

## Beneficial Species Profile



**Photo credit:** (Left & Right) University of Wisconsin-Extension (Photographer Unknown)

**Common Name:** Alderfly

**Scientific Name:** *Sialis spp.*

**Order and Family:** Neuroptera, Sialidae

**Size and Appearance:**

|                             | Length (mm) | Appearance  |
|-----------------------------|-------------|---|
| <b>Egg</b>                  | 0.60-0.68   | Eggs are usually found on riparian vegetation that is overhanging water. Eggs are dark brown in color, cylindrical, rounded, and contain a small minute opening on the tip of a knoblike structure. Egg masses contain approximately 300-700 eggs depending on species.   |
| <b>Larva/Nymph</b>          | 10-20mm     | The aquatic larvae are flat bodied and cryptic in color. Larvae have paired lateral filaments (tracheal gills) present on abdominal segment 1-7. Segment ten also contains a long tapered median filament that is covered with long hair-like sensilla, which are used to detect external stimuli. The larvae have stout mouth pincers.   |
| <b>Adult</b>                | 10-25 mm    | The hindwings are broader at the base than the front wings. Wings are held roof-like over the abdomen and are usually smoky in color. The antennae are long and beadlike. The adults do resemble dobsonflies and fishflies; however, they are smaller, soft-bodied and lack simple eyes (ocelli). The fourth tarsal segment is dilated and deeply bilobed. The wings of the alderfly are often darker in color than the wings of dobsonflies and fishflies. |
| <b>Pupa (if applicable)</b> |             | Alderfly pupae are exarate, meaning that the developing wings, legs, antennae and mouthparts are attached only at the base end and do not develop in a cocoon. They develop in a chamber dug in the soil and wet litter along the shoreline.  |

**Type of feeder (Chewing, sucking, etc.):** Larvae have chewing mouthparts, and the adults do not have functioning mouthparts.

**Host/s:** The larvae are non-selective predators that feed on insect larvae, annelid worms, crustaceans, and mollusks. Larvae are also considered scavengers that feed on dead invertebrates. Cannibalism can occur if population density in an area is high. Adult alderflies do not feed.

**Description of Benefits (predator, parasitoid, pollinator):** All stages play an important role in the environmental food web. The aquatic larvae have an important ecological role in freshwater habitats as predators, scavengers, and food source for many other aquatic and terrestrial predators. The larvae are also considered an important part of biological surveys aimed at monitoring the freshwater streams, rivers, and lakes.

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