Rutherford County
FROM THE GROUND UP
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Unwelcome Visitors: What to Know About Hammerhead Worms

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If you've ever turned over a rock or stepped into the garden early in the morning and noticed a long, flat worm with a wide, shovel-like head, you may have encountered one of the stranger invasive species in our region, the hammerhead worm. Though they may look like something out of a science fiction movie, hammerhead worms are very real and increasingly showing up in home gardens across Tennessee, including right here in Rutherford County.

Hammerhead worms, also known as land planarians, belong to the genus Bipalium and are native to Southeast Asia. These terrestrial flatworms are easy to identify thanks to their unique appearance. Most species grow between 4 and 8 inches in length, though some can reach lengths of 12 inches or more. Their bodies are flat, ribbon-like, and often brown or gray with distinctive stripes or mottling running down their backs. The characteristic "hammer" or crescent-shaped head gives the worm its name and makes it stand out from the many harmless worms and slugs that live in the soil.
These worms are most active in moist environments, particularly after rainfall or in heavily irrigated areas. You're likely to find them under rocks, logs, landscape fabric, or even crawling across patios or sidewalks during the early morning or evening hours.

While hammerhead worms may seem like harmless oddities, they can pose ecological problems in your landscape, specifically due to what they eat. Hammerhead worms are voracious predators of earthworms, which play a vital role in maintaining healthy soil. Earthworms aerate the soil, enhance water infiltration, and break down organic material, all of which benefit plant growth. By preying on earthworms, hammerhead worms have the potential to disrupt the natural balance of your garden's soil ecosystem. Hammerhead worms subdue their prey using a potent neurotoxin, then secrete digestive enzymes to liquefy the earthworm's tissues for consumption. Because of their appetite and ability to regenerate from body fragments, hammerhead worms can establish persistent populations if left unchecked. From a human health standpoint, hammerhead worms are not dangerous in the way that some garden pests can be, but they do produce a mucus that can irritate the skin. This mucus contains low levels of tetrodotoxin, the same toxin found in pufferfish. While the amount is too small to be considered dangerous to humans or pets in typical garden encounters, it is still advised to avoid handling these worms with bare hands.

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Hammerhead worms were likely introduced to the United States through the international movement of plants and soil. Once in a new area, they can thrive in humid, shaded environments, especially those with high soil moisture, such as mulched garden beds or wooded edges. Their spread is often accidental and tied to horticultural activities, as they can hitch a ride in potted plants, mulch, or soil moved from one location to another. In Tennessee, reports of hammerhead worms have increased in recent years. Warmer winters, increased humidity, and human-assisted transport have all contributed to their growing presence in gardens, nurseries, and even greenhouses.

If you come across a hammerhead worm, do not attempt to kill it by cutting it in half. Like many flatworms, hammerhead worms have remarkable regenerative abilities. In fact, each piece can grow into a new worm, turning one problem into many. Instead, here are a few safe and effective ways to remove them:

- Salt or Vinegar: Sprinkling table salt or spraying vinegar directly onto the worm is an effective way to kill it. Be careful not to spill these substances onto garden soil or plants, as they can damage beneficial organisms or vegetation.
- Citrus Oil Products: Some gardeners have also reported success using citrus oil-based products or natural insecticides formulated with orange oil.
- Seal and Dispose: Once the worm is dead, use gloves or a tool to pick it up, place it in a sealed plastic bag, and dispose of it in the trash. Do not compost it, as it may survive or spread fragments that could regenerate.
- Drying Out: Hammerhead worms require moisture to survive. Keeping your garden areas well drained, limiting overwatering, and reducing excessive mulch buildup can help make your landscape less hospitable to them.
- Reduce Hiding Spots: Remove old boards, logs, and excessive debris from your yard where the worms can hide. Periodic garden cleanup not only limits hammerhead worm habitat but also discourages other unwanted pests like slugs and snails.

Because hammerhead worms are now fairly widespread and established in many areas of the southeastern U.S., there is no need to contact the UT Extension Office to report a sighting. We are aware of their presence in Rutherford County and surrounding areas. While we appreciate the public's curiosity and interest in invasive species, these worms are not currently part of a state-managed monitoring program that requires local reports. Instead of reporting, focus your efforts on controlling them in your own landscape using the methods listed above. Hammerhead worms are here, and while they can pose some ecological concerns, they do not represent an immediate threat to public health or property.

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It's easy to be alarmed when you encounter something strange and unfamiliar in your yard, but hammerhead worms, while unpleasant, are manageable. Gardeners should remain watchful and proactive but not overly concerned. As with many invasive species, education and vigilance are the first steps toward effective control.

For questions or comments, please feel free to reach me at the UT/TSU Rutherford County Extension office. Our main office line is 615-898-7710 and my email is jski@utk.edu. Additionally, please check us out on the web at Rutherford.tennessee.edu to learn more about upcoming classes and all other Extension programming activities that we offer.
Happy Gardening!

Photo: National Invasive Species Information Center