Bat Surveys Keep Biologists Busy

If you’re a biologist at Craters of the Moon, the only thing harder than finding a needle in a haystack may be finding a bat in a cave. The journey to find that bat likely began with boiling your shoes and ended with a flat-on-your-stomach crawl over jagged rocks through the damp inards of a cave. You’d be forgiven for wondering if all the challenges are worth the effort. For the biologist studying these elusive creatures of the night, the greatest challenge may be the race against time.

Some obstacles to studying bats are obvious: their small size and nighttime activity make them difficult to spot. With 11 different species at the monument, identifying individuals is difficult even for experts.

A bat’s home of choice – a lava tube cave – adds more challenges. Caves offer bats shelter from predators and moderate temperatures throughout the year, a subterranean refuge from a hostile world. For humans the dark, cavernous passageways mottled with cracks and shadows can be hard to navigate if all the challenges are worth the effort. That’s also why biologists study bats with a sense of urgency – something out of the ordinary. That’s also why biologists study bats with a sense of urgency.

Scientists conduct mid-winter surveys of bats in a lava tube cave. Disposable suits minimize the risk of contaminating bat hibernacula with White-nose syndrome, a fatal disease for bats.

In 2005 a cold-loving fungus known to science as Geomyces destructans appeared in a cave in upstate New York. Likely hitchhiking from Europe on an unsuspecting visitor’s shoes or clothing, the biological intruder causes White-nose syndrome (WNS) in bats. In less than ten years it has killed an estimated 3 million bats across 22 states and 5 Canadian provinces, the equivalent of a smallpox epidemic for the bat world.

WNS poses additional challenges for biologists studying bats. During winter surveys of caves where bats hibernate – known as hibernacula – biologists donned disposable body suits and painstakingly decontaminated gear afterwards, including sterilizing their shoes in a 122°F water bath. These steps minimized the risk of “Bat Surveys” continues on page 3

Reading the Past

Outside the cave a bitter January wind scrapes at the treeless plain. In the shadowed recesses of the cave a handful of children huddle on a mat of sagebrush branches. Their mothers layer them with blankets against the damp cold.

Near the cave entrance a mound of broken lava rocks blocks some of the cold and wind. With methodical quickness men work in the half light, using the sharpened edge of a volcanic rock to cut through the hides of several bison. Soon all will enjoy a meal together, a small victory in the daily struggle against land and elements on the Snake River Plain.

Or so it is imagined by archaeologists today, a scene built from evidence at hand in the mouth of a remote lava tube cave centuries later: flakes of obsidian scattering the cave floor; a half-finished rock wall near the entrance; mats of dried sagebrush in a distant corner; and bones of a dozen animals, everything from bison to rabbits among them.

Given the challenging elements at Craters of the Moon – harsh even by high-desert standards – the long and varied human history of the area is all the more remarkable. Most visitors, from Oregon Trail emigrants to Apollo astronauts to vacationing families, pause for only fleeting exploration of the lava fields. Precious "Reading the Past" continues on page 2

Keep In Touch

It used to be the only way to experience a national park was to physically travel to it. Usually far from major cities and towns, a long car ride resulted in an entirely new experience in a novel setting. Places like Craters of the Moon continue to offer these outstanding experiences in an "unearthly" setting.

Today, social media offers an exciting new way to keep in touch with parks long before—and after—you set foot on the trail. Last year Craters of the Moon launched its own Facebook page. Posts run the gamut: practical information on trail conditions and ranger programs are mixed with wildlife pictures, a photo from the historic archives, or updates on current research.

The monument recently announced an exciting wildlife discovery – the first wolf sighting in the monument’s 89-year history – not through a press release but with a Facebook post. Our page also hosted a poetry contest in February, and you can see some of the winning entries inside this newspaper.

Craters of the Moon’s Flickr page, launched this spring, is another way to get a feel for the park before you arrive. Images of trails and features will help you make the most of your time. You can even share pictures of your experiences when your visit is complete. Also just in time for spring is the free Craters of the Moon wildlife app to help you identify and learn about the park’s surprising array of wildlife. Available now for iPads and iPhones, with a version coming soon for other smartphones.

Not to be overlooked is the park website, which has the most complete information on the monument. You can always contact us via the website for timely answers to specific questions you may have. The best part is these new media shift communication from a one-way broadcast to a conversation. While still remote physically, national parks like Craters of the Moon can be a part of your everyday world. You can share, learn, and reflect on “America’s best idea” anytime and anywhere. Please keep in touch so that we may better serve you and this national treasure.

Dan Buckley, Superintendent
www.facebook.com/CratersoftheMoonNationalMonument
www.flickr.com/CratersoftheMoonNP5
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Reading the Past
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An archaeologist searches for artifacts among the volcanic rock. Artifacts provide clues about the lives of those who lived at Craters of the Moon long ago.

Few except the Shoshone and Bannock Indians have spent enough time here to call it home. Evidence of their explorations are scattered surprisingly far throughout the monument. Pottery sherds and hunting blinds made from loose lava rock are common. Flakes of volcanic glass known as obsidian, used to make projectile points, suggest they hunted wildlife in the area. Some of these artifacts are on display and carefully maintained in the museum collection. Others still stand where they were erected, like the series of rock rings near Indian Tunnel’s entrance that give the lava tube its name.

Though Shoshones visited lava tube caves they likely did so for reasons different from today’s visitors. Refuge from the harsh desert climate is welcome any season, but caves also offer one of the few places water can be found year round, essential for survival.

The cool, constant temperatures of some southern Idaho caves may have made them an ideal place to store extra meat from a hunt – a sort of natural refrigerator – judging by the piles of discarded bones found.

Given the lack of written record, the distant human past at Craters of the Moon will continue to be based on one part evidence and one part speculation. As part of the national park system, this area will be managed in perpetuity to preserve the volcanic features so that future generations may interact with this intriguing landscape.

Actions taken today will undoubtedly leave clues for future archaeologists to observe and ponder. What stories will they reconstruct, what motivations will they infer tomorrow, from our interaction with the lava fields today?

Do You Haiku?

Craters of the Moon’s stark volcanic landscape inspires an array of responses. Some of those were captured recently by visitors in haiku, a form of poetry in which a completed poem is just 17 syllables. A sampling of poems submitted in February’s contest, led off by Matthew Durrant’s winning entry:

Ice meets ancient fire
Whites pass in black basalt
Silence meets fury

Ice caves in summer
Grant a cool reprieve and rest
The guide says “Let’s go.”

Snow falls on lava
Forming a cool head on top
Of a still warm heart

Once, ribbons of red
Now, crumpled, jagged and black
Future? Renaissance

Astronauts were here
They thought they were on the moon
Training for greatness

Students Conservation Association (SCA)

The Student Conservation Association (SCA) is America’s conservation corps. Members protect and restore national parks, marine sanctuaries, cultural landmarks and community green spaces in all 50 states. SCA’s mission is to build the next generation of conservation leaders and inspire lifelong stewardship of our environment and communities by engaging young people in hands-on service to the land. Craters of the Moon, and many other national parks, have benefited greatly from the hard work of SCA interns.
Craters of the Moon is an out of this world place to be a kid!

The only Lunar Ranger program in the Universe!

Also, join us for Junior Ranger Programs nightly at the campground amphitheater at 8 p.m.

Bat Surveys...  
continued from page 1

introducing WNS into bats’ winter homes, when they are especially vulnerable.

The upshot of all the effort: Three new hibernacula were found, confirming the monument’s caves provide important year-round habitat to several species of bats.

Monitoring continues this summer, presenting yet another challenge: bats that are active and perhaps widely dispersed or in maternity colonies, where mothers rear their young. Fortunately, biologists have a new technology to help find and identify them. Acoustic monitoring devices set up near cave entrances will record bat calls and new software can analyze those calls to aid in species identification.

Fortunately WNS is not yet a reality for bats at Craters of the Moon. Biologists will use this time to better understand the role of bats in the monument’s ecosystem, and several caves remain open to visitors who have been screened for WNS and receive a cave permit. That way, even if you never go looking for a bat in a cave you can help provide them a safe home for years to come.

Like to try your hand at wildlife monitoring or learn more about resource issues at Craters of the Moon? Ask about the Citizen Science program at the Visitor Center.

Bat calls are recorded as bats enter and exit a cave. Calls are then analyzed with the help of special software that identify individual species. Scientists can then determine which species are present in each cave.

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Townsend’s big-eared bats live in caves at Craters of the Moon year round. Image courtesy of Michael Durham.

How You Can Help
To prevent the spread of WNS screening is required to visit any cave at Craters of the Moon. Free permits are available at the Visitor Center, Entrance Station, or at any Ranger program. Be prepared to answer the following questions:

Have you been in a cave or mine since 2005?

If so, are you wearing or carrying anything that has also been in a cave since then (i.e., shoes, clothes, backpacks, flashlights, watches, phones, jewelry, etc.)?

If the answer is yes to both these questions, contact a ranger for more information.

To find out more about bats at Craters of the Moon, scan here:

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To find out more about bats at Craters of the Moon, scan here:
Walks and Talks  June 7 – August 10

Make the most of your visit to this volcanic wonderland! Enjoy a film or join a Park Ranger for a talk, guided walk, or evening program. A variety of programs are offered each day.

**Films**  Visitor Center, #1 on map
- "A Trip to the Moon" - Daily at 9:00 a.m. to 5:00 p.m. on the hour (25 min.)
- "Among the Craters of the Moon" - Daily at 9:30 a.m. to 4:30 p.m. on the half-hour (17 min.)

Begin at the visitor center (open 8 a.m. to 6 p.m. daily) to plan your visit and view exhibits and films that orient you to the area. Pressed for time?...View our new 7 minute introductory film in the museum.

**Patio Talks**  Visitor Center, #1 on map
Daily at 2:15 p.m. and 4:15 p.m.; also at 11 a.m. Fri.-Sun. (15 min.)
Enjoy a short presentation in a shady spot on the visitor center plaza. Check at the visitor center for topics.

**Cave Walks**  Caves Area Trailhead, #7 on map
Daily at 1:00 p.m. and 4:00 p.m.; also at 9:00 a.m. Fri.-Sun. (1½ hours, 1 mile)
Follow the trail through seas of ropy lava into the strange underground world of a lava tube. Wear sturdy close-toed shoes, bring a flashlight, water and a cave permit.

**Broken Top Hike**  Broken Top Loop Trailhead/Tree Molds parking lot, #6 on map
Mon. - Thurs. at 9:00 a.m. (2 hours, 1.8 miles)
Hike over, under and around a volcano on this fascinating hike. Bring sturdy shoes, water, a flashlight and a cave permit for exploring Buffalo Caves.

**Evening Stroll**  Campground amphitheater
Nightly at 7:00 p.m. (30 min., .25 mile)
Take a short hike to a panoramic view of the North Crater Cinder Cone and the lava landscape that surrounds it.

**Junior Rangers**  Campground amphitheater
Nightly at 8:00 p.m. (30 min.)
Learn to be a Ranger! Fun activities for kids ages 6-12. Parents are welcome too.

**Evening Program**  Campground amphitheater
Nightly at 9:30 p.m.; 9:00 p.m. in August and 8:30 p.m. in September (45 min.)
Rangers present different presentations each night on the natural and cultural history of the park. Check at the visitor center for topics. Bring a jacket and carry a flashlight for the walk back to your campsite.

**Special Programs**  Various locations

* Saturdays throughout the summer (times and distances vary) - Explore the Craters of the Moon Wilderness, enjoy a hike beneath the full moon or join other volunteers for a service project. Sign up for these special hikes and events by giving us a call or stopping by the Visitor Center.
* Star Party – June 7 & 8
* Wildflower Walk – June 8 & 15
* Nature Photography presentation & Teachers Workshop – June 14-16
* Full Moon Hike – June 22
* Book Signing and Reading – June 22
* Wilderness Hike – June 29
* Service Saturday – July 6
* Pioneer Mountains Hike – July 13
* Geology Teacher’s Workshop – July 13 & 14
* Full Moon Hike – July 20
* Geology Hike – July 27
* Evening Hike – August 3
* National Park Service Birthday (Fee Free) – August 25
* Star Party – September 13 & 14
* National Public Lands Day (Fee Free) – September 28
* Run the Rift Fun Run – September 28
* Veteran’s Day Weekend (Fee Free) – November 9-11

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U.S. Department of the Interior  Craters of the Moon National Monument and Preserve

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