



# Elongate Hemlock Scale

WISCONSIN DEPARTMENT OF AGRICULTURE,  
TRADE AND CONSUMER PROTECTION

**Scientific Name** Elongate Hemlock Scale (EHS), *Fiorinia externa* (Order Hemiptera: Family Diaspididae)

**Native Range** Japan (first observed in Queens, NY in 1908)

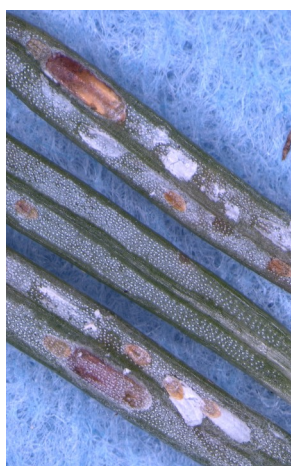
**Introduced Range**

- EHS is established in the District of Columbia, and the states of Connecticut, Delaware, Georgia, Kentucky, Maine, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, and West Virginia. EHS has NEVER been found in Wisconsin, although it has been intercepted numerous times on hemlock nursery stock, cut fir trees and fir décor.

**Host Range**

- In its introduced range, EHS is a pest of eastern and Carolina hemlock, balsam and Fraser fir Christmas trees (live scales can live on cut material for several weeks), Blue atlas cedar, blue spruce, and mugo pine trees.
- Elongate hemlock scale is known to develop and reproduce on 43 species, representing 7 genera of native and exotic conifers, including 14 species that are native to the United States.

## Feeding Habits / Damage



Renee Pinski, WDATCP

- Adult female EHS are soft-bodied, amber, legless, and wingless. Females are enclosed under brown, 2 mm long, waxy scale coverings, with up to 20 lemon colored eggs. Females and nymphs feed on the undersides of needles, using their piercing sucking mouthparts to remove nutrients from mesophyll cells (not vascular tissue).
- Adult EHS males are enclosed under white, 1.5 mm oval scale coverings. Male EHS have wings, but they are weak fliers. They only travel to mate, as they do not feed.
- Crawlers are yellow first-stage nymphs with legs that emerge from May—September. This mobile stage can start new infestations. Second-stage nymphs are immobile and settle under scale covers to feed.
- Scale feeding can result in needle yellowing, and tends to start on lower branches. Severe infestations can result in premature needle drop, branch dieback, and tree mortality, especially if combined with other pests or drought stress.
- EHS can have multiple overlapping generations per year, with crawlers emerging throughout the season.
- Protective, hard scale coverings, feeding location, and continuous crawler emergence makes EHS hard to control with pesticides. Nitrogen fertilization increases EHS levels.

**Dispersal** Wind, birds, and squirrels can spread EHS crawlers short distances. Human movement of infested nursery stock and other plant material can spread EHS to new areas.

## Contact Us / For More Information

Call the Pest Hotline at 1-866-440-7523 to report suspected EHS  
[DATCPestHotline@wi.gov](mailto:DATCPestHotline@wi.gov)  
[https://datcp.wi.gov/Pages/Programs\\_Services/EHS.aspx](https://datcp.wi.gov/Pages/Programs_Services/EHS.aspx)