

SUMMER
2015



MY PUBLIC LANDS

The Secret History of the World

Hey, Indiana
Joneses!

Join our skull and bones society & meet the paleontologists who visit ancient lands to discover the world's first fossils...

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School's Out!

SEE exciting summer snapshots from Burning Man to the Arctic Circle

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The Hero

BELIEVE in a real-life superhero who risked his life to save two others

p. 20

Mapping Out America

HIKE in the footsteps of pioneers who mapped our nation on foot



Photo by Matt Christenson



NEIL KOR NZE • Director, Bureau of Land Management • @blmdirector

LET'S THINK BIG FOR A MOMENT. By a conservative estimate, there are at least 10 million artifacts and specimens in American scientific institutions that were discovered on BLM land. This is probably only a smidgen of the ancient history waiting for discovery on the public land system.

Logan Butte—a spot in Oregon with 40 million years of continuous rock history and the setting for one of our main stories—is just one example of how much value certain areas can have to the global science community.

Turning from the west to the southwest, we next send you out for a field day with surveyors in New Mexico, where they use notes from 1896 to hunt for hidden monuments and decipher notes scratched into trees to accurately map America.

And finally, we have a profile in courage set at the Yellowstone River in Montana that is truly amazing. I knew our wildfire crews, among other BLM staffers, were brave, but this story of a dramatic river rescue is a must read. Luckily for all of us, (spoiler alert) this one has a happy ending.

There is a lot of nuance to the thousands of tasks the BLM does every day—with this magazine, over time, we hope to share some of that detail with you.

Neil Kornze,
Director, BLM



MY PUBLIC LANDS

THE MAGAZINE OF OUTDOOR ADVENTURE

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For two young girls, an otherwise ordinary river trip might have turned into their last day on earth. Fortunately, they had a hero.

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MAPPING OUT AMERICA
Forget Google Earth. When America was first mapped, it was through scratched codes on trees and metal poles in the ground.

FEATURE ARTICLES

My Side of the Mountain

Every summer, competitive runners from high schools around the nation meet up at Steens Mountain Running Camp in southeast Oregon for world-class high-altitude training. More photos at photos.steens.camp.

Photo by Kevin Jantzer, kevinjantzer.com
 Front Cover by Matt Christenson

BLM/ORA/WA/PL-15.0.12-1792

school's out

MOAB,
UTAH

Are you ready for the summer?

Millions of Americans love the experience of getting out in nature on their public lands. Some of the best spots are accessible, affordable and close to your own backyard. And don't forget your camera.

Photographer Zach Dischner grabbed this sunset shot while he was shredding the trails around Moab, Utah. Check out more shots from Zach's mountain biking trip (to include a killer pre-faceplant) at bit.ly/188QYtk.

When he's not getting photos of wheelies, Zach is a grad student in aerospace engineering. (So, in a way, you *do* have to be a rocket scientist to get this photo.) At his page, you might notice that he says his other dream is to become a pro photographer. Congrats, Zach. You're on your way!

We've got more great photos of your public lands at flickr.com/mypubliclands. Connect with us and share some of your own pics, and we might just feature your work in a future issue of *My Public Lands*.

Plus plan your next visit to Moab at on.doi.gov/1vPWNko

01

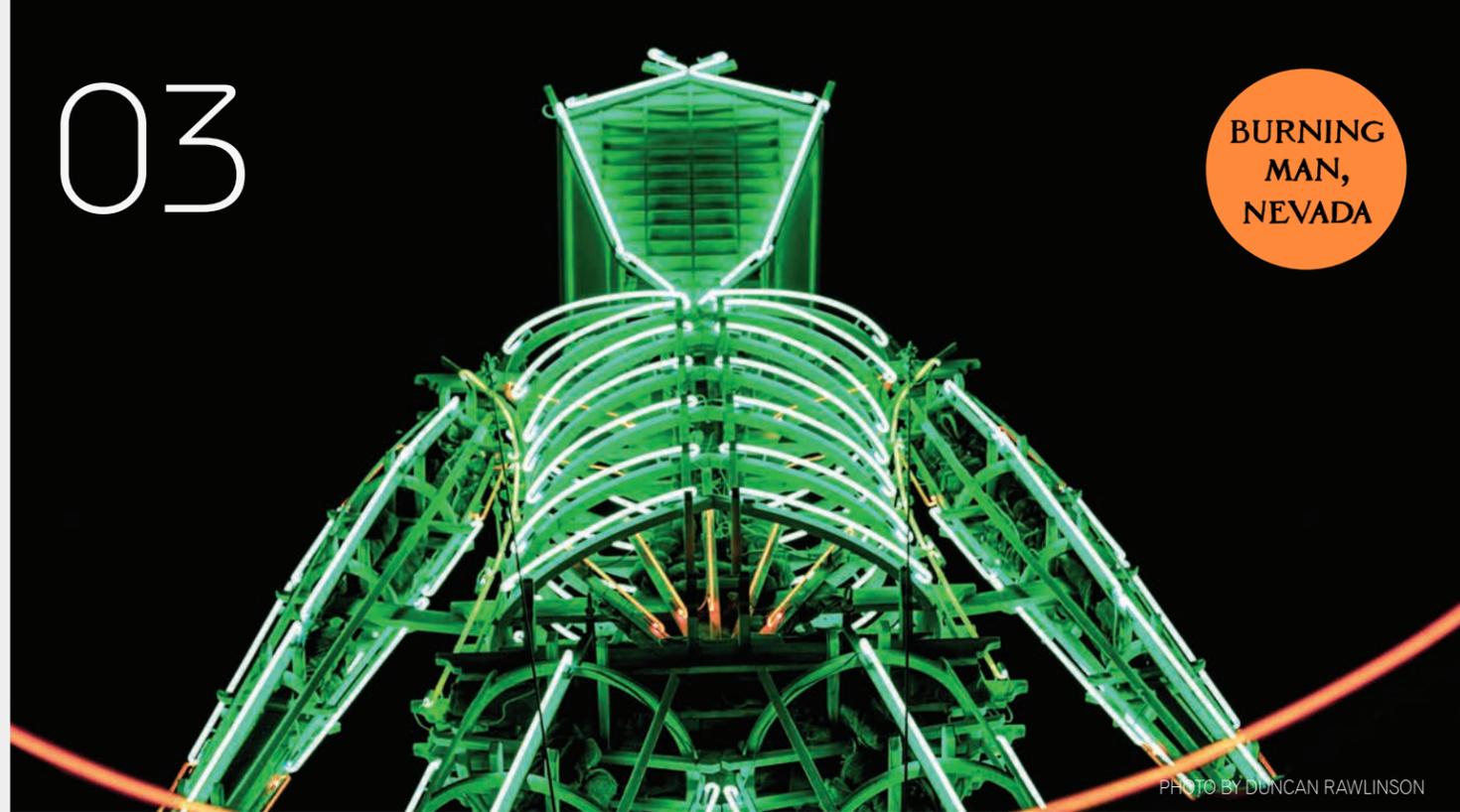
02



LEGEND
ROCK,
WYOMING

PHOTO BY HOWARD TWINE

03



BURNING
MAN,
NEVADA

PHOTO BY DUNCAN RAWLINSON

MY PUBLIC LANDS

PHOTOSTREAM

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02 America's First Art Gallery

You gotta go pretty far off the beaten path in Wyoming to find this quarter mile of ancient Native American rock carvings. Photographer Howard Twine snapped this shot of the sacred art – some of which is 10,000 years old – during a road trip to Yellowstone and Grand Teton National Parks. Want to see the aptly-named Legend Rock for yourself? You'll need a key for access because it's a protected site. Info at on.doi.gov/1ztURzm. See more of Howard's photos at flickr.com/foto_dobbin

04



ALASKA
HIGHWAY

PHOTO BY FRANK KOVALCHIK

03 I'm Waiting for the Man

Burning Man's namesake mascot towers above us in Duncan Rawlinson's awesome picture. Does the Man know what's in store for him? (Hint: It involves burning him to cinders.) To see what happened when the Burning Man was actually set on fire, check out Duncan's photo album from the Burn at bit.ly/1DHCNqs

04 Rebel With a Cause

Look closely. That ain't a motorcycle. Pete Waterman rode his tiny 110 scooter from Washington D.C. to the Artic Circle to raise funds for the American Brain Tumor Association. Although his scooter was only eight horsepower (a Harley Davidson is about 80), Pete's scoot successfully carried him over 16,000 miles for a wonderful cause. More pics at bit.ly/1DsDTqx

PHOTOSTREAM BY MATT CHRISTENSON

THE STORY BOARD

- ▶ *There are so many amazing things happening on your local BLM lands; literally, everything under the sun and on 245 million acres of the great American landscape.*
- ▶ *Here are just a few recent stories of some amazing adventures rocking your public lands.*

ILLUSTRATIONS: MATT CHRISTENSON

Blast Off

WATCH OUT FOR UFOs!



- ▶ **Plot:** Rocketeers blast off to 25,000 feet.
- ▶ **Location:** Bonneville Salt Flats, Utah
- ▶ **Action:** These salt flats are famous for land speed records, but the Utah Rocket Club sends their vehicles hurtling in a different direction – straight up! These rockets can travel up to four miles into the air. The multi-day event kicks off in the heart of summer on July 31, so don't forget your sunscreen!



PHOTO BY TREAS MANNING. PHOTOGRAPHYBYTREAS.COM

Night Lights

OR A SHOOTING STAR?

HEY, WAS THAT A SPACESHIP?

CONTRIBUTOR: DENNIS GODFREY



PHOTO BY BOB WICKERBY

- ▶ **Plot:** The best show *not* on earth
- ▶ **Location:** Grand Canyon-Parashant National Monument, Arizona
- ▶ **Action:** The International Dark-Sky Association describes the views from the monument as “outstanding gold-tier night skies—some of the best in the southwest.” Come any night to view distant galaxies and star clusters, but save the date for the Perseid Meteor Shower, from mid-July to late August.

- ▶ **Plot:** Spring Hike!
- ▶ **Location:** Mineral Ridge Trail, Idaho
- ▶ **Action:** Hey, it's not all watching rocket ships and starscapes... Just 11 miles from Coeur d'Alene is an actual trail for hiking. Sweat up the 3.3-mile trail, gaining 700 feet, for some great views of the lake.

CONTRIBUTOR: KRISTA BERUMEN

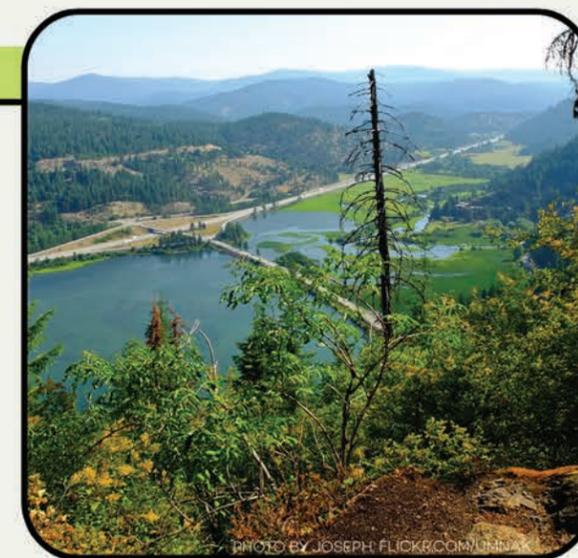


PHOTO BY JOSEPH FLICKR.COM/11111111

Take a Hike!



Run, Runner!

- ▶ **Plot:** America's best young distance runners train in the remote Oregon wilderness.
- ▶ **Location:** Steens Mountain, elevation 9,734 feet
- ▶ **Action:** For two weeks every July, high schoolers from across the country hike and run, and not much else, at the Steens Mountain Running Camp. The camp, which celebrates its 40th year this summer, ends with a "Thanksgiving dinner" of fun runs - a 28-mile race that kicks off at 4 a.m.



PHOTO BY KEVIN JANTZER, KEVINJANTZER.COM



The Drive Thru

- ▶ **Plot:** Jack in the Box goes 'legendary' in the California desert
- ▶ **Location:** Trona Pinnacles near Death Valley

- ▶ **Action:** When's the last time you saw a burger mascot ride a motorcycle in the Mojave Desert? This new ad shows off the geological wonder that is the Trona Pinnacles, which were formed underwater when the area was Searles Lake.

CONTRIBUTOR: STEPHEN RAZO

The List



- Known paleontological areas managed by the BLM: 28,000
- Artifacts and specimens found on BLM land now in museums: 10 million
- Paleontology permits issued by BLM in 2014: 376
- Year when the American beaver became the Oregon state animal: 1969
- Age of beaver teeth fossils found in Oregon in 2011: 7 million years old
- Year the Public Land Survey System began: 1785
- Year Wolfgang Amadeus Mozart completed his "Haydn" string quartets: 1785
- Fine in 1927 for removing a General Land Office survey monument: \$250
- Estimated number of markers in the ground throughout the U.S.: 2.6 million
- Number of Mount Rushmore presidents who were cadastral surveyors: 3
- Odd president out: *Theodore Roosevelt*
- Percent of Carnegie Hero Fund award recipients who died during their rescue: 21
- Number of investigators for the Hero Fund who verify the heroic events: 5
- Number of heroes recognized in first 100 years of the award: 8,800
- Amount of financial awards given in those first 100 years: almost \$28,000,000



PHOTO COURTESY JACK IN THE BOX, INC.

An illustration on a textured, parchment-like background. It features four stylized mountains. The two outer mountains are dark brown with a zigzag top edge and a series of horizontal lines on their slopes. The two inner mountains are black with a similar zigzag top edge. Above the central black mountain is a large, concentric red circle containing a white eye with a black pupil. Red, cloud-like shapes are scattered around the mountains. At the bottom, there are colorful, wavy bands in shades of red, orange, yellow, and green.

An Oral History by Toshio Suzuki

THE
Secret History
+ OF THE +
WORLD

At an undisclosed location in central Oregon,
landlocked by private land...

...there are 800 acres of terra firma that can
tell the history of the world.

Illustration by Matt Christenson

Thanks to the right mixture of a good fossil record and layer upon layer of ancient volcanic ash, Logan Butte has about 40 million years of continuous history, which is enough to make this Oregon parcel very well known among the global paleontology community.

Logan Butte is an Area of Critical Environmental Concern for the Bureau of Land Management, meaning it deserves and requires special protection. It also means it is not a tourist destination.

The place has been continuously studied—and sometimes pilfered—since 1864.¹ As recently retired BLM paleontologist John Zancanella said, “For our history here in Oregon, 1860 is pretty early.”

In addition to Zancanella, who helped manage the butte for 24 years, the following is a discussion with two additional scientists, in their own words, on the value of studying Logan Butte.

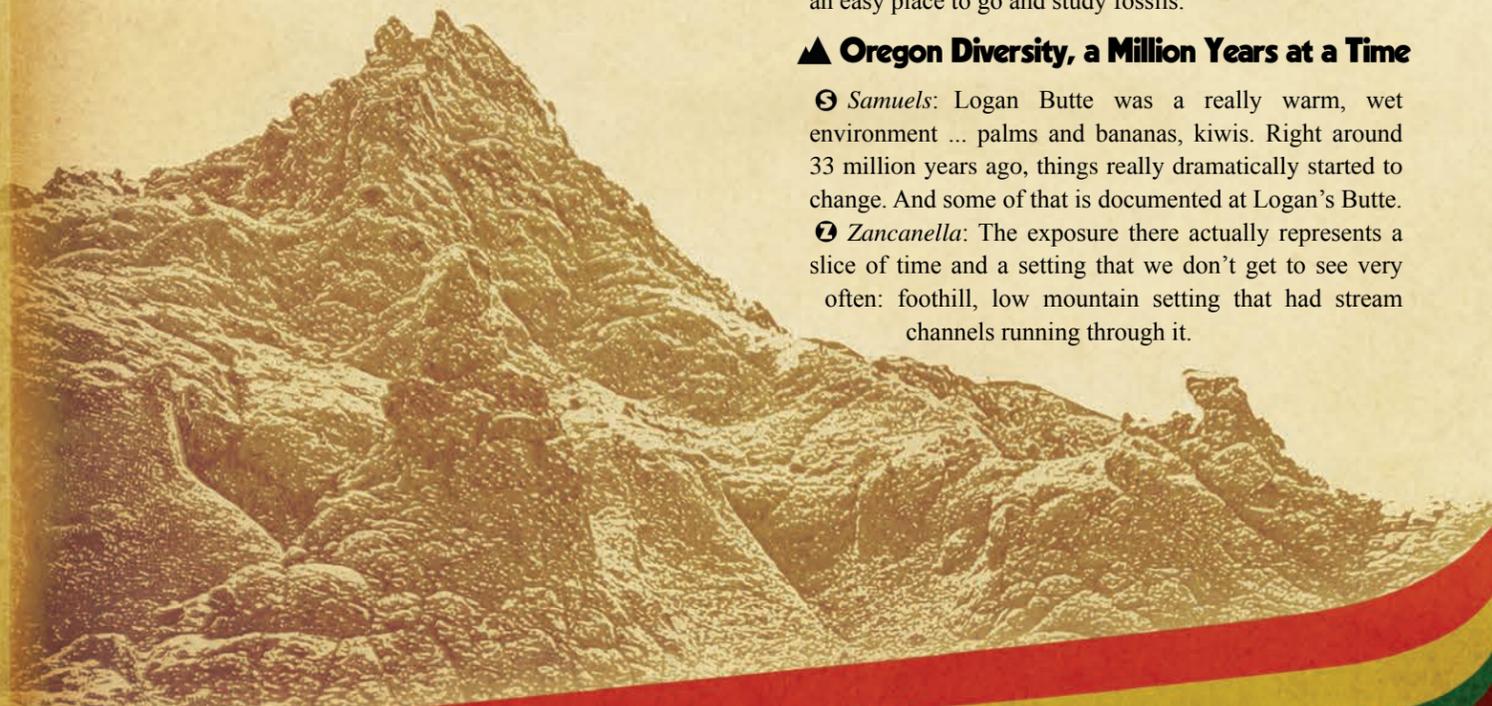


PHOTO BY JEFF CLARK

▲ The Study of Change

🗨️ *Josh Samuels (curator, John Day Fossil Beds National Monument):* We can see how the life changed, how the plants and animals changed, what went extinct, what survived, what adapted. Really for North America, it is the best place to study how things changed in one place over time.

🗨️ *Zancanella:* The story told here is not found almost anywhere else in the world. We have 40 million years of continuous rock sequence here ... the rising of those Cascades basically deposited those ash results that can be dated.

🗨️ *Samuels:* Most the fossils we have in Oregon, we can tell people how old they are by about a million years.

🗨️ *Samantha Hopkins (geology professor, University of Oregon):* The rocks from Logan Butte are from the middle of the Oligocene.² It’s a time period that isn’t very well known.

🗨️ *Zancanella:* You get to look at evolution over a long period of time. Plants, animals, climatic change, moving of the continent — you can only find that in one other place in the world — it’s like between India and Pakistan.

🗨️ *Samuels:* The only other place in the world where you can really do it is in Pakistan — and Pakistan is not really an easy place to go and study fossils.

▲ Oregon Diversity, a Million Years at a Time

🗨️ *Samuels:* Logan Butte was a really warm, wet environment ... palms and bananas, kiwis. Right around 33 million years ago, things really dramatically started to change. And some of that is documented at Logan’s Butte.

🗨️ *Zancanella:* The exposure there actually represents a slice of time and a setting that we don’t get to see very often: foothill, low mountain setting that had stream channels running through it.

🗨️ *Hopkins:* Logan Butte is interesting because it’s on the other side of the Ochoco Mountains. It’s not exactly the same stuff as the John Day Basin but the rocks are the same age.

🗨️ *Samuels:* Logan Butte is basically about the exact same age as the Blue Basin at John Day Fossil Beds. Animals—some are the same and some are different. Logan Butte was maybe more upland with wooded areas. Blue Basin may have been more open space.

🗨️ *Hopkins:* We’re trying to figure out the how and why they are different. It helps us understand the diversity of Oregon landscapes 30 million years ago.

▲ Public Lands, Public Fossils

🗨️ *Zancanella:* The very first fossil (Samuels) found there was a brand new species. That pretty much hooks you.

🗨️ *Samuels:* That first thing I found (at Logan Butte) ... a little mouse ... is the smallest animal we know at that time. Less than half as big as a deer mouse known today with teeth about the size of a period at the end of a sentence.

🗨️ *Hopkins:* We did, in fact, find the pocket mouse, which is a new species, on Josh’s first trip there.

🗨️ *Samuels:* A lot of animals are preserved there ... three-toed horses, early rhinos, dog species...

🗨️ *Hopkins:* Saber-toothed cats called nimravids.

🗨️ *Zancanella:* A marine reptile with a short neck and 3-foot-long head ... basically a Loch Ness Monster—well, we call it a Loch Ness Monster.

🗨️ *Samuels:* Archaeotherium ... or giant pigs.

🗨️ *Hopkins:* Horses, which were the size of small gazelles at the time.

🗨️ *Samuels:* The fossils from (Logan Butte), a lot of them are remarkably complete. Nice, beautiful, complete skulls.

🗨️ *Hopkins:* All we’re really looking at are the animals. We found some really nice rodent jaws and teeth, including the mouse jaw Josh is working on.

🗨️ *Samuels:* Our job is to go find them, bring them back to the museum, preserve them so future generations, everybody can see them, they can enjoy them, they can learn from them.

🗨️ *Zancanella:* I think we’re going to continue to find more there: We’ve only scratched—metaphorically speaking—scratched the surface there.

▲ National & Global Significance

🗨️ *Samuels:* We want to tell the public about the importance of these places but we also want to protect them. These fossils belong to everyone.

🗨️ *Zancanella:* You can’t just hike in there either, because you’ll be trespassing on private land. Logan Butte is totally landlocked by private boundaries.

🗨️ *Hopkins:* Logan Butte is key because it’s on BLM land. All federal lands require a permit ... in order to hold a permit you need to have a Ph.D. in your relevant field.³

🗨️ *Samuels:* Not all of the important fossils sites are located within the (John Day Fossil Beds National Monument) — majority are outside on public-private land.

🗨️ *Zancanella:* Park Service small units are surrounded by way more BLM land. It motivates the agencies to work together. This was the best part of my job — working with the Park Service and learning about all this.

🗨️ *Samuels:* This place is really of national and global significance. It’s the most significant site on BLM land in Oregon.

Notes

1. “Allocyon, a New Canid Genus from the John Day Beds of Oregon,” was published in 1930 after Charles W. Merriam found fossils at Logan Butte.

2. The Oligocene Epoch, from approximately 34 million to 23 million years ago, is known for a period of time that transitioned from the tropical to more modern ecosystems.

3. The Paleontological Resources Preservation Act of 2009 means business; basically, if the fossil has vertebrae, don’t take it from public lands. More information at <http://on.doi.gov/1sYsplf>

*"Certainly for those girls,
it could have been their last day on earth..."*

The Hero

Story by Toshio Suzuki



Along the bank of the Yellowstone River in Montana, on that warm August day in 2013, Angela Berry went numb when she realized her

two daughters had been swept away by the swift current. "I truly didn't know if I would ever see my girls again," she said.

As Berry watched the river steal away her two daughters, Justin Hanley was running along the river rock, attempting to head off the girls.

The BLM fuels technician and Montana native had just finished a big family dinner when he noticed the riverside commotion. Both he and his wife, Carolina, immediately ran towards the mighty Yellowstone River—estimated at 500 feet across in the area of Miles City.

Carolina, the stronger swimmer of the couple, went for the water first, hoping to catch the girls from behind, while Hanley tried the opposite, running ahead of the two.

The eastward flowing Yellowstone is so swift it even has wading restrictions on fishing in the late summer, according to local angling guides.

Hanley, who admitted the river was “a little bit intimidating,” was about to jump in for the first time ever.

The jump didn’t go so well—Hanley caught his hip on a concrete slab and scraped off a layer of skin the size of a small dinner plate—but just like the water temperature, he doesn’t remember much of that.

“You don’t feel anything—adrenaline is running,” he said.

Hanley swam 250 feet to the center channel where he hoped to intersect the struggling girls. But even though he saw them from land, he couldn’t see them any more once he started swimming.

In fact, Hanley was alternating swimming strokes to save energy and was on his back when he made the main channel.

“It’ll make the hair stand up on the back of your neck, I can tell you that much,” said Hanley of being taken over by the river.

Luckily, Hanley’s course was true and the girls, Chava Berry, 14, and Shoshana Berry, 10, were within reach when he got there.

By that time, agonizing minutes for the growing group of onlookers, Chava was unconscious and Shoshana was frantic and screaming for her mom.

“I just got a hold of them and knew that we had to get to the bank as soon as we could,” he said.

This is when Hanley crossed the line from courageous intent to certifiable hero.

Hanley pulled Chava close to his chest, face to face, with his left arm under hers, while using his left hand to hold Shoshana up. That meant he could somewhat use his right arm and legs to battle for the bank of the river.

Carolina, still trailing the scene from behind in the river, saw Hanley go under several times while packing the two girls, an extra 180 pounds.

Somehow, some way, Hanley made it to the side of the river, where fire and rescue personnel had arrived.

“We were sure played out by the time we got to the bank, I know that,” said Hanley.

Chava was resuscitated at the scene and flown to a hospital in Billings with an intensive care unit; Shoshana was shaken but OK.

The Berry and Hanley families had an emotional first chance to meet in Chava’s ICU, and after the girls recovered, the former wildland firefighter known for his willingness to help became something of a celebrity in Miles City, an eastern Montana town with a population of about 8,500.

“I don’t think we can go out without someone saying ‘congratulations,’” said Carolina.

Wendy Warren, Hanley’s boss at the BLM said, “He’s always about doing the right thing.”

Warren added that her “gung-ho” staffer is also known for being a big eater at work potlucks, perhaps explaining how Hanley was able to eat his family dinner—two helpings of deep-fried halibut, onion rings and deep-fried cookies—prior to his famous swim.

“We had just got this fryer and we had just got back from Alaska,” said Carolina, justifying the not-so-normal family meal.

Another BLM colleague from the fire program, Scott McAvoy, said Hanley is also known among the fire crew for being a speedy hiker because of his long legs and strides.

“We compare him to an antelope sometimes,” said McAvoy. “When he gets to hiking he’s kind of hard to keep up with.”

While the local community was embracing Hanley’s act of heroism, investigators with the Carnegie Hero Fund Commission were doing their criteria research.

“We don’t give an award for saving a life—we give an award to people who risk their lives while saving a life,” said Walter Rutkowski, president of the commission, which dates back to 1904 when Andrew Carnegie signed a trust worth \$5 million.

During their extensive research period of over a year, the Carnegie Hero Fund determined that Hanley traversed 700 total feet in the water; that equates to 213 meters, or well over four lengths of an Olympic-size pool.

As Rutkowski flatly put it, his organization deals with life and death situations, and in fact, 21 percent of their recipients die during the rescue.

“Certainly for those girls, it could have been their last day on earth,” said Rutkowski. “Same for Mr. Hanley.”

The Berry family agrees, and that is the main reason why they

“We don’t give an award for saving a life - we give an award to people who risk their lives while saving a life.”

lobbied the Carnegie commission so the girls could present the award themselves last December at a holiday function put on by the fire department.

“We were very touched that they wanted to do that,” said Rutkowski.

“My girls were thrilled” to present the medal, said Berry. “It was a very positive thing. They’ve done really well in the healing process.”

“That was just, pretty special, I thought, even for them to be able to do it,” said Hanley, who remains

rather matter-of-fact about his act of heroism and prestigious recognition.

“I would just hope that somebody would do that for my kids, if they could swim,” he said.

This year, Hanley will also receive the Department of the Interior’s award for valor at the Secretary’s convocation.

“He’s an amazing guy—his whole family—they’re just the sweetest family you could ever meet,” said Berry.

“They were right where we needed them to be.” ▼



From right, Justin Hanley with Chava and Shoshana Berry after they presented him with his award.

When Andrew Carnegie established the Carnegie Hero Fund Commission in 1904, he wrote, “We live in a heroic age. Not seldom are we thrilled by deeds of heroism where

men or women are injured or lose their lives in attempting to preserve or rescue their fellows; such the heroes of civilization.”

Since its inception, the Hero Fund has awarded nearly 10,000 medals along with \$36 million dollars in grants, scholarships and assistance. If you know a hero and

would like to nominate his or her name for consideration, please visit carnegiehero.org/nominate for more information.



MAPPING OUT AMERICA

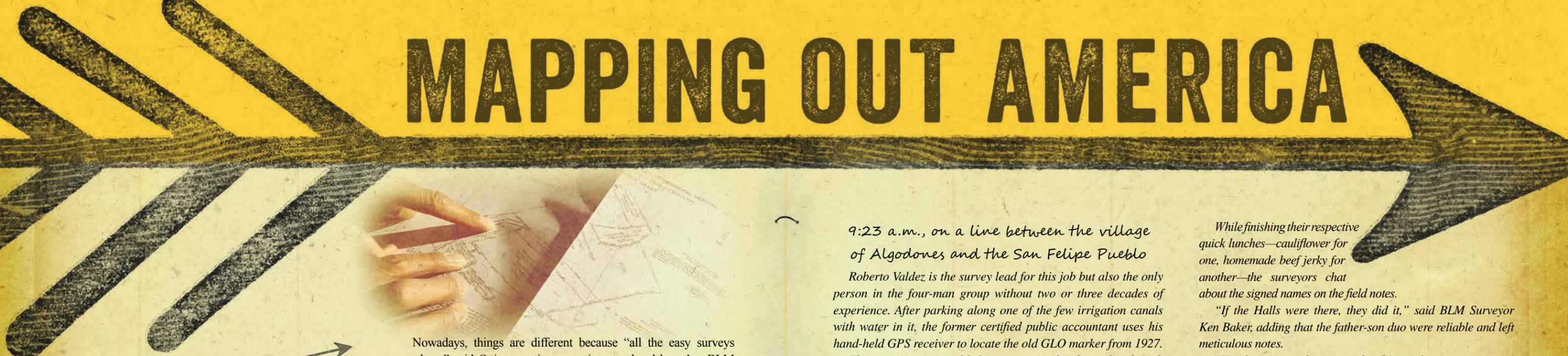
Forget Google Earth.

When America was first mapped, it was through scratched codes on trees, carved lines on stones and metal poles buried into the ground.

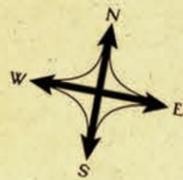
Yet even today – in the age of smart phones and satellites – our nation still needs these modern-day explorers to don their gear and head out into the wild.

STORY & PHOTOS BY TOSHIO SUZUKI

MAPPING OUT AMERICA



There are somewhere between two and three million land markers, or corners, that designate property lines across the U.S., and cadastral surveyors with the BLM may be able to find every single one.



The early survey history goes back over 200 years to before the Declaration of Independence was penned in 1776, and took off when the General Land Office (GLO) was formed in 1812. Today, the BLM can find old land monuments because there are notes—a job requirement—for the work done by those initial surveyors, many of whom were intellectual leaders of their time, including future presidents.

“As far as being able to convey the public domain to the masses, the General Land Office accomplished an amazing feat,” explained Tim Quincy, a BLM supervisory surveyor in California.

“It’s pretty amazing the quality of the surveying back in the day, considering their equipment,” said Charlie Doman, who holds the same position as Quincy but in Colorado. “We’re looking for monumentation that could be from 100, 120—depending on where you are in the country—150 years ago.”



Nowadays, things are different because “all the easy surveys are done,” said Quincy, noting a sentiment echoed by other BLM surveyors.

Sometimes there is land in need of an original survey, but most often the BLM is called upon to resolve a discrepancy or dispute that requires investigation and verification on the ground.

“As far as the complexity goes, I’d say they’re probably more important now than they’ve ever been in the past,” said Quincy of present day work.

Today’s surveyor requires the mathematics background of the those early intellectuals, a predisposition to being outdoors like the GLO expansion days, and a little historical sleuthing, a la “Indiana Jones,” except the BLM version carries a metal detector instead of a whip.

My Public Lands spent a day with BLM surveyors in New Mexico to see what the work looks like in 2015.

7:15 a.m., BLM Santa Fe parking lot

Survey technician Ronald Martinez, with his neon green gloves, stands in the bed of his government pickup truck loading the necessary equipment for the day, much like he has for the past 20 years: shovel; post digger; 20-pound digging bar; metal detector; GPS tripod units; and new BLM iron pipes for the resurveying job.

8:11 a.m., driving through the San Felipe Pueblo

Even though it is considered a lowland area from Santa Fe, the elevation in this part of the Rio Grande valley is still over 5,000 feet. Native juniper trees and grasses are everywhere, dotting the landscape of rolling hills while rocky cliff faces overlook sections of the river. Several homes have an adobe horno for baking bread or corn outdoors.

Between narrating the history and land rights of the nearby and abundant mountain ranges, BLM Surveyor Bill Olver explains how the Spanish land grants in the area predate Mexico, and thus there are a lot of private claims honored by the U.S. that the BLM resurveys.

“Surveying the land trusts for the Bureau of Indian Affairs is a New Mexico specialty,” said Olver. “Our office deals with it all the time.”

9:23 a.m., on a line between the village of Algodones and the San Felipe Pueblo

Roberto Valdez is the survey lead for this job but also the only person in the four-man group without two or three decades of experience. After parking along one of the few irrigation canals with water in it, the former certified public accountant uses his hand-held GPS receiver to locate the old GLO marker from 1927.

The pipe is missing, likely eaten away by the soil rich with alkali, but the position is confirmed and the team gets to work digging a hole for a new monument.

“Man, you get paid well, but you don’t have time to enjoy it,” said Valdez of his previous profession as he pulls out his leather bound hammer and die set. “But ask my wife which profession she prefers.”

Olver chimes in, joking that his wife can tell each day whether he worked in the field or the office.

With the Sandia Mountains in the background, Valdez lowers his sturdy frame to his knees and lightly taps in history, making sure the lettering is read from the south, an old GLO rule maintained by the BLM.

10:29 a.m., about 500 yards down the same line, beneath eight satellites.

“Penalty \$250 for removal” reads the brass top of the 88-year-old galvanized iron pipe. Back then they filled the pipes with concrete to make them even more difficult to pull out of the ground, as if the bent back flanges on the pipe’s bottom weren’t enough.

The next two original pipes are found easily because they’re out of the ground, standing next to railroad tie fence posts. This makes surveyors frown.

“When people pull the monuments we gotta put together the puzzle,” said Olver.

The sight is not uncommon, they agree, especially when dealing with private claimants who may want to expand their territory.

In this case, despite some GPS interference that makes the yellow hand-held device beep its medley of sounds, the crew precisely hammers a BLM brass washer into a spot on the huge post, then places a new monument a few feet away as a witness point.

1:25 p.m., in Cedar Crest, along the Turquoise Trail

The next survey job starts at a ‘No Trespassing’ sign with a new crew reviewing surveyor field notes from 1896 and 1915.

While finishing their respective quick lunches—cauliflower for one, homemade beef jerky for another—the surveyors chat about the signed names on the field notes.

“If the Halls were there, they did it,” said BLM Surveyor Ken Baker, adding that the father-son duo were reliable and left meticulous notes.

“You learn over the years who the good surveyors were,” added Baker.

2:05 p.m., in a piñon juniper woodland, submerged in snow

As he lumbers up the hill, the 6-foot-5 Olver does not pause for the dried tree branches that snag his uncovered arms, nor does he slow when the snow suddenly becomes 10 inches deep.

“This snow’s deep!” said Olver, clearly excited to be honing in on such an old marker.

Seconds later he stops at a pile of stones, one of which is almost the size of home plate on a baseball field but with short parallel lines carved into each side, indicating the mileage to the township corners.

Ultimately the team finds two stones and trees with original markings from 1896, but since one stone was moved and the dense junipers interfered with the satellite connection, they will come back the next day to use a total station that relies on line of sight and old fashioned trigonometry.

“We have to have something that is legally defensible,” explained Olver of the need for precisely calculated coordinates.

“It should be easier tomorrow for these guys,” said Olver, adding quickly, “We never use the ‘E’ word when we’re surveying.” ▼

FLORIDA

FLY BLM



The Jupiter Inlet Light is a 100-foot-tall war hero. Built in 1860, this lighthouse made history during WWII when it was used to intercept German U-boats trying to sink U.S. Navy ships off the coast of Florida. Today, it stands tall at the northernmost part of the Miami metro area welcoming visitors from around the world to Florida's Jupiter Inlet Lighthouse Outstanding Natural Area, one of the most beautiful public lands across the entire United States.



STORY & ILLUSTRATION BY AMY CHRISTENSEN