

# What's Growing On?

## BASTROP COUNTY MASTER GARDENER ASSOCIATION

November 2023

### Tarantulas

By Wizzie Brown



Tarantulas, also known as baboon spiders in Africa or hairy spiders in South America, are the largest spiders in the world. They can be found on every continent except Antarctica. Tarantulas have two body regions, eight legs, and hairy bodies. Tarantulas that are found in North and South America have hairs used in defense. These tarantulas use their legs to flick hairs off their abdomen and into the face of predators. Hairs cause irritation to the eyes and mucous membranes. Tarantulas can be attacked by birds, lizards, snakes, and tarantula hawk wasps.

Tarantulas are nocturnal predators and feed on insects, other spiders, small lizards, frogs, and snakes. When prey is captured, it is then bitten with the spider's fangs and injected with venom with digestive enzymes that kills and liquefies the prey. Once prey is soupy, the tarantula sucks up juices through their fangs. While tarantulas are capable of biting humans, their venom does not react with our body chemistry like widow or recluse spiders. Tarantula bites are comparable to a bee sting.

There are fifteen species of tarantulas in Texas and they create burrows in the ground, typically in well-drained soil. They use their webbing to line burrows which helps to shore up tunnels so they do not collapse. Webbing can also be used to create a molting mat which is laid down before the tarantula sheds its exoskeleton as well as used for handling prey. In other parts of the world, tarantulas live in trees and may use webbing to create a sling as a nest. Tarantulas are solitary, so there will only be one tarantula per burrow.

Tarantulas are arthropods, so they have an exoskeleton which requires them to molt numerous times throughout their life to grow. When ready to molt, which is controlled and signaled by hormones that only arthropods have, the tarantula lays down a silken molting mat, flips over on its back, and pops open the old exoskeleton along a weakened area called the ecdysial cleavage line. The spider must push its way out of the old exoskeleton by expanding and contracting its body to help wiggle its way out. Once the spider has emerged from the old exoskeleton, it stays in place on its back until the new exoskeleton hardens and then it will flip back over.

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Some in Texas may come across mass “migrations” of tarantulas. These are not true migrations as the tarantulas are not moving to live in a new area, but instead, are males out searching for females for mating.

While tarantulas may be disconcerting for people when they venture indoors, they really are not a pest and don't warrant control. The best thing to do is to keep tarantulas outside where they belong by sealing the home so the spiders cannot enter.

For more information or help with identification, contact Wizzie Brown, Texas AgriLife Extension Service Program Specialist at 512.854.9600.

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## Fall Vegetable Gardening Resource

**Texas A&M Fall Vegetable Guide** includes a list of plants that are frost tolerant and those needing protection. It also includes a list of recommended varieties plus care and culture practices.

<https://agrilifeextension.tamu.edu/browse/featured-solutions/gardening-landscaping/fall-vegetable-gardening-guide-for-texas/>

### New Website Features

Check out our website, which features project slideshows, a new photo gallery section, and an events calendar to check out upcoming activities. Find news articles and our newsletters. Thanks to Dave Posh for keeping the info timely for us <https://txmg.org/bastropcounty/>

## Volunteering

Master Gardeners volunteer in the community to teach others about horticulture. We follow the research-based recommendations of Texas A&M AgriLife Extension. Members who complete 50 hours of volunteer service in the year after training earn the designation “Texas Master Gardener.” We use our title only when engaged in Texas A&M AgriLife Extension activities.

# Improve Your Garden and Help Pollinators the Easy Way

By Howard Nemerov

The best help you can give beneficial insects this winter is to do nothing. Many of them use piles of leaves and twigs, plus stems of flowers and perennials for winter shelter and breeding next spring's generation. Since many beneficial insects consume insects that attack your flowers and vegetables, providing them a winter home means they'll be here next spring to "welcome" those pests!

According to Oregon State University: "*One of the most important things you can do to help overwintering pollinators is by doing nothing at all.*"<sup>1</sup>

Tyler Arboretum explains some biology behind why "doing nothing" benefits beneficial insects.

*Most insects undergo **diapause** as winter approaches. This is a term that describes a period of suspended development in an insect. It is characterized by cessation of growth and a reduction of metabolic activity.*<sup>2</sup>

In other words, cooler temperatures and longer nights make insects slow down and look for a place to hibernate. They're looking for brush piles, a thick layer of fallen leaves, or stems of frost-killed flowering plants.



Many butterflies spend their diapause as caterpillars or pupa (aka chrysalis), looking for **brush or leaf piles** to snuggle into for the winter. The Eastern Tiger Swallowtail is an example (left).

*After full-grown larvae have ceased feeding, they change to greenish-brown or chocolate-brown coloration and wander down tree trunks, usually onto the leaf litter... The pupa is the overwintering stage (right).*<sup>3</sup>



Bumble bees sometimes build nests in **brush piles**. If you have space to pile downed tree branches, these and other insects can overwinter there. Queen bumble bees mate in late summer and begin looking for a place to build a nest just beneath the soil surface. A layer of **fall leaves** provides extra insulation on cold nights.<sup>4</sup>



Small carpenter bees (genus *Ceratina*, left) "overwinter in excavated stems."<sup>5</sup> While the term "carpenter" may evoke a vision of bees drilling into your eaves and siding, small carpenter bees "excavate nests with their mandibles in the pith of broken or burned plant twigs and stems."<sup>6</sup> Leaving stems of annual and perennial plants until early spring encourages these tiny pollinators to make your garden home.

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Tufts University provides instructions on how to leave stems for native bees. You can trim frost-killed stems to neaten up the garden while still providing homes for over-wintering insects.<sup>7</sup>

Leaving leaves, stems, and branches pays dividends. Our winters are usually warm and moist enough that organic matter continues decomposing, releasing bound up nutrients and organic matter that rain-fall washes into the soil. ***You get free fertilizer and soil conditioning!***

**Winter weeds** provide food and shelter for beneficial insects like hover flies (aka syrphid flies). These tiny insects feed on “aphids, thrips, immature leafhoppers, and other small, soft-bodied plant pests” and are “one of the first beneficial insects to become active in the spring.”<sup>8</sup> Encouraging beneficials like these means less insect pressure on young tomato plants and spring flowers that will draw in even more pollinators. This in turn provides ongoing nectar for hard-working hover flies and encourages them to stay and reproduce an even larger population of plant protectors. Leaving winter weeds pays big dividends in spring!

Looking at the bigger picture, over-wintering insects in your garden benefits the entire ecosystem. I’ll leave you with these thoughts from Penn State Department of Entomology:

*If you have a goal of increasing biodiversity in your yard, ceasing to rake leaves is an easy and effective practice to adopt. Nurturing insect life under the leaves will support a wide variety of springtime plants and animals. Virtually all songbirds require insects, specifically caterpillars, to feed their young. Plants will grow in nutritious soil and receive pollination from butterflies and sphinx moths. You may even attract small amphibians such as toads and salamanders that live under moist leaves and eat insects.*<sup>9</sup>

## Endnotes

<sup>1</sup>Bruslind, Svea. “3 Ways to Help Pollinators During Winter.” Garden Ecology Lab, Oregon State University, January 6, 2022. Accessed October 28, 2023. <https://blogs.oregonstate.edu/gardenecologylab/2022/01/06/3-ways-to-help-pollinators-during-winter/>

<sup>2</sup>Heinbaugh, Nancy. “Overwintering Pollinators.” Tyler Arboretum, December 14, 2021. Accessed October 28, 2023. <https://tylerarboretum.org/overwintering-pollinators-2/>

<sup>3</sup>Hall, Donald W. and Butler, Jerry F. “TIGER SWALLOWTAIL, EASTERN TIGER SWALLOWTAIL, PAPILIO GLAUCUS LINNAEUS (INSECTA: LEPIDOPTERA: PAPILIONIDAE).” University of Florida Extension, revised May 2020. Accessed October 28, 2023. <https://edis.ifas.ufl.edu/publication/IN218>

<sup>4</sup>“Bumble Bees: Nesting and Overwintering.” Xerces Society. Accessed October 28, 2023. <https://xerces.org/bumblebeenests>

<sup>5</sup>Baker, James. “Small Carpenter Bees.” North Carolina State Extension. Accessed October 29, 2023. <https://content.ces.ncsu.edu/small-carpenter-bees>

<sup>6</sup>“Genus *Ceratina*.” Bug Guide, Iowa State University Department of Pathology, Entomology, and Microbiology, August 21, 2022. Accessed October 29, 2023. <https://bugguide.net/node/view/15027>

<sup>7</sup>Dorian, Nicholas. “The right way to leave stems for native bees.” Tufts Pollinator Initiative. Accessed October 29, 2023. <https://sites.tufts.edu/pollinators/2021/04/the-right-way-to-leave-stems-for-native-bees/>

<sup>8</sup>Thompson, Paul. “Little Hover Flies are a Big Beneficial Insect.” Clemson University College of Agriculture, Forestry, and Life Sciences, July 14, 2022. Accessed October 29, 2023. <https://hgic.clemson.edu/little-hover-flies-are-a-big-beneficial-insect/>

<sup>9</sup>Desorcie, Heather. “Insect Life Under the Leaves.” Penn State Department of Entomology, November 22, 2021. Accessed October 29, 2023. <https://ento.psu.edu/news/insect->

