Side of thorax/under the wings
 - Is there a circle or stripe between the wings (B)?
 - Is there a black notch or "v" behind the wings (C)?
- Abdomen:
 - What color is T1? T2? T3? ...T6?
 - Does the color cover the entire tergite or is there a pattern to (i.e. crescent shape or gap in the center)?



Photos: Xerces Society/Rich Hatfield

- Examine the cheek length; is it long or short?
- Make sure your photos show the features in the above checklist.

Symbol and Term Descriptions:

Uncommon: Species occurs infrequently or in low abundance.

Species of Conservation Concern: Evidence-supported rare or declining species that are in need of conservation. The Missouri Department of Conservation manages the list of species and prioritizes them when planning conservation efforts.

Tergite: A tergite is an abdominal segment. Females have 6 tergites, males have 7. The tergite nearest the thorax is Tergite 1 or "T1" and the terminal segment is Tergite 6 or "T6." Hair color of T1-T6 helps determine the species.

Male Identification:
Visit BumbleBeeAtlas.org for alternative guides.

Look-alikes!

- American vs Black-and-Gold Bumble Bee:** American has black hairs on top of the head, Black-and-Gold has yellow. T1 of American is often times ½ black and ½ yellow, Black-and-Gold is all yellow.

Photos need to include: Top of head and T1

- American (Male) vs Yellow Bumble Bee (Male):** American has mixed hair colors (yellow and black) behind the wings and on the sides of the thorax, while the Yellow bumble bee has yellow hair in these areas. Often, T7 of American will have orange coloration.

Photos need to include: Thorax (top and side) and T6/T7



Bumble bee illustrations: Paul Williams (identification and color patterns), Elaine Evans, Rich Hatfield (bee body design).

Missouri Bumble Bee Identification Guide (Females)

Key (See reverse side for descriptions)

 Common **T** = Tergite

 Species of Conservation Concern

This guide separates bees into two sections based on the color of the first tergite: (1) T1 is yellow or (2) T1 is black. All of these species occur statewide except for Lemon Cuckoo Bumble Bee, which is found near the N. and E. borders.

If first abdominal segment is yellow:





Bombus griseocollis
Brown-belted Bumble Bee
T2 color is crescent-shaped



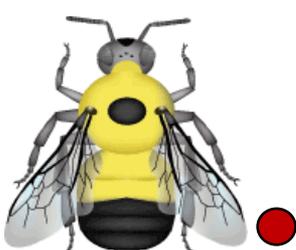


Bombus impatiens
Common Eastern Bumble Bee
Thorax with teardrop shape





Bombus bimaculatus
Two-spotted Bumble Bee
Yellow "W" shape on T2





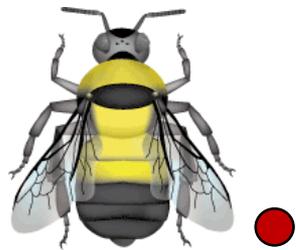
Bombus vagans
Half Black Bumble Bee
Spot on thorax is black & yellow





Bombus fervidus
Yellow Bumble Bee
Black hairs on top of head

*Males very similar to *B. pensylvanicus*, see **Look-alikes** on reverse side.





Bombus fraternus
Southern Plains Bumble Bee
T1/T2 hairs appressed/lay flat

If first abdominal segment is black:



* Very similar to *B. pensylvanicus*, see **Look-alikes** on reverse side.

Bombus auricomus
Black and Gold Bumble Bee
Yellow hairs on top of head



* Males very similar to *B. fervidus*, see **Look-alikes** on reverse side.



Bombus pensylvanicus
American Bumble Bee
T1 often 1/2 black, 1/2 yellow



Bombus variabilis
Variable Cuckoo Bumble Bee
Very short hair; Uncommon



Bombus citrinus
Lemon Cuckoo Bumble Bee
All yellow thorax

Rusty Patch Bumble Bee (*Bombus affinis*)



This species has not been detected in Missouri since 1998.

This species is protected under the Endangered Species Act. If you are surveying in Cole, Franklin, Gasconade, Jefferson, Maries, Miller, Osage, St. Charles, St. Louis and St. Louis City Counties, please see guidance from the US Fish and Wildlife Service before handling:

www.fws.gov/midwest/endangered/insects/rpbb/