



PHOENIX MOUNTAINS PRESERVATION COUNCIL LOOKOUT

Spring 2025 Newsletter



Courtesy of Ahwatukee 411

GILA VALLEY LOOKOUT

BY ANDY LENARTZ

One recently remodeled visitor area at South Mountain Park and Preserve is the Gila Lookout, located on top of the mountain, just east of the antennas which serve as the defining feature of the park. The remodel includes a small parking area and two shaded ramadas. There are informational signs, which are currently empty but presumably will soon have information on the park. Note there are no restrooms or water available at this location.

Visitors to this lookout are surrounded by great views, including the City of Phoenix's downtown and Camelback Mountain, the Sierra Estrella, and the Ahwatukee Foothills – all at one location. This lookout is accessible via vehicle on the Summit Road, by bike (which would make for an excellent Silent Sunday ride destination) or on foot from a newly built, short half mile connector trail from the National Trail.

BIRD OF THE MONTH: VERDIN

BY TICE SUPPLEE

Courtesy of Corey Lycopulus/Audubon

Our featured bird, the Verdin - Pájaro Moscón Baloncito in Spanish - is a small bird found in the southwest deserts. While related to titmouse and chickadee species, the Verdin is the only North American member of the old world family of birds known as penduline tits. Their Latin name, *Auriparus flaviceps*, means "yellow-headed golden chickadee."

This petite gray bird is easy to miss as it flits acrobatically among the branches of desert trees. For such a small bird (4 ½ inches long), the Verdin has a very loud call. Juveniles have no distinctive markings; however, the adults have a bright yellow face and russet shoulder patches. Verdin do not migrate and live in one place for their lifetime. They are resident birds in the deserts of Arizona, California, southern Nevada, New Mexico, and Texas, and also live in the deserts of northern Mexico.

What is often noticed are the round woven nests made of spider webs and twigs. A Verdin pair builds multiple nests that function as snug homes protecting the birds from cold and extreme heat. The female chooses a larger nest for laying the eggs and raising young. The entry to that nest is on the bottom, a strategy to discourage predators from entering. The breeding nest has a lining of feathers, leaves, and other plant materials bound with spider silk. The female will usually lay four blue-green to whitish color eggs. About a month after hatching, the young fledge from the nest and the parents feed them for another three weeks or so.



Courtesy of Hal Beral—The Image Bank/Getty Images



Courtesy of Ly Dang/Audubon Photography Awards

Nests built in summer often have an opening that faces prevailing winds, perhaps helping in cooling the interior. One study documented a Verdin pair had built 11 nests in one season. Perhaps Verdin beat us to the idea of a Man Cave and a She Shack.

When I first moved to Phoenix, Arizona the landscaping at my home was all non-native trees. I never saw a Verdin. I so love this petite desert charmer that I



planted a blue palo verde tree, a tree I knew Verdin preferred. The tree grew quickly and I was delighted to see a Verdin pair check it out and in a few days, they were building a nest.

My resident Verdin pair are vocal and built their new nest this February. Desert birds are smart, and nest early before the searing desert heat of summer. Another adaptation of desert dwelling birds is to nest again in the late summer if it rains, so do not be surprised if a wet summer results in another brood of young Verdin and other desert birds.



Courtesy of Larry Bond

My motto is: "Plant a native desert tree and have a Verdin in your yard!"

As the cities of the desert southwest encourage water conservation by planting native trees, the Verdin is becoming a bird of our desert cities. Once considered to be a species in steep decline, the prognosis is now good for the tiny Verdin as population trends are increasing. I like to think Audubon's Plants for Birds campaign is contributing to this increase.



SAVE OUR MOUNTAINS FOUNDATION

presents

APRIL COFFEE HOUSES AT NORTH MOUNTAIN VISITOR CENTER

GEORGE & GEORGIA

Saturday, April 19, 2025, 9-11 A.M.



"We are an acoustic duo that started making music together in 2016. We met in Denver, Colorado when Georgia came into the bourbon bar that George was playing at. From her seat she started singing harmony to every song. Our voices blended naturally. Soon we became a duo. After a short stay in Austin, Texas during the pandemic, we moved to Phoenix in June of 2021. We enjoy our harmonies and unique arrangements of songs from different genres and eras."

HALF WAY HOME

Saturday, April 26, 2025, 9-11 A.M.



Half Way Home, Barbara Herber on fiddle and Dave Baumann on guitar, have been playing together since 1993. For many years they were part of the Close Enough String Band, a five and sometimes six-piece extravaganza largely committed to Old Time Music and its more immediate offspring. The band made three CDs, one of them dedicated to Carter Family songs.

The first iteration of the trio, Half Way Home, grew out of the string band and featured Rick Sonder on banjo and too many autoharps. Their self-titled CD in 2005 was their first foray into more contemporary acoustic music. "It was where we honed our harmonies."

"North Mountain Visitor Center has long been a favorite venue of ours. It's a thorough delight to be asked back again."

**Coffee and refreshments will be served during the Coffee House.
Donations made to Save Our Mountains Foundation are much appreciated.**



STAYING ON TRAIL

UNDERSTANDING THE IMPORTANCE OF THIS MESSAGE



"Don't Trailblaze" is one of the principles of "Take a Hike. Do it Right". "Travel & Camp on Durable Surfaces" is one of the principles of Leave No Trace. "Don't Bust the Crust" is an educational program of the National Parks. These slogans are in an effort to protect the life

forms under our hiking feet - here's why.

Biological soil crusts, or cryptobiotic soil, are blackish or irregular raised crust on sand or soil. They are mini-forests composed of cyanobacteria, algae, fungi, mosses, liver wort, and lichens. They grow in every environment around the world and play so many roles they deserve to be protected by slogans and taglines. Here in the Sonoran desert, our crusts only grow to about 1 inch in height.

Cyanobacteria is what you may know as blue-green algae and is one of the oldest known life forms. Scientists believe this bacteria is responsible for the Great Oxidation Event that took place on around 2.3 billion years ago - the rise of free oxygen in the atmosphere opened the door for larger, more complex organisms. Still found today, even able to survive in hot springs (it's one of the organisms responsible for giving the Grand Prismatic Spring in Yellowstone National Park its color), its presence in our parks can be identified by dark splotches on the landscape as it weaves a fiber web through the soil binding it together and trapping moisture.

This weaving and binding protects the sand and soil underneath from wind and water erosion. Next time you're hiking a popular trail or one that has recently been worked on, notice how the soil right above the trail will crumble easily and fall when touched. About 18 inches up the back slope, touching that soil does not leave sand on your fingers or falling into your boots. The bacteria



Photos courtesy of Carla Gunn

(along with mosses, fungi and other organisms) have created a protective mat over the landscape. This mat will protect the sand and soil underneath from being carried in the winds into your eyes or into the washes with the rain.

Having been around for what is believed to be 3.5 billion years, it should be no surprise cyanobacteria are hardy and can survive extreme conditions. These survival techniques include surviving low heat fires. If they do not survive the fire, the dead crust will still protect against erosion. If they do survive, other organisms regenerate faster than they would in non-living soil. The bacteria can absorb up to ten times their volume in water, releasing it slowly into the soil when the rains are over. Important in our desert environment wherever present, this is especially important in fire damaged areas to promote the regrowth of organisms and heal the land.



These webs of active bacteria and mats of biomass provide protection but have none when it comes to interactions with humans. Bike tires and footsteps from both humans and our pets easily damage this crust (especially when dry, which is most of the time), breaking the inter connections that took years to create. Estimates for recovery are anywhere from 5 years to over a century, in some places they will never recover. These organisms cannot compete for sunlight, needing open spaces and to remain unburied to survive. The blowing sand and soil exposed by damaged areas can cover an active crust, limiting the ability for photosynthesis leading to further damage.

Restoring crusts artificially have been attempted but have been mostly unsuccessful. **Damage prevention is our best tool to maintain the benefits of this crust. Remaining on the trail avoids further damage. When allowing someone to pass on the trail, step off onto rocks. If going off trail is the only option, follow in someone else's footsteps to avoid the amount of ground being stepped on.**

With lots of slogans to choose from, pick your favorite and the one you feel will be most effective in educating park visitors of the importance of staying on trail to protect the crust.

References

Leave No Trace. (2025). *Principle 2: Travel & Camp on Durable Surfaces*. <https://lnt.org/why/7-principles/travel-camp-on-durable-surfaces/>

Southwest Biological Science Center. (January, 10, 2022). *Biological Soil Crust ("Biocrust") Science*. USGS.

https://www.usgs.gov/centers/southwest-biological-science-center/science/biological-soil-crust-biocrust-science?qt-science_center_objects=0#qt-science_center_objects

University of Zurich. (January 17, 2013). *Great Oxidation Event: More oxygen through multicellularity*. ScienceDaily. www.sciencedaily.com/releases/2013/01/130117084856.htm



PMPC

PREPARING FOR THE NEXT GENERATION SEED DISPERSAL MECHANISMS

Courtesy of Joshua Tree National Park via Flickr

The Sonoran Desert is starting to explode with wildflowers of different varieties. Those flowers, if pollinated, will produce seeds so the plant can reproduce. Though plants are stuck where they are, they have evolved to use a variety of processes to increase the dispersal distances of their seeds. Studies have found that plants in dry landscapes such as ours have evolved to spread their seeds the longest distance of any environment.

There are five main dispersal types: wind, water, gravity, animals, and explosion. Most plants use a combination of these types to increase the likelihood the seeds will be dispersed.

Wind dispersal is a common dispersal mechanism since wind is found in nearly all environments. Most grassy and weedy plants have light weight seeds with hair-like structures that allow for it to be carried in the wind. The creosote bush, ocotillo, brittlebush, poppies, tumbleweeds, buffelgrass, fountain grass, and stinknet all use this type of mechanism to exert some control over their dispersal.



Creosote seeds. There are 4 per ball

Water is not synonymous with the desert, but some plants have learned to take advantage of the rain to move their seeds. The blue palo verde grows along washes, so their light seeds can be picked up and moved. The emersion in water can soften the seed to increase its chance of germination. The prickly pear also uses water as a mechanism to transport its seeds long distances.

Gravity is a simple way of achieving seed dispersal. The heavy fruits of the saguaro will fall from the top of the giant, allowing mice and other ground animals to access the juicy fruit to carry away the seeds. Once the fruit is dried out, whether it fell from the saguaro or not, the seeds are round so they can roll downhill to new locations. The barrel cactus uses the same strategies.



Saguaro fruit
Courtesy of Michael Searcy

Animals play an important role in seed dispersal. The foothill palo verde depends on mice to take and store their seeds underground where they can germinate in a new location. The structure of buffelgrass seeds make them stick to hiker's shoes and pantlegs, helping them explode in population throughout the valley. The barrel cactus and saguaro have bright, sweet fruits to attract animals. Both have thousands of seeds per fruit that are eaten and distributed long distances by animals. Their tough shells protect them from digestive systems. The cholla also uses animals to repopulate in new environments. However,

their seeds usually aren't viable. The plant has weak joints and hooked spines, so parts of the plant break away and stick to animals as they brush up against the plant. Once the joint falls off the animal, it can take root and start a new plant.

Explosive dispersal is the most exciting of all the mechanisms. Seeds are launched from the plant when their pod breaks open. Chuparosas and fairy dusters both use this technique to spread their seeds. The seeds form in pods (the fairy duster pod looks like a peapod). As those pods dehydrate, tension is generated in the woody fibers. When the pressure becomes too much on the seam or a weak spot, the pod explodes open, and the seeds are launched. Fairy duster pods curl when breaking open. Studies suggest this curling action and the mostly flattened shape of the seeds help with the orientation of the seed and a reduction of drag during flight. Chuparosa capsules hold 4 mostly round seeds at the top of the pod. Upon explosion, the seeds are assisted out of their capsule by a small, hooked stalk called a jaculator (Latin for "thrown" or "darting") that ejects them from the capsule.



Chuparosa seed capsules
Courtesy of San Diego State University



Roots on a cholla ball

References

- Justicia californica*. (n.d.). https://plants.sdsu.edu/sdpls/plants/Justicia_californica.html
- Seale, M. and Nakayama, N. (2020). *From passive to informed: mechanical mechanisms of seed dispersal*. *New Phytol*, 225: 653-658. <https://doi.org/10.1111/nph.16110>
- Wikipedia contributors. (2025, February 2). *Seed dispersal*. Wikipedia. https://en.wikipedia.org/wiki/Seed_dispersal
- Zona, S. (2007). *Going Ballistic*. The Virtual Herbarium. <http://www.virtualherbarium.org/gardenviews/GoingBallistic.html>

Join us at the PMPC Spring Event!

The PMPC is partnering with Save Our Mountains Foundation for a celebration of the parks/preserves with music, education & beautiful scenery. We'll have a table at the North Mountain Visitors Center from 9 am to 1 pm. There will be a Coffee House Live Music Session from 9 am to 11 am. At 11:30, Ann Roseman with AIM at Melanoma Foundation will present a Sun Safety Talk with free sunscreen samples and other sun safety prizes.

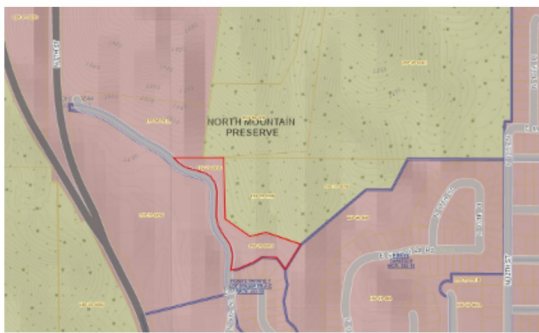
Three circular images showing different desert landscapes. The left image shows a tall saguaro cactus against a blue sky. The middle image shows a wide desert valley with mountains in the background. The right image shows a rocky desert trail with orange flowers.

Saturday, April 19th 9 am - 1 pm
North Mountain Visitors Center
12950 N 7th St, Phoenix, AZ 85022

YOUR DUES IN ACTION

PMPC IS WORKING TO ADD LAND TO THE PRESERVES!

There are still parcels of land that owners would like to donate to the City of Phoenix to be zoned as preserves to protect it from development. These parcels cannot be donated to the PMPC because of our 501(c)(4) status, but they can be donated to Save Our Mountains Foundation (SOMF). Your dues and monetary donations to the PMPC are being used for legal fees to finalize the land transfers to SOMF of two parcels that will expand our preserves!



Parcel to add to the preserves is highlighted in red
Courtesy of Maricopa County

Adding over two acres to North Mountain Park, APN 159-25-005U is connected to the preserves just east of 9th Street. It's not prime land for development or a trailhead, but it is land that can be protected and enjoyed in its natural state if donated to the City of Phoenix.

Trail 25 is a connector trail between Lookout Mountain and the rest of the Phoenix Mountains Preserves. The route has been a point of contention for years because hikers and bikers have been using golf cart paths. The second property on this list to be

donated is 214-47-494A, situated in the center of the Pointe Golf Club on Lookout Mountain. Ideally, with this piece of land owned by the City of Phoenix, Trail 25 can be rerouted through this parcel. This is progress but unfortunately won't finalize the Trail 25 reroute. The trail easement to use this new parcel will have to be reviewed and approved by the Real Estate Department of the City of Phoenix, which takes time. There will also need to be funding available to make the adjustment. City budgets are always tight, but the future of federal grant money the city receives for parks and preserves is now in question. If funding decreases, projects such as this reroute may need to be put on hold.



Courtesy of Montgomery & Interpreter, PLC

You can contribute to the PMPC so we can continue our work to grow and protect our preserves in two easy ways! Visit our website (phoenixmountains.org) or mail a check made out to PMPC to the North Mountain Visitors Center.



The City of Phoenix's Office of Environmental Programs invites you to complete an online survey as they embark on the 2025 Climate Action Plan Update. The survey is looking for residents' opinions about climate change, effective solutions for water conservation, affordability of AC and heating units, and food access to ensure the city's goals align with the needs of those who will be impacted by the Climate Action Plan.

You do not need to be a resident of the City of Phoenix to take the survey. Visit <https://bit.ly/PHXAction2025> today to make your voice heard! You can also visit www.phoenix.gov/oep to get to the survey and see some great projects the city has available to residents.



SOUTH MOUNTAIN PARK AND PRESERVE VISITOR'S CENTER

BY ANDY LENARTZ

The South Mountain Park and Preserve Visitor Center has received a much-needed remodel, revisioning, and new name. No longer called the South Mountain Environmental Education Center (SMEEEC), it has been rebranded as a Visitor Center.



Interactive topographical map of South Mountain Park/Preserve

The remodel has resulted in a beautiful space, the centerpiece of which is a massive, interactive topographical map. This is a digital map over a topographical background, which will permit the ability to update the map without replacing or redesigning it.

There is a welcome expansion of the focus on Indigenous history in the area, along with numerous artifacts. The full history of the area and park is represented in this renovated space. Additional displays include detail on the Civilian Conservation Corps (CCC) work at South Mountain and



CCC artifacts display

identification of key CCC landmarks at the park. Other new displays include interactive signage providing information on the plants, animals, and history of the park. Additionally, there are numerous beautiful examples of Sonoran Desert photography.

South Mountain Park Rangers encourage you to visit the remodeled site, located at the park's Central Avenue entrance, which they refer to as an "often-overlooked gem and a fantastic resource on South Mountain". They have shared that even many long time Phoenix residents have not visited and are shocked by how much they can learn about this local treasure at the Visitor Center. For those who have visited before, the updated exhibits and interactive map provide ample justification for another visit. Park staff is planning additional programming and volunteer opportunities at the Visitor Center in the near future.

The remodeled Visitor Center is open from 9:00am to 3:00pm, Thursday through Sunday as of February 2025. When open, staff will be onsite to answer questions. For up to date hours and details on upcoming events, check the Park's website: www.phoenix.gov/parks/trails/locations/south-mountain.

The Visitor Center has water, AC, and bathrooms, making this a perfect spot for desert lovers in the hot summer months. There is a small, short-term parking lot adjacent to the Visitor Center or ample parking in the larger lot next door, adjacent to the under construction Activity Complex.

This is a Visitor Center worthy of South Mountain Park and Preserve, and one worth a visit.



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