

Key (See reverse side for descriptions)

 Common    **T** = Tergite

 Species of Conservation Concern

# Missouri Bumble Bee Identification Guide (Females)

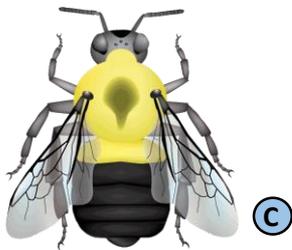
This guide separates bees into two sections based on the color of the first tergite: (1) T1 is yellow or (2) T1 is black. All of these species occur statewide except for Lemon Cuckoo Bumble Bee, which is found near the N. and E. borders.

## 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

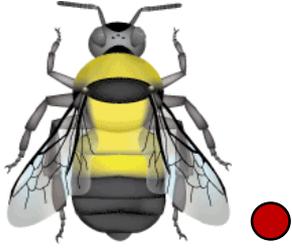


*Bombus vagans*  
**Half Black Bumble Bee**  
Spot on thorax is black & yellow



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

*Bombus fervidus*  
**Yellow Bumble Bee**  
Black hairs on top of head





*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.

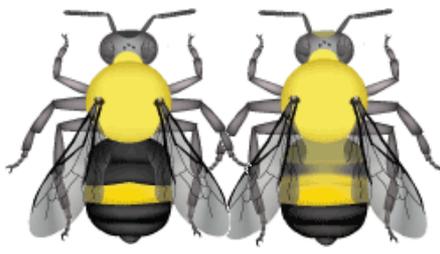


*Bombus pensylvanicus*  
**American Bumble Bee**  
T1 often 1/2 black, 1/2 yellow





*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/](http://www.fws.gov/midwest/endangered/insects/rpbb/)

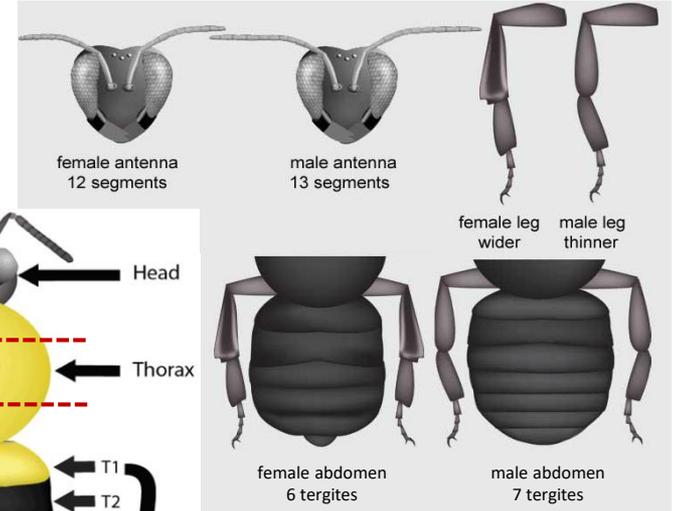
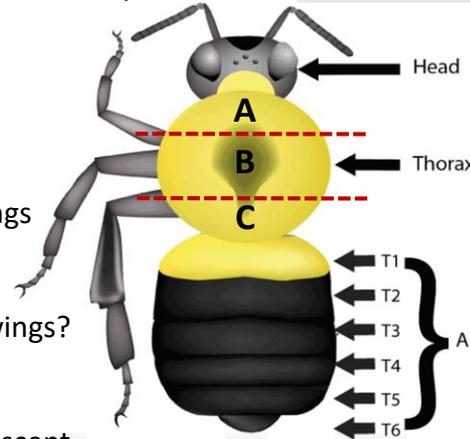
# Steps for Identifying a Bumble Bee:



1. 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

2. Examine the **hair color** on the following sections and record if it is black, yellow, mixed (black and yellow), orange, or white:

- 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?
  - Is there a central black notch in the behind the wings?
- Abdomen:
  - What color is T1? T2? T3? ...T6?
  - Does the color cover the entire tergite or is it crescent-shaped? Is there a gap of color in the middle or on the edges of one or more tergites?



**Male Identification:**  
Visit the Atlas website ([MOBumbleBeeAtlas.org](http://MOBumbleBeeAtlas.org)) for alternative guides.

3. Make sure your photos show the features in the above checklist.

## Key Term Descriptions:

**Common:** A species that is common and abundant throughout its range.

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

**Species of Conservation Concern:** Evidence-supported rare or declining species that is in need of conservation. These species are prioritized when planning conservation efforts.

## 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 Black-and-Gold is all yellow, whereas American is often times ½ black and ½ 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, Yellow bumble bee does not. Often, T7 of American will have orange coloration.

**Photos need to include: Thorax and T6/T7**

Bumble bee illustrations on front and back: Paul Williams (identification and color patterns); Elaine Evans, Rich Hatfield (bee body design)