

BRUSHFOOTS



The Brushfoots, or Brush-Footed Butterflies, are members of the family **Nymphalidae**, the largest of the butterfly families comprising over 6,000 species world wide. These strong, gliding fliers are typically covered with hairy scales, and are known for their characteristically short, almost vestigial, front legs covered with brush-like hairs (**setae**)--the inspiration for the family name. They are best known for the trait of using only four legs while at rest. It is theorized that the forelegs are repurposed as chemical receptors for improved smell and communication. Throughout the family, the antennae are bi-grooved below and clubbed at the apices.

While most butterflies hold their wings closed vertically above their bodies at rest, many brushfoot species hold theirs flat. They are rather large, colorful, and boldly patterned, with broad, triangular forewings that are generally larger than the hindwings. And like all butterflies, they lack a frenulum that their cousins, the moths, employ to connect fore- and hindwings, which allows both sets to act in unison during flight.

As with all butterflies, the brushfoots are diurnal and undergo a four-stage complete metamorphosis life cycle from egg to larva (caterpillar) to pupa to adult. The hairy, spikey, or knobbed caterpillars pupate in a **chrysalis**.

Family NYMPHALIDAE (Milkweed Butterflies)

Northern Monarch (*Danaus plexippus*)

Measurements:

Average: Length: 1.25" Wing Span: 3.75"

Distinguishing Field Characteristics:

medium-large size; copper-orange dorsal color, yellow-orange ventral side; black border with white spots; black head with white spots; bold black veins on fore- and hindwings; (m) black pheromone-producing vein spot on each hindwing; (f) slightly smaller, usually darker coloration, and wider wing veins

Notes:

common; solitary, except when overwintering or migrating in large swarms; while the species as a whole is cosmopolitan, subspecies *D. p. plexippus* ranges throughout most of NA, migrating south to MEX; caterpillars feed on their milkweed host; adults visit a variety of flowers for nectar; female lays singular eggs on various milkweed species; 6 subspecies, 2 color morphs (orange and white); important pollinator; adult lifespan to 5 weeks

Mojave presence: migratory

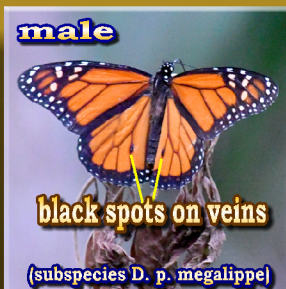
Comments:

Monarchs shown here (*D. p. plexippus*) investigating thistles at the Desert NWR are certainly among the most recognizable and best known of all butterflies. Their orange coloration with bold black wing veins stands out from all others, except the Queen and Viceroy butterflies...not easy to distinguish while fluttering around in the field (see next page for comparison).

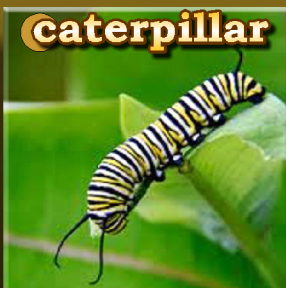
Monarch mating begins with an aerial pursuit by the male who usually forces the chosen female to the ground for his final reward. However, these couples at Corn Creek in the Desert NWR, Nevada, never made it that far, settling instead for a bush (left) and tree limb (right) to take care of business in October, 2018.



Corn Creek; Desert NWR



Mill's Pond; Pompano Bch, FL



Corn Creek; Desert NWR



Henderson BVP; NV



Hoover Dam; Lake Mead NRA



Family NYMPHALIDAE (Milkweed Butterflies)



enjoying a milkweed

Hend. BVP; Henderson, NV



ventral hindwings

black veins, white streaks

Hend. BVP; Henderson, NV



caterpillar

Western Queen (*Danaus gilippus*)

Measurements:

Average: Length: 1.25" Wing Span: 3.25"

Distinguishing Field Characteristics:

medium-large size; copper-orange color; black border with white spots; white spots on dorsal forewings; bold black veins on ventral hindwings only, lined with white streaks; both genders similar

Notes:

common; generally solitary; found in fields, marshes, open woodlands, mountains in the Great Basin, Mojave, Sonoran, and Chihuahuan Deserts of NA; female lays singular eggs, mainly on milkweeds; distasteful to predators due to chemicals in body (cardenolides, alkaloids, etc.) obtained from milkweed host plants; adults feed on nectar; 7 subspecies; adult lifespan of 1-3 months

Mojave presence: native



white spots in forewings

Hend. BVP; Henderson, NV



dorsal forewings

no black veins

Hend. BVP; Henderson, NV



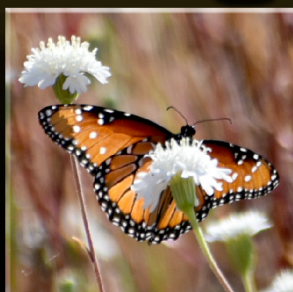
enjoying a pincushion

Willow Beh; LMNRA; AZ

Comments:

In the field, queens are difficult to distinguish from monarchs, unless one alights and stays still long enough to afford a thorough inspection. The only readily apparent difference is the lack of bold black veins on the dorsal side of the wings. The one above (*D. g. thersippus*) was photographed in June, 2021, at the [Henderson Bird Viewing Preserve](#).

Quick Comparison Queen Monarch

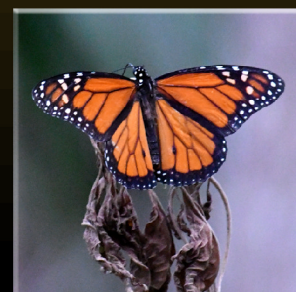


Willow Beh; LMNRA; AZ

white dots in and outside black borders
black veins in ventral hindwings only
dark orange forewings, paler hindwings
does not migrate extensively

white dots only within black borders
black veins in fore- and hindwings
fore- and hindwings uniform orange
migrates in large swarms

Ny3



Mill's Pond; Pompano Beh, FL

Family NYMPHALIDAE (Admirals)

Viceroy (*Limenitis archippus*)



Withlacoochee Forest; FL



Diamond Crk; CO Rvr; GC



Measureme

nts:

Average: Length: ~1.25" Wing Span: 3"

Distinguishing Field Characteristics:

medium-large size; copper-orange wings with bold black veins, black border with 2 rows of white spots, **black line that transects veins on hindwings**; black body with white spots

Notes:

common locally; found in a wide variety of habitats from moist areas (e.g. ponds, marshes, swamps) to drier ones (neadows, forests, deserts) throughout most of NA (conspicuously absent from CA) from CAN south to MEX; female lays singular eggs on tip of leaves of trees, mainly the willow family (*Salicaceae*), such as poplars, cottonwoods, aspen; caterpillars eat their eggshells upon hatching, then catkins and leaves of host tree, absorbing salicylic acid that makes them distasteful to predators; adults feed on nectar from a variety of flowers, particularly thistles and milkweeds; looks very similar to the equally distasteful **Monarch** and **Queen** butterflies, which serves to protect against predation (**Mullerian mimic**); 2-3 generations per year; generally seen flying spring to fall (year-round in FL); lifespan 6-14 days

Mojave presence: rare; eastern region

Comments:

Though viceroys have been reported in the eastern Mojave Desert in Las Vegas, NV, and Kingman, AZ, the only one I have seen in the area is the one above (center left) in May of 2024 at Diamond Creek Beach on the Colorado River in the Grand Canyon--essentially a transition zone between the Mojave and the Colorado Plateau Province.



My first encounter with the species was this specimen while I was on a hike through the Richloam section of the Withlacoochee Forest north of Lakeland, Florida, in May of 2021.



Withlacoochee Forest; FL



Withlacoochee Forest; FL



Family NYMPHALIDAE (Admirals)

Red-Spotted Purple Admiral (*Limenitis arthemis*)

Measurements:

Average: Length: ~1.25" Wing Span: ~4"

Distinguishing Field Characteristics:

large size; dorsal forewings blue-black, hindwings with **iridescent blue** and 2 rows of marginal spots (outer: blue; inner: red-orange); ventral hindwings dark brown with **3 basal red spots**, curved **sub-marginal row of red spots**, black marginal bands; black body

Notes:

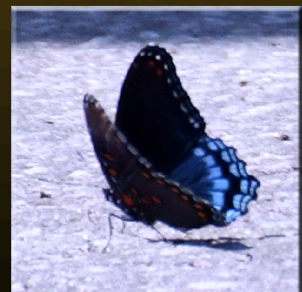
common locally; found in a variety of habitats (forests, riparian areas, etc.) mainly in eastern US, but isolated populations in sw US and MEX; female lays singular eggs on tips of leaves of trees mainly in the willow family (**Salicaceae**); caterpillar (white and green with yellow head and rear bumps) feeds on leaves of host tree; adults consume nectar, tree sap, rotting fruit, etc. (males "puddle"); evolved to mimic the poisonous **Pipevine Swallowtail** for protection from predators (**Batesian mimic**); 4 subspecies; 2-3 generations per year; generally seen flying in spring to fall; adult lifespan to 2 weeks

Mojave presence: rare; far eastern region

Comments:

Once considered a separate species from the **White Admiral**, it is now accepted as the southern subspecies: **L. a. astyanax**.

Rare residents of the far eastern region of the Mojave Desert (near Kingman, Arizona), these butterflies are not particularly cooperative photo models, as they are usually in constant motion. Males, on the other hand, can be more photogenic when they're preoccupied with "puddling" for nutrients, like this one at the **Santos Recreation Area** south of Ocala, Florida, in May of 2021.



Family NYMPHALIDAE (Checkerspots)

Sagebrush Checkerspot (*Chlosyne acastus*)

Measurements:

Average: Length: ~.75" Wing Span: 1.75"

Distinguishing Field Characteristics:

medium size; furry brown body, orangish abdomen; dorsal wings orange with dark brown markings, margins usually edged with white; ventral wings with alternating rows of white and orange checker spots separated by brown, crescent-shaped bands

Notes:

common locally; generally solitary, though males often congregate while patrolling for females; the species in general ranges in dry habitats (scrublands, washes, etc.) throughout western NA from extreme southern CAN south to nw MEX (*C. a. neumoegeni* more common in desert sw US); female lays clutches of green eggs on plants of the sunflower family (*Asteraceae*), primarily rabbitbrush; greenish-brown to black, spiky caterpillars feed in groups on leaves and flowers of host plant; adults consume nectar; 2 subspecies; 1-3 generations per year; adult lifespan ~2 weeks; usually seen from June to August

Mojave presence: native

Comments:

While this checkerspot is considered to be rather common across its range, it is certainly not common in the Mojave Desert. It is best represented by the subspecies shown above (*C. a. neumoegeni*). Though I may have unknowingly seen others before I became more acutely interested in nature photography, the one investigating a **Desert Marigold** that I casually got a snapshot of at the **Red Rock Canyon National Conservation Area** in May of 2017 is the only specimen I have actually taken pictures of.



Red Rock Canyon NCA; NV



Red Rock Canyon NCA; NV



caterpillar



Red Rock Canyon NCA; NV



Red Rock Canyon NCA; NV



ventral wing markings

Family NYMPHALIDAE (Patches)

California Patch (*Chlosyne californica*)

Measurements:

Average: Length: .75" Wing Span: 2"

Distinguishing Field Characteristics:

medium-size; pubescent, brownish-black body; brownish-black ventral and dorsal wings: orange median band and submarginal spots, small white spots in submarginal brown area; dark eyes; long, black-and-white banded antennae, brownish apical knobs; no sexual dimorphism

Notes:

uncommon; solitary except for mating (males are polygynous), locally social in large swarms; found in desert areas (washes, canyons, foothills, etc.) of sw NA from s CA east to s NV/AZ, south into MEX (rare elsewhere); males engage in "hilltopping"; eggs laid in groups on underside of leaves (e.g. sunflower family); gregarious larva (spikey, black with red spots) eat the leaves; adults feed on nectar; several broods from March to November, but mainly seen flying individually in the spring, though also later in the year in swarms after sufficient summer rains; adult lifespan 2-10 weeks

Mojave presence: native



Dolan Springs, AZ



Dolan Springs, AZ



Dolan Springs, AZ



Dolan Springs, AZ

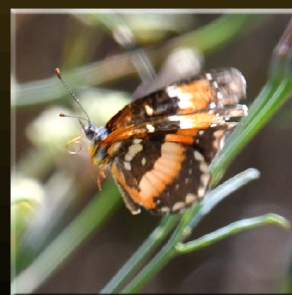


Dolan Springs, Arizona



Comments:

These uncommon butterflies revealed themselves to me for the first time in Dolan Springs in northwest Arizona on an absolutely beautiful day in October, 2022. At left, a couple enjoy the bounty provided by brittlebush flowers; at right, an individual with a pollen-coated belly is headed off for more at a new site.



Family NYMPHALIDAE (Crescents)

Pearl Crescent (*Phyciodes theros*)

Measurements:

Average: Length: ~.75" Wing Span: 1.33"

Distinguishing Field Characteristics:

medium size; furry, orange-brown body, orangish abdomen; black-and-white banded antennae with black (male) or orange (female) clubs on apices; dorsal wings are orange with an intricate pattern of brownish-black markings (very variable) and margins; dark edge on underside of hindwings encloses a pale crescent

Notes:

common locally; generally solitary; found in almost any habitat (fields, meadows, roadsides, streams, gardens, etc.) throughout most of NA (excluding west coast) from southern CAN to MEX (concentrated in e US); female lays clutches of eggs on underside of leaves of the aster family (*Asteraceae*); gregarious caterpillars (brown with dark spiky hairs) eat leaves of host; adults feed on nectar of a variety of flowers (dogbanes, milkweeds, asters, etc.), often with wings wide open like moths; low, erratic flight from spring to fall in northern range, year-round in southern; several generations per year; adult lifespan to 10 days

Mojave presence: rare

Comments:

While rare in the Mojave Desert (in fact, I've never seen one in my 40+ years in the region, although admittedly I've only been photographing plants and animals for the past 7 or so, having been focused on mines and minerals), this crescent is rather common in the eastern US. I encountered this one (my first) on an excursion into the Withlacoochee Forest in central Florida in May, 2021. I include it here, because the species has been occasionally observed as vagrants or accidentals in the Mojave.



Withlacoochee Forest; FL



Withlacoochee Forest; FL



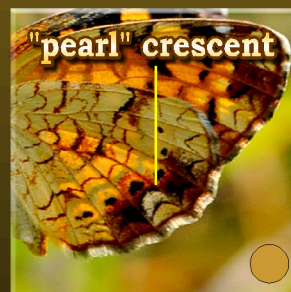
Photo: beatriz moisset



Withlacoochee Forest; FL



Withlacoochee Forest; FL



Family NYMPHALIDAE (Ladies)

Painted Lady (*Vanessa cardui*)

Measurements:

Average: Length: ~1" Wing Span: 2.25"

Distinguishing Field Characteristics:

brownish, furry upper body and base of wings; dorsal wings orange-red, black tips with white spots; black spots border hindwings; ventral wings paler, hindwings tan with 4 eyespots

Notes:

very common; generally solitary, except for mating (males are polygynous) and migration; occurs in temperate zones around the world (excluding SA) in any warm habitat (including deserts, grasslands, mountains, etc.); female lays singular eggs mainly on thistle, mallow, legumes; adult feeds on nectar of a large variety of host plants (caterpillars prefer the sunflower family, particularly thistles); aka **Thistle Butterfly**; adult lifespan about 3 weeks

Mojave presence: migratory; some year-round

Comments:

The Painted Lady is almost impossible to distinguish from the **West Coast Lady** in the field! About the best you can do is to take photos, get them onto a computer at home, and identify the characteristic features of each (see next page for comparison).

Being one of the most wide-spread of butterflies, the Painted Lady can be seen enjoying a great variety of plants in numerous environments. Clockwise from top left: Hoover Dam Lodge, **Lake Mead NRA**, NV (March 2019); North Timp Point, **Grand Canyon NP**, AZ (September 2021); **Pipe Spring National Monument**, AZ (September 2021); and **Red Rock Canyon NCA**, NV (October 2016).



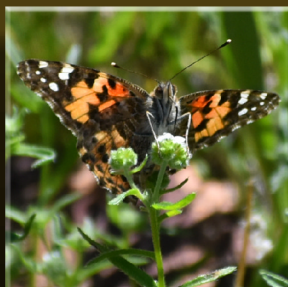
Hoover Dam Lodge; LMNRA



Yellowstone NP; Wyoming



Malpais Mesa; LMNRA



Hoover Dam Lodge; LMNRA



South Rim; Grand Canyon NP



Hoover Dam Lodge; LMNRA



Family NYMPHALIDAE (Ladies)



Hoover Dam Lodge; LMNRA

West Coast Lady (*Vanessa annabella*)

Measurements:

Average: Length: ~1" Wing Span: 2"

Distinguishing Field Characteristics:

brownish, furry upper body and base of wings; dorsal forewings deep orange, black tips with white apical spots; **black circles** border dorsal hindwings; ventral hindwings paler, with complex mottled pattern and obscured eyespots

Notes:

common; generally solitary, except when mating; occurs in varied habitats (deserts, riparian canyons, fields, meadows, gardens, etc.) throughout most of w US, sw CAN, Central America; female lays singular eggs on upperside of leaves of the mallow family (**Malvaceae**); yellow-lined, spiky, tan to black caterpillar lives in silk nest and eats leaves of host plant; adults feed on nectar of various flowers; multiple generations per year; seen flying April to December; adult lifespan 2-3 weeks;

Mojave presence: migratory; some year-round

Comments:

In the field, "Ladys" are difficult to distinguish between each other, unless they cooperate by posing very still, and you know what to look for. Fortunately, both species like to bask on the ground or linger at a flower long enough for good pics to be taken, like the one above at the Hoover Dam Lodge near the iconic Hoover Dam in March, 2019. The only readily apparent difference is the circles on the West Coast's hindwings, versus spots.



Hoover Dam Lodge; LMNRA



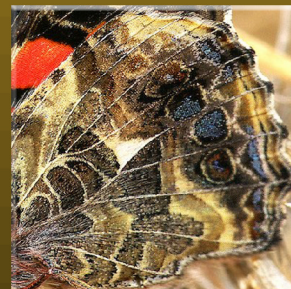
Hoover Dam Lodge; LMNRA



Hoover Dam Lodge; LMNRA



Photo: Peter Bryant



Quick Comparison Painted West Coast



distinct eyespots on ventral hindwings
black marginal **spots** on hindwings
white sub-apical bar

obscured eyespots on ventral hindwings
black marginal **circles** on hindwings
orange sub-apical bar



Family NYMPHALIDAE (Admirals)

Red Admiral (*Vanessa atalanta*)

Measurements:

Average: Length: 1.25" Wing Span: 2.5"

Distinguishing Field Characteristics:

medium size; furry, brownish-black body; dorsal forewings brownish black with **red median band**, white splotches near tip; dorsal hindwings have **red marginal band**; ventral wings mottled brown, black, and bluish; long antennae, apical knob black with white tip; fast, erratic flight; sexually monomorphic

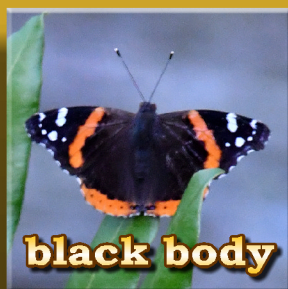
Notes:

common; generally solitary, except when mating and migrating; males very territorial; cosmopolitan, in moist urban and rural areas (canyons, streams, marshes, fields, gardens, etc.) mainly from Central America, migrating north to CAN (also Caribbean, NZ, n Africa, Europe, and Asia); males engage in "hilltopping" to wait for arriving females; female lays singular eggs on uppersides of leaves of host plants of the nettle family (**Urticaceae**); caterpillar (black/brown with white spots/yellow stripes, spiky hairs) eats and lives within silk-tied nest of leaves of host plant; adult prefers rotting fruit, sap, bird droppings, (rarely nectar); 2 broods per year, adults hibernate through the winter; active March to September in northern part of range, year-round in southern parts; adult lifespan to 3 weeks

Mojave presence: migratory

Comments:

While these admirals are adaptable to almost any habitat, they are far more common in the eastern US than in the desert southwest (the one shown above from Pompano Beach, Florida, was photographed in May of 2021). In fact, I've never seen one in the Mojave Desert, though they certainly do occur there. Now that I have a more avid interest in nature photography, I'll be keeping a closer eye out for this people-friendly butterfly. However, if you're visiting the area, do not expect to encounter this enticing migrant.



black body

Pompano Beach, FL



white-tipped antennae

Devil's River; June, TX



caterpillar



red forewing band

Pompano Beach, FL



red hindwing margin

Devil's River; June, TX



mottled underwings

Devil's River; June, TX

Family NYMPHALIDAE (Sisters)

Arizona Sister (*Adelpha eulalia*)

Measurements:

Average: Length: ~1.25" Wing Span: 4"

Distinguishing Field Characteristics:

large size; dorsal brown-black with bold white band, **orange patch** at tip of forewings (characteristic of "sisters"); ventral paler and patterned with brown, orange, blue, and white bands; yellow-orange eyes and proboscis; sexually monomorphic

Notes:

common locally; generally solitary; found in oak woodlands, forests, canyons, usually near water throughout sw US, south to Central America; once considered a subspecies of the **Mexican Sister** (*A. bredowii*), now elevated to full species status; female lays singular eggs on leaves of members of the oak family (**Fagaceae**); 5 larval instars; hairy/spiky, brown/green, caterpillars feed on oak host plants; adults eat rotting fruit, sap, rarely nectar; males "puddle" for nutrients from mud; 1-3 generations per year, emerging spring to fall; adult lifespan about 1 month

Mojave presence: native; far eastern region

The **Arizona Sister** butterfly is almost identical to the **California Sister** (*A. californica*), and in the field are essentially impossible to distinguish. Shown here are the two most important traits that are characteristic of the Arizona variety.

Comments:

While butterflies can be frustrating to photograph, "sisters" are usually good posers, like these ones at **Red Rock Canyon NCA** in southern Nevada in September, 2016 (left), and October, 2019 (right). Look for them wherever you find their favorite host plants, members of the oak family. These were spotted loitering around **Live Shrub Oak** (*Quercus turbinella*) at the sandstone quarry.



Red Rock Canyon NCA; NV

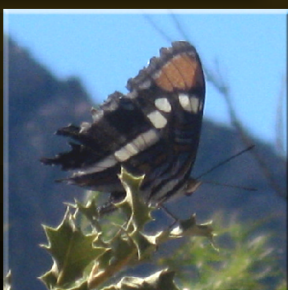
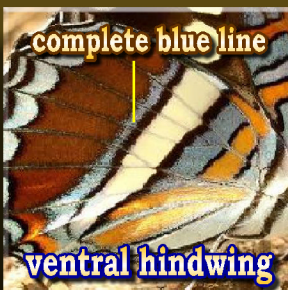
photo: Todd Stout



Colorado River; Grand Cyn



Colorado River; Grand Cyn



Family NYMPHALIDAE (Fritillaries)

Variegated Fritillary (*Euptoietia claudia*)

Measurements:

Average: Length: ~1" Wing Span: 2.25"

Distinguishing Field Characteristics:

medium size; furry, brown body; orangish eyes, legs, and antennae; dorsal wings light orange with brownish-black lines, crescents, sub-marginal spots; **black-ringed orange spot** on both forewing shoulders; ventral wings paler, mottled; hindwings have scalloped edges; sexually monomorphic

Notes:

common, but elusive; prefers open areas (fields, meadows, roadsides, etc.) in Argentina to southern US, migrating farther north in warm months; female lays singular eggs on undersides of stems and leaves of variety of plants (violets, purslane, etc.); 2-4 broods per year; 2-inch-long caterpillar (red-orange, black spikes, longitudinal black-and-white dashed lines) feeds on leaves and flowers of host; adults eat nectar of a variety of flowers (alfalfa, dogbanes, asters, etc.); flies spring to fall in southern part of range, summer to early fall in northern areas; lifespan ~2 months

Mojave presence: migratory

Comments:

This species is aptly named, since in Greek its genus, **Euptoietia**, means "easily scared." In other words this swift, low-flying butterfly is difficult to approach to get good photographs. However, while on a September trip to **Pipe Spring National Monument** near Fredonia, Arizona, in 2021, I found a specimen so intent on its foraging of a rabbitbrush in a roadside field that it paid no attention to my intrusion. In fact, so far in my experiences, this is the only member of the species I have ever been able to get good photos of. Sometimes you just get lucky!



Pipe Spring NM; AZ



Pipe Spring NM; AZ



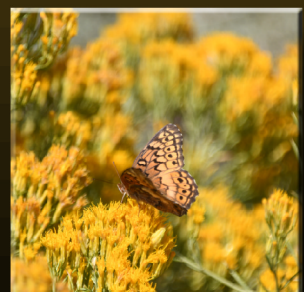
Pipe Spring NM; AZ



Pipe Spring NM; AZ



Pipe Spring NM; AZ



Family NYMPHALIDAE (Fritillaries)

Zerene Fritillary (*Speyeria zerene*)

Measurements:

Average: Length: ~1.25" Wing Span: 2.5"

Distinguishing Field Characteristics:

medium size; furry, brown body; orangish eyes, antennae, tips of black antennae clubs; dorsal wings variable shades of orange to brown, flare of bright orange from base of wings, 5 blackish irregular lines along leading edge of forewings, and the trailing edges of fore- and hindwings have spots and crescents; ventral hindwings pale yellowish with scattered silvery-white spots

Notes:

uncommon; ranges from central CA east to NM, north to CAN in meadows, dunes, grasslands, etc.; female lays eggs on plants of the violet family (*Violaceae*) or on nearby leaf litter; 1 brood per year; dark, spiky caterpillars overwinter, then feed on leaves of host plant; adults feed on nectar of numerous flowers, especially those of the sunflower family (asters, thistles, etc.); 15 subspecies (some endangered due to habitat loss); flies June to September; adult lifespan ~3 weeks;

Mojave presence: rare

Comments:

This species is very uncommon to rare in the Mojave region, although specimens have been noted in such areas as [Death Valley National Park](#) and southern NV. However, the only one I have verifiably seen and photographed is this one at [Yellowstone National Park](#) in September of 2019. It's always a treat to witness something special in Nature.



Yellowstone NP; Wyoming



Yellowstone NP; Wyoming

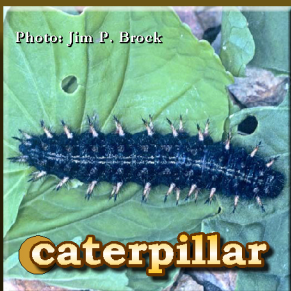


Photo: Jim P. Brock

Caterpillar



Yellowstone NP; Wyoming



Yellowstone NP; Wyoming



Yellowstone NP; Wyoming

Family NYMPHALIDAE (Cloaks)

Morning Cloak (*Nymphalis antiopa*)

Measurements:

Average: Length: 1.5" Wing Span: 3"

Distinguishing Field Characteristics:

medium-large size; pubescent blackish body; dorsal wings dark brown-black to maroon, ventral side striated gray; **iridescent blue submarginal spots** adorn wings next to marginal yellow or **white borders**; long dark antennae with pale apices; no sexual dimorphism

Notes:

common; solitary; found in a wide variety of habitats (wetlands, forests, deserts, etc.) throughout the northern hemisphere (rare elsewhere, such as n SA); males choose and defend their mating territory (called **lekking**); female lays clusters of small yellowish eggs (darkening to black) on end of stems of host plant (e.g. willow, poplar, birch); 3 subspecies in NA; larva (called **Spiney Elm Caterpillar**), up to 2" with black spines, red legs, and 8 red spots on back; larvae feed on leaves of host plant; adults feed on sap, rotting fruit, etc. (rarely nectar); aka **Grand Surprise**, **White Petticoat**; adult lifespan up to 1 year (among the longest of all butterflies); usually 1 generation per year; adults appear in early spring to mate after hibernating through winter; resulting brood flies June to July; not significant pollinators due to their diet

Mojave presence: migratory

Comments:

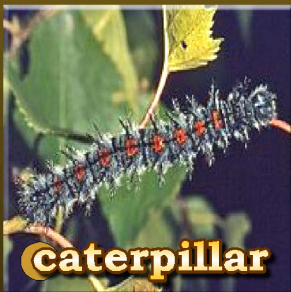
Cloaks are not particularly common in the Mojave region. Those that **are** spotted are usually in higher-elevation locations, such as the Spring Mountains in southern Nevada. The Arizona individuals shown here are of the southwestern subspecies **N. a. thomsoni**. They appeared at the **Henderson Bird Viwing Preserve** (a wetlands habitat), and in Antelope Canyon in the **Mt. Tipton Wilderness Area** near Dolan Springs in March of 2022.



Hend. BVP; Henderson, NV



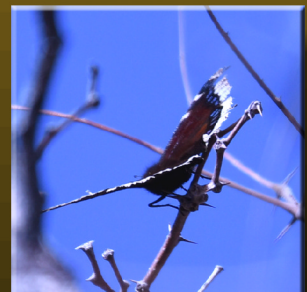
Hend. BVP; Henderson, NV



Hend. BVP; Henderson, NV



Diamond Crk; Grand Cyn; AZ



Mt. Tipton; Dolan Spgs, AZ

Family NYMPHALIDAE (Buckeyes)

Common Buckeye (*Junonia coenia*)

Measurements:

Average: Length: 1.25" Wing Span: 2.5"

Distinguishing Field Characteristics:

medium-large size; pubescent brown body; brown wings; 2 orange bars and 2 eyespots on forewings (white postmedian bar encloses larger eyespot); 2 eyespots on dorsal hindwings; ventral hindwings paler brown (summer) or reddish (fall); white antennae with dark apical knobs; no sexual dimorphism

Notes:

common; solitary; found in open areas (fields, pastures, scrublands, etc.) throughout most of NA (especially eastern) from s CAN south to n MEX (also Bermuda, Cuba); males choose and defend their mating territory (called **lekking**); female lays singular eggs on buds or upperside of leaves of host plants (mainly snapdragon family **Lamiales**); solitary caterpillar (.75", spiky, brown-black with tan stripes, orange legs) feeds on leaves of host plant; adults feed on nectar, mainly from yellow composite flowers; males "puddle"; aka **Buckeye**; adult lifespan about 4 weeks; 2-3 broods per year May-October (year-round in south); larvae and adults in southern range overwinter; pollinator of various flowers

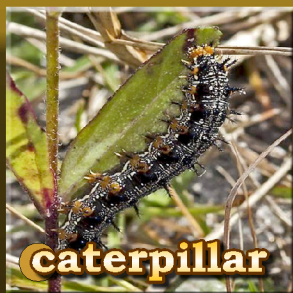
Mojave presence: migratory

Comments:

Buckeyes are rather rare in the Mojave region, occurring mainly as migrants avoiding colder climes. The male shown--first alighting on an aster, then landing on the moist ground to puddle for some nourishing nutrients in a drainage culvert adjacent to Route 66 in the Historic District of Kingman, AZ, in August of 2024--is the only one I've encountered in the region.



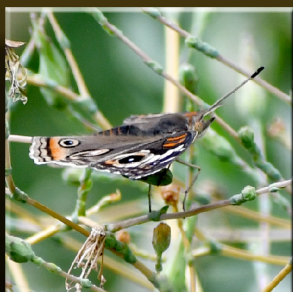
Colorado River; Grand Cyn



Colorado River; Grand Cyn



Colorado River; Grand Cyn



Family NYMPHALIDAE (Snouts)



mottled brown underwing

October

Corn Creek; Desert NWR; NV

American Snout (*Libytheana carinenta*)

Measurements:

Average: Length: 1" Wing Span: 1.75"

Distinguishing Field Characteristics:

small size; dorsal wings brown with orange patches and white spots, ventral hindwings mottled brown to plain violet-gray; elongated labial palps (mouthparts) extended forward to look like a long nose; tip of forewing squared; (m) first pair of legs short

Notes:

common; occasionally migrates in huge swarms; ranges throughout temperate NA south into SA, usually in fields and meadows; female lays small groups of eggs on trees of the hackberry family (*Cannabaceae*); caterpillars feed on leaves of host hackberry; adults feed on nectar from a variety of flowers; aka **Pale Snout**; flights--erratic and fast--observed May to August; adult lifespan 4-12 days (late-season broods diapause overwinter)

Mojave presence: migratory



long labial palps

Corn Creek; Desert NWR; NV



mimics dead leaf

N. Timp Point; GCNP; AZ



September

violet-gray underwing

N. Timp Pt; GCNP; AZ



caterpillar



November

Dolan Springs, Arizona



Comments:

These snouts, along with numerous other insects, enjoy the bounty in a field of mostly rabbitbrush at the entrance to **Pipe Spring National Monument** near Fredonia, Arizona, in September 2021.

The elongate snout that looks like the petiole of a leaf, combined with the coloration of the butterfly, is a camouflage technique that serves to protect the insect from predators. Hanging upside down from a branch or twig, its typical habit, mimics a dead leaf.



squared forewing tip