Garden Bugs & Insects of the SOUTHWEST

Jaret C. Daniels

Adventure Quick Guides

IDENTIFY POLLINATORS, PESTS, AND OTHER GARDEN VISITORS

Adventure Quick Guides

How many times have you seen a bug in your garden and wondered, "What in the world is that?" This Adventure Quick Guide provides an easy and fun way to identify common garden pollinators, pests, and aesthetically pleasing visitors. It features more than 120 insects and arthropods commonly seen in gardens of the southwestern United States.

This guide will help you learn to differentiate between pest species and beneficial insects, such as pollinators and those that can keep pests in check. The guide also includes a general introduction to basic pest control, as well as tips on how to make your garden and wider landscape a healthy, welcoming place for insects, arthropods, and other beneficial wildlife.

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KEY

- Species marked with this icon are pollinators.
- Species marked with this icon P are pests.
- Species marked with these icons V or B are either an aesthetic garden visitor or a beneficial predator of pest species.
- Species marked with this icon D spread plant disease.

GARDEN BUGS OF THE SOUTHWEST

In everyday language, we commonly refer to insects, spiders, and other creepy-crawly organisms, such as centipedes, as bugs. They, or signs of their presence, are routinely encountered in gardens and yards. Within this diverse mix are a wide variety of "bad" bugs, regularly referred to as pests, and "good" bugs, called beneficials. Most garden pest species cause damage by directly feeding on plants, transmitting disease to plants in the process, or indirectly damage or disturb plants by their activities. The resulting damage can be simply aesthetic or can lead to poor plant performance, deformed growth, reduced yield, or even death. Other pests can cause damage to structures or present a nuisance by their presence. Beneficials are a gardener's best friends. They provide natural pest control by feeding on or parasitizing undesirable garden and landscape bugs, helping to keep their populations in check. Others deliver key services such as decomposition, nutrient recycling, or pollination. Many are also entertaining or attractive watchable wildlife that add to the overall enjoyment of your landscape.

Controlling Pests

It's temping to want to reach for a container of pesticide at the first sign of a pest problem. This strategy, however, can often be counterproductive. Many commonly available pesticides can be harmful to humans, other wildlife, and the environment, especially if overused or applied inappropriately. Beneficial insects, such as monarchs and bees, are particularly susceptible. Harming these "good" bugs depletes your garden's natural pest control measures.

A better and more sustainable approach is to use integrated pest management, referred to as IPM. IPM focuses on long-term prevention, not just short-term control. Monitoring is the first step. This is best done by regularly getting out into your garden or landscape and looking around. Do you see any obvious signs

of pest presence or plant problems? If you do, take a closer look and try to identify the culprit. Use this guide as an aid. You can then take a sample to a local extension agent or nursery professional for confirmation. Next, it's important to assess the scope of the problem. Is it limited to a particular branch or plant, or is it impacting a larger area or number of plants? No matter what, regular monitoring is always a great strategy, as it helps you identify pest issues before they become problems. Remember, most large pest outbreaks start out small.

Now that you have identified the pest and level of infestation, you can develop a plan to control it or decide that control is not required at this particular time. IPM employs a management approach that typically involves a combination of mechanical, biological, and chemical controls to specifically target the pest.

Mechanical control can include physically removing pests from plants, using traps or barriers, or otherwise making a less suitable or desirable environment for the pest. **Biological control** uses known natural enemies against the pest. This can be a predator, parasitoid, or even a pathogen. A classic example is using ladybugs to help control aphids. **Chemical control** makes use of pesticides. Pesticides should only be used when necessary. Less-toxic alternatives such as horticultural oils or insecticidal soaps are often used first, and treatments are always applied only to the infected plant to minimize nontarget impacts. Remember, when using chemicals, always carefully follow the label directions for application rates and safety precautions.

Healthy & Diverse Landscapes

Healthy plants are more resistant to attack from pests and disease. Therefore, regular garden care and maintenance, along with a little TLC, is a great way to help prevent problems. Healthy plants also look and perform better, produce more flowers, and offer higher quality resources for pollinators.

Landscapes with higher levels of plant diversity, particularly flowering plants, tend to attract and maintain a higher abundance and wider range of beneficial insects. Collectively, such basic methods are easy to implement and offer a strong first line of defense.

Pipevine Swallowtail V
(Battus philenor)

wingspan up to 4 inches; black overall; male with iridescent blue scaling on upper side of the hindwing; female duller black with pale marginal spots; hindwing below black with blue scaling and bright orange spots; adults avidly visit flowers; larvae feed on pipevines

Anise Swallowtail V
(Papilio zelicaon)

wingspan up to 3.8 inches; wings black with a broad central yellow band, marginal yellow spots and a black centered hindwing eyespot; larvae feed on sweet fennel and *Citrus*

Black Swallowtail V
(Papilio polyxenes)

wingspan up to 4.25 inches; wings black with yellow spot band; female with reduced yellow bands and blue scaling on hindwing; hindwing with single tail; abdomen with yellow spots; larvae feed on carrot family plants, including dill, sweet fennel, and parsley

Giant Swallowtail V
(Papilio cresphontes)

wingspan up to 5.8 inches; wings above dark brown with crossing yellow spot bands; wings below yellow; hindwing with single tail; tail with central yellow spot; avid flower visitor; larvae feed on *Citrus* family plants, including cultivated citrus

Giant Swallowtail Larva V P
(Papilio cresphontes)

up to 2.3 inches long; mottled brown with a cream saddle and rear end; feeds on *Citrus* family plants, including cultivated lime, orange, and lemon; can be a minor foliage pest

Western Tiger Swallowtail V

(Papilio rutulus)

wingspan up to 4 inches; wings yellow with bold black stripes, a wide black margin, and a single long tail; avid flower visitor

Two-tailed Swallowtail V

(Papilio multicaudata)

wingspan up to 6 inches; wings yellow with bold black stripes, black margins, and two hindwing tails; avid flower visitor

Cabbage White P

(Pieris rapae)

wingspan up to 2 inches; wings white with black forewing tops and black spots; non-native

Cabbage White Larva P

(Pieris rapae)

up to 1.2 inches long; green to blue-green with short hairs, a narrow yellow stripe and yellow spots; feeds on various cabbage-family vegetables, including cabbage, broccoli, cauliflower, and kale

Orange Sulphur V

(Colias eurytheme)

wingspan up to 2.3 inches; wings orange with black borders in male; yellow-orange in females; some females white; hindwing below yellow with central pink-rimmed silver spot; larvae feed on clovers and alfalfa

Southern Dogface V

(Zerene cesonia)

wingspan up to 3 inches; wings yellow; forewing with pointed tip, black eyespot, and black markings outlining the silhouette of a dog's head in profile; hindwing seasonally variable from yellow to rosy-pink; larvae feed on alfalfa, prairie clovers, and false indigo

Sleepy Orange
(Abaeis nicippe)

wingspan up to 2.2 inches; wings above bright orange with irregular black margins; wings below seasonally variable from bright butter-yellow to reddish-brown; larvae feed on *Senna*; adults are avid flower visitors

Mexican Yellow
(Eurema mexicana)

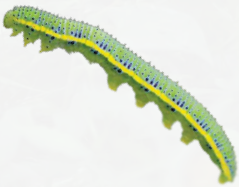
wingspan up to 2.2 inches; wings above creamy white with some yellow; forewing with irregular black margins outlining a dog's head in profile; hindwings pointed on bottom; larvae feed on *Acacia* and other pea family plants

Cloudless Sulphur
(Phoebis sennae)

wingspan up to 3.25 inches; wings mostly unmarked lemon-yellow in males; lemon to pale yellow with narrow dark border and central spot on forewing in females; seasonally variable; avid flower visitor; feeds with wings closed

Cloudless Sulphur Larva
(Phoebis sennae)

up to 1.8 inches long; green to yellow with a bright yellow stripe and blue spots along the side and numerous small black spots; larvae are green if feeding on leaves, yellow if feeding on flowers; feed on various *Senna* spp.



Dainty Sulphur
(Nathalis iole)

wingspan up to 1.2 inches; wings above yellow with black forewing tip and bar along lower edge; hindwing below yellow with greenish scaling; color varies seasonally; flies low

Gray Hairstreak
(Strymon melinus)

wingspan up to 1.4 inches; wings above dark gray with orange-capped black spot on hindwing; hindwing below light gray with white-outlined black line and orange-capped black spots near single hair-like tail; avid flower visitor

Great Purple Hairstreak
(Atlides halesus)

wingspan up to 2 inches; wings above iridescent blue with black borders in males; dusty blue in females; wings below dull black; hindwing with two hair-like tails; abdomen orange-red; larvae feed on mistletoe

Leda Ministreak
(Ministrymon leda)

wingspan up to 0.9 inch; wings above brown with blue scaling on hindwing; wings below gray with thin irregular black or red and white line through center; hindwing with hairlike tail; larvae feed on mesquite

Marine Blue
(Leptotes marina)

wingspan up to 1.1 inches; wings above lavender blue in males; white and pale blue with dark borders in female; hindwing below gray-brown with white-outlined spots and bands and an orange-outlined black eyespot; larvae feed on mesquite, and other pea family plants

Ceraunus Blue
(Hemiargus ceraunus)

wingspan up to 1.1 inches; wings above blue in males; brown in females; hindwing below gray-brown with white banding and two orange-rimmed dark eyespots; forewing below with row of white-outlined black spots; larvae feed on mesquite, and other pea family plants

Banded Garden Spider V B
(Argiope trifasciata)

up to 0.6 inch long; bulbous black, yellow-and-white striped abdomen; eight long black-and-yellow striped legs; female much larger than male; spins large circular webs between vegetation or on structures

Two-spotted Spider Mite P
(Tetranychus urticae)

up to 0.03 inch long; oval yellow to orange body, with four pairs of legs; often with two visible dark side spots; resembles a tiny spider; feeds on plant sap and spins loose silk on vegetation; pest of many trees and shrubs, vegetables, and berries

Common Desert Centipede V
(Scolopendra polymorpha)

up to 5 inches long; color variable, brown, tan, orange to almost bluish segmented and flattened wormlike body with many paler legs that extend outward; dark bands on the back; predators of insects, lizards, amphibians, and even small rodents; can bite

Greenhouse Millipede B
(Oxidus gracilis)

up to 0.9 inches long; tan to dark brown or nearly black elongated, worm-like body with many small legs; feeds on organic material; harmless

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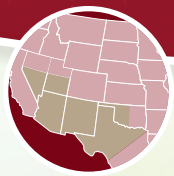

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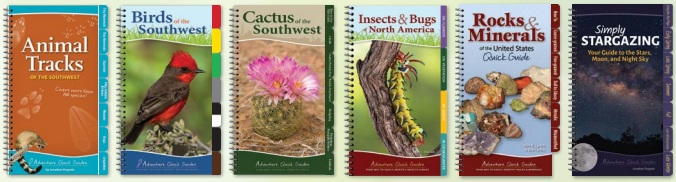

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