# INTERNATIONAL WOLF

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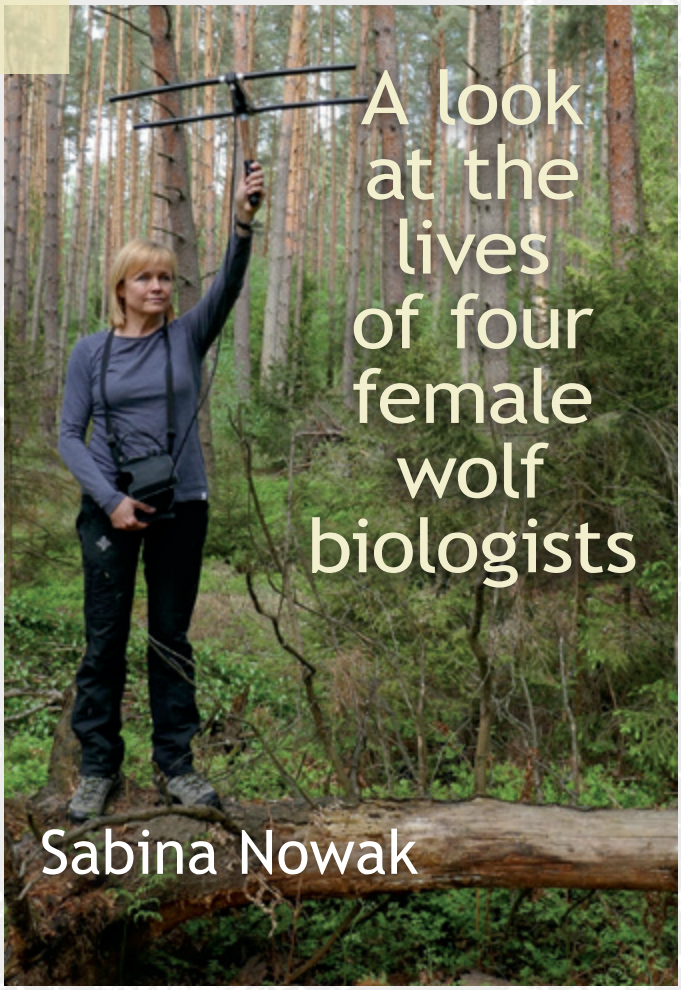
Courtesy of Diane Boyd


Courtesy of Yolanda Cortés

# Women and Wolves


Courtesy of Shannon Barber-Meyer




Robert Mysłajek

By DEBRA MITTS-SMITH

Wolf biology research is often thought of as a male profession. Yet women have played, and continue to play, a leading role in the study of *Canis lupus*.

To highlight their contributions, *International Wolf* interviewed four female wolf biologists: Diane Boyd, Yolanda Cortés, Sabina Nowak, and Shannon Barber-Meyer. Although many women are involved in wolf research, the background and experiences of these women offer a sample of the kinds of work being done. Each of these biologists works for a different type of agency in a different part of the world. Although political, geographical, historical and sociological aspects of their research make parts of their work unique, many activities and challenges involved in studying such a controversial species are similar. Several of these women are pioneers; not only are they women in a predominantly male profession, they also performed some of the earliest research on wolves in their respective countries. This first part of a two-part feature focuses on their educational backgrounds and most memorable work experiences.

## Education and work:

Intellectual interest and concern for animals led each of these women to become a wildlife biologist. The profession requires not only a bachelor's degree in a demanding field, but also advanced degrees. Volunteer work, paid internships, work on research projects and independent research provide necessary field experience while expanding a scientist's knowledge of wolves and wolf conservation.

**Diane Boyd** is one of the female pioneers in wolf research. Although she grew up in the Twin Cities of Minnesota, Boyd loved nature, being outdoors and learning about wolves. In the early 1970s, the Como Zoo in Saint Paul opened a new wolf exhibit that provided a more realistic landscape and living space than was typical for that time. Boyd remembers going to the zoo and watching those wolves.

She began college as a pre-veterinary student, but after working for a veterinarian, decided that she wanted to do more than spay and neuter pets. She switched her major and graduated from the University of Minnesota with a BS in wildlife conservation.

After graduation, Boyd pursued opportunities to work with wildlife. As a volunteer at a University of Minnesota captive wolf colony in Forest Lake, she gained experience working with captive wolves and learned from Dr. Jane Packard, an animal behaviorist who was studying wolf reproduction. Her next job took her to northern Minnesota where, under the direction of Dr. L. David Mech, she helped live-trap, radio-collar and count the last viable wild wolf population in the lower 48 states.

In 1979, Boyd headed to Montana to help the Wolf Ecology Project track Wolf W114, the first radio-collared gray wolf from Canada to recolonize the western United States. At the same time, she began graduate studies in wildlife biology at the University of Montana, successfully defending her dissertation *Dispersal, Genetic Relationships, and Landscape Uses by Colonizing Wolves in the Central Rockies* in 1997. Over the next two decades, Boyd studied and lived among wolves recolonizing Montana. To this day, when she talks to Montanans about wolves, she stresses that these wolves are not like the wolves of Yellowstone. "These wolves came on their own; nobody brought them here."

In 2016, after a brief retirement, Boyd returned to studying and working with wolves as the wolf management specialist for Montana Fish, Wildlife and Parks, Region 1. She continues that work today.

Chad Richardson

**Yolanda Cortés** knew, even as a child growing up in Madrid, Spain, that she wanted to study animals and become a zoologist or a veterinarian. "Of all wildlife, mammals were my favorite, particularly carnivores. And wolves have always been one of the most fascinating and attractive species to me," she says.

Cortés credits Spanish naturalist Felix Rodriguez de la Fuente's nature documentary with further inspiring her interest in wolves. Even before completing her undergraduate degree in biology at the Faculty of Biological Sciences, Complutense University of Madrid, Cortés was involved with research projects investigating other carnivore species such as European badger *(Meles meles)*, Euroasiatic otter *(Lutra lutra)*, stone marten *(Martes foina)*, Genet *(Genetta genetta)*, Euroasiatic wild cat *(Felis silvestris)*, and Iberian lynx *(Lynx pardinus)*.

Aside from a few scientific papers and books by Spanish researchers, there was very little research on wolves in Spain then. In 1997, Dr. Juan Carlos Blanco, a well-known wolf researcher, asked her to work with him on a project to study wolves in Cantabria, an autonomous region of Spain. This marked the beginning of her research on wolves and her longstanding collaboration and friendship with Dr. Blanco.

In 2001, Cortés earned a Ph.D. in Biology from Complutense University of Madrid. Her dissertation, *Ecology and Conservation of Wolves in Agricultural Habitats of Central Spain,* was about the radio-collaring of eleven wolves that lived in central Spain, in environments inhabited and altered by humans—and only the third thesis about wolves written in Spain. Since then, she has continued to study wolves and wolf conservation for non-governmental and public agencies.


*Cortez (left) holds a mastiff pup—one of the livestock-guarding dogs that help make possible farmers' coexistence with wolves.*


**Sabina Nowak** grew up in Katowice, in southern Poland, an urban area where mining and metallurgy made it one of the most industrialized and polluted places in the country. Resultant damage to wildlife spurred her interest in wildlife protection. In the 1980s she earned bachelor's and master's degrees in biology from the Faculty of Biology and Environmental Protection at the University of Silesia.

For most of her career, Nowak has worked independently, leading local and national conservation efforts targeting the protection and conservation of large carnivores. In 1996, she helped found the Association for Nature-Wolf, a non-governmental agency that advocates for the protection of the wolf in Poland. During this same time, Nowak conducted independent research on wolves in the Bialowieza Primeval Forest and the western-most edge of the Carpathian Mountains. Wlodzimierz and Bogumila Jedrzejewski, two of Poland's top wolf biologists, encouraged her to pursue a Ph.D., and in 2003 she successfully defended her dissertation, *Population Dynamics, Ecology, and Problems of Wolf Canis Lupus Conservation in the Silesian and Zywiec Beskid Mountains.* Today she continues advocating for wolves through teaching, wolf-habitat conservation, research, developing methods to prevent livestock depredation, and helping rescue wolves injured by traps or vehicles.

**Shannon Barber-Meyer** majored in biology, with chemistry and mathematics minors, at Eckerd College in Florida. Although her original goal was to study dolphins, she became intrigued by the complex social lives of wolves during a wolf-ecology course in Minnesota, and a different dream began. In 2006 she earned her Ph.D. from the University of Minnesota, under the direction of Dr. L. David Mech, in wildlife conservation with specializations in ecology, evolution and behavior. While working on her doctorate, Barber-Meyer captured wolves for radio-collaring and studied summer feeding habits of wolves in Minnesota's Superior National Forest. Her 2006 dissertation, *Elk Calf Mortality Following Wolf Restoration to Yellowstone*, focused on the predation (by wolves and other carnivores) of elk *(Cervus elaphus)* calves in Yellowstone. Barber-Meyer's post-doctorate work included monitoring the Emperor Penguin *(Aptenodytes forsteri)* for the Scripps Institution of Oceanography and working on tiger *(Panthera tigris)* conservation for the World Wildlife Fund. Her first "real" post-graduate-school, wolf-biologist job was as the Mexican wolf field-team leader at the Arizona Department of Game and Fish. Barber-Meyer currently serves as a research wildlife biologist with the U.S. Geological Survey, studying wolves and white-tailed deer *(Odocoileus virginianus)* with Dr. Mech in the Superior National Forest.


Courtesy of Shannon Barber-Meyer

# Expecting the unexpected

A "typical" day in the life of a wildlife biologist is never typical. Daily work may include tracking radio-collared wolves, writing a grant proposal or research report, analyzing data, attending meetings, speaking to a group of students, talking to a farmer in the aftermath of a wolf attack, performing a necropsy on a wolf or its prey, or even searching for an injured wolf in the wild. Still, there are days that are more memorable than others.

Nowak recalled, "When wolves started to recolonize western Poland, the first family groups preferred to reproduce on military training campgrounds, which are common in that region—remnants of Communist times and the Cold War. For most of the year, the overgrown buffer zones of shooting fields are left undisturbed by people, so the only inconvenience is the occasional noise of tanks and explosions, which the wolves have learned to ignore."

Every spring, Nowak and her team looked for wolf dens on the military bases. When they found one, they mounted cameras to monitor the site. On one late-May day, when one of the cameras failed to record, Nowak hiked out to check on the den where they had spotted wolf activity in April. As expected, the area in front of the den was covered with freshly dug sand, but no wolves were visible. "Suddenly, from a distance of several meters, I saw a heap of tiny bodies—four wolf pups, two-to-three weeks old, napping in the heather two meters from the den." Seeing no adult wolves, Nowak approached the pups to photograph them. Three of the pups woke up and sniffed in her direction. "They were beautiful, cute and fragile. Seeing them triggered a flood of affectionate emotions in my brain."


Robert Mysłajek

Nowak credited this experience for giving her insight on how wolves may have become domesticated. "Many thousands of years ago, we lived lives similar to those of wolves, in groups of kin, roaming through vast areas, foraging and hunting large prey. The human mothers collected fruits, bulbs and edible plants for their families. When they came upon a litter of wolf pups, they probably had an affectionate reaction similar to mine, which inspired them to bring some pups back to their camps. Perhaps they gave the pups to their children to play with, and the pups accepted their new families. Those that were calm and tame survived and likely became ancestors of the dog."

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In 1997, Dr. Blanco offered Cortés the opportunity to work on a research project on certain bird and mammal species in the Cantabria, funded by the University of Cantabria. Part of Cortés's job would be to determine the status of the wolf population in the region and evaluate the challenges and risks they faced. Aware of the value of working with a well-known

researcher, she left Madrid and moved to Santander, Spain. On her first day, Dr. Blanco introduced her to Nardo, one of the rangers in the Cantabrian Mountains. Nardo showed Cortés around the area, including the site of a wolf pack's former den—a site that his father, also a ranger, had shown him. Supposedly the den was no longer in use, since there had been no wolves in the area for a long time.


Courtesy of Yolanda Cortés

"After some time searching below the trees and the heather, we found the den," Cortés said. Everything showed us that it was still in use. When we looked into the opening, we saw six small pups. I could not believe that on my first day as a wolf biologist, I would have pups in my hands! It was an indescribable experience. It was also the only time in my career that I caught wild wolf pups, as we never interfere with packs in this way, and it tied me forever to this species."

In 2002, Barber-Meyer experienced first-hand some of the challenges and triumphs of studying a species as elusive as the wolf. She and two technicians were studying the summer feeding habits of wolves in the Superior National Forest in northern Minnesota, using GPS collars to track the movements and locations of wolves. Unlike today's GPS collars, which can transmit data to a website accessible from any computer, most early GPS collars required researchers to retrieve the actual collar (and the wolf wearing it) before they could download data. Barber-Meyer and her team were lucky; twelve days earlier, the female wolf FW845 had been caught and fitted with a new kind of collar—one that allowed them to obtain information about the wolf's movements from a distance. It was still challenging, however, as it required an antenna and a receiver, and researchers had to be within a half-mile of the collar to download data. This meant that they had to hike to where the wolf was, hoping the wolf did not move before they reached it. The dense forests and few roads made signals difficult to locate and required arduous hikes over rough terrain. Barber-Meyer had programmed the collar to take location readings every 10 minutes.

"Each day, we attempted to download her location data, which told us where she had been the previous 24 hours, and we hiked that same day to investigate places she might have killed and eaten her prey."

On a late afternoon in June, having downloaded the data, the team geared up for a backcountry hike. The weather was 60°F and overcast with thunderstorms. By the time they reached the locations, deep in the heart of a cedar swamp, the daylight was quickly fading, and a thick canopy and heavy rain further reduced visibility. They searched the clusters but found no evidence of a kill.

Barber-Meyer recalled, "Finally, on hands and knees, I began scouring the wet dirt of the last location, in what appeared to be a wolf bed— desperately hoping we had not gone to all this effort for an 'inconclusive' entry in the database. And then I found it—a piece of flesh with fawn fur on it. It was less than 2x2 cm (about a square inch), but I held it up like a trophy and shouted to the two technicians, 'I've got it!'"

Prize in hand, the group moved quickly to get out of the woods before it became too dark to navigate the wet, rocky terrain. "Our study area is in the famed Iron Range, and our compasses spun wildly as we crossed over iron deposits. Our GPS unit was not reliable if it got wet, so we had it in a plastic sandwich bag, but the rain was so heavy it was hard to read the screen through the plastic," Barber-Meyer said.

Finally, they made it back to the road, soaking wet and full of joy.

It was after 9 p.m. when they got back to the field station. Drenched and exhausted, Barber-Meyer triumphantly held up the tiny piece of flesh—that one bit of evidence that showed FW845 had eaten a fawn yesterday—to the wildlife biologist in charge of field operations.

"Looking up at me from his desk, where he was working on a manuscript, he said with a wry smile, 'And you get to get up and do it all over again tomorrow morning.'"

For Boyd, working in in the wild provided a vivid reminder that humans are not always the top predators. In the summer of 1987, she and Kurt Aluzas, a volunteer, were in the field drugging, collaring, and checking blood and weights on wolves. They had finished their tests and were beginning to pack up. The drugged she-wolf asleep on the ground was beginning to stir. Then they heard it—a twig snapped. Looking up, they saw a grizzly bear *(Ursus horribilis)* running out of the woods toward them. Boyd believes that the smell of blood had attracted the bear.

"This was before bear spray, and the only way we knew to protect ourselves was to make noise. So I started yelling and slapping my hand against my clipboard and stomping my feet." The bear retreated.

Boyd and Aluzas had resumed gathering their gear—more quickly this time—when they heard it a second time. A twig snapped. The bear had returned, looking menacing. They grabbed their gear, picked up the now-awakening wolf, an exercise Boyd described as akin to "hauling a six-foot-long, 80-pound semi-conscious sack of potatoes," and ran for their vehicle. Throwing their gear and the wolf on the back seat, they drove off, leaving behind one very disappointed bear. ■

*The second part of this interview will appear in the winter 2019 issue of* International Wolf.

Debra Mitts-Smith is a School of Information Sciences faculty member at the University of Illinois. Her research and teaching focus on visual culture, children's literature, history of the book and storytelling. Her book, *Picturing the Wolf in Children's Literature,* was published by Routledge in 2010. She is currently working on a cultural history of the wolf.