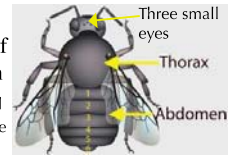




GUIDE TO MN BUMBLE BEES: FEMALES

This guide is only for females (12 antennal segments, 6 abdominal segments, most bumble bees, most have pollen baskets, no beards on their mandibles). First determine which yellow highlighted section your bee is in, then go through numbered characters to find a match. See if your bee matches the color patterns shown and the description in the text. Color patterns can vary. More detailed keys are available at discoverlife.org.

Join the search for bumble bees with www.bumblebeebeewatch.org



Yellow hairs between wings, 1st abdominal band yellow (may have black spot in center of thorax)

1. Black on sides of 2nd ab, yellow or rusty in center



2nd abdominal band with yellow in middle, black on sides. Yellow often in a "W" shape. Top of head yellow.

Bombus bimaculatus
two-spotted bumble bee



2nd abdominal band with yellow in middle bordered by rusty brown in a swooping shape. Top of head black.

Bombus griseocollis
brown-belted bumble bee



Light lemon yellow hairs on top of head and on thorax.

Bombus impatiens
common eastern bumble bee



Center spot on thorax with sometimes faint V shaped extension back from the middle. Queens do not have brownish central patch.

Bombus affinis
rusty patched bumble bee

2. All other ab segments black 3. 2nd ab brownish centrally surrounded by yellow

4. 2nd ab entirely yellow and ab 3-6 black



Yellow on top of head. Slightly elongate space above mandible

Bombus vagans
half-black bumble bee



Black on top of head. Square cheek. A few yellow hairs on 5th ab. Smaller than *vagans*. Spot on thorax may or may not be clear.

Bombus sandersoni
Sanderson's bumble bee



Variable color patterns. Smaller than many other bumble bees. Cheek shorter than width of mandible.

Bombus rufocinctus
red-belted bumble bee



Variable color patterns. Often brown on sides of thorax.

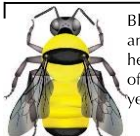
Bombus perplexus
confusing bumble bee

5. Yellow on front edge of 2nd ab

6. No obvious spot on thorax.

Black stripe between wings

1. Yellow on ab 1-4



Black on top and front of head. Sides of thorax yellow.

Bombus fervidus
yellow bumble bee



Yellow on top and front of head. Sides of thorax with brown hairs. 5th ab may be black.

Bombus borealis
boreal bumble bee



Distinct V shape extending back from center stripe on thorax. Black hairs on face and top of head.

Bombus ternarius
tricolored bumble bee



Yellow hairs on top of head and front of face. Only in Western MN.

Bombus huntii
Hunt's bumble bee



Variable colors. Smaller than many. Cheek shorter than width of mandible. A few yellow hairs between wings, but often looks like stripe.

Bombus rufocinctus
red-belted bumble bee

Back half of thorax is predominantly black

1. Yellow on top of head



Often with yellow on rear sides of thorax and yellow on top of head. Three small eyes lower on face (see below).

Bombus auricomus
black and gold bumble bee



2. Black on top of head



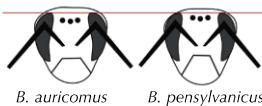
Usually black hairs on top of head. Three small eyes higher on face (see below).

Bombus pensylvanicus
American bumble bee



Smaller and stouter than many other bumble bees. Fringe of yellow hairs near end of abdomen. Short cheek.

Bombus terricola
yellowbanded bumble bee



B. auricomus

B. pensylvanicus

Common

Much of abdomen lacking hair, no pollen baskets



Bombus citricus
lemon cuckoo bumble bee



Bombus bohemicus
Ashton's bumble bee



Bombus insularis
indiscriminate cuckoo bumble bee



Bombus flavidus
female cuckoo bumble bee

Elaine Evans: University of Minnesota www.beelab.umn.edu www.befriendingbumblebees.com





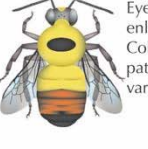
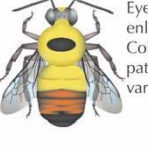




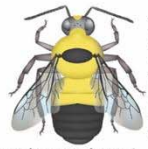
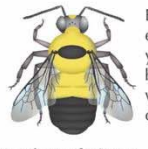



GUIDE TO MN BUMBLE BEES: MALES









This guide is only for **males** (13 antennal segments, 7 abdominal segments, mostly common late in the season, no pollen baskets, beards on their mandibles). **First determine which yellow highlighted section your bee is in, then go through numbered characters to find a match.** See if your bee matches the color patterns shown and the description in the text. Color patterns can vary. More detailed keys are available at discoverlife.org. Join the search for bumble bees with www.bumblebeewatch.org Ab=Abdominal band Ant= Antennal segment

by Elaine Evans, University of Minnesota www.beelab.umn.edu www.befriendingbumblebees.com






Thorax with yellow near wing base AND 3rd abdominal segment black or orange

1. Black on sides of 2nd Ab, yellow or rusty in center		2. 2nd Ab black		3. 3rd Ab orange	
					
2nd Ab with yellow in middle, black on sides. Yellow often in a "W" shape. Eyes not large.		2nd Ab with yellow in middle bordered by rusty brown in a swooping shape. Large eyes.		Light lemon yellow hairs on top of head and on thorax.	
<i>Bombus bimaculatus</i> two-spotted bumble bee		<i>Bombus griseocollis</i> brown-belted bumble bee		<i>Bombus impatiens</i> common eastern bumble bee	
					
Eyes slightly enlarged. Color pattern variable.					
4. 2nd Ab entirely yellow and Ab 3-6 black		5. 2nd Ab brown centrally			
					
Ant 3 is long. Black hair on thorax limited to central spot.	Ant 3 is short. Short hairs on back of ant segments 3 and 4. Many black hairs on thorax. Smaller than vagans.	Eyes slightly enlarged. Some yellow in black band between wings. Variable color patterns.	Center spot on thorax with sometimes faint V shaped extension back from the middle.		
<i>Bombus vagans</i> half-black bumble bee	<i>Bombus sandersoni</i> Sanderson's bumble bee	<i>Bombus rufocinctus</i> red-belted bumble bee	<i>Bombus affinis</i> rusty patched bumble bee		
					


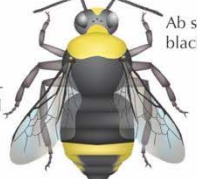


Thorax with yellow near wing base AND abdomen segments 1-3 yellow

1. Black spot in center of thorax		2. No obvious spot on thorax.	
			
Not large eyes. Very short cheek.	Large eyes	Variable color patterns.	
<i>Bombus citrinus</i> lemon cuckoo bumble bee	<i>Bombus auricomus</i> black and gold bumble bee	<i>Bombus perplexus</i> confusing bumble bee	
	 Common		

Thorax with black stripe between wings

1. Ab 1-4 yellow			2. Ab 2-3 orange	
				
Black on top and front of head. Sides of thorax yellow.	Yellow on top and front of head. Sides of thorax with brown hairs. 5th Ab may be black.	Often with orange on 7th Ab. Sides of thorax with dark hair.	Rear 1/2 of thorax yellow. Common in northern MN.	Rear half of thorax with some black hairs. Only in Western MN.
<i>Bombus fervidus</i> yellow bumble bee	<i>Bombus borealis</i> boreal bumble bee	<i>Bombus pensylvanicus</i> American bumble bee	<i>Bombus ternarius</i> tricolored bumble bee	<i>Bombus huntii</i> Hunt's bumble bee

Rear half thorax is black

1. 1st ab black		2. 1st ab yellow	
			
Smaller and stouter than many other bumble bees. Fringe of yellow hairs near end of abdomen.	Ab seg 1-3 black.	Ab seg 1 yellow.	Ab seg 6-7 with orange. Variable color. Often with yellow on rear half of thorax. Sometimes Ab 2-3 yellow
<i>Bombus terricola</i> yellowbanded bumble bee	<i>Bombus insularis</i> indiscriminate cuckoo bumble bee	<i>Bombus bohemicus</i> Ashton's bumble bee	<i>Bombus flavidus</i> Fernalde cuckoo bumble bee