

# SAVAGE BEASTS OR AFFECTIONATE PARENTS?



Pumpak  
– a one-year-old male  
wolf that was observed  
patiently looking after  
his younger siblings

For many years, people's perceptions of wolves had nothing to do with actual knowledge about wolf biology and ecology. What can close observations of wolf families teach us about these mammals? Should we give wolves names? And why don't they need our empathy?

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People's views about wolves are heavily polarized. On the one hand, the animals are seen as murderous beasts with an uncontrollable, indeed "wolfish" appetite. In children's literature, they are often depicted as evil incarnate, for example in the fairy tale *Little Red Riding Hood*, one of the first secular texts to be published in print. On the other hand, wolves have been a romantic symbol of wild nature and freedom, like in Russian bard Vladimir Vysotsky's song *The Wolf Hunt*. Such anthropomorphization of the animal world is nothing new – it is as old as human culture itself. In the case of wolves, however, the extensive and usually negative mythology, which has its roots in the Old Testament, overshadows the truth about these animals, which biologists have unraveled by studying the species intensively for 80 years.

## A pack is a family

After observing wolves in Alaska, American scientist Adolph Murie published his first book on the carnivore in 1944, which contained a statement that still provides the basis for understanding wolf biology. A wolf pack is simply a family that consists of parents and their offspring. Cooperation within a pack is the key to the group's success. Its members hunt together, defend their territory, and raise pups.

After we captured a female wolf named Orzechowa in the Lower Silesian Forests (*Bory Dolnośląskie*) and fitted her with a collar, she was alone for the first few days and stayed within a small area. After several days of snow-tracking Orzechowa, we started to wonder if she had any family. Seven days after she was collared, early in the morning, the family prospects still looked dim – we saw only Orzechowa's tracks in the fresh snow. We knew they were hers thanks to the radio signal from her collar. But when we returned two hours later, there were more tracks. Three other wolves were following Orzechowa. She he was not a lone wolf after all – she did have a family, and its members had kept looking for her after she "went missing." Finally, the wolves caught her scent and hurried to join her.

A newborn wolf pup weighs around 400 grams, is blind and deaf, and requires the constant presence of its mother. We witnessed this when we were tracking a collared female wolf we called Ronia near Ustrzyki Dolne in the Bieszczady Mountains. After giving birth to pups, Ronia stayed in or near the den practically all the time. She would only leave for brief periods during the day, most likely to drink water. Since Ronia was the only wolf in this family fitted with a transmitter, we could only guess that the other four wolves had been bringing her food. At the same time, in the northern edge of the Bieszczady Mountains near Bircza, we used radio telemetry to track a young male that had recently started a new family. The wolf pair had their den in one of the long and deep valleys at the foothills of the Bieszczady Mountains. We named the male Andro. He was the sole "provider" for his female and newborn pups. He spent the entire summer meticulously roaming an area of over 100 km<sup>2</sup> hunting for ungulates and bringing pieces of meat to the den in his mouth or stomach. He spent little time at the den. Thanks to his hard work, Andro and his female partner were joined in the winter by three large pups. In the following winter, the family had grown to seven wolves. In the third year of monitoring, there were as many as nine. Interestingly, in the summer when Andro became a father for the third time, we observed he no longer strained himself so much. With several helpers for hunting and providing for the female and pups, Andro could now afford to be much less active and spend much more time near the den.

The role of helpers – young non-breeding wolves – is not necessarily restricted to helping in hunts and providing food for the pups and their mother. We found this out several years later, when we were studying the ecology of wolves in the Lower Silesian Forests. This time we were armed with better telemetry technology – the collars transmitted their location to our computers via satellite phones. We also took advantage of improvements in digital video technologies by using camera traps. By combining these technologies, further enhanced with the tools of molecular genetics (which we also used in the Bieszczady Mountains), we were able to observe and correctly interpret many interesting aspects of wolf behavior.

Pumpak was a young male, the oldest of the female Orzechowa's offspring. He was one year old when his mother gave birth to a second litter of pups, at which time we installed camera traps near their den. Thanks to the recordings, we found out that the five-week-old pups were mainly cared for not by their parents but by their older brother. Pumpak would spend most of his time near the den watching over his siblings – licking and grooming them, and even carrying out some home renovations by enlarging the entrance to the den! Pumpak would patiently put up with his



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younger brothers and sisters pestering him when they were hungry or simply wanted to play. When he walked away, the pups would often signal their loneliness by howling. Pumpak would answer the call and return to the den within a few minutes. Pumpak's care for his younger siblings is documented in the film *Orzechowa i jej rodzina* ["Orzechowa and Her Family"], which is available on YouTube ([www.youtube.com/watch?v=suEmyNEhlyA](http://www.youtube.com/watch?v=suEmyNEhlyA)).

## How wolves hunt

Affection and tenderness related to parental care are at one extreme of wolf behavior. To provide for their families, however, wolves must hunt other animals. In our part of the world, these are mainly three species of ungulates: red deer, roe deer, and wild boar. Killing each of these animals poses a major challenge for wolves. A roe deer weighs around 20 kg and is fast, agile and difficult to catch. Our studies in the Lower Silesian Forests have shown that wolves often use the fences surrounding forest plantations as traps to catch roe deer. Adult wild boar are several times larger and heavier than wolves. They can weigh up to 150 kg and defend themselves aggressively, meaning a careless attack on an adult wild boar may end in serious injury (or worse) for a wolf that weighs around 35 kg on average. For this reason, wolves often attack young wild boars, but this is also not easy, because females can band together to defend their young. Red deer are two to five times heavier than wolves and can reach speeds of up to 70 km per hour over short distances. When necessary, they use their hooves to defend themselves against predators. Our observations in the Bieszczady Mountains revealed that wolves often make cunning use of brooks and gullies, which hinder red deer in their escape and make it easier for wolves to launch their final attack. In the winter, snow gives wolves an advantage, especially if the upper layer is frozen. A wolf exerts much less pressure on the ground than red deer, meaning they can easily move over the surface of frozen snow. Red deer sink deeply into the snow, allowing wolves to easily catch and kill them. In such conditions, wolves sometimes manage to kill

several red deer at the same time. This does not happen very often, but such incidents are the reason why wolves get accused of killing for pleasure, or more than they can eat. From the wolf's perspective, however, such behavior is completely rational. If wolves have the chance to catch an animal that is normally too fast to be caught and killed, then this is precisely what they should do. In the winter, meat can be eaten for several weeks, as long as people do not move carcass to use it as bait at hunting stands or otherwise prevent wolves from accessing their stockpiles.

Killing such a large animal as a red deer is no easy feat for a wolf. Observations of hunts show that such kills are made in a way that appears inhumane and unnecessarily violent from the human perspective. Wolves injure the animals they hunt, often by tearing off pieces of their flesh and waiting until the exhausted prey loses too much blood and is no longer able to defend itself. During our studies of wolves in Białowieża in the 1990s, we documented a case in which a large male wolf, named Drab, single-handedly killed a 150 kg male red deer. Jörn Theuerkauf, the scientist who tracked the radio-collared wolf, described the kill as a "massacre." Blood splatters stretched over 150 meters across the snow. For modern-day humans, who rarely witness the death of animals they consume, the way in which the buck died may have been shocking. For wolves, however, the kill was a matter of survival and necessary to feed their offspring. After killing the deer, Drab brought his whole family to feast. We know this because Drab's partner was also fitted with a transmitter. If we wanted to anthropomorphize Drab's behavior, we could say that he was a responsible father of his family, and his "massacre" of the deer was merely a manifestation of parental care.

Wolves do not only display aggressive behavior when they hunt. Wolf families occupy territories that cover on average 150 km<sup>2</sup>, and they try to prevent other wolves from trespassing. Wolves scent-mark the borders of their territory during regular patrols, which tells other wolves "this is our territory, and you risk a lot if you trespass." The same message is communicated by chorus howls, which cause even humans to get goosebumps. However, when scent-marking

Pumpak and his younger siblings



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and howling fail to deter trespassers, there may be fights between wolves, which often end tragically. When we were working in the Bieszczady Mountains in 2000–2007, we found several wolves killed by other wolves. The mortality rate resulting from wolf-wolf killings may exceed 10% in some populations and may be the main cause of death among adult wolves. This is certainly the case, for example, in the Denali National Park and Preserve in Alaska, where because the area is not inhabited by humans, no wolves get killed on roads or shot by hunters.

## Attentiveness and tolerance

Despite the legends propounding the aggressiveness of wolves, this species was successfully domesticated, and dogs are now one of the most beloved companions of humans. How were those aggressive animals tamed and made to cooperate with humans and even other animals? Researchers of canid behavior once believed that dogs developed traits that favored their cooperation with humans during the tens of thousands of years of their domestication. Two particularly important traits are attentiveness – paying close attention to the actions of partners – and tolerance, which manifests itself for example in sharing food with partners. Indeed, experiments comparing these traits in dogs and wolves raised by humans appeared to confirm the hypothesis. Dogs are more attentive and tolerant towards their human carers than wolves. But does this support the general conclusion that dogs are more cooperative than wolves? Friederike Range and Zsófia Virányi, researchers of canid behavior from the Wolf Science Center at the University of Veterinary Medicine in Vienna, Austria, attempted to answer this question in 2015. They tested attentiveness and tolerance in dogs and wolves. This time, however, the focus was not on cooperation with humans, but with partners of the same species. It turned out that wolves watched their wolf partners carry out tasks more attentively than dogs and could later recreate such behavior more accurately. What is more, wolves were more willing to share food with their companions than dogs. The latter had steeper hierarchies in which aggressively dominant individuals would not let other dogs near food. Consequently, the researchers could

conclude that during the long course of their domestication dogs did not acquire character traits desired by people, but instead inherited them from their ancestors, wolves. Rather than focusing on their partners, the domesticated wolves, or dogs, simply refocused their social competences on their human carers.

## In the eyes of humans

In light of the above, what is the answer to the question posed in the title of this article? Are wolves savage beasts or affectionate parents? First of all, we should realize that the question itself is an attempt to project the human concepts of good and evil onto the world of animals. However, wolves are not part of our social system, and there is no point judging them through the prism of our own social and ethical standards. Wolves are animals that have created their own, advanced system of family and social interactions that has been shaped by hundreds of thousands of years of evolution. They are neither good nor evil. Like all living organisms, they want to survive and bring offspring into the world. Anthropomorphizing wolves, or looking at them through human value systems, does nothing to help these animals and undoubtedly serves to strengthen radical opinions about their behavior.

American scientist David Mech, a pioneer in the study of wolves, believes that it is even a mistake to give names to wolves captured and fitted with transmitters for research purposes. This causes unnecessary emotions both among scientists and among those who observe such studies. Admittedly, we find it hard to get rid of this habit, and giving names to newly-captured wolves is sometimes a very emotional process. This somewhat unprofessional approach is to some extent justified by the fact that even Mech has not always followed his own advice – he named all the wolves that he observed on Ellesmere Island in the Arctic. That said, we must remember that wolves are not domestic animals, and they do not need our love or empathy. It is enough if we refrain from killing them and leave them with space to live.

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Photo 1  
A pup from the female wolf Orzechowa's family, crying desperately for its parents and its older siblings

Photo 2  
Social interactions between adult wolves in the Show Reserve in Białowieża