Friends of
Pinnacle Peak Park
NEWSLETTER
Spring 2020 Volume 33

Blister Beetle

By Lisa Levey

The Arizona Blister Beetle – named for its ability to secrete a liquid called cantharidin from its joints that causes painful blistering of the skin – ranks close to the top of the list as the insect world's most clever bug. The blister beetle's scientific name is Lytta magister but it is also known as the Desert Blister Beetle and the Master Blister Beetle. It has a long, thin, pliable body measuring from ¾ of an inch up to a couple of inches long. The beetle has thread-like antenna, non-bulging compound eyes, a bowed head, and fairly long legs. These beauties can be very colorful! Their primary body colors include black, brown, or gray, with red or orange heads. Other species have been known to sport spots or stripes of yellow red, brown orange, black, or white. Not only are blister beetles dangerous to touch – even if they have been crushed – they are also dangerous for animals to eat.

Of the more than 300 species found in the United States several dozen make their home in the Southwest, where the adults feed – sometimes voraciously – on both wild and cultivated plants, often favoring mesquites. While visiting Pinnacle Peak Park you have a chance to see one of the biggest and fanciest blister beetles around. You may see trees stripped by blister beetles or in the springtime a flowering brittlebush may be a temporary home to a small band of the beetles, several dozen of which may dangle from the flower stalks of the plant.

Photo by Hudsells

If you do spend even a little time watching the beetles, you will see some blister beetles rapidly eating the yellow flower petals of the brittlebush. Other beetles will be scrambling through the plant. These are males and when a male comes across a female, he may begin to court her, which the beetle does by climbing on the female's back and sweeping his antennae across her head. If the female is impressed by this courtship, she will permit the male to mate with her.

Photo by Mike

After mating has begun, the female often drags the male with her from flower to flower. She doesn't let him interfere with her meal. This is sensible because when the beetles mate, they remain attached for many hours, often more than 24! Eventually, however, the male and female separate. Now single, the female lifts up her wing covers and unfolds her flying wings for take-off. She will fly away in search of a distant place where she can land and lay her eggs. After she inserts her eggs into the soil, she leaves her offspring to their fate. When they hatch into baby beetle grubs, they burrow through the soil in search of a cluster of grasshopper eggs, which they will locate by detecting the odor of these unlucky eggs. If a grub's search pays off, it will feast on grasshopper eggs and eventually join a new generation of adult blister beetles in the springtime ready to repeat the cycle.

Now you know it's important to leave them alone if you are fortunate enough to find a mob of these red-headed beetles as you hike the trail at Pinnacle Peak Park!

Enzo Bonnette

By Bronte Ibsen

You may have noticed some new faces around the peak lately what with the recent retirement of two of our long-time staff members. Among some of the newbies is Enzo Bonnette, who has been working for the city for 5 years. He got his start at the McCormick Stillman

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Railroad Park, eventually transitioned to Cactus Park and has been with us at Pinnacle since November (though he's hiked here since 2005)! Enzo is currently enrolled at Scottsdale Community College, but he is mostly self-taught and has a few mentors that have been invaluable to him in his quest for knowledge. He credits mother earth herself as his best teacher to date.


Enzo Bonnette.

A true outdoorsman, Enzo has volunteered with the Forest Service at the Cave Creek and Payson Ranger stations. He has learned all about the nuances of the land from the high desert to the coniferous forests of Payson and has spent a lot of time exploring and familiarizing himself with all the flora and fauna therein. He is even working on a book documenting all of the flora and fauna present at Cactus Park just a little further south in Scottsdale! Outside of his work and volunteer work he is primarily interested in learning and reading, looking for new plant species, photography, playing guitar, archeology and ethnobotanics.

Enzo understands that all living things are a part of him in the same way that he is a part of everything. His pursuit to understand the world around him better informs his understanding of himself and is the primary motivation in the work that he does. Already a great addition to the team, Enzo hopes to put together some educational tables to better share his knowledge of the desert with all of our guests. Be sure to say hello if you see him in the office or on the trail!


Enzo at Pinnicle Peak Park as a kid.

Geological History of Pinnacle Peak

By Lee Goode

Geology challenges the human imagination. First, there is the notion of geologic time. We people think in terms of lifetimes or of centuries. What can 10,000 years possibly mean to us, let alone 65,000 or 70 million? We often wonder what the land we stand on was like in times past. What was here, we ask, when dinosaurs roamed, or when mountains were new? Though we may imagine different landforms, different vegetation, we probably still imagine "here" as a definite and permanent spot on the globe; a place with constant longitude and latitude, a place whose changes we could trace through time, perhaps by reading the record in the strata beneath our feet. Geology mocks our notion of permanence. Geology deals with continents that drift, collide, and re-form; with rivers and oceans that appear and disappear; with mountain ranges whose battered remnants have been carried away and now lie buried on some other continent. Geology warns us not to be too literal as we imagine the history of our planet.

The visible landscape that we see is the product of relatively recent geological events, but the rocks that make up the landscape are much older than the events that created what we see today. The basic rock underlying the terrain is ancient granite and metamorphic rock formed between 1.4 and 1.7 billion years ago (depending on the researchers and their tests). This rock was mostly underwater for more than a billion years; during this period it became covered with a thick layer of sediment that became sedimentary rock.

The geological processes that created the Rocky Mountains about 65 – 75 million years ago (MYA) lifted central Arizona (Colorado Plateau) above sea level, which caused this thick layer of sedimentary rocks on top of the granite and metamorphic rock to begin to erode. The major geological process that shaped the local landscape was the formation of the basins and ranges. Between 8 and 15 MYA, volcanic activity beneath the crust stretched the surface of central and southwestern Arizona. The surface began to crack in many places, forming parallel north-south cracks. Earthquakes and continuing volcanism caused some of the regions between cracks to slide downward by as much as four miles, while other areas did not. The lower areas are now called basins and the higher areas are called ranges. In a slightly later

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process the mass that formed Pinnacle Peak was pushed up from the center in the form of magma called a batholith (about 1.5 million years ago). The magma did not reach the surface but remained buried as it cooled.

The rock we see today, called Pinnacle Peak, juts skyward 600 feet from the valley floor, and is largely composed of granite that is made up of large crystals that slowly formed in the original magma. This huge block of granite includes some of the original rocks that preceded this formation. These inclusions are known as xenoliths (in geology any piece of rock having a different origin to that of the igneous rock) and phenocrysts (in mineralogy any relatively large crystal embedded in a more fine-grained or glassy igneous rock).

Remember this all happened about 1.5 Million years ago. Since that time the original rocks that surrounded the block of granite were slowly stripped away by the process of erosion and that is what we see today.

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Ocotillo: "The Little Torch"

By Rick McNerney

One of the more distinctive desert plants at Pinnacle Peak Park is the Ocotillo (oko'tijo). Indigenous to the Sonoran and Chihuahuan Deserts, which cover an area spanning from West Texas and Southern New Mexico, to Northern Mexico and Southern/Central Arizona. The Ocotillo (*fouquieria splendens*) is not a true cactus like the saguaro and prickly pear as it is not a succulent and, therefore, does not store water. In its natural environment, the Ocotillo will live from 60 to 100 years; some can achieve a height of 20' or more.

Through a good portion of the year, the many Ocotillos growing in the park appear to be a "dead" plant, showing no evidence of leaves or flowers. However, if you look carefully at the canes of this plant you will notice green areas that produce food through photosynthesis during these dormant periods. When there is adequate moisture, especially during our summer monsoons, the multitude of canes that comprise the Ocotillo will suddenly sprout small green leaves. Soon after that, the tips of the canes will sport a distinctive bouquet of red flowers. These flowers are hummingbird and bee attractors, can be used in salads (a very tangy flavor, I am told), and when dried, as an herbal tea.

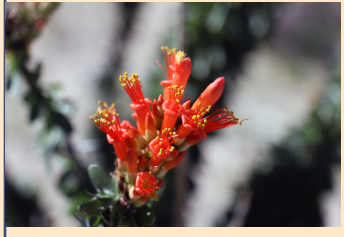

Photo by Pacific Southwest Region USFWS

The Ocotillo, also known as the Coachwhip, Flaming Sword, and Jacob's Staff, was used by indigenous people and early settlers in the Southwest in the making of fences – quite effective because of its spines. Canes cut from the plant were "planted" in rows with some of them taking root, thus forming a living fence.

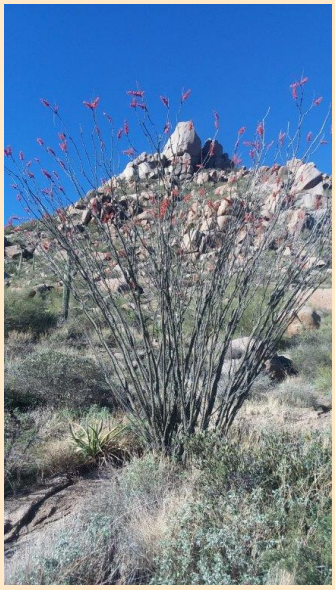

Photo by Rick

The Ocotillo family is comprised of only 11 species; all residing in the arid climates of North America. Within this family is the very weird and exotic Boojum tree (*fouquieria columnaris*), found exclusively in Baja California. Growing to heights of 50', this tree that resembles an inverted carrot covered in spines that produce yellow flowers. Unlike our Ocotillo, the Boojum is a succulent as its trunk will absorb and retain water. Wonderful specimens can be seen at the Phoenix Desert Botanical Garden.

Pinnacle Peak Park Scheduled Activities:

Sat., 2/1	10:00AM - Southwest Wildlife
Sat., 2/22	6:45PM - Astronomy Talk (registration starts 2/8)
Sat., 3/7	10:00AM - Liberty Wildlife
Mon., 3/9	6:45PM - Full Moon Hike (registration begins 3/2)
Fri., 3/13	5:45PM - Sunset Photo Hike (registration begins 3/6)
Fri., 3/20	7:00PM - Astronomy Talk (registration begins 3/5)
Sat., 3/21	10:00AM - Wild at Heart
Sat., 4/4	10:00AM - Liberty Wildlife
Tue., 4/7	7:00PM - Full Moon Hike (registration begins 3/31)
Sat., 4/18	7:30PM Austronomy Talk (registration begins 4/4)
Sat., 4/18	10:00AM - Wild at Heart
Sat., 5/2	10:00AM - Phoenix Herpetological Society
Thur., 5/7	7:30PM - Full Moon Hike (registration begins 4/30)
Sat., 5/16	7:45PM - Astronomy Talk (registration begins 5/2)
Fri., 6/5	7:45PM - Full Moon Hike (registration begins 5/29)
Fri., 6/12	8:15PM - Astronomy Talk (registration begins 5/29)

** Call the Pinnacle Peak Park main number at (480) 312-0990 to make reservations for the Astronomy Talk or Full moon Hike*

*** Minimum age to attend the Astronomy Talk is eight years old.*

Friends of Pinnacle Peak Park

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