



PHOENIX MOUNTAINS PRESERVATION COUNCIL LOOKOUT

Fall 2025 Newsletter



YOU WILL BE MISSED, LIBBY...

In July, Libby Goff (center) passed away unexpectedly. For many years, Libby was a friend and protector of the preserves. She was a vocal opponent of the original pipeline route through Dreamy Draw and her activism was key in getting the route changed to the edge of the preserve. She spoke out against the loss of native communities' cultural heritage sites and loss of preserve land because of the 202 construction through South Mountain Park/Preserve. She served on PMPC's Executive Board as Secretary for many years.

In 2022, Libby said during an interview, "I am a native of Phoenix, and I've been hiking since I was a kid. I realized, I'm enjoying hiking on trails several times a week. I want to make sure that this is around for many years to come."

We will honor your memory by continuing to do just that, Libby.

Photo courtesy of City of Phoenix

Pictured left to right: Debra Stark, Aaron Leiberman, Libby Goff, Kate Gallego, Geoff Reed

ODE TO LIBBY

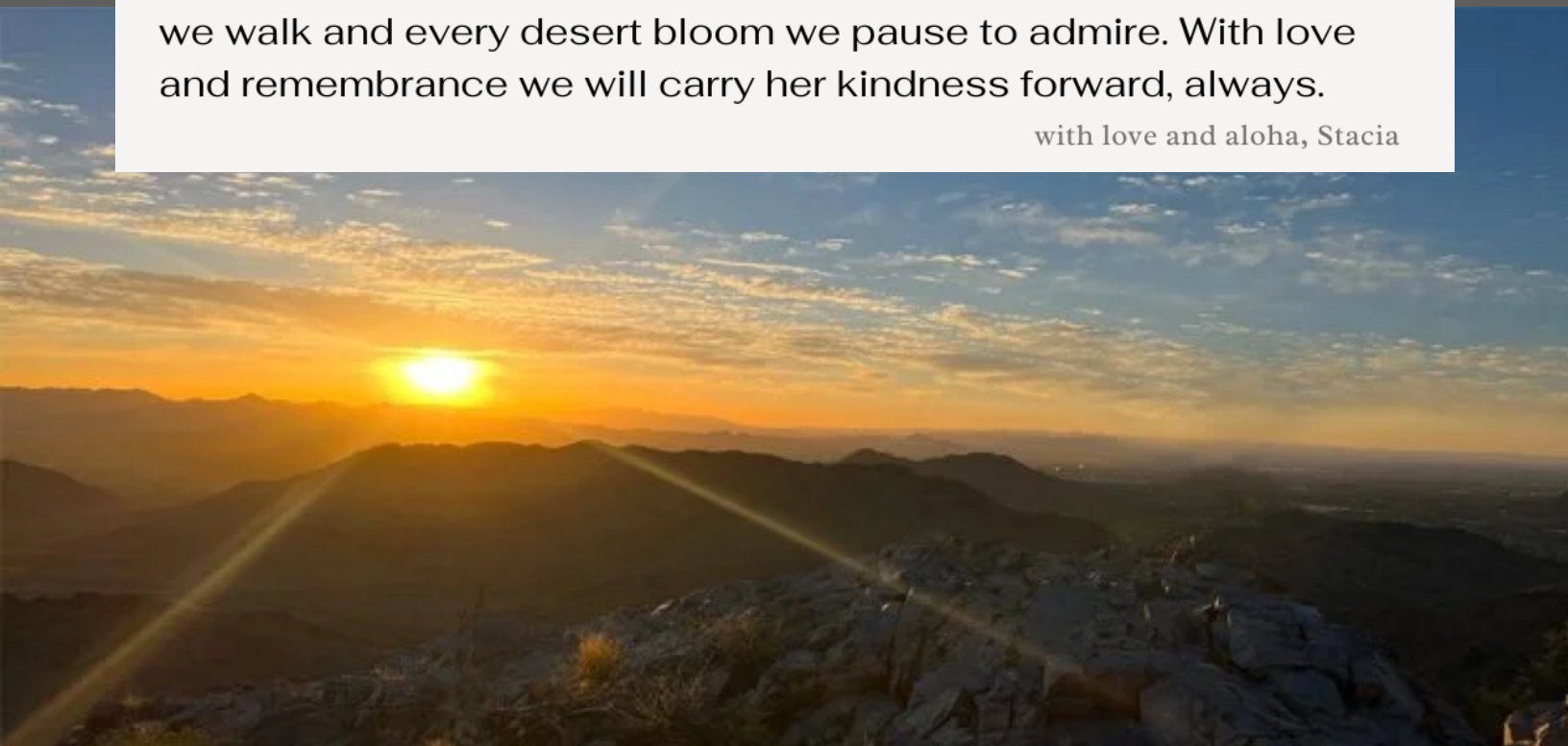
She was a rare spirit, a quiet force of nature who moved mountains, not with noise, but with grace and unwavering love. She taught us to slow down, to notice the shimmer of light on a cactus spine, the hush of dusk settling over our desert trails. She reminded us what matters: community, kindness, and protecting the wild places we call home.

Libby was a treasure to our beloved desert, a mover and shaker in education and mountain preservation. She was a quiet voice of reason, always guiding us down the right path. Libby knew how to make time, to notice and appreciate the wonders around us.

We will miss her kindness, her wisdom, and the gentle way she helped us all see what truly matters. She had such a gift for noticing life's small wonders, finding beauty in the desert and helping us all appreciate what is truly important.

Now, we walk these paths without her steady presence, but her footprints remain, etched deeply into our hearts and into this land she so dearly cherished. May her spirit stay with us, in every trail we walk and every desert bloom we pause to admire. With love and remembrance we will carry her kindness forward, always.

with love and aloha, Stacia



DESERT MARIGOLD

This native biennial (growing the first year, flowering the second) or perennial grows in sandy or gravelly soils and rocky slopes. The plant grows in a dense mound with thick stems that



Courtesy of floridaseeds.net

look silver to the naked eye. The stems and leaves are green but are thickly covered in fine grayish-white hairs that give it a silver color from a distance. When flowering between April and November, long stems grow with little to no leaves that are topped with a single bright yellow flower. The showy flower looks like a 1 to 2 inch daisy. The petals do not fall away so they are a long-lasting flower, turning papery over time.



Courtesy of Curtis Clark

Desert marigold may be the common name of this plant, but it's a misleading name. It's part of the sunflower family and not a relative of marigolds at all.

References

Arizona-Sonora Desert Museum. (n.d.) *Plant Fact Sheet: Desert Marigold*. [https://www.desertmuseum.org/kids/oz/long-fact-sheets/Desert Marigold.php](https://www.desertmuseum.org/kids/oz/long-fact-sheets/Desert%20Marigold.php)

Southwest Desert Flora. (2020). *Baileya multiradiata, Desert Marigold*. https://southwestdesertflora.com/WebsiteFolders/All_Species/Asteraceae/Baileya%20multiradiata,%20Desert%20Marigold.html

SAHARA MUSTARD

This invasive species is a fast-growing, short-lived winter annual that germinates after rainfall. It starts growing as a basal rosette of deeply lobed, serrated, hairy leaves. It then grows nearly leafless stem branches that can reach up to 2 feet in height, making it look like a shrub. The small yellow flowers on the top of the stem branches are self-pollinating. All of this growth can happen as quickly as 5 days! A well-developed plant can produce up to 9,000 seeds that remain viable for 3 years. In wet soil, those seeds have a near 100% germination rate.

It's considered invasive because its quick growth rate can lead to dense populations that do not allow native species to grow in. The plant can be toxic to wildlife because of a high oxalate content. After their lifecycle is complete, their dried-up leaves and stems become a fire hazard. Their dense growth behavior allows fire to spread over a greater distance which our native plants do not promote with their growth behavior.

Where there are smaller populations, hand pulling before the seeds mature is the best method of control. Removing germinated individuals in wet years can remove almost the entire population.

References

Arizona-Sonora Desert Museum. (n.d.). *Sahara Mustard* (*Brassica tournefortii*). <https://sdcwma.org/species/saharamustard.php>

Pinal County. (n.d.). *Sahara Mustard*. <https://www.pinal.gov/1722/Sahara-Mustard>



Courtesy of Belinda Lo

PRESERVES UPDATES

Courtesy of City of Phoenix

HISTORIC RANGER STATION

The old Ranger station buildings at South Mountain Park/Preserve, built in the 1930's by the Civilian Conservation Corps (CCC), will be getting work done on them. The goal of this project is to stabilize the buildings and protect them from the elements. This project is in the design process, meaning architectural drawings are being drafted and rounds of reviews will be completed so the construction crew knows what to build and how.

NORTH MOUNTAIN PARK IMPROVEMENTS

The design process (the architectural drawings) is scheduled to be complete this upcoming spring. Once these architectural drawings are complete, construction will begin.

PAPAGO PARK IMPROVEMENTS

Although not designated preserve land, the Phoenix-owned area of Papago Park has improvements coming. The area will be getting redesigned restrooms, improved lighting, road improvements, and upgraded ramadas. The design process is scheduled to be completed in late 2026.

PIESTEWA PEAK TRAILHEAD IMPROVEMENTS

The ADA accessible bridge from the new ramadas at the Piestewa Peak parking area to the Nature Trail Loop will be completed by the end of the year. There has been controversy about the building of this bridge since its came so long after other renovations of the trailheads and the "odd" placement of it. The trail connecting the parking lot to the Nature Trail Loop has been difficult to maintain over the years because of its heavy use and erosion of the surrounding area. Retiring that trail before it becomes dangerous or impassable is the goal of this bridge.

SOUTH MOUNTAIN ACTIVITY COMPLEX

The 11 acres being improved between the Holbert Trailhead and the South Mountain Visitors Center will be completed at the end of this year or early 2026. The renovations will include 2 large ramadas for big gatherings, multiple smaller family ramadas, and 2 restrooms. There will also be an artistic piece with 4 rays pointing to culturally and historically significant landmarks of the O'odham people. The rays will point to Chev S-Vegk (Camelback Mountain), Vainom Do'ag (Piestewa Peak), Na:k Jegalik (Hole in the Rock), and Shaw Butte.





GREAT HORNED OWLS

BY ANDY LENARTZ

Many are familiar with the burrowing owls in the Phoenix area, whether seeing them in the wild or at the Phoenix Zoo. But there is an even more likely chance that the deep, distinctive hoo-hoo-hoo heard at dusk or dawn near the mountain preserves belongs to a great horned owl, the most common owl species in Arizona.

Although perhaps surprising to some that this massive bird of prey lives in our urban desert landscape, they are adaptable in a similar way to coyotes and are found throughout the U.S. in a wide range of environments, from rural to urban and everything in between.

Great horned owls can reach a height of up to two feet and may weigh as much as two to three pounds, making them one of the largest owls found in the United States, and an impressive sight to behold. Their name comes from feathers around their ears which appear to form horns on their head.

They can be found year-round in the valley, more commonly seen during the fall and winter when the longer evenings leave more time to feed for these nocturnal birds. They also nest during the winter months of January and February, including on saguaros, making for some of the iconic southern Arizona photos. In these nests, both male and female owls will trade off incubating the eggs for approximately one month.

Great horned owls eat a wide range of food, including rodents, rabbits, snakes, and other birds. To protect our local great horned owl population, we can limit the use of poison used to kill rodents. As these rodents are a significant part of the owls' diet, they will also ingest any poisons used to eliminate rodents.

One final fact about great horned owls, the often-repeated statement about the owls being unable to move their eyes but able to turn their heads 360 degrees is partially true. They are unable to move their eyes but can 'only' rotate their heads 270 degrees. Which is still impressive to me as I started at a much lower range to begin with and my neck rotation range seems to be decreasing a couple of degrees every year as I get older!



References

Acosta, T. (October 23, 2023). *Owls in Arizona: Here are the most common owls you'll see and how to protect them.* Arizona Republic. <https://www.azcentral.com/story/entertainment/life/2023/10/23/owls-in-arizona/71245603007/>
Arizona-Sonora Desert Museum. (2008). *Animal Fact Sheet: Great Horned Owl.* <https://www.desertmuseum.org/kids/oz/long-fact-sheets/Great%20horned%20owl.php>

ICE MACHINES AT PRESERVES?

Ice machines were installed at the Echo Canyon and Piestewa Summit trailheads in June. These are the same ice machines you see at gas stations, but they are not for visitors to purchase for their hydration packs or to re-fill their warming iced coffees. The ice stored in these locked machines is on site to help save the lives of those suffering from heat stroke.

Heat stroke is the most serious of all heat-related illnesses. The victim's core temperature is exceeding 104 degrees Fahrenheit. The body is overheating. Those suffering from heat stroke experience nausea, vomiting, flushed skin, rapid breathing, racing heart rate, and changes in mental state or behavior. When brought on by exertion in healthy individuals, the mortality rate is 33% when there is no prompt medical intervention. In those who experience heat stroke by prolonged exposure to high temperatures with underlying chronic conditions (over 65 years of age, heart or lung disease, being overweight, etc.), the mortality rate approaches 80%. If the event is survived, there can be long term damage to the brain, heart, kidneys, and muscles. It is important to cool the person as quickly as possible to bring their core body temperature down. This is where the ice comes in for what is called cold water immersion.

The fire department puts the patient in a body bag, pouring the ice on top of them. The thermal conductivity of water is 24 times greater than air.



Heat can be quickly transferred from skin to the ice and cold-water slurry inside the bag. This technique is the gold standard for rapid cooling in emergency rooms. Now, this life saving technique has come to the mountains as we continue to see higher and higher temperatures in Phoenix.

During a rescue on Camelback Mountain earlier this year, a patient was dealing with a heat emergency. The fire department took ice up the mountain to cool them on the way down to a waiting ambulance. It took 40 minutes to get the patient to the parking lot. At the ambulance, the patient's temperature was 104.4 degrees. After a 6-day stay at the hospital, the patient was released with no identified neurological damage from the event. It is highly likely their core body temperature was higher than 104.4 degrees on the mountain and a 40-minute delay in cooling would have caused long-term damage, if not death.

These ice machines were funded by the Office of Heat Response and Mitigation. Multiple city departments are working together to identify the best trailheads for additional machines to be installed. At all trailheads with ice machines, signage will be installed to educate the public on why they can't help themselves to a bag and just how important this ice is.



Photos courtesy of City of Phoenix Parks and Recreation Department

References

Comp, G., et al. (2025). *Heat Stroke Management Updates: A Description of the Development of a Novel In-Emergency Department Cold-Water Immersion Protocol and Guide for Implementation*. *Annals of Emergency Medicine*, Vol 85, Issue 1, Pg 43-52. <https://doi.org/10.1016/j.annemergmed.2024.07.013>.

Mayo Clinic Staff. (2024). *Heatstroke*. Mayo Clinic. <https://www.mayoclinic.org/diseases-conditions/heat-stroke/symptoms-causes/syc-20353581>





SECRET LIVES IN THE DARK

Courtesy of CurriOdyssey

In the dark of night, some residents surrounding preserves or early hikers may catch sight of a fox with a striped tail, or a cat-like creature climbing a vertical rock face, or a skinny raccoon with an extra long tail. Chances are, this is a ringtail. The *Bassariscus astutus* is a relative of the raccoon who live in habitats of rocky outcroppings, canyons, talus slopes, and old mines. They live from Oregon to Mexico and between Nevada and Kansas. Even with that large range, sightings are rare because they are nocturnal, solitary creatures. The average home range of a male ringtail is 336 acres, marked by rubbing urine on the ground and on raised objects. Ringtails have incredible agility. They can move between cliffs and ledges by ricocheting from wall to wall. They can climb through small crevices by pressing all four feet on one wall and their back against the other. They climb vertical walls, like the side of a house or a saguaro. On their descent, they go down headfirst and rotate their hindfeet 180 degrees so the pads of the feet and their claws remain in contact with the surface to maintain control. Their slim body, about 24 inches long (this includes their tail), and weight (between 1 and 2 pounds) contributes to their nimbleness. If they stay still long enough, their cuteness can be admired. The upper side of their cat-like body is dark brown while the underside is pale buff. They have a fox-like face with black or dark brown rings around their eyes and large oval ears. Much of their night is spent foraging for food. They are omnivores but prefer animals. They eat rodents, rabbits, squirrels, insects, birds, lizards, snakes, frogs, and carrion. Their plant-based foods include acorns, fruits, and nectar. Don't take their liking for sweet fruits as a reason to leave these outside your home to see or catch one – leave wild animals wild. If trying to catch one, be warned their reaction will be to scream a high pitched, penetrating sound and discharge a pungent, foul-smelling secretion from their anal glands.



Reference

Goldberg, J. (2003). *Bassariscus astutus*. Animal Diversity
Web. https://animaldiversity.org/accounts/Bassariscus_astutus/

Courtesy of NV Dept. of Wildlife

SOUTH MOUNTAIN PARK/PRESERVE EVENTS

BY ANDY LENARTZ

Park Rangers, staff, and volunteers are ramping up programming, speakers, and events at South Mountain Park/Preserve in conjunction with the re-opening of the Park's Visitor Center. Recent events have included the indoor-based Summer at South Mountain Lecture Series, with featured speakers discussing topics such as Birds of Phoenix & Maricopa County, and a South Mountain Park and Preserve Book Talk.

After the summer months, additional activities will be added including outdoor-based events. A highlight this fall will be "Religion on the Rocks: Hohokam Petroglyphs and Ritualism at South Mountain", which will be a presentation and a petroglyph hike at the park. October will bring "Not So Scary: The Vital Role of Desert Creepy Crawlies", a presentation directed toward younger desert dwellers.

For more information on upcoming events, check the Outdoor Nature Programs page at

www.phoenix.gov/administration/departments/parks/classes-programs/outdoor-nature-programs.html and click on the Register for hikes and outdoor nature programs button. You can also follow the City of Phoenix Parks and Recreation Department Facebook page for announcements on some events.

Additionally, the date of the 2025 Summit Challenge has been announced for those interested in participating. Registration is open as of September 10 and the event will be held on November 15. For more information, please see

www.phoenix.gov/administration/departments/parks/activities-facilities/trails/phoenix-summit-challenge-.html



Courtesy of Carla Gunn



ROASTING PITS

Throughout the valley, archaeologists have found evidence of roasting pits. Roasting pits are an ancient technique for cooking food by digging a hole in the ground and burning wood to create hot coals. Roasting pits vary in size, depth, and their lining. The median diameter of 98 roasting pits in the Phoenix, Tonto, and Tucson Basins was 1.8 meters. They ranged in depth from 0.7 to 4.2 meters. Rocks are typically found in or lining the pit. The heat the stones hold allow for the food to continue to cook while limiting the wood needed to make charcoal.

There are many roasting pits that have been excavated at S'edav Va'aki Museum. In 1937, two roasting pits were identified outside two pithouses. It was thought these roasting pits were used during occupation because of their proximity to the pithouses. Archaeologists at the time dated their use somewhere between the late Pioneer period (1 – 750 CE) to the late Sedentary period (950 – 1050 CE). Both pits lacked rock lining, but they were lined with a black, quarter inch thick crusty layer that was grease-soaked and burnt. There were pot sherds, fragments of manos and metates, rubbing stones, and chunks of diorite found in one pit. Anything that would hold heat was used once it could no longer serve its original purpose. Pollen



Roasting pit at S'edav Va'aki
Courtesy of Julian D. Hayden

analysis was not an available tool in 1937 so identified traces of what was roasted in those pits are not available.

Roasting pits in South Mountain were used for cooking but may have been for a different purpose. Remnants of terrace farming and roasting pits still exist in the northeastern section of South Mountain. Pollen analysis has identified various crops, including agave. In other areas the Hohokam lived in, roasting pits found at intervals throughout agave field boundaries suggest field-side processing of agave hearts. The roasted agave hearts could have been taken to nearby communities to be eaten immediately, dried, stored, or fermented into alcoholic beverages. This could have been a food delivery service or used for trade with nearby communities. At an agave field excavated in Tucson, it's estimated that the location could have prepared 825 agave hearts annually. The roasting pit in the photo above is amongst what remains of extensive farming terraces that stretched far to the north of the mountain.



Roasting pit in the South Mountain bajada
Courtesy of Aaron Wright

References

Downum, C.E., et al. (1998). *Archaeology of the Pueblo Grande Platform Mound and Surrounding Features*, Vol. 4. City of Phoenix Parks, Recreation, and Library Department.

Fish, S. K. and Fish, P., (2023). *Earth Ovens and Desert Lifeways: 10,000 Years of Indigenous Cooking in the Arid Landscapes of North America*, pg. 120-142. University of Utah Press.

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