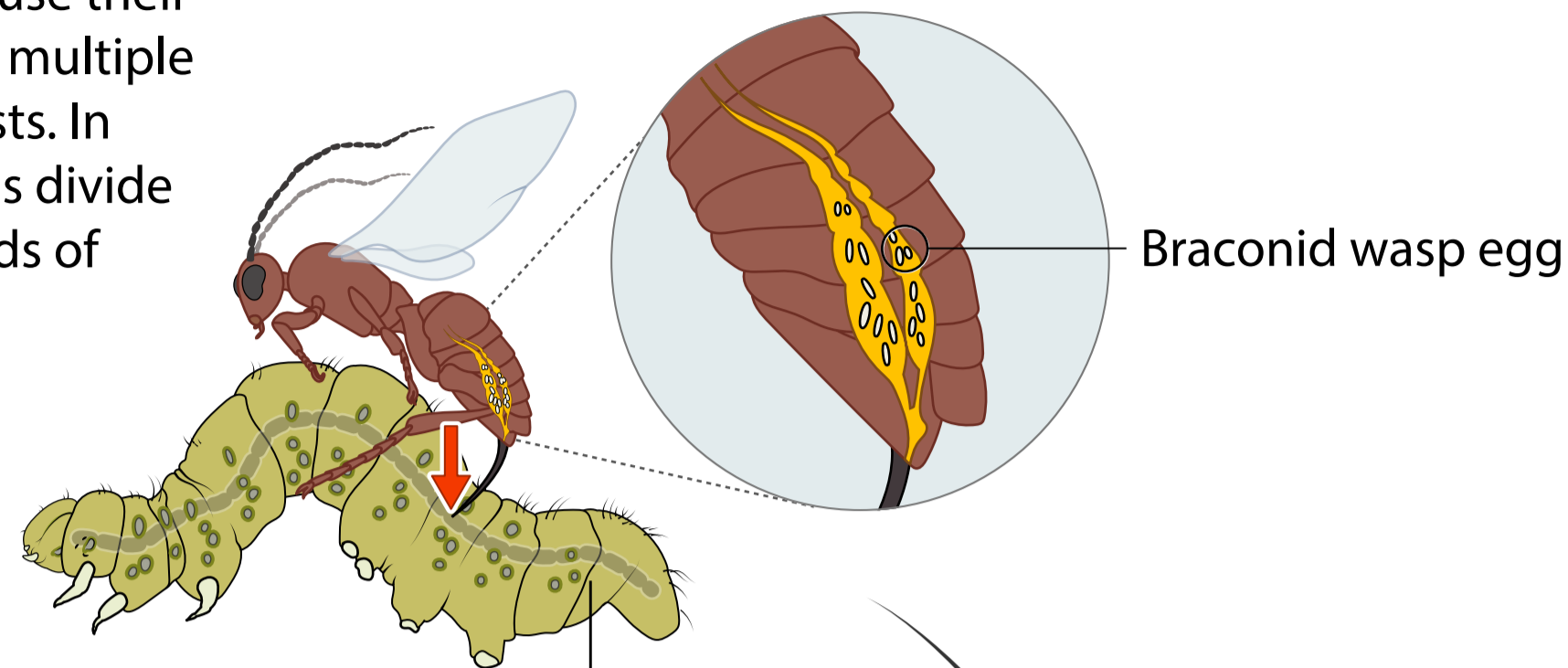


Life Cycle of Braconid Wasps

1 Egg Stage

Female braconid wasps use their long ovipositor to inject multiple eggs on or into their hosts. In some species, these eggs divide themselves into hundreds of identical copies.



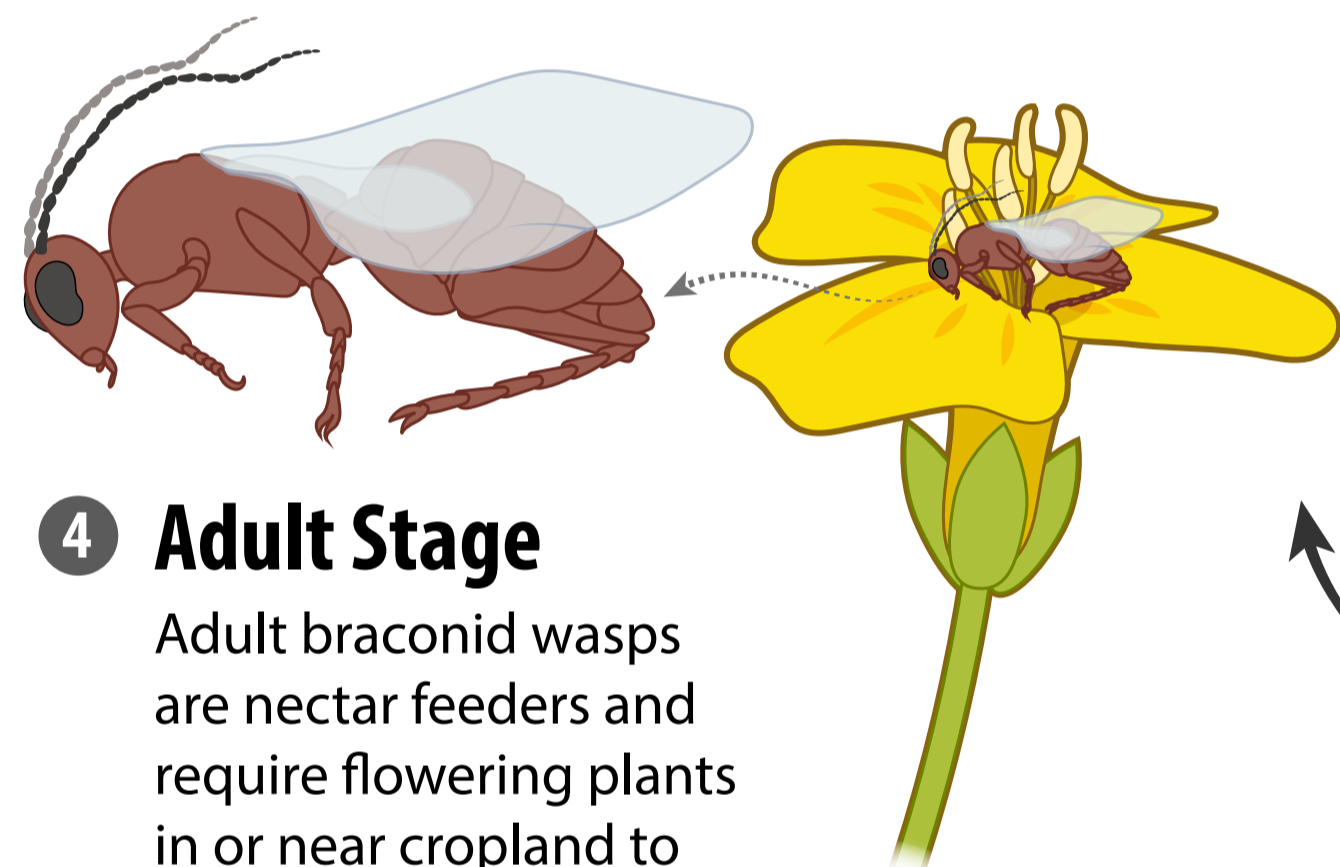
Braconid wasp egg

Common Host Species:

Alfalfa loopers, various cutworm species, and bertha armyworms.

Fun Fact:

The males make a high amplitude 'boing' noise to attract the females.

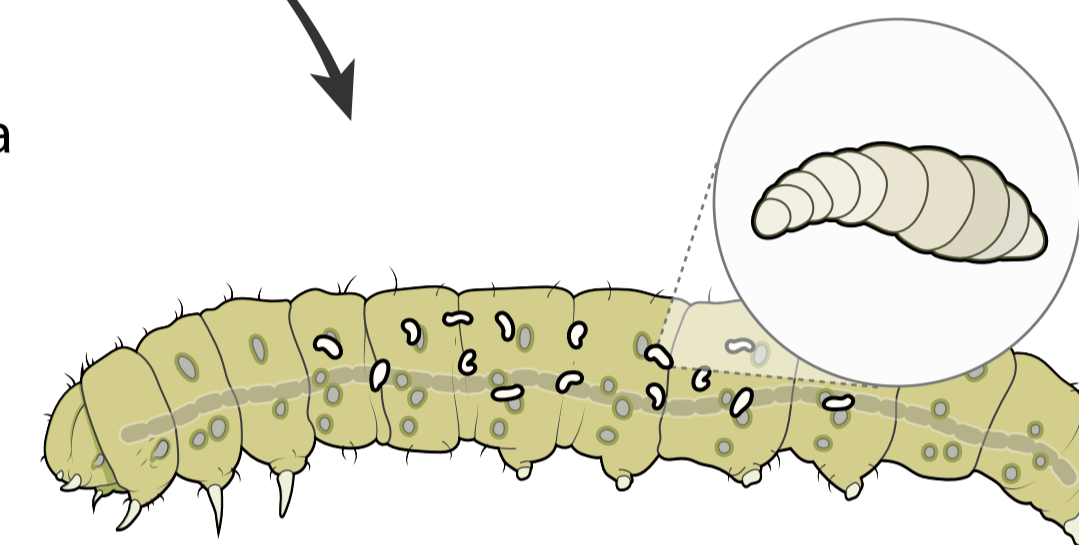


4 Adult Stage

Adult braconid wasps are nectar feeders and require flowering plants in or near cropland to complete their life cycle.

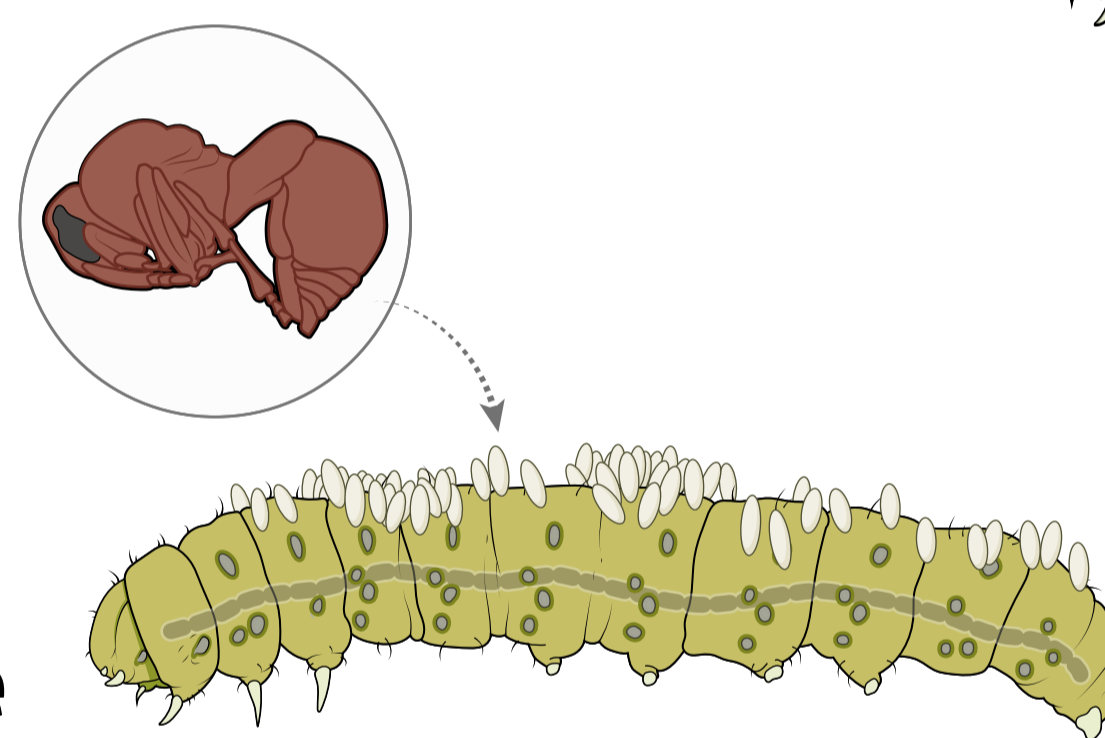
2 Larva Stage

Eggs hatch, and larvae develop inside or outside the host body. They feed internally (ex. inside the cutworm) while their host grows, then burst out of the host's body. Mature larva are 2-16 mm long with maggot-like appearance. They are white in colour and wingless, with visible mandibles.



3 Pupa Stage

Larvae begin to pupate on or beside the body in white silken cocoons. Some species envelop the entire worm in a silk shroud.



Biology

- The development from egg to adult takes an average of 10-28 days.
- Adult braconid wasps feed on nectar from flowering plants near cropland. Ideal plants can be found in natural or semi-natural uncultivated areas such as fencerows, shelterbelts, grassed strips, wetlands, and road allowances.



Management

- There must be some background population of host species for the braconid wasp to maintain an effective, responsive population.
- The host insect usually feeds until the end of its larval stage, or continues on to pupate, before it dies. Therefore, beneficial insects, such as braconid wasps, are one tool in an integrated management plan.
- Parasitoid species are highly susceptible to insecticides, so adherence to economic thresholds for pest species is paramount – prophylactic applications kill proportionally more beneficial insects than pests.



Scouting

- Best scouting times for braconid wasps are at the early flowering stage of the canola crop. Use a sweep net to capture and identify adults, both in and around the crop. The adults are typically 2-15 mm long.