



# CONSERVANCY CONNECTION

Student volunteers from the Crossroads School work on a restoration project along the Amargosa Wild and Scenic River.



Winter 2019



## WHO WE ARE:

Standing up for the wilds,  
waters, and communities of  
the Amargosa Basin and  
eastern Mojave.

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If you are interested in participating in our  
work, whether that be on the board or as  
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[tanya@amargosaconservancy.org](mailto:tanya@amargosaconservancy.org)

## STAFF

**Tanya Henderson**  
Executive Director

**Julie Vargo**  
Director of Finance and Operations

# Changing seasons, new trails

## Letter from the Editors

Dear Friends,

Summer is the season where the Amargosa is set to **broil**. It's a time to catch our breaths and reflect on what was accomplished when the world dipped below 90 degrees. Our last stewardship season saw the completion of two **major** projects that couldn't have been done without significant help from our partners and volunteers.

The desert can be an intimidating place to take a walk. I'm sure we've all had visitors who we have had the pleasure of introducing to the desert. It's a task that can be difficult in areas without many trails--while the wide expanses seem like endless possibilities to a desert rat, for some they just conjure images of cattle skulls and buzzards. For those wanting a short trail to introduce friends and family to the desert, the Amargosa River Trail loop out of China Ranch is now complete! And for those of us who love the quintessential oasis that is China Ranch, the shaded picnic tables and additional restroom facility give us another place to enjoy our date shakes.

The two-mile loop trail takes hikers out to a bluff that overlooks the Tonapah and Tidewater railroad grade and the Amargosa River. For those that want to travel another half mile out, there is a quick leg of trail to take you to a small slot canyon; all you have to do is wade across the mighty Amargosa. Interpretive trail signs can be found along the way offering a bit of information about the natural resources and history of the area.

Remember, it's best to hike in the seasons when the oven is turned **off**. Hiking in the summer is dangerous. Hope to see folks out there this fall!

Many of us love the desert for its intricately beautiful nuances. We learn the mountains on the horizon and know all we need to do is hike up for a better vantage point if we get discombobulated. But to some, the desert is a place that seems the same mile after mile and in which it can be difficult to tell where they are on the map. This was a problem that landed many off-highway vehicle recreators right into the Wild and Scenic Amargosa River. Last season we wrapped up our project of restoring motorized trespasses in Sperry Wash. Much of this was done by camouflaging the unauthorized routes, to help riders stay on course. We also installed a mile and a half of fence and a series of interpretive signs, with our Barstow BLM partners.

The Amargosa is such a rare desert gem, and now it is easier for all recreators to enjoy the resource responsibly. 🍃

Sincerely,

*Tanya Henderson*  
*Julie Vargo*



Tanya Henderson and  
Julie Vargo

# A WILD AND SCENIC HISTORY

photo credit (above): Bruce Gordon, Eco Flights

October 2, 2018, will be the 50th Anniversary of the National Wild and Scenic Rivers Act. Congressionally developed and signed into law by President Lyndon B. Johnson, the Act was meant to be a counterbalance to the rapid development of dams across the country. People saw a need to reserve at least some sections of the nation's rivers as free flowing. Fifty years later, the Wild and Scenic River System has over 12,000 miles of designated rivers, including the Amargosa.

Congress designated the Amargosa Wild and Scenic River on March 30, 2009. It has three sections - Wild (7.9 miles), Scenic (12.1 mi), and Recreational (6.3). Wild areas have no road access, few trails, and no development along the river. Scenic areas have more ways of accessing the area, but the river back is relatively undeveloped or changed. Recreational areas have access via roads or railroad and may have been altered by humans - currently or in the past.

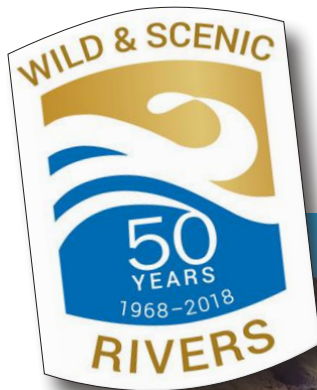
The Scenic portion of the river travels through mudbeds north of the Tecopa Hot Springs road, past Tecopa via Grimshaw Lake, to the mouth of the Amargosa Canyon. Here the designation changes to Wild as the river winds below the cliffs of the Palisades and through the narrowing canyon. Later, when the river meets

up with Sperry Wash, it becomes the Recreational section as the road traverses along, and sometimes through, the river.

While it seems unlikely that putting a dam in the Amargosa would ever be a realistic threat - the Wild and Scenic designation can give us some measure of comfort, especially when looking at our nation's history of damming rivers. An estimated 750,000 miles of rivers in the United States are blocked by dams, or around 20% of waterways. On the other hand, as of August 2018, only 12,754 miles of US rivers have been

designated as Wild and Scenic - that's less than 1 percent. There are an estimated 75,000 dams in the US, and this number might be much higher.

Although as a country we are beginning to recognize the value of intact river systems, dams continue to be a huge burden on the health of river systems. Once a river is dammed, a cascade of negative environmental impacts occurs. Flow disruption leads to sediment deprivation, bank erosion, lowering of the groundwater table, and riparian habitat destruction. The free-flowing nature of the Amargosa is therefore crucial to maintaining the delicate ecosystem that is integrated with the water. 🌿



# BOTANICAL DISCOVERIES

By Naomi Fraga

I remember the first time I visited the Amargosa River in 2005. We had a magnificent rainy season that resulted from the 2004-2005 El Niño year. My boss at the time had me organize a series of plant collecting expeditions across California to document the incredible diversity of flowering plants that bloomed that year. I was new to botany and still learning the desert flora so the opportunity to wander around the desert documenting plant diversity was a dream assignment! Perhaps it was my nascent understanding of the flora or my impressionable youth, but that trip solidified my love for the desert and forged a pathway for my future research as a plant scientist. I came back to the Amargosa in 2012 with an interest in learning more about its rare plants. Since then, I have been studying the Amargosa niterwort (*Nitrophila mohavensis*), and other rare and endemic plant species of the region.

Fast forward to 2018 and I now have a full-fledged research program studying the plants of the Amargosa River and surrounding areas with a focus on the California side. This year was not a “superbloom” like my first trip back in 2005 or the most recent flower extravaganza in 2016, but there are still

plenty of treasures to be found. Behind every nook and cranny are discoveries waiting to happen. While most of my botanical surveys thus far have focused on the low lands surrounding the river, the mountains beyond are relatively unexplored and have piqued my interest. In early May I went on an exploratory journey in the Resting Spring Range just east of Shoshone.

My goal was to explore the highest peak in the range, Stewart Point, and survey for two rare plants: *Arctomecon merramii* (desert bearpoppy) and *Agave utahensis* var. *eborispina* (ivory spined agave). My field companion Carolyn Mills and I found one of those rare plants (the Agave), in addition to several other significant finds. To my amazement, on a single trip we were



*Agave utahensis* var. *eborispina* (ivory spined agave) was previously only known from the west side of the Nopah Range in California and adjacent mountain ranges in Nevada.



*Penstemon stephensii* is a rare plant species of limited distribution that occurs on carbonate rock outcrops. Most occurrences are in San Bernardino County, and this record was the first in the Resting Spring Range.

# IN THE AMARGOSA WATERSHED

able to document five rare plants at previously undocumented locations, and at least two significant range extensions. All in a day's work!

Our expedition to Stewart Point illustrates just a few of the reasons why I love the Amargosa. The Amargosa River and surrounding mountains are rich in plant and animal life that are unique and irreplaceable. The Amargosa is

complex ecologically, hydrologically, and geologically and more study is needed to tease apart these complex relationships and further our understanding so we can protect this incredible gem for future generations. In all of my journeys studying the plants of California, I find that the Amargosa always draws me back. I have more than a lifetime of work ahead of me

that will merely scratch the surface of understanding the plants, their natural history, and what we can do to ensure they are here to stay. I look forward to future expeditions and discoveries - I already knew the Amargosa region was a special place for plants, but each new finding opens my eyes even wider to the complexities of nature and the extent of what is waiting to be discovered. 🌿



*Hedeoma nana subsp. californica* (California false pennyroyal) is of limited distribution in California, known primarily from the Mojave Preserve, the Kingston Mountains and Death Valley National Park. This is the first known record in the Resting Spring Range.



The finding of *Astragalus purshii* var. *tinctus* (Woolypod milkvetch) fills a 100 air mile gap. Up until now, the nearest locations for this species were on Telescope Peak and Clark Mountain.

# PINING ABOUT LARGE-SCALE SOLAR

By Julie Vargo

photo credit (above): Patrick Donnelly

Just over the mountains from Tecopa, in the Lower Pahrump Valley, there is a plan to install a 3000 acre solar array in otherwise untouched, old growth desert - an area featuring desert tortoise and Joshua Trees. Nearby is the town of Pahrump, NV, a growing suburb of Las Vegas, connected via Hwy 160 which traverses through plains of dense yucca and creosote. Further vistas featuring several mountain ranges from the Spring Mountains to Kingstons to the Nopahs. The area has been designated by the Bureau of Land Management (BLM) as a desert tortoise relocation habitat. NextEra Energy intend to build the Yellow Pine Solar Project solar array here. The BLM is currently taking comments about the project in order to prepare its EIS.

With climate change and fossil fuel consumption at the forefront of the list of risks to the health of our planet and our lives, it can be difficult and poorly received to raise a stink about being opposed to solar. Yet across the desert, we see communities and environmental advocates strongly opposing such projects. Why?

There are few places remaining in the world that have not been subject to changes by humans. Yet there are still vast stretches of desert lands in the SouthWestern United States that have so far remained relatively untouched. These areas support a diversity of life, provide an escape from civilization,

and even help counteract climate change. So as desert aficionados, when we see a company coming in and wanting to destroy these untrammelled, pristine and untouched areas, the idea doesn't go over well. Meanwhile, there are millions of acres of parking lots, rooftops, and other potential sites for solar panels - sites that could produce power where it is needed rather than far away, requiring miles of power lines and associated impacts.

Using untouched public lands to build industrial scale solar power plants destroys, completely, a place that once was home to desert tortoises, horned lizards, and Joshua trees. The creosote bushes that catch sand in their bases and form sheltered "nurseries" for other plants to grow or snakes to take shelter are forever gone. We lose access to these places - no camping under the desert stars or watching a distant monsoon thunderstorm light up the sky. No driving back roads or hiking to that hidden spring. These places are gone for the rest of our lifetimes. Even summiting the nearby peaks, we will no longer look down upon unbroken alluvial fans and wandering washes. They will be under pavement, plowed flat, and reflecting back at us with a huge glare. This glare tricks migrating birds into thinking the solar fields are water. Many waterfowl are not able to take flight again without water from

which to start their flights.

Meanwhile, our urban centers, where the power is needed, are heat sinks - stuck in a cycle where the warmer it gets, the more we turn up our air conditioners, spewing more hot air into the streets. In the US, we lose 5-6% of power generated between the power plant and where it gets used in homes and stores.

On the other hand, there are significant engineering, maintenance, and other hurdles to address before we can see a significant change in the way solar power works its way into being a primary power source for our country. So when you write your representatives or talk to your friends about not supporting solar on undisturbed desert lands, make sure you include the part about what to do. We need policies that will encourage utility companies to find solutions that advance dispersed solar. We need a system to sell rooftop space to utility companies for installing solar arrays. We need better energy storage systems - solutions that don't require large and destructive heavy-metal mines. We need qualified engineers and an educational system that will produce them.

Energy is complicated. There is no clear and easy path forward. But there are many alternatives to destroying prime desert lands that have so far escaped the abuse of a heavy human hand. 🌱



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# MEET THE AMARGOSA: THE AMARGOSA WILD AND SCENIC RIVER

50 years of the Wild and Scenic Rivers Act

Join us October 19-21, 2018

[www.amargosaconservancy.org/mta2018](http://www.amargosaconservancy.org/mta2018)

Come to Learn, Experience and Enjoy.  
Field Trips, Birding, Conversations, Presentations

Join us in Tecopa, CA, to learn about why the Amargosa River is one of the most unique pieces of the National Wild and Scenic River System. We will have speakers, field trips, activities such as birding, photography, and hiking – and conversations about important issues facing the River and surrounding public lands.

Visit our webpage to learn more and to register for this year's event.





Naomi Fraga, board member and expert on California's rare and endemic plant species, leads a botany walk at Willow Creek trail during last year's Meet the Amargosa.



P.O. Box 63  
Shoshone, CA 92984