



Dalotia coriaria (formerly *Atheta coriaria*)

Shore Fly & Soil Pest Predator

DESCRIPTION:

Dalotia is a native species of soil-dwelling rove beetle, which feeds on small insects and mites. Both adults and larvae are active, aggressive predators and are attracted to decomposing plant or animal material and algae where their hosts are found.

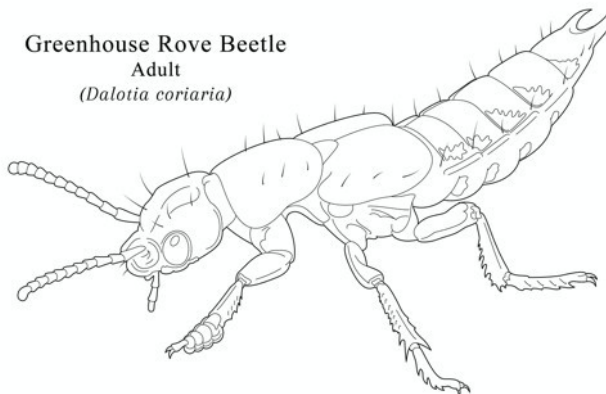
They are light to dark brown in color; adults are 1/8-inch (3-4mm) long and are slender with short wing covers. Rove beetles have an interesting habit of curving the abdomen upwards like scorpions and can run or fly when disturbed. Since they actively fly, they rapidly colonize the release area.

TARGET PEST:

Shore flies (Ephydriidae)

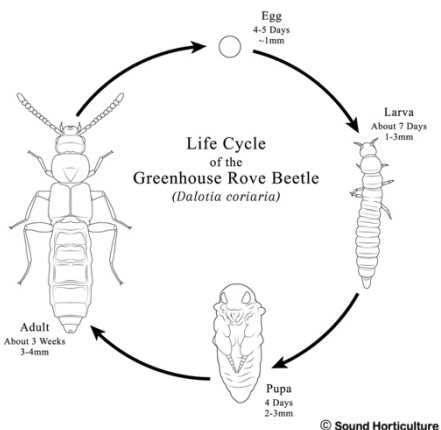
Fungus gnats (Sciaridae)

Western flower thrips (*Frankliniella*)



Greenhouse Rove Beetle
Adult
(*Dalotia coriaria*)

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LIFE CYCLE:

The complete life cycle takes 21 days at 70°F (21°C). The sex ratio is equal, 1:1 females to males. Eggs hatch in 3-4 days into young larval stages. Larvae resemble adults, and pupal chambers are constructed out of silk. Each *Dalotia* consumes 10-20 prey per day. Adults live for 21 days and are non-diapausing under greenhouse conditions. Populations will naturally fluctuate throughout the growing season depending on host numbers.

USE IN BIOLOGICAL CONTROL:

Dalotia are used primarily to assist in the control of shore flies and fungus gnats and other small arthropods in the soil or planting media. (For information on fungus gnats, see Fungus Gnats.) They also help control soil stages of thrips and feed on most other small soil organisms such as moth flies, springtails and root mealybugs.

They have been used successfully in vegetable, bedding and potted plant production and seedling and cutting propagation. They adapt well to the various growth media (including rock wool and coconut fiber) and capillary mats used in plant production, but do not survive freezing or flooding conditions.

Note: *Dalotia* has a longer life cycle and takes longer to establish than the *Stratiolaelaps* predatory mite (formerly called *Hypoaspis miles*), so *Dalotia* should be used along with *Stratiolaelaps* for best results.

For more information, Please contact **Sound Horticulture**

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MONITORING TIPS:

Active adults and larvae may be seen by disturbing the top inch (1-2 cm) of soil or growth media and watching for movement. Freshly cut potato can be used for attracting and monitoring both *Dalotia* and fungus gnat larvae by placing pieces of potato, cut surface down on the soil or growing media in different areas of the greenhouse.

PRODUCT INFORMATION:

Dalotia is available in bottles of 100- 1000 adults in peat/vermiculite media. To check the product for live *Dalotia*, inspect on arrival. The adults may be seen, moving in the media. They are active fliers so do not open containers until within the release area. The predators should be applied as soon as received. If necessary, containers can be held at 50°F (10°C) for up to 7 days.

INTRODUCTION RATES:

Dalotia is most effective when applications are started before fungus gnat populations become well established, or while numbers are still low (below 10/trap/week). One application of *Dalotia* per crop cycle is usually sufficient if started early in the season.

- Soil culture, sawdust bag or rockwool culture –

Apply 0.1 per square foot. Release throughout the greenhouse at a rate of 100-1000/greenhouse weekly or biweekly (depending on greenhouse history of shore flies and fungus gnats) until a total of 1/10ft² (m²) of total greenhouse area are released. To ensure reproduction and mating, release 50-100 in one spot in the center of the release area. Be sure to treat areas with wet, exposed areas of soil, where fungus gnats and shore flies are likely to breed.

FOR BEST RESULTS:

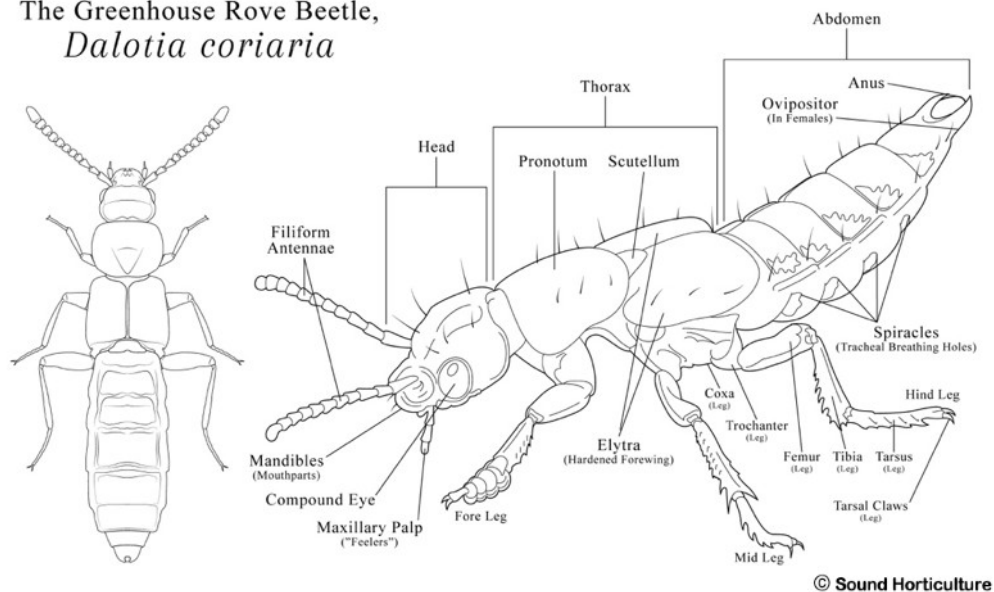
Maintain large and healthy populations of *Dalotia* by constructing a DIY Breeder Box out of a Styrofoam box roughly 12" x 12" or 8" x 16". Contact Sound Horticulture for more information or to our website for a step-by-step guide.

USING CHEMICALS:

For information on expected effects of pesticides, contact Sound Horticulture. It is likely that foliar sprays are less harmful than soil drenches, depending upon how much pesticide reaches the soil surface. Microbial pesticides, such as Gnatrol WDG® (BTI) will not harm *Dalotia*.

**Content Courtesy of
Applied Bio-nomics Ltd**

An Anatomical Guide To:
The Greenhouse Rove Beetle,
Dalotia coriaria



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