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PRYOR MOUNTAIN MUSTANGS: ON THE RANGE, OR ON THE BRINK?

On the Montana-Wyoming border, the future of a genetically unique herd of mustangs depends on collaboration between big government and local conservationists.

By

MONICA A. GOKEY

B.S. Marketing, Pennsylvania State University, State College, PA, 2007

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Approved by:

Sandy Ross, Dean of The Graduate School
Graduate School

Jule Banville, Chair
School of Journalism

Alison Perkins, Co-Chair
School of Journalism

Mark Hebblewhite, Co-Chair
Wildlife Biology Program

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“Pryor Mountain mustangs: On the range, or on the brink?”

On the Montana-Wyoming border, the future of a genetically unique herd of mustangs depends on collaboration between big government and local conservationists.

Chairperson: Jule Banville, School of Journalism

ABSTRACT

At the Pryor Mountain Wild Horse Range straddling the Montana-Wyoming border, the fate of a herd of mustangs rests with the Bureau of Land Management and local horse conservationists. Nationally, the two sides are generally pitted against each other in the ugly world of horse politics. But in the Pryors, advocates and government have forged a tenuous partnership. Both sides want to see healthy horses on healthy range.

And there could hardly be a better herd to benefit from such a truce. The Pryor Mountain mustangs have a unique genetic heritage at stake. The horses are some of the last surviving relics of an old-world horse lineage that dates back to the equines originally brought to the Americas by Spanish conquistadors. It’s a lineage on the cusp of being eclipsed in the wild.

ABOUT 30 MINUTES up Burnt Timber Ranch Road, Ginger Kathrens and Lauryn Wachs are stopped, binoculars out, zeroed in on a small group of horses grazing on the Pryor Mountain Wild Horse Range in southern Montana.

“That foal doesn’t have a mother,” Wachs says. She tromps through the snow to get a closer look at the band, whose patriarch is a dun stallion named Cappuccino. The foal was supposed to be with an entirely different family on the range, and how Cappuccino came to be a foster-dad for this young filly remains a mystery.

“The only reason this foal would be on her own is if her mother is injured or dead, or they somehow got separated,” Kathrens says.

Kathrens and Wachs head a Colorado-based mustang advocacy group called the Cloud Foundation. Its namesake is a Pryor Mountain band stallion Kathrens has filmed since his birth in the mid-1990s. If the Pryor Mountain herd is the Hollywood of mustangs – as it’s sometimes called – Cloud is its Matthew McConaughey, a gorgeous, studly blonde who’s a hit with the ladies, er, mares.

Kathrens first filmed Cloud as a wobbly colt, then as a bachelor, and on through his rise to become one of the most dominant harem-holding stallions in the Pryors. Her PBS documentaries, three in total, are a beautiful insider’s look at the social behaviors and intimacies of wild horses.

Between Kathrens’ films and advocacy work, the Pryor horses have been catapulted into fame with audiences beyond what you might expect. Cloud may be Kathrens’ film star, but his celebrity has endeared audiences to *all* the Pryor Mountain mustangs – which has furnished the herd with a dedicated cohort of passionate advocates.

And while horse politics have typically pitted advocates against government, there’s a tenuous partnership being forged in the Pryors. It’s one where the Bureau of Land Management is still periodically culling horses, and where local horse advocates co-exist with that plan. Both sides want to see healthy horses on healthy rangelands.

And there could hardly be a better herd to benefit from such a truce – the Pryor Mountain mustangs have a unique genetic heritage at stake. They are some of the last surviving relics of an old-world horse lineage that dates back to the early equines brought to the Americas by Spanish conquistadores. And it’s a lineage on the cusp of being eclipsed in the wild.

TEN WESTERN STATES are home to about 37,000 wild horses and burros, overseen by the BLM’s Wild Horse and Burro Program. The agency is simultaneously charged with protecting wild horse herds *and* controlling their population numbers – an agonizing dichotomy.

Because the horses running wild today are the progeny of domestic stock, mustangs are feral animals – not truly *wild* in the way that deer, elk and bison are wild. Management-wise, it puts horses in limbo.

Just one scrap of legislative protection – the 1971 Wild and Free-Roaming Horses and Burros Act – differentiates mustangs from other feral animals, like hogs and pythons, both of which have a bounty on their carcasses.

At the Pryor Mountain Wild Horse Range, a 38,000-acre allotment straddling the Montana-Wyoming border, the situation is rosy compared to other horse habitat in the West. The Pryors are managed *principally* for the horses. Most Western mustangs are tenants on land subject to the BLM’s multiple-use mandate, meaning they compete for resources on par with other interests like livestock grazing, oil

and gas development, recreation and so on.

However you feel about wild horses, there's something different about the horses in the Pryors. Many have black stripes on the backs of their legs and withers. And most are smaller than domestic stock, averaging around 14 hands high.

Before the advent of genetic testing, some thought these traits were indicative of inbreeding. But a closer look at the horses' genetic makeup showed a handful of rare markers that link them to some of the earliest horses brought to the Americas by Spanish conquistadores.

But because the horses came over 500 years ago, "they are an entirely different type of horse than they currently have in Spain," Dr. Phil Sponenberg explains from his office at Virginia Tech. Sponenberg is the equine world's expert on Spanish mustangs. And he's been involved with the Pryor horses since the 1990s.

Today, this unique lineage present in the Pryors is dubbed "colonial Spanish" or "old Spanish type" – but most people refer to them simply as Spanish mustangs.

"This type of horse has become quite rare and, in feral herds, extremely rare," Sponenberg explains. There are a handful of BLM-managed herd areas in the West where mustangs exhibit similarly unique genetics as the Pryor horses. But the Pryor horses are by far the best protected of those.

"The wild horse from which these come is extinct, and so the domestic and feral genetic biodiversity is all we have," Sponenberg says. "If we lose it, we lose it."

In other words, the Pryor horses are living history. How we preserve living history, it turns out, is a deceptively complicated matter.

AT THE SIDE OF the rugged 4x4 road bisecting the Pryors, Kathrens and Wachs make note of the motherless foal and head back up to "Sheryl" – the off-road utility vehicle they bought with a donation from Sheryl Crow. On the range, there are 20-odd horse family bands the Cloud Foundation regularly monitors.

"We keep tabs on the entire herd," Kathrens says. Which is a bit of an understatement.

Kathrens and her cohort of advocates are actually keeping tabs on mustang herds throughout the West. Her approach hasn't made her popular with everyone. But she's got the romantic notion of horses on her side.

"To the American public, mustangs are a symbol," says Kathrens. "And symbols are important, particularly in times when you get down..."

"Literally dozens of times that I've been on the mountain I've had total strangers walk up to me and tell me this is the best day of their life," she adds.

But they're not just symbols to Kathrens; They're a wildlife species with a bona fide claim to resources and protection – a major point of contention between horse advocates and land managers, who sometimes see mustangs more like beloved national pets.

Continuing up Burnt Timber Ranch Road, Sheryl gurgles and whirrs up a steep pitch before shuddering to a stop at an abandoned mine site. Off to the right is a light-colored horse standing

calmly with his family.

“It’s Cloud,” Kathrens confirms after consulting her binoculars. Kathrens waves every time she sees the 18-year old band stallion, just to let him know it’s her.

Wachs unloads the camera equipment and the two women make their way down to where Cloud’s family is lazing. Everyone’s quiet, and the sound of cornmeal-like snow ricocheting off waterproof jackets is interrupted only by the periodic crunch of hooves on snow crust. The horses amble over to a mineral lick and Kathrens’ camera is focused in.

“This is so exciting for me,” she says quietly. “This is footage I don’t have yet.”

One of Cloud’s mares, Feldspar, licks at the reddish-brown enclave like it’s a dirt lollipop. Kathrens explains that mineral nutrients are particularly important to pregnant and nursing mares. Just as Feldspar’s foal comes up to suckle, the mare kicks him away. “She’s pregnant,” Kathrens says, excitement bubbling to the surface. Kicking at her own foal meant Feldspar was weaning him to save precious resources for the baby gestating in her belly.

“If you hang out with wild horses very much, what is so readily apparent is the complex nature of their relationships with each other within the family unit,” she says.

And it’s true. Kathrens has something to offer on nearly every individual horse – their personality, whether they’re a flirt or a reliable mate, a strict parent or not. These horses are strikingly similar to people in that way.

MATT DILLON TRIES to stay out of horse politics. But it’s not always easy. Unlike the Hollywood actor he shares a name with, Dillon is not a man of a thousand [chiseled] faces – he’s a pretty straightforward guy.

Dillon, 30, is an environmental specialist at the local mining company. What he does on the side though, is to keep track of the Pryor herd’s genetics in a way that’s so meticulous, so thorough, that he’s the BLM’s go-to source of information when it comes time to remove these horses from the range.

Driving up the Pryors in his green SUV, Dillon is wearing jeans, a Carhartt jacket and a baseball cap. He could pass for a rancher until his two small dogs, one with a bow in her hair, enter the picture.

Dillon got involved with the Pryor horses through his parents who, at one point, were coming up to the range just about every weekend.

The citizen advocacy movement to protect these mustangs has deep local roots reaching back to the 1960s, when the BLM formally sought to eradicate the horses. The herd was saved in large part due to the efforts of a widowed rancher’s wife and a local reverend.

The reverend asked Dillon’s mom to design a school lesson about the horses for classrooms nationwide. His family was hooked. Dillon can still remember the reverend telling him, “a hobby isn’t worth having unless it consumes you.”

About five years ago, you could fairly call Matt consumed. He was the director of the Pryor Mountain Wild Mustang Center, the modern incarnation of the local group dedicated to preserving the Pryor mustangs. Under Dillon’s leadership, the Mustang Center started taking the herd’s genetics seriously. They also started collaborating in earnest with the BLM – something relatively unheard of in the us-

versus-them world of horse politics.

About 45 minutes up the mountain, Dillon's wife spots horses off to the right and he parks it to go the rest of the way on foot.

A stunning bay stallion with an ink-black mane slowly walks into view. "That's Doc," Dillon says. Behind Doc is his family, two mares and a yearling. Doc is a good example of Dillon's handiwork.

"As far as genetics goes, Doc is important to the herd because he's the only offspring of his mom, and his mom is part of a really small bloodline," he explains.

Dillon keeps a meticulous family tree of the horses. He can generally tell you who is related to whom and whether a horse's parents are still on the range (Doc's mother, for example, is one of the oldest mares). His records go back more than three decades.

"The management at the time had general ideas on breeding and husbandry," Dillon says. "That's why I can take my project back so far is because they kept really detailed records – the horses were treated like livestock."

What Dillon means is that the Pryor horses, early on, were managed for certain traits – like color, conformation, etc. In the wild, nature selects for the traits that best equip an animal for survival, but when humans are involved, they generally choose the traits that best meet their needs – a practice dubbed selective breeding.

At the dawn of the BLM's Wild Horse and Burro program in the 1970s, it was the norm to move horses among ranges to try and improve the overall quality of mustangs.

For example, in Dillon's records, he has note of a "Rock Springs stallion" – a horse likely brought to the Pryors from the BLM's equine holding facility in Rock Springs, Wyo. Introducing new genetics into the herd was probably beneficial in some regard, but it also steered the herd away from its historical norm.

"The herd was managed for grulla and duns – those weren't the majority in the 1970s, but today they're the majority," Dillon says. Grulla and dun are colors typically associated with the colonial Spanish horses and so they were purposefully selected for to improve the herd's resemblance to such a unique breed.

Today, when horse removals are necessary to prevent overgrazing of the range, it's still humans who are making the final yay-or-nay decisions on who stays and who goes. (Purists might argue that this is still selective breeding because humans are ultimately deciding which horses will be around to procreate.)

But whereas past removal decisions might have been steered by subtle motives to keep certain colors or physiques on the range, nowadays Dillon's project is aimed at one thing: preventing genetic loss from the herd.

It's hard to put your thumb on the value of preserving genetic diversity. Imagine you have an attic full of junk. A lot of it is probably worthless, junk in the truest sense. But maybe there's an item that could net you \$10,000 on "Antiques Roadshow," – assuming you can find a buyer who values it that much. With genetics, it's hard to pinpoint the value of what you're hanging on to and what is being lost. But more biodiversity is generally understood to be better, safer. Later on down the road, you may actually find that \$10,000 treasure hiding in your attic – and for the Pryor horses, perhaps there will come a

time when their unique genetic heritage becomes a competitive advantage for survival.

Is it possible that time is already here? Biologically it may be hard to ascribe value to the Pryor herd's rare Spanish genetics. But in a human world, the Pryor horses represent a tangible link to history. And the rarity of their Spanish heritage is certainly attractive to some.

DILLON DOESN'T have the final word in which horses stay and which go – that burden still sits with the Bureau of Land Management. Jared Bybee is the BLM's Wild Horse and Burro specialist for the Pryor Mountains – and it can be a tough job.

Bybee joined the ranks of the BLM's field office in Billings office six years ago after working with the agency's Wild Horse and Burro program in his home state of Nevada. The two states couldn't be more different, mustang-wise.

More than half of all the wild horses in the American West live in Nevada. "Horses in Montana are viewed as a novelty," Bybee says. And while the 135 to 145 Pryor Mountain mustangs are a drop in the bucket against Nevada's 18,000-plus, the Pryor horses each have a name, personality and human fan club.

"The primary reason people use [the Pryors] is to recreate and see wild horses," Bybee says. There is one paved road through the southern part of the horse range, but two 4x4 roads bisect the more rugged parts. That kind of accessibility has been pivotal in putting horse enthusiasts in touch with their mustangs. And Bybee has been quick to embrace the horse fans as sources of reliable data about the horses. The collaborative relationship is still in its early stages, but both sides seem committed to making it work.

Bybee, for his part, is still hesitant to talk much about the Pryor horse people, but a lot of those folks are effusive about Bybee. By and large, they sing his praises.

"The big turn-around came with Jared," says Matt Dillon about when the BLM stopped being enemy *numero uno* in the eyes of the horse crowd. "Jared was more open. He'd always keep us in the loop – obviously there are no secrets in the Pryors – he wasn't holding back anything."

That open stream of dialogue between government agency and local conservationists was the seed of an increasingly positive relationship. Dillon, for one, says he doesn't hesitate to call Jared if he sees something new going on with the horses. Other Pryor horse advocates say the same.

But Bybee also has to be the bad guy from time to time, typically when it comes time to make the final call on removing those horses the BLM has determined the range can no longer sustain.

"Anytime you remove animals, it's always controversial," Bybee says. Just about every BLM roundup of Pryor horses in the last 10 years has earned the agency a lawsuit, and a handful of those have come from Ginger Kathrens and the Cloud Foundation. But Bybee doesn't take it personally, noting that it's pretty normal for his organization's ideas to be kick-boxed around the ring of public discussion.

"That's what we do as a public agency, put actions out there – and everyone has a right to be a part of the process and comment," Bybee says. "That's just how the process is designed."

But the process in the Pryors now involves this collaboration between Bybee and Dillon. They use a tiering scheme, where candidates for removal are placed into a hierarchy based on how common their genetics are.

Horses in the first tier of removal priority have multiple siblings of identical parentage on the range. Horses in the second tier may have one sibling on the range or they may come from a small bloodline. While horses in the third tier are unusual, and removal might mean the end of a genetic line. At the last roundup, Bybee used this framework as a guideline to determine which horses stayed and which had to go.

“The horse community is really working with us to ensure our management actions aren’t going to necessarily be deleterious to the herd in the long run,” Bybee says.

Some might be surprised to learn that Bybee is a mustang owner himself. It goes against the grain of what many perceive about the BLM: the horses are a thorn in the agency’s side. Horse advocate Ginger Kathrens is quick to say not all BLM employees think negatively of mustangs, “but unfortunately, the majority who manage the horses don’t have much empathy for animals. And they also don’t have the appreciation of them that the American public has.”

But Bybee says he’s one of many. “I think the public would be surprised how many people in the Wild Horse and Burro program actually have a wild horse or a burro that they’ve adopted.”

At the horse auction following last summer’s roundup in the Pryors, Bybee and his mustang were corralling the Pryor horses, fresh off the range, from their holding pens into the bidding arena. Bybee is an excellent horseman. The only clue to his horse’s wild origins was the freeze-brand on its neck (a trademark tattoo of all BLM mustangs taken off the range).

Bybee explains that his horse is a rescue mustang (not from the Pryors) that had come back to the BLM with a hoof infection. After keeping the horse at his own place and doctoring the infection, Bybee says the animal became attached to him. Around the same time, it struck out with other potential adopters. His mustang has an original, yet spectacularly uncreative name.

“I just call him Wild Horse,” Bybee says.

MATT DILLON ASCENDS a small hill. The snow is up to his shins in some places. From the top looking down, Doc’s family seems to have wandered into the periphery of another grazing family band.

Doc and the other stallion approach each other and defecate over one another’s droppings, each trying to make their scent linger on top. Both stallions sniff at the growing stud pile, nostrils flaring with every whiff.

One of them suddenly lets out a shrill scream. Doc raises his head sharply and the two stallions lock shoulders, each pressing itself against the other in a struggle for dominance.

As abrupt as it starts, the two stallions spin on their heels and part ways, each headed back to his mares.

Dillon explains the encounter as the stallions’ way of saying to each other, “Hey, I’m here with my family and I don’t want trouble. Keep your distance.” Dillon notes that scruffs like this one are more common during the spring mating season.

An average of 7 inches of precipitation per year nourish the sparse plant life in the Pryor Mountains. In January, the landscape is mostly brown with patches of white snow. Dillon explains how moisture is the single most limiting factor for the horses – in years with poor precipitation, forage generally suffers

accordingly, as do the horses.

“In historic times, if the range got overgrazed, the horses could go someplace else,” Dillon says. And he’s right; horses are remarkably ambulatory – it’s a struggle to catch up to more horses spotted from afar.

The Pryor Mountain Wild Horse Range is fenced in on three sides, with the Big Horn Canyon as the fourth, natural barrier.

Horses can no longer flee to proverbial greener pastures if their range gets overgrazed – and it’s been this way since the 1970s. It’s a similar story elsewhere in the West. The idea that “free-roaming” horses live in the American West is a half-truth – horses live on parcels of fenced off rangeland (very big ones, in many cases).

So the BLM purposefully manages herd sizes at a number the ranges can handle, not unlike ranchers manage livestock.

“It’s not realistic to think the horses can self-manage themselves here on the range,” Dillon says, pointing out that the range boundaries are artificial to begin with.

“It’s so dry that if the range gets overgrazed, it’s going to be slow to recover,” he says. Overgrazing the range is a bit like running up a debt on a credit card – the problem gets worse the longer it’s left unmitigated.

The lushness of the range (or lack thereof) is one thing that’s often misrepresented to outsiders in Dillon’s point of view.

“It’s easy for someone out East to be told, ‘BLM is taking away green pastures from the horses’, but this is the reality,” he says, looking out over the range. He points to a buckskin stallion and his mare. “Look at Chino, just milling around, looking for those little bits of grass peeking up over the snow and nibbling on those.” It’s a harsh environment to eke out a living.

Four years ago, a controversial roundup thrust the Pryor horses into the national spotlight – despite the positive relationship between most local horse advocates and the BLM.

“The 2009 gather wasn’t just a gather because we had a lot of horses on the range, which we did,” Dillon explains. “I think it also became a battleground that pitted the national BLM office against horse advocates.” Dillon rattles off a list of government personnel who were sent to the roundup to make sure it went smoothly.

The BLM was adamant it needed to remove horses to safeguard the condition of the range. Advocates wanted the horses to be left alone, and had successfully delayed the roundup in court. They’d also garnered thousands of signatures in opposition, mostly from people who’d never seen the range.

Many advocates flew out to the roundup under the impression they were taking a stand for the horses in good faith. “It was kind of unfair to them,” Dillon says. “A lot of those people came out here all fired up. When they saw the reality, they were like, ‘Well, this isn’t what I thought was going on out here.’”

Dillon is hardly the first person to raise an eyebrow at some of the propaganda disseminated by advocacy groups.

But the harsh reality is there’s no easy solution for managing America’s mustangs in a way that

doesn't overtax the land, and the Pryors are no exception.

The tension between the BLM and advocates is necessary in a way – it puts equal weight behind the horses and their government custodians. That tug-of-war is arguably what pushed protective legislation through Congress for the horses in the 1970s, and today it still remains a check to agency authority.

Looking forward, Dillon is confident that conservationists need to work *with* the BLM to do what's best for the horses. But it's a tough sell to many in the advocacy community who feel their purpose is best served as agency watchdogs.

THE AUCTIONEER INTRODUCES a young mare named Krystal. It's late summer and the BLM has been pulling horses off the range for six weeks. Forty-five Pryor Mountain mustangs are being offered for sale here.

"Two-year old blue roan filly, Krystal, I believe this is Cloud's daughter," he says, which elicits a round of groaning and "no's" from the crowd.

He chuckles and shrugs his shoulders. Someone in the audience yells out Krystal's correct dam and sire. "Anyway she's a 2-year-old blue roan," he says, and the bidding begins.

Who'll bid-me one and a quarter, one and a quarter, one and a quarter? Yeah, I got one and a quarter! Anyone want to bid-me one-fifty? One-fifty? One-fifty.....

The Pryor horses are named like hurricane seasons, and most of the horses up for adoption are in the J, K and L cohort – 1- to 3-year-olds.

To watch these horses get auctioned is to watch Matt Dillon's genealogy project at work. Horses like Judith, Kelly and Lander are going home with human owners, while Juniper, Kindra and London stay on the range – their genetics deemed more important to the diversity of the herd than the horses moving in and out of the auction ring.

A healthy chunk of potential buyers in the crowd are somehow connected to the Cloud Foundation. Much of the unintended work the advocacy group does is to ensure no Pryor horse ever goes into the BLM's long-term holding system, or to slaughter.

After the first round of bidding, several horses are left without bids. A Cloud Foundation board member steps in to adopt nine mustangs, which are trucked out East to continue life at a mustang preserve in Virginia.

Months after the sale, Dillon mentions how pivotal the Cloud Foundation was in finding good homes for the Pryor horses that day in September 2012.

"Not all those horses would've been adopted had it not been for Ginger [Kathrens] and her friends coming in – they had to work hard for that," Dillon says. It's an uncomfortable truth, that even the most famous of America's mustangs aren't a hot-button item for adoption.

Kathrens wants to see an end to roundups in the Pryors, which would mean an end to auctions like this one. "What these horses value most is their freedom and their families," she says, noting that they lose both every time horses are removed from the range.

In the long run, it would mean restoring predators to help manage the horse population naturally. But in the meantime, it means relying more heavily on fertility control to keep herd growth at bay.

In April of 2013, the Cloud Foundation released a proposal calling for increased fertility control in the Pryors. The BLM is currently soliciting public comment on the plan.

It's a serious change of tune for the foundation and Kathrens, who spent years in opposition of a fertility drug called porcine zona pellucida, or PZP, especially against its use in the Pryors.

FROM A SMALL laboratory on the fringes of Billings, Dr. Jay Kirkpatrick and his two employees have quietly been solving horse problems for more than 40 years. After PZP failed as a human contraceptive in the 1970s, Kirkpatrick started developing the drug for use in wildlife.

PZP is made from pig ovaries, a byproduct of the pork industry. Upon injection, PZP stimulates the immune system of a mare to produce antibodies against the vaccine. Those antibodies plug the sperm receptors on her own eggs, prohibiting fertilization. Kirkpatrick likens it to putting glue in a lock.

As a wildlife contraceptive, PZP is administered in the field with little more than good aim and the *pfffft* of a dart gun. And the drug has made some headway in wild horse world.

On Assateague Island off the coast of Virginia, PZP successfully reined in a burgeoning feral horse population. When Kirkpatrick darted the first mare there in 1988, the herd was at 176 individuals. Today the island has 110 horses – with no roundups or removals since Kirkpatrick has been involved. He says his life has never been the same since.

And while PZP is used in the Pryors, it's not used to the same extent it's used on Assateague. For the most part, PZP has yet to be widely adopted out West. Kirkpatrick says a lot of that comes down to access – that is, the percentage of fertile mares that can be reached. With three roads bisecting the range, the Pryor herd is a poster child for access. But wary feelings about PZP have likewise kept the drug at arm's length.

Kirkpatrick is in an unusual position – he is both the architect and the advocate for his own technology. He sees his work as two-pronged – half conservation, half animal welfare.

“We're trying to conserve very delicate ecosystems by keeping horse numbers in control,” Kirkpatrick explains. “The other half of our work is pure animal welfare – there's nothing humane about a roundup and removal. You're breaking up long-standing social groups.” Kirkpatrick has a real moral imperative behind his work. For him, fertility control is the more responsible method of wildlife stewardship.

It seems simple on the surface – use PZP and reduce (or eliminate) the need for roundups – but other scientists have concerns over long-term side effects of herd-wide PZP regimes.

On Assateague Island, PZP-managed horses are living longer now that they're free from the stresses of annual birth (three times longer in some cases). It's created a demographically skewed population. And the increasing proportion of older horses has caused a series of changes in management policy, culminating in a China-style one-offspring policy for the Assateague horses.

Is a single foaling opportunity per mare per lifetime enough to perpetuate the herd's genetic diversity over time? When two horses mate, it's a crapshoot as to which genes are passed to the offspring. For mares that only breed once in a lifetime, whichever genes are not passed on to their offspring die with that mare. And if those genes aren't present elsewhere in the herd, they're lost.

The question of how to best use PZP begets a larger question: how much *should* humans jerry-rig the breeding population of wild horse herds?

The prospect of no more roundups in the Pryors is an attractive one, and Ginger Kathrens nods confidently at the use of PZP to keep herd growth at bay. In the long term, she'd like to see population control become the role of predators. But in the meantime, PZP is poised to control herd numbers in the here and now.

"It's as realistic as it was in Assateague 30 years ago," she says. And Kirkpatrick agrees.

BUT FOR MATT DILLON, how to best use PZP is a little less clear. While he knows it's important tool for managing herd size, there's some concern below the surface. He worries it could compromise the herd's resiliency, and by consequence, perhaps their unique genetic heritage as well.

In the winter of 1977-78, about a third of the Pryor horses died. It was a major loss. In extremely harsh winters the horses aren't able to paw through to bare ground for sparse mouthfuls of grass. Wild horses generally die cold, wet and hungry.

If there were to be another catastrophic event – a harsh winter, a wildfire – where the herd lost a significant portion of its members, Dillon wonders how quickly the horses would bounce back. Even if PZP use was halted immediately, it's unclear how long it would take the herd's remaining breeding population to return to fertility. (Darted mares are rendered infertile for about a year. But it's not always predictable when annual PZP boosters wear off.)

"The horses that bounce back we want to be representative of a nice selection of genetics," he adds.

And Dillon's concerns are hardly unique to him. Other scientists have questioned whether PZP-managed herds suffer from a loss of genetic diversity over time. One study on Assateague suggests they may.

How PZP fits into the mix? The keeper of the Pryor horses' genetics still isn't sure. In an ideal world, he'd like to see PZP use expanded to the point where there isn't a need for roundups every three to four years, "so that if there is an adoption, then the horses available are so rare that there's competition for them – not just demand, but actual competition to make sure they end up in great homes."

Wanting to see the Pryor horses fare well on and off the range is one thing all stakeholders can agree on – both the horse advocates and the BLM.

Pinpointing *why* they care so much is a little more difficult. Are the Pryor horses valued simply as wild, sentient creatures deserving of stewardship? Or does this passion for conservation have to do with the herd's unique genetic heritage?

Maybe it's some combination of both.

Leaving the range, Dillon says he's always thought of the Pryor horses like the original maize.

"Today our corn is so modified from what it originally was. Maybe some of these wild herds are similar – at some point there may be a need to bring something in from these wild-bred horses, horses that still have some historic genetic info that was, say, long lost in the quarter horse world."

Maybe there doesn't need to be a reason to conserve the rare Spanish heritage of the Pryor horses. Sometimes it's only when something is on the cusp of being lost in the wild do people rally in earnest to save it – to cling to what remnants they can of a bygone era.