Fates and footprints| Yellowstone grizzly bears and the Endangered Species Act

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The University of Montana

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FATES AND FOOTPRINTS

-YELLOWSTONE GRIZZLY BEARS
AND THE ENDANGERED SPECIES ACT-

by

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B.S. Montana State University, 2003

B.A. Montana State University, 1999

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This series explores the current debate over removing Yellowstone ecosystem’s grizzly bears from the list of endangered species.

The grizzly bear was listed and protected by the Endangered Species Act in 1975, just two years after President Nixon created the law. Now, 30 years later, some people say the bears no longer need ESA protection because they’ve met required population, distribution and reproduction targets.

Steps toward delisting the grizzly began years ago, but they have been met with fierce resistance from delisting opponents who say the plans fall short of fully protecting the bears.

Defenders of delisting, however, say that the "Conservation Strategy," years in the making, will uphold the management and protection of the grizzlies.

Now, in 2006, the federal government will decide whether to delist Yellowstone grizzlies.

The first article in this series tracks a day in the life of a radio-collared grizzly bear. Using narrative based on the bear’s real GPS coordinates, the article answers how the life of a grizzly may change once the bears are removed from the Endangered Species list. It also introduces all issues within series.

The second article explores the methods of science used to count and monitor the species, and it frames the scientific debate.

The third article shows the levels of social tolerance toward the griz in the Greater Yellowstone Ecosystem, when it’s OK to kill a bear, and the specific changes people will notice when the bear is delisted.

The next article highlights one example of this tolerance in Wyoming’s bear country.

The last article shows the debate over how the success of the Yellowstone bears, or delisting, may affect the future of the Endangered Species Act.

Other species have been delisted from the Endangered Species Act without a fight, but not the Yellowstone grizzlies.

They're the most studied grizzly population in the world. And aside from a population in northwest Montana, they're the last grizzly strongholds in the lower 48 states.

They now have become unwitting players in a struggle between science, politics, and business that, at its core, revolves around territory coveted by both humans and grizzlies alike.
Preface

My interest in the grizzly bear and its future began with a footprint. Her print.

It was a six-inch spread indentation behind four claw marks in the sand, and it paralleled my running shoe’s neatly pressed outline on the north shore of Alaska’s Lake Beverly.

I found it the next morning when I returned for my daily run along the beach, fog lifting off the lake as a loon family called back and forth to each other in eerie, echoing coos. I stopped short. It was only then that I realized I was intruding.

Just a wall tent and the jet boat’s mechanic roar separated me from her, a female grizzly bear, and her three yearling cubs during my summer spent working at a fly fishing camp in southwest Alaska’s Wood Tikchik State Park.

The grizzly family frequented the lakeshore all summer, like neighbors politely tolerating us strange newcomers to their block. We avoided them and they us, but we knew of each other’s constant presence, and we shared the lake.

I fished the water for the same food the grizzly family did.

I watched the three cubs grow, from tiny fur balls tagging behind their mother in June to strong young bears twice the size in September. I watched their mother gain weight all summer as she gorged on spawning salmon that made a journey by the hundreds up tiny tributaries of the lake.

Just once did a grizzly make its mark on anything human that summer, and I guess it was out of curiosity to see if the yellow inflatable kayak tasted any good.

That summer sparked a humility within me- a deep respect for this incredible species, Ursus arctos horribilus.

If I could live beside them peacefully, couldn’t others, too?
Alaskan brown bears, although much more abundant than the Yellowstone grizzly population, may someday face the problems their species faces in the lower 48. With human development, resource extraction and population growth, it’s just a matter of time, I think.

The Yellowstone bears are the most studied population in the world. Over time, they have become an icon of the West, a litmus test for the wildness of the Rockies.

Some even say that grizzly bears are the “canary in the mine,” and their survival will indicate the success or the preservation of the nation’s true wilderness.

Others say grizzly bears can’t and should not coexist with people.

The current controversy surrounding the grizzly bear involves valuable territory, the Yellowstone ecosystem—a place I called my backyard for nearly 10 years. I wondered what the future holds for these grizzly bears, and how people in my region will make the decisions that determine the bears’ fate.

How will bears be affected by these man-made decisions?

How has the species influenced people on an individual level?

After researching, interviewing and shadowing people who spend their lives studying or sharing space with bears, I discovered much about bears, but even more about people.

After all, while only on rare and unfortunate occasions is the reverse true, people will determine the fate of grizzly bears.
Thanks

I’d like to thank my parents, Karen and Fred Hollon and Dick McLandress, for unconditional love and encouragement throughout my life; my husband, Todd Moen, for patience and for listening to my million rough drafts; my grandparents, Charles and Glenda Clark, for their support; my committee members, Professor Dennis Swibold for the editor’s guiding light and enthusiasm for Yellowstone’s grizzly bears, Visiting Professor Michael Downs for his interest, suggestions and occasional wildlife cartoon to keep work fun, and Dr. Daniel Pletscher for his time and expertise on grizzly bears; Dean Jerry Brown for discussions about fly fishing and Yellowstone’s grizzly bears; Shellie Nelson for her way with words; Brooke Hewes for being a friend and reliable running partner in times of stress; the wine and whine journalism crew for the occasional night off; Paula Beswick of the Greater Yellowstone Coalition for showing me how fun a profession preserving Yellowstone can be; Shannon Podruzny for introducing me to the life of bear researchers and teaching me the wonders of hiking Grand Teton’s backcountry in search of bear scat; the Joe Durso fund for covering $500 worth of expenses; the Kim Williams Fellowship: the interviewees who devoted their time to this project; the dozens of people whose life’s work is to live beside, to protect or to manage grizzly bears; and the signers of the Endangered Species Act, who gave the bears the chance to survive in Yellowstone.
“If we are to succeed in saving grizzlies with all their wildness, we will not do it by changing bears to meet our needs. For the first time in our relatively short history on this planet, we will have to be the ones to bend.”

Doug Peacock in *Grizzly Years*, 1990
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Coordinates of Survival: A Day in the Life of a Bear
She is lightning.

Grizzly bear Number 474 streaks through the pines, her thick muscles stretching then contracting beneath her dark chocolate-colored fur, a blur of black-green-black-green, and down the valley she runs, toward the promising scent blowing from willow alders along the river.

On this mid-August afternoon, in this valley bordering Wyoming’s Grand Teton National Park and Idaho’s Targhee National Forest, the grizzly’s speed and sharp senses will lead to a kill. Today, she will feast on elk calf, the tender meat like sweet caramel melting between her tremendous jaws.

Tomorrow will take her elsewhere. Her hunger honors no boundaries, heeds no government signs. It often overrides her fear of men and machines.

Two months ago – and for the second time in a year – it led her into a tubular steel trap set by federal scientists, who fit the 7-year-old bear with a radio collar allowing them to track her movements precisely. They know where she makes her daybeds, they know what she eats and when, they know if she mates or if she has cubs, and they know, come winter, where she will make her den. Those precise coordinates and data help scientists monitor her species’ survival.

In the years ahead, the bear’s survival and her success at passing on her genes, may hinge as much on her ability to avoid humans as it does on her talent for finding food. And that drive for food, for survival, could someday lead the grizzly to her death.

* * *
Grizzly bear Number 474 has enjoyed the protection of the federal Endangered Species Act all of her life.

Since 1975, when her species was first listed as endangered, the Yellowstone bear population has grown nearly 300 percent.

Today, she is one of an estimated 600 grizzly bears living in the greater Yellowstone ecosystem, an area of some 6 million acres, spanning three states, two national parks and six national forests.

Of the five other grizzly populations in the lower 48 states, only Yellowstone’s bears prove to be thriving to the extent that federal authorities believe they no longer need the government’s full protection.

Last fall, the U.S. Department of Interior recommended the bears be “delisted,” meaning that enough grizzly bears deemed necessary for their continued survival live in the Yellowstone area.

Upon delisting, the states of Idaho, Montana and Wyoming will gain control of the more than 200 grizzlies, more than one-third the entire population, that often wander and live outside the 6-million acre swath of critical bear country called the Primary Conservation Area.

Wyoming already has plans for a grizzly bear hunting season, with a lottery allowing hunters to kill upwards of five grizzlies in designated areas with a surplus of bears. Montana and Idaho expect to allow some hunting, too.

To ensure the species’ survival, federal scientists have determined the number of bear deaths the population can sustain without crashing. Under delisting, each state will be assigned a percentage of the “allowable mortality.”
Wyoming, home to nearly half of the Yellowstone region’s grizzlies, will receive half of that number.

Hunters are not the only danger facing Number 474 and other bears living on the margins of the ecosystem. Operating within the mortality guidelines, the states would also have more latitude to kill bears that threaten humans or their property and livestock.

Number 474’s world could become more dangerous.

* * *

Some factors remain in her favor, however.

As a breeding-age female whose success is especially crucial to the population’s future, she’s more likely to catch a break if she gets into trouble with humans.

Research also shows that females more often stick to known territory. In the two years the Interagency Grizzly Bear Study Team has tracked her movements, she has roamed the same area, about 275 square miles.

In that time, researchers have come to know their bear well.

“She’s got a feisty character,” says ecologist Shannon Podruzny, leader of the interagency study team that tracked Number 474 last summer in the Tetons.

Unlike other females caught in culvert traps to be collared and studied, Number 474 growls when she’s under anesthesia.

She has been captured and collared twice, once in September 2004 and again in July 2005. Her collar will stay on until fall 2006, when it is supposed to unlock and drop off at an exact, pre-programmed time.
By then, she will have provided researchers an intimate insight into grizzly behavior and perhaps a glimpse into what the bears’ future holds.

Last summer, Podruzny and her study team workers also mapped coordinates for four other grizzlies, including a big male, Number 398, who frequents the riverbanks adjacent to 474’s range.

“Bears usually have a floating territory,” said Podruzny. “A female can avoid other bears, more dominant bears, by shifting her home range a little bit.”

The bears generally avoided each other, but the study team’s interest was instantly piqued when the data showed the two bears occupying the exact same coordinates for about three or fours days in June.

“We think that Number 474 and Number 398 were a mating pair this summer,” said Podruzny. “Maybe there will be cubs in the spring.”

Shifts in territory also mean bears are ranging farther to find stable food sources and suitable mates because some areas are threatened by development such as road building.

According to research by bear biologist Dave Mattson, adult female grizzlies have been displaced from about 16 percent of the total available habitat in Yellowstone by roads and developments.

Critics of delisting worry that there’s not enough protected territory for the bears.

Federal scientists insist there is. The bears’ thriving population, they say, speaks for itself.

***
Number 474 makes the most of her opportunities.

It's now about 7 p.m. on the same August evening, according to the data streaming to a satellite from the radio on her collar.

In less than one hour, the 325-pound sow has covered more than two miles of steep, thicketed terrain, crisscrossed with foot-deep deadfall from the 1988 Yellowstone fires. After a meal of elk calf along the Snake River, she moves in search of more food.

Shuffling swiftly, her head swoops as she feeds on the abundant sedge tussocks.

She ambles up the hillside, away from the river in search of the candy sweet, Pez-sized whortleberries that stain her paws and muzzle a deep-fuscia.

Next she finds a patch of ripe huckleberries. She strips the bushes bare; their red-purple veined leaves are torn and broken. Later, their seeds pepper the scat she leaves behind.

* * *

Her movements are clear to the trackers who follow her trail of paw prints, hair and broken foliage.

Elk is the staple of spring and early summer diet, but Yellowstone’s short berry season is important, too.

In September and early October, the final crucial months before hibernation, Number 474 will turn her attention to raiding caches of whitebark pine cones, carefully gathered and buried like treasure by red squirrels.

Each sappy cone contains the calories of a Hershey bar. The cones’ seeds account for nearly 70 percent of Number 474’s fall diet.
But each whitebark pine grows only 17 cones a year, and some years are better than others.

This fall, researchers suspect Number 474 found fewer seeds because the trees suffered attacks by mountain pine beetles and a disease called blister rust. Together, they have killed thousands of Yellowstone trees.

Government scientists say the opportunistic bears will easily find sources of food.

But critics of delisting fear the decline of whitebark pine will force bears to leave their safe havens in search of food.

They recall that grizzly numbers dropped dangerously when park officials began destroying “problem bears,” the ones that were conditioned to associate dinner with people, after the disappearance of a once-major food source: Yellowstone’s garbage dumps.

* * *

The August sun has dropped below the horizon, and Number 474 heads back to the river after an evening of grazing.

The GPS reads coordinates at 10 p.m., and darkness begins to envelope the valley. Number 474 finds a bedding ground under a pine on the forested island surrounded by the riverbank’s willows and marshland. She tosses and turns all night long, even crosses the rolling water in a nocturnal quest for another bed.

She rests unsoundly, as usual.

Maybe she smells the lingering scent of hikers and canoeists who passed by earlier in the day, a mere hundred meters from her bedding ground.
She may be nervous because the scene of her latest elk kill lies a few feet from a well-traveled trail. Signs warned hikers of her presence, but she smells fresh boot tracks most every day each summer.

But there may be another reason for her unease. The clue lies in the fact that when she rests, she carefully makes three daybeds, one next to another.

***

“We think she may have had cubs with her earlier this spring, but they may not have made it,” said Podruzny.

Cubs have a 50-50 chance of surviving to adolescence. Many are eaten by starved male grizzly bears when they emerge from their winter dens. If infanticide does occur, the female griz may reproduce again sooner.

The statistics are crucial. Grizzlies have one of the slowest reproduction rates of all Rocky Mountain mammals. A female grizzly may be more than four years old before she has her first cubs.

Mating in the spring, a sow’s delayed gestation period allows the embryo to implant and begin growing in November. In the darkness of her winter den, she will likely give birth to three or fewer half-pound, hairless cubs in February.

Barring disaster, the cubs may stay by her side for two and half years while she teaches them the essentials of survival.

***
Early the next morning, Number 474 is up before the sunlight. Guided by her nose, she bolts up the mountainside, and with the speed of a racehorse she heads into the heart of the Primary Conservation Area.

In the future, her sense of direction may prove fateful.

If her supply of food runs low, or if a dominant male pushes her out of her range, she could easily leave the safe haven of the Primary Conservation Area and cross into national forest lands traversed by roads and dotted with livestock allotments, where cattle or sheep could tempt her into a relatively easy meal.

* * *

A map of the area abutting 474’s home range shows dozens of red dots, each indicating the times a bear has attacked livestock or frightened hunters or residents living on the forest’s fringe.

Today, livestock-eating grizzlies are usually relocated at least once, but if bears are delisted, state wildlife agencies, operating within the “allowable mortality,” may have less patience.

* * *

Like most grizzly bears, Number 474 tends to avoid people, if she can help it. By high noon, she is tucked into one of her three daybeds beneath pine trees above her river.

But come afternoon, she’s off in search of more berries or the sweet, acidic treat of ants in a rotten log.

Later, she’ll catch a whiff of elk across the valley.
An old adage says that if a pine tree falls in the forest, the eagle will see it, the deer will hear it, and the bear will smell it.

Just so. Number 474 might lift her nose into the air to study the scent of elk, which could be as far as seven miles away. Standing on her back legs, nearly 6 feet tall, she may pivot and lean toward the smell.

In a fluid twitch she is down on all fours, her head low beneath the lightly grizzled hump of her shoulders. Her massive front legs reach forward in a blur of dark color, propelling her toward her next meal.
Covering Grizzly Ground
It is a clear mid-August morning in Grand Teton National Park, perfect weather for downloading bears.

Ecologist Shannon Podruzny, wearing a sun-faded ball cap imprinted with the initials of the Interagency Grizzly Bear Study Team, will embark on a three-hour flight over the park.

Laptop tucked beneath one arm, her task is to plot a week's worth of coordinates for nine bears wearing GPS telemetry collars and wandering Wyoming's rugged northwest corner.

Her work is no walk in the park.

Podruzny's challenge is to track the footsteps of grizzly and black bears in the maze of trees and crags below, a mission all but impossible without the Space Age tools at her disposal.

As she flies over borderland dividing Grand Teton from Yellowstone Park, transmitters strapped to the necks of selected bears beam signals up through the treetops and into space, where they are transmitted via a satellite to a receiver on earth.

With a press of a button, Podruzny can download data for any bear that is in direct line with the receiver attached to the wing of her plane. Then, the coordinates for each bear find their way from the collar to Podruzny's computer.

The data from that August day eventually joined streams of information collected by other researchers and flowed into maps, reports and statistical models designed to answer the most crucial question facing the most studied population of grizzlies on earth: Can Yellowstone's grizzlies thrive without the full protection of the federal government?
By mid-November 2005, with snow already deep on the Tetons, the U.S. Interior Department used Podruzny’s and others’ work to recommend removing the bears from the list of threatened species protected by the Endangered Species Act.

“The science indicates that there are enough bears in the ecosystem to warrant delisting,” said Podruzny.

Critics worry there isn’t enough food or room for the bears. “Delisting,” they fear, is a premature reaction to political pressure from ranchers, developers and recreationists on the fringes of grizzly country.

However, Chris Servheen, the U.S. Fish and Wildlife Service official responsible for overseeing the recovery of Yellowstone grizzlies, is confident the data supplied by Podruzny and others proves the case.

"Delisting the Yellowstone grizzly bear is not a vote," he said. “It will be determined by science.”

New Science

It’s impossible to count every bear, but nobody seems to dispute federal researchers’ estimates that the Yellowstone grizzly population stands at more than 600, up from the estimated 200 bears that gained federal protection in 1975.

That key number comes from a statistical model developed last spring by mathematicians and scientists. Based on a number of actual sightings, a series of computer-run simulations estimate the probable number of grizzlies in the Yellowstone ecosystem.
The model also projects how many bears can die each year without hurting the overall population. Female bears with cubs — so crucial to the population’s survival — cannot comprise more than 30 percent of those deaths.

Under the new model, federal scientists estimate that there are about 1.4 times more bears living in the ecosystem than previously thought. Following this theory, there can be 1.4 times as many bear deaths without hurting the population’s odds for survival.

“These new numbers are pivotal for the future of the Yellowstone grizzly,” says Dr. Charles Schwartz, leader of the interagency Grizzly Bear Study Team for the past seven years.

While most everyone agrees that an accurate count and a population threshold are crucial, the real debate centers not on the number of bears but on whether the habitat can support them.

**How Much Room do the Bears Need?**

Federal researchers say Yellowstone’s grizzlies need 6 million acres.

Their plan for the bears’ future designates that much ground as a Primary Conservation Area, also known as the PCA. Within that area, which includes both Yellowstone and Grand Teton parks, they say grizzlies can find everything they need to sustain their current population.

But some critics say the bears need more space — at least another 1.7 million acres bordering the Primary Conservation Area, lands where roughly a third of the ecosystem’s grizzlies currently roam.
"We will admit that the Endangered Species Act has been successful in protecting the bears," said Louisa Willcox, director of the Natural Resources Defense Council's Wild Bears Project in Livingston, Mont.

“But it doesn't change our view that the grizzly bear habitat is not sufficient for de-listing,” said Willcox.

The organization, founded in 1970, is a national non-profit group of scientists, lawyers and environmental specialists dedicated to protecting public health and environment. It opposes delisting bears and aims to protect and restore grizzly habitat in the lower 48.

Willcox and others contend the federal government wants to manage Yellowstone bears on an ecological "island."

Instead, they say the government should not only protect all occupied habitat, but connect it to other ecosystems so bears can roam from one population to another to access seasonal foods, breed, escape natural disasters and steer clear of people.

"Major sources of grizzly bear nutrition are not secure," she said. "Oil and gas development, road building and private lands development are a huge threat to grizzly bear habitat."

According to the federal outline for how bears will be managed once delisted, a grizzly is only secure in its habitat if it can stay at least 500 meters away from a road.

Under these terms, Willcox worries that the security of bear habitat is hanging from a shoestring.
While the average male grizzly bear needs up to 1,300 square miles and females can require half that, both genders rely on wild areas that are free of roads, oil wells and subdivisions.

Meanwhile, one-third of the greater Yellowstone area’s grizzlies, about 200, have pushed out of the heart of the proposed PCA to live on fringes of land frequented by people.

Only a small fraction of this borderland is wilderness, leaving the majority open to public use. Half of that public land is subject to oil and gas development and timber cutting. Three-fourths of that land is open to road construction.

To the dismay of bear advocates, bears and people now share many of the same “last best” places.

The growing number of subdivisions around the region pose what critics believe may be the biggest threat to the bears’ survival. More people in the region will mean more contact with bears, and in such conflicts bears often - nearly always - lose.

There’s no question that population in the 20 counties surrounding Yellowstone is increasing dramatically. Montana’s Gallatin County grew by 34 percent between 1990 and 2000. Human-bear conflicts near the resort community of Big Sky are keeping Montana Fish, Wildlife and Park officials busier than ever.

In Wyoming, just outside Yellowstone’s east entrance near Cody, a new 155-home subdivision will sit directly in the place where bears live.

“The next big threat to bear and human health along the North Shoshone is this subdivision,” said Wyoming Game and Fish grizzly bear management officer Mark Bruscino.
Bruscino has been teaching residents of the small mountain community of Wapiti, Wyo., just a few miles east of the proposed development, to live safely around bears by doing such things as properly storing garbage. But he questions whether people moving in from outside Wyoming will be willing to adopt a bear-responsible lifestyle in griz country.

"Wyoming is, in most places, at full capacity for bears," he said. “At the same time, we continue to see more people and development.”

There are areas that can biologically sustain bear populations, he said, but which areas can socially sustain bears?

“Wyoming is, I’ll admit, not particularly tolerable of them,” he said. “More people means more human-bear encounters. That will inevitably be bad for both people and bears.”

Federal scientists, such as the study team’s Podruzny, agree with Bruscino. As the overlap of human and bear activity grows, people and bears will have to learn to live together.

“There will always be certain places on the fringes of the ecosystem that both bears and people use,” said Podruzny.

In her 12th season of tracking grizzlies in Yellowstone, she is certain the bears know when she’s on their trail, no matter the terrain. She thinks bears and people can learn to live with each other. In fact, they already coexist more often and better than we suspect, she said.
Is there enough food?

While federal officials say grizzly bear foods are secure enough, some environmental groups such as the Greater Yellowstone Coalition (GYC) in Bozeman, Montana, aren’t so sure.

Threats to prime food sources such as the whitebark pine and cutthroat trout, coupled with the proximity of developing subdivisions, oil and gas drilling and road building could put hungry grizzlies and people on a collision course, they say.

Any catastrophe affecting the food supply could force hungry bears to leave the relative safety of the Primary Conservation Area to find food.

Whitebark pine, growing in upper subalpine zones, is particularly susceptible to mountain pine beetles. The insects first attack lodgepole pines and then move to the whitebark pine, preferring larger trees over 80 years old.

Another threat to whitebark pine in Yellowstone is a pathogen called blister rust. It forms a sickly, strangling canker around the tree, preventing it from receiving nutrients from the top down and from reproducing.

Treetops with dead foliage dot the region’s forests in shades of brown and yellow like royal crowns proving the insects’ slow conquest.

In fact, a Forest Service study predicts that together beetles and blister rust frequency will increase with the warming trend and will take a toll on the whitebark pine in the next two decades by reducing the species by as much as 95 percent.

The whitebark cones are a crucial food source, especially in the fall when grizzly bears try to put on the pounds for winter. In the weeks before hibernation, the pine’s sappy, calorie-rich cones count for nearly 70 percent of the bears’ diet.
Rather than finding single cones, bears invade red squirrels’ winter stockpiles, called middens, which are usually buried by the hundreds near tree trunks under ground or in rotten logs.

One palm-size cone has more calories than a Hershey’s chocolate bar.

“Each seed has about 10 calories,” said Podruzny. “A cone can have about 50 seeds, so that’s a good 500-calorie snack.”

Podruzny has published several studies for the agency specifically focused on the whitebark pine and other bear foods in the ecosystem. She believes bears can survive periodic infestations like that of the pine beetle.

“It’s true that the pine beetle is attacking this species in certain areas, but it will not wipe out the bear population,” she said. Grizzly bears are “opportunistic,” and they will find other sources of food.

Servheen agreed that the bear population will withstand what he calls the “natural dips and rises” in whitebark pine availability.

“It’s like if you and I were told we could not eat cheeseburgers anymore,” he said. “Do you think we would starve? I don’t. We would, like grizzly bears, find another source of food.”

Another important bear food source is the army cutworm moth. These insects migrate north in early summer for only two months to escape the heat of their home in the southern Rockies of Arizona and New Mexico.

During June and July, grizzly bears feed on these big insects, which take refuge in high-elevation rocks during daylight. Grizzlies from all around climb to these elevations, usually above 10,000 feet, and each can feed on as many as 40,000 moths per day.
Equaling the calories of about 70 Snickers candy bars, a swarm of rock diving moths isn’t bad trail food for the hungry, mountain-climbing bears.

“We’ve taken fly-overs this year and seen as many as 20 grizzly bears at one moth site,” said Wyoming’s Bruscino.

This seasonal concentration of bears at moth sites is rare, but it’s similar to other famous concentrated food sources like Alaska’s salmon-spawning McNeil River.

Drought and forest fires could easily devastate the moths’ home habitat in the southern states, eliminating their migration and forcing the bears to range farther for food.

But, again, researchers are confident the opportunistic bears will find new sources of food.

**What about genetics?**

Those who oppose delisting also point to the concerns of geneticists, who worry that inbreeding among Yellowstone bears could cause disastrous loss of genetic diversity. If too many grizzlies share common genetic traits, they could be unusually vulnerable to a single, devastating disease for which they have no immunity.

Yellowstone bears have no territorial links to populations of free-roaming grizzlies elsewhere in North America.

Acknowledging the problem, the USFWS’ recovery plan calls for importing two grizzly bears per generation, or every 10 years, from other populations in North America to prevent inbreeding.
This solution doesn’t settle well with wildlife biologist Lance Craighead of the Craighead Environmental Research Institute. The group was founded in 1964 by his father, Dr. Frank C. Craighead, Jr., who pioneered the fields of conservation and wildlife research, particularly of grizzly bears in Yellowstone.

“The big problem with dropping in a couple bears, or transplanting them, is that it may not be very effective,” said Craighead.

Female grizzly bears rarely stray from where they are reared, he said, so they aren’t likely to adapt well to a new territory. Imported males may adapt better, but will still struggle to find a niche in a habitat already saturated with dominant bears.

In fact, a list of 269 scientists officially opposed delisting during the public comment period in a sign-on letter to Servheen. The scientists concluded: “We, the undersigned scientists believe that there are many reasons that the Yellowstone population is not biologically recovered and should not be removed from the list of threatened and endangered species.”

But federal scientists say the plan will work.

“We have seen this work in the past,” said Servheen, recalling the times bear management officers have relocated bears from one part of the ecosystem to another.

And while he concedes that the loss of genetic variability is a theoretical concern, he says government scientists will never “abandon” the species to suffer from inbreeding.

“In this day and age, there are few carnivorous populations that will be left without some ongoing conservation management,” he said. “We will always need and plan to have a level of ongoing conservation,” he said.
In fact, federal funds to the tune of $3.4 million will guarantee an ongoing, adaptive bear management plan in Yellowstone after bears are delisted.

“We will never allow the population to go below 500,” Servheen said.

**Study Team**

While the debate over delisting continues, the Interagency Grizzly Bear Study Team remains focused on the science at the heart of this matter.

"It's an ongoing program," said Schwartz of the IGBST. "It's the hub of the wheel, and the spokes. We have dozens and dozens of people involved in collection of data and monitoring the bear habitat."

And according to that science, bear habitat seems to be in good shape for the 500 bears they hope to sustain.

One of the team's projects this year is to determine the ways black bears and grizzly bears share habitat and interact. Using GPS coordinates, the team monitors where and what the bears are eating and what kind of terrain each prefers.

"We may be able to tell how changes in the supply of important foods, such as whitebark pine, might affect the dynamics between black and grizzly bears," said Schwartz.

They wonder how competition with black bears might affect grizzlies' chances for survival.

Do black bears have a better chance of survival? Does one species dominate the other? When do grizzly bears move closer to people and outside the park?
This information could then be used to help park management determine when and how bears should be managed in the park, particularly if they are removed from the ESA.

Podruzny plans to return to the Tetons next summer for her 13th season with the bears. She will also begin a new project to study cutthroat trout, another key grizzly food, in Yellowstone Lake.

The Yellowstone grizzly bear may be delisted, but not without debate. Many observers expect a shower of litigation will follow the federal government’s final decision.

Meanwhile, scientists like Podruzny steadily collect the numbers and habitat statistics they need, with laptops and hiking boots ready to go.

And although Podruzny believes full-heartedly in the science she has helped develop over the years, she questions how the pages will turn for Yellowstone grizzly bears in a future that will largely hinge on how the three states manage bears.

“I care about these bears,” she said. “Although the numbers say it’s time, I can’t be certain that delisting is the answer. I just don’t know.”
Living with Bears
His Carhartt jacket covered with the dust and manure of morning chores, Wyoming cattleman Albert Sommers sat church-pew straight in the office chair, his jaw clenched, and stared a hole through the state game official across the table.

His gnarled, chapped hand gripped a list of 52 cattle killed on the Upper Green River last year, presumably by grizzly bears.

“If it were up to me, I’d give no bear a second chance. They’d be dead on the first offense,” he told Wyoming Game and Fish officer Brian DeBolt.

The grazing association Sommers heads represents 13 ranches, which together run up to 7,598 cattle in Wyoming’s Upper Green River drainage and on Union Pass, an area that is also home to more than 12 known radio-collared grizzlies. About 10 percent of Yellowstone’s grizzly bears wear collars. Therefore, this drainage may in fact be home to many more.

The group has held its permit to graze the Upper Green since 1916, and Sommers’ family was running cattle on the land before it became the Bridger-Teton National Forest, bordering Yellowstone and Grand Teton national parks.

His forefathers faced few of the grizzly problems he faces today.

“I’m sick of the bureaucracy surrounding the bear,” Sommers told DeBolt at the Game and Fish headquarters in Pinedale last fall, where they met to discuss the impacts of wolf and grizzly predation on his association’s livestock. “A bear’s just doing what a bear does - he’s making a living. And at times he’s making a living on my piece of property.”

DeBolt nodded. He understood the rancher’s frustration. He’d like more freedom to deal with bad bears, too.
The Yellowstone area’s grizzly bears have been protected by the federal Endangered Species Act since 1975. By law, Sommers and ranchers in Montana, Idaho and Wyoming cannot dispatch a cattle-killer as their forefathers did: with a well-aimed rifle slug and the official approval from local authorities.

Today they must contact a Wyoming Game and Fish officer or one of the U.S. Fish and Wildlife Service “riders,” who will take the matter up the chain of command.

Because grizzlies are a threatened species, every decision to destroy a problem bear must eventually come from one man: Chris Servheen, U.S. Fish and Wildlife Service’s bear recovery coordinator, who lives hundreds of miles away in Missoula, Montana.

But if Yellowstone bears are delisted, state wildlife officials in Wyoming, Idaho and Montana would gain more freedom to decide whether to relocate or destroy grizzlies that threaten livestock and people. They may even allow grizzly hunting as a tool to keep the bears under control.

Today, a bear can only be killed if it presents a persistent threat to the safety of people and livestock, but with delisting, the circumstances for killing a grizzly may widen.

**Livestock Depredation**

Under the Endangered Species Act, Yellowstone grizzly bears have a designated recovery zone called the Primary Conservation Area, 6 million acres of land that includes two national parks and six national forests.

Upon delisting, Idaho, Montana and Wyoming will manage the bears that live on national forest land beyond park borders.
Each state is responsible for its own strategy for managing bears on livestock allotments, public and private lands, and on national forest lands.

The burden will fall heaviest on Wyoming. Of the estimated 600 grizzly bears that live in the Yellowstone ecosystem, nearly half are in Wyoming. Of the six forests within the PCA, Wyoming’s Shoshone National Forest has the most habitat suitable for grizzlies, about 1.2 million acres.

For Cody rancher Tom Bales, who has lost 25 head of cattle in the last six years, that means trouble.

“A good grizzly bear is up in the mountains, away from people, just being a bear. But now, they’re getting conditioned to eating out of the pen, that’s what I’m afraid of,” said Bales.

A third generation rancher, he runs 325 head on 17,000 acres of Forest Service, BLM and deeded land. His pastures extend across the South Fork of the Shoshone River, from Carter Mountain on the eastern edge of the Washakie Wilderness to Sheep Mountain just north.

For him, the danger is close to home and personal.

The first few photos of his weathered black album show his daughter’s 4-H lambs, splayed and bloody, lying in a heap of stained wool, protruding bones and half-eaten guts.

A grizzly sow that frequented his cattle ranch 22 miles south of Cody mauled and ate the lambs just 50 yards from his front door. His daughter found their remains as she went to feed them early one spring morning.

“Her scream, it will be in my mind forever,” Bales said.
From 1992 to 2002, Wyoming officials fielded 800 complaints about bear problems, most of them concerning livestock losses.

In response, the feds closed seven sheep allotments inside the PCA between 1998 and 2004. Ranchers have been encouraged to put special locks on grain sheds and to bury livestock carcasses at disposal sites far from their homes or corrals.

But bears still kill livestock, and when they do, ranchers like Bales are compensated by the Wyoming Game and Fish Department. Wyoming sets aside $500,000 a year for livestock depredations, and the reimbursements would continue if the grizzlies are de-listed.

But ranchers must prove the killer was a grizzly, and that’s not easy. Even if they can, there’s still a bear out there that may come back for more.

If government trappers manage to catch it, a first-time livestock killer is typically relocated to another part of the ecosystem. The policy is likely to continue under delisting, but a shortage of places to send bears may put more pressure on state managers to consider the most drastic option.

“Yellowstone Park is at full capacity.” said DeBolt. “They haven’t accepted a re-located bear in years.”

Nor are individual states eager to accept each other’s problem bears.

“I don’t think Idaho or Montana will accept any relocated bears from outside their states even after delisting,” said Mark Bruscino, Wyoming’s chief grizzly manager.

According to Idaho’s Fish and Game grizzly bear management plans, trapped bears will be relocated to bear inhabited areas within the state, the Caribou-Targhee National Forest comprising the majority of the Idaho’s biologically suitable habitat.
Montana Fish, Wildlife and Parks has a similar plan to relocate bears, and even to expand the bear habitat, in suitable areas of the seven southwest and south-central counties near Yellowstone Park (Carbon, Stillwater, Sweet Grass, Park, Gallatin, Madison and Beaverhead counties).

That means that each state will continue to either relocate problem bears in-state or kill them. Wyoming relocates its bears to the Sunlight Basin, an area north of Cody designated as part of the PCA.

But relocation doesn’t always work. Some grizzlies have been known to return to the scene of their kills within 48 hours, Wyoming’s DeBolt said.

Currently, a second offense for male bears usually marks them for death. Females may get another chance. But if bears are delisted, the state will have more authority to make those decisions.

Although he says state and federal officials have few disagreements, DeBolt describes the current policy as “ultra-conservative” in its efforts to maintain and increase the bear population in Wyoming. He looks forward to less bureaucracy and more flexibility in managing his state’s grizzlies.

Servheen understands.

“State agency workers, like Brian DeBolt or whoever, might feel like they have to call Daddy to ask for the car keys every time they have a bear,” said Servheen. “After delisting, they will be able to drive on their own.”

In practice, that means DeBolt and Bruscino won’t have to clear their decisions with Servheen. But each decision to kill a bear will still be weighed against federal guidelines for maintaining a thriving grizzly population in the region.
The Greater Yellowstone Coordinating Committee- a group including many of the scientists, biologists and federal officials who manage bears today- would hold states accountable after delisting.

“By no means will delisting give the state autonomy in managing the bear,” said Servheen. “We will continue to monitor (grizzlies) as we have for years, and we have $3.4 million to do so.”

Legal Bear Deaths

In preparation for delisting, scientists from the Interagency Grizzly Bear Study Team have developed a mortality threshold, which is the number of bears they believe can die each year without hurting the population.

According to their calculations, there must never be fewer than 500 bears in the greater Yellowstone ecosystem.

With an estimated 600 bears there now, they have set an annual allowable death rate of 9 percent for female grizzlies and 15 percent for males.

Each state would receive a portion of that number based on occupied habitat, and Wyoming, with the majority of bears on its land, would get nearly half of the allowable bear deaths – or about 50 bears per year.

Under that restriction, each state can decide what to do with its problem bears. Strategies may vary depending on where each state wants bears and where it does not.

According to Servheen, Montana wants to increase its bear population in the state’s seven-county bear habitat and Idaho wants to increase it in some areas, as well.
Wyoming may choose to allocate more bear deaths to areas like the Upper Green and North and South forks of the Shoshone River where livestock deaths have been relatively high.

But such decisions would also depend on the number of bear deaths caused by people other than bear managers.

Hunters in Bear Country

Elk hunters have always taken a toll on grizzlies roaming outside national parks.

A Forest Service study found that most of the 161 bear deaths on national forest land between 1975 and 2004 were blamed on poachers or on hunters who mistook grizzlies for black bears or shot grizzlies in self-defense.

“We average about two human injuries (from bears) per year in Wyoming,” said Bruscino. “Almost all of them are due to hunters.”

In such encounters, the bears usually lose.

In a typical accident in September 2005, a guide killed a sow grizzly who charged him and a bow hunter who had just killed an elk. The guide pulled out a pistol and shot the grizzly dead.

“To infer that the hunter was wrong makes me mad,” said Bruscino in response to the local news coverage following the accident. “He was doing everything right.”

Wildlife officials have to judge whether each killing was justifiable, but regardless of blame, every bear’s death counts against each state’s “allowable mortality.”

Inadvertent deaths could also put a crimp in state plans to allow a limited number of hunters to stalk the lower 48’s largest predator.
A Grizzly Bear Hunt

Idaho, Montana and Wyoming are each considering limited grizzly bear hunting as part of their management plans.

“In a perfect world, we might have hunters up there to target those bears that are prone to killing livestock,” said DeBolt. “The hunter could get a trophy, the property owner wouldn’t lose their livestock, the hunters and fishermen wouldn’t have to pay me to go deal with it,” he said.

Money to be made from hunting grizzlies could also give Wyoming residents more reason to support the bears’ preservation. It might even discourage poaching, DeBolt said.

Wyoming’s plans for a grizzly bear hunt, although not set in stone, are further developed than the other states’. Bruscino envisions a tightly controlled hunt. If the grizzly population can stand it, the state could hold a lottery for about five grizzly hunting licenses. A resident would pay $500 for a chance to bag a grizzly; a non-resident would pay $5,000.

“Many people come to me and say they oppose hunting bears because the animals are so beautiful,” said Bruscino. “Well, I think they are beautiful, too, and I personally don’t want to hunt them. But I do understand the value of hunting as a management tool.”

Ranchers might even find hunters tracking the same bears that lurk around their own livestock, but given the mortality threshold set by the federal government, cattleman Sommers isn’t encouraged.
“I don’t believe they will be able to remove enough bears to reduce bear density,” he said.

Social Acceptance

Just one valley north of Tom Bales’ ranch runs the North Fork of the Shoshone River. It rolls from Yellowstone Park eastward through Wapiti Valley, with an estimated population of 2,000 inhabitants, passing suburban developments and dude ranches and sprawling second homes, before meeting the Buffalo Bill Dam just outside the town of Cody.

The North Fork is bear country, but it’s become people country, as well.

Teresa Lineberger, originally from North Carolina, is one of the homeowners along the North Fork whose frequent encounters with grizzlies forecast the future for bears and people sharing common ground.

On her mantle is a picture, taken October 2002, of Lineberger holding a 50-pound grizzly cub that state wildlife officials trapped and tranquilized near her home.

The yearling cub cradled in her arms resembles a starry-eyed teddy bear with oversize paws and velvet black footpads. Trappers also caught the cub’s mother, who had been visiting Lineberger’s overloaded crab apple trees all summer.

Years later, with her eight-week old son in her arms, she recounted the day the grizzly sow and two cubs approached her fourth-grade daughter, Rachael, who was swinging outside near the crab apple tree.

Even after her call to the Game and Fish ended with the trapping and relocation of the grizzly family, she says she still loves bears. And although officials suggested she cut
down her enticing crab apple trees, she admits she loves the history they represent -- the years of successful growth and the occupation of her ranch- and refuses to remove them.

Homes such as hers dot the North Fork corridor and divide the land into quilted squares along the river, giving grizzly bears dozens of opportunities to graze on fruit trees, dig through gardens and get into garbage cans in search of easy calories.

In fact, the next most common cause of bear death behind human-caused hunting accidents is the attraction of bears to unnatural foods.

Wyoming’s bear manager Mark Bruscino worries about what he calls “food rewards” -- fruit trees, garbage cans, grain sheds and pet foods that attract bears.

“Grizzly bears eat just about anything,” he told a group of officials visiting for Gov. Dave Freudenthal’s natural resources tour last fall. “I’ve even seen one eat a snowmobile seat.”

Open space, bear food and habitat free of roads or homes are keys for grizzly survival. But as more people move into the fringes bordering the grizzlies’ safe haven, the number of conflicts between bears and people has sky rocketed, primarily in Wyoming and southwestern Montana.

“If people think they can coexist with bears, but they continue to develop Big Sky as they have been, they have something coming,” said Kevin Frye who works as Montana’s grizzly bear management officer in Bozeman. “It’s just impossible there.”

Yet Bruscino, with more than 16 years experience working for Wyoming Game and Fish, believes people can learn how to live with grizzlies. In fact, he and director Terry Cleveland started a program in 1991 called the Bear Wise Community to teach people how.
Most people living in Yellowstone’s fringes have a bear story to share. At the heart of these stories, a question resurfaces again and again: Can they really coexist with grizzlies?

If the Yellowstone grizzly bear is delisted and the states take more responsibility for managing the species, the answer to their question may lie in the willingness of humans to make accommodations.

“Killing bears is just one management tool,” said DeBolt. “Another tool that has been in place forever is good wildlife stewardship. People have bent over backwards to make so many concessions for the grizzly bear. That’s what it takes.”
Making the Grade in Bear Country
For most American school kids, the chance to see a grizzly bear wander across the playground falls right in between not-on-your-life and never-ever.

But at the Wapiti K-5 School, nestled along U.S. Highway 16 and equidistant from Yellowstone National Park and Cody, Wyo., a six-foot tall bear fence, made of thick wood poles and chain-link fencing, surrounds the playground exactly for that reason.

In 2002, just days after the barrier was erected, it proved its worth when the fence kept a bear from cutting through the playground during morning classes.

According to the Wapiti School principal, Betsy Sell, the grizzly bear skirted the perimeter of the fence, making its way around the school instead of crossing through its grounds.

“It’s really more for peace of mind,” said Sell.

The sightings of grizzly bears in this area have become too common for comfort, she said, and rather than be afraid of the bears, it’s time people in the Wapiti Valley learn how to live with them.

The valley sits just on the border of federally designated grizzly bear country, a 6-million-acre safety zone for Yellowstone’s grizzlies that includes two national parks and six national forests.

The clear water of Shoshone’s North Fork cuts through Wapiti Valley. Starting at the pine forested east entrance of Yellowstone Park, the river rolls eastward through steep, rocky canyons that gouge and drain the landscape and look like claw marks cutting toward the river’s vein of water. It passes through green patches of irrigated grasslands and dry rolling tussocks of the valley further east, halting only at the Buffalo Bill Dam in the wide-open plains near Cody.
Theodore Roosevelt once called this stretch the “most scenic 50 miles in America.”

Now, ranches and new log homes pepper the landscape, roads weave through canyons and cross the river as bridges, and farmland divides sporadically into geometric patterns.

Wapiti Valley’s rugged terrain has long been bear country, but it has quickly become man’s country, too.

A 155-home development will soon move in just a few miles from the school, and as more people populate this area each year, it could be a wildlife disaster in the making.

But Mark Bruscino, the state’s chief bear management officer who lives in nearby Cody, has faith in the residents’ ability to live peacefully with bears.

Bruscino and director of the Wyoming Game and Fish department Terry Cleveland started a program here in 1991 aimed at teaching community members how to live in bear country.

Called the Bear Wise Community, the program provides Wapiti Valley residents with tips on proper garbage storage and recommends certain types of landscaping to discourage bears.

“I’m proud to say that the people in Wapiti know, they really know, how to avoid conflicts with bears,” said Bruscino.

In the last few years, the program has given away more than 250 bear-proof garbage cans: old paint barrels with sealable lids that were donated to the effort.
With $120,000 acquired in grants from the state and from the U.S. Fish and Wildlife Service, Game and Fish has hired a person to work full-time to help residents come up with ideas for avoiding or discouraging bears.

Among other things, residents are considering putting electric fencing and bear-resistant grain and garbage containers in people’s yards.

The program also teaches farmers and cattle ranchers better ways to store their feed, lock their grain sheds and dispose of livestock carcasses to avoid attracting bears.

“We used to bury carcasses on our land, so Mark (Bruscino) turned it around and this year we can take them to the county dump,” said rancher Tom Bales who runs 325 head of cattle along the South Fork of the Shoshone.

Teresa Lineberger, mother of two children under 10, is a backcountry ranch outfitter who helps her husband, Ron, run the Double R Ranch from her home in the Wapiti Valley.

“Education is really the key here. Some of our neighbors might not think to bear-proof their garden or their garbage, but they should know it’s important here,” said Lineberger.

She regularly has run-ins with grizzly bears, but she accepts this as a part of life.

Her daughter attends the Wapiti School just a few miles downstream. Each day, the school bus drops her daughter at the end of the long dirt road, and Lineberger or her husband fetch her.

The K-5 school acts as the gathering point for community meetings and is the hub for Bruscino’s program.
In 2002 Bruscino helped organize the installment of the school’s burly bear fence, while the environmental group, Defenders of Wildlife, donated $2,600 to purchase supplies.

Wapiti School principal Betsy Sell credits the Bear Wise Community program for helping people learn better ways to avoid bears and to be smart in bear country.

Bruscino said that when he started the program years ago, he thought it might be possible to prevent all conflicts between bears and people. Now he’s more realistic.

“All we can do is try and manage, mitigate, prevent them where we can,” he said.

The Bear Wise concept began in Canada, and it has quickly spread to other areas where people and bears coexist.

“You’ve got to remember that grizzly bears live all over the northern hemisphere,” Bruscino told a group visiting the Wapiti School during Gov. Dave Freudenthal’s fall 2005 tour. Grizzly bears inhabit large parts of Russia, Scandinavia, Italy, France and Spain.

“We are not unique,” he said. “People do live with grizzly bears, and we can, too.”

But there are limits to what people are willing to do for bears.

Lineberger said one year she had the students from the Wapiti School come pick off the apples before they fell to rot on the ground and entice the bears. But this year she didn’t do so.

She refuses to cut down her bear-attracting crab apple trees. She loves bears, she says, but she loves her orchard, too.
“Bears are like fish jumping out of a basket here,” said Lineberger. “It’s thrilling to be able to walk out my back door and see a bear, but I’d cry if I had to dig up my two trees for them. You just can’t get anything to grow here.”
A Law in the Line of Fire
The Endangered Species Act, a 33-year-old law under sharp attack in Congress this spring, could use a success story, federal scientists say.

There’s no doubt the law kept Yellowstone’s grizzly bears from vanishing, as the region’s population has increased from 200 in 1975 to more than 600 today.

But now, according to federal scientists, it’s payback time.

The law desperately needs an image booster, a success story. And according to the federal scientist leading the bear recovery effort, Chris Servheen, delisting Yellowstone’s grizzly bears, *Ursus arctos horribilus*, would do the trick.

“This (delisting) goes way beyond bears,” said Servheen of the U.S. Fish and Wildlife Service. “It will be evidence that the ESA works as it is and that it can fix the problem.”

But not everyone agrees just how the decision to delist Yellowstone’s bears and to declare this species recovered will influence the image of the ESA.

Some say removing federal protections from the griz would be a mistake, proving the law isn’t keeping its promises.

**The ESA**

The Endangered Species Act was signed into law by President Richard Nixon in 1973, the same year the United States and North Vietnam signed the Paris Peace treaty. As one of the most popular environmental laws ever enacted, it has undergone only three minor changes since Yellowstone’s grizzlies were listed in 1975.
But, nearly 30 years later, separate proposals have emerged in Washington to remove the federal protection for grizzlies and phase-out the law that helped the species to recover.

Former Interior Secretary Gale Norton declared last fall that Yellowstone bears no longer need the law’s protections and should no longer be listed as one of the 1,869 threatened or endangered species. Meanwhile, the U.S. House of Representatives passed a bill recommended by the House Resources Committee that could reshape and eventually remove the law entirely.


If enacted into law, Pombo’s bill would make protecting species’ habitat on private land essentially voluntary by rewarding people if they choose to obey the “law.” It would also give the Secretary of Interior sole discretion to designate species habitat.

In addition, the bill could create a new and malleable definition of “best available science,” of which the new Secretary of Interior, possibly Idaho’s Dirk Kempthorne, would have complete jurisdiction. The secretary shares that authority now with the U.S. Fish and Wildlife Service, a division of the Interior Department, and NOAA’s National Marine Fisheries Service, a division of the Department of Commerce. This focus in power would give the government more leeway to judge whether the science actually supports delisting decisions.
Pombo’s bill would also require monetary compensation for property owners who are inhibited from using their land due to the presence of an endangered species. In addition, it would give local government more say in the listing and recovery process.

Most notably, the bill includes a “sunset provision” that would cause the ESA to expire in 2015, along with all related permits, licenses and reauthorizations.

Though few people believe Pombo’s bill can pass the Senate, the proposal reflects the Republican frustration that the ESA is more trouble than it’s worth.

**Pombo’s Bill**

Pombo’s bill passed the House 229-193 in September, with Republicans leading the majority.

Those who support the measure, such as Rep. Dennis Rehberg, R-Mont., and Chuck Cushman, executive director of the American Land Rights Association, say the changes would greatly improve the ESA by modernizing, updating and enhancing what they see as an old, broken law.

Cushman, who co-founded ALRA in 1978, represents the cattle growers, farmers, ranchers, miners and recreationists who seek to protect their rights to federal and private land.

“I’ve realized that the little guy, the small land owner or farmer, didn’t have a voice in the ESA,” said Cushman.

Under Pombo’s bill, ranchers, loggers and even outfitters prevented from using leased or private lands due to the presence of an endangered species would have more authority to claim reimbursement for lost income.
Cushman lists the inadequacies he sees in the ESA: After 32 years, the law has recovered only 15 of the more than 1,300 listed species, a 99.99 percent failure rate. Nine species have gone extinct under the ESA, and according to the U.S. Fish and Wildllife’s web site, 16 species have been erroneously listed because of false data.

But the list of those who oppose Pombo’s bill grows longer each week. Nearly 6,000 biologists signed a letter in mid-March 2006 urging senators to preserve scientific protections in the landmark law.

Organizations opposing Pombo’s bill include Defenders of Wildlife, which has helped reimburse many ranchers in the Greater Yellowstone Ecosystem for livestock depredations caused by grizzly bears, and the National Wildlife Federation, a group whose purpose is to protect species and species’ habitat.

In an analysis of Pombo’s bill, Defenders of Wildlife argues that the proposed changes would weaken and even gut the ESA by establishing unrealistic deadlines for scientific review of actions that may harm species.

The report says the bill would require taxpayers to pay developers and other special interests not to violate the law, and it would weaken the check-and-balance consultation process that protects threatened and endangered species and habitat from harmful projects.

The biologists’ letter opposing the bill even said the new law would severely weaken the role of science by allowing the Secretary of Interior to base delisting decisions on the “best available science.”
But the best argument against Pombo’s bill, according to Tom France of the Na­tional Wildlife Federation in Missoula, Mont., is that the current bill works, and the griz­zly bear revival in Yellowstone is strong evidence of that.

The grizzly bear, with its slow reproduction rate, high mortality rate and need for biologically sustainable and socially tolerable habitat, could be considered one of the most difficult species to save. Yet, federal scientists say, the law has done its job.

“If (delisting) is blocked, through litigation and hog-wash court action, then the result will be that people will say, ‘You know, no matter what we do under the ESA it isn’t good enough, so why even bother with the whole thing?’” said Servheen.

“Not delisting the Greater Yellowstone grizzly bear, when we’ve done so much to improve the population and habitat, is going to hurt the ESA even more by giving ammu­nition to those who want to ruin the law.” he added.

The Griz and the ESA

Meanwhile, environmentalists argue over whether delisting the grizzly bear is the best thing to do.

Some look at the ESA and see the need to bolster it with a success story. Others believe the kind of success delisting would endorse is no true success at all.

“If this (precedent) is set, why couldn’t any zoo population be successful under the ESA?” asked Doug Honnald, a Bozeman-based attorney of the environmental law firm Earth Justice, who has litigated environmental cases for more than 20 years.

Honnald isn’t alone in his opposition. Hundreds of scientists from all over the country have petitioned their opposition to delisting the Yellowstone grizzly as well.
Unlike many other species protected by the Endangered Species Act, Yellowstone grizzlies have an intact habitat, nearly 6 million acres, with the country’s first national park at its heart.

A charismatic icon of the West, the grizzly carries a reputation far greater and more vivid than most of the endangered species put together, according to Honnald. Dozens of organizations exist for the sole purpose of helping the griz, and the frequent “bear jams” of backed-up motorists who stop for bears in Yellowstone Park illustrate tourists’ infatuation with the species.

Therefore, said Honnald, the success of the grizzly cannot set an example for the other hundreds of species under the law. The grizzly bear is just too unique to signify an overall success for the law.

But it could signify a loss, he added.

The bears do not have a secure habitat, said Honnald, and delisting them now would only prove the ESA cannot fulfill its promises.

Not all conservationists agree. Tom France of the National Wildlife Federation in Missoula concedes that Yellowstone grizzly bears inspire a unique human interest. However, he said, the recovery of bears illustrates a great win for the ESA.

Unlike Honnald, France believes it is time to delist Yellowstone bears.

France doubts that Pombo’s bill will pass in Congress this year, regardless of the debate over delisting grizzlies. But he predicts the issue’s outcome will influence how people view the management of threatened animals for years.
“Success breeds success,” said France “This (delisting) models good feelings between the agencies for a recovery effort that will attract attention, and it will influence the management of other species.”

In the face of both Honnald’s concern and Pombo’s bill, Servheen also sees delisting as crucial to the ESA’s future.

“I don’t want to see the ESA damaged,” said Servheen. “I think it’s a very important law. If we can’t recover the Yellowstone bear with the existing ESA, then there’s really a problem with the law itself.”
Bibliography

Significant Interviews

Bales, Tom. Third generation cattle rancher on Shoshone River’s south fork. Personal interview at his ranch near Cody, Wyo. Sept. 27, 2005

Barber, Kim. Wildlife biologist, Shoshone National Forest. Phone interview Aug. 29, 2005

Bruscino, Mark. Chief Bear Conflict Manager, Wyoming Game and Fish Department. Phone interviews Aug. 24 and Sept. 2, 2005 and Feb. 20, 2006; email correspondence; personal interview at Wyoming Governor’s Natural Resources Tour in Cody and Wapiti Valley Sept. 27 and 28, 2005

Chartrand, Leon. Wyoming Game and Fish Bear Wise Community Planner. Phone interview Sept. 5, 2005. Personal interview at the Wyoming Game and Fish Department in Jackson Hole Sept. 28, 2005


DeBolt, Brian. Bear Management Officer, Wyoming Game and Fish Department. Phone interviews Sept. 6, 2005 and Mar. 22, 2006. Personal interview at the Wyoming Game and Fish Department in Pinedale Sept. 29, 2005

Frye, Kevin. Grizzly Bear Management/Research. Montana Fish, Wildlife and Parks. Phone interview Sept. 5, 2005. Personal interview at the Interagency Grizzly Bear Committee summer meeting in Gardiner, June 7 – 9, 2005

Honnald, Doug. Attorney, Earth Justice-Bozeman. Phone interview Nov. 29, 2005

Lineberger, Teresa. Land owner and Wapiti resident. Personal interview at her home in the Wapiti Valley, Wyo. Sept 27, 2005

Podruzny, Shannon. Ecologist, Interagency Grizzly Bear Study Team, Montana State University-Bozeman. Email correspondence; personal interview in the Grand Teton backcountry and at the team base camp on Jackson Lake Aug. 9 – 14, 2005

Schwartz, Charles. Leader, Interagency Grizzly Bear Study Team, Montana State University-Bozeman. Phone interview Mar. 15; email correspondence; personal interview at the Interagency Grizzly Bear Committee summer meeting in Gardiner, Mont. June 8, 2005.

Sell, Betsy. Principal, Wapiti School. Personal interview at the Wapiti School Sept. 26, 2005

Servheen, Chris. Grizzly Bear Recovery Coordinator, U.S. Fish and Wildlife Service. Email correspondence: personal interviews at the University of Montana April 25, 2005, at the Interagency Grizzly Bear Committee summer meeting in Gardiner, Mont. June 7, 2005 and at the Interagency Grizzly Bear Committee winter meeting in Missoula, Mont. Nov. 30, 2005
Sommers, Albert. President of the Upper Green River Cattle Association. Personal interview at
the Wyoming Game and Fish Department in Pinedale on Sept. 29, 2005

Willcox, Louisa. Director, Wild Bears Project, Natural Resources Defense Council. Email corre-
spondence: phone interviews May 6 and 8, 2005 and Nov. 29, 2005

Books

Brown, Gary. The Great Bear Almanac. New York: Lyons and Burford Publishers, 1993. This is
a classic almanac, with photos and a complete guide to all kinds of bears, not just the grizzly.

194, Chapter 12, The Grizzlies and the Juggernaut. The Craigheads in Bozeman, Dr. Jonkel from
the Great Bear Foundation in Missoula, and Chris Servheen from the Interagency Grizzly Bear
Research Subcommittee, all add to the data in this chapter about bear mortality.

Craighead, John et al. The Grizzly Bears of Yellowstone: their ecology in the Yellowstone eco-
bible. It has 500 pages of history, study methods, biology, habitat, population and long-term
management data, etc. It also has photos. The leading grizzly bear information written by the
most knowledgeable biologists in the field.

Read this book in a tent with a flashlight at numerous campsites in Yellowstone Park in the last 10
years, and it’s not only a book-full of riveting tales about bear attacks, but it educates the reader
on living and playing in bear country


Robbins, Jim. *Last Refuge: the environmental showdown in the American West*. New York: Harper Collins West, 1994. This is an analysis of environmentalism in Yellowstone. It’s an all-encompassing look at the GYE, and some of the key sources of info come from the non-profit organization, the Greater Yellowstone Coalition.

Schneider, Bill. *Where the Grizzly Walks*. Missoula: Mountain Press Publishing Co, 1977. Schneider was a federal ranger and acknowledges that his views differ from the agency’s. He wrote the book just two years after the bear was listed on the ESA, and his insight is essential reading.

**Selected Articles, Essays and Papers**


Crossen, Judith. “Effort under way to weaken Endangered Species Law;” *Reuters*. January 7, 2005. For the first time in decades, critics of the ESA including Richard Pombo, R-Calif., want to rewrite the law to “modernize and improve” it. The most controversial change is that the law
might require the “best use of science” rather than “best available science,” which would likely
delay the listing of a species.

www.openspaces.org. This is an extremely comprehensive history of the ESA - the progression
from 1973 to the “sound science” issue now that some people say will weaken the ESA. It’s
good, but long. Very informative and useful.

This is an article about Gardiner, Mont., and shows the Willcox- Servheen debate.

Godfrey, Liz. “Press Release: House Committee votes to weaken the ESA,” Endangered Species
Coalition. Talks about two acts that are hotly debated right now, the “Sound Science for Endan­
gered Species Act Planning Act,” (HR 1662) and “Critical Habitat Reform Act of 2003,” (HR
2933). This is written by the Endangered Species Coalition, but it links to official bills. It’s a
good, although not particularly balanced, piece of info.

Hagengruber, James. “Bush wants to double timber cut: Admin to revamp Endangered,” The
Spokesman Review. December 2004. This is Idaho-related issues and talks about Bush cutting
critical habitat for threatened and endangered salmon in the NW. Also, Bush in office and since
2000, he’s increased the amount of national forest acreage to wildfire prevention and prescribed
burns by four fold.

Club, Washington, D.C., Defenders of Wildlife. January 31, 2005. This is a state of the environ­
ment briefing that talks about the Bush administration’s effort to weaken the ESA. It lists some
interesting facts: Bush has listed the fewest number of species (eight) than any other president
and the Department of Defense has received exemptions from environmental laws, putting endangered species at risk. The environmental group, Defenders of Wildlife, released the article and their specific biases must not be ignored.


Willcox, Louisa. “Last Stand for the Grizzlies,” Jackson Hole Guide. November 28, 2001. She presents her stance on the debate, but also talks about the periphery towns just outside of the park and how they are the ones of concern- Jackson, Cooke City, Dubois, Cody and Gardiner.

Reports


“Wildlife Damage Claim Summary for FY05 with a 10-year History.” 


**Web Resources**

Defenders of Wildlife <www.defenders.org>

Headwaters News <www.headwatersnews.org>

Interagency Grizzly Bear Committee <www.fs.fed.us/r1/wildlife/igbc/>

Interagency Grizzly Bear Study Team  <www.nrmse.usgs.gov/research/igbst-home.htm

U.S. Fish and Wildlife Service, The Threatened and Endangered Species Act
<www.endangered.fws.gov/esa.html#Lnk04>