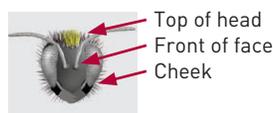


# Guide to Minnesota Bumble Bees: Females

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 section your bee is in, then go through numbered characters to find a match. See if your bee matches the description in the text as well as the color pattern. Color patterns can vary. Bumble bees are depicted in relative size. Search for bumble bees with [www.bumblebee-watch.org](http://www.bumblebee-watch.org)

Ab = abdominal segment **C** Common **E** Endangered **D** Declining



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

### 1. Black on sides of Ab 2, yellow or rusty in center



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

*Bombus bimaculatus*  
two-spotted bumble bee **C**



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

*Bombus griseocollis*  
brown-belted bumble bee **C**



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

*Bombus impatiens*  
common eastern bumble bee **C**



### 3. Ab 2 brownish centrally surrounded by yellow

Worker. Center spot on thorax with sometimes faint V shaped extension back from middle.

*Bombus affinis*  
rusty patched bumble bee **E**



### 4. No obvious spot on thorax

Variable color. Often Ab 3 yellow.

*Bombus perplexus*  
confusing bumble bee

### 5. Ab 2 entirely yellow and ab 3-6 black



Yellow on top of head. Few black hairs on thorax. Elongate cheek (see inset).

*Bombus vagans*  
half-black bumble bee



Variable color. Often black hairs on thorax. More square cheek than vagans (see inset).

*Bombus sandersoni*  
Sanderson's bumble bee



Queen. Black on top of head. Round face. No brownish central patch or extension of black hairs from spot on thorax.

*Bombus affinis*  
rusty patched bumble bee **E**



### 6. Yellow on front edge of Ab 2. Dark hairs near wing bases



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

*Bombus rufocinctus*  
red-belted bumblebee

## Black stripe between wings. No yellow hairs at wing base.

### 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

### 2. Orange/red on Ab 2-3



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 face and top of head. Only in far west MN.

*Bombus huntii*  
Hunt's bumble bee



Northern range.

*Bombus frigidus*  
frigid bumble bee

## Back half of thorax is predominantly black. Hairy abdomen.

### 1. Large size, long face



Three small eyes lower on face (see inset). Short spine on hind basitarsus.

*Bombus auricomus*  
black and gold bumble bee



Three small eyes higher on face (see inset). Long spine on hind basitarsus.

*Bombus pensylvanicus*  
American bumble bee **D**

### 2. Small size, round face



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

*Bombus terricola*  
yellowbanded bumble bee **D**

### Side view of head



*vagans sandersoni*

### Front view of head



*auricomus*

*pensylvanicus*

## Much of abdomen lacking hair, no pollen baskets, wide head (uncommon)

### 1. Black top of head



*Bombus ashtoni*  
Ashton's cuckoo bumble bee **D**



Side of thorax mostly yellow.

*Bombus citrinus*  
lemon cuckoo bumble bee



Side of thorax mostly dark.

*Bombus variabilis*  
Variable cuckoo bumble bee



Ab 4 yellow.

*Bombus insularis*  
indiscriminate cuckoo bumble bee



Ab 6 strongly curled under abdomen

*Bombus flavidus*  
Fernald cuckoo bumble bee

# Guide to Minnesota Bumble Bees: Males

This guide is only for males (13 antennal segments, 7 abdominal segments, mostly seen in late season, no pollen baskets, beards on their mandibles). First determine which section your bee is in, then go through numbered characters to find a match. See if your bee matches the description in the text as well as the color pattern. Color patterns can vary.

Bumble bees are depicted in relative size. Join the search for bumble bees with [www.bumblebeewatch.org](http://www.bumblebeewatch.org)

Ab = Abdominal band    Ant = Antennal segment    **C** Common    **E** Endangered    **D** Declining

## Abdominal segments 1-3 yellow, 4-7 black

### 1. Black spot in center of thorax

 <i>Bombus citrinus</i> lemon cuckoo bumble bee	<p>Not large eyes. Wide head.</p>	 <i>Bombus auricomus</i> black and gold bumble bee	<p>Large eyes.</p>
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### 2. No obvious spot on thorax

 <i>Bombus perplexus</i> confusing bumble bee	<p>Variable color patterns.</p>
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## Thorax with some yellow near wing base AND 3rd abdominal segment black or orange

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

 <i>Bombus bimaculatus</i> two-spotted bumble bee	<p>Ab 2 with yellow in middle, black on sides. Yellow often in a "W" shape. Eyes not large.</p>	 <i>Bombus griseocollis</i> brown-belted bumble bee	<p>Ab 2 with yellow in middle, bordered by rusty brown in a swooping shape. Large eyes.</p>
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### 2. 2nd Ab black

 <i>Bombus impatiens</i> common eastern bumble bee	<p>Light lemon yellow hairs on top of head and on thorax.</p>
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### 3. 3rd Ab orange

 <i>Bombus rufocinctus</i> red-belted bumble bee	<p>Eyes slightly enlarged. Color pattern variable.</p>
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### 4. 2nd Ab entirely yellow and Ab 3-6 black

 <i>Bombus vagans</i> half-black bumble bee	<p>Ant 3 is long. Black hair on thorax limited to central spot.</p>	 <i>Bombus sandersoni</i> Sanderson's bumble bee	<p>Ant 3 is short. Short hairs on back of Ant 2 and 3. Many black hairs on thorax.</p>	 <i>Bombus rufocinctus</i> red-belted bumble bee	<p>Eyes slightly enlarged. Round face.</p>
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### 5. 2nd Ab brown centrally

 <i>Bombus affinis</i> rusty patched bumble bee	<p>Center spot on thorax with sometimes faint V shaped extension back from middle.</p>
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### 6. Sides of thorax brown. Wide head.

 <i>Bombus variabilis</i> variable cuckoo bumble bee	<p>Ab 2 with yellow in middle, black on sides. Yellow often in a "W" shape. Top of head yellow.</p>
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## Thorax with black stripe between wings. Nearly all hairs near wing base are black.

### 1. Ab 1-4 yellow

 <i>Bombus fervidus</i> yellow bumble bee	<p>Black on top and front of head. Sides of thorax yellow.</p>	 <i>Bombus borealis</i> boreal bumble bee	<p>Yellow on top and front of head. Sides of thorax with brown hairs. Ab 5 may be black.</p>	 <i>Bombus pennsylvanicus</i> American bumble bee
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### 2. Ab 2-3 orange

 <i>Bombus ternarius</i> tricolored bumble bee	<p>Common in northern MN.</p>	 <i>Bombus huntii</i> Hunt's bumble bee	<p>Far western MN</p>
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### 3. Ab 3 black

 <i>Bombus frigidus</i> frigid bumble bee	<p>Northern MN</p>
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## Rear half thorax is black

### 1. Ab 1 black

 <i>Bombus terricola</i> yellowbanded bumble bee	<p>Smaller and stouter than many other bumble bees. Fringe of yellow hairs near end of abdomen.</p>	 <i>Bombus insularis</i> indiscriminate cuckoo bumble bee	<p>Ab seg 1-3 black. Wide head. Uncommon.</p>
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### 2. Ab 1 yellow

 <i>Bombus bohemicus</i> Gypsy's cuckoo bumble bee	<p>Ab seg 1 yellow. Wide head. Rare.</p>	 <i>Bombus flavidus</i> Fernalde's cuckoo bumble bee	<p>Ab seg 6-7 with orange. Variable color. Often with yellow on rear half of thorax. Sometimes Ab 2-3 yellow. Wide head.</p>
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