



the **Wolf** & the **Dog**:

FIRST FRIEND TO BEST FRIEND







A Message from Defenders of Wildlife

Dogs have long been known as “man’s best friend,” but that title doesn’t go far enough. We trust dogs to protect our children, our families, and our homes. We turn to dogs as partners in work—from herding livestock to detecting drugs or explosives. We share our lives with dogs and enjoy their steadfast friendship. Dogs are loved, cherished, honored members of our families.

Many of the qualities that we value in our dogs—including loyalty, intelligence, kindness, and courage—come directly from their wolf ancestors. Yet even as dogs have become a welcomed part of our society, the wolf has been the victim of unfounded persecution and a target for execution.

Defenders of Wildlife has long worked to protect wolves from those still determined to harm them—and we are very proud of our

long history of success. Our admiration for the wolf and its role in nature is so strong we feature it in our logo. And it serves as a constant reminder of one of our most magnificent wild species.

There is a great deal to admire in the wolf, and we see much of it reflected every day in our steadfast domestic companions who greet us each evening with a wagging tail.

Humans have a love affair with dogs. As you enjoy this book, we hope it will illustrate for you why wolves are just as deserving of our admiration, and our protection.



Rodger Schlickeisen
President



Timeline Schematic OF WOLF/DOG EVOLUTION

37 MILLION YEARS AGO:
Evolution of the first canids



Canid skull

9 MILLION YEARS AGO:
Evolution of *Eucyon*,
forebearer of wolf, dog
and coyote



Coyote

1 MILLION YEARS AGO:
Evolution of the
gray wolf



Wolf howling

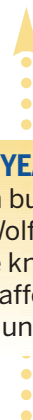
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14,000 - 100,000 YEARS AGO:
Evolution of the
domesticated dog



Siberian husky

12,000 YEARS AGO:
Human buried with
pup. Wolf or dog?
No one knows—but
the affection
seems undeniable.



Long, Long Ago . . .

At some point, long before recorded history, wolves and humans established a special relationship. No one knows if wolves took the initiative and ingratiated themselves with mankind while scavenging at camp sites, or if humans actively adopted less aggressive wolf pups. But at some point, a particularly friendly pup probably bonded with a human, accepting that man or woman as part of its “pack.”

Once a wolf became accepting of humans, its benefits to those humans were unquestionable. Deeply loyal, a wolf could use its keen senses to warn when trouble approached. It could help chase down prey, and it could guard families.

Scientists once thought the evolution of wolves into dogs was complete roughly 12,000 to 14,000 years ago—but new evidence suggests it could have been much earlier than that—perhaps 100,000 years ago. The first dogs probably evolved from wolf breeds in Asia, which were smaller than the gray wolves we know today in North America. Over time, people began to realize the advantages of improving on their dog’s natural assets, and selective breeding began.

The very first species of dogs were the greyhound—bred in the deserts of Africa for their speed in bringing down prey—and the mastiff, first seen in northern Europe and created as especially powerful guard dogs.



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**3,000 - 4,000
YEARS AGO:**

Development of
distinct dog breeds



Greyhound

MIDDLE AGES: Dogs
bred for specific
hunting traits



Labrador retriever

1570: First known
attempt to classify dogs—
De Canibus Britannicis
by Dr. John Caius



Pembroke Welsh
corgi

1886: First dog show,
founded by Charles Cruft

1884: Establishment of
the American Kennel Club



West Highland white terrier

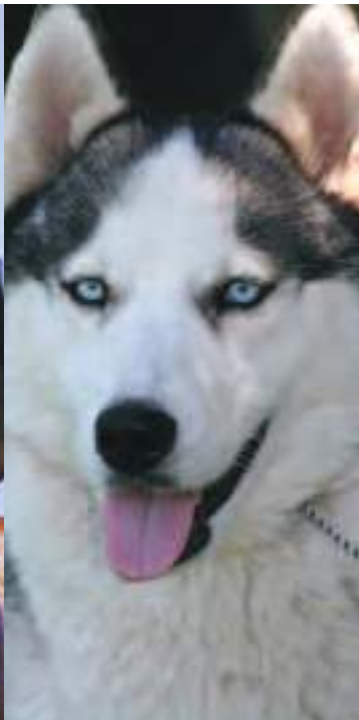


Working Together

When wolves were sufficiently evolved to become dogs, human hunting methods changed. Once the best hunting technique was to hit the prey with a stone axe—a dangerous strategy. But as soon as humans had dogs as partners, they began to employ weapons that could kill from further away, including spears or arrows.

These weapons were less likely to kill at first blow, but a dog could track a wounded animal and bring it to bay—even fight it if necessary.

Perhaps one of the most significant gifts that dogs have given to humanity is this partnership that helped our species to advance and prosper.





Wolf

©Jack Mills

Creating a Breed Apart

For centuries dogs were what we'd today call mongrels—unspecific breeds that tended to follow the coloration and size of the wolves from which they descended. But eventually humans began to take advantage of the fact that some dogs had superb herding instincts, some were better hunters, and some were natural guardians, and they began to breed specific types of dogs.

The mastiff and the greyhound were bred into existence some 4,000 years ago. But the practice of selective breeding really took off with the rise of the aristocracy in the Middle Ages. Members of the nobility considered it a sign of prestige to maintain dog packs created to hunt a variety of prey. Beagles were bred to bay loudly while tracking foxes and other species so a hunting party could follow them by ear. Hounds were developed with enhanced senses of smell





Siberian husky

to pursue even “cold” trails. Terriers—tremendous diggers—were created to go after animals that tended to hide underground.

Retrievers were bred in part for their gentle mouths that don’t crush prey when they return with it. Labradors developed as exceptional swimmers and water lovers, and so are useful for duck hunting. Boarhounds, wolfhounds, elkhounds—each was created to be used in hunting one specific prey.

By the Renaissance, “companion” breeds had been developed. These were dogs too small and delicate to be used as work partners, and were designed simply as

pets—a luxury only the rich could afford. Working breeds continued to become more specialized, with collies and shepherds for herding, pit bulls and bulldogs for fighting and protection, and a dazzling array of other dogs for hunting.

In the 1800s, the first dog shows popularized the concept of pure-bred dogs. Today the American Kennel Club recognizes well over 150 breeds, and there are an estimated 300-400 breeds of dogs in existence. Today there are dogs in every part of the human-inhabited world, and most dog owners regard their pets as far more than a luxury—they are necessities and beloved members of our family.



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A Dog is not a Wolf

Domestication produced some quite universal results. Because they don't have to survive in the wild, domesticated dogs are often smaller and less cunning than wild wolves. They also tend to hold on to juvenile behaviors longer. For example, wolf pups will play but rapidly outgrow the desire to do so. Dogs, on the other hand, are eager to play almost throughout their lives.

But on a genetic level, dogs and wolves are extremely similar. The DNA difference between the two is less than 1% (that includes comparing wolves to Chihuahuas, Great Danes or huskies). Meanwhile, for comparison, there is an approximate 6% difference between wolves and coyotes.

Of course there are very significant differences between wolves and dogs.

Most importantly, dogs are tamable and trainable, while wolves (and all wild canines) are generally not. Dogs are willing to accept a position in a human "pack," and generally exhibit docility, a comparative lack of fear, and a high tolerance for stress. Wolves have a much quicker reaction to stress, and reach a "fight or flight" point much more rapidly than dogs.



Newfoundland

Physical differences are some of the most obvious distinguishing characteristics between wolves and dogs. Wolves tend to remain roughly consistent in size within their subspecies (that is, gray wolves don't vary greatly in size, although they are considerably larger than most other wolf species), and while their coat color can range from pure white to inky black, their coats' textures are the same.



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Dogs exhibit a wide range in size, from toy breeds just a few inches high to the mighty Newfoundland and the Irish wolfhound, which stand 30 inches tall or higher at the shoulder. A Maltese has a dramatically long, silky

coat, a poodle sports curly hair, a husky's coat is similar to a wolf's, and a bulldog wears an extremely short coat. There are even hairless dogs and dogs like the komondor with corded coats.



Communication in Wolves and Dogs

Wolves use vocalizations, body language and their incredible senses of sight, smell, and hearing to communicate. Posture and tail position are extremely important in establishing order in a wolf pack; the alpha (or leader) wolf stands straight with tail elevated, while subservient wolves cringe, put their tails down, and refrain from looking the leader in the eye. Wolves use scent markings to establish their home territory. And wolves call out with howls to get the attention of

other wolves that might be nearby or miles away. But wolves almost never bark.

Dogs use each of the same senses to communicate, but selective breeding has altered the standard forms of wolf communication. Many dogs bred for their ultra-shaggy or silky coats are less able to see visual cues—for example, an English sheepdog relies as much on hearing as on sight. Dogs like the basenji, which are bred to have very curly tails, are less able to express





Basenji

emotions with their tails. Pugs have extremely foreshortened noses, and that has diminished their sense of smell.

And dogs bark—and bark and bark—to indicate a warning, excitement, eagerness, or a wide variety of other emotions. Dogs also howl, although some species are more prone to do so than others. And dogs often harken back to the old call of the wild when they howl along with a siren, a violin or singing. Interestingly, while wolves rarely bark in the wild, they can learn to bark when kept with dogs.



Old English sheepdog



The Fall of the Wolf . . . The Rise of the Dog

Over the millennia, the advances of civilization have left less and less wild lands available for wolves (and all wild species). But the expansion of humanity that has proven problematic for wolves has been a boon to dogs—a species that has benefited from its inclusion in human society. There are now an estimated 10,500–12,500 gray wolves in the United States, and more than 60 million pet dogs.

Habitat loss is a very real threat to wolves—but it’s important to understand how the actual extermination of wolves became such a high priority for so long. The blame can be assigned partly to livestock depredation, but also to folk tales, legends, and children’s stories.



“The Three Little Pigs,” “Little Red Riding Hood,” and countless other fairy tales use “The Big Bad Wolf” as the villain. Over time, this repeated and colorful bias helped inflame public opinion against wolves and harm the species. In the United States, wolves were declared vermin. So many were shot that by the 1980s, the only population in the lower 48 states was a small pack in far northern Minnesota.

It has taken a great deal of work and a good measure of educational outreach to inform the public about the key roles wolves play in nature and how they share many of the qualities we most admire in dogs.







Why Should We Save Wolves?

For most of human history, we haven't needed to concern ourselves about sustaining the web of life. But today, for the first time since the extinction of the dinosaurs sixty-five million years ago, we're losing species faster than nature can create new ones. And that's because of our relentless population growth and development of modern technologies ever more capable of altering the natural world.

Given current trends, it is estimated that by the time a child born today reaches his or her 30th birthday, one of every five current species on Earth will be either doomed or already extinct. After that, if present trends continue, the prospect will worsen.

Because the wolf has endured such a long history of persecution, the campaign to reverse the government's policies toward wolves makes that cause into a symbol of the larger struggle to upgrade our society's overall wildlife conservation values. If our society can alter its attitudes and policies toward the wolf, then widespread adoption of a more beneficial conservation ethic shouldn't be far behind.

We should save wolves because it's good for the wolf, it helps establish a conservation ethic that can save other imperiled species—and it's good for the environment our children will inherit.





Wolves return to Yellowstone National Park

A remarkable thing happened as a consequence of the gray wolf being reintroduced with Defenders' leadership to Yellowstone: a natural dynamic balance was restored.

Biologists call wolves a “keystone” species because their absence or presence dramatically affects the overall health of the ecosystem. The re-introduction of wolves proved that point. When wolves returned, they hunted elk which reduced their numbers and—importantly—caused them to spend less time in the river valleys. With the elk dispersed, aspen and willows

could again grow and prosper along the rivers. This in turn provided food for beavers which returned, built dams and created wetlands. Waterfowl and songbirds then also returned. And so on.

One of our nation's most popular and beloved parks is now ecologically healthier and more vibrant because of the return of just one critical species. This success, one of the greatest wildlife conservation victories of the twentieth century, is worth celebrating—and worth learning from.

About the Photographer



Jack Mills, wildlife photographer, has a passion for wildlife conservation in general, and wolves in particular—and it shows. His photographs capture both the beauty and essential wild nature of the magnificent gray wolf. It's no wonder that his work is published regularly in books, calendars, magazines, and web sites.



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Bibliography of Reference Works

How the Wolf Became the Dog, John Zeaman, Franklin Watts, a division of Grolier Publishing, 1998

Behavior of Wolves Dogs and Related Canids, Michael W. Fox, Harper & Row, Publishers, 1971

The Domestic Dog, its evolution, behaviour and interactions with people, James Serpell, ed., Cambridge University Press, 1995

The Wolf Within, David Alderton, Howell Book House, 1998

Wild Dogs Past & Present, Kelly Milner Halls, Darby Creek Publishing, 2005

“The Early Evolution of the Domestic Dog,” Darcey F. Morey, *American Scientist Magazine*, Volume 82

“Stalking the Ancient Dog,” Christine Mlot, *Science News*, vol. 151, June 28, 1997



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