

Balancing Weeds and Ranching

by Duke Phillips, Chico Basin Ranch

Economic hardship is the single most detrimental thing for the ecology of the land, no matter whether it comes in the form of drought, hungry grasshoppers, bad business decisions, or a depressed market. Weeds begin sprouting when the land is stressed. Weeds come in all different forms and sizes. And, weeds aren't necessarily plants. If we do not have a diverse and healthy business on a ranch, then the land usually takes it in the pants. When I begin seeing weeds, I wonder if perhaps they are a symptom of a ranching management program that is out of balance.

Multi-Dimensional Resource

The Chico Basin Ranch is a new business outside Colorado Springs, Colorado, that operates on the premise that a ranch is a multi-dimensional resource, not just a home for a herd of cattle. I believe that this ranch is unique,

Editor's Note



Carduus nutans L.

Invasive and noxious weeds are expected to infest 140 million acres in the U.S. by the year 2010, and infestations are expected to increase at the rate of 20 million acres per year. Rangelands and pastures will be the primary land types invaded by these species.

However, the "fight" against noxious weeds has focused on the weed and not what they tell us about the land they are invading. We hope we have put a little perspective on the topic with this issue of the newsletter.

as all ranches are in their own way, and that its intrinsic qualities can be leveraged to create a dynamic business that sustains the land and wildlife and maintains a lifestyle that the people living and working on the ranch can be proud of.

The Chico Basin Ranch is located between Colorado Springs and Pueblo, on the high desert prairie. It has three ecosystems, 20,000 acres of sand sage, roughly 3,000 acres of wetland/riparian, and 65,000 acres of short-grass prairie. It has 350 acres of irrigated farm land planted in alfalfa and permanent pasture for grazing, some haying, and upland bird habitat (hunting).

The ranch is owned by the Colorado State Land Board and is leased by Duke and Janet Phillips, and our four children—Tess, Duke, Julie, and Grace—for a 25 year term, which began in 1999. The

(con't on page 14)

From the Founders

*Jim Winder
Courtney White
Barbara Johnson*

We have had some exciting additions to our Quivira family.

First, we would like to welcome Ernie Atencio to our Board of Directors!

Ernie works in northern New Mexico as a freelance writer and consultant and is currently coordinator of the Valles Caldera Coalition. He's worked throughout the West as an environmental activist, journalist, environmental educator, wilderness instructor, national park ranger, and laborer. His publications include a variety of journalism, anthropology, natural history, reviews, essays, and creative writing, including many articles for *High Country News*. With an abiding interest in human ecology and stewardship traditions, and an MA in applied anthropology from Northern Arizona University, Ernie has done ethnographic field research and written about sustainable development in Ladakh, India, Havasupai Tribe ethnohistory in the Grand Canyon, Navajo forestry, western cowboy culture, and Hispano resource-

use traditions in northern New Mexico. He is the author of *Of Land and Culture: Environmental Justice and Public Lands Ranching in Northern New Mexico*, published last year by The Quivira Coalition and the Sierra Club.

Ernie says that Quivira's mission and approach "resonate strongly with my experience. This kind of idea had been vaguely kicking around in my anthropologist/environmentalist skull for a long time until I heard a friend say it plainly a few years ago: environmental health and community health are dual priorities, neither one is more important than the other."

Ernie is replacing Dan Dagget, who, luckily for us, is not going too far away. Dan is joining Kirk Gadzia and Nathan Sayre on our Advisory Committee. Dan has become increasingly busy these days with his own organization, EcoResults!, and so wanted to limit, slightly, his involvement with us. We know how much time it can take to start an organization, so we understood.

Ernie joins the 11 other dedicated and talented members of our Board, who will be meeting again on June 29. We appreciate all the work they put in to help us and especially to advise us. There is so much knowledge and experience around the table at every Board meeting that, between them and our Advisory Committee, we can usually find the answers to all our questions.

And secondly, we've got help!

We are very pleased to announce that in March we hired Mike Newmon to be our full-time Administrative Assistant (that makes a grand total of four staff!). Since he's the guy who will be answering the phone, principally, we thought we should introduce him.

Mike hails originally from

(con't on page 25)

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2



June 2002



Ranching West of the 100th Meridian: A Booksigning Event in Santa Fe



[Top left]
Ed Marston
discusses
his
opinions of
ranching in
the West.
[Left] Rick
Knight
reads from
his article
in *Ranching West of the 100th Meridian*.
[Top right]
Drum
Hadley



sang one of his poems, several of which appear in the book, at the beginning of each section. [Lower right] Rick speaking to the crowd, with the book in the foreground. (Photos courtesy of Courtney White.)



The Quivira Coalition hosted a Book Signing and Poetry Reading on April 12th at the Wild Oats Community Room, featuring Rick Knight, professor of wildlife conservation at Colorado State University, and Ed Marston, publisher of *High Country News*, who signed and read from their new book *Ranching West of the 100th Meridian: Culture, Ecology, and Economics*—a collection of essays on the future of sustainable ranching in the West; and Drum Hadley, rancher and member of the Malpai Borderlands Group, who read from his poetry.

Rick is the co-editor of *Stewardship Across Boundaries* (Island Press, 1998) and *A New Century for Natural Resources Management* (Island Press, 1995). A recent article in this newsletter ([Holy Cow! Biodiversity on Ranches, Development, and Protected Areas in the New West](#), *January 2002, Vol. 5, No. 1*) highlighted his ongoing research on ranching and biodiversity.

Drum, his family, and the Animas Foundation own the Gray Ranch in the bootheel of New Mexico. They have been restoring that ranch to remarkable health and as habitat for a variety of wildlife, including some endangered species. Drum is the man who coined the term Grassbank, which has now becoming trade-marked.



Noxious Weeds: A Personal Journey

by Craig Conley,
Bionomics Southwest

I first became aware of noxious weeds six years ago at the annual noxious weed “short course” held in Farmington. Picture after picture showed thousands of acres of Montana, Wyoming, and Idaho pastures filled with nothing but leafy spurge and an assortment of knapweeds. That alone was enough to convince me that this was bad. Statistics on the economic impact of noxious weed infestations in these states and stories of ranchers walking off their land because the cost of killing the weeds was more than the value of the land further convinced me that we didn’t want to follow the same path in New Mexico. On my trip home, I started spotting patches of musk thistle, Russian knapweed, and perennial pepperweed for the first time along NM 44. I haven’t driven a highway since without scanning the right of way for noxious weeds.

Getting Personal

The issue of noxious weeds became very personal for me when, two years later while walking along a new water pipeline I had installed the summer before, I found myself standing in the middle of a two-acre patch of Russian knapweed. The ground was covered in a mat of stalks and seed heads from the previous season’s growth. Some areas were so thick, I could not see the ground. My first response was dizziness as I could not believe Russian knapweed was on my land. My second response was to wonder how on earth it got there in the first place. None of my neighbors had ever mentioned having noxious weeds. My third response was to find a way to kill them as quickly as possible. All I wanted to do was blow them away before they had a chance to spread to the rest of the land.

The next spring, I found a 55 gallon steel barrel and proceeded to gather up and burn every seed head

and living Russian knapweed I could get my hands on. Finding live plants and the previous year’s growth was complicated by the fact that many of the plants were growing up between sagebrush so they were easy to miss. Also, over the winter, the stalks had started to break down and seed heads were falling to the ground. I spent the month of June on my hands and knees on a “search and destroy” mission. However unpleasant it was crawling around through sagebrush, it was a luxury I would later discover few people could afford. As the dust devils whipped across the property in early March, I had visions of millions of seeds being picked up and re-deposited over every square inch of my land.

By the end of June I had cleared the area of every sign of Russian knapweed. I was feeling in control again. **BUT**, by mid-September the area had filled in even thicker with new plants. Every spot that in the spring had a single stalk now had five, with bunches of seed heads at the end of each one. It also seemed to have spread to an even larger area! I was desperate. Armed with a pump sprayer and a gallon of Tordon, I set to work spraying every plant I could locate. The effort of carrying around a 30 pound container for two days and pumping it every five minutes to maintain enough pressure made me pull out my Northern equipment catalogue and dream longingly of an ATV-mounted 40 gallon electric pump sprayer. What was clearly missing was a more effective delivery system. Or so I thought.

Although the herbicide was effective in killing weeds, it left large patches of bare ground waiting for something new, and possibly worse to take over. Having largely achieved my original goal of simply getting rid

(con’t on page 5)



of the weeds, I was faced with an even greater one of getting something to grow back to fill in the bare areas.

While surveying other parts of the land that spring, I found three more patches that were not nearly as large as the first. I was out of control again. I bagged a few plants and went visiting my neighbors to see if they had seen anything similar on their property. I didn't have to go far. My next door neighbor not only had seven acres of Russian knapweed but over an acre of hoary cress.

The Human Dimension

The prospect of having to fight an endless battle against weed seeds blowing in from all around me led me to seek the aid of the Cuba Soil and Water Conservation District. With their support, I worked with my neighbors to develop a community-based program for managing noxious weeds. The program, funded by the BLM, mapped noxious weed infestations in the Lindrith area, provided training as well as equipment and herbicide for anybody willing to treat their own weeds. For the most part we were dealing with small pioneer weed infestations of less than half an acre. The infestations were in plowed fields, pastures, well locations, or on the edge, and in some cases the middle, of roads. They were largely in areas that were regularly disturbed and were going to continue to be disturbed for a long time. Killing the weeds to keep them from spreading to other areas seemed the appropriate goal. In other areas, however, the goal was the broader objective of restoring and maintaining healthy pasture. To achieve this goal, we clearly needed other tools.

Visiting with ranchers in the process of mapping and treating the weeds made me much more aware of the relationship between people and weed management. Two more expe-

riences, however, have led me to realize the two are inseparable. The first experience was a field review of several pastures in the Rio Puerco basin near Cuba. I knew there was Russian knapweed in the area and although uneasy about it, was prepared to spray about 60 acres. As we began surveying the area prior to spraying, the number of infested acres quickly rose to over 350. Making the problem worse was the fact that much of the area would be left with bare ground once the weeds were killed off. To complicate the situation, we were close to the Rio Puerco, the knapweed was growing right up to homes, and a local resident had already voiced concern about sensitivities to herbicides. Clearly we needed a more sophisticated approach than I was prepared to deliver. While we might have killed weeds, we would not have solved the problem. The problem was more systemic and therefore needed a more systemic solution.

The second experience occurred in Taos. After not spraying herbicides on the rights of way for over seven years, the New Mexico State Highway and Transportation Department began treating the roadsides in the spring of 2001. The immediate, strong negative response to spraying by Taos County residents led to a spraying moratorium on highway rights of way in Taos County until alternative control methods were tested. A Noxious Weed Control Committee was established to find and test these alternatives. In the process of working with this group, I have come to realize that herbicides can have some large adverse impacts. In the case of Taos, those with multiple chemical sensitivities and organic farmers were directly affected by the use of herbicides, even when used in small amounts.

(con't on page 22)

A Personal Journey

(con't from page 4)

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*** For informational purposes only**



June 2002

Successfully Controlling Noxious Weeds With Goats

*The natural choice
that manages weeds
and builds soil
health*

by Lani Lamming

*Lani Lamming is the owner of the
goat grazing business, Ewe4ic
Ecological Services, based in
Alpine, Wyoming, and is a
Beyond Pesticides board member.*

*Ms. Lamming has an M.S. in weed
science from Colorado State University
in Ft. Collins, Colorado.*

I am a displaced cattle rancher. I bought a hundred head of cashmere goats to eat weeds in 1997 because I could not find a job that I wanted or that suited me. I now have 2,000 head of goats and have 12 people working for me. The goats are used as a tool in intensive grazing and short duration schemes under holistic resource management principles.

The goal of the land is to build the soil so it can produce the kinds of plants that we want to grow there. Weeds are symptomatic of a problem. The problem is poor soil having no organic matter that can support good growth. We want to make the grass the best competitor and stress the weed at every turn. Goats help with this problem because everything they eat is then recycled as fertilizer and laid back down on the grasses. As the goats graze, they trample in the fertilizer.

We worked last year in seven states. I keep working and moving from job to job, migrating north to south, and up and down in elevation—working all the time. I have federal contracts with the U.S. Fish and Wildlife Service, Bureau of Reclamation, Bureau of Land Management, and the U.S. Forest Service. I have state, county, and city contracts in several states. But, most of my business is on private land. The smallest area I have grazed was a 12-foot by 60-foot backyard. I grazed 30 baby goats there for three days. The biggest job I have done was 20,000 acres in Montana.

We take a lot of data while we are herding goats. We use a video camera with a GPS unit

hooked into it. I am able to create a noxious weed layer that can go into any government database for their weed inventory.

Weeds as Symptoms

“Weed” is a man-made word; plants do not care who their neighbors are. Plants are rooted to the ground and cannot run away so they must protect themselves by making sharp spines or poison for defense, enduring late frost and early snow, severe wind, drought, and flood. Survival tactics are keen and those that can grow, reproduce, and compete in an open niche are rewarded. Some plants produce 500,000 seeds per plant and then disperse them by wind, water, your socks, wildlife hair, birds, the mud in car and bike tire treads. More aggressive weeds produce seeds besides spreading by a vegetative root system and some can even poison other plants around them.

Weeds are symptoms that there is an underlying problem. Typical problems are drought, disturbed soil (construction), poor soil quality, fire, flood, overgrazing, over-rest, and poor land management, which remove competitive species, leaving open niches. A noxious weed requires minimal introduction to invade and thrive in an open niche. Americans are notorious for wanting instant gratification and usually get an over-the-counter chemical to “kill the symptom” without asking why symptoms are growing there and “what is the real problem?”

Weeds (symptoms) are indicators that land health is stressed.

(con't on page 7)



Looking beyond symptoms, land health is measured by four ecosystem functions: water cycle, mineral cycle, energy flow, and succession of the plant community. The real problem lies in one or more of these categories and land managers may review land use goals to see which category needs to be augmented.

Stability begins in the soil. All plant life above and microbial life below with micro- and macro-fauna depend on soil health and available nutrients. When noxious weeds are seen in full flower, the land manager is two years late. He should have been tending to the soil much earlier. Small mammals, insects, birds, reptiles, wildlife, livestock, and people depend on production from the soil, and humans manage these resources. Stability in the soil has a domino effect through its products, continuing up through individuals, families, communities, and corresponding economics.

Problems with Pesticides

To a cattle producer, there is no production on land that is covered with noxious weeds. Therefore, he/she has to rent property to feed the cattle. Because, in some states, the law requires him to clean the weeds up, he will probably spray Tordon (picloram and 2,4-D) on them, costing him about \$100 an acre. I have seen patches of land sprayed with this pesticide, killing everything but the diffuse knapweed it was meant to kill. Now the cattle producer has got two-fold costs and no production.

When you introduce hu-

mans after weed problems, you tend to have lots of trouble with human error. First, they have to recognize the weeds, which they probably will not be able to do unless they are in full flower. Then, they have to get the right eradication method on the right day and at the right time to get it done.

One problem with using

Successfully Controlling Noxious Weeds with Goats

(con't from page 6)



chemicals to control weeds is that they are trying to kill the symptom. Pesticides never take care of the problem. The problem is that there is a stress or a niche open on the land that needs to be filled with something good, something productive that you want.

A lot of things happen when you spray pesticides. For one, the weeds can mutate and become deformed. I have seen this happen to common mullein. The spray boom along the highway got the plant and half of it deformed while the other half kept on growing. I have seen deformed prickly lettuce that was very thick

Rep. Tom Udall, his father Stewart (former Secretary of the Interior), and Lani, after a hard day with the goats at Galisteo. (Photo courtesy of Rucky Barclay.)



(con't on page 18)

The Far Horizon

by Courtney White

"We spend too much time chasing symptoms, not causes, of problems."—
Lani Lamming,
goat rancher

When my wife, Gen, and I decided to start a family, we sat down at the kitchen table and asked ourselves a difficult question: Were we doing our children a favor by bringing them into this world?

While we suspected that millions of parents had asked themselves this question over the centuries, it seemed especially pertinent now, given the escalating quantity and quality of challenges confronting society. We were not real thrilled with what "progress" had wrought so far, and we were not convinced things were going to get better before they got worse.

So, we wondered: Did "good" parenting extend to not becoming parents at all?

Being optimists, we took the gamble (and a genuine gamble it is), creating beautiful twins, a boy and a girl, the pride of our lives. We also vowed to work hard to make the world a little bit better, so that Sterling and Olivia's patrimony would be as nourishing as possible.

And the one big lesson that parenting has taught me is this: real change begins at home.

Environmentalism

My home is in the environmental movement. I've been a member of one green group or another since prehistory, it feels like. I've run the gamut from check-book activist to letter writer to wilderness warrior to volunteer lobbyist (I even went to D.C.). In the mid-1990s I became active with the Sierra Club in response to worrisome political trends, and in 1997 I took the fatal final step, with the founding of The Quivira Coali-

tion, into a professional career.

In the process, I have come to see that my home, like any home, needs periodic repairs.

I'm not the only one who thinks this way. In an admiring review of the movement entitled *Earth Rising: American Environmentalism in the 21st Century*, author Philip Shabecoff, a former journalist for the *New York Times*, writes that while the old environmentalism brought "profound changes in American life—to its landscape, its institutions, and its people," today it "seems to have no broad, shared vision of where it wants to take us." He insists the movement re-focus and redouble its efforts.

The need for action is urgent. "If environmentalists and their cause do not prevail in the next few decades," he writes, "our habitat, our quality of life, and our democratic institutions could erode to the point that they might take centuries to recover."

Far from preaching absolutist nonsense, however, Shabecoff urges the movement to return to its roots—to the vision of Teddy Roosevelt and Gifford Pinchot, who saw conservation as "a core value of progressive politics, as an issue of democracy, as a means of bringing science to bear on the creation of policy, and as a means of achieving economic and social equity for present and future generations."

To take this vision into the 21st century, Shabecoff proposes an ambitious agenda: tackling global climate change; working on

(con't on page 9)



“full-account” capitalism, including the creation of sustainable economies; encouraging political reform, including an overhaul of campaign finances; re-democratizing science and technology; and enlarging the struggle against globalization. At the same time, he urges an expansion of the word “environment” to include the “workaday world”—where we work, play, and go to school.

The problem with the old environmental movement, he says, is its fixation on symptoms, rather than causes, of global ills. “The underlying flaws in our social systems that cause or contribute to the environmental predicament are rarely addressed by environmental organizations,” he writes. The movement can no longer simply “nibble” at the edges, he says. It needs to transform itself into a *social* movement, one that digs at the roots of problems.

A key task of this new social movement, he writes, will be creating a *regenerative* economic system based on nature’s model, one that “grows not by continual production and consumption but by constant self-renewal.”

It is a tall order, but Shabecoff remains optimistic. “We possess sufficient knowledge and tools with which to transform the future. Our science and technology have the capacity to restore much of what has been harmed...our economies still generate enough wealth to meet the needs of the transition; [and] our ability to communicate information and ideas to one another is growing with exponential speed.”

Causes

There are good reasons to take Shabecoff’s vision seriously. One lies in a report that he cites from the Environmental Defense Fund (1997) which says, “An historic threshold has been crossed. A shift has occurred in the balance of strength between nature and humankind. We have passed, almost without noticing it, from a world in which the overall stability of the Earth’s environment could be taken for granted to a world in which major, often *i r r e v e r s i b l e* manmade alterations of the environment are under way.”

In other words, continuing to separate man from nature—one of the principal philosophies of the old environmental movement—is not only impossible today, it is foolish. The two are now inextricably linked, as biologist Peter Raven points out: “There is not a square centimeter anywhere on earth, whether it be in the middle of the Amazon basin or the center of the Greenland ice cap, that does not receive every minute some molecules of a substance made by human beings.”

This raises fundamental questions about the goals and methods of the old movement. If no place is truly “pristine” anymore, what does “protection” really mean? We are certainly not

The Far Horizon

(*con’t from page 8*)



Gen, Sterling, and Olivia under an elm in La Cienega. (Photo courtesy of Dad.)



(*con’t on page 26*)

June 2002

A “Living Fire” in New Mexico



[Top] “Sarge” and Lani’s predator control—a burro. [Below] The Galisteo River. [Far right] The goats smooth the arroyos at “Rancho Choo-Choo.” [Below right] Six hundred goats, looking for a meal.

In April and May, The Quivira Coalition, along with Earthworks Institute and Bionomics Southwest, was pleased to co-sponsor Lani Lamming, and her 600-head goat herd, for a spell in our fine state.

In April, the herd resided at “Rancho Choo-Choo,” as Lani calls it, a sizeable property owned by Leslie Barclay and her husband, on the Galisteo River near the village of Cerrillos. The goats dined principally on a dense stand of tamarisk and Russian olive trees, though some tasty forbs were available as well.

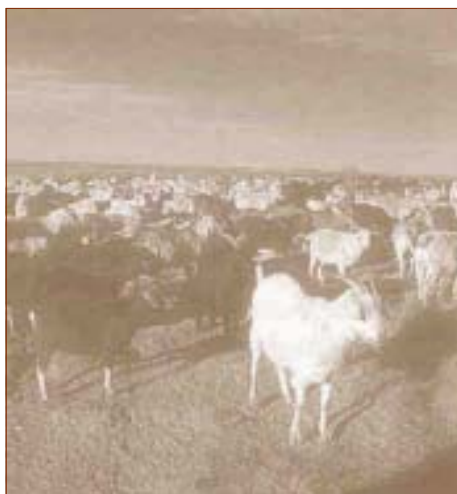
Leslie met Lani at a workshop at the Chico Basin Ranch in late February and immediately took a shine to her and her goats. She arranged for the goats to come to New Mexico in order to see what they could do to help with her “noxious tree” problem. “It was a natural fit with the mission of Earthworks,” says Leslie, “whose goal is to try different strategies to heal the land.” Her ranch, she said, had been hit hard by livestock over the last century and is still suffering the effects of past poor management.

To fix persistent erosion and weed problems, the advice Leslie kept getting from the

“experts” was to break out the bulldozers and the herbicides. Leslie wanted to do neither, preferring to find strategies that encourage nature do the work instead. That’s why Lani’s goats were so appealing. In addition to the browsing, Leslie wanted to see how the impact of 2400 goat feet, plus innumerable bits of goat “fertilizer,” would help the land. “It should be a big help,” she says.

What Leslie, and others, are discovering is how, in the words of a Quivira Board member, goats can be a “living fire” on the land. If carefully managed, goats can create a beneficial effect similar to a “cool” or low-intensity fire, without the danger of burning down people’s homes.

Leslie describes her experi-



ence with Lani and her goats as “incredible.” She was sorry to see them go, especially since the tamarisk was just beginning to bloom (very tasty to goats). “I fell in love with them,” she says, “and I promise to have them back.”

In fact, all of us hope to have them return to New Mexico permanently. We are working together to figure out how to create a resident herd of goats in order to spread the “living fire” across the state.

Stay tuned for more developments.

A “Living Fire” in New Mexico

(con't from page 10)

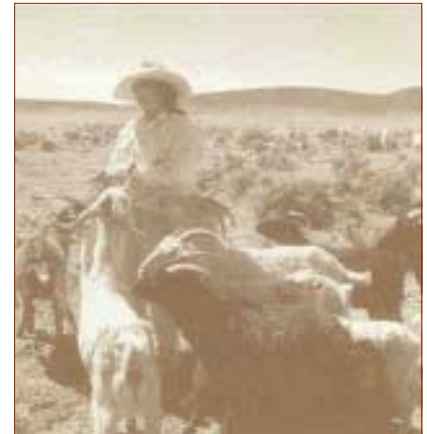


After leaving Leslie's ranch, the goats moved to the property of Susan and Tom Simons, Quivira members, in La Cienega. They spent three days there munching a dense infestation of Russian knapweed, Russian olive, and Chinese elm (below left) along the acequia and the riparian area. The goats strip the trees of leaves and bark, stressing them.

A government agent had advised spraying these sensitive strips of land with the herbicide Curtail. (All photos on these two pages courtesy of Courtney White.)



[Below] Lani and her goats. [Far Left] The goats rip into dinner. [Left] The goats were more interested in the sage than the lovely mountain view.



In early May, Lani and her goats moved to Tony Benson's property west of Taos, as part of a collaborative range restoration project. Through a grant to The Quivira Coalition provided by the Collective Heritage Institute, the goats spent five days happily decimating the abundant sage on Tony's land. Baseline monitoring was completed prior to the goats' arrival, and we are all very curious as to what the results will tell us—if it ever rains again!



While in Taos, Lani gave a workshop to about 50 interested citizens. Twenty came out to see the goats in action. The goats were as interested in them as they were in the goats.



June 2002

First Annual Conference, January 18-19, 2002 Albuquerque



David James (top) spoke about "Working with the Federal Government." We even attracted the "next generation!"



We filled up the Ballroom at La Posada. There was standing room only. (All photos on these two pages courtesy of Gene Peach.)

We held our First Annual Conference January 18-19 at La Posada de Albuquerque. Entitled The New Ranch at Work, the goal of the two-day conference was to highlight the new thinking taking place among ranchers, scientists, environmentalists, land managers, and others across the

region. Half-day sessions included: Grazing as a Natural Process, the Principles of the New Ranch, Grazing and Biodiversity, and Building the Radical Center. Over 300 people attended, neatly divided into thirds--ranchers, federal and state employees, and environmentalists. Funding for the conference was provided by the EPA, New Mexico Environment Department, the Thaw Charitable Trust, and the McCune Charitable Foundation. The event was a runaway success on every level. A reporter for the Albuquerque Tribune called the conference "historic." Best of all, most of the people who attended expressed a genuine sense of community. Many told us they were going home "refreshed" and "reinvigorated."

(See the note on page 21 about our Second Annual Conference!)

First Annual Conference

(con't from page 12)



Kirk Gadzia, Bob Budd, Joel Brown, Kris Havstad (at the mike), Jim Brown, Brandon Bestelmeyer, from the **Grazing as a Natural Process** panel.



David James, Julia Davis of the CS Ranch, Gail Garber of HawksAloft, and Roger Bowe (standing), from the **Principles of the New Ranch** panel.



La Posada set up their historic lobby for lunch.



[Top] There were a lot of questions from the audience, this one from Patrick Zwartjes of the Rocky Mountain Research Station. [Left] Dale Jones from the New Mexico Watershed Coalition asks his.



Balancing Weeds and Ranching

(con't from page 1)

year term, which began in 1999. The ranch operates strictly on cash flow and carries no debt. Ninety-five percent of the ranch's income comes from providing a turnkey grazing and management service to cattle owners. We also own a seed stock Beefmaster herd and have several non-traditional enterprises that are operated on the ranch. Additionally, we run about ten workshops throughout the year in collaboration with The Rocky

Mountain Bird Observatory and of weeds along with several threatened and endangered plant and animal species and works with The Nature Conservancy, The Natural Heritage Program, and The Rocky Mountain Bird Observatory on their management.

We also work with Charley Orchard, Kirk Gadzia, and others on range monitoring and workshops aimed at improving our management skills and knowledge. Our objective is ultimately to have

30 transects across the ranch representative of various types of terrains and problems. Through the transects, we will track those species of plants, animals, and situations that have special needs or that represent opportunities. Additionally, we want to use the information to make

better decisions about the natural environment and our business.

Weed "Care"

As we look at the various things that we have to do, managing our exotic weed problem is one of our lowest priority tasks. I say this not because we don't have a lot of weeds—we do—but because if we spent too much time focused specifically on just one problem—in this case weeds—I believe we would go broke. Time is the most essential thing we have and is in the least supply. Consequently, we attempt to include weed "care" in our overall management

(con't on page 15)



The Chico Basin Ranch. (Photo courtesy of Duke Phillips.)

Mountain Bird Observatory and The Nature Conservancy, and independently, for school kids of all ages, for the urban community wanting to learn more about ranching, and for agriculturalists who want to learn more about working with environmental groups and about better business practices.

I didn't realize how much live water, how much good exotic plant habitat, or good cow habitat or good deer habitat existed until I started getting to know the ranch from horseback. Hidden draws with springs flowing out and traveling down through parched desert land, entirely different ecosystems intermingled in a patchwork across the ranch. The ranch hosts plenty



scheme. Our philosophy in managing this business is challenging ourselves to identify and leverage the most promising inherent qualities of the ranch to create a healthy, diversified business that enhances our natural resources. We have found that the hard part has been keeping from getting distracted and being pulled in too many directions at one time. Consequently, today, we devote ourselves to five primary profit centers that we think have the long-term potential of moving the cattle enterprise toward the background financially, and to serve more as a tool for managing the surface of the ground to achieve our conservation goals.

Grazing Management

Managing our weeds is one small part of one aspect of one management area—grazing. A much larger challenge today is the pending prolonged drought and not getting caught with our pants down, even though it may turn out we can do nothing except pack up and leave. In anticipation of a prolonged drought, we hired Kirk Gadzia to come to the ranch to give a class on grazing planning. Our objective was to come away from it with a comprehensive grazing plan that allowed us to grow as much grass as possible without destocking.

Weed management came into the picture when we thought of inviting Lani Lamming to give a presentation on her weed control methods using goats, and because we have been interested in running goats together with our cattle. I thought also that, through her, we could get other people to the ranch

to defray the costs of the school. Bob Painter from the Colorado Division of Wildlife also gave us a presentation to round things out; he is widely respected in eastern Colorado for his work with weed control on CDOW properties by using cattle grazing and minimal amounts of chemicals.

We came away from the course with a comprehensive grazing plan that included controlling our exotic plants. We also spent



Balancing Weeds and Ranching

(con't from page 14)

Checking out the Ranch on horseback.
(Photo courtesy of Duke Phillips.)

much time in small quarters, isolated from phones and interruptions from the outside talking about ranching, grazing, weed control, grazing, management, ranching, diversification, grazing, and ranching. We ate a lot of good food, had a lot of laughs. I have thought many times since of how good it is to close oneself away with others of kindred mind to think in depth about things.

Another outcome of the course was our decision to graze 900 yearlings using portable fence-

(con't on page 16)



Balancing Weeds and Ranching

(con't from page 15)

ing through our riparian and wetland areas in five to 50 acre breaks (paddocks). Bob Painter's presentation convinced us that simply grazing cattle in some kind of intensive fashion so that there was "tromping" (Bob's words) by the cattle's hooves, and rest, all or most of the weeds would disap-

one day tearing all the fences out on this ranch and grazing a multi-species herd consisting of cattle, goats, and sheep, all with the same labor force it would take to graze only the cattle, in a migratory fashion around the range...a covered wagon with a cowboy crew supported by dogs, horses, ultra-lights, and motorcycles caring for the land and livestock, another crew on the other side of the pasture bringing vacationers out from around the world to help herd the 15,000 head herd...busloads of school kids with another crew in another part of the pasture coming out to learn about ranching and the ecosystem...and Lani had always wondered about the dynamics of grazing goats with cattle.

Kirk thought the idea was such an important one in terms of gaining knowledge about grazing that he contributed \$1,000 toward the experiment. It just turned out that we got along great with Lani (who wouldn't?), and Lani, with some time in between jobs, decided to graze her 700 head of goats here for several weeks as an experiment, which, today, is all history.

It was great fun. We grazed the livestock in three ways: cattle in front of the goats, goats in front of the cattle, and together, loose herding them. We made Land EKG (Charley Orchard) transects across each area, as well as across an area that neither goats nor cattle had grazed, as a control area. The goats worked well with the cattle, as they chose the woody plants and liked diving off the banks of the arroyos

(con't on page 17)



The Headquarters Lake. The kids in the boat are Duke and two of his friends, fishing for bass and blue gill.
(Photo courtesy of Duke Phillips.)

pear. So, we thought, if we *really* intensify the process, we would disturb the surface of the ground to increase the mineral and water cycles, succession, and energy flow, the exact things that we determined we needed to do in order to grow as much grass as possible. AND, we would manage our weeds, AND we would graze each inch of ground for a very short time, between one and four days, to rest the remainder of the year.

Goats, Too!

Toward the end of the workshop, as we sat digesting our major decision to graze a large herd of cattle in such an intensive manner, the prospect of grazing Lani's goat herd with our cows as an experiment started burning hotter. I have always fantasized about

16



June 2002

(breaking down the banks), and the cattle affected a relatively much larger ground surface area. We will know much more next year when we re-analyze the transects.

Thinking Evolved

The cattle today continue grazing in the small areas, old hands to the routine of moving regularly, eating all varieties of plants, except tamarisk and Russian olive (we miss the goats). Our thinking has evolved considerably since that long day at the end of our workshop. We are contemplating grazing our entire herd of cows with portable fencing through the ranch to accomplish several things: **first**, but not necessarily in order of importance, it would control the weeds—we see this as a side benefit; **second**, we would enhance the ecosystem as much as it can possibly be enhanced; **third**, it would position us to manage the ecosystem processes to the fullest extent that we know in order to get through the drought; **fourth**, we would learn the maximum amount about grazing this land; **fifth**, we would be able to better control the nutritional plane of the livestock, **sixth**, we would learn exactly the production capability of the land so that when we come through on the other side of the drought, we can more correctly stock our country. All in all, it means taking things to the edge in order to learn as much as possible about grazing management. It means becoming as intimate as possible with the land, which is the basis for all activities which support our lives on this ranch.

Importance of Management

Lately as I have attended grazing and ranching conferences outside the ag industry, the buzz has been that *ranching can actually be good for the ecosystem*. These conferences remind us all of the importance of **management**, as it is in all businesses, but which for some reason is underestimated in ranching. In the normal course of my business though, I do not consciously think about the positive things that I strive to do for the land in my care because I crossed that road such a long time ago and it is the core part of what we do.

I spend more time thinking of those things that help stabilize my business during the erratic climatic swings, or the dramatic rise and fall of markets, or from misaligned perceptions. When speaking to environmental advocacy and cattle grower groups, I talk about building a diversified business, about working together with ecologists instead of dropping into our comfortable adversarial pose. I usually forget to say anything about our land stewardship work because protecting and enhancing the land is simply part of our routine, part of the process of our ranching practices that go back further than I care to remember these days.

In all of our personal lives and in all life on this ranch, Mother

(con't on page 27)

Balancing Weeds and Ranching

(con't from page 16)



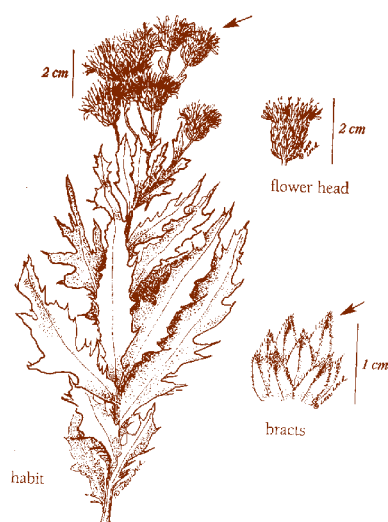
Wannes de Lange, from Holland, is holding a bird that was caught in a net that the Rocky Mountain Bird Observatory put up in their April and May bird banding station on the ranch to get school kids out to the ranch to see birds. Wannes was working at Chico Basin and then joined Lani Lamming in New Mexico for a couple of months to help her herd her goats.

(Photo courtesy of Duke Phillips.)



Successfully Controlling Noxious Weeds with Goats

(con't from page 7)



Canada thistle.

lettuce that was very thick stemmed and curvy. The Roundup (glyphosate) that was sprayed on it did not kill it. Instead, it came back and made full seed. Another example is of Dalmatian toadflax, which is normally tall and wispy. It was sprayed with a chemical called Curtail (clopyralid, 2,4-D) and it mutated to a ribbon. It was three inches wide and almost six feet tall and still had full flower. I wonder what the genetics are on these plants.

Short-sighted chemical weed control may result in a species shift, where one noxious weed is killed as another one replaces it that is resistant to that chemical. New chemistry is needed and the landowner is locked into continuous chemical use as symptoms are chased. Likewise, people sometimes get caught up in taking several different antibiotics, only to find themselves still sick but immune to all the drugs.

On my master's research plots in Wyoming there are dead trees as a result of Tordon being sprayed ten years ago. The spraying also made a pure monoculture of Russian knapweed across the valley. The plot was then sprayed with a chemical to kill the Russian knapweed and reseeded with grasses. Every time a chemical was used to kill the Russian knapweed, white top, another noxious weed, began to grow there.

For some noxious weeds, chemical sprays are ineffective. One example is oxeye daisy, which has no leaf surface for the chemical to be absorbed. But, goats love it.

Goats—The Natural Choice

In an arid environment, grazing is the most powerful tool for land management. Animal impact on the land with corresponding hoof action, manure additions, and selective grazing may be used to enhance ecosystem functions. Goats are browsers, not grazers, and prefer 10% grass which is opposite to the diet preferences of cattle and horses, which prefer 90% grass.

Goats are advanced technology recycling machines that are self-propelled. They eat noxious weeds and brush in preference to grass, and recycle all consumed plants to organic fertilizer pellets that are scattered evenly on the ground as they leave. Irrigation is accomplished by getting the goats a drink of water from the creek and depositing it a pint at a time up on the dry hillsides where grass seed has been sown.

Hoof action from 600 goats (2400 sharp little hooves) incorporates seed, plant materials, and fertilizer into the soil where all can help soil stability, our starting point. Bare ground is covered. Hooves break soil capping so water from rains and snows can be captured and used effectively without waste and run-off. Hoof action helps to mellow steep banks and slow erosion while plant cover is achieved.

Goats do an excellent job of trimming, pruning, and clearing plant debris that impedes water flow besides removing weed seed sources from waterways. Goats

(con't on page 19)



have a narrow, triangular mouth and they chew and nibble very fast, which results in most seeds being crushed. Enzymes and digestive juices further destroy weed seed viability. In the case of leafy spurge, a journal article says, when a goat eats 100% viable leafy spurge seed, 99.9% is destroyed.¹ Goats have an enzyme in their saliva that detoxifies poison hemlock before they swallow. This allows goats to eat poison hemlock without harm to them.

Benefits of Goats

The benefits of my goat grazing service are three-fold: environmental, economic, and social. Of course, environmental, because you can reduce chemicals or get rid of them completely. Economic, because we have put a lot of people to work, young kids, college students, high school kids, elementary students, and transients. And social, because there is nothing like a 1,000 head of goats to draw people to the land to learn about weeds!

Goats prefer weeds, like the knapweeds and yellow star thistle. Goats eat all poisonous plants, which does not seem to bother them.

The first thing goats do when they walk through a pasture is snap off all the flower heads. Then they pick the leaves off one at a time, very quickly, leaving a bare stalk. Once the goats graze the weed, it cannot go to seed because it has no flower and it cannot photosynthesize to build a root system because it has no leaves. The plant's stalk and the ground are left undisturbed. The canopy

has been removed allowing sunshine to hit the ground. The goats are fertilizing the ground, and the grasses remain untouched by the goats. Our working goats know when they are done and ready for the next job.

It is well-documented in research that, if you cut the stems off most weeds with a sharp blade, the plant will quickly respond by making just as many seeds if not more, actually making the plant denser. But because of the way a goat eats, the plant is stopped. It cannot make any seeds or photosynthesize. I think the plant is fooled into thinking that everything is okay, so it does nothing.

The grazing selectivity is the goats' diet preference. One thing we have learned is that goats have great diet specificity by age and gender. What the older males prefer to eat first differs from what the baby goats, the nannies, and the yearlings prefer to eat first. If available, the older males prefer Russian thistle and Russian olive and elm trees, while the babies' first choice is field vine weeds. At one of our jobs in Jackson Hole, Wyoming, we had two noxious weed problems, musk thistle and lupin. The older male goats started grazing the Musk thistle and the younger goats started grazing the lupin, a poisonous plant.

Timing Must Be Right

Timing as to when to graze a weed is important to making the biggest impact. If wildflowers are your goal for the land, yet you have

(con't on page 20)

Successfully Controlling Noxious Weeds with Goats

(con't from page 18)

*For more information,
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307-421-3737*



June 2002

Successfully Controlling Noxious Weeds with Goats

(con't from page 19)

The Short List of What Goats Will Eat

Spotted knapweed, Russian knapweed, Russian olive trees, tamarisk, poison hemlock, poison ivy, poison oak, larkspur, locoweed, lupin, leafy spurge, yellow toadflax, Canada thistle, musk thistle, sagebrush, rabbitbrush, cheatgrass, kochia, elm trees, juniper, oakbrush, pinon, hoary cress, goldenrod, chamisa, cholla, mesquite, and creosote.

According to Lani, they will eat all sixty-eight noxious weeds on Colorado's official weed list.

"Nothing bothers them," says Lani, "except domestic dogs."

to control your noxious weeds by law, I would graze to stress the weed when the wildflowers are not yet in bloom. For diffuse knapweed, the optimum time to graze is the first of June.

For Canada thistle, the perfect time to graze would be right when it is in full bud before it flowers. At this time, the plant has put all of its energy into getting ready to make a seed, so it has spent a lot of its root reserves. Over time, the thistle cannot compete with the grasses. Every time I stress the plant by grazing the goats, it will spend more energy trying to grow back. If you do this for a deep-rooted perennial for three times a season or over three years in a row, that plant has spent everything it has and will die.

Handling Goats

When you are managing a 1,000 head of goats, you have to be able to handle them. We manage the goats by herding them within electric fences. Once the goats accept the fence as a boundary, it is magical stuff. On occasion, we do not turn them on.

Another way we handle the goats is by walking them. For one job, we walked 1,000 head of goats 35 miles down the right-of-way of Highway 287 on our way to a ranch in Enis, Montana. Every landowner along the way came out, saw what we were doing, and hired us. So we stopped one day here, two days there, three weeks there.

On our way, we grazed the goats on three river islands that were filled with spotted knapweed. Goats do not like water. It is a

natural fence. The only time they will step into it is if a predator is in hot pursuit. Therefore, we had to figure out how to get the goats to the islands to graze. We found some picnic tables and placed them end-to-end across the river. Sure enough, that 1,000 head of goats used the picnic tables to get to each island and then back to the mainland.

Leafy Spurge – Goats' First Love

Noxious weeds are extremely aggressive and invasive and are very difficult to control. Leafy spurge is a perennial and has an extensive root system. The seed capsules dry and shoot the seeds eight feet in all directions. The extensive underground root system is a spreading threat at the same time. Leafy spurge is capable of making an identical new plant far away from the mother plant. The root system goes down about 30 feet. It can grow in a crack in a rock, or on the side of a cottonwood tree about 20 feet off the ground. What is the solution to leafy spurge in the cottonwood tree? Goats! Leafy spurge is almost the goats' favorite food and they do climb trees.

The goats seek out leafy spurge and eat it because they like it. When you look at a leafy spurge plant after the goats have grazed it, you can see where they have bitten the flower off, releasing a white latex substance. This white latex is supposed to make people go blind, cause rashes on hands, and cause blister on horses' feet. A little girl

(con't on page 21)

20



June 2002

Successfully Controlling Noxious Weeds with Goats

(con't from page 20)

was sent to the hospital with third degree burns from getting the white latex on her legs. This substance is the reason why cattle and horses will not eat it. Cattle will not even walk into the patches of leafy spurge. For some reason, it is the reason why goats eat it, and love it.

Christmas Tree Recycling

A great way for communities to recycle Christmas trees is to have people pay \$2 to have goats recycle them. Any money generated could then be used for weed control in that community the following summer.

The goats love Christmas trees, they clean them up, stripping all the bark off. The remaining tree trunk can be sold to a youth group, to be cut, packaged, and sold as firewood. So the recycling keeps going on and on through all levels of insects, birds, people, and different groups of people.

¹ Sedivec, K. et al. 1995. *Controlling Leafy Spurge Using Goats and Sheep*. North Dakota State University Extension Service, Fargo, North Dakota.

Editor's Note: See "A Living Fire' in New Mexico" on page 10 for more information on Lani's goats in New Mexico.

In Memoriam: Bob Langsenkamp, First Quivira Member

Leading conservationist and dedicated public servant Bob Langsenkamp died March 1. "He was the best kind of human being you'd ever want to know," said former State Land Commissioner and Mayor of Albuquerque, Jim Baca.

A native of Indianapolis, Bob moved to Silver City in 1975, where he worked for the Wilderness Society. After Bob helped found the New Mexico Conservation Voters' Alliance in 1982, Baca hired Bob to work for the New Mexico State Land Office. Bob eventually became Deputy Commissioner, serving under both Baca and current Commissioner, Ray Powell. He retired from state work in 1995.

But he didn't stop working on environmental issues. In 1997, he founded the New Mexico Wilderness Alliance and worked at the Valle Grande Grass Bank on Rowe Mesa.

Bill deBuys, chairman of the Board of Trustees for the Valles Caldera National Preserve worked closely with Bob at the Grass Bank.

"This may be the funniest man on Earth and an absolute joy to be around," said deBuys who gave the eulogy at Bob's memorial service in Santa Fe. "Really, he was an important New Mexican. He contributed to conservation issues in this state for 30 years."

In addition, Bob was a Boy Scout leader, active in his church, and volunteered with the Sierra Club.

Bob was The Quivira Coalition's first dues-paying member, and we worked with him on Grass Bank issues. He will be sorely missed by all who knew him.

Typical of Bob, he continued to give to New Mexico even after his death. His organs were donated to needy recipients, including the husband of a State Land Office co-worker.

Second Annual Conference

We are busily planning our Second Annual Conference on "Healthy Land, Healthy People," which will be held January 16-18, 2003 at the Hilton in Albuquerque. (Wait! Didn't we just finish the 1st conference?)

We will have more information in our next newsletter, but we just wanted to alert you so that you can put us on your calendar.

We have also moved the venue, to accommodate more people—so you'd better show up!

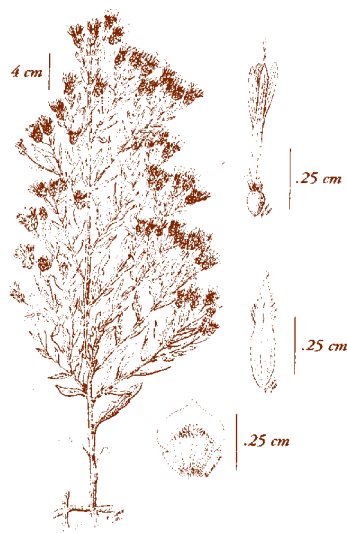
21



June 2002

A Personal Journey

(con't from page 5)



Russian knapweed.

Abandoning Preconceptions

In the process of trying to address the issue of noxious weeds in several different contexts, I have had to abandon a number of my own preconceptions regarding their management and the role people play in that management. I now realize that managing noxious weeds is as challenging from its social dimension as it is from its ecological perspective. There is a lot of mythology surrounding noxious weeds and their management. By mythology, I mean those insidious half-truths that are partially correct but, when universally applied, don't hold together. I am probably as guilty of falling into this trap as anybody. It is certainly hard to separate solid facts from partial truths when it comes to noxious weed management. It is easy to hang onto a myth if it appeals to our basic belief system. Reality, however, has a funny way of exposing the missing pieces and contradictions over time. Perhaps the biggest uncertainty, and the area most susceptible to myth creation, is the evaluation of consequences both of doing nothing and of various management alternatives. Are noxious weeds really that big a problem? Some consider them out of control already, others enjoy the pretty flowers. Will a control method that works well in one place also work in another location with very different ecological conditions? It is certainly difficult to sort out.

Conley's Pearls of Wisdom

At The Quivira Coalition's conference this past winter, Tony Malmberg gave me one of those pearls of wisdom that makes life a little easier to deal with. He said, "If you're not an academic, then real life is legitimate research." What follows is not based on research or even the noxious weed literature. (What I have found since I first took the Noxious Weed

Short Course is that there are probably more opinions regarding noxious weed management than there are hard facts.) It has come from working with my own noxious weeds and trying to help others deal with theirs. Out of this tangle, I have come to believe a few things about noxious weeds and people that I will try to explain below.

Noxious weeds are bad...but... If you value native diversity, local agriculture, and healthy ecosystems, then there is not much positive to say about noxious weeds. Noxious weeds are aggressive and use a variety of mechanisms to out-compete natives. They typically provide poor habitat for local species. Yes, some do have lovely flowers but I have difficulty seeing past the damage they do to appreciate their beauty.

This issue gets foggy, though, when faced with the question, "Which is worse, weeds or bare ground?" I was faced with this question last summer when in the field with Kirk Gadzia. We were looking at a large arroyo bank covered with a monoculture of Canada thistle. My first comment was, "We have to eradicate these weeds!" Kirk's response was, "At least something is growing there to keep the bank from washing away."

Maybe the answer lies somewhere in the middle. Yes, they do stabilize slopes so perhaps it's not a good idea to strip them off all at once. Perhaps they can be used as transitional cover until a more permanent, native solution can be established. If you can keep them from going to seed and spreading to adjoining uninfested areas then they probably won't do much damage. The potential problem, however, is that once a monoculture of noxious weeds has established itself, it can be difficult to get anything else to compete. Many nox-

(con't on page 23)

22



June 2002

ious weeds are designated so because of their ability to prevent other species from germinating and surviving.

Managing noxious weeds is a long-term task for land managers. We are not going to eradicate every noxious weed out there. It's comparable to trying to eliminate every germ in the environment. Like germs, we learn to live with them by developing immune systems. The stronger our immune system, the less often we get sick. Likewise with noxious weeds: The healthier the land is, the less likely it will become heavily infested.

We can make the task of managing weeds easier over time or harder. One of my neighbors routinely surveys for weeds on his ranch. No population has more than a season to establish itself before he has identified it and controlled it. Dealing with weeds is an integral part of his management. Likewise, I spend 30 minutes to an hour twice a year pulling stragglers on my two-acre patch to control any new growth. You can make the job easier over time by early alert and quick response or you can wait until the problem gets big enough to really worry about. By then, you are in for some tough times. Our neighbors in Wyoming and Montana have learned this lesson the hard way.

Just killing weeds is not the solution. Certainly a common response to noxious weed infestations is to solve the problem by simply killing the weed. To quote the great political philosopher A. Schwarzenegger, "If it's alive, I can kill it." My first response to finding Russian knapweed on my own land was to find better, more efficient ways to kill it. Thank heavens for workshops that remind us of the basic questions. The one that I was recently brought back to reality with was:

"What is your goal in getting rid of your weeds?"

The answer seemed so obvi-

ous. "Why, to kill them of course."

"And what will you replace them with? If you do nothing, nature will likely replace the void with something similar or even something worse."

There is certainly evidence of areas being cleared of Russian knapweed only to be infested with hoary cress.

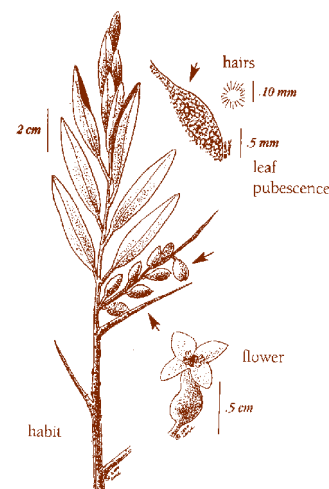
The spread of noxious weeds is often a symptom of larger problems with the land. These problems might include excessive disturbance, overgrazing, and high erosion, i.e., poor health. Overly disturbed ground can result from road building (for highways or ranch roads), OHV use, mining, oil and gas exploration, or repeated overgrazing. Any large or persistent area of bare ground is a potential site for noxious weed infestation. For some areas, like oil and gas locations, the ground will be continually disturbed until the well runs dry and the area is revegetated. Using herbicides in such circumstances may be the only recourse. On rangeland, however, the most sustainable and long-term way to control weeds is to restore the land to healthy functioning—and then to monitor it forever.

Maintaining healthy land and managing noxious weeds takes time. Noxious weeds on private or public land are something else land managers have to take into consideration in addition to everything else they have to do. Like Duke Philips (see article on page 1), most ranchers would go out of business if all they did was manage noxious weeds. Time is perhaps our most valuable and at the same time scarcest resource. Many of us have jobs, families, and a million other responsibilities. Many of the ranchers I have worked with have at least one other job in addition to ranch duties.

(con't on page 24)

A Personal Journey

(con't from page 22)



Russian olive.



A Personal Journey

(con't from page 23)

Available Soon: "Can Goats Save the West?"

On May 7th, The Quivira Coalition hosted a workshop entitled "Can Goats Save the West?" featuring Lani Lamming. Her lecture, and extensive answers to questions from the fifty-member audience, will be made available in the near future.

For more information, contact The Quivira Coalition at (505) 820-2544.

Unfortunately, noxious weeds—or seriously degraded rangeland—won't wait until everything else is done. Waiting until weeds get to be a problem means the solution is going to be harder and more costly to address. Like any other land management activity, time and money invested can take years or decades to see a return. If you are restoring land, it probably took years or decades for the problem to develop in the first place so it is not out of line for it to take years or even decades to correct.

Most weeds require repeated effort to successfully control them. Drawing from the wisdom of A. Schwarzenegger once again, the three little words, "I'll be back," apply well to noxious weeds. Some noxious weeds like Russian knapweed can have both Spring and Fall growth and seed production. Once you think the infestation is gone, it's not a bad idea to monitor for another five years or longer.

Prevention is the best long-term solution. Saving a dollar or two on a bale of hay may seem like a good decision at first but not if that hay is infested with Russian knapweed or hoary cress seeds. Far too many of the weed infestations I have encountered were started by feed purchased from weed infested areas. When patches of hoary cress, Russian knapweed, and perennial pepperweed start to appear around barns, corrals, and feeding areas it doesn't take a genius to identify the source. Prevention isn't very glamorous but it certainly is the cheapest and most effective method of keeping weeds under control.

There is no silver bullet. Integrated Vegetation Management is a term we are likely to hear more about. Its premise is based on the hard lesson that no single method of management has proven to be completely successful in the long-term

control of noxious weeds. As I mentioned earlier, my real goal in managing noxious weeds turned out to be broader than just killing weeds, even though I may not have realized it when first trying to solve the problem. If our goal is healthy land, then using the many tools of restoration is likely to get us farther in the long run than just killing weeds.

I personally like the idea of controlled grazing, using goats, sheep, and cattle for weed control because they integrate control and restoration at the same time. While reducing the viability of the weeds themselves, they also manage the seed load, till the soil, and create the right conditions for competition to thrive. While it may seem that it is taking longer to kill the weeds this way than by just spraying them with herbicides, you are likely to achieve the long-term goal of restoration more quickly.

Conclusion

We all have biases built into our management paradigms. Biases about appropriate tools, about our understanding and assessment of the consequences of management actions, and tradeoffs are an integral part of our decisionmaking. With these biases, it is difficult to even approach something that appears to be rational decision making. Obscurity and confusion seem to come hand in hand with complex problems. Decisions about the management of noxious weeds will likely occur in the context of a host of environmental issues such as biodiversity, rangeland health, the role of grazing, and human health effects. There are certainly multiple perspectives and emerging conflicts about noxious weeds and their management. Those who approach this issue with clear goals and an open mind are most likely to find a management approach that works.



Mike hails originally from Abilene, Texas, though over the years he has lived in western New Mexico, northern and southern Arizona, and central Wyoming. In 1989, his family moved to Lincoln, New Mexico, so Mike's dad could become the head of the range department for the Cloudcroft District of the U.S. Forest Service.

In other words, Mike is no stranger to the variety of Southwestern landscapes, the nitty-gritty of livestock production, or the fierce emotions involved in the grazing debate. The Cloudcroft district has been especially contentious, with ranchers and environmentalists going at it recently. "My dad's always in court," says Mike with his easy chuckle, "and it drives him crazy."

In fact, it was Mike's dad, Rick, a regular reader of our newsletter, who alerted Mike to the advertisement for a new staff position. He encouraged Mike to apply. "He loves The Quivira Coalition," says Mike, "He thinks you guys are the best hope out there for bringing people together."

Mike brings a useful "ag" perspective to our staff. After graduating from high school in 1998, where he spent his spare time cowboying on ranches and judging livestock shows instead of playing football, Mike attended New Mexico State University, where he earned a B.S. in Animal Science. Among his many teachers was Jim Winder's brother, John ("We won't hold that against him," said Jim when he heard the news).

Upon graduation, Mike proceeded directly to the "real world" of modern industrial agriculture. He took a good-paying job with the mammoth Seaborg corporation in Kansas, working in a huge Contained Animal Feeding Operation (CAFO) that housed 300,000 sows. "It was bad," says Mike with a disgusted chuckle,

"real bad. The pollution was a big problem. I hated it."

Mike quit Seaborg and went back to NMSU for a graduate degree in agricultural economics. Once there, he concentrated on computers and discovered, like many of his generation, that he had a natural affinity for the technology. However, the "real world" rose up again, in the form of bills that needed to be paid, so Mike took another job in agriculture, this time with Orkin, the pesticide conglomerate.

Mike's job with Orkin was to provide "vector control" at numerous dairy operations in eastern New Mexico—in other words, kill flies with pesticides. Lots of pesticides. It didn't take long for Mike to become disillusioned, again. Something was very wrong with the whole system, he realized. We were fighting nature, and losing. "It got to the point," says Mike, "that when I pulled up in my truck at a dairy, a huge cloud of flies would see me and take off. I'm serious! I could see them fly away."

When the contractor he worked for went out of business, Mike decided to try something new, his experience with modern agriculture having not quite lived up to his expectations. So he started making cowboy hats and selling them over the Internet, to Russians, among others. He still owns his own company, Thievin' Vaqueros (www.thievinvaqueros.com).

Although profitable, selling hats over the Internet is a lonely business, so Mike began to look for "real" work again. That's when he heard about the Quivira Coalition. We're not sure how "real" we are, compared to Seaborg or Orkin, but we're pleased that Mike chose to work with us.

From the Founders

(con't from page 2)

Welcome, Ernie and Mike!



Mike Newmon and Madeleine Wells in front of our office, at 1411 Second St. in Santa Fe. Madeleine is a regular volunteer with us, and a huge help. Another great volunteer, Sheryl Russell, is not pictured. Thanks, everyone!

25



June 2002

The Far Horizon

(con't from page 9)

"We need to move from a strategy of defending bits and pieces of nature to recognizing the links between a healthy community and a healthy environment."

ally mean? We are certainly not "protecting" wildlands from global climate change, acid rain, carbon dioxide buildup, or even the rapid spread of noxious weeds. So, what do we accomplish by "protecting" additional landscapes without addressing the social and economic forces that are threatening them in the first place?

Spencer Beebe, former vice president of The Nature Conservancy, puts it this way: "The old environmental movement is over, in a sense. That movement arose as a defense against the industrial economy and to save some precious pieces of the landscape from human industrial endeavor. It was appropriate. But we need now to move to a new era where we find synergy and sympathy between the built and natural environments. We need to move from a strategy of defending bits and pieces of nature to recognizing the links between a healthy community and a healthy environment."

This means a whole new strategy based on answering a vital question: how do we live sustainably in our native landscapes? How do we address the causes of problems, not simply fixing symptoms, with the goal of creating a sustainable mode of existence, in harmony with nature, and do so quickly, before our landscapes deteriorate further?

Healing

My native landscape is the American West. I've surveyed its deserts, climbed its mountains, backpacked its national parks, traveled its dusty backroads, photographed its frontiers, lived in its

cities, and met a countless variety of its citizens. I have also read its literature, studied its history, poured over its maps, drunk its beer, and, most recently, worked to help shape its future.

All of this reading, thinking, meeting, and traveling has led me to one inescapable conclusion: the West needs more restoration, not more protection.

By "restoration" I mean restoring to good working order what Aldo Leopold called the "land mechanism"—stable soil, diverse plant communities, functioning watersheds. As an activity it should be humble and modest, working one acre at a time, with the goal of creating a regenerative system on the land.

My definition of "restoration" also includes people and their economies, both urban and rural. Fundamentally, it means restoring hope. I like Wendell Berry's definition of sustainable agriculture: "That which depletes neither soil nor people." We desperately need to stop depleting our land and our people in the American West.

Restoration should be an act of healing. It is a useful metaphor. As with a sick patient, land can be restored to full health under the caring guidance of knowledgeable professionals trained to the latest methods, including a land health version of homeopathy. Under this paradigm, land protection becomes useful as a form of preventive medicine.

Rather than simply continue to treat symptoms, a land health paradigm can direct us to

(con't on page 27)

26



June 2002

The Far Horizon

(con't from page 26)

causes of problems. Healing can be collaborative, democratic, and life-changing, with the long-term goal of a sustainable, fruitful, and hopeful future.

Fortunately, the land health paradigm is not just wishful thinking. I see it in operation almost every day, from collaborative wa-

tershed groups to the rise of progressive ranching techniques. The recent re-emergence of goats as a tool for controlling noxious weeds is a good illustration of the land health movement at work. "Using nature to heal nature" could be the motto of these efforts, and the movement as a whole.

All of these developments give me hope for the future, and reassure me that my children could still inherit a world rich in ecological and cultural diversity. If I can contribute to this patrimony in some small way, I'll consider my job as a parent to have been successful.



The Quivira Coalition Website

Our website contains information on current events as well as old issues of the newsletter.

You can visit us online at www.quiviracoalition.org

Balancing Weeds and Ranching

(con't from page 17)

Nature is where everything starts and where everything ends. This one fact colors everything that we do in our business. "Weeds" are simply a manifestation of what we don't want to happen. It is dangerous getting carried away chasing them off. If we keep our focus on what we desire, on our dreams, on our fantasies, and if we attempt to work together toward our mutual goals instead of focusing on our differences, then the weeds will drop out of the landscape of our land and business, and out of our lives. And that will leave more time to enjoy the things we like, which, for me, is the tranquility that comes with living and working with land and animals on a ranch.

JOIN US!

Would you like to join The Quivira Coalition? We rely heavily on donations from our members. If you would like to help us continue our educational mission, please send your contribution with this form to our Santa Fe address.

Yes! I would like to join The Quivira Coalition. I can contribute:

___\$15

___\$30

___\$50

___\$100

___Other

Contributions entitle you to receive this newsletter, notices of upcoming events and publications, and preference in enrollment for our Outdoor Classrooms, Conferences, and Workshops.

Thank You!

27



June 2002

UPCOMING EVENTS

Outdoor Classrooms on Rangeland Health

with Kirk Gadzia

Saturday-Sunday, July 13-14 at the CS Ranch near Cimarron

Saturday-Sunday, August 24-25 at Sid Goodloe's Carrizo Valley Ranch near Capitan

Saturday-Sunday, September 14-15 at the Williams Ranch, Quemado

Resource Management 101 for Landowners and Conservationists

with Jim Winder at his Lake Valley Ranch

Saturday, July 27

Hands-on Riparian Restoration Workshops

with Bill Zeedyk

Friday-Saturday, July 12-13 Location to be determined

Saturday-Sunday, August 3-4 Comanche Creek, Valle Vidal (if the Carson Forest re-opens!)

Friday-Saturday, August 9-10 Location to be determined

Saturday-Sunday, October 5-6, Cuba

New Ranch Workshop, with Kirk Gadzia

co-sponsored by the Rio Puerco Management Committee

Saturday, August 10, Cuba

Roads Workshop, with Bill Zeedyk

co-sponsored by the New Mexico Watershed Coalition and

Rio Puerco Management Committee

September 20-21, Cuba

Editor's Note: Between the dry weather and the forests being closed, we are having to postpone and reschedule a number of events, or move them to different locations. Check our website for up-to-the-minute details. We will also be sending out monthly flyers with the latest information.



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