

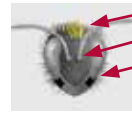
Guide to Minnesota Bumble Bees: Females



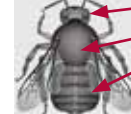
This guide is only for females (12 antennal segments, 6 abdominal segments, most have pollen baskets, no beards on their mandibles). First determine which section your bee is in, then go through numbered characters to find a match. See if your bee matches the description in the text as well as the color pattern. Color patterns can vary. Bumble bees are depicted in relative size. Ab = abdominal segment **C** Common **D** Declining: populations dropping

E Endangered: at risk of extinction **U** Uncommon: few records in MN

Population status from IUCN and MN records as of 2020



Top of head
Front of face
Cheek



Three small eyes
Thorax
Abdomen

Many 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**



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

Bombus affinis
rusty patched bumble bee **E**



Variable color. Often Ab 3 yellow. Side of thorax usually dark.

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



Sometimes black hairs near wing base. More square cheek than vagans (see inset).

Bombus sandersoni
Sanderson's bumble bee



Queen. Black on top of head. Round face.

Bombus affinis
rusty patched bumble bee **E**



Sides of thorax black. Infrequent.

Bombus nevadensis
Nevada bumble bee **U**

Side view of head



vagens sandersoni

Front view of head



auricomus *pensylvanicus*

Black stripe between wings. Few if any yellow hairs at wing base.

1. Yellow on Ab 1-4



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

Bombus fervidus
yellow bumble bee



Yellow on top & front of head. Sides of thorax with brown.

Bombus borealis
boreal bumble bee



Black extending back from center stripe on thorax. Black hairs on face & top of head.

Bombus ternarius
tricolored bumble bee **C**



Yellow hairs on face & top of head. Far west MN.

Bombus huntii
Hunt's bumble bee **U**



Variable. Cheek shorter. Always dark band on thorax with few yellow hairs near wing base. Can have intermixed red, yellow, & black hairs.

Bombus rufocinctus
red-belted bumblebee

2. Orange/red on all of Ab 2-3

3. Ab 1 & front edge of Ab 2 yellow. Ab 3 red or black. Ab 4-5 red, black, or yellow.

Black stripe between wings contd.

4. Orange/red on Ab 4-5



North-
ern
MN.

Bombus frigidus
frigid bumble bee **U**



Black on side of thorax. Southern MN.

Bombus fraternus
southern plains bumble bee **U**



Three small eyes lower on face (see inset). Often black on Ab 2. Short spine on top inner side of hind basitarsus.

Bombus auricomus
black and gold bumble bee



Yellow on middle edge of Ab 1. Long spine on top inner side of hind basitarsus.

Bombus pensylvanicus
American bumble bee **D**



Smaller & stouter. Fringe of yellow hairs near end of abdomen. Short cheek. Round face.

Bombus terricola
yellowbanded bumble bee **D**

Back half of thorax is predominantly black. Hairy abdomen.

1. Large size, long face

2. Small size, round face

Much of abdomen lacking hair, no pollen baskets, wide head. Uncommon at flowers.

1. Black top of head



Side of thorax mostly dark.

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



Side of thorax mostly yellow.

Bombus citrinus
lemon cuckoo bumble bee



Side of thorax mostly dark.

Bombus variabilis
Variable cuckoo bumble bee **E**



Ab 4 yellow.

Bombus insularis
indiscriminate cuckoo bumble bee



Ab 6 strongly curled under abdomen. Ab 1 sometimes yellow, Ab 4 sometimes white.

Bombus flavidus
Golden 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
 Ab = Abdominal segment Ant = Antennal segment **C** Common **E** Endangered **D** Declining **U** Uncommon


Abdominal segments 1-3 yellow, 4-7 with black or orange

Population status from IUCN and MN records as of 2020

1. Black spot in center of thorax

2. No obvious spot on thorax

 <p>Not large eyes. Wide head. Thorax with black extension back from center.</p> <p><i>Bombus citrinus</i> lemon cuckoo bumble bee</p>	  <p>Large eyes. Black on Ab 4-7. Hair on thorax varies, black in center or all yellow. Sometimes yellow on Ab 4.</p> <p><i>Bombus auricomus</i> black and gold bumble bee</p>	 <p>Large eyes. Orange on Ab 6-7.</p> <p><i>Bombus nevadensis</i> Nevada bumble bee U</p>
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 <p>Variable color patterns.</p> <p><i>Bombus perplexus</i> confusing bumble bee</p>


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


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

2. 2nd Ab black

3. 2nd Ab brown centrally




  <p>Ab 2 with yellow "W" shape in middle, black on sides. Eyes not large. Sometimes yellow intermixed with black on Ab.</p> <p><i>Bombus bimaculatus</i> two-spotted bumble bee C</p>	 <p>Ab 2 with yellow in middle, bordered by rusty brown in a swooping shape. Large eyes.</p> <p><i>Bombus griseocollis</i> brown-belted bumble bee C</p>
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 <p>Light lemon yellow hairs on top of head and on thorax.</p> <p><i>Bombus impatiens</i> common eastern bumble bee C</p>
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 <p>Center spot on thorax with sometimes faint V shaped extension back from middle.</p> <p><i>Bombus affinis</i> rusty patched bumble bee E</p>

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

5. Sides of thorax brown. Wide head.

 <p>Ant 3 is long. Black hair on thorax limited to central spot.</p> <p><i>Bombus vagans</i> half-black bumble bee</p>	 <p>Ant 3 is short. Short hairs on back of Ant 2 and 3. Many black hairs on thorax.</p> <p><i>Bombus sandersoni</i> Sanderson's bumble bee</p>	 <p>Large eyes.</p> <p><i>Bombus fraternus</i> southern plains bumble bee U</p>
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 <p>Ab 2 with yellow in middle, black on sides. Yellow often in a "W" shape. Top of head yellow.</p> <p><i>Bombus variabilis</i> variable cuckoo bumble bee E</p>



Black stripe between wings. Few if any yellow hairs at wing base.


1. Ab 1-4 yellow

2. Orange/red on all of Ab 2-3

3. Ab 3 black

 <p>Black on top & front of head. Sides of thorax yellow.</p> <p><i>Bombus fervidus</i> yellow bumble bee</p>	 <p>Yellow on top & front of head. Sides of thorax with brown hairs.</p> <p><i>Bombus borealis</i> boreal bumble bee</p>	 <p>Ab 7 sometimes black</p> <p><i>Bombus pensylvanicus</i> American bumble bee D</p>
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 <p>Common in northern MN.</p> <p><i>Bombus ternarius</i> tricolored bumble bee C</p>	 <p>Far western MN</p> <p><i>Bombus huntii</i> Hunt's bumble bee U</p>
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 <p>Northern MN</p> <p><i>Bombus frigidus</i> frigid bumble bee U</p>



Black stripe between wings contd.



Rear half of thorax black



4. Ab 1 & front edge of Ab 2 yellow. Ab 3 red or black. Ab 4-5 red, black, or yellow.

1. Ab 1 black

2. Ab 1 yellow

  <p>Eyes slightly enlarged. Few yellow hairs between wing bases. Few black or red hairs at edge of Ab 2. Color pattern variable.</p> <p><i>Bombus rufocinctus</i> red-belted bumble bee</p>

 <p>Smaller and stouter than many other bumble bees. Fringe of yellow hairs near end of abdomen.</p> <p><i>Bombus terricola</i> yellowbanded bumble bee D</p>	 <p>Ab 1-3 black. Wide head.</p> <p><i>Bombus insularis</i> indiscriminate cuckoo b.b.</p>
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 <p>Ab 1 yellow. Wide head. Side of thorax usually dark.</p> <p><i>Bombus ashtoni</i> Ashtons cuckoo b.b. E</p>	 <p>Ab 6-7 with orange. Variable color. Often with yellow on rear half of thorax. Sometimes Ab 2-3 yellow. Wide head.</p> <p><i>Bombus flavidus</i> Golden cuckoo bumble bee</p>
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