

FAMILY: Megachilidae (leafcutting bees)

DESCRIPTION: Moderate-sized, stout-bodied bees. Unlike most bees, have two submarginal cells, each approximately the same length.

DIVERSITY: Several thousand species worldwide.

ECOLOGY: Leafcutting bees are usually solitary, but occasionally parasitic. Nests are usually made in natural cavities (such as beetle grub tunnels) such as in wood, but also may be made inside pithy cavities in plant stems, or in the ground. Some species construct nests in the open on stems, leaves, or rocks.

Leafcutting bees get their name from their habit of cutting leaves to line their nests. They are the only bees that divide their nests into cells using materials the bees bring in from outside the nest. You may find leaves from which leafcutting bees have very neatly cut pieces for their nests. In some cases they chew the leaves into pulp before using it. Some species use other materials, such as mud, resin, or plant hairs, and may add pebbles to the mix.



Some species collect pollen; in contrast to most bees which have pollen baskets on their legs, the females of these species carry the pollen in a scopa on the underside of the metasoma.

COLLECTION METHODS: Beating vegetation or by hand in nets.

FAMILY: Pompilidae (spider wasps)

DESCRIPTION: Slender wasps with long slender legs. Pronotum somewhat quadrate in lateral view. Very diagnostic transverse sulcus across the mesopleuron. Most are dark but some are brightly colored, with smoky or yellowish wings. Although some ichneumonid and scoliid wasps mimic them in this respect, spider wasps can often be recognized due to their habit of flitting their wings nervously as they walk along the ground.

DIVERSITY: About 4,200 species worldwide.

RANGE: Worldwide but mostly in the tropics.

HABITAT: Adults are usually seen on flowers or walking around on the ground hunting prey.

ECOLOGY: Spider wasps get their name because they paralyze spiders with their sting and lay eggs on them. The spiders are placed in chambers underground, in rock crevices, or in rotten wood. Sometimes the spider is left



in its own burrow, the egg may be laid on an active, unparalyzed spider, or the eggs may be laid on spiders that have already been stung by another wasp. The eggs hatch and the larvae feed on live, paralyzed spiders until it is time to pupate. Females sting painfully.

COLLECTION METHODS: By hand in nets, with attention paid to not getting stung.

References:

Borror, Donald J., Charles A. Triplehorn, and Norman F. Johnson. *An Introduction to the Study of Insects*. 6th ed. Fort Worth, Texas: Harcourt Brace College Publishers, 1989. pp. 730-731.

Goulet, Henri, and John T. Huber. *Hymenoptera of the World: An Identification Guide to Families*. Ottawa, Ontario: Research Branch, Agriculture Canada, 1993. p. 320