FROM THE EDITOR:

This spring, after a year of tumult from the Covid pandemic (and other matters), there is reason for genuine optimism that these terrible days could be over soon and life will return to, somewhat, how it was before. My spirits have been lifted by my Covid vaccination and shots given to my friends and family and millions of others. When I venture out into the streets, I notice more and more people about. Schools promise to reopen soon. President Biden announced that will be enough vaccine for every adult American by May, and if we remain vigilant about wearing masks and social distancing, and getting vaccinated, we might be able to gather in small groups for fireworks on the 4th of July. Yay!

During the most recent Desert Survivors board of directors meeting we discussed the resumption of our trips and group activities. The general consensus was September would be the time proper time. Then a few days later Biden suggested early July could be safe. We have already announced a desert kayak trip in the Sea of Cortez for late-October 2021, and this trip was completely booked within a few days of its announcement. Clearly there is a desire to get back out there. The Covid crisis is a fluid situation and there is a possibility some of our trips could resume in the summer. Of course, things could go to the worse again, but we are hopeful they won’t.

In 2020 I went on two trips to the desert by myself. In April I explored the Mojave, camping in my Jeep, visiting familiar sites and new places that I have been wanting to see. I trekked into the Saline Valley for the first time and was stunned by beauty of the place. The snow capped Inyo Mountains were magnificent. I loved what I was seeing, but frustrated too since I was unable share the sights with anyone else. I missed Desert Survivors so much at that moment.

We are headed to the desert sea.

Last December I was finally able to scratch from my to-do list a task that had been nagging me for some time—to upgrade the Desert Survivors website. The old site was put together in 2008, and while I found it to provide a functioning, nicely-designed web presence, over the years its software became more and more troublesome to maintain. And people started coming up to me to say that the site looked dated, and even that Desert Survivors appeared to longer be in business because its old style. The present day omnipresence of smart phones—the old site was not designed for—only made its obsolescence more obvious.

The new Desert Survivors website is now up and running. If you visit it, you will recognize aspects of the old site within the new design. The pages have been cleaned up, are more dynamic and they feature some of the best photography from our members. It even looks good on a smart phone.

I also want to give a shout out to Ed Anderson; the person who taught me how to operate the old website back in 2012; and who over the years managed to put Band-Aids and splints on its obsolete software to keep it running far beyond its sell-by date. Thank you, Ed, for those long hours on the phone, helping fix seemingly intractable glitches. It could not have been done without your help.

It was with true sadness when I learned last summer of the passing of Hall Newbegin. Hall was a long-time Desert Survivor, and the former editor of this publication. I first met him in 2013 when I interviewed Hall and Skip Perry for an article about the Desert Survivors’ Mt. Whitney to Badwater backpack. Hall and Skip were the only participants to complete the entire 128-mile trek. I found him a smart and high-spirited man. His descriptions and thoughts about the excursion made great copy.

Hall was an avid hiker and outdoorsman. He relished the wilderness and began collecting scents he found in nature. In 1998 he founded a body care company that used fragrances of wild plants named Juniper Ridge.

Hall was diagnosed with Frontotemporal Degeneration—a dementia that in its final stages can cause speech difficulties, tremors and loss of muscle control. He died from surgery complications after a fall. His 15-year-old daughter and his sister were at his bedside. He was 52 years old.

—Nicholas Blake

Cover photo: The shadows of good friends Kaitlyn van der Zweep and Kianna Gicalé in the Mojave Desert as they link hands and arms to make a heart shape. Read about their journey to the desert on a really hot day on pages 12 & 13. Photo: Kianna Gicalé
April is membership renewal month for Desert Survivors

It has been a most difficult last 12 months. Yet this April there is reason for optimism. The vaccination rate is brisk, Washington seems to have a functioning government again and we could soon safely gather in groups. It is not hard to imagine happier days ahead.

It is with anticipation of better times that this April we come to Desert Survivors members asking for renewal of their annual dues. Your membership builds community and helps us sustain programs of education and conservation of desert lands. If we remain vigilant about wearing masks and social distancing and getting vaccinated, we hope to resume desert excursions with safety by the end of the year.

Thank you for your support.

Please go to our website: desert-survivors.org and click on “Join/Renew” to pay by bank card. This is the preferred way of payment since it is less paperwork & data entry for our volunteers. Rather pay by check? Please mail your payment ($30) to: Desert Survivors, P.O. Box 20991, Oakland, CA 94620-0091.

Cactus Illustration: Flowering plant of Neomammillaria dealbata, watercolor by Mary Emily Eaton (1923.)

Even though Desert Survivors is not sponsoring trips, many of our members are getting out in the wild. In December 2020 Craig King and friends drove the Mojave Road, where he came upon the skeletons of thousands Joshua Trees burned in the August 2020 Cima Dome fire. Although the ground was scorched bare, there is hope that mostly native vegetation will come back and the land will again host vibrant life.

Craig King
When I first heard several years ago that the military wanted to take over several hundred thousand additional acres of the Desert National Wildlife Preserve, my heart just sank. Because what the military wants, the military gets. Right? The military is the Goliath of the American way.

National defense, American security, I understand. I am fully supportive of our military personnel and feel a strong military is necessary, and also that we are currently in no way supporting the enlisted men and women who defend our country in the way they deserve. However, I do not believe that this military land acquisition would have helped with any of these concerns. And in the end, it did not happen. At least not yet.

I first wrote on this topic in The Survivor in Spring 2019, and included the background on how and why Desert National Wildlife Preserve was set aside in 1936 by President Roosevelt (hint: to protect the desert bighorn sheep); and how during World War II the military cleaved off nearly half of the preserve for a training grounds; and why the Air Force now wanted to remove a further 227,027 acres from the wildlife refuge (hint: to expand their training opportunities in the Nevada Test and Training Range due to advanced technology). But a lot has happened in the past two years.

As expected, the expansion request was included as part of the 2021 National Defense Authorization Act (NDAA)—must-pass legislation that funds all of our military operations. This annual legislation has almost always passed with large bipartisan, if not unanimous, support.

To protect the Desert National Wildlife Refuge, individuals and organizations worked tirelessly for the past three years to gather support and fight the military Goliath. And it paid off. In the end, almost all Nevada residents came out against the expansion proposal, and remarkably they came together to fight it. The expansion proposal had bipartisan opposition from both rural and urban communities, including many local elected officials from small towns and counties. Not only environmentalists, but hunters, off-roaders, and tribal groups all came out against the proposed expansion. All six of the Nevada congressional delegates favored ‘no expansion’ language.

In an unlikely turn of events, the underdog (temporarily) wins against the mighty military.

by Stacy Goss

If the Air Force took over the land it would be forever off-limits to the public.
I’m still in awe at how this issue got the citizens of the state to join together in their opposition. But maybe Nevadans are tired of being overrun with military installations and finally said “enough.” Even with opposition for expansion so sweeping, at the time I did not think this was enough to thwart the U.S. military.

I still can’t think of this as anything other than a David and Goliath story, with supporters of the refuge taking down a giant. The 2021 National Defense Authorization Act passed both houses of Congress, with no military expansion language included. The giant had fallen.

And while there were some reserved celebrations, the bill was not yet a done deal. Due to items totally unrelated to the Nevada refuge, President Trump threatened and eventually vetoed the NDAA legislation. However, on January 1, 2021, Congress for the first time in four years, successfully overrode the President’s veto—a feat that requires two-thirds majorities in both the House and Senate. The refuge remains as it is. What a victory!

The 2021 National Defense Authorization Act includes language that maintains the refuge at its current size for the next 25 years. But it also suggests the battle is not over. Congress directed the Air Force to continue to work with Nevada stakeholders to reach an agreement on expansion plans. The military most likely will be back. Maybe this year, maybe in several years. So like all unprotected public lands, the fight for preservation is never over, it is just delayed. And unlike the Biblical David and Goliath, the Goliath in this story has not been beheaded. He has only retreated, perhaps to plot its next plan of action.

As David Brower writes in his book Conversations with an Archdruid, “All a conservation group can do is to defer something. There’s no such thing as a permanent victory. After we win a battle, the wilderness is still there, and still vulnerable. When a conservation group loses a battle, the wilderness is dead.”

As this issue of The Survivor was being prepared, in early-March 2021, Senator Cortez-Masto (D-NV) proposed The Southern Nevada Economic Development and Conservation Act,—a Clark County lands bill that would set aside 2 million acres as protected land. This would be the largest conservation bill in Nevada history, and the entire Nevada congressional delegation supports the legislation. It includes 1.3 million acres in the Desert National Wildlife Refuge that would finally be officially designated as Wilderness. It also includes a 51,000-acre expansion of the Red Rock Canyon National Conservation Area, a conveyance of 41,255 acres to the Moapa Band of Paiutes, and an additional 337,000 acres of Wilderness in Clark County.

Cortez-Masto stated that she wanted to find a “balanced approach”, so this bill would open up 30,000 acres of federal land for affordable housing and business growth. Most of this would result in development of a large stretch of federal public land, running south along the I-15 corridor toward Jean, NV and the California border, as well as public land near Indian Springs, Laughlin and the Moapa Valley areas. So although many environmental groups are supportive of this legislation, a few are not, as they believe the 30,000 acres of development near Las Vegas is just the type of continued sprawl that is outdated and unnecessary and is not worth the trade-off.

While the Desert National Wildlife Refuge needs permanent protection, and it would be wonderful to have the 1.3 million acres in the Refuge changed from Proposed Wilderness to Wilderness, it has yet to be decided if the trade-off is worth it.
One day in 1988, a San Diego County archeologist named Ron May spent his lunch hour dumpster diving in search of discarded photo albums. Tipped off by a county deputy with an eye for historic things, May salvaged a messy collection of old photos, notes, and paintings from the estate of Susie Keef Smith. The County moved Smith to a nursing home for end of life care when she was no longer able to live independently in old age. After her death, County public administrators sorted her possessions for transfer to relatives or auction and consigned the remainder to the trash.

What May found that day was a trove of black and white photos chronicling southern California desert adventures in the early twentieth century, from the Salton Sea to the Colorado River, Mecca to Blythe. The candid shots of mines and miners, desert oases, surveyors, homesteaders, animals, and scenery capture a rough but beautiful landscape in transition from “burros and flapjacks” to the massive construction works of canal and aqueduct and touristed getaways of the twentieth century.

The photographers were a pair of bold young cousins, Susie Keef Smith and Lula Mae Graves. Smith, raised on a homestead on the margins of the Salton Sea, was the postmistress at Mecca. More than just a mail repository, the post office also functioned as the unofficial town hall and community gathering spot of the region. Susie was the attractive magnet at the center of it all. With Kodak and Graflex cameras, she photographed everything interesting, turning many of the scenes into tourist postcards she sold throughout the region. Stricken with polio as a child, the adult Susie never let her leg brace stand in the way of a good adventure or fun time.
Lula, her younger cousin, came to the desert in 1929 from Tennessee, looking for dry air to cure her lung disease. It was a match made in buddy heaven for two women who shucked conventional decorum to explore via burros, model Ts, and even biplanes. In jodhpurs, big hats, and western garb, “Susanita and Ramona”, as they nicknamed themselves, palled around with old prospectors, young engineers, homesteaders, working men, and desert bohemians. Their photos show the fun and joy they took from a free and rugged environment.

Do we all have to “grow up” eventually? For Susie and Lula, the end came with Lula’s marriage to a mining engineer, Warren Graves, in 1931 and a move to Los Angeles to raise a family. She died at 100 in 2008 after living for years as widow in rural San Jacinto. Susie eloped to Mexico to marry a cousin in 1935 and had to leave the desert in the 1940s after developing a post-polio complication of heat intolerance. She and her husband eventually settled near San Diego. A devout Christian, for the last half of her life Susie ministered to Mexican braceros, still photo documenting the life she lived. She died in 1988 at age 87. With Susie’s remaining funds willed to her missionary work, her belongings fell to the County Administrator and eventually, a dumpster in San Diego.

From that lucky dumpster came the almost-forgotten story of Postcards from Mecca. Ron May’s salvaged photos eventually made their way to archeologist Russ Kaldenberg and historian Dennis Casabier at the Mojave Desert History and Cultural Center. At the same time they were preserving this photo window into a desert long gone, Lula’s grandson, artist Warner Graves III, was following and painting his grandmother’s locales with her inherited photo albums in tow. Eventually, the two photo collections came together in a collaboration that includes Susie’s and Lula’s photographs as well as a series of complementary essays on the cousins’ lives, a history of their favorite desert camp at Corn Spring oasis, the early desert postcard industry, and of course, the “fabled” dumpster where this review began.

You can order Postcards from Mecca from the publisher, Mojave Desert Heritage and Cultural Association (MDHCA) in Goffs, CA at https://mdhca.org/store. You might could find it on Amazon for a buck or so cheaper, but ordering it from MDHCA funnels the money back into a local organization dedicated to preserving and researching our Mojave Desert history.
The Survivor | Spring 2021

Ramblings from the East Side

Autumn on the east side of the Sierra is a kaleidoscope of golds, ambers and even crimsons where Aspens grow. But close by, the desert beckons as the days begin to cool. So in late October 2020, the call of the basin and range to the east grew and drew us away from the watered country to the dry terrain on two short but memorable trips.

by Kim Marcus

Some of you have visited the straw bale cabin my wife, Wendy, and I have in the Twin Lakes district outside of Bridgeport in Mono County. And I hope to use it as a base for future Desert Survivors trips on the East Side once the pandemic passes. But for now, it is our isolated redoubt from the virus and a jumping off point for nearby adventures.

Lynne Buckner is in our Covid pod, and in late October, after enjoying the glowing aspen groves in the Robinson Creek watershed, we struck out for drier vistas. First, the three of us headed to the north side of Mono Basin in search of the historic DeChambeau Ranch. But on the way, we stopped by the Conway Ranch at the bottom of Conway Summit. If you have ever driven down to Mono Lake from the north on Hwy. 395, the Conway Ranch encompasses the verdant meadows and time-worn structures at the base of the grade.

We first visited a newly stabilized barn. Weathered galvanized sheets were used to patch the roof, and the windows and doorways were sealed off with new pine planks. Rabbitbrush was in effusive bloom all about, and pellets of dehydrated sheep dung were thick near an old livestock corral.

Soon, we drove along to investigate more unexplored buildings at the far east side of the ranch. These were of newer vintage, including an interior complete with a porcelain sink, and a secondary structure featuring a series of picture windows offering inspiring views of the Sierra front and Lundy Canyon.

We made our way next to the remains of the DeChambeau Ranch, which lies to the south of Cemetery Road near the eastern base of Black Point. (Signage is scarce on the approach, all the better to keep the grounds safe from vandals.) Lynne helped guide the way through the maze of roads, and we soon arrived at a small parking lot at the southern entrance to the ranch.

PART ONE: Conway and DeChambeau Ranches in the Northern Mono Basin Offer a Palette of Arrested Decay

The ranch itself is large and in good shape, given that it’s been mostly inactive since the late 1930s, and it offers informative interpretative signage. The two-story main house is fronted by a large porch. There are numerous outbuildings as well as an extensive assemblage of barns, their wood weathered and burnished by the dry high desert air. Massive and aging poplars still hang on to life throughout and stand as sentinels to this important piece of Mono County history.

The ranch was first settled in 1871. The DeChambeaus, a family with French-Canadian origins, bought it in 1906. It was part of a collection of industrious agricultural oases that once thrived throughout the Mono Basin and helped feed the inhabitants of
Bodie and other nearby mining camps. It prospered until the Great Depression and was purchased by the Forest Service in 1992. Today it is the focus of ongoing projects to arrest its decay, including several planned by HistoriCorps for this summer, with special attention to replacing its shake shingle roofs.

After leaving the ranch, we continued to explore. I had previously spied a series of ponds in the vicinity with Google Earth, and my interest was piqued. What was this water doing in the middle of the sagebrush steppe? We soon came upon them. They are known as the DeChambeau ponds and date to the early 1900s. We ventured around the largest, known as Pond #2, on a use-trail flanked by luxuriant reeds and grasses and a tangle of willows that eventually opened onto a verdant watery expanse.

The series of four ponds are today managed for wildlife habitat and are owned by Inyo National Forest. Water cascades from one pond to the next by a series of culverts dug into the man-made berms that impound their waters. The ponds were augmented in the 1950s for use by duck hunters and those activities are reported to continue to the present day.

The ponds are fed by a hot artesian water well (originally dug in the 1920s in a failed attempt to find oil) adjacent to the site and diversion channels from Mill Creek, two miles to the east. A new 1,700-foot pipeline was recently completed to replace the decrepit predecessor that had run from the hot water well. The Mono Lake Committee has been active in the recent rehabilitation of the ponds, and their website has much more information about their history. But whether or not it makes ecological sense to use water from Mill Creek, once home to a gallery riparian forest, to fill these artificial ponds is debatable.

To finish the day, we ventured to the northern flank of Black Point, a volcanic hill that was once submerged under Mono Lake. There's a route at the end of the road to a series of fissures that are reported to be as deep as 80 feet and traversable. Unfortunately, it was too late in the day to visit them, but we did make our way to the shores of Mono Lake and touched its waters as a warm, late afternoon breeze blew. We returned to the cabin that night.

PART TWO: A Trek to the Foot of Conglomerate Mesa and the Warm Waters of Saline Valley

A couple of days later, Lynne and I departed for Conglomerate Mesa at the southern end of the Inyo Mountains. (Wendy had work obligations and couldn't join us.) We made the long climb up Hwy. 190 and turned off at the Joshua Tree forest of Lee Flat to find our way to the mesa. Lynne navigated down a series of narrowing roads until we could go no farther because of rough rock. We quickly set up our tents and then headed on foot in search of what is known as Tom's Camp.

We found the camp, located in a pinyon and juniper woodland at about 6,000 feet, after an hour or so of hiking late in the afternoon.
We returned to camping spot down a narrow, gravel-filled wash to complete a scenic two- to three-mile loop. A near full moon arose at dusk to herald a calm, cool evening.

The next day broke bright and warm as we headed back down to Lee Flat. We parked at a triangle intersection and walked to the east toward the Nelson Range in search of Black Well. Again, Lynne led the way, and it was relaxing to tag along as we passed by slopes of sagebrush and Joshua trees.

We headed to a cleft in the hills, crossed a small wash and then entered the main canyon, which was broad and open. We soon came upon a petroglyph followed by many more. There had apparently been a good water supply here at some point, but whether because of geological changes or recent dry climatic patterns, there was none to be found. Or maybe we weren’t looking in the right place.

Animal likenesses and geometric images were festooned on the rocks. And a coiled mini maze-like image etched on the stone was striking for its power and beauty. There were also carvings by newcomers to this land: J.O. Tonkin – July 4th 1907; and a signature left by the “Ubehebe Bunch.” Imagining how many had passed by or rested here, and what lives they led, is a common desert mystery at sites such as this.

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From the south, Conglomerate Mesa appears more like an undulating ridgetop capped by a jumble of flanking slopes. It was about 1,200 feet to the top from where we stood, with the only viable route visible to the northeast by a defile. Because of the lateness of the hour, we decide to forgo the ascent, and, like the visit to Black Point, our appetite was whetted for a return adventure. There also appears to be a northern access point to the top that is a favored route; indeed, this type of recon is almost as fun as the ascent itself.

We returned to the car the way we came, covering about two miles, and soon made the descent into Saline Valley. I spied a view of the Panamint Range and the dunes from South Pass. The grapevines in the canyon as we drove down to the Saline Valley floor glowed yellow in the autumn sunlight. After miles of washboard, we turned on the track to the warm springs and made a quick camp. The springs were closed and drained because of Covid restrictions, and hence the dispersed camping surrounding them was relatively uncrowded. It was in the low 80°s as the sun began to set over the Inyos and as a full moon rose to the south over flanks of the Last Chance Range.

As the light faded, Saturn and Jupiter shone in tandem to the southwest, and Mars soon blazed red in the southeast. A mild zephyr blew as I walked through a grove of palms to reach a shower powered by water from the warm springs. The faucet was not
working properly, with low water pressure, and thus I had to crouch on the stonework underneath. I decided it was a fine substitute for the pools themselves as the warm water poured over my head and body.

The next morning, we heard some burros braying in the distance. And then their exhalations grew louder, along with the clopping of hooves until a pair appeared and paid us a visit; their demeanor was gentle, and they enjoyed having their muzzles lightly stroked.

We eventually dropped into the wash, and the willows and other riparian vegetation grew dense. The water was flowing fast in the channel as I noticed a shadow pass, that of a monarch butterfly. I hadn't seen one in many years, especially not in the desert. Lynne decided to stay back as I blustered through the thickets (where I later realized that I had lost my water bottle).

We soon drove up the Steele Pass Road out of camp and peered into the small pools of the source spring, fenced in to protect it from equine visitors. From there, we went another mile or so up the rough track traversing the rocks in search of the “murder cabin.” We found a small trail across some desert pavement that led to a small forge and finally a faint track to the cabin, which was perched precariously at the side of the wash. It's formally known as the Braden Cabin, after a pistol-packing mercury miner called Red Braden who had constructed it decades ago.

Braden died of cancer in 1977, and it was subsequently inhabited by a reputed antisocial Saline Valley denizen called "Wolfman" for a time in the 1980s. He was the focus of unfounded rumors tying him to the murder of a couple, who had been camping at the main spring complex. Their murders have never been solved, though their remains were found in 1988 many miles up the Steele Pass road from the cabin, three years after they had disappeared. See https://timensspace.net/saline-valley-chronicles/ for more details.

Returning down the wash, the weather was warm (in the mid-80°s), and we were cooled intermittently by welcome breezes and took refuge at times in the shade of the cut banks at the edge of the wash for respites. Compact glaucous tufts of turtleback (Psathyrotes ramosissima) were in flower with delicate yellow blossoms.

The next morning, we broke camp and headed to the base of the Inyos along the Saline Valley Road. Our destination was the mouth of McElvoy Canyon. After a couple of attempts, we found the access route and hiked up a rubble field of outwash before reaching the side of the main wash. Below, we could hear water trickling and gurgling, an amazing and welcome incongruity in the stark desert landscape.

Finally, I reached a deep, shaded grotto that featured a hanging garden of moss, with water tumbling down the near vertical wall and overhang. At its base, there was a carpet of southern maiden-hair ferns flanked by a stand of columbine not in bloom. In the middle of it all, a ladder beckoned up a steep, slippery slope. I pondered the route for a moment before realizing this would be the end point of my McElvoy adventure. Walking back out, the monarchs were still fluttering. And as we returned to the car and drove out via the North Pass, I felt relaxed and fulfilled.
Hiking the Mojave on a Summer Sizzler

Wishing to avoid crowds on local trails, two Los Angeles women head to the desert for an early morning hike. They knew it would be hot, but this August day may have been the hottest ever!

by Kaitlyn van der Zweep

Like many people, I spent much of my time in 2020 online. Due to Covid restrictions and precautions, minimal social interactions were and continue to be encouraged. Through video calls, Netflix parties, and pub trivia streams, I found myself constantly surrounded by screens. By summer, I was itching to leave the computer, go outside and find an adventure. So, I called my “bubble buddy” Kianna and invited her to meet up for a hike.

We had a few requirements for our hike. It was August, and the temperature in Los Angeles was forecasted to reach triple digits, so our hike needed to begin early. A low-traffic and secluded trail, while always desirable, was even more preferable during the Covid pandemic. With this in mind, we knew we would have to venture outside of the greater Los Angeles vicinity to avoid the weekend crowd of hikers as eager as we were to leave their homes. We texted back and forth a few times, and discussed possible destinations. When Kianna jokingly suggested we go to the desert and watch the sunrise, I immediately agreed. It took a little bit of negotiating (I offered to buy donuts if we started really early), but soon our weekend excursion was planned. The day before we left, I was a little worried about the high temperature. To ease my concerns, I checked the tire pressure on my car, topped off its coolant and made sure I packed plenty of drinking water. We would leave before dawn, and I felt we would be able to beat the heat.

LOS ANGELES, CA – 5:00 AM - 77°F

As with most weekend festivities that optimistically begin with, “Let’s meet at 4:30 AM,” we had a late start. However, not too long after 5:00 AM, we pulled out of my driveway, sleepy-eyed and bed-headed but ready for a day of excitement and exploration. Although we were in a race against the sun, promises had to be kept and we made a detour in Lancaster for donuts.

Google Maps listed three donut shops that would be open at this hour. The first two we ventured to were closed. Grrrr! Thank god the third one had its lights on and was open for business; and as our drive continued, both of us were happily filled with sugar, but a bit disappointed we would be too late to enjoy the sunrise over the crimson cliffs at Red Rock Canyon.

ROSAMOND, CA - 6:20 AM - 90°F

As we drove toward the town of Rosamond, the sky started brightening. Eager to watch the sunrise, we pulled over onto the side of the highway. We listened to the sparse traffic driving behind us, and the sky transform into pinks and purples over the dry landscape. While perhaps not the magical moment we had envisioned experiencing—it was certainly not sitting atop the canyon rocks—it was an amazing view nonetheless.

Kianna had never been to the Mojave Desert, so I took on the role of seasoned desert guide, as I once had before. A year prior, when I had an out-of-town visitor, I took them to the Red Rock Canyon, as suggested by my friend and Desert Survival expert Nick Blake. He had given me GPS coordinates of some outstanding sites, that I fortunately still had saved on my phone.

They discovered this beautiful long-nose leopard lizard out on the playa.

 Rockefeller Canyon Preserve.

The author Kaitlyn van der Zweep.

The instrument panel thermometer that morning.

*Yale Climate Connections:
Death Valley, California may have recorded the hottest temperature in the world - August 17, 2020
HAGAN CANYON, CA - 7:05 AM - 95°F
The next stop on our journey was the Hagen Canyon Preserve Nature Trail. By now, the sun was fully in the sky, and already making itself known. We wandered along the path, climbed onto rocks and explored the beautiful landscape. After our early morning and long drive, it was nice to stretch our legs and enjoy the scenery, solitude and silence. Once we had seen our fill and taken photos we hopped back into the car.

REDROCK CANYON, CA - 8:45 AM - 99°F
We drove a short way up the road and pulled into the Ricardo Campground. There we found a trail that followed a ridge. At the top of a cliff, we took a moment to admire the empty campgrounds below and the never ending desert view in the distance. The breathtaking beauty of our surroundings may have kept us entranced forever, if not for the intensifying heat. Encouraged by our desire to get out of the sun and reapply sunscreen, we snapped a few photos and turned around and made our way back to the car.

SALTDALE, CA - 10:15 AM - 106°F
We had one final destination: the Koehn Dry Lake near the abandoned mining town of Saltdale, CA. With the air conditioner blasting, we got back onto the road. The drive provided a much needed break from the heat, where we could rehydrate and cool down. I parked the car on the dirt shoulder of a small side road, but instead of immediately leaving the vehicle, Kianna and I stayed seated for some time. Were we really ready to bear that heat?

Finally we gathered the motivation. We opened our doors. Instantly, I was engulfed by hot, arid air. I took another large sip from my water bottle, and we began walking toward the lake. On the way, we crossed train tracks and two abandoned railroad cars. As we walked the ground beneath our feet turned to cracked dry mud. We wandered aimlessly around the lakebed, enjoying the cracking sensation felt with every step. Upon first glance, the terrain seemed completely desolate and empty, but while searching for lizards, we found several indiscernible pieces of rusted metal and old mattress springs emerging from the ground like twisted flowers. By 11:00 AM, the sun's steady climb overhead finally got the best of us and we headed toward my car one last time. As we made our way back, we stopped and spent some time at the railroad cars; admiring more the shade they provided rather than the artistic graffiti they featured or the interesting patinas of their rusting bodies.

When I turned the ignition on in my car, the thermometer read 106°F but neither of us believed it. It had felt much, much hotter than that. Exhausted, sun kissed, and glistening with sweat, we began our long drive back to Los Angeles.

Our journey took place on August 16, 2020—a day of record heat throughout the Mojave Desert. Perhaps the hottest temperature on Earth was recorded that day*. Less than 100 miles away from where Kianna and I had been hiking, Death Valley, California reached 129.9°F. The year 2020 is certainly full of moments that everyone will remember. While some may recall attending weddings or baby showers through Zoom, or perhaps a Christmas spent alone, I will always remember the scorching day my friend and I hiked in the desert near by the hottest place on Earth.

ROSAMOND, CA - 6:20 AM - 90°F
As we drove toward the town Mojave, the sky started to brighten. Eager to watch the sunrise, we pulled over. We sat down on a curb, listened to the traffic drive behind us, and watched the pinks and purples over the dry landscape—sitting atop the canyon view nonetheless.

I've been to the Mojave Desert, so I took on the role of expert guide, as I once had been an out-of-town visitor, Nick Canyon, as suggested by my friend, Nick Blake. He had grown a beard of some outstanding sites, saved on my phone.
On a recent backpack to the Virgin Springs area of Death Valley my companion Esperanza and I came across the carapace of a dead desert tortoise. It was laying on its back and all the soft tissue save for a few remnants was missing. This piqued my interest about this incredible animal that is able to survive in one of the harshest environments on the planet. When I got home, I did more research.

The earliest known turtles date to the late Permian Epoch—298.9 million to about 251.9 million years ago. Whereas today’s turtles are toothless many ancestral forms possessed teeth. Many of the oldest and most primitive forms also lacked a plastron and carapace—the lower and upper sections of the shell. As they evolved some of the bony structures such as its ribcage became the shell and have become the forms we see today. Turtles are very adaptive and can be found on every continent excluding Antarctica. Having survived past mass extinction events, these animals in my estimation seem extremely hardy. Unfortunately, today many of the turtle species including the desert tortoise are listed as threatened, endangered or critically endangered in the human-caused mass extinction.

There is a distinction between turtle and tortoise: being that all tortoises are turtles but all turtles are not tortoises. The most important thing to remember about tortoises is that they are all land dwellers. One way to distinguish tortoises from turtles is their legs. Tortoises all share a unique hind limb anatomy made up of elephantine (columnar) hind limbs and feet, and their forearms are not flipper like.

The desert tortoise is native to the Mojave and Sonoran Deserts with a range of northern Mexico, western Arizona, southern Nevada south west Utah and southeast California. The animal is believed to be 15 to 20 million years old. Two distinct species of Desert Tortoise exist with the Colorado River being the dividing line between the two groups.

It is a long-living animal with some in the wild reaching 80 years. It grows slowly with a low reproductive rate. It spends most of its time in burrows or rock shelters to regulate body temperature in the harsh desert climate and to reduce water loss. They are most active after seasonal rains and inactive the rest of the year. They can grow to 10 to 14 inches in length and weigh from half pound to nearly 12 pounds—with the males generally being larger. The front limbs have sharp claw like scales that are flattened for digging. In the Mojave they favor alluvial fans where favorable soil for dens may be found. These tortoises tend to spend their lives in a particular range, where they know their food, water and mineral sources. Home ranges are from 25 to 200 acres and are determined by proximity to available resources and rainfall. Since tortoises are solitary animals they only come in contact when crossing paths in their ranges and in mating.
Traditionally, Native American groups in the southwest used the desert tortoise in different ways. The carapace, or top shell, was used as a bowl, ladle, container, shovel, or as a pottery making tool. Some groups even used the whole shell as a rattle. Other groups used the tortoise shells as drums or as decoration on ceremonial clothing. Smaller bones were used as gaming pieces, jewelry, and as ornamental pieces. Most groups ate the meat of the tortoise, but a few including the Mojave did not. Emblems of the tortoise have been found on ancient Mojave pottery and etched into desert rocks. The animal is commemorated in song and legend, functioning as a symbol for long or eternal life, revered old age, and a base or form of the earth.

Desert tortoises have lived alongside humans for thousands of years. In the early years of the 20th century, they thrived within the Southwest’s arid landscapes, with accounts of as many as 1,000 tortoises per square mile populating parts of the Mojave. But by the end of the century, the animal’s declined so great that the desert tortoise is now listed as a Threatened Species under the Endangered Species Act. Livestock grazing, urban development, predation of juvenile tortoises by ravens, along with the ever-increasing use of off-road vehicles are major causes of tortoise’s degraded habitat and overall wane. Also, disease in the form of a lung infection transmitted by released tortoises from captivity is a serious threat to the population. For a creature that has survived the extinction of the dinosaurs the likelihood of its future survival seems to be in doubt.

**RANGE OF THE DESERT TORTOISE**

Right photos: In 2011, on the basis of DNA, geographic, and behavioral differences between desert tortoises east and west of the Colorado River, it was decided that two species of desert tortoises exist: Agassiz’s desert tortoise (Gopherus agassizii) and Morafka’s desert tortoise (Gopherus morafkai). Gopherus morafkai occurs east of the Colorado River in Arizona, as well as in the states of Sonora and Sinaloa, Mexico.

Left photo: The new species name is in honor of the late Professor David Joseph Morafka (1947-2004) of California State University, Dominguez Hills, in recognition of his studies and conservation of the desert tortoise.

Left photo: The boom of off-road vehicle activity in the desert has been a disaster for the tortoise.

Above photo: One of the newest threats to the desert tortoise is the proliferation of ravens in the habitat. The bird preys on vulnerable tortoise hatchlings.

Left photo: Scales of the tortoise forelegs have evolved into claws that make the animal capable of digging.

Gopherus agassizii

Gopherus morafkai
DESER T SURVIVORS
HEAD BACK TO COURT
OVER PROTECTION OF
BI-STATE SAGE-GROUSE

by Nicholas Blake

In 2015, Obama Administration Secretary of Interior Sally Jewell announces the Bi-State Sage-Grouse will not be listed as threatened.

Researchers place a radio telemetry collar on a sage-grouse hen.

On September 29, 2020 conservation groups, including Desert Survivors, once again filed suit against the U.S. Fish and Wildlife Service (USFWS) for failing to protect the Bi-State Sage-Grouse under the Endangered Species Act. This is the latest skirmish in a long battle that began over the agency’s proposed designation of this ground-nesting bird as “threatened species” in 2013 and the abrupt reversal of this decision by the agency in 2015.

In 2016 Desert Survivors and other conservation groups led by attorneys from the Center of Biological Diversity and the Stanford Environmental Law Clinic sued the USFWS over the turn-about of the proposed change of designation, arguing the agency misread a scientific analysis of the species’ viability and gave too much credibility to private conservation measures in stemming the birds’ decline. They called the decision to withdrawal of the 2013 proposed listing as, “arbitrary and capricious and in violation of the Endangered Species Act.” Most likely the agency’s reversal was prompted by considerable political backlash from area livestock grazers, business groups, off-road vehicle enthusiasts and local politicians.

In a decision that was considered a big win for conservationists in 2018, the U.S. District Court in San Francisco ruled in the plaintiff’s favor declaring USFWS wrongly denied Endangered Species Act protection to the animal when it withdrew its threatened species proposal. The judge issued an order vacating the 2015 decision and reinstated the 2013 proposed “threatened species” listing status. The court also directed the agency to set about making final listing decision.

In 2015, about the same time the USFWS decided not to list the Bi-State Sage-Grouse, the Obama administration announced a bi-partisan, private/public lands project for protection of the greater sage-grouse population. The plan included conservation projects in 11 states and limitations to oil and gas drilling, mining and livestock grazing on 10 million acres of federal land. This all came to a swift end with the election of Donald Trump as president. In June 2017 the Interior Secretary Ryan Zinke announced plans for a “review” of efforts created during the Obama administration to support the greater population of sage grouse. Zinke’s intent was clear—imperiled animals were not going to get in the way of industries that pollute and disturb the range.

So it came as little surprise to anyone that in March 2020 the Trump-led U.S. Fish and Wildlife Service, doubling down on its prior decision to withdraw the 2013 proposed listing rule, once again concluded that the Bi-State Sage-Grouse “does not meet the definition of a threatened or endangered species.”

The USFWS claimed much of its new decision was based on information it obtained after the 2013 ruling; however, a judicious reading of this material would make one conclude the opposite. The new information included an updated population and habitat analysis by the U.S. Geological Survey that is referred to as the Coates 2020 Study. The new study estimated a worsening of the overall Bi-State Sage-Grouse population. In 2013 the service estimated a population between 1,833 to 7,416 birds. The Coates 2020 Study suggested a 2018 population at 3,305—on the low end of the previous population range and below the “minimum criteria for long-term persistence” of 5,000 birds the agency used in its 2013 assessment. The study also identified six distinct and largely geographically isolated populations of the Bi-State Sage-Grouse. It indicated that five of these populations were declining in numbers with several having a high probability of vanishing altogether in the near future. Only the Bodie Hills study area gained more birds.

The Coates 2020 Study also described the range contraction and habitat fragmentation for the bird. Between 2008 and 2018 the total distribution area of the Bi-State Sage-Grouse shrunk by 137,123 acres (6.5%), despite voluntary conservation measures intended to increase grouse habitat. In the 2020 Listing Withdraw, the agency understated the largely dismissed the range contraction across the subpopulations by repeatedly emphasizing the minimal range expansion in the Bodie Hills.

In the 2020 ruling, the USFWS cited conservations efforts aimed at promoting the Bi-State Sage-Grouse. Some of this work in included 50,054 acres of conservation easements, 46,400 acres of pinyon-juniper removal, 1,300 acres of “chemical or mechanical treatments of non-native plant species”, 46 projects aimed at maintaining, improving or restoring riparian/meadow sites impacted by grazing animals and 22 miles of power line and fencing removal. While these efforts are commendable, they affected only 6% of the acreage the USFWS proposed in 2013 as critical...
habitat for the species, and the USFWS did not provide evidence that these conservation measures have been effective. In fact while these conservation measures were taking place the population of the bird continued to decline.

So the plaintiffs—Desert Survivors, Center For Biological Diversity, Wild Earth Guardians, Western Watershed Project—as we did in 2016, have gone back to court to sue the U.S. Fish and Wildlife Service for failing to protect the Bi-State Sage-Grouse. In the new complaint we asked the court to vacate the 2020 Listing Withdrawal, declaring it as “arbitrary and capricious,” and to reinstate the 2013 proposal. We do this to save the creature from a fate of complete demise. We do this so that the generations that succeed us will be able to enjoy the Bi-State Sage-Grouse for educational and recreational activities.

The U.S. Department of the Interior and the U.S. Department of Fish and Wildlife answered the complaint in December 2020. The State of Nevada indicated it would seek to intervene for the defense. The record for the case is expected in April 2021. The case has been assigned to United States Magistrate Judge Jacqueline Scott Corley. We will keep you posted on these events.

The Coates 2020 Study explained, Bodie Hills PMU differs in material ways from the others. It has a relatively high elevation and high precipitation rates, both of which buffer against drought. It has cool moist soil, which makes it resilient to disturbance and weed invasion. Compared to the rest of the Bi-State Sage-Grouse range, Bodie Hills contains a relatively greater amount of upland riparian springs and meadows that provide good brood-rearing habitat for the birds.
I lived in a van traversing North America for four years, spending some of those days in our wonderful desert lands. It is the benefit of a 31-year career in a good paying job with a modest pension. Upon retirement I had decided that a second, albeit much shorter career was needed to achieve “future financial security.” Luckily, someone close to me, Desert Survivors member Julie Donohue, challenged me to rethink what it would take to live comfortably till my eventual expiration.

Was this possible with my pension and my future Social Security benefit? Did I really need my three-bedroom, two-bathroom house with its massive three car garage? No. Would I have medical insurance covered? Yes. Enough for food, shelter, & utilities? Yes again. Are there less expensive places for me to reside than Berkeley? Of course, there are. If I didn’t have to work for a living anymore, then why do it?

An annoying challenge it was too, with many discussions. But grateful I am for it, as it forced me to look again and again at the underlying parameters I’d used to concatenate the need for a second career. Under scrutiny these parameters shifted and I could see a way to live comfortably without another career. Still feel that way too. Jettisoning my previous decision (and my Berkeley mortgage) I now determined to spend some time traveling about before settling down somewhere.

Enter the van, a 2006 Dodge Sprinter 2500. Its previous owners took a new passenger model, gutted the interior, and outfitted it nicely as a weekender or for extended excursions lasting a few weeks. It came with a fixed double bed, refrigerator, 240 amp-hours of battery storage, cassette toilet, minimal interior storage, and an exterior pullout food prep/washing platform. It was the perfect size for me, and came with a diesel engine notable for excellent mileage (21 to 23 mpg) for such a weighty vehicle (about 7500 lbs.) Once in hand, I added a solar panel, increased the interior storage, installed an interior sink and gray water tank, and upgraded the audio system. Gotta have my tunes.

Launching from Berkeley on 2 Nov 2013, I circumnavigated the San Francisco Bay Area, making farewells, and doing a final sorting of supplies. Then it was off to the desert with no particular time constraint, just letting the days and spaces determine the itinerary. This became the guiding thesis of my journey, peppered with larger overarching goals, such as touching all four corners of the contiguous 48 states or attending certain events, like the climate march in New York City or the solar eclipse in Hopkinsville KY, or attending a niece’s wedding. These goals were in flux as it turned out, but gave me geographic and temporal anchor points. Within these guidelines, I adopted a somewhat open time frame. This served me well, including a few emergencies.

Here’s an excerpt from the opening of my woefully incomplete travelogue. It is offered as a glimpse into my sense that there was no hurry to complete a trip, to finish a route, or bag a peak and then get home. Home was the van, and the outside an op-

16 November, 2013, morning in the Indian Wells Valley, CA ~8:30 AM. Spent three nights in the Indian Wells...
I moved slowly across the desert landscape, lingering in places familiar and long loved, going to new places I'd known of but not yet visited, and finding new places to go. Scouring maps & atlases for interesting destinations for what I thought would be a mostly southern route became a regular evening ritual. Another dear friend and previous Desert Survivors member, Sam Moorman, gave me a book, printed in the early 1960s, on selected State Parks in all 50 states. A bit out of date style wise, and somewhat quaint in its presentations, it proved very handy as well. Moving thusly, four months passed before I arrived in Tucson, AZ.

While driving in Arizona Dave spotted this beast beside the road.

Before launching, I had planned a seven-week Euro tour beginning in June by storing the van at a cousin's place in upstate New York and flying out of JFK. That was my first anchor point, and I was looking forward to an eight-month meander across the south & then north along the eastern seaboard. Unfortunately, a nasty bicycle accident in Tucson, replete with fractures and torn ligaments, interrupted my journey and required seven weeks of recovery. Relaunching on April 30th, and making up for the lost time, a more diagonal track across country seemed appropriate. I made a beeline to Utah & the Colorado Plateau spending two weeks among its canyons, arches, mesas, and ruins. Luckily, my arrival coincided with a good crop of wildflowers, including the most abundant and densest stands of Indian ricegrass (Oryzopsis hymenoides) I've ever encountered and a new-to-me Evening Primrose (likely Oenothera pallida.) Such abundant ricegrass made it click in my mind of what a great food resource it must have been for Native Americans. There were acres upon acres of it, with ripening panicles swaying in the warm breezes. And the primrose field was just plain gobsmacking.

9:20 AM and the wind has found me again. The van rocks gently and I hear the wind rushing around the vehicle. Several intrepid bicycle riders passed by about 15 minutes ago, heading toward Inyokern. Time for coffee and to decide on the day's venture.

Valley two evenings parked at a dying friend's place, the third parked in the open desert tucked up against basalt flows trailing off the Black Mt. volcano near old Highway 395. I'm parked facing east and have left open the privacy curtain to let the sunshine pour through the windshield and warm up the van before getting out of bed to enjoy the surrounding views. It's quite breezy now, as evidenced by the swaying creosote branches, but less so than earlier. I closed the roof vent around 2:00 AM due to wind noise and for fear the vent cover would be torn off. The wind also whistled through my bike (mounted astern) making odd tones reminiscent of wooden flutes and plaintive dove calls - a low volume impromptu concert lulling me into a deep comforting sleep. But now, visible in the dawning light I see compression clouds capping the Sierra crest to the north & south of Owen's Peak, a sure sign of a very windy day. It's likely much windier elsewhere in the valley, as there's a murky haze to the north and west, and the Coso Mtns. are obscured, as is their junction with the Sierra.
The Survivor    Spring 2021

The rearview mirror as I coursed across a 
the Rocky Mountains slowly recede in 
Colorado Springs to Kansas City. I watched 
like the time I was traveling eastward from 

Then there were the spontaneous moments, 

Eventually the Rockies were lost below 
the western horizon, and no hills, pla- 
teaus, mesas, or mountains were discern- 
able in 360 degrees. This was my first 
encounter with the flatness of the Great 
Plains and big sky country. Only the 
clouds brought a sense of dimension to 
this otherwise two-dimensional world 
and the sun’s position a sense of direction. 

I tarried a bit, looking for places to wander 
afoot. Alas, land east of the Rockies is mostly 
privately held, surrounded by fences, and off 
limits to casual exploration. There were few 
opportunities to pull over, get out, and walk 
around. I took advantage of those oppor- 
tunities when they presented themselves. 

After one of these excursions, I spied a 
thunder cloud moving in from the south 
west, a tall, dark, monstrous looking thing, 
flat on the bottom with a massive boiling 
cauliflower head. After watching it build for 
a while, I returned to my route and soon 
discovered our paths were going to cross. 

Both terrifying in its immensity and the 
threat such phenomena can represent, the 
moment was also exhilarating with the 
prospect of witnessing its power unleashed 
in these wide-open spaces. Kind of made 

Mr. McMullen toured Europe the summer of 
2014 and returned to New York in time 
to join the 300,000 participants of the Peo- 
ple’s Climate March in September. 

Once back in his van, he continued his mo- 
 bile life—visiting all parts of the lower 48 
United States and British Columbia over 
the next three years. 

These days, Dave finds himself back in 
Berkeley, CA residing in a house firmly 
fixed to the ground. He has taken up the 
sport of lawn bowling and is a Desert Survi- 
vors Board of Directors member. 

— the Editor

dangerous it is to be out and about alone 
than it is traveling in groups. Risk assess- 
ment becomes a more present governor 
on my adventurousness, and suddenly 

Time not spent on lonesome, wandering 
trails was dedicated to more managed cul- 
tural sites, parks and monuments, and mu- 
seum visits came into my itinerary, as did 
organized walking tours and befriending 
people along the way. Cheesy tourist attrac- 
tions lost some of their tawdry aura, and 

A fellow traveler I met talked of the “Spoke 
Phenomenon.” This happens to travel- 
ers as they learn about different places 
and events en route to anywhere. Some- 
one tells you about someplace, you go 
there, you meet more people who tell you 
about more places, and so forth and so 
on. “Spoke” makes sense if one returns 
to a hub, then explores another “spoke” 
to return again. For me, the explorations 
added zigs to my zags across the. Word-of- 
mouth and Mr. Moorman’s book rendered 
add zigs to my zags across the. Word-of- 

Prospect of witnessing its power unleashed 
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Then there were the spontaneous moments, 
lake like the time I was traveling eastward from 
Colorado Springs to Kansas City. I watched 
the Rocky Mountains slowly recede in 
the rearview mirror as I coursed across a 
surprisingly arid terrain. There were 
small yuccas and low growing cacti un- 
familiar to me. Grasses and shrubs were 
diminutive and spread apart, and no 
trees were visible in every direction. 

Eventually the Rockies were lost below 
the western horizon, and no hills, pla- 
teaus, mesas, or mountains were discern- 
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— the Editor
Adaptations for Existence in a Very Dry Place

by Nicholas Blake

One of the real joys when becoming familiar with the desert is learning how plants and animals have evolved to survive in the extreme environment. The dry, high heat of summer must be particularly difficult for life; but more so, the long, long months without rain and overall lack of water in the desert puts real stress on plants and creatures. The adaptations of life to exploit scant moisture is particularly fascinating, and recent studies have given us new understanding of physiological attributes of a desert rodent and a plant have allowed them to thrive where it is very dry.

The grasshopper mouse (genus *Onychomys*) is a tiny rodent that lives in the Sonoran Desert. It is most notable for being a super aggressive carnivore. It stalks and kills all manner of small animals including insects, arthropods, snakes and lizards and even creatures larger than itself including other rodents and ground nesting birds. It is a fearless and furious attacker that does not give up until its quarry is dead. The grasshopper mouse is particularly unique in the animal kingdom because it preys on scorpions. The scorpion protects itself by administering an intense painful sting to an attacker. In mammals (rats, coyotes, humans) the sting toxins activate a pain neuron that causes an attacker back off as a reflex of tissue damage. These creatures stay away from scorpions.

The scorpion sting does not seem to faze it. Scientists, researching ways to alleviate pain in humans, have been keen on the grasshopper mouse since the scorpion sting does not seem to faze it. They recently discovered the unique dynamics of the grasshopper mouse’s nervous system; how when it is stung amino acids in its nervous system bind the scorpion toxin, blocking pain signals and at the same time inducing analgesia (pain relief.) In effect, this creature feels no pain. During studies, when a grasshopper mouse attacks a scorpion and is stung, it will back off for an instant (reacting from the pain), then just as quickly resumes its assault (after the pain relief sets in.) Scientists theorize that the mouse is so aggressive because it needs to constantly hunt to obtain scarce desert moisture from the flesh of its prey. Grasshopper mice when fed meat in a laboratory will go months without drinking readily available water. The animal’s ability to exploit the scorpion as a food and water source gives it one bit more support for survival in their waterless range.

Recent studies discovered that the mesquite tree has a means to actively manage water resources in its dry world. Researchers in the Santa Rita Mesquite savanna outside of Tucson, AZ have observed a dynamic they call hydraulic redistribution, where in the rainy season, when the near-surface soil is wet, mesquite trees transported water through its root system from the surface down to deep, dry soil. The water is then placed in a sort of storage—where it is not lost to evaporation and kept away from shallow rooted plants. During dry periods the mesquite trees, using the same roots, will lift this deep reservoir of water for transpiration, photosynthesis and overall productivity of the plant. This provides a competitive advantage for the mesquite over understory plants such as grasses.

The study published in 2018 by eight scientists from the University of Illinois and the University of Arizona determined in 2015 on a Sonoran Desert test site that 17% of rainfall water was absorbed into the soil, with rest returning to the atmosphere through evaporation and transpiration. A full 76% of the soil moisture was then sent deep underground by the mesquite. For years people have admired the mesquite’s root system that tapped deep into the ground to reach water. What they did not know, was that in many instances, it was the tree itself was bringing in the water.

The adaptations such as those the grasshopper mouse and mesquite to thrive the desert are fascinating. The desert rodent ounce-for-ounce is likely the most viscous predator on the planet. Take that wolverine and Tasmanian devil! A tree that saves for a non-rainy day flips that idiom in a delightful way. The desert truly is the greatest place on earth. Take that High Sierras!

Further reading:


Gathering around the campfire during a 2016 car camp to the Old Woman Mountains.

Martina Koneitzny is deathly afraid of falling and she needs reassurance getting down this steep section in 2012.

Checking out a sculpture installation as part of the “Desert X” art exhibition near Indio, CA in 2019.

Dinner in a downpour on the 2018 Glass Mountain trip.

Mother and daughter enjoy happy hour on the 2019 Butte Valley, Death Valley N.P. trip.

A wall made of empty bottles in East Jesus, CA in 2019.

Trip leader David Oline on the “Wolf of Fox Mountain” car camp in May 2019.

Ruth Guabe and daughter Zoe in the Coso Mountains during an Easter 2013 car camp.

Photo: N. Blake

Photo: Bob Davis

Photo: Marisa Seaman
Photos From Past Trips & Events

Due to Covid-19 precautions Desert Survivors has curtailed group excursions and gatherings. Featured here are shots from trips over the past nine years. With ongoing, population-wide vaccinations, we are cautiously optimistic that our group activities can resume in the Fall 2021. We cannot wait to get back out there!

Right photo: A Kodak Moment in a slot canyon during a 2019 day hike on the Amargosa River.

Stacy Goss points the way on a 2013 day hike in the Mecca Hills.

Pov scrambles out of a box canyon during a 2012 Granite Mountains backpack.

Canyon of the Ancients 2019.

Desert Survivors tour the massive dust mitigation project on Owens Lake in 2018.

Dinner time for backpackers at Joaquin Rocks in May 2018.

Buck Nelson on his epic solo hike of the Desert Trail in 2012.

Photo: N. Blake

Photo: A. H. Cominos

Photo: Buck Nelson

Photo: N. Blake

Photo: N. Blake

Photo: N. Blake

Photo: N. Blake
Desert Survivors Membership Form

Membership dues are just $30/year, although additional donations are welcome. You can join or renew your membership by filling out this form and mailing it in with a check to the address shown below.

Name (req'd) _____________________________________________________________
Street Address (req'd) ______________________________________________________
City, State, Zip Code (req'd) ______________________________________________
Phone number: ___________________________________________________________
E-mail address: ___________________________________________________________

I want to join or renew at the following rate (make check payable to “Desert Survivors”):  

___ $30 - Tortoise (basic rate)  ___ $50 - Roadrunner  ___ $100 - Coyote  
___ $500 - Bristlecone  ___ $1000 - Bighorn

Desert Survivors • P O Box 20991, Oakland, CA 94620-0991