

# Rewilding Horses for a European Context

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Conservationists are reintroducing horses (and cattle) to areas they once roamed wild in, in an effort to restore lost ecosystems, help shape and regulate landscapes, and promote biodiversity.

However, getting damaged ecosystems to a point where they become self-regulating without navigating animal welfare and ethical concerns, conflicts of interest and public expectations is no easy enterprise.

## What is rewilding?

Rewilding is a conservation approach that uses natural processes to restore damaged ecosystems and reintroduces animals and plants capable of adapting to those environments with the aim of achieving a natural, self-regulating state.

There have been many successful rewilding experiments where reintroduced species have improved ecosystems. These include the restoration of wetlands in Europe thanks to the reintroduction of beavers, and the remarkable cascade effect witnessed amongst animals and plants triggered by the return of wolves to Yellowstone National Park in the United States.

## Rewilding of horses

Thousands of years ago, wild horses roamed most parts of the Earth. Whilst it is impossible to know exactly how many species or subspecies existed back then, European cave art from the Paleolithic period depicts horses with similar primitive characteristics to the sole surviving wild horse species, the Przewalski's horse, a native of Asia.

The last living subspecies of European wild horse was chased off a cliff at the end of the nineteenth century. And although true wild horses no longer exist in Europe, rewilding projects are relying on closely related and hardy domestic breeds with the attributes required to restore the wilderness environments.

The horse is a keystone species, which means they play an important role in environmental sustainability. While the research is limited, there is some evidence that rewilded horses help enhance grassland biodiversity. As selective browsers, they eat down grasses and young woody plants, restoring the wood-grass balance, while dispersing seeds and protecting the productivity of the soil and the nutrients in it.

When grazing horses trample down larger plants, smaller ones like wildflowers that attract bees and other pollinating insects, have a better chance of flourishing since they no longer need to compete for valuable nutrients and resources. Horses also assist with fire-prevention, by cleaning up long grass and undergrowth.

## Restoring abandoned ecosystems

Around the world, complex ecosystems have been shaped because of agriculture and regular land management. And perhaps nowhere is this more evident than in Europe.

Over the last century, thousands of Europeans abandoned a rural way of life and moved to urban centres. This has taken its toll on farming communities and

"To restore stability to our planet, we must restore its biodiversity, the very thing that we've removed... We must rewild the world."

Sir David Attenborough

the landscape. As younger generations flee the land, farmers have no one to share their skills with and when they pass away, they take with them vital farming traditions and agricultural practices learnt over many generations.

Farms which flourished only a few decades ago are now uninhabited, desolate ruins. Without managed grazing and cropping management, much of the land has literally dried up and precious top soil has blown away. Weeds, brambles and trees grow at an uncontrolled rate, increasingly causing problems like wildfires or flooding every year. This all creates a downward spiral of further degradation, which becomes increasingly difficult to combat.

Conservationists wager that introducing horses to these abandoned areas will help create conditions that can restore the ecosystem and help support a greater diversity of species.

When domestic breeds such as the Konik are re-released for rewilding, they are expected to play the same role in nature as their wild ancestors did. This raises important issues in terms of our duty of care for their welfare. Image by Hans Heiner Buhr.



A



B



C

**IMAGE A:** Exmoor ponies are considered to be suited for rewilding. Image by Ronenvief Shutterstock.com.

**IMAGE B:** The Dutch rewilding project using Konik horses caused huge public consternation when a large number of animals inside starved to death and officials prosecuted those who attempted to bring hay into the park. Image by Andrew Balcombe Dreamstime.com.

**IMAGE C:** An important aspect of many rewilding initiatives is enabling ecotourism and improving public attitudes to conservation. Image by Sander Meertens, Dreamstime.com.

### Ethical considerations of rewilding

When domestic animals such as horses are re-released for rewilding, they are expected to play the same role in nature as their wild ancestors did. This means they need to forage and fend for themselves with minimal human interference, no man-made shelters, and no protection from predators.

Since the horses used in these programs are semi-feral domestic breeds rather than wild horses like the extinct Tarpan or the Przewalski's horse, the first question to arise is whether it is acceptable for humans to relinquish responsibility for the welfare of individual animals as they adapt to their new life and environment.

The implications of operating on nature's terms is a very controversial aspect of rewilding. Although human intervention conflicts with the idea of self-regulating conservation, allowing nature to take its course means that population numbers will fluctuate, and in hard winters or periods of drought, many horses may die. What are our obligations in terms of protecting the welfare of rewilded animals like horses?

### Conservation in the face of public attitudes to animal welfare

Two rewilding cases have made waves in Europe recently due to welfare concerns. Of note is that both projects keep herds of rewilded horses in large enclosures (Koniks in Holland and Exmoor ponies in Denmark). Dubbed mini Jurassic parks, the managers originally settled on a non-interventionist strategy.

Since these nature reserves do not allow the horses to migrate and leave the area when food runs out, the animals are susceptible to starvation during extreme weather events. Further, the absence of predators inside the fenced areas means that during good times, herd numbers grow unchecked unless humans control breeding and/or arrange managed culls.

In 2018, the Oostvaardersplassen (OVP) in the Netherlands came under the spotlight when a large portion of the animals inside starved to death as officials refused to intervene.

The 5,000-hectare site, a reclaimed wetland area, was unsuitable and unable to support the number of animals. And despite the lack of predators, the land managers had not been implementing a population control plan.

Things came to a head when government officials began fining and went as far as arresting locals who were caught feeding hay to the starving animals. After continued public protests and lobbying with politicians, officials finally agreed to allocate extra feed to the emaciated animals and better control the numbers in the future.

More recently, a rewilding project at the Mols Laboratory Research Station, part of Denmark's natural history museum, has come under fire. Set up in 2016 to investigate scientifically the effects of rewilding on biodiversity.

But this year, photographs showing thin and injured Exmoor ponies began circulating on the web this year, and just like in the Netherlands, Danish project managers refused to intervene with supplemental feed.

The images caused an uproar in the local community and drove the Exmoor Pony Society of Britain to send one of their experts out and call on the UK's World Horse Welfare to intervene. A Facebook Group of more than 11,000 followers is monitoring the events and is fuelling the ongoing welfare vs conservation debate..

The Danish Animal Ethics Council published their position statement of the need to achieve a balance between rewilding and human duty of care, particularly when animals are released into fenced areas. Their detailed report highlights the risks of prioritising conservation aims over the public's concern for animal welfare outcomes.

The project managers however maintain that while they do not feed the animals when they are hungry, they don't let them die of hunger either. They say that in times when there are too many animals for the available food they "will be the 'wolf' that reduces the population", in effect removing individuals who are unwell or not coping. Nevertheless, the culling of wild horses is also a public relations and welfare minefield.

Since the horses used in these programs are semi-feral domestic breeds rather than wild horses, the first question to arise is whether it is acceptable for humans to relinquish responsibility for the welfare of individual animals as they adapt to their new life and environment.

IMAGE A: In Italy, several autochthonous breeds are kept in semi-feral conditions. Although they are owned by individual farmers, they share vast nature reserves with other livestock and have to deal with wolf and bear attacks. Image by Cécile Zahorka, The Pixel Nomad.

IMAGES B & C: The Pentro Horse has roamed in this area since pre-Roman times. It is well adapted to the wetland environment and despite public concern, studies have shown the horses' grazing patterns have a significantly beneficial impact on the ecosystem. Images by Michele Permanente, a local environmentalist guide of Il Pantano della Zittola.



### Public concerns over welfare

In early 2021, animal rights groups began circulating images of the protected Pentro horses in the snow. The horses, they said, should be brought inside over winter, and not outside facing the elements. There were claims that breeders had been misusing European Union funds intended for their protection for their own gains, with accusations that the horses had been 'abandoned' and left to fend for themselves.

It was even suggested that the horses were causing irreversible damage to the delicate wetland ecosystem. Politicians got involved, journalists and lawyers were called-in, and an internal investigation took place. Finally, a public meeting was held in Montenero Val Cocchiara with the support of the regional council.

Experts from Molise University provided scientific evidence to show that, contrary to what was circulating in the media, the wetlands were in excellent health. A total of 1,300 horses and cattle are registered and rotationally grazed over 2,300 hectares (public and private land).

They showed the grazing patterns of the horses helps control shrubs and plant growth that would otherwise dominate the area and assist opening up waterways and tracts of grass to create new opportunities for more plant species to thrive. Researchers even discovered previously unknown insect species, testifying to the unique and increasing biodiversity of the area.

Responding to those animal rights groups concerned about the welfare of the Pentro horse, who believe they should be brought down off the hills during winter, Professor Miraglia, who has been monitoring the Pentro horse population since 1998 said "No. The Pentro horse needs to be managed like this. These horses have rare genes which are testimony to their rusticity and ability to evolve and adapt to the environment they live in."

Prof. Miraglia added "In the winter, the Pentro horses behave just like any other feral horses; they naturally move themselves to higher areas where they can seek out shrubs under the snow. This is completely normal and owners supply the horses with supplemental hay in the form of large round bales when required."

### Wild but not wild

This year, animal rights groups in Italy created a media stir over herds of semi-feral Pentro horses living outside during the cold winter months.

These horses are not part of any organized rewilding project but live in a nature reserve, in semi-feral herds, and several studies have found their presence is beneficial to the ecosystem.

The Pentro Horse is one of five protected autochthonous breeds in Italy and takes its name from an ancient Samnite tribe. Unique because their genetic makeup has been characterized by climatic and geographic factors, the Pentro horse is adapted to its wetland environment, the Pantano della Zittola, much like Camargue horses and Kerry Bog ponies.

The Pantano della Zittola floods between October and May due to rainwater and underground springs. Surrounded by thick forest, it is one of the most important marshes and peat bogs in Italy.

The wetlands provide a resting place for migratory birds such as storks, eagles and herons. Horses (and cattle) have roamed this landscape since pre-Roman times and over generations, have adapted to face snowy winters, dry summers and the constant threat of wolves and bears.

Many of Italy's working horses are historically and physically linked to their environment. The Murgese horse of Puglia has always been raised on karst topography (a landscape shaped by the dissolution of carbonate bedrock) because it promotes the growth of strong, hard hooves.

Tolfetano horses were left semi-feral for decades and evolved to handle the rocky, arid Tolfa mountains of Lazio, while the Monterufolino ponies, who were raised in the Tuscan mountains, are now sought-after all over Italy for their rusticity and adaptability to any sort of management system.

Likewise, Pentro Horses have been valued for centuries because of their hardiness and strength - a direct result of their environment. The fact they live outside most of their lives, does not mean they are not well-managed.



**IMAGE A:** Italian guard dogs, such as the enormous Abruzzese Shepherd have always played a role protecting livestock from predator attacks.

**IMAGE B:** Wolves and bears never went extinct in central Italy, but in recent years, wolf attacks on livestock have increased. Just last year, there were reports of 150 Pentro foals being killed by wolves.

**IMAGES C & D:** As well as Pentro horses, there are other Italian breeds kept in semi-feral conditions, like these Monterufolini horses, pictured by Cécile Zahorka, The Pixel Nomad.

Cécile is passionate about photographing rare horses. You can view more of her stunning images online @thepixelnomad.

*Wolves, a cure-all for restoring balance or a dangerous problem?*

Wolves and bears never went extinct in central Italy and unlike in other parts of the world, farmers have always accepted predator attacks on their stock as part of life. In recent years however, wolf numbers and attacks have increased, and livestock losses have been substantial.

Nicola Giarrocco, who helped promote the Pentro breed at the International Horse Fair in Verona says the wolves have become braver and bolder in the last couple of years. "Where once they went for just the foals, now they also bring down adult horses. That never happened in the past." Nicola's good friend, Carlo Scalzitti lost twenty foals last winter.

Local media has reported that during 2020, one hundred and fifty Pentro foals were killed by wolves. Is it possible to find a balance when wolves and livestock are kept in national parks under semi-feral conditions?

In 2020, a team of researchers led by Professor Konstanze Krüger of Nürtingen Geislingen University in Germany, travelled to central Italy to understand the situation between horse owners and land managers, and to understand the extent to which wolves should be preserved when they pose a direct threat to horses in the area.

One of the experts they interviewed was Professor Sandro Lovari, from the University of Siena, who believes farmers' complacency is partially to blame for the rise in fatal wolf attacks.

During the 1970's there were only 150 wolves in the whole of Italy, so attacks were less frequent than any moment in history. "Farmers began to leave their animals up in the mountains unattended for up to ten days. Of course, then the wolf turns up and finds an open restaurant with no one to asking him to pay the bill" says Prof. Lovari.

He advocates the use of more than one prevention strategy, including the use of guard dogs like Maremma's and the enormous Abruzzese Shepherd, a primitive breed that has always been used in these parts to protect sheep. But while breeders have some success using dogs, they seem to be less efficient when protecting horses.

Hardy local cattle know how to circle around newborn calves and aggressively defend their young, horses are less likely to defend a lengthy attack. They tend to just give up. And unlike flocks of sheep, horses tend to split into small bands, which makes keeping a correct ratio of dogs to livestock much more challenging. Wolves are very adept at modifying their hunting strategies to distract or intimidate the dogs.

The other prevention strategy of bringing the mares back to the stables before foaling is also tricky in areas where year-round grazing occurs, like in the Pantano. Foaling can take place throughout the year, often in locations that are difficult to monitor.

In an effort to legitimise the conservation objectives, the government provides breeders with financial compensation for losses to wolves, but as Giarrocco explains, these can be difficult to obtain; "It is frustrating. The government only reimburses breeders if they can demonstrate the carcass of the victim.

"Sometimes the carcass is not found. On other occasions the horse is badly injured but does not die straight away or is left so disabled it needs to be euthanased. Without a valid vet certificate, the loss of these animals is not reimbursed" says Giarrocco.

"We all like the idea of seeing a majestic wolf running in the wild, the image is beautiful – but horse breeders can't deal with losses like this in the long run, and sometimes it feels like the forestry authorities don't want to hear the farmers side – just the wolves."

It seems clear that conservation initiatives will always present ongoing challenges, largely due to conflicts of interest between human stakeholders such as farmers, tourism operators and conservationists.

While generally regarded as positive to the earth's sustainability, rewilding processes are also raising complex and sometimes unforeseen ethical and legal considerations.

Many of the species that rewilding seeks to restore or reintroduce, such as wild horses and wild cattle, became extinct as a result of human intervention. And while reintroduction may be the least we can do to make up for previous mistakes, we don't want to cause harm to those species twice, first by causing their extinction and then by reintroducing them in a manner that causes individual members to suffer.

Animal welfare must be considered from the animal's point of view and achieving the right level of human intervention will require understanding and good will from all sides.

*Further reading:*

Danish Animal Ethics Council Position Statement on the Use of Animals in Rewilding: <https://bit.ly/2YnR9QX>

Mols Laboratoriet rewilding statement: <https://www.naturhistoriskmuseum.dk/mols-laboratory/a-wilder-mols-laboratory>

Statement from Exmoor Pony rewilding project: <https://www.wildponywhispering.co.uk/rewilding>

Ethical Considerations for Wildlife Reintroductions and Rewilding: doi: 10.3389/fvets.2020.00163