OREGON DEPARTMENT
OF AGRICULTURE GUIDES

Stink Bugs of Oregon

A guide to members of the insect family Pentatomidae and their relatives commonly found in Oregon

INTRODUCTION

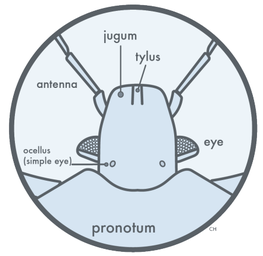
Stink bugs are insects in the order Hemiptera, known to entomologists as the "true bugs." True bugs are characterized by having sucking mouthparts that they use to suck juices from plants or prey. More specifically, stink bugs are in the family Pentatomidae, and are distinguished from other hemipterans by having five antennal segments (*penta* = five, *tomo* = part); other hemipterans have four or less. When disturbed, stink bugs emit defensive liquids from their scent glands that can have a strong odor and a bad taste to discourage predators. Although most are herbivorous on a wide variety of plants, a few are predacious on other insects. Over 50 known stink bug species have been found in Oregon. This guide features some of the common species, and some close relatives, that growers and others might find on their farms, in their gardens, or in their homes. For species with common names, they are provided under the scientific name, but not all species possess a common name. In Oregon, a few species of stink bug can be nuisance or agricultural pests, but most are not considered pests and none are dangerous to people. This guide is intended to aid you with identifying stink bugs that you find around the state to help with pest management decisions or to satisfy your curiosity.

ATTRACTIVE PLANTS

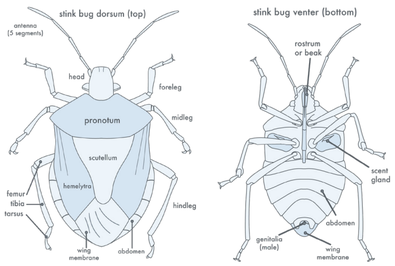
These plants are attractive to many species of stink bugs throughout the spring and summer:

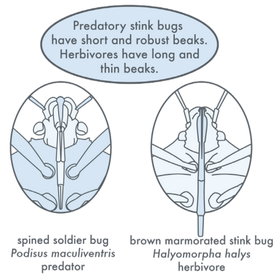
- Antelope bitterbrush (*Purshia tridentata*)
- English holly (*Ilex aquifolium*)
- Hawthorn (*Crataegus* spp.)
- Himalayan blackberry (*Rubus armeniacus*) and other *Rubus* sp.
- Oregon grape (*Mahonia aquifolium*)
- Red alder (*Alnus rubra*)
- Tree of Heaven (*Ailanthus altissima*)
- Wild carrot (*Daucus carota*)
- Wild and weedy grasses

BODY PARTS



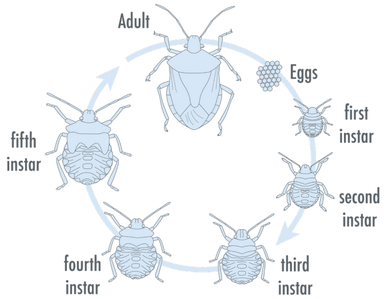
detail of stink bug head





LIFE CYCLE

When the weather warms in the spring and the days get longer, adult stink bugs come out of hibernation to feed, mate, and lay eggs. These adults will die a few weeks later, but their offspring will hatch and develop through the summer. Stink bug egg clusters can have seven to as many as fifty eggs, varying by species. After hatching, the young insects, called nymphs, go through five "instars", or immature stages, before molting into a winged adult. The first instars generally remain on the egg cluster but later instars can be very mobile. The different stages can be distinguished by their relative size to one another and the development of the wing pads on the later instars. There is variation between species and some stages can be difficult to discern. Stink bug nymphs will always complete five instars before molting into adults.



At the end of the summer, as days get cooler and shorter, adults will begin to move into hibernation areas and settle down for the winter. Most adult stink bugs spend the winter in leaf litter or under tree bark, but some, like the brown marmorated stink bug, will gather in structures. Some stink bugs are univoltine, or have a single generation per year, but others are multivoltine, completing two or three depending on summer conditions. (Image adapted from illustrations in *The Developmental Stages of Some Species of the Japanese Pentatomoidea (Hemiptera)*, Kobayashi 1967).

PREDATORS

Apoecilus bracteatus

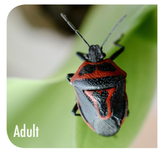
Size: 13 – 17 mm

Description: Pale orange, pink, or tan with solid red antennae. Abdomen with alternating dark bands along the edge. *Apoecilus* is univoltine and overwinters in the egg stage. The defensive fluid smells putrid. It has been reported that nymphs and adults are generally solitary but will aggregate to molt.

Hosts: Predacious on Lepidoptera larvae, including fall webworm, and some leaf beetle larvae and sawfly larvae. Nymphs and adults have been found on golden rod and alfalfa.

Range: Have been collected in Oregon from western, south and central regions. Occurs in the northern United States, and in the western states, south to New Mexico and Colorado.

Perillus bioculatus
Two-spotted stinkbug



Size: 8.5 – 11 mm

Description: Mostly black with bright red or orange markings. Pronotum red with two black marks. Head black with solid black antennae. Edge of scutellum with red marks. Color can be variable, from red to orange to very pale orange. Color on hemelytra can be present or not, but there are always two black marks in a field of color on the pronotum. Nymphs have black or metallic blue wingpads and bright abdomens.

Hosts: *Perillus bioculatus* nymphs are voracious predators of the Colorado potato beetle (*Leptinotarsa decimlineata*). Nymphs and adults will feed on the beetle eggs and larvae.

Range: Occurs statewide across Oregon, and across the United States.

Podisus brevispinus, *Podisus maculiventris*
Spined soldier bugs

Size: 8.5 – 13 mm

Description: Adults are mottled light brown to tan dorsally, but can appear to be slightly red or pink or on the hemelytra. Pronotum often with pointed "spines" on the hind angles, but these can also be rounded. Wing membranes often have a central black stripe. Antennae are solid tan colored. *Podisus brevispinus* can be distinguished from *P. maculiventris* by the presence of a small spine that extends forward from the abdomen between the base of the hind legs on *P. maculiventris*, which is not present or does not reach the hind legs on *P. brevispinus*.

Hosts: *Podisus* species are predators on many pest species, and are important in many integrated pest management systems. They primarily feed on Lepidoptera larvae, but because they are opportunistic will feed on many other types of insects.

Range: Both species are found across the United States and have been collected statewide in Oregon.

Zicrona caerulea
Blue shieldbug

Photo by Thomas Shahan

Size: 4.5 – 9 mm

Description: Distinctive dark blue to black metallic color both dorsally and ventrally. Legs and antennae are black.

Hosts: Predacious on beetle larvae, particularly leaf beetles, and Lepidoptera larvae (according to literature outside of North America). In Britain, said to occur on low vegetation habitats such as heathland, damp grassland, and low woodlands. They are solitary and overwinter as an adult.

Range: Found across the United States and has been collected statewide in Oregon.

For more information

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Photos and illustrations by Chris Hedstrom, unless otherwise noted. Information written and compiled by Chris Hedstrom using various published sources. Please inquire for references.

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STINK BUGS

Banasa dimidiata

Size: 7 – 10 mm

Description: Distinctive bi-colored pronotum; green towards the head and red towards the abdomen. Body usually glossy with small dark punctures. Scutellum often green with light spot on the tip. Hemelytra green or red. Antenna tan to green with dark tips. Head is reddish with dark punctures. Color of this species is highly variable. Often referred to as *B. dimiata* in literature. Nymphs have a dark thorax with a tan abdomen and are often more oval than round when compared to other stink bug nymphs. *Banasa tumidifrons* and *B. rolstoni* are other species that are also reported from Oregon. These differ in size, rostrum length, and the coloration of punctures on the head.

Hosts: Wide range of hosts, but commonly found in Oregon on mountain-ash (*Sorbus* spp.), English holly, lilac (*Syringa vulgaris*), arborvitae (*Thuja* spp.), and cane berries (*Rubus* spp.). In the Columbia River Basin, species of *Banasa* can be found on conifers.

Range: Very common across Oregon and found across the United States.

Chinavia hilaris
Green stink bug

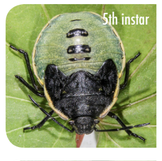
Size: 13 – 19 mm

Description: One of the largest stink bugs in Oregon. Uniform bright green color, abdomen has distinctive black marks or notches along the outer edge. Antennae dark with light bands. Edges of body may be tinged with yellow. Nymphs are brightly colored with black wingpads and white and green striped abdomens. Very young nymphs have an orange pronotum. Older nymphs have orange patches on the edge of the pronotum, which nymphs of other species in Oregon do not have. Often referred to as *Acrosternum hilare* in literature.

Hosts: Wide range of hosts including English holly, hawthorns, red alder, and Himalayan blackberry. Prefer woody shrubs and trees. Can be a pest on corn, cotton, tree fruits, tobacco, and other crops in some states.

Range: Common in the Willamette Valley and elsewhere in Oregon. Can be found in southern Canada, New England, and across the U.S.

Chlorochroa ligata
Conchuela bug



Size: 13 – 20 mm

Description: Ranges from bright to dark green (almost black in some regions) with a bright band along the edge of pronotum and abdomen ranging from red to yellow. Antennae are solid black. Many have a lighter colored spot at the tip of the scutellum. Nymphs tend to be mostly black except for the margins of their abdomen and pronotum, which is white to yellow. In other regions of the country, the color is highly variable. Wings reportedly with purple flecks on specimens outside of Oregon and Washington. Defensive liquid smells sour and candy-like.

Hosts: Wide range of hosts including Oregon grape, on which it is very common, English holly, winegrapes, Himalayan blackberry, hawthorn, and arborvitae (*Thuja* spp.). *C. ligata* is considered a pest of apples in California and of cotton in New Mexico.

Range: Very common throughout western and southern Oregon, and is found in the western United States.

Chlorochroa rossiana

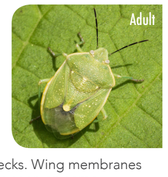
Size: 10 – 15 mm

Description: Bright green oval shape with yellow edges along abdomen. Small depression running along the middle of the scutellum. Juga extend just past the tylus. If small spots are present on the base of the scutellum, they are weak and indistinct, otherwise they are not present. Wing membrane is clear or colorless. Antennae are dark, except for the first segment which is green. Literature on this species is scarce.

Hosts: Found on Oregon grape, spectacle pod (*Dithyrea maritma*), groudsel (*Senecio vulgaris*), clover (*Trifolium* spp.), alfalfa (*Medicago sativa*), and cocklebur (*Xanthium strumarium*).

Range: Specimens in Oregon collected from Central and SE Oregon, but entire range is unknown.

Chlorochroa uhleri



Size: 12 – 16 mm

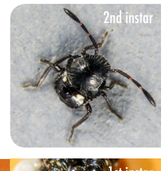
Description: Oval shape overall, pale green with abdomen edged in yellow, without black markings. Antennae almost entirely black, first segment green. Three distinctive light spots on the base of the scutellum. Hemelytra with yellow specks. Wing membranes clear (without purple flecks, as can be seen on some *Chlorochroa ligata*. Tylus and juga equal or nearly so. Embolium (ridge on hemelytra originating at the anterior point of the forewing) is slightly wider towards the posterior end than at the origin.

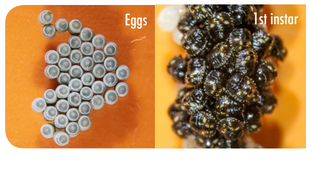
Hosts: Russian thistle (*Salsosa iberica*), tansymustard (*Descurania pinnata*), alfalfa (*Medicago sativa*), wheat (*Triticum aestivum*), tumblemustard (*Sisymbrium altissimum*), and antelope bitterbrush in eastern Oregon (*Purshia tridentata*).

Range: Similar to above, specimens in Oregon collected from Central and SE Oregon, but range is unknown.

Note: Chlorochroa species look very similar and are difficult to determine to species without examining internal anatomy. The descriptions in this guide are based on descriptions from "Revision of the species of the Sayi-Group of *Chlorochroa* Stal (Hemiptera: Pentatomidae)" by Buxton et al. California Dept. of Food and Agriculture, 1983).

Thyanta custator
Red-shouldered stink bug





Size: 10 – 11 mm

Description: Pale to light green, often with a distinctive red stripe across the pronotum, but are also often light brown or tan with no stripes or distinctive markings. Wing membranes with scattered dark spots. Nymphs are dark brown to black. Early nymphs have two distinctive pale spots on opposite sides of their abdomens and appear hairy compared to other stink bug nymphs. *Thyanta custator* is very closely related to *T. pallidovirens* and they are morphologically indistinguishable, but there is chromosomal evidence that they are separate species. This also species contains some subspecies.

Hosts: *T. custator* is a generalist feeder and is reported to be a minor pest on a variety of crops including beans, corn, peaches, and wheat. The closely related *T. pallidovirens* is a pest of pistachios in California.

Range: Common through Oregon and North America.

STINK BUGS

Cosmopepla conspicillaris
Hedge-nettle stink bug or happy bespeckled stink bug

Size: 5 – 7 mm

Description: Glossy black dorsally with margins of scutellum and hemelytra outlined in yellow or orange. Pronotum with markings that resemble spectacles, with a lateral yellow or orange line in the middle of the pronotum. Tip of scutellum edged in white. Wing membranes. Legs and antennae black or very dark brown.

Hosts: In literature, *C. conspicillaris* is commonly found on *Stachys palustris*, commonly called hedge-nettle or woundwart. Also found on *Stachys bizantia* (Lamb's ear) in Corvallis. Collected in Corvallis, Oregon on pathfinder (*Adenocaulon bicolor*) and columbine (*Aquilegia* spp.).

Range: Western United States. In Oregon, specimens collected primarily in western region of the state.

Cosmopepla uhleri

Size: 4 – 5 mm

Description: Reddish brown with a distinctive, irregular orange (or red or yellow) band across the pronotum. Pronotum without pale edges seen in other *Cosmopepla* species. Antennae dark brown. Edge of abdomen with alternating light and dark bands. Underside black.

Hosts: Collected on columbine (*Aquilegia* sp.). Also collected on thimbleberry in Portland (*Rubus parviflorus*) and wild *Geranium* spp.

Range: Specimens in Oregon collected in and around Portland, but extent of range in the state is unknown. In the U.S., known range is western United States to Nebraska.

Cosmopepla intergressa

Size: 4 – 5 mm

Description: Very round with brown speckled appearance. Often appears slightly metallic or coppery, especially on ventral side. Wing membranes often with dark venation. Pronotum with light band. Scutellum with three ivory-colored spots. Antennae light except for last segment.

Hosts: Common on thimbleberry, raspberry, and other *Rubus* spp. and *Geranium* spp. Collected from wild currant (*Ribes* spp.) in southern Oregon.

Range: Found throughout Oregon. Common in the Willamette Valley. Found in the western United States to Kansas and Missouri.

Cosmopepla lintneriana
Twice-stabbed stink bug

Size: 5 – 6 mm

Description: Frequently referred to as *Cosmopepla bimaculata*. Small black body with red cross marking on pronotum. Scutellum with two red markings on either side (these markings are where it gets its latin synonym and common name, two (bi-) stab marks (-maculata).

Hosts: In Oregon, observed on lamb's ear, geranium, seed heads of wild carrot, columbine, thimbleberry, and many other plants.

Range: Common throughout Oregon and the United States.

Holcostethus abbreviatus
Holcostethus limbolarius
Holcostethus tristis

Size: 8 – 10 mm

Description: Mottled dark yellow and black pattern across entire dorsal surface with alternating black and yellow bands along abdomen. Wing membrane area is solid dark. *H. limbolarius* is very similar in appearance to *H. abbreviatus*, but is a little smaller, and the band of color around the abdomen is continuously yellow along the edge with small black marks instead of clear dark bands. *Holcostethus tristis* is similar in shape to *H. abbreviatus* and has the same alternating black bands as *H. abbreviatus*, but is much darker, nearly black or very dark brown with dark antennae. Nymphs of all species are have short hairs on their upper abdomen and thorax, and have light bands or stripes on opposite sides of their abdomen. This genus is closely related to *Trichopepla*.

Hosts: Polyphagous species, commonly found on English holly, lilac (*Syringa vulgaris*), hawthorn, Himalayan blackberry, and snowberry (*Symphoricarpos albus*) in the Willamette Valley. Also found on antelope bitterbrush in central Oregon.

Range: *Holcostethus abbreviatus* and *Holcostethus tristis* are found in the western U.S. *Holcostethus limbolarius* is found across the United States. *Holcostethus abbreviatus* is common in western Oregon, whereas *Holcostethus tristis* is less commonly found in the state.

Trichopepla aurora

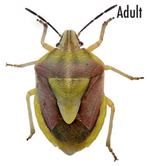
Size: 8 mm

Description: Tan with distinctive stripes on the basal half of the pronotum. Unlike other stink bugs, the stink bugs in this genus are often covered in small hairs (in Greek, "tricho-" means hair, and "-pepla" means coat). They are closely related to the genus *Holcostethus*. They are reported to usually occur in groups. Literature regarding behavior or life history is scarce.

Hosts: In Oregon, observed on weedy grasses, but is mostly unknown.

Range: Occurs in California, Oregon, Idaho, South Dakota and Colorado.

Antheminia remota



Size: 8 – 9 mm

Description: Pink to purple head with pronotum green anteriorly and purple posteriorly, with a pale lateral stripe running from the back of the head to the scutellum. Purple or pink hemelytra with a green scutellum, which has a wide tip. Edges of abdomen bright green. Formerly referred to as *Codophila remota*.

Hosts and Range: Although this genus is found throughout the United States, it is not very common and there are sparse notes about behavior or preferred host plants. In Oregon, it has been collected in grassy areas statewide.

Neottiglossa tumidifrons

Size: 4.5 – 6 mm

Description: Very similar in appearance to *N. undata*, but with a more narrow body than that species. Head broadly rounded at the tip with concave appearance. Also very similar in appearance to *N. cavifrons* and *N. sulcifrons*, which are not as common or are not known to occur in Oregon.

Hosts: Frequently found on wild carrot, grasses, and oats.

Range: Across Canada and United States. Common in Oregon in the Willamette Valley and identified from specimens in Baker, Deschutes, Douglas, Jackson and Lake counties and Wasco County.

Neottiglossa undata

Size: 4.5 – 6 mm

Description: Body is long-oval shape, mostly grey brown. Yellow triangular head with brown to black punctures. Pale yellow line in the middle of head that extends through pronotum to scutellum, often with two pale lines on opposite sides of scutellum. Outer antennal segments dark.

Hosts: Frequently found on wild carrot, grasses, and wild oats in abundance.

Range: Across Canada and United States. Very common in Oregon in Willamette Valley and identified from specimens in Baker, Deschutes, Douglas, Jackson, Lake and Wasco counties.

STINK BUGS

Brochymena affinis

Size: 14 – 20 mm

Description: Wide and flat bodied. Black and white mottled appearance with accents of orange on pronotum and scutellum, upper body covered in punctures and indentations. Antennae solid black. Front edge of prontotum with serrations. Wing membranes with dark areas around veins. Legs are black with white bands. Jugae extend past tylus but do not usually touch. Defensive secretions smell sweet and fruity, similar to maraschino cherry. Overwinters under tree bark.

Hosts: Observed on alder, ash (*Fraxinus* spp.), Douglas-fir (*Pseudotsuga menziesii*), and cedar (*Thuja plicata*) in Corvallis, Oregon. Reported to be found on Ponderosa pine (*Pinus ponderosa*).

Range: Commonly found in the Willamette Valley in Oregon, but have been recovered in eastern Oregon. Found in the western United States to Nebraska.

Brochymena quadripustulata
Rough stink bug

Size: 14 – 18 mm

Description: Oval shape, narrow when compared to *B. affinis*. Jugae are longer than tylus, and converge to touch (they do not usually touch in *B. affinis*). Overall grey-brown mottled body covered in dimples or indentations, compared to *B. affinis* that is more black and white than brown.

Hosts: Mostly arboreal, but reported host range is extensive. In Oregon, specimens have been found on hawthorn, red alder, black walnut (*Juglans nigra*) black locust (*Robinia pseudoacacia*) and mountain-ash (*Sorbus* spp.).

Range: Across the United States. In Oregon, commonly found in Wasco County, but occurs statewide. Common across the northern United States.

Euschistus conspersus
Consperse stink bug

Size: 8 – 12 mm

Description: Upper body brown or grey overall, mottled or spotted appearance, underside light tan or light green. Pronotum with small serrations along the outer edges. Legs are yellow or tan and covered in black spots. Wing membranes are dark, but faint spots are visible. Antennae are yellow with brown tips. *Conspersus* means "with spots" in Latin.

Hosts: Very wide host range. Can be a pest in apples in Washington and California. Often found feeding on wine grapes, but not considered a major pest of this crop in Oregon.

Range: Common throughout Oregon. Found in the western United States.

Euschistus variolarius
One-spotted stink bug

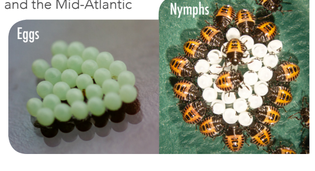
Size: 11 – 15 mm

Description: Upper body brown or grey, mottled or spotted appearance, underside lightly tan or green. Can be distinguished from *E. conspersus* by the appearance of a faint "V" or lighter area on the end of the scutellum. *E. variolarius* is usually larger than *E. conspersus*, and lacks small dark marks that appear ventrally along the outer edge of each abdominal segment which appear on *E. conspersus*. The males of the species have a distinctive spot on the genitalia.

Hosts: Host range is wide and is similar to that of *E. conspersus*.

Range: Commonly found in the Willamette Valley of Oregon. Found throughout the United States.

Halyomorpha halys
Brown marmorated stink bug



Size: 8 – 12 mm

Description: Greyish brown and marbled upper body, sometimes slightly purplish on the hemeleytra. Legs are light tan to white with dark spots on the femora. Alternating light and dark banding along the edge of the abdomen is usually visible from above. Pronotum without serrations along the edge, unlike *Brochymena* or *Euschistus*. Antennae are dark with distinct light bands. Nymphs usually have black and red abdomens with black thorax and heads, and are very active when disturbed.

Hosts: Very wide host range. In Oregon, commonly found in urban areas on English holly, catalpa, paulownia, himalayan blackberry, and hazelnut. In the Mid-Atlantic states, *H. halys* is a significant economic crop pest as well as an urban nuisance pest. *H. halys* is expected to be a significant economic pest in Oregon and is already a nuisance pest in many areas due to its habit of aggregating on the sides of buildings and inside homes.

Range: In Oregon, northern region of the state from Hood River to Portland, along the Willamette Valley south to Medford. Also found in coastal counties. In the United States, found in 38 states and established as pests in Oregon, Washington, and the Mid-Atlantic region.

OTHER COMMON TRUE BUGS

Family Acanthosomatidae
Elasmucha lateralis
Elasmostethus cruciatus

Size: *E. lateralis* is 6 – 8 mm
E. cruciatus is 8 – 10 mm

Description: The family Acanthosomatidae was formerly treated as a subfamily within the Pentatomidae, but is now considered separate. Members of this family can be distinguished from the pentatomids by the number of tarsal segments—two for Acanthosomatidae and three for Pentatomidae—but also by the spine or "keel" on their abdomen, adjacent to the rostrum when at rest. Both of the species pictured here are often found on red alder cones and *Rubus* spp., especially thimbleberry, *R. parviflorus*. Nymphs of *E. lateralis* are especially gregarious. Although some members of this family are considered pests, for example on hazelnuts in Turkey, they are not considered pests in Oregon. Adults exhibit maternal care of eggs and early instars.

Family Rhopalidae
Boisea rubrolineata
Boxelder bug

Size: 6 – 10 mm

Description: Western boxelder bugs are native to Oregon and primarily feed on the flowers and seeds of maple (*Acer* spp.). They will also occasionally feed on other ornamental plants or fruit trees, but are not known to cause damage. Boxelder bugs belong to the same insect order as stink bugs (Hemiptera), but do not defend themselves with odorous chemicals. In late summer, they often become a nuisance pest due to their habit of aggregating on the sunny sides of buildings and trees and have been mistaken for the brown marmorated stink bug, *Halyomorpha halys*. Although they are not considered plant or structural pests, boxelders in high numbers can cause aesthetic issues due to large amounts of excrement. Aggregations can interrupt outdoor activity, but these events are relatively short-lived and chemical management is not recommended.

Family Rhyparochromidae
Raglius alboacuminatus
Tuxedo bug

Photo by João Coelho

Description: *R. alboacuminatus* is a true bug in the family commonly called "dirt-colored seed bugs". They were first found in Oregon in 2002. They are of note because they can occasionally invade homes and landscapes in very large numbers, making them a nuisance pest. They can be identified by the combination of white spots at the tip of the abdomen, the hemelytra, and the pronotum, plus the appearance of white edges on the scutellum. Although they are a nuisance pest, they are seed feeders and do not pose risks to plants or structures.

Family Scutelleridae

Description: The scutellerids are more round and tortoise-like when compared to pentatomids. Their scutellum is very large and extends to cover their entire abdomen. Common species in Oregon are in the genus *Eurygaster* and can be very numerous in wild grasses where they feed on grass stems. However, these insects are not considered pests in Oregon. *E. integriceps* is an serious economic pest of wheat and barley in Asia and North Africa, but this species is not known to occur in the United States.

More information on Pentatomids:

Stink Bugs of Economic Importance in America North of Mexico. J. E. McPherson and Robert McPherson, CRC Press, 2000.

Pentatomoidea information online. Dr. David Rider, North Dakota State University. http://bit.do/b3cgB