

Insect of the Prairie



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In Nebraska there are...

60+ species of reptile and amphibians,
95 species of mammals,
80 species of fish,
400 species of birds,
1470 species of plants, and
Over 10,000 species of insects.



Prairies are home to thousands
of species of insects.

Many of the insects are specially
adapted to living in the prairie.



Why are insects important to prairie ecosystems?

Insects help pollinate many prairie plants.

Insects consume living and dead plant material, manure, and dead animals... all leading to increased nutrients in the soil. This, then, helps prairie plants grow better.

Insects provide food for many prairie animals... birds, bats, skunks, moles, mice, shrews, frogs, and snakes.



Today we will talk about...

Beetles

Butterflies

Dragonflies

Grasshoppers

Velvet Ant



Leatherwing or Soldier Beetle

Family Cantharidae

Related to the firefly, but the is unable to produce light.

One British species is bright red, reminding people of the red coats of soldiers, hence the common name. A secondary common name is leatherwing, obtained from the texture of the wing covers.

Larva consume grasshopper eggs, aphids, caterpillars and other soft bodied insects. Adults are important predators of aphids. They supplement their diet with nectar and pollen



American Burying Beetle

Nicrophorus americanus

The largest carrion-frequenting insect in North America; it may reach a length of 1 ½ inches. Adult beetles are nocturnal.

Shiny black with two bright orange spots on each wing, large orange spot on the pronotum, and small spot between eyes.

They are remarkably adept at detecting the odor using the organs of smell located on their antennae, they can find a dead mouse within an hour of death from as far away as two miles.

Placed on the Endangered Species List in 1989 primarily due to habitat fragmentation.



Dung Beetle

Phanaeus vindex

Dung Beetles play an important role in recycling nutrient in the ecosystem.

Phanaeus vindex are generally $\frac{1}{2}$ to 1 inch long and brightly metallic colored.

Adult male and females, working in pairs, dig burrows in animal excrement where eggs are deposited. Eggs hatch and larvae feed on the dung.

Adults feed on carrion.

Front legs are modified for digging.



Red Admiral

Vanessa atalanta

Black wings with white spots on the outside of forewing. Orange or red stripe through center of forewing extending to edge of hindwing.

Nettles are common host plants, however false nettles or hops can be used.

This species emigrates north in the spring, and there is some evidence of a dispersed return flight in the fall.

Habitat varies widely; can be found in moist deciduous forests and open meadows.



Great Spangled Fritillary

Speyeria cybele



Color is orange with many black and tan spotting. Colors can vary slightly among sexes.

Mate in June or July, but females then disappear, hiding under leaves or bark, only to reappear in late August and September, when they lay their eggs near violets. At this time the shorter-lived males, which emerged a few days or weeks before females, are scarce.

Adults feed on nectar, caterpillars feed on violets.

Eastern Tiger Swallowtail

Papilio glaucus

General color is yellow with black stripes extending downward from top of forewing. Edge of wings in black with yellow spots. Lower edge of hindwing has blue patches.

Wide range covering most of the United States from Alaska to the Atlantic. Generally, smaller and paler in eastern states.

This species often feeds in groups seeking a wide range of plant nectars.

Habitats include broadleaf forests, road sides, and meadows.



Common Checkered Skipper

Pyrgus communis



Color is extremely variable. Above can be quite blackish with little white checkering (especially in female) or very pale with broad bands of white spots (particularly males).

Range extends from Southern Canada to Argentina.
Considered to be the most common skipper in North America.

Highly aggressive, males of this species patrol tightly circumscribed territories, darting out at passing objects.

Clouded Sulphur

Colias philodice



Often called the Common Sulphur.

A small yellow butterfly (1 ½ - 3 inches) with a black band along the edge of both forewing and hindwing.

Because caterpillars feeds on clover, alfalfa, vetches, and many other pervasive legumes, its range has spread dramatically due to increased agriculture. Adults feed on nectar of many plants.

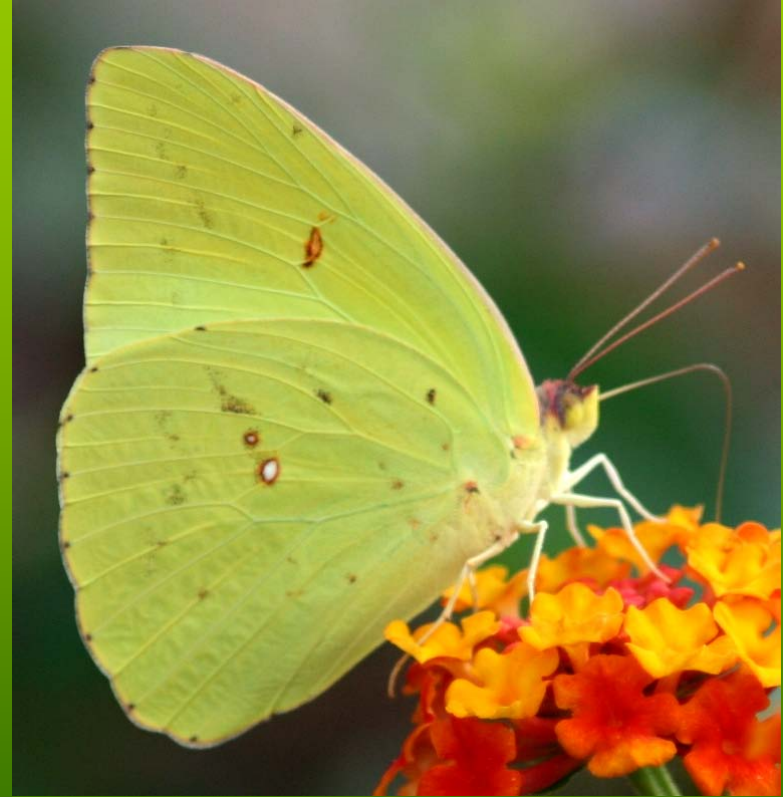
Cloudless Sulphur

Pyrgus communis

A pale to bright yellow butterfly. Wingspan ranges from 2 ¼ - 3 ¼ inches; slightly larger than the Clouded Sulphur.

The major difference between the Cloudless and Clouded is that the Cloudless lacks the dark bands on the edge of the wings.

Adults feed on nectar from flowers with long tubes including hibiscus, lantana, and wild morning glory. Caterpillars feed on members of the pea family – alfalfa and clover.



Cabbage White

Pyrgus communis

Extremely pale yellow or white butterfly. One black spot on males, two spots on females.

Small butterfly; wingspan is only 1 $\frac{3}{4}$ - 2 $\frac{1}{4}$ inches.

Males patrol for females. Females lay single eggs on plants in the mustard and caper family.

Adults eat nectar from an array of plants including mustards, clover, dandelion, asters, and mints.

Common in wide open spaces.



Common Green Darner

Anax junius



A common dragonfly throughout the entire U.S.

Often found flying over meadows; must have a water source near.

A large dragonfly with lengths ranging from 2 $\frac{3}{4}$ to 3 $\frac{1}{4}$ inches.

Males establish and continually defend territories along the shores of lakes and ponds. After mating, females fly singly, without the male attached, or in tandem with the male, to lay their eggs in the stems and leaves of aquatic plants.

Western Meadowhawk

Sympetrum occidentalis

A smaller dragonfly with a length on only 1 ¼ to 1 ½ inches.

A common dragonfly in the western United States. Can be found in a wide variety of habitats provided water is near.

Naiads feed on a wide variety of aquatic animals: mosquito larvae, aquatic fly larvae, shrimp, small fish and tadpoles. Adults eat almost any flying insects: mosquitoes, flies, moths, mayflies, and flying ants.



Ebony Jewelwing

Calopteryx maculata

Up to two inches long.

Males are larger and have a big black head, green body, and black wings.

Females also have black wings, but they have a lighter colored body. They also have a white spot on their wings.



Can be found in a wide variety of habitats, but must have a stream or pond near.

They eat large numbers of gnats, aphids, flies, and other insects.

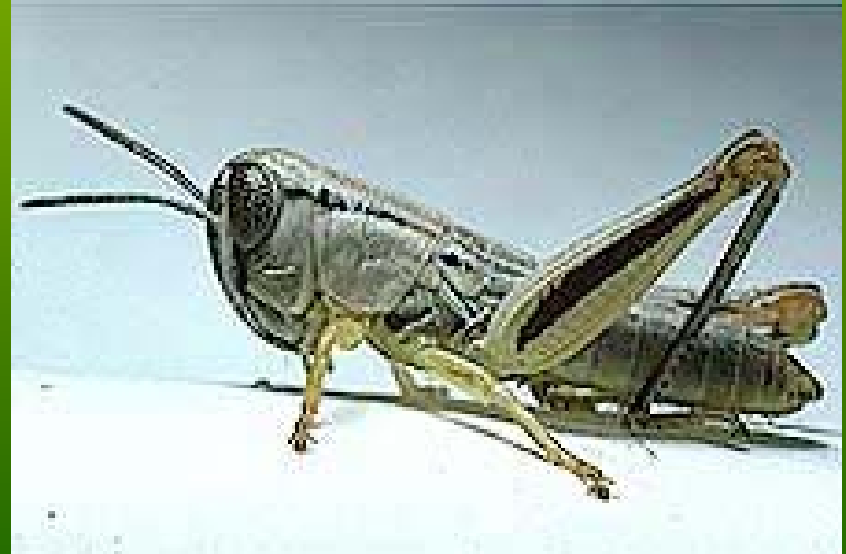
Largeheaded Grasshopper

Phoetaliotes nebrascensis

Prefers tall grasses; dominate species in many Midwest tall grass prairies and a common species in mixed grass prairies.

Feeds almost exclusively on grasses including, little bluestem, big bluestem, and Kentucky bluegrass.

Because the majority of adults of the Largeheaded grasshopper develop short wings unsuited for flying, this form of the species cannot disperse or migrate very far. Although it can move to better areas of green vegetation.



Striped Grasshopper

Amphitornus coloradus



Body is slender, cream colored with brown stripes.

Found in tall grass prairies although not a dominate species. Greatest numbers exist in the mixed grass prairies.

The diet of the striped grasshopper consists almost exclusively of grasses and sedges. Crop analyses indicate that it feeds chiefly on blue grama, needleandthread, threadleaf sedge, and needleleaf sedge.

Bigheaded Grasshopper

Aulocara ellioti

Found from southern Canada to northern Mexico; most commonly found in mixed and short grass prairies.

A serious pest of grasses. Survey records reveal that it may reach densities of 20/sq. yard in the mixed grass prairie and 40/sq. yard in desert grassland.



The bigheaded grasshopper feeds mainly on the green leaves of grasses and sedges, although it can also feed on ground litter.

Velvet Ant

Family Mutillidae



Not actually an ant but rather a wasp.

Over 150 species exist in North America.

Males have wings, but no stinger; Females have no wings, but have a stinger.

Often encountered while walking on the trails. Velvet ants are often the first insects out in the morning and the last in at night. They seek shelter from mid-day heat under leaf litter.

Main food is nectar.