

Field identification of *Echinacea* visitors

(* Indicates particularly common)

Unless otherwise noted, pictures by S. Pimm

BEES (4-wings, biting mouthparts, pollen-collecting hairs, flight often fast and erratic)

Family Halictidae *

- Metallic or black, w/ little hair on thorax. Abdomens of females fairly round w/ pointed ends (males more slender). Often seen methodically working every anther.
- *Augochlorella* *: Small (7mm), entirely bright metallic green.
- *Agapostemon* *: Mid-sized (11mm), head and thorax bright metallic green. Most common species, *Agapostemon virescens*, has dark abdomen w/ pale hair bands. Less common species entirely green and may be difficult to distinguish from *Augochlorella* in the field—however, they tend to be larger and slightly more bluish in color than *Augochlorella*, with faint whitish hairs on upper portions of abdominal segments.
- *Halictus*: Small to mid-sized (7-11 mm), typically black, or dull metallic green (*H. confusus*). Heads may appear fairly large relative to body. Distinct bands of pale hair on lower edges of first four abdominal segments, when apparent, can be used to distinguish *Halictus* from *Lasioglossum*. *H. confusus*, while similar in color to many species of *L. (Dialictus)*, can usually be distinguished from the latter by size and abdominal banding pattern.
- *Lasioglossum (s. str.)*: Mid-sized (8-10 mm), shiny or dull black, pale hairs on upper portions of first 2-3 abdominal segments sometimes apparent, but usually at least partially hidden.
- *L. (Dialictus)* *: Small to very small (4-7 mm), relatively slender. Dull metallic blue, green or dark gold thorax, abdomen dark brown w/ or w/o metallic sheen and often w/ pale hairs covering lower segments. Several species in our area.
- *L. (Evylaeus)*: Small (6 mm), entirely black, shiny abdomen with no apparent bands of pale hair. Very difficult to distinguish from *H. (Pterosarus)* in field, although wings somewhat smokier and abdomen tends to appear more rounded.



Family Andrenidae *

- *Heterosarus (Pterosarus) **: Small (6 mm), black, with clear wings. Males w/ yellow patch on face, and yellow markings on legs. Occasionally observed mating on *Echinacea* heads, and multiple males may be seen gathering around a pollen-collecting female. Abdomen tends to appear longer and more slender than in *Evylaeus*, sometimes curving upwards at the end.
- *Andrena*: Mid-sized (7-13 mm). Dark brown or black. Moderately hairy thorax. Wings sometimes smoky. Females w/ long pollen-collecting hairs on back edge of thorax, and thick bands of short hair lining depressions between eyes and antennae (may require scope to see). Larger species may be difficult to distinguish from *Melissodes* in field, though generally appear more slender than the latter, with proportionally larger heads. Males may have yellow patch on face as in *Melissodes*, but antennae not elongated.



Family Anthophoridae * (sometimes included in Apidae)

- *Melissodes **: Mid-sized to fairly large (10-15 mm). Densely hairy thorax (hairs may be whitish, yellow or orange-brown), often (but not always) have pale bands of hair across middle portions of dark abdominal segments. Upper part of abdomen broader than more slender-waisted halictids and andrenids. Males smaller, w/ yellow patch on face and long antennae, often found resting on or under *Echinacea* heads.
- *Ceratina**: Small (6-8 mm), nearly hairless, dark metallic blue, sometimes appearing black or slightly greenish. Round face w/ white mark on lower half. Abdomen slender and blunt, appearing ridged on upper surface, w/ small point on tip. Pollen-collecting hairs on hind legs relatively reduced. Larger than most *Dialictus*.



Family Apidae

- *Apis mellifera* (honeybee): Mid-sized (12 mm). Orange and black stripes on surface of abdomen, last large segment of hind legs wide and flat. Hairy thorax. Fairly large head, long and pointed face w/ hairy eyes. Occasionally found resting on *Echinacea*.
- *Bombus* (bumblebee): Large (11-16 mm) and very hairy. Black and yellow hairs covering upper surface of thorax, abdomen, and top of head. Rarely found on *Echinacea*.



Family Megachilidae

- *Megachile*: Large (13-14 mm), robust, hairy bees. Large heads, jaws. Long yellow hairs on forearms (males) or underside of abdomen (females). Abdomens of females may appear heart-shaped and tend to curl upwards slightly at end. Eyes of males may appear greenish in life.
- *Heriades*: Small (7 mm), black. Squarish head w/ a line of short white hair just inside each eye. Thorax nearly hairless, covered in coarse punctures. Slender blunt abdomen, turned under at end, w/ thin white bands of hair on lower edges of segments (upper surface). Females have yellowish pollen-collecting hairs on underside of abdomen. Wings dark and smoky.
- *Coelioxys*: Fairly large (12-13 mm), black, sometimes w/ pale bands on abdomen. Tip of abdomen long and tapered, sometimes w/ spines visible. Cleptoparasites of *Megachile*; lacking pollen-collecting hairs.



FLIES (2 wings, sucking mouthparts, short antennae in tuft between eyes)

Family Syrphidae (hoverflies) *

- Bee or wasp mimics. Large head w/ often reddish eyes, shiny thorax. Abdomen w/ yellow and black markings—somewhat transparent, color varies w/ the type of pollen they have been eating. Often found hovering above vegetation or sucking pollen from anthers.



Family Bombidae (beeflies)

- Very hairy, pale brown. Head relatively small, w/ elongated mouthparts. Wings dark and smoky.



BEETLES (Hard wing coverings, often linger on heads casually eating pollen)

- *Chauliognathus pennsylvanica* (Pennsylvania leatherback): Straight, slender wing coverings (elytra), mostly yellow w/ black head and legs and black patches on elytra and thorax. Long segmented antennae, long legs.
- *Diabrotica*. Small. Generally all black (sometimes with reddish thorax), shiny. Wing coverings long, fairly slender but rounded at end. Relatively long antennae. Less commonly observed species has the same shape but is greenish-white in coloration.

