

## Study List of Common Insects in Texas (August 2018)

### How to use this list

This document presents information about each species that is required for the identification portion of 4-H Entomology. The text in the html version and this PDF version is the same. However, because this version is primarily intended to be printed, the photos are smaller and fewer than those available in the html version. Students will also want to study the html version with its larger photos. The column entitled 'Level' indicates whether the species is required at the Junior, Intermediate or Senior level.

Level	Common Name	Order	Host or Location	Significance
J	Silverfish	Thysanura	House	Pest
I	Mayflies	Ephemeroptera	Near water	Inconsequential
J	Black-winged damselfly	Odonata	Stream	Beneficial
J	Green darner	Odonata	Stream	Beneficial
I	Stoneflies	Plecoptera	Near water	Inconsequential
I	Banded-winged grasshopper	Orthoptera	Pasture	Pest
J	Differential grasshopper	Orthoptera	Pasture	Pest
J	Long-horned grasshoppers	Orthoptera	Shrubs/grass	Pest
J	Field cricket	Orthoptera	Outdoors,	Pest
I	Mole crickets	Orthoptera	Sandy soil	Pest
I	True katydid	Orthoptera	Trees	Pest
J	American cockroach	Blattodea	House	Pest
I	German cockroach	Blattodea	House	Pest
I	Smokeybrown cockroach	Blattodea	House	Pest
I	Termites	Blattodea	Wood, stumps	Pest
J	Praying mantids	Mantodea	Shrubs, vegetation	Beneficial
J	Walkingsticks	Phasmatodea	Shrubs, vegetation	Inconsequential
I	Earwigs	Dermaptera	Leaf litter	Inconsequential
I	Barklice	Psocoptera	Tree trunk	Pest
I	Chicken head louse	Phthiraptera (Mallophaga)	Poultry	Pest
J	Head louse	Phthiraptera (Anoplura)	Humans	Pest
I	Hog louse	Phthiraptera (Anoplura)	Swine	Pest
I	Short-nosed cattle louse	Phthiraptera (Anoplura)	Cattle	Pest

<b>Level</b>	<b>Common Name</b>	<b>Order</b>	<b>Host or Location</b>	<b>Significance</b>
S	Ambush bug	Hemiptera (Heteroptera)	Flowers	Beneficial
S	Assassin bug	Hemiptera (Heteroptera)	Field crops	Beneficial
J	Backswimmer	Hemiptera (Heteroptera)	Pond	Beneficial
J	Bed bug	Hemiptera (Heteroptera)	Humans	Pest
S	Big-eyed bugs	Hemiptera (Heteroptera)	Field crops	Beneficial
S	Boxelder bug	Hemiptera (Heteroptera)	Boxelder trees	Pest
S	Burrower bug	Hemiptera (Heteroptera)	Grasses, peanuts	Pest
I	Chinch bug	Hemiptera (Heteroptera)	Grass	Pest
I	Cotton fleahopper	Hemiptera (Heteroptera)	Cotton	Pest
S	False chinch bug	Hemiptera (Heteroptera)	Sorghum	Pest
J	Giant water bug	Hemiptera (Heteroptera)	Water, ponds	Pest
J	Green stink bug	Hemiptera (Heteroptera)	Weeds	Pest
J	Harlequin bug	Hemiptera (Heteroptera)	Cole crops	Pest
S	Large milkweed bug	Hemiptera (Heteroptera)	Milkweed	Beneficial
I	Leaffooted bug	Hemiptera (Heteroptera)	Plants, weeds	Pest
S	Minute pirate bugs	Hemiptera (Heteroptera)	Insects	Beneficial
J	Squash bug	Hemiptera (Heteroptera)	Squash	Pest
S	Tarnished plant bug	Hemiptera (Heteroptera)	Plants, weeds	Pest
J	Toad bug	Hemiptera (Heteroptera)	Shoreline	Beneficial
S	Water boatman	Hemiptera (Heteroptera)	Pond	Beneficial
S	Water scorpions	Hemiptera (Heteroptera)	Stream	Beneficial
I	Water striders	Hemiptera (Heteroptera)	Pond	Beneficial
S	Wheel bug	Hemiptera (Heteroptera)	Vegetation	Beneficial
I	Kissing Bug	Hemiptera (Heteroptera)	Animals	Pest
J	Cicadas	Hemiptera (Auchenorrhyncha)	Trees	Pest
J	Leafhoppers	Hemiptera (Auchenorrhyncha)	Grasses	Pest
S	Planthoppers	Hemiptera (Auchenorrhyncha)	Various plants	Pest
S	Spittlebugs	Hemiptera (Auchenorrhyncha)	Alfalfa	Pest
S	Treehoppers	Hemiptera (Auchenorrhyncha)	Trees	Pest
J	Aphids	Hemiptera (Sternorrhyncha)	Corn, sorghum	Pest
I	Greenbug	Hemiptera (Sternorrhyncha)	Small grains	Pest
S	Pecan phylloxera	Hemiptera (Sternorrhyncha)	Pecans	Pest
I	Psyllids	Hemiptera (Sternorrhyncha)	Potato	Pest
I	Scales, armored	Hemiptera (Sternorrhyncha)	Trees, shrubs	Pest
I	Scales, soft	Hemiptera (Sternorrhyncha)	Ornamental Trees	Pest
S	Whiteflies	Hemiptera (Sternorrhyncha)	Vegetables, cotton	Pest

Level	Common Name	Order	Host or Location	Significance
I	Thrips	Thysanoptera	Flowers	Variable
J	Dobsonflies	Neuroptera	Stream	Beneficial
J	Antlions	Neuroptera	Plants	Beneficial
S	Brown lacewings	Neuroptera	Insects	Beneficial
I	Green lacewings	Neuroptera	Insects	Beneficial
S	Mantispids (Mantidflies)	Neuroptera	Woodlots	Beneficial
S	Owflies	Neuroptera	At lights	Beneficial
S	Alfalfa weevil	Coleoptera	Alfalfa	Pest
J	Blister beetles	Coleoptera	Plants, alfalfa, weeds	Pest
I	Boll weevil	Coleoptera	Cotton	Pest
S	Carpet beetles	Coleoptera	Wool carpets	Pest
S	Carrion beetles	Coleoptera	Dead animals	Beneficial
J	Caterpillar hunter	Coleoptera	Woodland	Beneficial
S	Click beetles	Coleoptera	Corn, field crops	Pest
I	Colorado potato beetle	Coleoptera	Potatoes	Pest
S	Confused flour beetle	Coleoptera	Stored grain	Pest
J	Cottonwood borer	Coleoptera	Cottonwood trees	Pest
S	Elm leaf beetle	Coleoptera	Elm trees	Pest
J	Fireflies (lightningbugs)	Coleoptera	Weeds	Inconsequential
S	Flat-headed borer (Metallic wood borer)	Coleoptera	Trees	Pest
S	Flea beetles	Coleoptera	Weeds	Pest
I	Japanese beetle	Coleoptera	Crops	Pest
J	Lady beetles	Coleoptera	Weeds	Beneficial
I	Lesser grain borer	Coleoptera	Stored grain	Pest
S	Locust borer	Coleoptera	Black locust	Pest
I	Maize weevil (rice weevil)	Coleoptera	Stored grain	Pest
J	May beetles (June beetles_ or Junebugs)	Coleoptera	Shrubs	Pest
S	Mealworm	Coleoptera	Stored grain	Pest
I	Plum curculio	Coleoptera	Peaches	Pest
S	Predaceous diving beetles	Coleoptera	Ponds	Beneficial
S	Rove beetles	Coleoptera	At lights	Inconsequential
S	Sawtoothed grain beetle	Coleoptera	Stored grain	Pest
S	Soldier beetles	Coleoptera	Flowers	Inconsequential
J	Spotted cucumber beetle	Coleoptera	Weeds	Pest
I	Sweet potato weevil	Coleoptera	Sweet potatoes	Pest
J	Tiger beetles	Coleoptera	Shady trails	Beneficial
S	Tumbling flower beetles	Coleoptera	On flowers	Inconsequential
S	Water scavenger beetles	Coleoptera	Stream	Inconsequential
S	Whirlygig beetles	Coleoptera	Stream	Inconsequential

<b>Level</b>	<b>Common Name</b>	<b>Order</b>	<b>Host or Location</b>	<b>Significance</b>
I	Scorpionflies	Mecoptera	Plants	Inconsequential
I	Fleas	Siphonaptera	Cat, dog	Pest
S	Bee flies	Diptera	Flowers	Beneficial
S	Black flies	Diptera	Stream	Pest
S	Blow flies	Diptera	Carrion	Variable
I	Common cattle grub	Diptera	Cattle	Pest
J	Crane flies	Diptera	Meadow	Inconsequential
S	Deer fly	Diptera	Woodlands	Pest
S	Flesh flies	Diptera	Carrion	Variable
I	Horn fly	Diptera	Cattle	Pest
J	Horse fly	Diptera	Woodlands	Pest
J	House fly	Diptera	Barn	Pest
J	Mosquitoes	Diptera	Yard and meadow	Pest
S	Robber flies	Diptera	Woodlands	Beneficial
S	Sheep keds	Diptera	Sheep	Pest
I	Sorghum midge	Diptera	Sorghum	Pest
S	Stable fly	Diptera	Cattle	Pest
J	Syrphid fly (flower/ hover fly)	Diptera	Flowers	Beneficial
I	Caddisflies	Trichoptera	Near stream	Inconsequential
I	Alfalfa caterpillar (clouded sulfur)	Lepidoptera	Alfalfa	Pest
S	Armyworm	Lepidoptera	Grasses	Pest
I	Bagworm	Lepidoptera	Juniper	Pest
J	Black swallowtail	Lepidoptera	Carrots, weeds	Beneficial
J	Bollworm or corn earworm	Lepidoptera	Cotton, corn, others	Pest
S	Buckeye	Lepidoptera	Plantain	Inconsequential
S	Cabbage butterflies	Lepidoptera	Cole crops	Pest
I	Cabbage looper	Lepidoptera	General feeder	Pest
S	Cercropia	Lepidoptera	Oak	Inconsequential
S	Cutworms	Lepidoptera	Grass, plants	Pest
J	Fall armyworm	Lepidoptera	Grasses	Pest
S	Fall webworm	Lepidoptera	Trees	Pest
S	Forest tent caterpillar	Lepidoptera	Broad-leaved trees	Pest
I	Giant swallowtail	Lepidoptera	Citrus	Beneficial
J	Gray hairstreak (Cotton square borer)	Lepidoptera	Cotton	Pest
S	Great leopard moth	Lepidoptera	Weeds	Inconsequential
I	Greater wax moth	Lepidoptera	Beehive	Pest
S	Indianmeal moth	Lepidoptera	Stored grain	Pest
S	Io moth	Lepidoptera	Trees, corn	Inconsequential
J	Luna moth	Lepidoptera	Oak	Inconsequential

<b>Level</b>	<b>Common Name</b>	<b>Order</b>	<b>Host or Location</b>	<b>Significance</b>
J	Monarch	Lepidoptera	Milkweed	Beneficial
S	Mourningcloak butterfly	Lepidoptera	Willow	Inconsequential
S	Peach tree borer	Lepidoptera	Peach trees	Pest
S	Pecan nut casebearer	Lepidoptera	Pecans	Pest
I	Pink bollworm	Lepidoptera	Cotton	Pest
J	Polyphemus	Lepidoptera	Oaks	Inconsequential
S	Question mark	Lepidoptera	Elms	Pest
J	Red admiral	Lepidoptera	Nettles	Inconsequential
S	Saltmarsh caterpillar	Lepidoptera	Grasses, weeds	Pest
I	Silver spotted skipper	Lepidoptera	Black locust	Inconsequential
S	Sorghum webworm	Lepidoptera	Sorghum	Pest
S	Southwestern corn borer	Lepidoptera	Grain crops	Pest
S	Tiger swallowtail	Lepidoptera	Cherry	Beneficial
I	Tomato hornworm	Lepidoptera	Tomatoes	Pest
J	Underwing moths	Lepidoptera	Trees	Inconsequential
S	Viceroy	Lepidoptera	Poplar	Inconsequential
J	Wood nymph	Lepidoptera	Thick woods	Inconsequential
S	Baldfaced hornet	Hymenoptera	Woodlands	Pest
J	Bumblebees	Hymenoptera	Meadow	Beneficial
S	Carpenter bees	Hymenoptera	Fence posts	Pest
J	Cicada killer	Hymenoptera	Soil	Beneficial
J	Honeybee	Hymenoptera	Flowers	Beneficial
S	Horntails	Hymenoptera	Logs	Pest
S	Ichneumon wasps	Hymenoptera	Flowers	Beneficial
S	Leaf-cutting bees	Hymenoptera	Flowers	Beneficial
J	Mud daubers	Hymenoptera	Buildings	Beneficial
J	Red harvester ant	Hymenoptera	Pastures	Inconsequential
J	Red imported fire ant	Hymenoptera	Pastures, lawns	Pest
S	Sawflies	Hymenoptera	Plants	Pest
S	Tarantula hawk	Hymenoptera	Woodlands	Beneficial
S	Texas leafcutting ant	Hymenoptera	Woodlands	Pest
J	Velvet ants	Hymenoptera	Soil	Pest
J	Yellow jackets	Hymenoptera	Ground nests	Pest

<b>Level</b>	<b>Common Name</b>	<b>Order</b>	<b>Host or Location</b>	<b>Significance</b>
S	Brown dog tick	Acari	Dog	Pest
S	Fowl tick (blue bug)	Acari	Poultry	Pest
J	Lone star tick	Acari	Cattle	Pest
I	Spider mites	Acari	Plants	Pest
I	Crab spiders	Araneae	Flowers	Beneficial
S	Jumping spiders	Araneae	Garden	Beneficial
I	Recluse spiders	Araneae	Board piles	Pest
S	Tarantulas	Araneae	Soil	Beneficial
J	Widow spiders	Araneae	Woodlots	Pest
J	Wolf spiders	Araneae	Under rocks	Beneficial
J	Yellow garden spider	Araneae	Garden	Beneficial
J	Scorpions	Scorpiones	Log piles	Pest
I	Harevestmen	Opioliones	Caves	Inconsequential
S	Vinegaroons	Thelyphonida	Arid regions	Inconsequential
S	Centipedes	Class Chilopoda	Ground	Inconsequential
S	Millipedes	Class Diplopoda	Leaf litter	Variable
S	Sowbugs and pillbugs	Isopoda	Compost	Variable
I	Springtails	Collembola	Surface of puddles	Variable
I	Sun spiders (Wind scorpions)	Solifugae	Arid regions	Inconsequential

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## Thysanura (silverfish)



Photo: Bart Drees

### Silverfish

**Scientific name:** *Lepisma saccharina* Linnaeus  
(Thysanura: Lepismatidae)

**Facts:** Silverfish are considered very primitive insects. They are flattened from top to bottom and have a scale-like covering that gives them a silvery appearance. These insects are a pest in homes and in libraries, where they can damage books. They require very little water but do need a source of sugar or starch in their diet. Silverfish have long antennae and three long tail-like structures (cerci) on the end of the abdomen. This species is the most commonly seen member of the order Thysanura.

## Ephemeroptera (mayflies)



Photo: Extension Entomology

### Mayflies

Scientific name: (Order: Ephemeroptera)

**Facts:** Mayflies are an important part of the diet for many species of fish. The adults are delicate, soft-bodied insects and range in size from approximately one quarter inch to over two inches long. When at rest, the wings are held together over the back. The immature stages develop in water for a period of a few weeks to a few years, depending on the species and water conditions. When the last aquatic stage leaves the water, it molts into a cloudy-winged stage called the subimago. The subimago soon molts into the true adult or imago stage. This stage has clear wings. Mayflies are the only insects that molt after they are able to fly.

## Odonata (dragonflies and damselflies)



Photo: Blair Nikula

### Black-Winged Damselfly

Scientific name: *Calopteryx maculata* (Beauvois)  
(Odonata: Calopterygidae)

**Facts:** The black-winged damselfly can be readily identified because it is the only species in Texas that has solid black wings. Males and females differ somewhat in wing coloration with males being darker winged. Naiads or aquatic nymphs of the black-winged damselfly are typically found in flowing streams. Damselflies are effective predators both as naiads and as adults. A wide variety of damselflies occur throughout Texas. Most of these cannot be accurately identified by anyone except damselfly specialists. All damselflies can be distinguished from dragonflies readily because damselflies hold their wings together over their back when at rest. Moreover, damselflies have their front and hind wings very similar in shape and size.

## Odonata (dragonflies and damselflies)



Photo: John Jackman

### Green Darner

Scientific name: *Anax junius* (Drury)  
(Odonata: Aeshnidae)

Facts: Dragonflies come in a variety of colors. Many of them have patterns on the wings. Dragonflies hold their wings flat when at rest. The green darner is a representative of the dragonfly group. Darners are large high-flying dragonflies which can be difficult to collect. They are occasionally a problem around bee hives when they prey on bees.

## Plecoptera (stoneflies)



Photo: Bart Drees

### Stoneflies

Scientific name:  
(Order: Plecoptera)

Facts: Adult stoneflies have long antennae and wings folded over the back. Stoneflies have aquatic immatures which prefer clear, flowing streams which limits their distribution in Texas. The few species that we find in Texas (about 20) are usually in central Texas or the Hill Country.

## Orthoptera (grasshoppers, crickets and katydids)



Photo: Bart Drees

### Banded-winged grasshoppers

Scientific name:  
(Orthoptera: Acrididae)

Facts: There are several species of banded-winged grasshoppers. They are conspicuous when they fly because of the brightly colored hindwings. Wings can be red, pink, or orange with dark bands. Some like the Carolina grasshopper have yellowish bands on dark wings. When they land they tend to disappear because they blend with the grass and soil. Some of the males in this group fly in circles with a loud snapping noise as part of the courtship ritual. Museum specimens often have the wings spread to show the color pattern.



Photo: Extension Entomology

### Differential Grasshopper

Scientific name: *Melanoplus differentialis* (Thomas)  
(Orthoptera: Acrididae)

Facts: The differential grasshopper is a short-horned grasshopper with a spine on the prosternum. These general feeders eat grasses, crop plants, and fruits throughout the United States.



## Orthoptera (grasshoppers, crickets and katydids)



Photo: John Jackman

### Long-horned grasshopper

Scientific name:  
(Orthoptera: Tettigoniidae)

**Facts:** Long-horned grasshoppers have very long, thin antennae. Most are cryptically colored (blend in with foliage), are active at night, and are noisy.



Photo: Noel Troxclair

### Field Cricket

**Scientific name:** Gryllus species  
(Orthoptera: Gryllidae)

**Facts:** Field crickets are common throughout the Texas. There are about 900 species of crickets in the world. Only male crickets "chirp", and there are four types of chirping songs for different purposes. The chirping sound is made by rubbing the left hind leg against the right hind leg. Crickets are omnivorous; they eat many different types of organic matter and they are scavengers. Crickets can carry human disease.



Photo: Noel Troxclair

### Mole Cricket

Scientific name:  
(Orthoptera: Gryllotalpidae)

**Facts:** Mole crickets have robust front legs highly modified for digging. They tunnel rapidly just below the soil surface and make trails of pushed-up soil similar to that of a mole only much smaller. Mole crickets can run very rapidly when on the soil surface. They are attracted to lights and are occasionally pests of vegetables.



Photo: C. Williams

### "True" Katydid

Scientific name: *Pterophylla* spp.  
(Orthoptera: Tettigoniidae)

**Facts:** The family Tettigoniidae is called longhorned grasshoppers due to their long, thin antennae. However, the name katydid is often applied to any member of the family. The "true" katydids are members of the genus *Pterophylla*. The species in this genus can be difficult to separate so the name best applies to the genus. "True" katydids are some of the heaviest and largest specimens in the family in Texas. They have wide bodies and typically are found in trees. Their singing at night is characteristic.

## Blattodea (cockroaches and termites)



Photo: Mike Merchant

### American cockroach

**Scientific name:** *Periplaneta americana* (Linnaeus)  
(Blattodea: Blattidae)

**Facts:** This species is one of our larger cockroaches reaching about 2 inches in length. They are a reddish-brown with the margins of the pronotum light brown or yellowish. American cockroaches live in wood piles, decaying trees, sewer systems, and inside buildings. They can be common household pests and eat a wide variety of foods. Adults are capable of flying.



Photo: Bart Drees

### German cockroach

**Scientific name:** *Blattella germanica* (Linnaeus)  
(Blattodea: Blattellidae)

**Facts:** The German cockroach is about 5/8 of an inch long, light brown in color. Wings of adults cover the abdomen. The pronotum has two prominent dark stripes. Nymphs are smaller, wingless and have a pale stripe that runs lengthwise down the middle of the darker brown body. This household pest can be a real nuisance and may be found in colonies.



Photo: Mike Merchant

### Smokeybrown cockroach

**Scientific name:** *Periplaneta fuliginosa* Serville  
(Blattodea: Blattidae)

**Facts:** Adult smokeybrown cockroaches are dark brown to black. Bodies range from 1 ¼ inch to 1 ½ inch long. Both sexes have wings longer than the length of their body. The pronotum is a solid dark brown color. Smokeybrown cockroaches require high humidity to survive. Outside they are found in wooded areas with moisture and shade. Indoors, they are commonly found in attics or near fireplaces.



Photo: Patrick Porter

## Termites

### Scientific name:

(Sub Order: Isoptera)

Facts: Worker subterranean termites, *Reticulitermes* spp., are pale-colored and soft bodied. Like all termites they have a thick "waist" and bead-like antennae. These characters can separate them from ants which have thin "waists" and elbowed antennae. The reproductive forms of termites have wings with the front and hind wings nearly identical. They shed their wings after they are done with the nuptial flights. Reproductive termites are typically darker in color than the pale workers. Subterranean termites are structural pests of buildings and tunnel into wood. They have protozoans in their guts that digest the cellulose in wood. Termites are important recyclers of dead wood.

## Mantodea (praying mantids)



Photo: Extension Entomology

### Praying Mantids

**Scientific name:**  
(Order: Mantodea)

**Facts:** The praying mantids are well known. They have forelegs that are fitted for grasping prey. Praying mantids slowly stalk their prey or sit and wait. Just as they capture their prey they can move extremely fast. The head of the praying mantis can be rotated in nearly a circle as some people believe. Mantids have elongated pronota and long thin antennae. There are only a few species of mantids found in Texas. The Carolina mantid, *Stagmomantis carolina* (Johannson), is a common species that is widely distributed. The female lays a frothy egg case that hardens after it is laid. Egg cases of some mantids are sold for biological control. The name is spelled either "pray" to refer to the position of the front legs or "prey" to refer to feeding on other insects.

## Phasmatodea (walkingsticks)



Photo: Unknown

### Walkingsticks

**Scientific name:**  
(Order: Phasmatodea)

**Facts:** Walkingsticks are well known for their slow-moving behavior and camouflage. Their long bodies, legs, antennae, and color make them appear to be sticks. They feed on plants and sometimes defoliate trees. The two-striped walkingstick, *Anisomorpha buprestoides* (Stoll), is relatively short and stocky compared to many walking sticks. This one is known to ooze a milky secretion from between the body segments. This secretion is caustic and can burn the skin temporarily. The longest insect in the United States is a walkingstick, *Megaphasma dentricus* (Stal), which reaches a length of about 7 inches.

## Dermaptera (earwigs)



Photo: Patrick Porter

**Scientific name: Order Dermaptera**

**Facts:** Earwigs have the front wings shortened and leathery. The hind wings are folded under them. They fly readily even though the wings are hidden when you first see them. The cerci (or pincers) at the end of the abdomen is an important character for recognition. Some earwigs are nearly 1 to 1 1/2 inches long, but other species are smaller. Earwigs are occasionally pests in gardens and crops. However, they are best known as a nuisance in and around homes. They emit a disagreeable odor when crushed. Common Texas species are predaceous, capturing smaller arthropods with large pincers located at the end of their abdomen and devouring them with their chewing mouthparts.

## Psocoptera (barklice and booklice)



Photo: Patrick Porter

### Barklice

Scientific name: *Archipsocus nomas* Gurney and others  
(Psocoptera: Archipsocidae)

Facts: Barklice are usually brownish and under 1/8-inch-long. Adults have two pairs of membranous wings with the front wing larger than the hind wing. Wings are held roof-like over the body. Antennae are long and thin. Barklice feed on fungi, algae and dead plant material. This species sometimes wraps large tree trunks and branches with webbing. The webbing causes concerns but is really harmless.

## Phthiraptera (lice)



Photo: Extension Entomology

### Chicken head louse

Scientific name: *Cuculotogaster heterographus* (Nitzsch)  
(Phthiraptera: Philopteridae)

Facts: Chewing lice are small, flat, and wingless with a head that is wider than the thorax. They usually feed on feathers of birds. The chicken head louse is a pest of poultry.

## Phthiraptera (lice)



Photo: Beverly Sparks

### Head louse

Scientific name: *Pediculus humanus capitis* (De Geer)  
(Phthiraptera: Pediculidae)

Facts: Sucking lice are small, flat, wingless parasites with a head narrower than the thorax. The mouthparts are formed for piercing and sucking. They feed on blood of the host which is usually a mammal. The human louse has two subspecies, the body louse and the head louse. Head lice are usually found only on the head. They are up to 3.5 mm long.



Photo: John Jackman

### Hog Louse

Scientific name: *Haematopinus suis* (Linnaeus)  
(Phthiraptera: Haematopinidae)

Facts: The hog louse is yellowish in color and quite large for a louse, up to 1/4 inch long. This sucking louse has a narrow head. It is a well-known pest of hogs and the numbers can build up especially in confined animal operations.

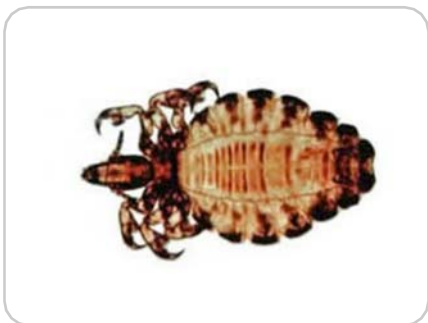


Photo: Oklahoma State Univ.

### Short-nosed Cattle Louse

Scientific name: *Haematopinus eurysternus* (Nitzsch)  
(Anoplura: Haematopinidae)

Facts: The short-nosed cattle louse lives on and sucks blood from cattle. These wingless insects are only 1/20 to 1/16 inch long. Whereas chewing lice have wide heads, sucking lice have narrow heads.

The Order Hemiptera begins on the following page

## Hemiptera Suborder Heteroptera (true bugs)



Photo: Patrick Porter

### Ambush Bugs

**Scientific name:**  
(Hemiptera: Phymatidae)

**Facts:** Ambush bugs are predators which normally lie in wait for prey. They have front legs fitted for grasping, much like that of a praying mantis. They commonly sit on a flower waiting for insects attracted to flowers.



Photo: W. L. Sterling

### Assassin bugs

**Scientific name:**  
(Hemiptera: Reduviidae)

**Facts:** Assassin bugs are predators which feed on other insects. There are many species. Some of them are brightly colored with orange and black. Others are cryptically colored with greys and greens. If you trap one on your skin it may poke its beak into you as a defense. When that happens, the result is a quick sharp pain that usually subsides within a few hours.



Photo: John Jackman

### Backswimmers

**Scientific name:** *Notonecta* sp.  
(Hemiptera: Notonectidae)

**Facts:** Backswimmers are other predators that can also inflict a strong bite. They are backswimmers because they swim upside-down through the water. Their hind legs are very long and modified for use as oars. Because they swim upside-down, their body is shaped similar to a boat with the upper surface of the body keel shaped. Another adaptation for their back swimming behavior is that they are counter-shaded opposite of most creatures. Normal creatures have the upper body surface darker than the lower surface since this makes them less conspicuous. This coloration has been reversed in the backswimmer since it is advantageous while it is upside-down in the water.



Photo: Oklahoma State Univ.

### Bed Bugs

**Scientific name:** *Cimex lectularius*  
(Hemiptera: Cimicidae)

**Facts:** Bed bugs feed primarily at night on the blood of warm-blooded hosts, especially humans. Their preferred habitat is bedding with seams or crevices such as mattresses and box springs, sofas, and other furniture. Adult bed bugs will be approximately 1/4 -inch in length, are reddish-brown in color and are flattened, oval, and wingless. Bed bugs feed at five- to ten-day intervals with their feeding period lasting about twelve minutes. Bed bugs are not known to transmit diseases. It is believed that they are moved from one place to another primarily by humans, but they will move from one unit to another in multi-unit buildings.

## Hemiptera Suborder Heteroptera (true bugs)



Photo: Bart Drees

### Big-eyed bugs

**Scientific name:** *Geocoris* sp.  
(Hemiptera: Lygaeidae)

**Facts:** Big-eyed bugs are predators that tend to stay on vegetation near the ground. They are important beneficial insects in cotton and other field crops. The large eyes and round bodies are characteristic of this group. The majority of Lygaeidae are plant or seed feeders. The predatory behavior of this group is unusual in the family.



Photo: John Jackman

### Boxelder bug

**Scientific name:** *Boisea trivittata* (Say)  
(Hemiptera: Rhopalidae)

**Facts:** Boxelder bugs feed only on boxelder trees. They seem to do little damage to the trees. They are a nuisance when they get abundant and try to enter homes as shelter for the winter.



Photo: Bart Drees

### Burrower bugs

**Scientific name:** *Pangaeus* sp.  
(Hemiptera: Cydnidae)

**Facts:** Burrower bugs are pests of various crops especially peanuts. They burrow into the soil and suck on roots and nuts in peanuts. Damage shows up as deformed and poorly flavored peanuts.



Photo: Patrick Porter

### Chinch Bug

**Scientific name:** *Blissus leucopterus leucopterus* (Say)  
(Hemiptera: Lygaeidae)

**Facts:** Chinch bug adults are about 1/16 inch long. White wings, folded flat on the back, are marked with a triangular black patch at the middle of their outer edges. Legs are reddish to reddish-yellow. Chinch bugs feed on turf causing brown patches to form.



Photo: Patrick Porter

### Cotton Fleahopper

**Scientific name:** *Pseudatomoscelis seriatus* (Reuter)  
(Hemiptera: Miridae)

**Facts:** Cotton fleahopper adults are small yellowish-green bugs about 1/8 inch long with black specks on the upper surface of the body. Their piercing-sucking mouthparts are used to feed on leaves of cotton.



## Hemiptera Suborder Heteroptera (true bugs)



Photo: Patrick Porter

### False Chinch Bug

**Scientific name:** *Nysius raphanus* Howard  
(Hemiptera: Lygaeidae)

**Facts:** False chinch bugs are sucking bugs that resemble the chinch bug but are less strikingly marked. They are usually a dull shade or gray brownish-black and have a wider head and larger eyes. They are about 3/16 inch long when mature. They may damage lawns.



Photo: Bart Drees

### Giant Water Bug

**Scientific name:** *Lethocerus americanus* (Leidy)  
(Hemiptera: Belostomatidae)

**Facts:** Giant water bugs are commonly attracted to lights and are very large, approximately 3 inches long. They are sometimes called "electric light bugs" because of their habit of flying to lights. They are predators and occasionally feed on small fish but more commonly on insects. They have piercing-sucking mouthparts and can give a painful bite if not carefully handled by a collector.



Photo: Extension Entomology

### Green stink bug

**Scientific name:** *Nezara viridula* (Linnaeus)  
(Hemiptera: Pentatomidae)

**Facts:** The southern green stink bug is one of the largest stink bugs. It can be found in gardens, field crops, and roadside flowers. Adults are up to 3/4 of an inch long and solid green in color.



Photo: Patrick Porter

### Harlequin Bug

**Scientific name:** *Murgantia histrionica* (Hahn)  
(Hemiptera: Pentatomidae)

**Facts:** The harlequin bug is a red and black spotted bug of the stink bug family. It is flat and shield shaped, and as long as 3/8 inch.



Photo: Bart Drees

### Large Milkweed Bug

**Scientific name:** *Oncopeltus fasciatus* (Dallas)  
(Hemiptera: Lygaeidae)

**Facts:** The large milkweed bug is an attractive black and yellow sucking insect that feeds on milkweeds and related plants. It has been used extensively in laboratory work in entomology because it can be reared easily in the lab on milkweed seeds and water.

## Hemiptera Suborder Heteroptera (true bugs)



Photo: Extension Entomology

### Leaffooted bug

**Scientific name:** *Leptoglossus phyllopus* (Linnaeus)  
(Hemiptera: Coreidae)

**Facts:** The dark brown color with a conspicuous whitish line across is characteristic of this species. The hind legs are flattened and expanded, almost leaf-like, which is typical for members of the family. They feed on tomatoes, southern peas, soybeans, and many other plants. Adults are about 3/4 inch long.



Photo: W. L. Sterling

### Minute pirate bugs

**Scientific name:** *Orius* spp.  
(Hemiptera: Anthocoridae)

**Facts:** Minute pirate bugs are predators that feed on small insects and insect eggs. They are common in cotton and other field crops where they are considered beneficial.



Photo: Patrick Porter

### Squash Bug

**Scientific name:** *Anasa tristis* (De Geer)  
(Hemiptera: Coreidae)

**Facts:** The squash bug is an elongate-flattened, oval, blackish brown bug about 2/3 inch long. Squash bugs are serious pests of squash and pumpkins.



Photo: Extension Entomology

### Tarnished plant bug

**Scientific name:** *Lygus lineolaris* (Palisot de Beauvois)  
(Hemiptera: Lygaeidae)

**Facts:** Adults are oval, flattened and about 1/4 inch long. They are coppery-brown with whitish-yellow markings. Nymphs are similar but smaller. Lygus bugs feed on a wide variety of plants including cotton and alfalfa. They are sometimes pests. There are several similar related species.



Photo: John Jackman

### Toad Bug

**Scientific name:** *Gelastocoris* sp.  
(Hemiptera: Gelastocoridae)

**Facts:** Toad bugs are very easily overlooked. They are brownish and about 1/2 inch long. They hop much like toads and are typically found along rocky shores of lakes or ponds. Careful examination will reveal that toad bugs have six legs, showing that they are indeed insects and not toads after all.

## Hemiptera Suborder Heteroptera (true bugs)



Photo: Bart Drees

### Water Boatman

**Scientific name:** *Corixa* sp.  
(Hemiptera: Corixidae)

**Facts:** Water boatmen are commonly confused with backswimmers since they superficially resemble them. All water boatmen have a striped pattern across the back and they swim with the wing side up. Water boatmen are generally smaller than backswimmers. They are algae eaters and are unlikely to bite collectors.

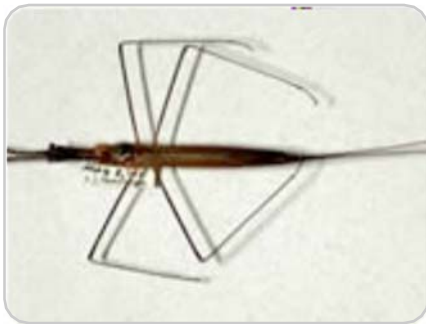


Photo: John Jackman

### Water Scorpions

**Scientific name:** *Ranatra* and other genera  
(Hemiptera: Nepidae)

**Facts:** Water scorpions are not scorpions at all but are a predatory insect found commonly in slow moving water. They have long legs and a thin body and are confused with walking sticks by some people. Water scorpions do have wings and occasionally fly but are seldom seen doing so. They are often found among vegetation.



Photo: Bart Drees

### Water Striders

**Scientific name:**  
(Hemiptera: Gerridae)

**Facts:** Water striders actually skate on the water surface. The surface of all water is slightly denser than the water below it and water striders can actually sit on that surface film layer. They can fly or skate across the water surface very rapidly and are often found on flowing streams.



Photo: Bart Drees

### Wheel bug

**Scientific name:** *Arilus cristatus* (Linnaeus)  
(Hemiptera: Reduviidae)

**Facts:** The wheel bug is a predator and a representative of the assassin bug family. They are large and conspicuous which causes concern when they occur around the home. The name refers to the elevated ridge on the pronotum which resembles a cogged wheel.

Photo caption: Wheel bug, *Arilus cristatus* (Linnaeus)  
(Hemiptera: Reduviidae),  
preying on a squash bug.



## Kissing Bug

**Scientific name:** (Hemiptera: Triatominae)

**Facts:** Kissing bugs are a blood feeding insect that may vector the parasite that causes Chagas disease. Kissing bugs are more active at night and feed on anything that contains blood, including mammals, reptiles, and birds. They are commonly found under wood piles and other debris during the day. They resemble other assassin bugs but are set apart by the orange/red and black striped pattern bordering the abdomen.

Photo caption: Kissing bug, *Arilus cristatus* (Linnaeus)  
(Hemiptera: Reduviidae),

Photo credit: Rachel Curtis-Robles

## Hemiptera Suborder Auchenorrhyncha (cicadas, hoppers)



Photo: Bart Drees

### Cicadas

**Scientific name:** *Tibicen* and a few other genera  
(Hemiptera: Cicadidae)

**Facts:** Cicadas make the loud buzzing noise in the trees in the hot part of the summer. They sometimes are called locusts but the name locusts should only be used for certain migratory grasshoppers. Immature cicadas live in the soil where they suck sap from tree roots. There are several species and some live 17 years in the soil before they emerge as adult cicadas.



Photo: Patrick Porter

### Leafhoppers

**Scientific name:** several genera  
(Hemiptera: Cicadellidae)

**Facts:** Leafhoppers are small, very active, greenish to brownish, slender, wedge-shaped, jumping insects. Sizes range from 1/8 to almost 1/2 inch long. They suck plant juices with their piercing-sucking mouthparts.



Photo: Patrick Porter

### Planthoppers

**Scientific name:** several families  
(Hemiptera: Superfamily Fulgoroidea)

**Facts:** Planthoppers are a diverse and large group. They are often referred to as a group by the superfamily Fulgoroidea. Some have clear wings while others have green wings.



Photo: Patrick Porter

**Spittlebug Scientific name:**  
(Hemiptera: Cercopidae)

**Facts:** Spittlebugs are usually noticed as nymphs since the nymphs form a mass of spittle around their body as a protective measure. Adults normally are brown or green and dull colored, however, there are a few forms which are bright and attractively colored. All spittlebugs have a ring of spines on the apex of the tibia which distinguishes them from leafhoppers.

## Hemiptera Suborder Auchenorrhyncha (cicadas, hoppers)



Photo: Bart Drees

### Treehoppers

**Scientific name:** many species  
(Hemiptera: Membracidae)

**Facts:** Treehoppers come in a variety of colors and patterns. Some treehoppers are camouflaged and may appear as spines or twigs until they move. All treehoppers have the pronotum extending over the back in the adult stage. The three-cornered alfalfa hopper, *Spissistilus festinus*, pictured here is a pest of soybeans and alfalfa. They feed near the base of small plants and can damage the stems enough to girdle them. The nymphs have the same general shape but a short pronotum and a row of spines down the back.

## Hemiptera Suborder Sternorrhyncha (aphids, psyllids, scales, whiteflies)



Photo: Bart Drees

### Aphids

**Scientific name:** many species  
(Hemiptera: Aphididae)

**Facts:** Aphids are generally under 1/8 inch in length with only a few species that are larger. Aphids are soft-bodied, with rounded or elongate bodies, long legs and long antennae. The distinguishing feature is a pair of extensions on the abdomen called cornicles. Adult aphids may be winged or wingless. Aphids can be almost any color including: green, reddish, yellow, or black. Some aphids produce a waxy secretion that covers their body making them appear woolly and white. Aphids have a complex life cycle and sometimes produce live young without mating or egg laying. Other times they mate, lay eggs, and reproduce in a more typical manner. Aphids suck plant juices and excrete a lot of liquid called "honeydew" which drops on whatever is below them. Honeydew is sticky and provides a substrate for black sooty mold to grow. Aphids are sometimes called "plant lice" and almost every kind of plant has some aphid species that feeds on it.



Photo: Extension Entomology

### Greenbug

**Scientific name:** *Schizaphis graminum* (Rondani)  
(Hemiptera: Aphididae)

**Facts:** The greenbug is an aphid and is small, bright green with black leg tips, cornicles, antennae and eyes. These soft-bodied insects are about 1/12 inch long. Note the darker green stripe down the center of the body which serves as another identification aid. It has piercing-sucking mouthparts like all other aphids. Both winged and wingless forms occur.

## Hemiptera Suborder Sternorrhyncha (aphids, psyllids, scales, whiteflies)



Photo: Noel Troxclair

### Pecan Phylloxera

**Scientific name:** *Phylloxera devastatrix* Pergande  
(Hemiptera: Phylloxeridae)

**Facts:** The pecan phylloxera is an aphid-like insect responsible for gall formation on pecans. Phylloxera galls are formed on leaf stems or blades.

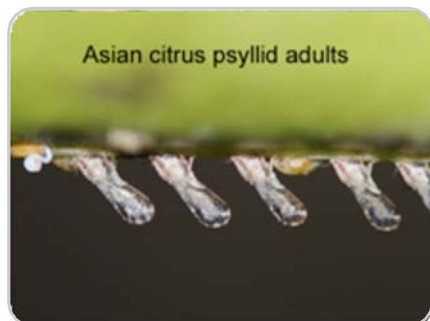


Photo: Noel Troxclair

### Psyllids

**Scientific name:**  
(Hemiptera: Psyllidae)

**Facts:** Psyllids are sometimes called "jumping plant lice", but they are not lice at all. Psyllids can carry several plant diseases and are therefore known as "vectors" (capable of transmitting a disease from one host to another). The pictured insect is an Asian citrus psyllid. Another species, the potato psyllid is the same species as the tomato psyllid, and we refer to either tomato psyllid or potato psyllid depending on which host plant it is infesting.



Photo: Patrick Porter

### Armored scales

**Scientific name:**  
(Hemiptera: Diaspididae)  
about 300 species in North America

**Facts:** Females of this family are very small and conceal their bodies with a hard covering formed by wax secreted by the insect and cast skins from earlier instars. The shape of the covering is characteristic of the species and they may be circular or elongate, smooth or rough and variable in color. Female bodies are flattened and disk-like with neither eyes nor legs. Males are winged and have well developed legs and antennae. Armored scales include several very important pest species like the San Jose scale, *Quadraspidiotus perniciosus* (Comstock) which is pictured here. It is a serious pest in orchard trees, shade trees and ornamental plants. Armored scales usually feed on woody plants.



Photo: Bart Drees

### Soft scales

**Scientific name:**  
(Hemiptera: Coccidae)  
about 85 species in North America

**Facts:** Female soft scales are elongate and usually convex. They have a smooth, hard exoskeleton or are covered with wax. Females usually have legs and antennae are reduced or absent. Males may be winged or wingless. The brown soft scale, *Coccus hesperidum* Linnaeus, is pictured here. Also included in this family are wax scales and tortoise shell scales.

## Hemiptera Suborder Sternorrhyncha (aphids, psyllids, scales, whiteflies)



Photo: Bart Drees

### Whiteflies

**Scientific name:** several species  
(Hemiptera: Aleyrodidae)

**Facts:** Whiteflies are generally quite small under 2mm even as adults. The adults are usually white as the name implies and fly slowly around plants. The life cycle is complex with the nymphs laying closely on the plant surface. The last stage is more like a pupal stage than a nymph. Whiteflies can be severe plant pests and some of them have strains that are resistant to insecticides. They are pests often in greenhouses but can be pests in field crops and vegetables too. The silverleaf whitefly, *Bemisia argentifolii* Bellows & Perring, is one of our worst pests in this family. The [eggs and larvae](#) look very different from the adults.

## Thysanoptera (thrips)



Photo: Extension Entomology

### Thrips

**Scientific name:**  
(Thysanoptera: Thripidae)

**Facts:** Thrips like this species often feed in flowers. They can be found by tapping the flower head over a piece of white paper or into a box. Thrips are so small they look like a hyphen that moves. The western flower thrips, *Frankliniella occidentalis*, is one of the more common species and occasionally a pest.



## Neuroptera (dobsonflies, lacewings, antlions, mantispids and owlflies)



### Dobsonfly

**Scientific name:** *Corydalus cornutus* (Linnaeus)  
(Neuroptera: Corydalidae)

**Facts:** Dobsonflies are large (some are over 3 inches long) insects with long membranous wings. The wings are typically held flat over the back when they are at rest. Adults are often attracted to lights but usually only near flowing rivers. The male has extremely long mandibles, not particularly good for biting. However, these mandibles are used to grasp the female during mating. The adult female can be an effective biter if given the opportunity. Dobsonflies are the adult form of a common aquatic immature called a hellgrammite.

Hellgrammites are aggressive predators found in flowing streams. They are good fish bait and are very often used as such.



Photo: Bart Drees

### Antlion

**Scientific name:** *Myrmeleon* sp.  
(Neuroptera: Myrmeleontidae)

**Facts:** Antlions have long clear wings with many veins and long delicate bodies. Some of them have dark markings or spots of color in the wings. They are usually over an inch long. Antlions may look similar to damselflies at first, but antlions have short but conspicuous antennae that are enlarged at the end. Antlions are likely to be found at lights at night but can be found in the daytime usually at rest on foliage. Immature antlions are called doodlebugs. They make pits in sandy areas and wait for ants and other insects to fall into the pits. Look for their pits under eaves of houses, under bridges, or in other sheltered areas. Adults are sometimes attracted to lights.



Photo: Joseph Berger

### Brown lacewing

**Scientific name:**  
(Neuroptera: Hemerobiidae)

**Facts:** While they are in different Families, brown lacewings and green lacewings have similar habits. Adults feed on pollen, nectar and honeydew and can also feed on aphids, spider mites or other prey. The larvae are voracious predators and can feed on any insect that is small enough. Brown lacewings are especially good at eating aphids.

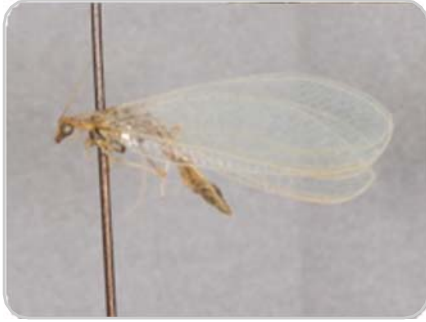


Photo: Patrick Porter

### Green lacewing

**Scientific name:** Genus *Chrysopa* and Genus *Chrysoperla*  
(Neuroptera: Chrysopidae)

**Facts:** Adult green lacewings feed on pollen, nectar and honeydew and can also feed on aphids, spider mites or other prey. The larvae are voracious predators and can feed on any insect that is small enough. Larval lacewings are key predators and often provide good biological control of many pests. The next time you see a pecan tree or rose bush covered with honeydew (indicating an aphid infestation), look around for lacewing larvae on the leaves.



Photo: Curt Williams

### Mantispid

**Scientific name:** *Mantispa* sp.  
(Neuroptera: Mantispidae)

**Facts:** Mantispids, or mantidflies, superficially resemble preying mantids because they have raptorial front legs. They can also resemble wasps and the wings are sometimes marked like a wasp. Some immature mantispids feed on spider egg masses.



Photo: John Jackman

### Owlflies

**Scientific name:**  
(Neuroptera: Ascalaphidae) few species

**Facts:** Owlflies are rather large insects and resemble dragonflies or damselflies. The long-clubbed antennae are key characters that separate this group from Odonata. The wing venation is more like lacewings than dragonflies. The larvae do not dig pits like antlions but lie on the surface of the ground and wait for prey to move past.

## Coleoptera (beetles and weevils)



Photo: Bart Drees

### Alfalfa weevil

**Scientific name:** *Hypera postica* (Gyllenhal)  
(Coleoptera: Curculionidae)

**Facts:** The alfalfa weevil is an important pest of alfalfa in most of the U. S. The larvae and the adults feed directly on foliage and can reduce the yield.



Photo: Bart Drees

### Blister beetles

**Scientific name:** *Epicauta* sp.  
(Coleoptera: Meloidae) many species

**Facts:** Blister beetles can cause blisters on skin if they walk on it because of a substance that they produce. This substance is very toxic, and a horse can be killed if it ingests 2 or more blister beetles. The toxin is still active even after the beetles die. There is more than one species of blister beetles that are striped in Texas. Blister beetles come in many colors including black, gray, yellow, and metallic blue. They can also have a variety of markings especially spots and stripes.



Photo: Winfield Sterling

### Boll Weevil

**Scientific name:** *Anthonomus grandis grandis* Boheman  
(Coleoptera: Curculionidae)

**Facts:** The boll weevil is a hard-shelled, grayish to brown, long-legged beetle, about 1/4 inch long with a slender snout, and two spurs on the inside of each front leg. Larvae are white crescent-shaped grubs found inside cotton squares.

## Coleoptera (beetles and weevils)



Photo: John Jackman

### Carpet Beetles

**Scientific name:**

(Coleoptera: Dermestidae) several species

**Facts:** Carpet beetle adults are small, mottled brown to solid black, oval-shaped beetles about 1/8 inch long. Larvae are carrot-shaped, hairy or bristly, brownish, and about 1/4 inch long. Larvae can damage textiles, even synthetic materials. Adults often are found on window ledges indoors or outdoors on flowers in the early spring.



Photo: John Jackman

### Carrion Beetles

**Scientific name:**

(Coleoptera: Silphidae) several species

**Facts:** Carrion beetles are typically found in decaying animal carcasses. Some carrion beetles are very attractively colored and they are beneficial by helping to break down animal carcasses.



Photo: Patrick Porter

### Caterpillar Hunter

**Scientific name:** *Calasoma sp.*

(Coleoptera: Carabidae)

**Facts:** The caterpillar hunter is one of the largest beetles of the ground beetle family. They are active predators and thus the name caterpillar hunter is attributed to this species. They make attractive specimens because they have green metallic coloration across their backs.



Photo: Bart Drees

### Click beetles

**Scientific name:**

(Coleoptera: Elateridae) several species

**Facts:** Click beetles are generally brown or black in color. They are elongated and flattened and quite similar in shape. Many of them are rather small and under 1/2 inch in length while a few are over two inches long. The eyed click beetle, *Alaus oculatus*, and other members of this genus have conspicuous eye spots on the pronotum. Click beetles get their name from the behavior they exhibit when placed on their back. They tense the body and thrust the pronotum downward with a sharp clicking sound. This action flips the beetle into the air for several inches and they usually land right side up after this maneuver. The click beetle genus *Pyrophorus* has eye spots that bioluminesce. The eye spots stay glowing for long periods and can be seen for over a hundred feet away on a dark night. The ability to bioluminesce is well known in the firefly family, Lampyridae, but is uncommon in other insect groups

## Coleoptera (beetles and weevils)



Photo: Bart Drees

### Colorado Potato Beetle

**Scientific name:** *Leptinotarsa decemlineata* (Say)  
(Coleoptera: Chrysomelidae)

**Facts:** The Colorado potato beetle has a convex body shape, is about 3/8 inch long, yellow, and has five black stripes on each wing cover. Larvae are red to yellow, humpbacked, and as long as 3/5 inch. Both adults and larvae feed on potato foliage



Photo: H. A. Turney

### Confused Flour Beetle

**Scientific name:** *Tribolium confusum* Jacquelin du Val  
(Coleoptera: Tenebrionidae)

**Facts:** The confused flour beetle is a shiny, reddish brown beetle about 1/7 inch long. It is a common pest of stored products. Both larvae and adults feed on starchy materials such as flour or cracked kernels of grain



Photo: C. Allen

### Cottonwood borer

**Scientific name:** *Plectrodera scalator* (Fabricius)  
(Coleoptera: Cerambycidae)

**Facts:** Cottonwood borers are robust and large with the adults about 1 1/4 inch long. The long antennae make them appear even larger. They are black and white in color but there is a lot of variation in the pattern with some specimens almost entirely black. The larvae are wood borers that feed in cottonwood and willow. They generally infest trees that are weak or dying but sometimes attack trees that are quite healthy. Adults also feed on the same trees and can sometimes be found in large numbers near the base of a tree



Photo: Mike Merchant

### Elm leaf beetle

**Scientific name:** *Pyrrhalta luteola* Muller  
(Coleoptera: Chrysomelidae)

**Facts:** Elm leaf beetle adults are about 1/4 inch long, overall yellow to brownish-green in body color, and marked with black spots on the head and thorax. They have broad black stripes following the outer wing cover (elytra) margins. Larvae grow to about 1/2 inch and are yellowish with black spots and broad stripes along the sides. Pupae are 1/4 inch long and are bright orange-yellow with scattered black bristles.

This insect is a foliage-feeding pest on elms especially in the High Plains

## Coleoptera (beetles and weevils)



Photo: Bart Drees

### Firefly

**Scientific name:**

(Coleoptera: Lampyridae)

**Facts:** Fireflies are well known for their nighttime light displays. The light-producing organs of these soft-bodied beetles are located in the yellowish-green areas on the undersurface of the abdomen. The production of light (bioluminescence) is found in relatively few other insect families.



Photo: Bart Drees

### Flatheaded Borer

**Scientific name:** many species

(Coleoptera: Buprestidae)

**Facts:** Flatheaded borers are larvae of metallic wood borers. They range in length from 1/10 to over 1 1/4 inches. Many adults, especially the larger species, can be found on freshly cut wood. The smaller species, in the genera *Agrilus* and *Acmaeodera*, can be collected on leaves in the sunlight, or on flowers, they are especially active in the spring. Larvae are called flat-headed borers because the thorax is flattened and the head retracted. They tunnel just below the bark of dead or dying wood. The smaller species are more common in small twigs and some are root borers. The smallest species are leaf miners in oaks, certain legumes and other plants. The species pictured is *Chalcophora virginiensis* (Drury) is one of our largest species and it feeds on pine as larvae. They can be collected in hot weather in the summer on pine logs.



Photo: Patrick Porter

### Flea Beetle

**Scientific name:** many species

(Coleoptera: Chrysomelidae, Subfamily Alticinae)

**Facts:** Flea beetles range in size from minute to more than 1/4 inch long. Most are dark with a smooth, shiny surface; however, some are striped. Hind legs are enlarged, enabling the beetles to jump vigorously when disturbed. They damage a wide range of vegetables, riddling the leaves with small holes.



Photo: Noel Troxclair

### Japanese beetle

**Scientific name:** *Popillia japonica*

(Coleoptera: Scarabaeidae)

**Facts:** Over 300 plant species are hosts of Japanese beetles which are widespread and destructive pests of turf, landscape, and ornamental plants and fruit, garden and field crops. Japanese beetle larvae, known as white grubs, feed on roots, especially of grass plants, while the adult beetles feed on foliage, flowers and fruit. The beetles are a distinctive metallic green with copper-colored wings and five tufts of white "hairs" along each side of the abdomen.

## Coleoptera (beetles and weevils)



Photo: Bart Drees

### Lady Beetle

**Scientific name:** many species  
(Coleoptera: Coccinellidae)

**Facts:** There are many species of lady beetles in Texas. The convergent lady beetle, *Hippodamia convergens* Guérin-Ménéville, pictured here in the bottom center is one of the most common and easily recognized species. It is called convergent because the white bars on the pronotum converge. Lady beetles are recognized as beneficial insects because both the adults and larvae feed on aphids and other small insects



Photo: John Jackman

### Lesser Grain Borer

**Scientific name:** *Rhyzopertha dominica* (Fabricius)  
(Coleoptera: Bostrichidae)

**Facts:** The lesser grain borer both in the larval and adult stages is a serious pest of stored grain. The adult feeds on whole or cracked grain, and larvae develop inside kernels, destroying the internal contents. The adult is about 1/8 inch long and has powerful chewing mouthparts. Note how the head is turned down under the thorax, a distinguishing characteristic of the family to which this insect belongs.



Photo: John Jackman

### Locust Borer

**Scientific name:** *Megacyllene robiniae* (Forster)  
(Coleoptera: Cerambycidae)

**Facts:** Locust borer larvae feed in living black locust trees. Although this is one of the most commonly seen longhorned beetle species in Texas, there are also many other species that occur here. There is a wide range of variation in color and size. Many of them are quite large, well over 2 inches long. Some have gaudy colors such as the locust borer's black and yellow. Some very closely resemble bees and wasps in overall appearance. Long antennae and bright color patterns make these favorites for collectors.



Photo: John Jackman

### Maize weevil (rice weevil)

**Scientific name:** *Sitophilus zeamais* (*Sitophilus oryzae*)  
(Coleoptera: Curculionidae)

**Facts:** Maize weevil (rice weevil) is a small weevil only a few millimeters long. It is a serious pest in stored grain especially corn and rice. Adults are dark brown to black in color with lighter spots on the elytra. This weevil also has an elongated "snout". The larva like most weevil grubs are more or less "C-shaped".

## Coleoptera (beetles and weevils)



Photo: G. McIlveen, Jr.

### May beetle or Junebug

**Scientific name:** *Phyllophaga* sp.  
(Coleoptera: Scarabeidae)

**Facts:** The genus *Phyllophaga* is a large one in Texas with about 150 species. Identification to species is difficult. In addition, there are several other genera that are similar in appearance. The larvae feed on roots of grasses and other plants and they can cause damage in lawns and crops. Even though the genus name means "leaf feeding" the adults do not cause damage very often. These common insects are easily collected under lights in the spring and early summer



Photo: Bart Drees

### Mealworm or yellow mealworm

**Scientific name:** *Tenebrio molitor* Linnaeus  
(Coleoptera: Tenebrionidae)

**Facts:** Mealworms are pests of stored grain. However, this species is best known as a pet food for lizards, frogs, and snakes. The larvae are also used as fish bait. Because this insect is relatively easy to grow, it has been used in many experiments and scientific studies.



Photo: John Jackman

### Plum Curculio

**Scientific name:** *Conotrachelus nenuphar* (Herbst)  
(Coleoptera: Curculionidae)

**Facts:** Plum curculio adults are weevils about 1/4 inch long with projections on the wing covers. Larvae are white C-shaped grubs which feed in fruit.



Photo: Bart Drees

### Predaceous Diving Beetle

**Scientific name:**  
(Coleoptera: Dytiscidae)

**Facts:** Predaceous diving beetles range in size from 1/16 inch to almost 2 inches long. Many of them are black or brown; some have markings. These beetles are predaceous as adults and larvae. Larvae, commonly known as water tigers, are not recommended for use in aquariums because they can easily capture and kill small fish. The adult beetles come to the surface of the water tail end up in order to replenish their air supply.



## Coleoptera (beetles and weevils)

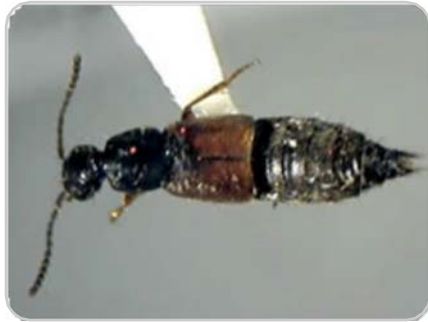


Photo: John Jackman

### Rove beetles

**Scientific name:**  
(Coleoptera: Staphylinidae)

**Facts:** Rove beetles are a large family in terms of species. Most of them lead rather secret lives and are easily overlooked. They are most commonly found under bark, logs or rocks and at lights at night. Some of them superficially resemble earwigs because of the short elytra. The larvae and adults are generally considered to be predators



Photo: Bart Drees

### Sawtoothed grain beetle

**Scientific name:** *Oryzaephilus surinamensis* Linnaeus  
(Coleoptera: Sylvanidae)

**Facts:** These small beetles are pests in food like cereal, corn meal, and flour. They can enter your house in infested products from the grocery or they could move in from the surrounding habitat. They get their name from the jagged saw-like edges on the pronotum of the adults.



Photo: John Jackman

### Soldier Beetles

**Scientific name:**  
(Coleoptera: Cantharidae)

**Facts:** Soldier beetles are common on flowers, where they feed on nectar and pollen. They come in a variety of shapes and sizes. Some species can be confused with fireflies.



Photo: Bart Drees

### Spotted Cucumber Beetle

**Scientific name:** *Diabrotica undecimpunctata howardi* Barber  
(Coleoptera: Chrysomelidae)

**Facts:** Spotted cucumber beetle larvae are also known as the southern corn rootworm. Adults are yellowish or yellowish-green with 12 black spots on the back and about 1/4 inch long. Adults are active and commonly found. A wide variety of plants are attacked by the larvae.



Photo: Extension Entomology

### Sweet Potato Weevil

**Scientific name:** *Cylas formicarius elegantulus* (Summers)  
(Coleoptera: Curculionidae)

**Facts:** Sweet potato weevil grubs are legless, white, with pale brown heads, and are as long as 1/3 inch. Adults are red and blue-black beetles, about 1/4 inch long, with the snout projected forward.

## Coleoptera (beetles and weevils)



Photo: Bart Drees

### Tiger beetles

**Scientific name:** *Cicindela* sp.  
(Coleoptera: Carabidae) see note below

**Facts:** Tiger beetles are fast, agile predators and are a challenge to collect. They are found often in sandy areas and along trails in wooded areas. They are one of the favorite groups for beetle collectors and some collectors specialize only in this group. Some authorities place the tiger beetles in a separate family called Cicindelidae. However, the more modern view places these beetles in the ground beetle family, Carabidae



Photo: John Jackman

### Tumbling flower beetles

**Scientific name:** *Mordella*, *Mordellistena* and other genera  
(Coleoptera: Mordellidae)

**Facts:** Tumbling flower beetles can be very abundant on flowers especially those in the carrot family (Umbellifera) and aster family (Compositae). The larvae feed in stems and dead wood. The pointed tip of the abdomen gives the family a second common name, the spine-tailed beetles.



Photo: Bart Drees

### Water Scavenger Beetle

**Scientific name:**  
(Coleoptera: Hydrophilidae)

**Facts:** Water scavenger beetles are also common in a wide range of sizes and are generally brown or black. Some water scavenger beetles have a conspicuous ridge on the underside of the thorax. This ridge easily distinguishes them from predaceous diving beetles. Adults usually feed on decaying matter; larvae are usually predaceous. To breathe, water scavenger beetles hold an air bubble on the undersurface of the body. These beetles come to the water surface head first.



Photo: Bart Drees

### Whirligig Beetles

**Scientific name:** *Dineutes* and *Gyrinus*  
(Coleoptera: Gyrinidae)

**Facts:** Whirligig beetles are found on ponds and streams. They congregate in large numbers and scurry about the water surface in a random pattern. When handled, these beetles give off an apple-like odor. Whirligig beetles are unique in that their compound eyes are divided, giving them a four-eyed appearance. This eye division allows them to see above and below the water surface at the same time.

## Mecoptera (scorpionflies)



Photo: Curt Williams

### Scorpionflies

**Scientific name:**  
(Order: Mecoptera)

**Facts:** Scorpionflies are attractive insects with patterned wings. They get the name scorpionfly since the male genitalia is held over the back of the abdomen in the typical defensive posture of scorpions. However, they are harmless and cannot sting. Females lack the conspicuous genitalia. They are predators and capture other insects as food using their legs.

## Siphonaptera (fleas)



Photo: Roger Meola

### Fleas

**Scientific name:**  
(Siphonaptera: Pulicidae)

**Facts:** Adult fleas are legendary for their jumping ability. The cat flea, *Ctenocephalides felis* (Bouché), is the most common flea pest of dogs and cats in Texas. Adults can be found on the pet and sometimes move to humans for a blood meal. Flea larvae are small, elongate, and thin. The larvae are found in the yard or around the pet bedding area and they feed on skin flakes, hair and other organic matter.

## Diptera (flies, gnats, midges and mosquitoes)



Photo: Bart Drees

### Bee Fly

**Scientific name:**  
(Diptera: Bombyliidae)

**Facts:** Bee flies are commonly found on flowers. They are fuzzy bodied flies that feed on nectar. You can differentiate them from flies by counting wings (flies have 2, bees have 4).



Photo: J. V. Robinson

### Black flies or Buffalo gnats

**Scientific name:** *Simulium* sp.  
(Diptera: Simuliidae)

**Facts:** Buffalo gnats are small humpbacked biting flies. They are persistent biters and even crawl into the hair to bite the scalp. Bites from them are generally worse than mosquito bites and the bite can bleed long after the gnat has left. They are a nuisance and sometimes a serious pest of humans, pets, and livestock. The larvae are found in flowing water where they attach to rocks, sticks, and other structures and sift food from the water as it floats by. Adults are strong fliers so they can be found long distances from water.

## Diptera (flies, gnats, midges and mosquitoes)



Photo: John Jackman

### Blow flies

**Scientific name:**

(Diptera: Calliphoridae) several species

**Facts:** These flies are about the size of a house fly or a little larger, but many of them are brightly colored in green or blue. Adults arrive at a dead animal where they lay eggs. Maggots feed on the dead flesh of the carcass. Most of them are scavengers and some of the larvae can also feed on excrement. A few species in this family have been reared under septic conditions and the larvae are used for treating certain



Photo: C. Hoelscher

### Common Cattle Grub

**Scientific name:** *Hypoderma lineatum* (Villers)

(Diptera: Oestridae)

**Facts:** The common cattle grub or heel fly is a hairy fly 1/2 inch long, or about the size of a honey bee. The front, sides, and back of the head are covered with yellowish white hairs. Adult mouthparts are small (reduced). Larvae have hooks as mouthparts for tearing flesh. Larvae tunnel through the bodies of cattle and form lumps in the backs of the cattle before adult flies emerge.



Photo: Patrick Porter

### Crane Flies

**Scientific name:**

(Diptera: Tipulidae)

**Facts:** There are literally thousands of species of crane flies in North America. They are conspicuously long legged and commonly attracted to lights. Larvae of crane flies generally grow in damp or wet habitats. Many people think that these are large mosquitoes, however, they cannot bite.



Photo: Bart Drees

### Deer flies

**Scientific name:** *Chrysops* sp.

(Diptera: Tabanidae)

**Facts:** Deer flies are biting flies with a pattern in the wing. They are larger than a house fly but smaller than most horse flies. They can bite human, pets, and livestock. Larvae are large maggots usually in slow moving water where they feed on organic matter. Adult flies can be found around lakes and ponds. However, they are also a pest of livestock in rangeland where the adults like to roost in cedar trees. In Texas, they are sometimes called "cedar flies".

## Diptera (flies, gnats, midges and mosquitoes)



Photo: John Jackman

### Flesh flies

**Scientific name:**  
(Diptera: Sarcophagidae)

**Facts:** These flies look much like a house fly and most are blackish with grey stripes, but some have a red tip on the abdomen. Larvae usually feed on some sort of animal material. There are scavengers on dead animals, parasites of other insects, and a few are parasites of vertebrates.



Photo: Patrick Porter

### Horn Fly

**Scientific name:** *Haematobia irritans* (Linnaeus)  
(Diptera: Muscidae)

**Facts:** The horn fly looks like the house fly but is only about half as large. Adults have piercing-sucking mouthparts and suck blood. Adults rest with their heads pointed downward on the backs of livestock. Larvae have hooks in their mouthparts and feed in cattle manure.



Photo: Bart Drees

### Horse Fly

**Scientific name:** *Tabanus* sp.  
(Diptera: Tabanidae)

**Facts:** Horse flies suck blood from livestock. Some species are only 3/4 inch long. The common black horse fly attains a length of 1 1/4 to 1 1/2 inches. Horse flies have large, compound eyes.



Photo: Patrick Porter

### House Fly

**Scientific name:** *Musca domestica* Linnaeus  
(Diptera: Muscidae)

**Facts:** House fly adults are 1/4 to 5/16 inch long. The top part of the thorax is dusty gray and contains four equally broad stripes running from front to back. The fourth wing vein makes a sharp bend to the outside and almost meets the third at the wing tip. Adults have sponging and sucking mouthparts, while larvae have hooks in their mouthparts for tearing.



### Mosquito

**Scientific name:** Family Culicidae  
(Diptera: Culicidae)

**Facts:** Mosquitoes are slender-bodied, long-legged insects, less than 1/2 inch long, with delicate wings fringed with scales. Males have bushy antennae. Mosquitoes have long, slender sucking mouthparts. Only adult females suck blood; males feed on nectar.

## Diptera (flies, gnats, midges and mosquitoes)



Photo: Bart Drees

### Robber flies

**Scientific name:** several species  
(Diptera: Asilidae)

**Facts:** Robber flies are very common insects especially in the summer. They are active predators that catch insects on the wing. They often sit on a conspicuous perch and fly out to catch insects passing by. A few of the robber flies mimic bumblebees and are very difficult to distinguish without a close inspection. Of course, they have only two wings like all flies while bumble bees have four wings. Robber flies also have a concave area on the top of the head between the eyes.



Photo: Patrick Porter

### Sheep keds

**Scientific name:**  
(Diptera: Hippoboscidae)

**Facts:** Sheep keds are wingless even as adults and have legs that are widely spread to the sides of the thorax. They feed on sheep taking blood meals. They can be found deep in the wool right next to the skin.



Photo: Extension Entomology

### Sorghum Midge

**Scientific name:** *Contarinia sorghicola* (Coquillet)  
(Diptera: Cecidomyiidae)

**Facts:** Sorghum midge adults are reddish and smaller than a sorghum seed. Their eggs are deposited in sorghum seed at the time that heads bloom. The larvae develop inside the seeds.



Photo: Patrick Porter

### Stable Fly

**Scientific name:** *Stomoxys calcitrans* (Linnaeus)  
(Diptera: Muscidae)

**Facts:** Stable fly adults are about 1/4 inch long and have grayish-colored bodies and piercing-sucking mouthparts. Except for a pointed, stiff, slender beak sticking out from under the head, a stable fly adult resembles a house fly. Seven dark, rounded spots are on the upper side of the abdomen. Larvae have hooks in their mouthparts and feed in manure.

## Diptera (flies, gnats, midges and mosquitoes)



Photo: Patrick Porter

### Syrphid Fly ■

**Scientific name:** many species  
(Diptera: Syrphidae)

**Facts:** Syrphid flies are sometimes called flower or hover flies. They are normally brightly colored in yellows and blacks. Many people mistake these for bees. Larvae of syrphid flies occur in a variety of habitats.

Many of them feed on aphids, some occur in sewage, and others in decaying wood.

## Trichoptera (caddisflies)



Photo: Bart Drees

### Caddisflies

**Scientific name:** many species  
(Order: Trichoptera)

**Facts:** Caddisflies are an important component of the aquatic insect community. Larvae live in water, especially flowing streams. Larvae look much like a caterpillar with few hairs. Some larvae make small cases to hide in made out of sticks, leaves, sand, or pebbles. However, some larvae do not make any case at all. They feed on organic matter on the bottom of the stream. Adults are alive for only a day or two, do not feed and are attracted to lights at night. The adults look like small moths with long antennae and most of them are drab brown or gray.

## Lepidoptera (butterflies, moths and skippers)



Photo: Nick Grishin

### Alfalfa Caterpillar or Clouded Sulfur

**Scientific name:** *Colias eurytheme* Boisduval  
(Lepidoptera: Pieridae)

**Facts:** The larvae of this species is referred to as alfalfa caterpillar. The alfalfa caterpillar is a representative of a group of butterflies known as yellows or sulphurs. The alfalfa caterpillar has at least two-color forms, one yellow and one nearly white. Intermediates between these colors also occur. Alfalfa caterpillars can become exceedingly numerous in alfalfa and are sometimes pests of that crop.



Photo: John Jackman

### Armyworm

**Scientific name:** *Pseudaletia unipuncta* (Haworth)  
(Lepidoptera: Noctuidae)

**Facts:** Armyworm moths are a medium gray in color. They are distinguished by a single small white spot which always occurs in the front wing. Armyworm larvae are dark green to greenish-brown with three stripes on each side: first a pale orange white-bordered stripe, next a dark brown almost blackish stripe, and below another pale orange stripe edged with white on the upper side. They are about 1 1/2 inches long when full grown. Armyworm larvae prefer grasses, corn and small grains.



Photo: Bart Drees

### Bagworm

**Scientific name:** *Thyridopteryx ephemeraeformis* (Haworth)  
(Lepidoptera: Psychidae)

**Facts:** Bagworms are brownish, rather fat-bodied worms which live within tough silken bags. The bags, when full grown, are up to 2 inches long and hang from leaves and twigs of evergreens which they attack. Other species in this family feed on oaks, elms and various other trees.



Photo: Bart Drees

### Black Swallowtail

**Scientific name:** *Papilio polyxenes asterius* Stoll  
(Lepidoptera: Papilionidae)

**Facts:** Larvae of the black swallowtail feed on celery, carrots, and dill. These caterpillars are yellow with black stripes across the back. Adults are pollinators of nectar producing, flowering plants.



## Lepidoptera (butterflies, moths and skippers)



Photo: Patrick Porter

### Bollworm or corn earworm

**Scientific name:** *Helicoverpa zea* (Boddie)  
(Lepidoptera: Noctuidae)

**Facts:** Bollworm larvae can feed on over 250 plant species. It is a pest on cotton, corn, tomatoes, sorghum, soybeans, and other crops. This pest is one of the worst on cotton. Adult moths are attracted to lights at night. There are artificial pheromone traps that are used to trap male moths to monitor the populations.



Photo: Bart Drees

### Buckeye

**Scientific name:** *Junonia coenia* (Hubner)  
(Lepidoptera: Nymphalidae)

**Facts:** The buckeye is a widely distributed butterfly and the larvae feed on plantain. The eye spots on the upper surface of the wings are the conspicuous characteristics of the buckeye.



Photo: Nick Grishin

### Cabbage butterflies

**Scientific name:**  
(Lepidoptera : Pieridae)

**Facts:** The cabbage butterfly, *Pieris rapae* (Linnaeus), is the common white butterfly throughout most of the eastern US. The larvae of this species is a pest when it feeds on cabbage, broccoli, and related crops but it also feeds on many wild host plants. There are several other white butterflies that also share the name as cabbage butterflies.



Photo: Extension Entomology

### Cabbage Looper

**Scientific name:** *Trichoplusia ni* (Hubner)  
(Lepidoptera: Noctuidae)

**Facts:** The cabbage looper is a green caterpillar with white stripes down the back. They have only three pairs of fleshy prolegs (legs on the abdomen) and loop when crawling. They grow to 1 1/4 inches long. Adults are a brown moth with siphoning mouthparts.

## Lepidoptera (butterflies, moths and skippers)



Photo: Bart Drees

### Cecropia

**Scientific name:** *Hyalophora cecropia* (Linnaeus)  
(Lepidoptera: Saturniidae)

**Facts:** The cecropia is one of our largest moths. This grayish moth can typically be found in wooded areas in the spring and summer. Male moths have feathery antennae and are strongly attracted to the unmated females. The huge larvae feed on leaves of various broad-leafed trees.



Photo: John Jackman

### Cutworms

**Scientific name:**  
(Lepidoptera: Noctuidae)

**Facts:** The cutworms are a group of Noctuidae that share the habit of hiding in the soil and usually feed on plants near the soil. A few of the species also climb plants to feed. The adults are typically drab moths (like the black cutworm shown here) usually colored from nearly black to gray or brown. The larvae are typically grey, brown, or green with short hairs and few markings. Often the damage is seen much easier than the caterpillars.



Photo: Patrick Porter

### Fall Armyworm

**Scientific name:** *Spodoptera frugiperda* (J.E. Smith)  
(Lepidoptera: Noctuidae)

**Facts:** Fall armyworm larvae are tan or green to nearly black caterpillars with three very thin yellow lines down the back and a wider one on each side. Prominent white markings form an upside-down Y on the front of the head readily distinguishing it from other armyworms. Full-grown larvae may attain a length of 1 to 1 1/2 inches.



Photo: Catherine Barr

### Fall Webworm

**Scientific name:** *Hyphantria cunea* (Drury)  
(Lepidoptera: Arctiidae)

**Facts:** The fall webworm makes webs in pecan and other trees. Larvae reside inside in a mass within the web. These larvae are quite hairy, pale-yellow caterpillars with black spots about 1 inch long when full grown. Adult moths are medium sized and generally white with black markings. The markings are quite variable and some moths will be heavily marked. Several generations occur each year.

## Lepidoptera (butterflies, moths and skippers)



Photo: G. McIlveen, Jr.

### Forest tent caterpillar

**Scientific name:** *Malacosoma disstria* Hubner  
(Lepidoptera: Lasiocampidae)

**Facts:** In spite of the name, the forest tent caterpillar does not make a tent. This species is common and widespread for a few weeks in the spring when it feeds on many species of broad-leaved trees, especially elms and oaks. Caterpillars can be identified by a series of white key-hole shaped markings with one per segment down the back. The adults are rather drab, fuzzy moths that are only out for a few weeks in late spring or early summer. The eastern tent caterpillar, *Malacosoma americanum*, makes a tent where branches meet and feeds mostly on peaches, plums, cherries, and hawthorns. The caterpillars have a single white dash on each segment of the back.



Photo: Mike Quinn

### Giant Swallowtail

**Scientific name:** *Papilio cresphontes* Cramer  
(Lepidoptera: Papilionidae)

**Facts:** The giant swallowtail is the largest butterfly in North America. It is easily recognized by the conspicuous yellow pattern on a black background. Adults are pollinators of nectar producing, flowering plants. Larvae of the giant swallowtail feed on citrus and are called orange dogs. Caterpillars in the north feed on other plants such as prickly ash.



Photo: Patrick Porter

### Gray Hairstreak (Cotton Square Borer)

**Scientific name:** *Strymon melinus* (Hubner)  
(Lepidoptera: Lycaenidae)

**Facts:** The gray hair streak is an attractive little butterfly with minute tails on its hind wing although these tails are often broken off. Larvae of the gray hair streak are known as cotton square borers and attack cotton squares and hibiscus buds.



Photo: Bart Drees

### Great leopard moth

**Scientific name:** *Hypercompe scribonia* (Stoll)  
(Lepidoptera: Arctiidae)

**Facts:** This moth can be quite common under lights in some years. The fuzzy caterpillars are often seen migrating across roads and they have black hairs with a pink body underside. There is confusion with the common name "leopard moth" which is also used for a moth in the carpenter moth family, Cossidae.

## Lepidoptera (butterflies, moths and skippers)



Photo: Patrick Porter

### Greater Wax Moth

**Scientific name:** *Galleria mellonella* Linnaeus  
(Lepidoptera: Pyralidae)

**Facts:** The greater wax moth is a pest in beehives. Caterpillars of this species tunnel through the comb, feeding on wax, honey and pollen. They are not usually a problem in healthy hives, but, if not controlled, can be extremely damaging to weakened hives or to combs placed in storage.



Photo: John Jackman

### Indianmeal moth

**Scientific name:** *Plodia interpunctella* (Hubner)  
(Lepidoptera: Pyralidae)

**Facts:** The Indianmeal moth is a common stored food pest. Adults often appear to have the front wing very dark. In some specimens most of the dark wing scales are lost and they appear very light in color. There are actually several species of caterpillars that feed on grain products, nuts, dried fruit and other foods. Caterpillars in this group have few hairs and usually spin webbing in the food where they feed.



Photo: Ed Knudson

### Io Moth

**Scientific name:** *Automeris io* (Fabricius)  
(Lepidoptera: Saturniidae)

**Facts:** Io moths are smaller than most silk moths with a wingspan of only two to three inches. They also have large eye spots in the hind wings. Io moths are yellow in color with females being darker colored than males. The larvae have clusters of hairs on conspicuous raised areas on each segment. These hairs can be very irritating to humans. Larvae occasionally attack corn and roses in large numbers.



Photo: Bart Drees

### Luna Moth

**Scientific name:** *Actias luna* (Linnaeus)  
(Lepidoptera: Saturniidae)

**Facts:** The luna moth is a very elegant looking silk moth. Adults are often green in color with long "tails" extending from the hindwing. Larvae feed on sweet gum, hickory, walnut and persimmon. Some individuals will show darker colorations tending toward purple.

## Lepidoptera (butterflies, moths and skippers)



Photo: Mike Quinn

### Monarch

**Scientific name:** *Danaus plexippus* (Linnaeus)  
(Lepidoptera: Danaidae)

**Facts:** The monarch is a very attractive orangish-brown and black butterfly. Larvae of this butterfly incorporate a toxin into their body from feeding on milkweed which makes them taste bad to birds and other predators. The orange and black color pattern is a warning to predators indicating that the butterfly tastes bad. Monarchs migrate north in the spring and the next generation(s) migrate south in the fall. They overwinter in Mexico. Monarchs are the Texas State Butterfly.



Photo: Bart Drees

### Mourningcloak butterfly

**Scientific name:** *Nymphalis antiopa* (Linnaeus)  
(Lepidoptera : Nymphalidae)

**Facts:** Mourningcloak butterflies are one of the few butterflies that spend the winter as adults. Consequently, they can be found early in the season before most butterflies are on the wing. They get their name because the drab black of the wings appears like a cloak that was used to cover a casket in past times.



Photo: E. Knudson

### Peachtree Borer

**Scientific name:** *Synanthedon exitiosa* (Say)  
(Lepidoptera: Sesiidae)

**Facts:** Peachtree borer adults are moths. Females are blue-black with clear hind wings and an orange crossband on the abdomen. Adult male moths have wings nearly clear and several narrow yellow bands across the abdomen. Larvae are about 1 inch in length, whitish in color with a dark brown head and a plate behind the head. Larvae tunnel in trunks of peach trees and produce a mass of frass in the process.



Photo: John Jackman

### Pecan Nut Casebearer

**Scientific name:** *Acrobasis nuxvorella* (Neunzig)  
(Lepidoptera: Pyralidae)

**Facts:** The pecan nut casebearer is an important pest of pecans. The adult moth has a siphoning mouth tube. Larvae have chewing mouthparts. Several generations occur each year. The first generation is usually the most damaging in pecans since it damages terminal growth as nuts are first formed.

## Lepidoptera (butterflies, moths and skippers)



Photo: Winfield Sterling

### Pink Bollworm

**Scientific name:** *Pectinophora gossypiella* (Saunders)  
(Lepidoptera: Gelechiidae)

**Facts:** Pink bollworm are pinkish-white, brown-headed caterpillars up to 1/2 inch long and are found in cotton bolls. They are easily distinguished from boll weevil grubs by having 8 pairs of legs and prolegs.



Photo: Extension Entomology

### Polyphemus

**Scientific name:** *Antheraea polyphemus* (Cramer)  
(Lepidoptera : Saturniidae)

**Facts:** The polyphemus is another one of the giant silk moths. It is generally a medium brown color with conspicuous eye spots in the wings. The larvae feed on various broad-leafed trees. They usually form pupae on the ground where they roll leaves into a cocoon.



Photo: Mike Quinn

### Question Mark

**Scientific name:** *Polygonia interrogationis* (Fabricius)  
(Lepidoptera: Nymphalidae)

**Facts:** The question mark has a pair of silver spots on the lower surface of the hind wing. This is quite conspicuous against the leaf brown pattern of the hind wing. Its name is derived from the similarity of these silver spots to the form of a question mark. There are several closely related species to the question mark and care must be taken in their identification.



Photo: Bart Drees

### Red Admiral

**Scientific name:** *Vanessa atalanta rubria* (Fruhstorfer)  
(Lepidoptera: Nymphalidae)

**Facts:** The red admiral occurs across the northern hemisphere. The larvae feed on nettles and male adults are known to be territorial, defending a particular nettle patch against other males. Adults are pollinators of nectar producing, flowering plants.

## Lepidoptera (butterflies, moths and skippers)



Photo: Patrick Porter

### Saltmarsh Caterpillar

**Scientific name:** *Estigmene acrea* (Drury)  
(Lepidoptera: Arctiidae)

**Facts:** Saltmarsh caterpillar adult males and females differ. Females have white hind wings and males have yellow hind wings. The caterpillars have a very fuzzy appearance and attack a wide variety of plants including cotton.



Photo: Patrick Porter

### Silverspotted Skipper

**Scientific name:** *Epargyreus clarus* (Cramer)  
(Lepidoptera: Hesperiiidae)

**Facts:** The silverspotted skipper is one of our larger skippers. Its name comes from the large silver spots that are visible on the underside of its hindwings. Skippers form an intermediate group between butterflies and moths. They are more thick-bodied than typical butterflies, yet resemble butterflies in other ways such as in being active during the day. The antennae of most skippers are hooked. The name skipper comes from the characteristic fast and bouncy flight of these butterflies.



Photo: Unknown

### Sorghum Webworm

**Scientific name:** *Nola sorghiella* Riley  
(Lepidoptera: Noctuidae)

**Facts:** Sorghum webworm larvae attack grain sorghum heads. The larvae are greenish-yellow to tan with four darker stripes down the back and are covered with closely spaced hairs and spines. The mature larvae are about 1/2 inch long and have chewing mouthparts with which they consume the developing grain.



Photo: Patrick Porter

### Southwestern corn borer

**Scientific name:** *Diatraea grandiosella* Dyar  
(Lepidoptera: Crambidae)

**Facts:** The southwestern corn borer is an important pest of corn especially in the High Plains. This pest often borers into corn stalks causing yield loss or lodging (falling over) of the corn plants. The adult is a whitish moth.

## Lepidoptera (butterflies, moths and skippers)



Photo: Extension Entomology

### Tiger Swallowtail

**Scientific name:** *Papilio glaucus* Linnaeus  
(Lepidoptera: Papilionidae)

**Facts:** The tiger swallowtail is nearly as large as the giant swallowtail. The yellow background with black stripes are the obvious reason for their name. Some females are black and can be mistaken for black swallowtails. Adults are pollinators of nectar producing, flowering plants.



Photo: Patrick Porter

### Tomato Hornworm

**Scientific name:** *Manduca quinquemaculata* (Haworth)  
(Lepidoptera: Sphingidae)

**Facts:** Tomato hornworms are large (some as long as 4 inches), green caterpillars with diagonal white bars on the sides and a slender horn at the tip of the body. Adults have long, sucking tubes for mouthparts, while larvae have chewing mouthparts. Larvae and adults often are confused with the tobacco hornworm which it closely resembles. The tobacco hornworm feeds on the same plants and sometimes is more common than the tomato hornworm. Adult tomato hornworms have a spindle shaped body with 5 yellow-orange markings along each side of the abdomen.



Photo: John Jackman

### Underwing Moth

**Scientific name:**  
(Lepidoptera: Noctuidae) many species

**Facts:** Underwing moths include a wide variety and large number of species. The forewings of underwing moths are generally dull colored and form effective camouflage while they are at rest. The hind wings are conspicuously marked, normally with a yellow or red and black pattern. Some species have black, or black and white hindwings. Larvae normally feed on trees and are common on walnut and hickory. Species identification of underwing moths should not be attempted by anyone except experts in this group.



Photo: Patrick Porter

### Viceroy

**Scientific name:** *Limenitis archippus* (Cramer)  
(Lepidoptera: Nymphalidae)

**Facts:** The viceroy closely resembles the monarch butterfly. This relationship of resemblance is known as Mullerian mimicry. By having different species of butterflies that taste bad look similar, then all benefit by having predators avoid eating them. Viceroys can be distinguished from monarchs by their smaller size and the additional black line that runs across the hind wing. Viceroys usually have a single row of white dots on the outer margin of the wing and monarchs typically have a double row.



## Lepidoptera (butterflies, moths and skippers)



Photo: Bart Drees

### Wood Nymphs or Satyrs

**Scientific name:** several species  
(Lepidoptera: Satyridae)

**Facts:** There are many species of wood nymphs in the United States. They are basically brown and have some form of eye spot on their wings.

## Hymenoptera (wasps, bees, ants, sawflies and horntails)



Photo: G. McIlveen, Jr.

### Baldfaced Hornet

**Scientific name:** *Dolichovespula maculata* (Linnaeus)  
(Hymenoptera: Vespidae)

**Facts:** Baldfaced hornets are a type of yellowjacket. They create an enclosed paper nest that is often football-shaped. They are black in color with white to cream colored markings. Other types of wasps and even bees also produce confusion. Correct identification to species requires an expert.



### Bumble bee - [on the right]

**Scientific name:** *Bombus* sp.  
(Hymenoptera: Apidae)

**Facts:** Bumble bees have a hairy or fuzzy thorax and abdomen black and yellow markings. They nest in the ground making colonies of up to a few hundred individuals.



### Carpenter bee [on the left]

**Scientific name:** *Xylocopa* sp. [Hymenoptera: Apidae]

**Facts:** Carpenter bees resemble bumble bees but can be distinguished by the shiny surface on the top of the abdomen. They nests in hollows of wood and sometimes drill into cedar and other wood used in buildings.



Photo: Curt Williams

### Cicada Killer

**Scientific name:** *Sphecius speciosus* (Drury)  
(Hymenoptera: Sphecidae)

**Facts:** The cicada killer is another soil-nesting wasp. It is very large with a reddish-brown thorax and a yellow and black abdomen. This beneficial insect captures cicadas and carries them to a nest where they are fed upon by the wasp larvae.

## Hymenoptera (wasps, bees, ants, sawflies and horntails)



Photo: Bart Drees

### Honey Bee

**Scientific name:** *Apis mellifera* Linnaeus  
(Hymenoptera: Apidae)

**Facts:** The honey bee is probably more valuable for its pollination of crops than it is for its production of honey and wax. Honey bees are about ½ inch long, yellow and black in color with fuzzy bodies.



Photo: Bart Drees

### Horntail

**Scientific name:** *Tremex columba* and other species  
(Hymenoptera: Siricidae)

**Facts:** Horntails are unusual because their biology is not typical of most Hymenoptera. Larvae feed in dead logs much like wood-boring beetle larvae. Adults resemble wasps but they have a broadly joined waist and therefore a cylindrical body. Adults are often found ovipositing (laying eggs) on logs.



Photo: Patrick Porter

### Ichneumon wasps

**Scientific name:**  
(Hymenoptera: Ichneumonidae)

**Facts:** Ichneumon wasps are very common but easily overlooked. They range in size from about 1/4 inch to over an inch. They come in many colors but often are black with yellow markings or brown. They can often be found around light at night or near wood piles where they are searching for borers that they use as food for their larvae. They are parasitic wasps that sting prey and leave eggs in the prey. Larvae develop inside the host and emerge later. Ichneumon wasps have a cell in their front wing that looks like a witch's hat (or the sorting hat from Harry Potter).



Photo: Patrick Porter

### Leaf-cutting Bee

**Scientific name:**  
(Hymenoptera: Megachilidae)

**Facts:** Leafcutting bees are generally beneficial because they aid in pollination. However, they can cause minor damage to plants (particularly roses) by cutting oval or circular holes in the leaves. They use the leaf cuttings to line their nests, which are constructed in soil, rotten wood, hollow stems, or other cavities.

## Hymenoptera (wasps, bees, ants, sawflies and horntails)



Photo: John Jackman

### Mud Daubers

**Scientific name:**  
(Hymenoptera: Sphecidae)

**Facts:** Mud daubers build their nests with mud, which they may carry for a considerable distance. Mud nests are formed on various surfaces, such as buildings, and can become a nuisance or distraction in some areas. Adult mud daubers are about  $\frac{3}{4}$  of an inch long, various colors, and have a thin, threadlike waist.



Photo: Patrick Porter

### Red Harvester Ant

**Scientific name:** *Pogonomyrmex barbatus* (F. Smith)  
(Hymenoptera: Formicidae)

**Facts:** Red harvester ants are reddish-brown and  $\frac{1}{4}$  to  $\frac{1}{2}$  inch long. They have two nodes and a row of hairs under their mandibles. They build nests which are clear of vegetation and typically covered with small gravel near the entrance hole at the center. These ants may sting if disturbed. They forage around the mound for seeds.



Photo: Patrick Porter

### Red imported fire ant

**Scientific name:** *Solenopsis invicta* Buren  
(Hymenoptera: Formicidae)

**Facts:** The red imported fire ant is well known to most Texas at least in the eastern and southern parts of the state. These ants have two nodes, a reddish-brown head and thorax, and a black abdomen with a stinger. The antennae end in a 2 segmented club.



Photo: Noel Troxclair

### Sawfly

**Scientific name:**  
(Hymenoptera: Cimbicidae, Diprionidae or Tenthredinidae)

**Facts:** Sawflies are in the Order Hymenoptera, suborder Symphyta. Most of the Hymenoptera we encounter are in the suborder Apocrita. One can tell the difference between adult sawflies and most other Hymenopterans by the fact that sawflies have a very broad connection between the abdomen and thorax, whereas most other Hymenoptera have a very narrow connection that looks like a pinched waist. Larvae look very much like caterpillars, and this is uncommon in the Hymenoptera. Sawflies occasionally become quite numerous and can cause significant damage to forests and horticultural plants.

## Hymenoptera (wasps, bees, ants, sawflies and horntails)



Photo: Bart Drees

### Tarantula hawk

**Scientific name:** *Pepsis* sp.  
(Hymenoptera: Sphecidae)

**Facts:** Tarantula hawks are one of the largest species of wasps in Texas. They sting tarantulas, bury them in holes in the ground and lay eggs on them. The larvae of the wasp then feeds on the provided tarantula.

These large wasps are bright metallic blue-black in color with reddish-brown wings. They are generally quite harmless to humans because they seldom sting. They can be provoked to sting though and should be left alone.



Photo: Extension Entomology

### Texas leafcutting ant

**Scientific name:** *Atta texana*  
[Hymenoptera: Formicidae]

**Facts:** Texas leafcutting ant is also known as the town ant or cut ant. They are reddish-brown in color with spines on their head and thorax. The workers come in different sizes. They form large colonies with numerous entry holes preferring sandy soils in East and South Texas. They carry foliage from trees back to the colony to grow fungus on which they feed and grown their young.



Photo: Patrick Porter

### Velvet ants

**Scientific name:** *Dasymutilla* spp.  
(Hymenoptera: Mutillidae)

**Facts:** Velvet ants are really wasps. Females are wingless and shaped like ants but very hairy or fuzzy. They are usually red, orange, yellow or white with black. One of the larger species is called "cow killer" because of the severe sting, but they do not kill cows. Males of this group are winged and fly slowly over grass or weeds in search of a female to mate with. Females crawl rapidly on the ground and attack nests of other ground dwelling insects.



Photo: Curt Williams

## Yellowjacket

**Scientific name:** *Vespula* spp.  
(Hymenoptera: Vespidae)

**Facts:** The name yellowjacket causes much confusion because it is sometimes applied to the whole genus *Vespula* or any yellow and black wasp. Yellowjackets typically nest in the ground but they may nest in trees or structures. They collect caterpillars and other insects as a protein source for their larvae. They also forage for sweet substances like fruit and may bother humans at picnics. Their sting is painful. Adults are yellow and black in color and create enclosed paper nests out of chewed wood fiber.

## Order Acari (ticks, mites and chiggers)



Photo: John Jackman

### Brown dog tick

**Scientific name:** *Rhipicephalus sanguineus* (Latreille)  
(Acari: Ixodidae)

**Facts:** The brown dog tick is a pest primarily on pets. They can build up in big numbers especially in kennels and other areas where pets are confined. These ticks are light to dark brown in color with no noticeable markings.

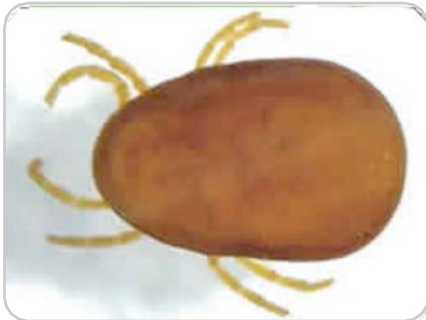


Photo: John Jackman

### Fowl Tick or Blue-bug

**Scientific name:** *Argas persicus* (Oken)  
(Acari: Argasidae)

**Facts:** The fowl tick also is known as the "blue-bug". It is a parasite of poultry, with sucking mouthparts concealed on the underside of the body. It is a member of the soft tick family and, unlike hard ticks, has no hard plate over the body. Mature fowl ticks are 1/4 to 3/8 inch long.



Photo: John Jackman

### Lone Star Tick

**Scientific name:** *Amblyomma americanum* Linnaeus  
(Acari: Ixodidae)

**Facts:** Female lone star ticks are reddish-brown with a white spot on the back. This is one of the hard tick family because it has a shield-shaped plate (scutum) on its back. Piercing-sucking mouthparts help this pest take blood from the host. Ticks that take in a lot of blood enlarge and are called engorged.



Photo: Unknown

### Spider Mites

**Scientific name:** *Tetranychus* and other genera  
(Acari: Tetranychidae)

**Facts:** Spider mites are sometimes called red spiders. They are pale-greenish to reddish in color, six-legged in the immature stages and eight-legged as adults, soft-bodied and up to about 1/60 inch long. Piercing-sucking mouthparts are used to feed on plant tissues. Mites cannot be identified to species without very high power microscopes and special preparation of specimens. Some mites are predators.

## Subphylum Chelicerata, Class Arachnida, Order Araneae (spiders)



Photo: John Jackman

### Crab Spiders

**Scientific name:** *Misumenooides formosipes* (Walckenaer), whitebanded crab spider (Araneae: Thomisidae)

**Facts:** Crab spiders have the first two pairs of legs projecting forward. This gives them a crab-like appearance and thus the name. Some crab spiders are yellow or white and sit up on flowers where they wait for prey. Other species are dull colored and are commonly found under bark.



Photo: Extension Entomology

### Jumping Spiders

**Scientific name:** many species (Araneae: Salticidae)

**Facts:** Jumping spiders have large eyes and usually a chunky, fuzzy body. They come in many colors from black and grey to bright red with many having a distinct color pattern. Some species mimic ants and are difficult to tell from them at a glance. Jumping spiders are very active hunters during the daylight hours. Their excellent eyesight is used for stalking prey. Before pouncing on a victim, jumping spiders attach a line of silk from which they can dangle if they fall.



Photo: John Jackman

### Recluse Spiders

**Scientific name:** *Loxosceles* spp. (Araneae: Sicariidae)

**Facts:** Recluse spiders live in undisturbed areas. The body of an adult is 3/10 to 1/2 inch long, but much larger if legs are included. Adults have a violin-shaped spot on the cephalothorax (head and thorax combined) and six pairs of eyes on the front of the cephalothorax. The bite can result in a severe wound that may require two months to heal. Usually, the internal reaction to a bite is less severe than is the reaction to the bite of a black widow spider.

The brown recluse spider, *Loxosceles reclusa* Gertsch and Mulaik, is the species that is often mentioned. However, there are about six species in Texas and they are difficult to distinguish.



Photo: John Jackman

### Tarantulas

**Scientific name:** *Aphonopelma* spp. (Araneae: Theraphosidae)

**Facts:** Tarantulas are widespread throughout Texas and are our largest spiders. Most of our species are in the genus *Aphonopelma*. They usually take over burrows in the soil but may dig some of it themselves. They usually spend most of the day in the burrow and move out at night to hunt. They line the burrow with webbing and extend the webbing out on the soil surface. The extended web is used to sense prey that is walking by.

## Subphylum Chelicerata, Class Arachnida, Order Araneae (spiders)



Photo: Extension Entomology

### Widow Spiders

**Scientific name:** *Latrodectus* spp. (Fabricius)  
(Araneae: Theridiidae)

**Facts:** Widow spiders are shy and secretive and found in seldom-disturbed areas. The mature female has a characteristic hourglass-shaped, reddish-orange marking on the underside of the abdomen. However, there are four species in this genus in Texas and the markings on the abdomen can be highly variable. It is often difficult to distinguish between the species. Moreover, they are not all black and especially the males and juveniles can have a lot of red, green, white or other colored markings. Widow spiders are predaceous, devouring small arthropods trapped in their irregular cobwebs. Their bite is relatively painless at first, but may be followed in about an hour by intense pain and swelling. The venom causes nausea, cramps, lack of coordination, and difficulty breathing by interference in nervous functions. Death is uncommon but has occurred in individuals hypersensitive to the venom.



Photo: John Jackman

### Wolf Spiders

**Scientific name:**  
(Araneae: Lycosidae)

**Facts:** Wolf spiders are brown to grey in color, often with various markings on the body. They are usually active at night. They capture prey by hunting rather than by waiting in a web. One common species is *Rabidosa rabida* (Walckenaer) which is marked with chevrons (sargent stripes) down the back.



Photo: John Jackman

### Yellow Garden Spider

**Scientific name:** *Argiope aurantia* Lucas  
(Araneae: Araneidae)

**Facts:** The yellow garden spider or black-and-yellow argiope is a particularly attractive and large species of orb-weaving spider. It is also known as the yellow garden argiope and the "writing spider". This spider has a white cephalothorax, yellow abdomen, and black and yellow legs. Orb weaver spiders are some of our more conspicuous spiders. Many people think of a typical orb weaver web when they think of a spider.



## Subphylum Chelicerata, Class Arachnida, Order Scorpiones (scorpions)



Photo: Extension Entomology

**Scientific name:**  
(Order: Scorpiones)

**Facts:** Scorpions are not insects but arachnids. However, they usually are included in entomology. They are important because of their painful sting. Texas species rarely cause problems when they sting except in very young children or persons hypersensitive to their venom. The striped bark scorpion, *Centruroides vittatus* (Say), occurs throughout the state and is the only scorpion in the eastern half of Texas. Scorpions have 8 legs, "claws" or "pinchers" on the front of the body, and a long tail with a stinger at the tip.

## Subphylum Chelicerata, Class Arachnida, Order Solifugae (sun spiders or camel spiders)



Photo: Noel Troxclair

**Sun spiders or wind scorpions**

**Scientific name:** *Eremobates* sp.  
(Arachnida, Solifugae: Eremobatidae)

**Facts:** Sun spiders are also known as camel spiders and wind scorpions. They can run very fast - "like the wind" - which is the source for the common name. Sun spiders are found primarily in drier parts of the state. They have strong jaws that protrude forward that are used to capture prey.

## Subphylum Chelicerata, Class Arachnida, Order Thelyphonida (vinegaroons)



Photo: Bart Drees

**Vinegaroons**

**Scientific name:** *Mastigoproctus giganteus* (Lucas)  
(Uropygi: Thelyphonidae)

**Facts:** This is the only species of this order in Texas. It is rather large with adult body lengths of 40-80 mm. They have forward projecting mouthparts enlarged and formed into pinchers. They are predators with forward projecting claws. They are called vinegaroons because they can emit acetic acid (a main component of vinegar) from the base of the tail. This is used as a defense against predators. They are also called whip-scorpions because of the thin tail. They do not sting.

Vinegaroons are found only in the western parts of Texas.

## Subphylum Chelicerata, Class Arachnida, Order Opiliones (harvestmen)



Photo: Wizzie Brown

### Harvestmen

**Scientific name:**  
(Order: Opiliones)

**Facts:** Harvestmen are also often called Daddy-Longlegs. Some species are found in caves. They have a rounded body with long, slender legs. Most species in this group are predacious or plant feeders.

## Subphylum Myriapoda, Class Chilopoda (centipedes)



Photo: Wizzie Brown

### Centipedes

**Scientific name:** *Scolopendra* and other genera  
(Class: Chilopoda)

**Facts:** Centipedes have elongated, worm-like bodies and a pair of antennae. They have one pair of legs per body segment and a pair of appendages (cerci) on the end of the abdomen. They are fast moving predators and usually active at night. They are typically flattened from top-to-bottom (dorso-ventrally). Some centipedes are hazardous because they can bite with the mouth and pinch with the legs and cerci. They also produce some venomous compounds which are injected by mouthparts or dropped into a wound from between the leg segments. The largest centipedes in Texas are in the genus *Scolopendra*. They can be over six inches long.

## Subphylum Myriapoda, Class Diplopoda (millipedes)



Photo: John Jackman

### Millipedes

**Scientific name:**  
(Class: Diplopoda )

**Facts:** Millipedes have elongated worm-like bodies and a pair of antennae. They have two or more pairs of legs per body segment. Most millipedes have round cylindrical bodies. However, some of them have flattened extensions out the side of each segment. They are generally slow moving and active mostly at night. They tend to hide under rocks or stones and in organic debris.

## Phylum Arthropoda, Subphylum Hexapoda, Order Collembola (springtails)



Photo: Extension Entomology

### Springtails

**Scientific name:**  
(Order: Collembola)

**Facts:** This order contains small (usually under 2 mm), soft-bodied insects that leap using an appendage on the end of the abdomen called a furcula. They prefer moist habitats. One species, the water springtail, *Podura aquatica*, is grayish and can build up in high numbers locally.

## Phylum Arthropoda, Subphylum Crustacea, Class Malacostraca, Order Isopoda (sowbugs and pillbugs)



Photo: Bart Drees

### Sowbugs and Pillbugs

**Scientific name:**  
(Order: Isopoda)

**Facts:** Sowbugs and pillbugs are crustacea which is a group that includes shrimp, crawfish and lobsters. Isopods are some of the few crustacea that are terrestrial. Sowbugs and pillbugs have 7 pairs of legs and 2 pair of antennae. Pillbugs can roll their bodies into a tight ball when they are disturbed and this behavior gives them the name. Other names are "roly-pollies" and "ball bugs". Sowbugs have two tail extensions and do not roll into a ball. Both of these are found together especially in moist habitats with lots of organic matter.