

CHEAT SHEET FOR BEE MORPHOGROUPS

HONEY BEES (*Apis mellifera*)

(Figure 1)

<p>SIZE RANGE: 12–15 mm/0.47–0.59"</p> <p>COLORS: </p> <p>KEY CHARACTERISTICS:</p> <ul style="list-style-type: none"> • Torpedo-shaped; fuzzy head and thorax; tri-tone striped abdomen • Moist pollen on hind legs 					
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BUMBLE BEES (*Bombus*)

(Figure 2)

<p>SIZE RANGE: 8–(15–)25 mm/0.31–(0.59–)0.98"</p> <p>COLORS: </p> <p>KEY CHARACTERISTICS:</p> <ul style="list-style-type: none"> • Robust; fuzzy all over, markings vary by species • Females carry moist pollen on hind legs • Workers & males are smaller than queens 					
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CHAP LEG BEES (*Anthophora, Melissodes, Peponapis, Svastra, others*)

(Figure 3)

<p>SIZE RANGE: 8–20 mm/0.31–0.79"</p> <p>COLORS: </p> <p>KEY CHARACTERISTICS:</p> <ul style="list-style-type: none"> • Robust; velvety all over; pale bands on abdomen • Females carry dry pollen on hind legs • Males are less hairy, often have longer antennae 					
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MEDIUM DARK BEES (*Andrena, Colletes, Halictus, others*)

(Figure 4)

<p>SIZE RANGE: 7–18 mm/0.28–0.71"</p> <p>COLORS: </p> <p>KEY CHARACTERISTICS:</p> <ul style="list-style-type: none"> • Narrow-robust; fuzzy head & thorax; some species have pale stripes on abdomen • Females carry dry pollen on hind legs and sometimes under thorax arm pits 					
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METALLIC GREEN BEES (*Agapostemon, Augochlora, Augochlorella, Augochloropsis*)

(Figure 5)

<p>SIZE RANGE: 9–11 mm/0.35–0.43"</p> <p>COLORS: </p> <p>KEY CHARACTERISTICS:</p> <ul style="list-style-type: none"> • Narrow; fuzzy head & thorax; striped abdomen or with pale hair bands • Females carry dry pollen on hind legs • Coloration varies—may be green all over, or have a light-and-dark striped abdomen 					
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TINY DARK BEES (*Ceratina, Hylaeus, Lasioglossum*)

(Figure 6)

<p>SIZE RANGE: 4–8 mm/0.16–0.31"</p> <p>COLORS: </p> <p>KEY CHARACTERISTICS:</p> <ul style="list-style-type: none"> • Narrow; sparse hair; faint or no abdominal stripes • Dry pollen on hind legs or in stomach • May have yellow or white markings on face, often metallic green or blue-green in bright light (also black, brown, or pale gold) 	<p>6–8 mm / 0.24–0.31" 5 mm / 0.2" 4–7 mm / 0.16–0.28"</p>				
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COLORS: White/light Yellow Amber Orange Red Brown Black Green† Blue-green† Blue† † Metallic

STRIPED HAIRY BELLY BEES (*Anthidium*, *Heriades*, *Hoplitis*, *Megachile*, *Osmia*)

(Figure 7)

<p>SIZE RANGE: 8–12 mm/0.31–0.47"</p> <p>COLORS: [W] [Y] [A] [O] [R] [B] [Bl] [G] [BG] [BL] [M]</p> <p>KEY CHARACTERISTICS:</p> <ul style="list-style-type: none"> • Very robust; mostly lightly fuzzy, some very fuzzy on thorax, pale hair stripes on abdomen • Dry pollen on belly (under abdomen) • When visiting flowers, females bees often elevate abdomen 		
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METALLIC HAIRY BELLY BEES (*Hoplitis*, *Osmia*)

(Figure 8)

<p>SIZE RANGE: 8–12 mm/0.31–0.47"</p> <p>COLORS: [W] [G] [BG] [BL] [M]</p> <p>KEY CHARACTERISTICS:</p> <ul style="list-style-type: none"> • Robust; lightly fuzzy on thorax, no stripes on abdomen • Dry pollen on belly • Among the first bees seen in early spring 		
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CUCKOO BEES (*Coelioxys*, *Epeolus*, *Nomada*, *Sphecodes*, *Triepeolus*, others)

(Figure 9)

<p>SIZE RANGE: 8–12 mm/0.31–0.47"</p> <p>COLORS: [W] [Y] [A] [O] [R] [B] [Bl] [G] [BG] [BL] [M]</p> <p>KEY CHARACTERISTICS:</p> <ul style="list-style-type: none"> • Small-large, very narrow; usually not hairy; wasp-like color patterns • Lack pollen-carrying structures—very narrow legs • Look similar to wasps; often seen flying low to the ground or on flowers 		
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COLORS: [W] White/light [Y] Yellow [A] Amber [O] Orange [R] Red [B] Brown [Bl] Black [G] Green† [BG] Blue-green† [BL] Blue† † Metallic

TABLE C1: KEY CHARACTERISTICS OF BEES, FLIES, AND WASPS

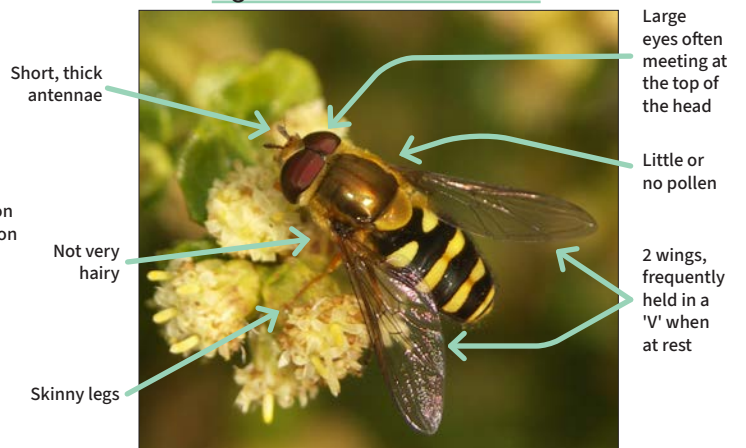
Distinguishing floral visitors such as butterflies, beetles, and moths from bees is fairly straightforward, but separating bees from wasps or flies can be more difficult. Here are the key characteristics for telling them apart:

	WINGS	BODY SHAPE	HAIRS ON BODY	BODY PATTERNS	POLLEN-CARRYING STRUCTURES	ANTENNAE
BEES	• 4 wings (2 pairs)	• Robust, some slender • Constricted waist	• Usually hairy • Often fuzzy appearance	• Usually hairs, sometimes on exoskeleton	• Female bees carry pollen on their hind legs or under abdomen	• Slender, long
WASPS	• 4 wings (2 pairs)	• Slender • Constricted waist	• Not hairy	• On exoskeleton	• None (some grains may be stuck to body)	• Slender, long
FLIES	• 2 wings (1 pair)	• Robust • No constricted waist	• Usually not very hairy	• On exoskeleton (rarely hairs)	• None (some grains may be stuck to body)	• Short, thick

Figure 10: KEY FEATURES OF WASPS



Figure 11: KEY FEATURES OF FLIES



*Please note that these illustrations are based off of national averages—individual bees or local populations may vary.

CREDITS: Content edited and adapted from *Citizen Science Monitoring Guide: Maritime Northwest Bees & Butterflies* and *Streamlined Bee Monitoring Protocol* by Jennifer Hopwood and Angela Laws of the Xerces Society. Photographs by David Cappaert CC BY-NC 3.0 (Figures 1, 10); Rollin Coville (Figures 2, 3, 5, 6, 7); Jacy Lucier (Figures 4, 9); and the Xerces Society / Mace Vaughan (Figures 8, 11). Bee group icons by the Xerces Society / Sara Morris. See Additional Acknowledgments on page 58 in the *Citizen Science Monitoring Guide: Maritime Northwest Bees & Butterflies* for more details.