

Nature at the Tinneys (With Insect Focus)

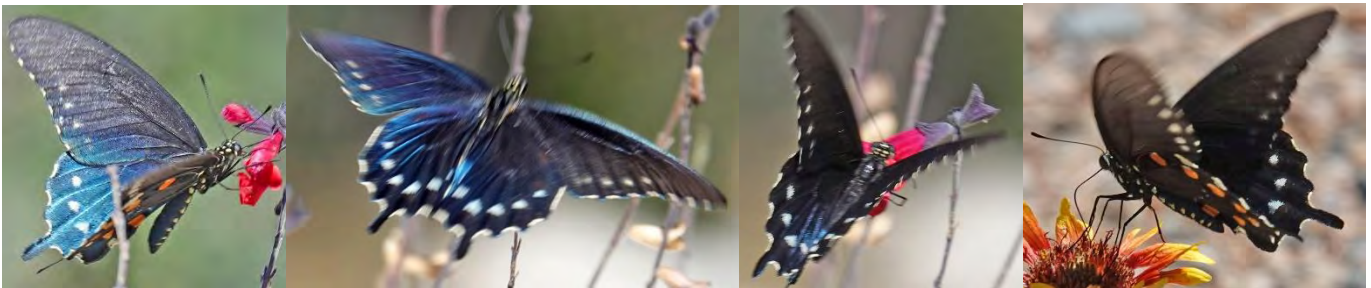
(August, September, October 2021 – Bob and Maxine (photographer) Tinney, Ranch at Prescott, Arizona)

Lepidoptera - Butterflies and Moths

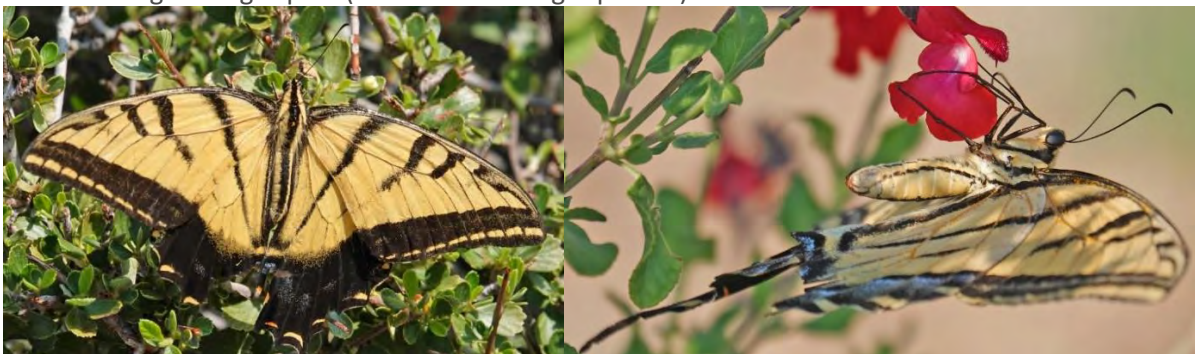
Butterflies and moths are both in the Order **Lepidoptera**, which encompasses about 180,000 species of flying, scaly-winged insects in the world. Moths and butterflies are the only (with few exceptions) group of insects that have wings covered by scales. They also differ from other insects by their ability to coil up their feeding tube (the **proboscis**). On a morning walk in September, the Tinneys counted 63 butterflies and moths within a one-mile distance. Arizona has had a surprisingly good monsoon this 2021 season, which has made The Ranch plants greener, and releasing seeds and dying. The more rain, the better the plants growth, which gives insects like butterflies and moths more to eat and a greater chance to contribute to the ecosystem's food chain. The antennae and eyes are found on the head along with a pair of galeae in pupa stage unite to zip together and form the **proboscis** that the butterfly or moth uses to suck nectar.



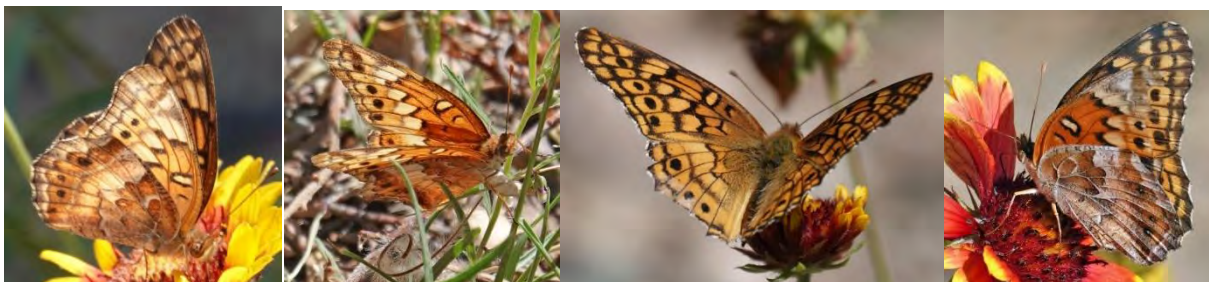
The upper surface of the wings of the **Black Swallowtail** (*Papilio polyxenes asterius*) is black with two rows of yellowish spots—large and bright in males and smaller and lighter in females. The area between the rows of spots on the hind wings of females is powdery iridescent blue. In all three photos, a conspicuous red spot with a black bulls-eye is on the inner hind margin of the hind wings.



The **Pipevine Swallowtail** or **Blue Swallowtail** (*Battus philenor*) is one of the most beautiful swallowtails. Male forewing velvety black; hindwing with single tail, iridescent blue-green scaling and single submarginal row of pale spots. Female duller black with more prominent pale spot band. Ventral hindwing black with iridescent blue-green scaling and single submarginal row of large orange spots (visible left and right photos).



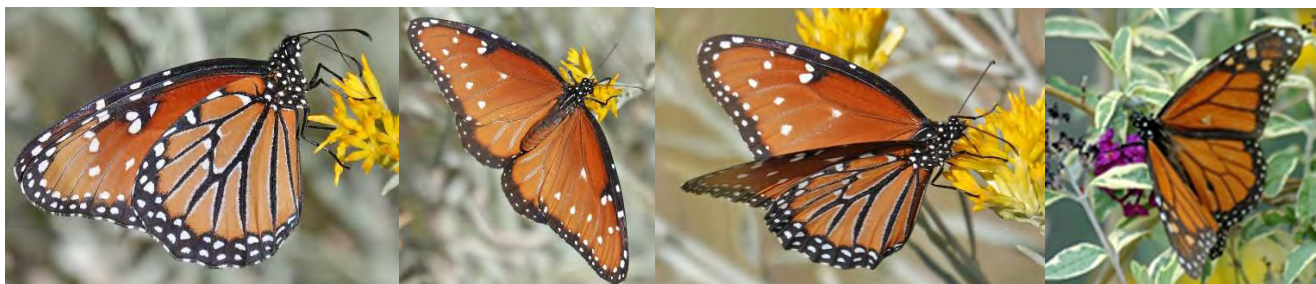
Arizona's state butterfly is the **Two-tailed Swallowtail** butterfly (*Papilio multicaudata*). The two-tailed swallowtail butterfly became the state butterfly in 2001. Swallowtails are the largest species of butterflies in the United States. It features a wingspan of 3 ½" to 5 ½" long. This butterfly is lovely and graceful, yet rarely enjoyed.



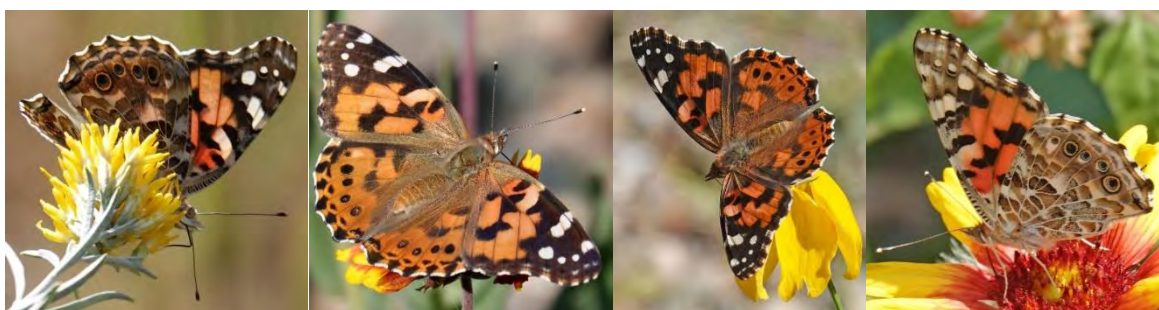
Three **Variegated Fritillaries** (*Euptoieta claudia*) are spotted while Bob was trimming shrubs near the driveway. The Variegated Fritillary is brownish orange above, with a complex checkered pattern of black markings and dark dots. It has a black-rimmed pale orange spot near the leading edge of the forewing.



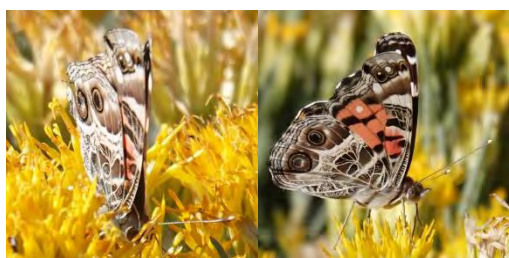
Three **Variegated Fritillaries** are seen fluttering and then two mating (note opposite head positions and coloration). The genus name was taken from the Greek word *euptoiētos* meaning "easily scared", and they soon fly across the driveway attached together to some nearby rocks (last photo) to continue their efforts. They have two or three broods per year.



The upper side of the **Queen Butterfly** (*Danaus gilippus*) is chestnut brown; black borders of forewings have 2 rows of white spots; white spots are scattered at the forewing apex. Underside of hindwing has black veins; black borders of both wings have 2 rows of white spots. Often mistaken as a **Monarch** with veined upper side (right, older photo).



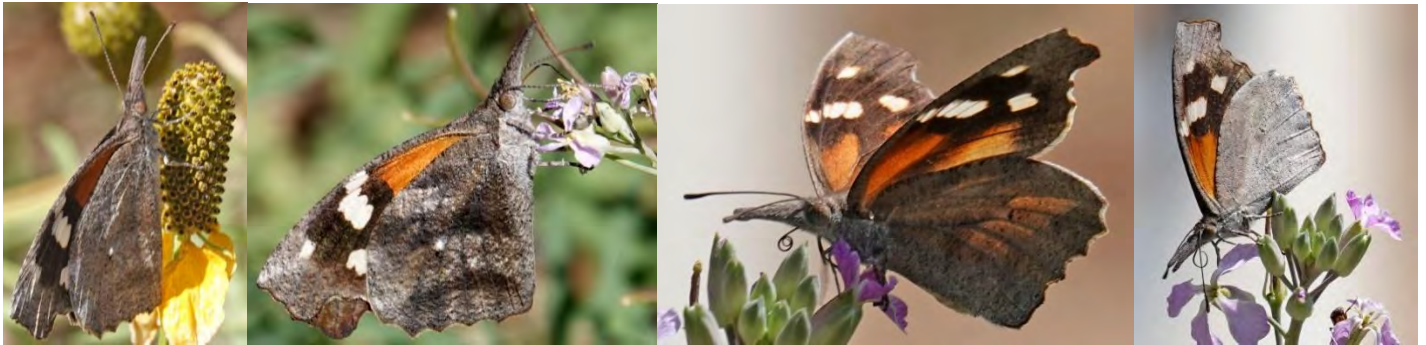
The upperside of the **Painted Lady** (*Vanessa cardui*) is orange-brown with darker wing bases; forewing with black apex patch and white bar on leading edge; hindwing submarginal row of 4 small black spots sometimes has blue scales. Underside has a black, brown, and gray pattern with 5 small submarginal eyespots.



When Maxine started cropping the photos and identifying the various species, two of the Painted Ladies didn't look quite right. She identified the photos as **American Ladies** (*Vanessa virginiensis*) which were enjoying the flowers on the fall blooming rabbitbrush. The **American Lady** has a distinct white spot on the square orange patch of the upper wing, which the Painted Lady does not have. The American Lady has two eyespots on the lower wing, whereas the Painted Lady has 5 spots.



The first two photos of the **California Patch** (*Chlosyne californica*) have been tattered and losing scales by wind/ hail of a storm or after a possible predator encounter, but still flying and trying to survive. The two right photos are of a more perfect individual of the **California Patch** with brownish-black at the base and costal edge, with a wide yellow-orange median band and large orange submarginal spots.



The **American Snouts** (*Libytheana carinent*) have greatly elongated mouthparts that make them seem to have long “noses.” This is the only species of snout butterfly in North America. Forewings are elongated with squared-off wingtips. The dorsal wing pattern is orange with wide dark borders with white spots. (Note: Third and fourth photos with proboscis curled.)



The **Sleepy Orange** (*Eurema nicippe*) is a North American butterfly in the family Pieridae. The summer form of Sleepy Orange butterflies, those that emerge in the spring and summer, are noticeably more colorful than the winter form butterflies (three together top photos) with their tan or brown ventral hindwings.



The **Gray Hairstreak** (*Strymon melinus*) is a small gossamer-winged butterfly and appears delicate and shimmery. The gray hairstreak also has the signature set of "tails" on their hind-wings that they may wriggle around to imitate their antennae and their head when a predator might strike at their hind-wings rather than their head, and they escape.

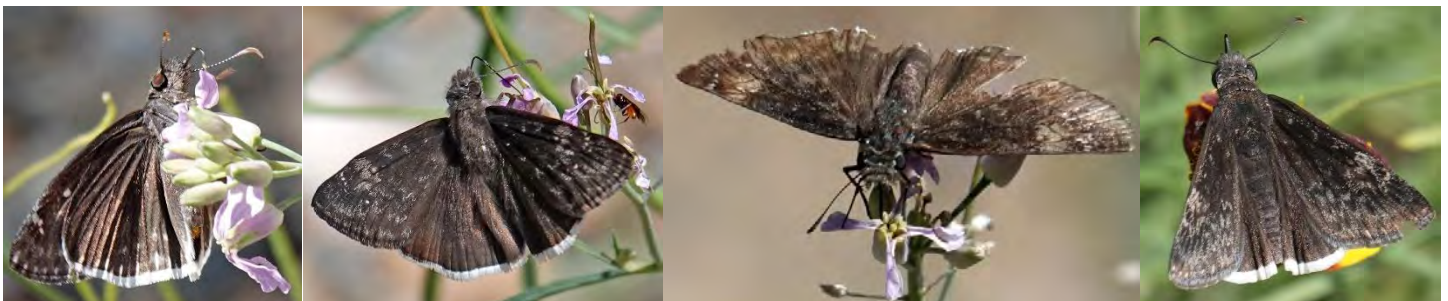


While pulling grasses from our walking paths, Maxine encounters what she believes to be two **Apache Skippers** (*Hesperia woodgatei*) with ventral hindwings that is dark green-brown with widely-spaced smallish white spots and dorsal forewings with yellowish spotting. Antennas are long with short clubs and a white ring at the base of each club. Maxine got her camera and saw that the skippers were fluttering around together for a bit and may have been mating (Two Skippers in the two right photos, but difficult to distinguish).



The believed to be **Dull Firetip** (*Pyrrhopyge araxes*), also known as the Golf-Club **Skipper**, is a North American butterfly in the family HesperIIDae. They usually perch with their wings fully or partly open, while enjoying the Sage in our yard.

The upper side of the wings is brown with the fore wings having several glassy white spots. Note the antennae and Proboscis last photo.



The believed to be **Funereal Duskywing's** (*Erynnis funeralis*) forewing is narrow and pointed, hindwing is somewhat triangular. The upper side of wing is black; forewing has a dull brown patch at the end of the cell.

Hindwing has white fringe on the outer margin.



The **Dainty Sulphur** or **dwarf yellow** (*Nathalis iole*), is in the family Pieridae. These small, yellow, black and greenish gray butterflies can be identified by the black spots on their ventral forewings and enjoy the flowers in the Tinneys' yard (above and below).



Two left butterflies are believed to be **Clouded Sulphur** or **Common Sulphur** (*Colias philodice*) or perhaps a **Clouded Yellow** with a dark spot on the upper wing and circle spot on the lower wing. This is probably the female from the greenish color and enjoys Rabbitbrush nectar. Two pairs right are believed to be **Little Yellow Butterflies** feeding on Indian Blanket flowers.

(Help with Verification of Identifications would be appreciated.)



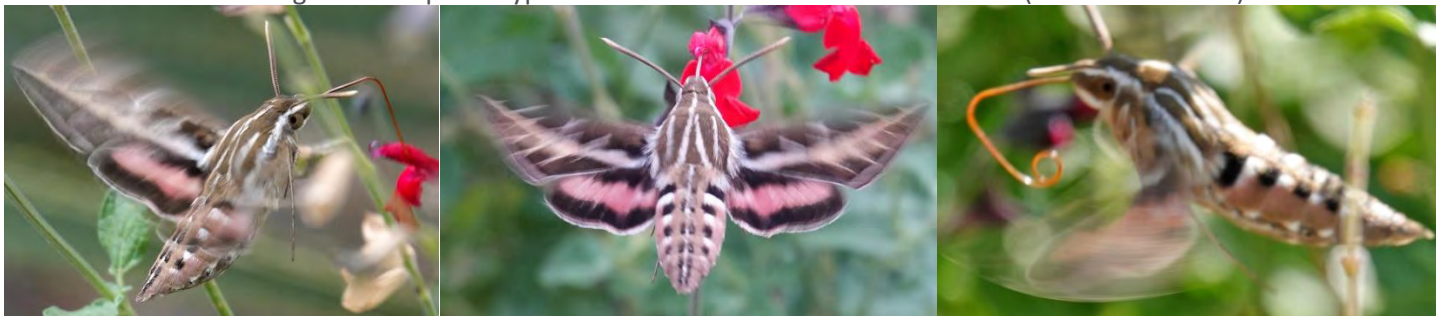
Believed to be a **White Angled-Sulphur** (*Anteos clorinde*) which has an apex of forewing hooked. Wings are pale green, fading with age. Yellow bar in forewing cell is more diffused in a female.



The **Checkered White Butterfly** (*Pontia protodice*) features white wings populated with dark grayish-black spots, and it enjoys the nectar of some wild radish flowers. The right photo may be a cryptic **Somber Carpet Moth** (*Disclisioprocta stellat*).

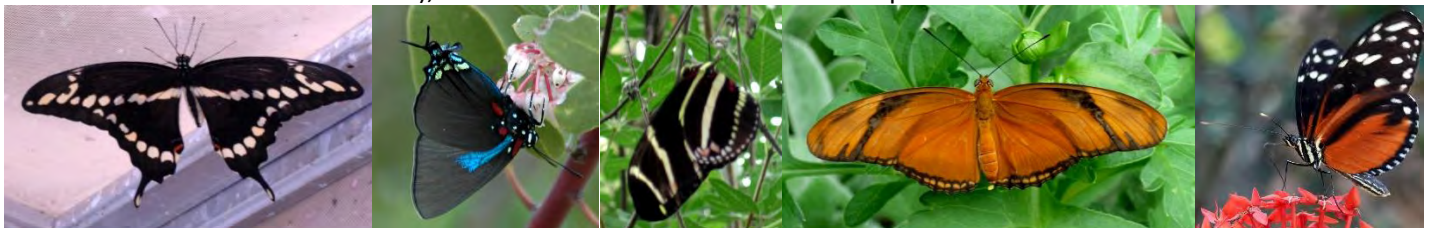


The **White-lined Sphinx Moth**, (*Hyles lineata*) is a moth of the family Sphingidae. They are sometimes erroneously referred to as the 'hummingbird moth' because of their bird-like size and flight patterns. As caterpillars, they have a wide range of color phenotypes but show consistent adult coloration. (above and below).



The last photo brings to mind the problem moths and butterflies would have if they had to fly around with their **proboscis**, like a long rope dangling out of their mouth, which with resin springs back or retracts after feeding.

Butterfly and Moth Identification is much like learning sea creatures, but after 500+ Scuba dives the Tinneys were well versed with the sea creature names and their environs. Then when we began Birding, many birds were LBBs (little brown birds), but now have more than 1200+ bird species on our Life List.



In addition to the above, we have seen many other butterflies in the US and other countries, including **Giant Swallowtail**, **Great Purple Hairstreak**, Viceroy, Arizona/California Sister, Mourning Cloak, **Zebra Longwing**, Grizzled Skipper, Common Mexican Bluewing, Sooty, Buckeye, Mimosa Yellow, Spring Azure, **Julia Heliconian**, Caraunus Blue, and **Scarlet Tiger** . . . but know we will never become lepidopterists as there are 313 species of butterflies in Arizona, 11,500+ in the United States, and 180,000 worldwide. This identification process was very time consuming and difficult for Maxine. If some of you with butterfly/moth backgrounds note errors in this document, your help with identification would be most appreciated.

Four Orders of Insect Species in the United States

Terry Erwin of the Smithsonian Institution's Department of Entomology estimates the number of **living species of insects** to be 30 million. The largest numbers of described species in the U.S. fall into four insect Orders: **Coleoptera** (beetles) at 23,700, **Diptera** (flies) at 19,600, **Hymenoptera** (ants, bees, wasps) at 17,500, and **Lepidoptera** (moths and butterflies) at 11,500. Since Lepidoptera has been described above, below are photos of a limited sample of the other three orders.

Crane Flies (Order: Diptera)



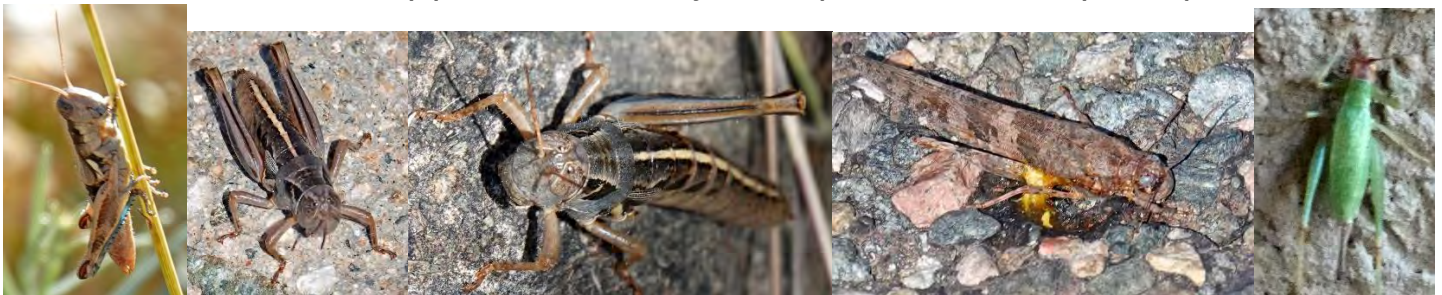
In September with rainy weather, residents in Prescott start to notice giant insects landing or flying around our homes or offices. People call them giant mosquitoes, but these gentle giants are not mosquitoes at all. They are actually **Crane Flies** (*Tipulidae*) and are harmless. We had friends for lunch on the patio and could see about 16 Crane Flies which stayed on the house walls. The adults live out their short lives relying on fat reserves built up during their underground larval stage. The sole purpose of the adult crane fly is to mate (right photo) and, for the females, to lay eggs for next spring's crop of flies. Crane flies are harmless to handle, so the next time one makes its way indoors, simply cup it gently to release outdoors. Think of it as a romantic gesture.

Bees and Wasps (Order: Hymenoptera)



Black Bumble Bees (left) are pollinators on Mexican Hat flowers. As one of the largest groups of pollinators, **Honey Bees** (center) prefer flowering plants in abundance. The **Ammophila Thread-waisted Wasp** tend to be medium-sized and generally black, with some amount of orange on the abdomen (the hindmost part of the body). There is a narrow constriction between the thorax and abdomen (thus the name "thread-waisted").

Grasshoppers and Katydid (Order: Orthoptera)



Orthoptera is the order of insects that includes grasshoppers, katydids, and their relatives. Orthoptera means 'straight wings'. Most are easily recognizable by their hind legs, which are usually enlarged for jumping. Maxine kept seeing a red-winged Grasshopper and when googling the first photo of the **Blue-legged Grasshopper**, she found it had the red-hind-wings! The Grasshopper (4th photo) is egg laying, and **Red-headed Meadow Katydid** (5th photo) also has mandibulate mouthparts and large compound eyes.

Praying Mantis (Order: Mantodea)



Praying Mantis get their common name from the stance they commonly adopt. The fore legs are raised as if in the act of prayer, the name mantis is also derived from the Greek word for prophet. Of course, the legs are actually raised so that they can be used to grasp any prey that strays close to the mantis.



They have voracious appetites and for this reason they are sometimes, incorrectly, called "Preying Mantis". Mantids will eat prey of a similar size to themselves and bigger species will eat vertebrates including mice, lizards and frogs. The average lifespan for praying mantids is twelve months.

Snakes and Lizards (Order: Squamata **Class: Reptilia Subclass: Lepidosauria**)

Reptiles are tetrapod vertebrates, creatures that either have four limbs (including Lizards) or, like snakes, are descended from four-limbed ancestor, **Lepidosauria**.



The **Long-nosed Snake** (*Rhinocheilus lecontei*) is a species of nonvenomous snakes and is distinguished by a long, slightly upturned snout, which is the origin of its common name. It is tricolor, vaguely resembling a coral snake with black and red saddling that almost looks like banding, on cream-colored background (two left photos).

The (right frame) shows top and bottom portions of a 45" snake skin shed which was left tangled in a shrub near the Tinneys' front door.



Lizards start to come out after the weather warms up. Fewer are seen in the winter in Prescott, but may be uncovered in one's yard when you are moving rocks. Lizards are cold blooded so they need warmth to be active.

Spiders (Order: Araneae)



Spiders are air-breathing arthropods that have eight legs, chelicerae with fangs generally able to inject venom. As the weather cools this juvenile **Tarantula** looks for lunch of grasshoppers, beetles, other small spiders and arthropods, and will sometimes eat small lizards. The desert tarantula lives in a deep burrow which is lined with silk webbing to prevent its caving in. The hole is enlarged as the spider grows. They are equipped with urticating hairs on their abdomen which can be released by kicking with the back legs; these hairs irritate the nose and eyes of would-be attackers.

Chipmunks and Squirrels (Order: Rodentia)



Chipmunks live in the forest habitats as well as rocky meadows and sagebrush flats. Found mostly in the mountains of North America. Chipmunks devour many types of fruits and seeds available at the Tinneys.



Squirrels are nimble, bushy-tailed rodents. A group of squirrels are called a scurry or dray and can be very territorial.

Cottontail Rabbit: (Order: (Lagomorpha) Previously Rodentia)



The **Cottontail Rabbits** have stub tails with white undersides that show when they retreat, giving them their characteristic name. They are busy in the Tinneys' yard eating grasses, sedges, clovers, and the shoots, stems, leaves, flowers, and seeds of many different plants.

Striped Skunk (Order: Carnivora)

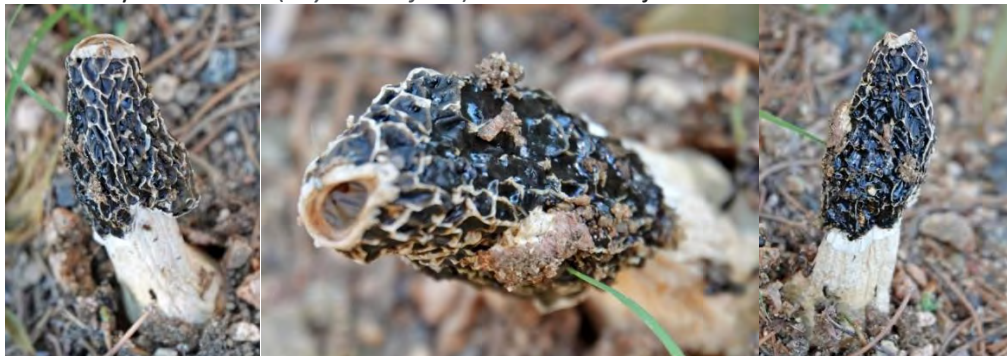


Striped Skunks have an easily identifiable coloration: two thick white stripes along the back and tail sharply contrast an otherwise black coat. The specific pattern of the stripes on the head, body and tail can vary among individuals, and is accompanied by a thin, white stripe running from the snout to forehead.

Javelina or Collared Peccary (Order: Artiodactyla)



A family of Collared Peccary or **Javelina** (*Tayassu tajacu*) visit with two juveniles and two babies which are still suckling.



Mention must be given to the **Black Morel Mushroom** (*Morchella augusticeps*) which is seen in one of our flowerbeds. It has a hollow cap with elongated ridges and blue reflective pits.

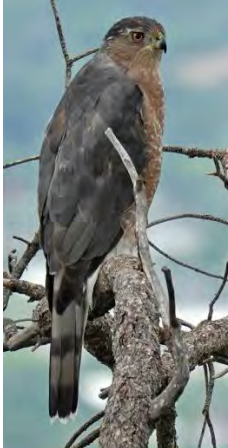
Flowering Plants and Others



Birds (Order: Aves)



Turkey Vultures (*Cathartes aura*) in flight.



Cooper's Hawk (*Accipiter cooperii*). One hawk is caught by a predator at night that left only scattered feathers and the tail section (shown top and bottom).



A **Gambel's Quail** (*Callipepla gambelii*) family drinking and eating in the yard.



Graceful, slender-tailed, small-headed **Mourning Doves** (*Zenaida macroura*) are common to Prescott.



The forest **Band-Tailed Pigeons** (*Patagioenas fasciata*) are frequent visitors to the Tinneys.



One morning the **Greater Roadrunner** (*Geococcyx californianus*) enters the yard and decides to do a little sunbathing by spreading the feathers on its back to absorb the warm sunrays (right).



The **Roadrunner** then begins to preen using its beak to position feathers which may have become separated or out of place, clean plumage, and keep ectoparasites in check.



"Before I go hunting, I will show off my beautiful feathers just for you. Beep Beep!"



In August adult **Anna's Hummingbird** (*Calypte anna*) bring juveniles and subadults to the yard.



Juvenile **Rufous Hummingbird** (*Selasphorus rufus*) enjoy the flowers and feeders.



The juvenile and subadult **Black-chinned Hummingbird** (*Archilochus alexandri*) have long beaks and white eye-dots.



The crisp juvenile red-shafted male and bathing juvenile female **Northern Flickers**, (*Colaptes auratus*) visit the feeders and bathe in the water pans.



Woodhouse's Scrub Jays (*Aphelocoma woodhouseii*) take treats from the seed stump and the pine cones.



Photos include an adult male with red nape, female, two juveniles with light crown coloring, and possible female juvenile **Hairy Woodpecker** (*Dryobates villosus*).



Acorn Woodpeckers (*Melanerpes formicivorus*) and **Ladder-backed Woodpeckers** (*Dryobates scalaris*)



Common Ravens (*Corvus corax*) seeking treats hidden in the trees.



Very expressive **Bush-tits** (*Psaltirparus minimus*) move through the trees.



The **Bridled Titmouse** (*Baeolophus wollweberi*) is a small bird with a dashing swirl of black and white on its face.



The **Juniper Titmouse** (*Baeolophus ridgwayi*) is a plain gray bird with a prominent black eye and a feisty tuft of feathers.



The **Mountain Chickadee** (*Poecile gambeli*) is common in the conifer forests and dines on the Tinney's seed blocks.



The **Red-breasted Nuthatch** (*Sitta canadensis*) has a dark gray cap and black stripe through the eye broken up by a white stripe over the eye and has a rusty red breast.



The **White-breasted Nuthatch** (*Sitta carolinensis*) is stocky, with a large head, short tail, powerful bill, and strong feet.



A mother **American Robin** (*Turdus migratorius*) will have 1-3 broods per season and 3-5 eggs per brood and seems to have brought some juveniles into the yard with her.



The **Hermit Warbler's** (*Cathartes aura*) flanks are streaked and black wings have two diagonal white wing bars.



The yellow-olive **Orange-crowned Warblers** (*Leiothlypis celata*) have broken eyerings with faint eyeline.



The monochrome **Black-throated Gray Warbler** (*Setophaga nigrescens*) wears a tiny yellow spot in front of each eye.



Two **Western Tanagers** (*Piranga ludoviciana*) stop for reserves for their migration south.



Male, female, and immature **Black-headed Grosbeaks** (*Pheucticus melanocephalus*) are headed South for the winter.



Adult **Spotted Towhees** (*Pipilo maculatus*) raise their young (two right).



A **Green-tailed Towhee** (*Pipilo chlorurus*) bathes in a water pan.



The adult **Canyon Towhee** (*Melozone fuscus*) guides the juveniles into the yard.



An adult and juvenile **Rufous-crowned Sparrows** (*Aimophila ruficeps*) are fairly sedentary birds that rarely migrate.



Chipping Sparrows (*Spizella passerina*) have dark lores and dark eyeline.



White-crowned Sparrows (*Zonotrichia leucophrys*) appear each winter to grace our yards.



Oregon Dark-eye Junco (*oreganus*) and **Bullock's Oriole** (*Icterus bullockii*) at water feature.



Male, female and juvenile **House Finches** (*Haemorhous mexicanus*) partake in a water feature bath.



Male, female and juvenile **Lesser Goldfinches** (*Spinus psaltria*) are tiny, stub-billed songbirds with long, pointed wings, and short, notched tails.

Mule Deer (Order: Artiodactyla)



Four-point Mule Deer Buck (left) in velvet with doe and fawn (center), then after velvet is shed (right).



The 6-point Buck has shed its velvet and as fall deepens in November the Rut will begin and the Does will start estrus.



One Doe may have tangled with a mountain lion or coyotes as her body shows scars of injuries.



The bond between the does and fawns are great and the does are attentive to their fawns.



The spotted Fawns stay with their mother thru October. As the fawns grow, they may reach water in the bird bath.



Three fawns of different size and doe (left). The fawns are becoming more independent each day and losing their spots.



While her mistress is out of state, Lava, our God-cat, visits before Halloween and helps decorate.

Happy Fall and Halloween to Each of you! Tinneys