

Gardening Basics

Southeast Asian Hammerhead Flatworm

The Southeast Asian Hammerhead Flatworm, also known as the Arrowhead Flatworm, is an unusual creature originating from southeast Asia. It belongs to one of the most primitive animal groups, the Phylum Platyhelminthes (flatworms). It is a “planarian” which is defined as “a free-living flatworm which has a three-branched intestine and a tubular pharynx, typically located halfway down the body”. There are both water and land planarians with the Southeast Asian Hammerhead Flatworm commonly known as a land or terrestrial flatworm.



Arun T.P., Bugwood.org

Quick Facts

- Most common species in Texas is the *Bipalium kewense*.
- Has a flattened head, sometimes half-moon or arrowhead-shaped, has distinct longitudinal stripes, is up to 10 inches long, is grey or brown, and slimy.
- Reproduces primarily by fragmentation but also lays eggs.
- Found in dark, cool, moist areas such as under rocks, logs, shrubs, and the soil's surface after a rain. Greenhouses are a favorite habitat.
- Considered both beneficial and predatory. Beneficially, they feed on slugs and other harmful insect larvae but also prey on earthworms. They are cannibalistic when food sources are scarce.
- Move around and feed at night.

Reported Locations

Terrestrial flatworms are found in over 50 countries and were discovered in the U.S. more than 100 years ago. Their natural habitats include hot humid environments in California, the southeastern states, and Texas. They have been found from Orange to Uvalde, numerous Gulf Coastal counties, and the DFW area over through East Texas and are spread most often by the landscape, nursery, and mulch industries.

Reporting is inconsistent in Texas, so the Texas Invasive Species Institute is collecting data in Texas using reports from citizens. To help in this effort, take a picture of the flatworm, document the location coordinates, and send in an email to invasives@shsu.edu

Impact on Gardeners

Most often, they are considered a nuisance in the U.S. and typically do not cause significant destruction of the earthworm population for home gardeners. Flatworms do not eat plants, and as noted earlier, can be considered beneficial predators of slugs and harmful insect larvae.

Management

There are no known control measures for Hammerhead Flatworms. As a preventative measure, the soil of any new potted plants should be carefully checked for them and should not be combined with compost, garden soil, or other potting soil if found. Hammerhead Flatworms secrete a neurotoxin to disable their prey. This neurotoxin can be irritating to the skin if touched or if pets eat them. Protect your hands with gloves or use a paper towel or stick to pick up the flatworm. Drop it into a zipper-lock bag with salt or vinegar, seal the bag and discard it in the trash. Wash your hands

thoroughly after handling them. They can be sprayed with citrus oil, e.g., orange oil, a combination of citrus oil and vinegar, or just vinegar, or sprinkled with salt. Resist the temptation to chop up the flatworm and leave it in the garden as this will result in it reproducing from the segments in about 10 days.

So far, earthworm populations in Texas have not been decimated by these unusual creatures. Based on anecdotal evidence and the lack of consistent reporting in Texas, the Hammerhead Flatworm does not appear to be a real risk at this time for the home gardener, but it is always good to be educated about any potential harm to the precious earthworms in our gardens.

Source:

“Land Planarians”, Insects in the City, Texas A&M AgriLife Extension:
<https://citybugs.tamu.edu/factsheets/landscape/others/ent-1004/>

Texas Invasive Species Institute, hosted by Sam Houston State University: <http://www.tsusinvasives.org/>