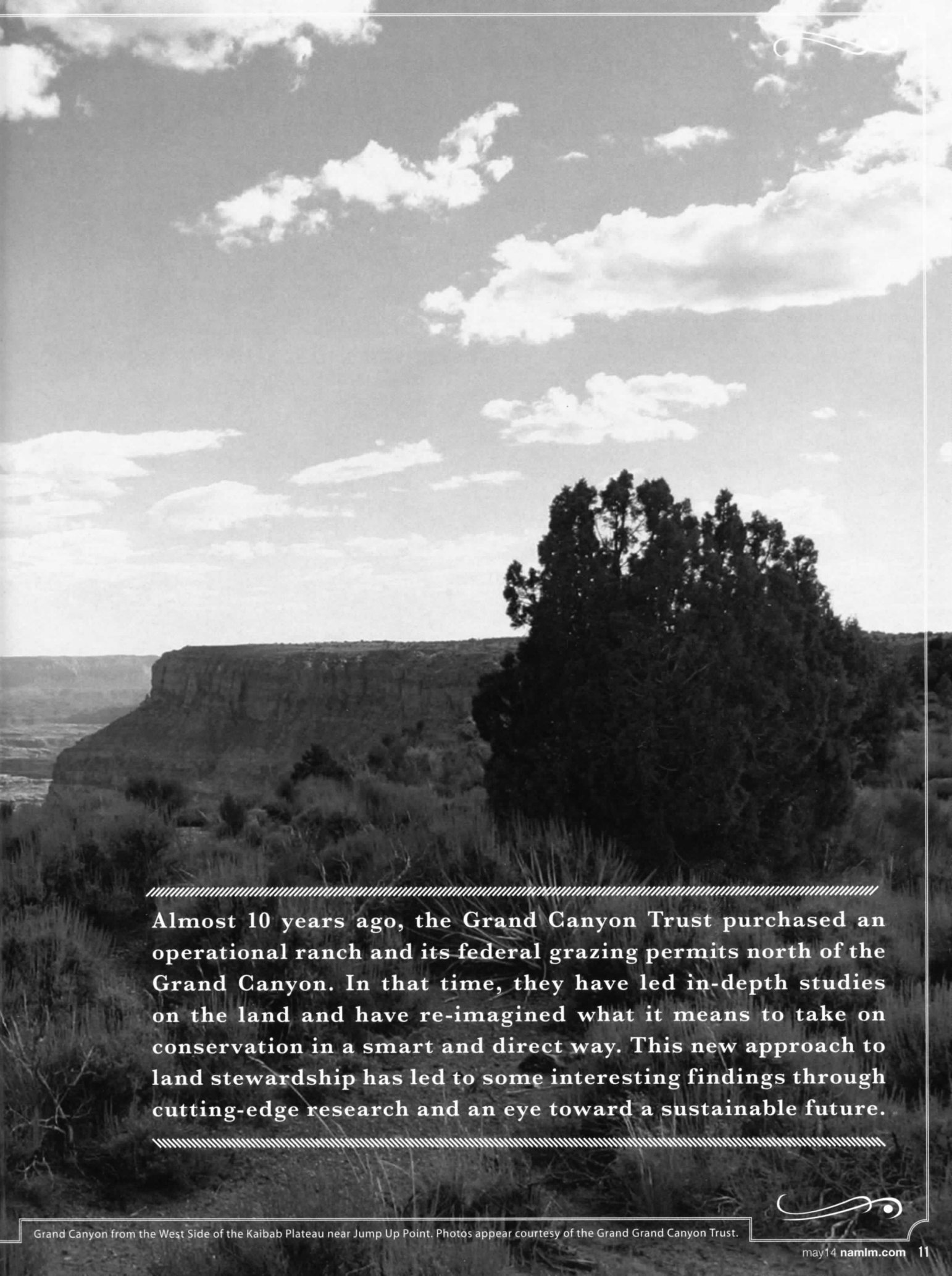




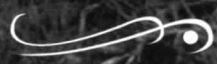
**A NEW HOME  
ON THE  
RANGE**

**HANDS-ON,  
ON-THE-GROUND  
CONSERVATION AT  
KANE RANCH**

*By Rose Houk*



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Almost 10 years ago, the Grand Canyon Trust purchased an operational ranch and its federal grazing permits north of the Grand Canyon. In that time, they have led in-depth studies on the land and have re-imagined what it means to take on conservation in a smart and direct way. This new approach to land stewardship has led to some interesting findings through cutting-edge research and an eye toward a sustainable future.  
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**M**att Williamson sits carefully on his chair at the conference table at Grand Canyon Trust headquarters in Flagstaff. Carefully, because he'd just spent ten hours on horseback the day before up on the Paria Plateau. Williamson is more scientist than cowboy, and the rigorous session in the saddle was all in a day's work for him as director of the Trust's Kane and Two Mile Ranch program. He came to the job three years ago, he said, out of "interest in the place" and the chance to "call a landscape like that home."

That landscape is the amazing chunk of territory called the Arizona Strip, from Grand Canyon's North Rim to the Utah border, from the Grand's Marble Canyon to Nevada state line. An unfathomable empty stretch of ground given over to the occasional bison and mountain lion, seasonal riverrunner and flycaster, and curious tourist bound for better-known destinations. It's an essentially Western place, banded in wide valleys of golden grass and long mesas of rainbowed rock.

In 2005, the Grand Canyon Trust bought the Kane and Two Mile ranches along with grazing rights on associated public lands—almost the entire eastern half of the Strip. Joining forces with the Conservation Fund, for \$4.5 million the Trust ended up with about 1,000 acres of private land, along with 850,000 acres of permitted or leased land, split fairly evenly between the U.S. Forest Service and federal Bureau of Land Management. It's one of the largest ranches in Arizona.

The Kane Ranch headquarters is a small stone house, circa 1877, now restored as accommodations and meeting place, off-the-grid but with plenty of amenities. From the front porch, you hear only birdsong or the creak of the gate in the wind. In the far distance is that great Southwest vortex—the convergence of the Echo and Vermilion Cliffs at Lee's Ferry, historic crossing of the Colorado River. The gash of the Marble Platform scribes the edge of House Rock Valley; to the left the Paria Plateau caps the Vermilion Cliffs where the Two Mile Ranch is located. And behind, the Kaibab Monocline sweeps up to the forested dome of the Kaibab Plateau, then spills back off the west side to Kanab Creek. It is country that nurtures a rare pincushion-sized cactus and 200-foot-tall yellow-belly ponderosa pines—with an arc of blue sky big enough for soaring California condors.

## CONSERVATION MADE REAL

Next comes the question: Why would a Flagstaff-based conservation group be interested in taking over a herd of bovines hiding in more than three-quarter million rugged acres three hours from town? Ethan Aumack, conservation director for the Trust, assured that grazing was "one of the prime reasons" they bought the ranches. It was an opportunity to "ground the organization in a special place," to "make conservation real."





In the late 1800s and early 1900s, that same land had been rode hard and put up wet, as they say. Tens of thousands of cows and sheep chewed it down to the bone. Over the course of the last century, allowed numbers of livestock dropped constantly. Today the Trust runs a herd of less than a thousand, mostly Black Angus cows and bulls bearing the XT brand.

Neighboring permittees initially had some concern about the group's intentions, said Aumack. But with nearly 10 years of experience under their belts with the ranches, he thinks a "fair degree of tolerance" has evolved. "We've earned our spurs" running a real livestock operation." And as former ranch program director John Heynemann assured a reporter, "we're real ranchers, not a bunch of cowboys out there reading poetry or singing to the animals."

The Trust is now in partners with a local family—J.R. and Lynette Jones, and son Justun—who run the livestock operation, doing business as North Rim Ranches. The Jones family is interested in producing beef, and they must tend to the myriad day-to-day matters of ranching, from fixing fences to keeping water flowing to using their trucks and trailers to move the cows from higher to lower pastures and back again. Mostly though, Justun Jones spends his days on horseback, which suits him just fine. This is his home ground, where his grandfather and father ranched and where he spent summers as a boy.

They do have a bottom line. "We gotta make sure we're paying our bills," Justun said. But "we understand what the Trust is doing." Though nearly all his time is taken up with the cattle, Justun is also helping with some of the Trust's research projects. He believes his family's care and long experience on the land add a great amount of knowledge. And he points out, he's gotten at least one Trust vegetarian to try a Kane burger.

## NEW LANGUAGE

While the Grand Canyon Trust speaks some of the same language as traditional ranchers, it has undeniably pulled the reins in a different direction. With that new direction comes a new language—phrases such as "adaptive management," "collaboration," and "landscape-scale restoration" are spoken.

Immediately after buying the ranches, the Trust undertook a baseline assessment—science-speak for taking the measure of soil and plants at several hundred discrete points, gaining a snapshot of the land conditions and a yardstick for comparing later grazing impacts. Northern Arizona University conservation biologist Tom Sisk, a science advisor to the ranches who's been involved from the beginning, says the assessment determined the "parts of the ecosystem" that were there. He sees it as a huge contribution.

Sisk noted there are places where cows simply should not be present,



Students discuss climate impacts on the edge of the Grand Canyon at Kane Ranch.



such as delicate streambanks and springs, archaeological sites and other sensitive areas. But he contends the Trust's herd is small enough and the land big enough that the herd is "ecologically invisible." Still, the lower, drier places like House Rock Valley can take a beating, and recovery in areas with such low precipitation is painfully slow.

The ranches afford a wealth of science and research projects for Sisk and others. A main target is cheatgrass—public enemy number one among nonnative plants. Cheatgrass has a foothold in a 1996 burn on the west side of the Kaibab, the seeds carried by the wind or on the hooves of cattle. If livestock are spreading cheatgrass, this research could help managers figure out how to lessen that impact.

Conversely, if grazing is timed right, the cattle could be brought in to eat cheatgrass during the early greenup stage, before it sets seed. Another concern is the Kaibab mule deer herd, which depends on the west side for migration and winter range. Eradicating cheatgrass and bringing back native grasses will improve that key wildlife habitat, as well.

The effects of livestock operations on mule deer and other animals are also being watched, literally, with cameras. Pronghorn with big brown eyes, wary coyotes, mountain lions, bobcats and even roadrunners have had their portraits taken by infrared, remote-tripped cameras. Williamson explained that about 50 cameras have been placed across the ranchlands to test predictions about where animals are

moving. The aim is to see how cows change habitat, and how wildlife responds to presence of cows. "We don't even have the beginning of an idea how to answer that yet," noted Williamson. Other projects monitor bats, test seed-planting methods, and restore springs.

### THE WILD CARD

Yet another effort, what kept Williamson astride that horse for 10 hours, is the "experimental garden array." With such wide elevation differences on the ranches—around 4,000 to more than 9,000 feet—researchers will place garden plots at different elevations to see how plants respond, hoping to identify ones most likely to survive and reproduce in a rapidly changing climate. Climate change is the wild card for the Southwest's future, and will be another overriding focus of research on the ranches. One thing is certain, said Aumack, "it's not going to make running livestock any easier."

In 2012, the Trust and six other agencies and universities signed on to the Kane-Two Mile Research and Stewardship Partnership. It lays out an ambitious "applied" research agenda for the ranches and collaborators. The Kaibab National Forest was one of the signers. Mike Hannemann, the forest's range, watershed, invasive species, and rare plants program manager, says the partnership is "kind of unique and kind of exciting."

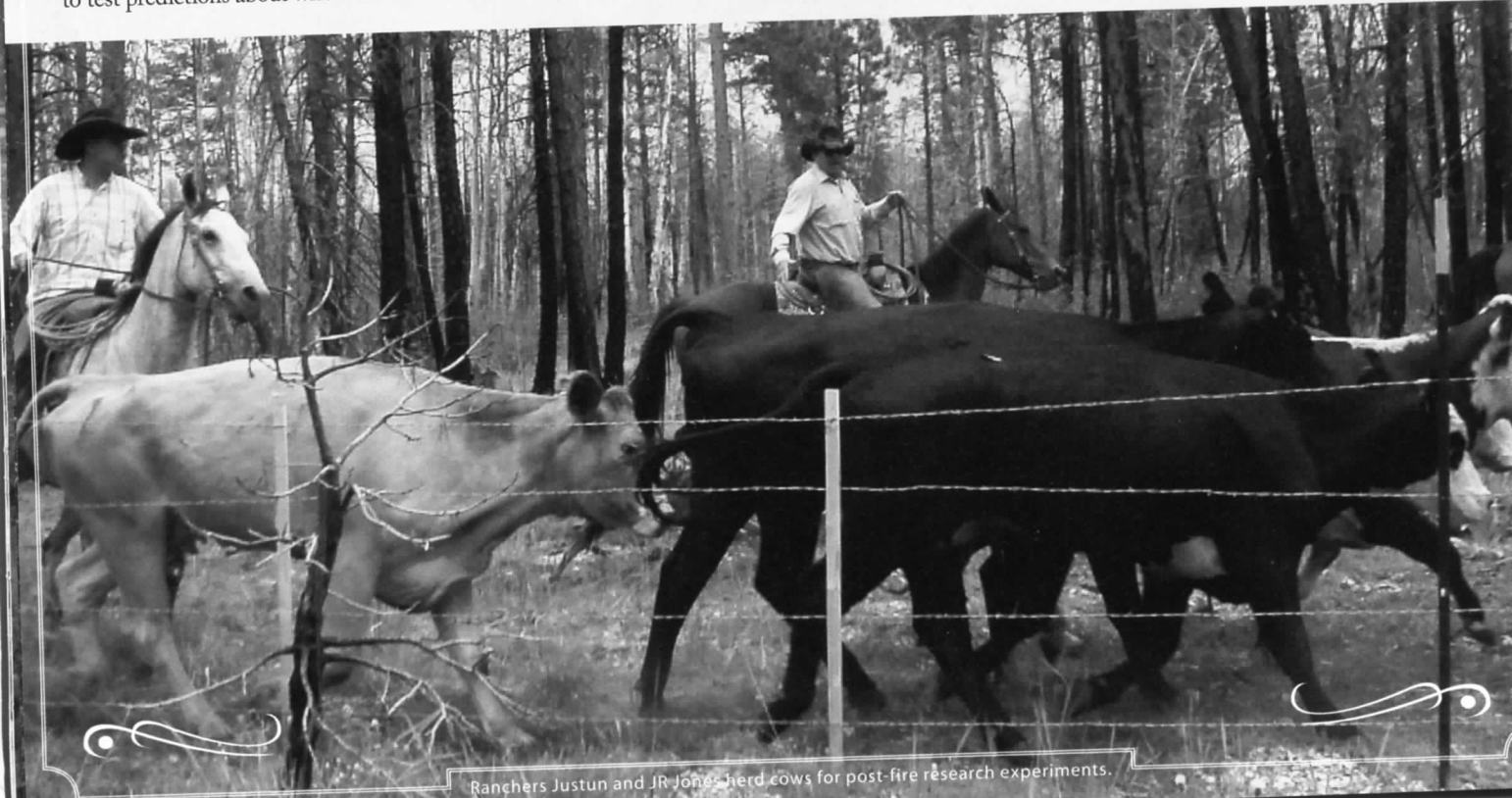
The approach is new for him and his agency, and there are skeptics, he says, and

lots of people are watching. But the value is "you've got real world research helping us direct management in the future. . . right here. . . with our issues." The partnership embodies the fact and necessity of collaboration, trying to answer the most pressing questions and better understand what "land health" means.

The Trust's volunteer program is deeply involved in the ranches. People donate their time and services to pull fence, dig out invasive plants, and collect data alongside researchers in the field. They've spent hundreds of hours doing important work, says Aumack, and in the process have had a chance to connect to a "beguiling, beautiful" place. And education is another piece of the program, using the ranches as training ground for conservation biology students and others lending a hand and learning at the same time.

"In my mind," said Sisk, with the Kane and Two Miles ranches the Trust bought an "opportunity to try to modernize the way we manage big landscapes." Ethan Aumack hopes they are "going beyond traditional battlegrounds" in land management in the West, with sound science to guide them.

Justun Jones declared, "We want a hundred percent success on this deal, and so does the Trust." And Matt Williamson knows they're going after some hard questions without ready answers. But, his biggest hope is that in another 10 years "we've learned some parts of the big questions," and that people are convinced "this is the way to work together." ▲



Ranchers Justun and JR Jones herd cows for post-fire research experiments.