

Journal #5848 from sdc 11.7.24

Axolotl

Long-lost custom: Washo and other groups aim to bring back traditional fire mgt practices

Zoom invitation & codes for "Still Our Own Indian Selves"

5 Nevada mines where you can dig for gems and keep your treasure (and perhaps sage site)

Apply now: EJ4Climate Grant Program

Biden administration punts on big Colorado River move

PBS Reno Offerings of Note

And from the World Wildlife Catalog

Asilomar: short films that explore the cultural practices/personal stories of Indigenous community

Scholarships with December 18-31 (A-N) Deadlines

Nevada Has Loads of Lithium. Here's Why.



See 11 Axolotl Facts You Need To Know on Utube

Rekindling a long-lost custom: The Washoe tribe and other groups aim to bring back traditional Indigenous fire-management strategies

By Kris Vagner

November 5, 2024

The first-ever Washoe Intentional Fire Training at Lake Tahoe was part of a decades-long effort by the Washoe tribe and several other groups to revive traditional fire and land management practices.

Subject: Zoom invitation & codes for "Still Our Own Indian Selves"

Please share with your friends. This will be a unique and special experience.

Leslie Friedman is inviting you to a scheduled Zoom meeting.

Topic: Leslie Friedman's Zoom Meeting

Time: Nov 8, 2024 12:00 PM Pacific Time (US and Canada)

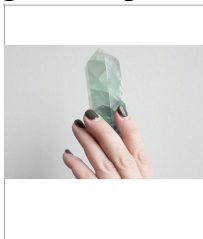
Join Zoom Meeting

<https://us02web.zoom.us/j/88415051911?pwd=6UobaZ2GjB0jm0B5sztim5LZzIxWOX.1>

Meeting ID: 884 1505 1911

Passcode: 471999

Sorry for late notice; original got lost in "piles". If really interested, I am sure she would be glad to repeat.



5 Nevada mines where you can dig for gems & keep your treasure

Nevada is home to many mines where you can dig for gemstones to keep for yourself. Here are the top five spots.

[**Read More**](#)

Apply Now: EJ4Climate Grant Program

The fourth cycle of the \$1.5 million [Environmental Justice for Climate \(EJ4Climate\) Grant Program](#) is now open for applications for projects on “Community-led education programs to increase environmental justice and climate adaptation knowledge,” with up to \$175,000 in grant funding available for recipients. Initiated by US Environmental Protection Agency (EPA) Administrator Michael S. Regan in 2021, the EJ4Climate Grant Program is dedicated to empowering underserved and vulnerable communities, and Indigenous communities, across North America, to help prepare them for climate-related impacts and to advance environmental justice.

The EJ4Climate Grant Program welcomes proposals that promote the development of climate adaptation knowledge related to the following themes: extreme weather impacts, transition to clean energy sources, conservation or restoration initiatives, traditional ecological knowledge to address climate change impacts and/or food sovereignty.

Proposed approaches may include, but are not limited to: hands-on activities, place-based learnings, community-science initiatives, knowledge exchange with Elders, training and capacity building, awareness campaigns, and engaging youth as agents of change. Successful projects will feature the active involvement and leadership of vulnerable and underserved communities and/or organizations serving these communities, in their design and implementation plans.

Proposals are due by **November 14, 2024** and projects will be expected to begin in Spring 2025.

Learn more here: <http://www.cec.org/grant-programs/ej4climate/>

Biden administration punts on big Colorado River move



“The Biden administration has told Colorado River negotiators it no longer plans to issue its draft set of plans for managing the waterway in December, leaving the next major move in the battle over the West’s most important river to the next president. The federal plans for the waterway are of increasing importance since the seven states that share it are deadlocked over new rules to govern the river after 2026. The Interior Department’s Bureau of Reclamation had said for months that it intended to issue them as part of a draft environmental impact statement at the end of the year. But in recent weeks bureau officials have told states and water users that they will instead release only a list of reasonable options for governing the waterway, which would later be analyzed as part of the environmental impact statement. ... ”

[Read more from Politico](#) (sorry, subscription required).

PBS Reno Offerings of Note:

(Thank you, Stacey for your service)

- 11.9 8am/7pm** **Antiques Roadshow: “Celebrating Native American Heritage”**
Celebrate incredible art and artifacts from Indigenous creators and history makers.
- 11.9 noon** **Cook’s Country: From the Indigenous Pantry”**
- 11.11 2pm** **Finding Your Roots:** Henry Louis Gates, Jr. introduces LaVar Burton and We Studi tro the family they’ve never known.
- 11.15 9:30** **The American Buffalo “Blood Memory”** American mammal, is driven to point of extinction. (Part 1 of 2) (Repeats at 2:30 am)
- 11.17 1am** **Native Horse**
- 11.17 12:30 pm** **Cara Romero: Following the Light** Art photographer Cara Romero’s Work Captures Indigenous and non-Indigenous cultural.
- 11.17 1:00pm** **Souza on the Rez: Marching to the Beat of a Different Drum**
A look at four community bands highlights a vibrant aspect of Native American music.
- 11.17 6:30 pm** **Arteffects: “Native American Heritage Month”** Four local artists celebrate and express their heritage through different art forms.
- 11.18 3am** **Native America: from Caves to Cosmos** (part 1 of 4)
- 11.18 4am** **Native America: from Nature to Nations** (part 4 of 6)
- 11.19 3am** **Native America: “Cities of the Sky”** (Part 3 of 4)
- 11.19 4am** **Native America: “New World Rising”** (Part 4 of 4)
- 11.22 9:30 pm** **The American Buffalo: “Into the Storm”** A diverse an unlikely collection of Americans start a movement that rescues the national mammal from disappearing forever. (Part 2 of 2) Rpeats 2:30 am
- 11.23 1am** **And Knowledge to Keep Us”** Sugpiat kids gather for Akhiok Kids Camp to connect and celebrate the knowledge of their ancestors.
- 11.26 9 pm** **Lidia Celebrates America: “Changemakers”** Follow Lidia across America as she meets chefs, farmers, and entrepreneurs who are hard at work trying to change the way Americans see and think about food.

And from the World Wildlife Catalog (www.wwfcatalog.org)

As a nocturnal species living mostly in underground borrows, black-footed ferrets are challenging to monitor in their wild. Until recently, scientists primarily used high-intensity spotlights to locate their green eyeshine.

To increase the effectiveness of these surveys, WWF and the Fort Belknap Reservation's Fish and Wildlife Department have been using forward-looking infrared (FLIR) cameras to locate ferrets by their body heat, which is proving more effective.



Infrared cameras locate ferrets missed by spotlight surveys. The tower-mounted cameras detect ferrets at nearly twice the distance as a spotlight. And the drone-mounted infrared camera is effective at spotting ferrets as they move across a prairie dog colony in remote areas difficult to access by vehicle.

These technologies are making it easier to assess population status to better provide better guidance for conservation management for one of the most endangered mammals in North America.

Native Nations Lead the Way

Plains bison hold great ecological and cultural importance to the lifeways and lands of Native Nations throughout the Southern Great Plains. In fact, for many plains people, their creation stories say that people and bison are relatives.

At one point, bison were one of the widest ranging large mammals in North America numbering between 30 and 60 million individuals. But by 1889, only 512 plains bison remained. In response to their tragic decline, conservationists-including indigenous people-successfully brought the plains bison back from the brink of extinction to an estimated population of .5 M, with more than 45,000 living today in Tribal and conservation herds.

Native Nations seeking to restore bison to their lands remain the cornerstone of the species' recovery. Since 2014, WWF has partnered with Native Nations throughout the Northern Great Plains in support of their vision and efforts to conserve and restore grassland ecosystems within communities to benefit their people.

WWF will continue to follow the lead of Native Nations to identify opportunities and create places where bison can thrive in large herds of over 1000 bison on vast landscapes across the Northern Great Plains.



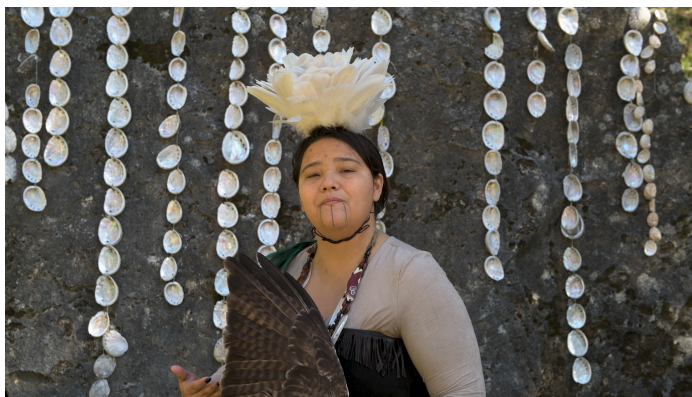
Asilomar State Beach and Conference Grounds is pleased to invite the public to view a selection of short films that explore the cultural practices and personal stories of local and regional Indigenous community members, including Indigenous perspectives on climate change and traditional stewardship. A discussion with the artist/film maker Kirti Bassendine and local Indigenous leaders follows the screening. This FREE event takes place in the historical, Julia Morgan-designed Grace H. Dodge Chapel Auditorium.

Please see the attached press release for details. Please credit Photographer Kirti Bassendine for all images. *(Ed note: not attached)*

For interviews and additional images, contact Kirti Bassendine, artist/film maker, at 678-765-9484, kirtibassendine@gmail.com.

For additional information about the event or venue, please contact me – Jenifer Lienau Thompson, by responding to this email or at the phone number below.

Many thanks for your interest and support and if you could please add this to your calendar and



send a Press Release to other news outlet in the surrounding counties

Scholarships with December 18-31 Deadlines

Equitable Excellence Scholarship	\$20,000	December 18, 2024
Amazon Future Engineer Scholarship	\$40,000	December 19, 2024
PinPoint Leak Detection's Innovation Scholarship	\$1,000	December 19, 2024
Texas Legion State High School Oratorical Contest	\$2,000	December 20, 2024
Pioneers of Flight Scholarship	\$1,000	December 27, 2024
Frank L. Greathouse Government Accounting Scholarship	\$10,000	December 30, 2024
Future Attorneys of America Merit Scholarship	\$5,000	December 30, 2024
Goldberg-Miller Public Finance Scholarship	\$25,000	December 30, 2024
Government Finance Professional Development Scholarship	\$10,000	December 30, 2024
ICASE Presidential Scholarship	\$1,000	December 30, 2024
Jeffrey L. Esser Career Development Scholarship	\$15,000	December 30, 2024
\$2,000 No Essay CollegeVine Scholarship	\$2,000	December 31, 2024
Adventuresinlove4Andie VEDS Scholarship	\$750	December 31, 2024
Anchell International Documentary Photography Scholarship	\$1,000	December 31, 2024
Balanced Man Scholarship - Austin Peay State University	\$1,750	December 31, 2024
Barbizon's \$100,000 College Tuition Scholarship	\$100,000	December 31, 2024
Bonnie Fang Nursing Scholarship	\$5,000	December 31, 2024
Charles E. Peterson Prize Fellowship	\$2,500	December 31, 2024
David Malcolm Scholarship	\$2,500	December 31, 2024
Dr. Nicholas Vacc Scholarship	\$5,000	December 31, 2024
EDvestinU Quarterly Scholarship Giveaway	\$1,500	December 31, 2024
Elks National Foundation Emergency Educational Grants	\$5,000	December 31, 2024
J. Wood Platt Caddie Scholarship	\$10,000	December 31, 2024
L. Ron Hubbard Illustrators of The Future Contest	\$5,000	December 31, 2024
L. Ron Hubbard Writers of The Future Contest	\$5,000	December 31, 2024
Live Poets Society of New Jersey - National High School Poetry Contest	\$500	December 31, 2024
Mary P. Oenslager Scholastic Achievement Awards (SAA)	\$6,000	December 31, 2024
Maryland 2+2 Transfer Scholarship	\$2,000	December 31, 2024
Michigan State University Transfer Student Scholarships	Varies	December 31, 2024
NBCC Foundation Military Scholarship	\$8,000	December 31, 2024
NBCC Foundation Rural Scholarship	\$8,000	December 31, 2024

Nevada Has Loads of Lithium. Here's Why.

Nevada is becoming a major producer of lithium, thanks to topography, climate, and geologic serendipity.

by [Evan Howell](#) 31 October 2024



Lithium-rich brine evaporates at the Silver Peak Mine in Clayton Valley, Nev. Lithium is leached from rhyolite source rocks and concentrated in basin reservoirs, where it has traditionally been pumped to the surface and allowed to evaporate in the desert sun. Credit: Scott Thibodeaux/ Nevada Bureau of Mines and Geology/[Jowitt et al., 2024](#)

In Clayton Valley, a broad basin in western Nevada's Esmeralda County, aquamarine pools lie between brown-toned mountains under a clear blue sky. Similar basins and ranges align like battalions from west to east across the state, though most are bone dry. Clayton's still ponds are artificial—and rich in lithium.

Silver Peak, a tiny former silver mining town in this remote valley, became Nevada's first lithium production facility in 1966, decades before the metal became a key to renewable energy and [national security](#). The facility, operated by Albemarle Corporation, produces 5,512 tons (5,000 metric tons) of lithium carbonate annually.

Silver Peak is Nevada's only lithium-producing site, but that will soon change.

“Nevada clearly has more lithium than any other state.”

Historically, lithium had little economic significance, but surging demand for lithium-ion batteries has sharpened focus on these deposits. The [U.S. Geological Survey reports](#) that

batteries, primarily for electric vehicles, comprise 87% of global lithium use. Analysts expect this share to rise to 95% by 2030. The United States produces a paltry 0.5% of global lithium, but Nevada could revise that statistic.

“Nevada clearly has more lithium than any other state,” said [Christopher Henry](#), an emeritus geologist at the Nevada Bureau of Mines and Geology (NBMG).

“That’s thanks to our tectonic setting,” added [James Faulds](#), a geologist at NBMG.

The state’s lithium deposits are a result of almost unimaginable geologic serendipity. Nearly everything relates to stretching crust: steep topography, abundant volcanic rocks, high heat flow, arid climate, and hydrologically closed basins, according to a [new report](#) from NBMG.

From Water Comes Lithium

The tectonic history of North America’s [Basin and Range Province](#), which comprises much of the western United States, including the entire state of Nevada, is complex. About [17 million years ago](#), crust previously thickened by ancient tectonic collisions began to stretch and thin, spreading like mounded Silly Putty, Henry explained.

Blocks of crust tilted like dominoes, forming basins where sediment and water pooled into shallow lakes and reservoirs. Magma rose through the thinning crust, spewing volcanic rocks to the surface to intermingle with cobbles, sand, and clay.

Most of Nevada’s basins are now dry, with only curled mud cracks and salts remaining as vestiges of yesteryear’s lakes. Crustal extension continues today and is key to the state’s vast lithium reserves.

“Nevada is the fastest growing state, tectonically speaking.”

“Nevada is the fastest growing state, tectonically speaking,” Faulds said.

Lithium’s story begins with igneous rocks, explained [Simon Jowitt](#), an economic geologist at the University of Nevada, Reno. Most lithium mined worldwide is extracted directly from these hard rocks, including at the world’s largest lithium mine in Australia’s [Greenbushes pegmatite](#).

But Nevada’s lithium source rocks, namely, rhyolite (the erupted form of granite), contain only trace amounts of lithium—not enough to economically mine directly. Here geologists are instead interested in “volcano sedimentary deposits,” where the highly soluble metal is concentrated in nearby basins after being weathered out of its source rock.

Streams generally collect runoff and flow to the sea, but Nevada’s arid climate and topography render most basins hydrologically closed. Streams instead bring water into internally drained basins, where it pools.

Runoff leaches lithium from rhyolites wherever they occur—from deep underground to slopes of steep ranges. The lithium-enriched runoff accumulates in basins and slowly concentrates into brines.

“You’ve got something almost like a sponge,” Jowitt said. “The water comes, but there’s no escape.”

In Clayton Valley, lithium-rich brine is either pumped to the surface to evaporate or processed through still-emerging [direct lithium extraction](#) techniques.

Lithium Clay Potential

what excites geologists is the potential of Nevada’s lithium clay.

Beyond brine,

The McDermitt Caldera, which straddles the Nevada-Oregon border, marks an early manifestation of the Yellowstone hot spot, which ultimately formed a chain of volcanoes as the North American plate moved over a stationary heat source.

When McDermitt erupted [16.3 million years ago](#), a lake within the caldera filled with ash and [smectite clay](#). As the lake evaporated, hydrothermal fluids transformed the lithium-rich smectite into even richer [illite clay](#), especially at Thacker Pass at the southern end of the caldera. Today, McDermitt is one of the world’s largest known lithium deposits.

Uranium prospectors stumbled upon McDermitt in the 1970s. “The behemoth there is lithium,” said [Tom Benson](#), a volcanologist at Lithium Argentina Corp. With lithium neither economically attractive nor easily mined, however, production at the site never began.

“We’re trying to figure out what happened at McDermitt.”

Today, the company’s spin-off, Lithium Americas Corp, [estimates](#) that its Thacker Pass project contains 240 million tons (217.3 million metric tons) of the metal. The company plans to start production around 2028.

Nevada’s other calderas haven’t yet yielded similar amounts of lithium, leaving geologists puzzled. “We’re trying to figure out what happened at McDermitt,” Faulds said.

Benson thinks the key is McDermitt’s uniquely enriched rhyolites, formed when hot, dry magma melted lithium-rich continental rocks. In contrast, Nevada’s older calderas formed in colder, subduction-like settings or melted crust with less lithium. “The tectonic setting and type of crust matters,” Benson said.

Just 268 miles (431 kilometers) to the south, Rhyolite Ridge’s tilted strata rise along the Silver Peak Range—Nevada’s next lithium clay frontier. Once believed to sit atop a McDermitt-type buried caldera, Rhyolite Ridge is better understood as a faulted and drained Clayton Valley, Faulds explained.

Initially, geologists think, lithium-rich rhyolitic tuff deposits accumulated in Rhyolite Ridge’s tectonically active basin. As the basin developed, a lake formed, depositing clay-rich lake sediments over the volcanic rocks. Hydrothermal fluids seeped through faults and fissures, soaking the lake bed sediments with lithium from the rhyolites below. Later faulting uplifted and tilted these deposits, exposing the valuable clays.



Uplifted and tilted lithium-bearing sedimentary deposits extend through Rhyolite Ridge, Nev. Sites like Rhyolite Ridge hold significant potential for lithium resources. Credit: Michael H. Darin/Nevada Bureau of Mines and Geology/[Jowitt et al., 2024](#)

To understand Rhyolite Ridge, “you take Clayton Valley, chop it up with faults, and uplift portions to expose enriched clays from lithium brines,” Faulds said.

Ioneer USA Corporation is [planning](#) a lithium-boron mine and chemical processing plant at Rhyolite Ridge, with production expected by 2028.

Meanwhile, in the hills outside Reno, the [Tesla Gigafactory](#) has produced enough lithium battery cells to power 500,000 electric vehicles annually since 2017. With McDermitt and Rhyolite Ridge production set to start amid ongoing Clayton Valley operations, Nevada’s lithium production is expected to rise.

—Evan Howell, Science Writer

Correction, 31 October 2024: This article was updated to correct the amount of mineral reserves at the Thacker Pass site.

8 November 2024: The article was updated to remove an unlicensed image.