



MARS ROVER SEARCH FOR WATER STARTS WITH BABBITT RANCHES

Acting as a robotic field geologist, a nearly five-foot Mars Exploration Rover got a feel for the rocky, canyonlands of the red planet by first visiting Babbitt Ranches. Last summer, scientists from the US Geological Survey, the Jet Propulsion Laboratory and NASA watched eagerly as they tested the performance of the rover, remotely controlled from Pasadena, Calif.

Two rovers are scheduled to enter the Martian atmosphere in early 2004. Each has the ability to drive many tens of meters per Martian day as they explore sites where liquid water may once have existed.

The rovers' instruments will be used to examine rocks and soils, investigating what the environment once was like and how suitable it may have been for life.

"I am excited about this," says Flagstaff USGS astrogeologist Ken Herkenhoff. "This is the first time we'll have the opportunity to do real field geology on Mars."



Photo courtesy NASA/JPL/Cornell University/USGS

**THE TRADITION IN
QUALITY QUARTERHORSES CONTINUES**

With bloodlines tracing back to the early 1900s, some 34 colts and fillies donning the famous Hashknife brand are up for auction. *See related story on page 3.*



Scientists say today's Mars looks cold, dry and barren, but they believe conditions were very different at one time.

Dr. Bob Anderson of JPL says the scientists could not have tested the rover without the help of the Babbitts. "The Mars Exploration Rover Project is very grateful to the Babbitt Family for allowing the rover testing before being launched to Mars."

The spacecraft carrying the rovers will be slowed with parachutes as they touch down. Airbags will cushion their landings.

WUPATKI AND BABBITT RANCHES PROTECT PRONGHORN



Understanding that pronghorn don't care where the boundaries are between a ranch and a national monument, Babbitt Ranches and Wupatki National Monument are joining forces to install devices called goat bars to help the animals move under fences throughout their habitat range.

"We want to make sure that the herd can get to whatever it needs to get to on anybody's land," says Paul Whitefield, Wupatki National Monument natural resource specialist. "Wupatki may have good forage and browse during certain seasons, and the other lands out here certainly have better water supplies. The pronghorn also need to change elevation with the seasons."

The goat bars or pronghorn passes are being installed at the Old Line Camp at Citadel Canyon and at the ranch and park boundary near Crack-In-Rock Pueblo. "We know pronghorn go out there to the Little Colorado River. We've even seen some fawning," says Whitefield.

Goat bars are sections of PVC pipe that slide over the lowest two strands of wire on a range fence, pulling the lower strand up.

"Pronghorn don't jump fence like elk," says Whitefield. "They have horns instead of antlers so they don't shed them and it's difficult for them to get under that lowest strand with horns on their heads. The PVC pulls the lower strand of wire up so that there is more space underneath for the animal to get through and less potential for them to get tangled in the wire."

Whitefield adds that the wires may be harder to see if pronghorn are fleeing predators, like coyotes. "Wildlife biologists suspect that if pronghorn learn about these bigger pieces of pipe, it may be easier for them to see that piece of the fence and get under it faster."

On a related note, Wupatki and Babbitt Ranches are working with ADOT through the planning process to broaden Highway 89 to four lanes.

"We're trying to make sure that a four-lane highway doesn't isolate or split the pronghorn herd on the east or west side of it," says Whitefield.

One proposed solution is to create a wildlife overpass that the animals might use to get to both sides of the highway.

"From my perspective as a National Park Service biologist, Babbitt Ranches has been one of the best conservation-oriented private land managers that I've worked with in my 13-year career in the agency," says Whitefield. "Their approach to holistic range management is visionary and it's a breath of fresh air to have neighbors who are aligning their objectives for long-term conservation."

The National Park Service and Babbitt Ranches are also working together on bird surveys, a fire management plan for the area and the restoration of the Little Colorado riparian zone from the tamarisk invasion.



REDLANDS CAMP PROUDLY OFFERS HASHKNIFE FOALS

Some 400 horse enthusiasts are expected out at the Redlands Camp for the traditional Babbitt Ranches BBQ and 2003 Colt Sale, 11 a.m., Saturday, July 12.

This year there will be 34 colts and fillies up for auction, all donning the Hashknife brand. This brand stands for a century of excellence in horse breeding with bloodlines tracing back to the early 1900s and the legendary Hashknife Ranch that once stretched across much of northern Arizona and New Mexico.

"Most of our horses have a little bit of Driftwood in them. We also have a stallion, Proud Gun, who is the grandson of Freckles Playboy," says Victor Howell, Babbitt Ranches manager.

Driftwood was a rodeo star, known for his speed and ability to stop hard, which helped cowboys rope calves and steers. Freckles Playboy was a famous cutting horse. He died this year.

Howell says the Colt Sale has grown in popularity in recent years, attracting people from all over the country. "We get a mix of folks. About a third are ranchers, a third are rodeo riders and a third are people who just want a nice ranch horse for breeding or trail riding."

The average price for a Hashknife foal is about \$1,500. All are Registered Quarterhorses with the American Quarterhorse Association.

GOVERNOR VISITS BABBITT RANCHES



Arizona Governor Janet Napolitano stopped by the Babbitt Ranches office in April to learn about efforts the Babbitt family is making in regional planning and ecological science. Pictured from left to right are Coconino County District 1 Supervisor Paul Babbitt, Governor Napolitano, Billy Cordasco of Babbitt Ranches and Babbitt Ranches Manager Victor Howell.

TREATMENTS TO RESTORE GRASSLAND

As pinyon and juniper trees crowd out each other and take over grasslands across the West, the Arizona Game and Fish Department and Babbitt Ranches are implementing thinning and burning treatments on the CO Bar Ranch.

"Instead of taking on the big trees, we'll focus on the little ones and try to maintain what we've got for grassland," says Rick Miller, Arizona Game and Fish Department habitat program manager. "In a lot of places, the pinyon and juniper have invaded grasslands or have become much thicker than they used to be and are shading out grasses and forbs. This affects the pronghorn because there isn't as much forage for them and they can't move through the area as easily when it's thick with trees."

Babbitt Ranches has applied for a federal grant from the \$1.7 million available to private landowners for wildlife habitat projects through Landowner Incentive Program funds. The grant could fund a landscape-scale project stretching for miles on the eastern range of the ranch between the Coconino National Forest and the

... continued on page 7

COUNTY HOPES TO PRESERVE OPEN SPACES

Protecting values associated with recreation, wildlife, open space and scenic views is one of the goals behind the revision of Coconino County's General Plan.

Included in the revised plan, called the Coconino County Comprehensive Plan, are options for ranchers and other private landowners to be able to draw value from their land without having to sell large tracts to developers.

"We have tools given by the state legislature that enable the transfer of development rights and arrange for ranchers to sell rights they didn't use in trade for not developing the land," says Coconino County District 4 Supervisor Deb Hill.

Hill says the plan has not been updated for more than a decade, and in that time the face of the county has changed dramatically. "The way that we live now is much different from the rural lifestyles of before. The prior document wasn't

really keeping pace with the kinds of uses that we were seeing. Viewsheds, wildlife migration routes and wetlands on private lands weren't really protected. As we update this guiding document that governs land use in the county, water use and the protection of natural resources are being much more carefully addressed."

Coconino County Community Development Director Bill Towler says the county is working with private landowners on a one-on-one basis to explore alternatives for extracting value from their land without having to sell to a developer.

"The owners of large tracts of land don't really want their ranches to be sold and broken up, but many of them have their life savings tied up in the value of the land."

Included in the plan are segments identifying "Our Vision for the Future," "Toward a New Land Ethic" and "The Conservation Framework."

<p style="text-align: center;">Our Vision for the Future</p> <p style="text-align: center;"><i>The County vision is of livable communities and healthy landscapes where:</i></p> <p>Existing communities accommodate growth while retaining their historic and cultural character * Integrated conservation design is the standard for new subdivisions and developments * Planned communities and infill development allow the county both to grow and preserve its landscapes * Collaborative planning ensures success in addressing issues across jurisdictional lines * Natural resources are conserved and land is used efficiently * Land uses are compatible with the unique natural environment * Environmentally sensitive lands, ecosystems, and habitats are preserved * Growth is balanced with available water resources * Citizens are assured a variety of transportation choices and modes * A stable, vibrant economy allows all residents to lead productive lifestyles * Residents are provided a range of housing opportunities and recreational amenities * Communities are safe and attractive, and residents share a sense of pride and place.</p> <p style="text-align: center;"><i>The 2003 Coconino County Comprehensive Plan</i></p>	<p style="text-align: center;">Toward a New Land Ethic</p> <p style="text-align: center;">"Whatever may be the equation for men and land, it is improbable that we as yet know all its terms.</p> <p style="text-align: center;">The answer, if there is any, seems to be in a land ethic, or some other force which assigns more obligation to the private landowner.</p> <p style="text-align: center;">A land ethic, then, reflects the existence of an ecological conscience, and this in turn reflects a conviction of individual responsibility for the health of the land."</p> <p style="text-align: center;"><i>Aldo Leopold, A Sand County Almanac</i></p>	<p style="text-align: center;">The Conservation Framework</p> <p style="text-align: center;"><i>Conservation-based planning incorporates the following decision-making guidelines:</i></p> <p>Assess impacts of local decisions in a landscape context * Make land use decisions that are compatible with the natural potential of the site and the landscape * Avoid or mitigate for the effects of human use and development on ecological processes and the landscape * Identify and preserve rare or critical ecosystems, habitats, and associated species * Minimize the fragmentation of large contiguous areas of habitat and maintain or restore connectivity among habitats * Minimize the introduction and spread of nonnative species and use native plants in restoration and landscaping * Conserve use of non-renewable and critical resources * Avoid land uses that deplete natural resources * Avoid contamination and pollution of our communities and environment * Land use decisions must be considered over time horizons that encapsulate the natural variability of ecosystems * Evaluate the effects of land use decisions cumulatively and over time.</p> <p style="text-align: center;"><i>Adapted from the Ecological Society of America</i></p>
---	---	---

AGREEMENT PROTECTS RESOURCES BEYOND PARK AND RANCH BOUNDARIES

Recognizing that the COBar Ranch and the Flagstaff Area National Monuments are integral parts of larger regional ecosystems, Babbitt Ranches and the National Park Service have entered into a unique Memorandum of Understanding to establish a partnership of communication, cooperation and coordination in managing their resources while continuing to meet the operational needs of the ranch.

The COBar contains scenic vistas, unique geologic features, a variety of plant communities, wildlife habitat and movement corridors, and archeological resources that contribute to the purpose and significance of the neighboring Wupatki National Monument.

Thus, Babbitt Ranches and the Park Service have expressed a mutual interest in ceding ownership of certain COBar lands to Wupatki, acknowledging that it's becoming increasingly necessary for resource protection and preservation strategies and actions to go beyond park boundaries in order to preserve resources for future generations. But until regulatory, legislative and fiscal requirements for the NPS acquisition of certain COBar lands can be achieved, the two entities have identified management alternatives.

"This agreement allows us to continue and strengthen our relationship in our shared stewardship approach toward the resources," says Kim Watson, Flagstaff Area National Monuments ranger. "The Babbitts have always been proactive neighbors in the protection of the natural, cultural and historical environment and open spaces. This allows us to share resources to achieve mutual goals."

The COBar Ranch is located just north of the Wupatki National Monument.

DROUGHT DRIVES BABBITT CATTLE TO GREENER PASTURES

Poor grassland conditions caused by the drought in the Southwest created a challenge for cattle ranchers over the last year. For the first time in many years, Babbitt Ranches had to move cattle, more than 5,000 head, to greener pastures.

"The market was really low because the rest of the West was in a drought also, so we were trying to keep the cattle until the market went up," says Victor Howell, Babbitt Ranches manager. "We put some more weight on them so we wouldn't lose money."

Some 2,400 heifers were trucked to the La Cienega Ranch in Yucca, Calif., 1,500 steers were taken to a wheat pasture in the panhandle of Texas, and about 1,300 cows spent the winter on the Mallet Ranch in Douglas.

Most of the yearlings have been sold, but the cows are now scattered across Babbitt Ranches taking advantage of the spring and early summer vegetation.

"We don't expect the drought situation and range conditions to be as bad this year," says Howell. "A rancher has to be an optimist. That's the only way he can make it."



Some 1,500 Babbitt steers spent the winter grazing in Texas wheat pastures. Some 5,200 animals had to be moved from Babbitt Ranches because of poor grassland conditions caused by the drought.



After 28 years with the Arizona Game and Fish Department, Bob Barsch plans to leave the job in December, but not the land.

For wildlife manager and poet Bob Barsch, a love for the land has always been a part of who he is. In fact, the name itself, Barsch, is German for yellow perch.

"I think some of us are probably just programmed to get a big kick out of seeing a frog jump or looking at plants. It's probably just in our genes," he says. "I find a great deal of pleasure in watching things grow and seeing life in all its various forms."

This December, Barsch will be retiring after 28 years with the Arizona Game and Fish Department. For the past 18 years, he has been managing wildlife in Unit 7, which spans much of northern Arizona including the Babbitt Ranchlands.

"The elevations on the Babbitt Ranches go from 4,600 feet to something like 6,500, so you

BOB BARSCH, WILDLIFE MANAGER AND NATURE LOVER, TO RETIRE

have a great variety of habitat types. It's that combination of varied habitat, open space and different species to work with—big game and non game—that makes this area so unique and beautiful. One of the most pleasurable things is that you have ranchers and landowners who are very interested in retaining these natural ecosystems for now and into the future. Just being able to work with people like Babbitt Ranches, who are so willing to go out of their way to accommodate your wishes and your expertise, is just a dream come true. It makes you feel effective and good to be able to accomplish things."

Barsch says one of his favorite spots is above Tubb Ranch at Mesa Butte, about 20 miles north of the San Francisco Peaks.

"You get up on top there and you see for many miles in any direction. You can look across the Indian Reservation northward and see Red Butte, you can see just south of the Grand Canyon, the Peaks and Kendrick. You feel nature is so overwhelming because the landscape itself is so huge and so empty. It makes you feel very, very special because you're the only guy you can see out there. Nature is just so tremendously inspiring

and fulfilling. When you look at the landscape like that, you feel very content and excited at the same time."

Barsch plans to spend his retirement in much the same way that he spent his career—out in the woods and the hills. "That enables me to watch the seasons come and go and to observe nature. I don't plan to leave that."

He plans to continue writing his nature-inspired poems, like this one, as well.

Eagle

*Hunger is a yearning
Gnawing inside somewhere—
The burning premonition
of weakness
Demanding strength
in the wings
That grabs with pain
and flings
Claws and feathers
from rocky temples—
Rocketing with grace
through emptiness.*

"Bob is an extraordinary wildlife manager and friend of the Babbitts," says Billy Cordasco of Babbitt Ranches. "He's been a solid supporter in the efforts Babbitts has made."

GIS SOFTWARE OFFERS PRECISION IN CHARTING CHANGES ON NATURAL RESERVE LANDS

New Geographic Information System (GIS) software will help researchers assess changes over time on the Coconino Plateau Natural Reserve Lands and accurately pinpoint vegetation and other features of the area.

"This software will help us answer specific questions about the land, such as changes in the abundance and distribution of the pinyon and juniper trees. Through its database, we'll be able to take a look at what the landscape was like in 1950 and compare it with what it looks like today," says Terence Arundel, a US Geological Survey geographer overseeing the research.

The GIS spatial software is available because of a grant from the Environmental Systems Research Institute, which funds international conservation programs. Using Babbitt Ranches' biological research information, the Ecological Monitoring and Assessment Foundation, with the USGS, was able to successfully apply for this grant.

Findings will be included in a research project being conducted by Northern Arizona University geography graduate student Cindy Parker and geography professor Dr. Samantha Arundel and made available to EMA.

In a preliminary report, Parker writes, "Over the decades, the Babbitts have witnessed what they fear is a reduction in ecological viability due to the spread of pinyon-juniper woodland, loss of grassland and an increasing density of trees. Although changes on the Babbitt Ranches have been observed and reported, these changes have never been documented or quantified, and the causes have never been investigated. This study will accomplish these tasks."

Arundel says the GIS software will verify the accuracy of information previously acquired from aerial photography, and enable spatial patterns to be mapped and analyzed.

"What's particularly intriguing about this landscape is that it's very diverse, from the top of the Peaks to the bottom of the Grand Canyon. There are a tremendous amount of geographic changes," he says. "Also intriguing about this project is that we're talking about a ranching family that recognizes changes in the land and wants to use this information for conservation purposes."

The project is scheduled to begin this fall and be completed in the spring of 2005.

TREATMENTS

...continued from page 3

Tusayan District of the Kaibab National Forest.

In the meantime, Babbitt Ranches is funding a smaller, defensive PJ project. "We want to see what we can get done over a two-week period," says Miller.

Opening up the thick pinyon/juniper forest not only benefits the pronghorn herd but also other animals such as grassland songbirds, raptors and mule deer. The goal of these treatments is to improve wildlife habitat by strengthening plant vigor and health in the existing plant communities and by increasing the diversity and amount of native plants.

"Babbitt Ranches has been exceptional in its efforts to maintain wildlife on its ranches. In the past we've worked together on turkey, pronghorn, mule deer and elk projects. Babbitt Ranches has also done wildlife inventories to find out what and how many animals are on the ranchland. That's very unusual for ranchers," says Miller. "In fact, it's unheard of."

RUGGED CATARACT CANYON GOES UNDER EMA'S MICROSCOPE



Amidst the sun-streaked canyons, chiseled walls and time-worn gorges of Cataract Canyon are Northern Arizona University students and researchers working to gain a comprehensive understanding of this isolated and remote portion of the Colorado Plateau.

Through grants, contracts and donations, researchers are studying the plants, animals, water, land conditions and climactic trends of the canyon itself, along with the Cataract Creek watershed, to gain knowledge about the land for the Ecological Monitoring and Assessment Foundation and Program at NAU.

"As we develop an ecological assessment of Cataract Canyon, we have a wonderful opportunity for various research disciplines to study the Colorado Plateau and for students to gain hands-on, in-the-field training," says Dr. Bill Auberle, EMA program director. "The information we'll be compiling will be invaluable to landowners of the area."

Along with the biological information, data about the anthropological history will be gathered as well.

"There are ancient petroglyphs and there's even more modern history of how the Hopis traded with the Supai over the last 500 years, but we don't know that much about the cultural anthropology of the area," says Auberle. "One of the things we're looking at is the trails that were used."

In addition, the group will be studying flood and drought cycles, the impact of invasive weeds on native species and how wildlife is using the canyon.

The information gained in this ecological assessment will be made available to landowners and managers of the Colorado Plateau including private ranchers, the Forest Service, Arizona State Land Department and the National Park Service.

BABBITT RANCHES

REMEMBERS

BILL VAN PRAAG

Cowboy and mechanic, Bill van Praag, died May 27, 2003. "Bill was a long-time employee and friend of Babbitt Ranches," says Victor Howell, Babbitt Ranches manager. "He touched many people from all walks of life and will surely be missed."

As van Praag worked for Babbitt Ranches, his wife, Dorothy, worked by his side as a cook for the cowboys. He also served in the U.S. Army in Korea.

Van Praag was 71 years old.

"EMA's mission is to provide the best scientific information we can to the land stewards of the area," says Auberle.

Cataract Creek forms Cataract Canyon before it becomes Havasupai Creek and Havasupai Falls in the Grand Canyon. EMA is overseeing the ecological assessment, which is expected to be completed this fall.

FOR MORE INFORMATION ABOUT

BABBITT RANCHES

CALL: 928/774-6199

WRITE: **BABBITT RANCHES P.O. BOX 520 FLAGSTAFF, AZ 86002**

VISIT OUR WEB SITE: www.babbitranches.com