



Born to be wild. (Interview) (Interview). Eleanor Case. *New Scientist* 184.2472 (Nov 6, 2004): p46(3).

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The 19-year-old Claudia Feh couldn't believe her eyes. On the walls of the Lascaux caves, the horses in the Palaeolithic paintings looked alive and free. Yet the only truly wild horses left in the world were the Przewalskis--and they were in zoos. Feh's next 20 years were spent with wild horses. She and her team even pioneered a novel way of reintroducing the Przewalski to one of their native habitats, Mongolia. Eleanor Case talked to Feh after she received a Rolex award for Enterprise

How did it feel when you watched your Przewalski horses take their first steps on Mongolian soil this summer?

I don't think I realised what had happened. The journey from France, where we had reared them, lasted 48 hours and was a nightmare for the horses, so it was quite stressful, it took time for us to realise how amazing this was, and how beautiful the horses looked just grazing and resting. They were really tired for the first days, but they looked happy. It was a great moment a few days later when I really felt they had settled down. They are doing very well. They adapted fast to their new environment.

Why is the Przewalski horse so important to Mongolians?

It is a sacred animal in Mongolia. It belongs to Mongolia. We call the project after the Mongolian word for wild horse, takh. Many Mongolian people came to see me and they didn't say congratulations, they said thank you very much for bringing our horses back to where they belong. Mongolian people, especially those living out in the countryside, traditionally have a very strong relationship with nature because they live with it and out of it. You can see it in their poetry and songs. Most of their songs are about mountains or rivers or wild animals.

Why did the Przewalski horse disappear?

I think the story started 30,000 years ago with agriculture. Wild equids all over the world raid the high-quality cereal fields where they can, and get, understandably, in trouble for this behaviour. That was probably the start of their decline in Europe. So they found their last refuge in Mongolia, where there are very few crops. Mongolia is the last stronghold for many large central Asian mammals--they probably all retreated there.

What finished the Przewalskis off?

The scientific discovery of the Przewalski horses came at the end of the 19th century--followed by a rush of capture expeditions. They were chased on horseback, and all the adults were killed to get at the foals. The captors tried to make domestic mares "adopt" the foals, and then to start them on the long trip to the west. For every one foal arriving in the west, at least 10 died. This must have decimated the already quite rare animals. After the second world war, the last place they roamed was Jungaria, which contained a strong Cossack population who were keen on eating horse flesh. Thanks to the war, they had automatic rifles. Probably the last population of Przewalski horses became over-dispersed. Young horses grow up in their family groups. At puberty they

leave the family to reproduce elsewhere in order to avoid incest. But if the next group is 150 kilometres away, they cannot reproduce. If they were too spaced out, the population would stop growing.

So there's no fundamental reason why they shouldn't thrive again in Mongolia?

Habitat is no problem. The local attitude is very positive. The biggest obstacle in the long term is hybridisation. For years, we have been negotiating with all the local nomads to stop breeding domestic horses in the future, and they understand. They need horses for looking after their herds, but they don't have to breed them. We will compensate by buying them riding horses. The region is 2500 square kilometres and it's a natural island. We aim to have a viable population of a thousand horses in the future. The reintroduction has just started and the next two years will be crucial.

So how did you get into this?

I've always been attracted to all wild animals. And the Przewalski horse is the last wild horse in the world. It only lived in captivity from the 1970s. But since the horses are very easy with regard to habitat and climate, why did the last wild horse have to live in zoos? I shall do something about that, I thought. And I'm a biologist: I study animals. I like animals. If you like and study animals, obviously you feel concerned about what happens to them so you move into the conservation aspect of saving species--it seems logical. Of course it was a great moment for me seeing the cave paintings of horses in Lascaux. I was overwhelmed. I look forward to another world where there would be once more plenty of large animals roaming free. But this whole story developed gradually, starting with my interest in Camargue horses, which led naturally to studying Przewalski horses and thinking that the last wild horse has no freedom any more.

What is so appealing about their behaviour?

The social behaviour of horses attracted me. It's complex. Stallions and mares have long-term relationships, which is very rare in mammals. Horses and plain zebras are exceptional in that they form long-term family structures where a stallion and two to three mares stay together for most of their lives and the foals grow up inside this structure.

Is this the sort of data you get from books?

Not necessarily. You see, I didn't really follow the classical lines of becoming a scientist. After my A-levels I dreamed of going to the Camargue. It turned out that the Tour du Valat biological station needed someone. So I started working there. I did fieldwork on birds all day, from early morning to late evening and sometimes during the night. I was happy. I did not feel like going back to studying, but I was sent back to do a course in biology. And then came the perfect excuse. The Tour du Valat horse study started. I asked if I could be an assistant and was accepted. I told the director of the station I didn't have time to do full-time studies and do fieldwork. So I was a field assistant for two years, and then did fieldwork for another six years for my own thesis, rather like the Open University in Britain.

Did you find that this unconventional background and the fieldwork paid off when it came to understanding the horses?

Yes, absolutely. In eight years, I did several thousand hours of observations on the Camargue horses and nothing else. I don't have a perfect memory but I have a visual memory. It's like a film inside my head. I can still see the situations, the horses, exactly. This is very helpful for interpreting behaviour. Not having been confronted with theories and lectures probably helps me to have a different approach. I read a lot and I'm familiar

with many theories but it certainly helps to have a different view and not just follow the guidelines of an established field.

But hasn't your fieldwork also produced a very important finding that you could only have got by close observation?

Our research based on detailed lifetime individual follow-ups, a rare thing today, makes a modest contribution to the understanding of mammalian social structure. At the moment we are working on a subject that I don't especially like: infanticide. All of our original Przewalski stallions came out of zoos, and some committed infanticide. But the evolutionary theory that males kill unrelated offspring of females in order to enhance their own fitness doesn't fit with our horses. We have such a close follow-up that we saw actual attacks on the foals, but, very importantly, we saw when there were no attacks--in situations where theory would have predicted there would be attacks. Most people don't like to talk about infanticide because it's a nasty behaviour. But you can't deny it when you see it. Our approach was to understand the situations when they do it. Firstly, only stallions that had grown up under unnatural social conditions killed foals. Secondly, we saw infanticide only during the first years when the social relationships were very unstable, and the horses nervous. No stallion of the second generation killed a foal.

How is your approach different from the two existing projects?

Our approach was a direct follow-up to work I had done in the Camargue. We started with a natural herd of Camargue horses in 1974, and without human intervention for the next 10 years the whole herd grew to 80 animals from the 13 original animals. We realised that the social relationships between horses were much more complex than was previously thought. In fact, in the beginning of the 1970s the horses, like most domestic animals, were extremely well studied in the veterinary sense, but little was known about how they behaved under natural conditions. So for the reintroduction of Przewalski horses I realised how important social behaviour was for the survival of individuals.

Our approach was to first create a socially natural herd of Przewalski horses so they could learn how to cope with their fellow horses and stallions could learn to ritualise their encounters rather than fighting all the time. We were in no hurry. We gave them 10 years so they could develop their natural social behaviour before we started the reintroduction. The idea was to reintroduce existing groups because we knew this was a stability factor. We knew that stress can lead to death in these horses, and stability in social relationships reduces stress.

Przewalskis seem to run differently from other horses. Why?

That's typical stallion behaviour to round up his group. He does it towards his mares but also towards his foals. It's something that even horse people rarely know about. Even many horse riders who have spent their life with horses have never seen it.

What else have you discovered through observation that people who have their heads stuck in textbooks never see?

We're working on mutual grooming. They groom each other at many places on their bodies. Their preferred place is at the base of the neck, where the peripheral nerves that help to control the heart rate are sited. When we imitated grooming at this place, the heart rate went down. So mutual grooming has a calming effect. Horses groom each other at other points, probably to stimulate reproduction. We have collected something like 2500 grooming sequences in Przewalski horses and we are mapping them to identify precise places.

With the Rolex money, you'll be involving local people even more than before. Have they a lot to teach you?

One aspect is their closeness to nature, which makes me feel close to them because I share this attitude. The other aspect is their extremely developed sense of cooperation. Very small children learn to share everything. With most nomadic people, hospitality is sacred, and based on reciprocity. Probably part of it is because they live in a particularly harsh environment and so depend on each other for survival in many situations.

What did they make of the project?

At the beginning in 1998, they were afraid they would have to leave the place. They thought that to be part of a national park was incompatible with their staying. So we reassured them that, on the contrary, their presence was wanted. They are now enthusiastic and very much looked forward to the arrival of their wild horses.

What about the centre you are building as part of the Mongolian project?

The Wild Horse Mesh--the name of the centre--is extremely important. My education was not traditional. Although I live in the Camargue and work at the research centre there, most of my friends and the people in the Camargue are not scientists. I've always been in a social environment where scientists are a small part of the population. Very often there are many misunderstandings about scientists, about research, so to create this centre in a very remote village is something I've always wanted to do, with non-scientists and scientists working together on fundamental research.

Most local people are really thirsty for knowledge, they are very open to everything. It's going to be very important that we get them involved in the whole process. The centre will be open to everybody, and information will be broadcast on the radio. Even if they don't have electricity, they have a radio with batteries. It's something that's not conventional--it's not a research centre, it's something new.

Do you still enjoy watching the horses?

It's real happiness for me. I have slightly less time now to watch them because I'm occupied with the project. But it's still pure happiness when I have time to go and look at what happens. We have a "relic" population of Camargue horses and when I have a free moment I go to see them. Even with these horses, which I've known for three generations, every time I watch them something new happens. I guess that's part of the fascination as a researcher.

Do you ride?

I have a horse in Mongolia and I still ride a little bit. But I'm not a passionate horse rider any more. I think the more that I studied horses the less I felt like riding them, probably out of respect. I shouldn't interfere. For me it's much more the animal that interests me than its uses.

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