



A border collie stands on the bluff at Raven's Point, Tennessee.
PHOTOGRAPH BY STEPHEN ALVAREZ, NAT GEO IMAGE COLLECTION

ANIMALS REFERENCE

Domestic dog



COMMON NAME: Domestic dogs

SCIENTIFIC NAME: *Canis familiaris*

TYPE: Mammals

DIET: Omnivore

GROUP NAME: Pack

AVERAGE LIFE SPAN IN THE WILD: 12 years

SIZE: Five to 35 inches at the shoulder

WEIGHT: Three to 250 pounds

SIZE RELATIVE TO A 6-FT MAN:



IUCN RED LIST STATUS: ? **Not evaluated**



CURRENT POPULATION TREND: Unknown

What is a domestic dog?

The term “domestic dog” refers to any of several hundred breeds of dog in the world today. While these animals vary drastically in appearance, every dog—from the Chihuahua to the Great Dane—is a member of the same species, *Canis familiaris*. This separates domestic dogs from wild canines, such as coyotes, foxes, and wolves.

Domestic dogs are mostly kept as pets, though many breeds are capable of surviving on their own, whether it’s in a forest or on city streets. A third of all households worldwide have a dog, according to a 2016 consumer insights study. This makes the domestic dog the most popular pet on the planet.

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Evolutionary origins

All dogs descend from a species of wolf, but not the gray wolf (*Canis lupus*), like many people assume. In fact, DNA evidence suggests that the now-extinct wolf ancestor to modern dogs was Eurasian. However, scientists are still working to understand exactly what species gave rise to dogs.

When dogs broke off from their wild ancestors is also a matter of mystery, but genetics suggest that it occurred between 15,000 and 30,000 years ago.

While it’s impossible to say exactly how a wild wolf species became a domesticated dog, most scientists believe the process happened gradually as wolves became more comfortable with humans. Perhaps wolves started down this path simply by eating human scraps. Many generations later, humans might have encouraged wolves to stay near by actively feeding them. Later still, those wolves may have been welcomed into the human

home and eventually bred to encourage certain traits. All of this is thought to have unfolded over thousands of years.



A HISTORY OF DOGS 101

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Dog breeds

Today, many of the dogs you know and love are the product of selective breeding between individuals with desirable traits, either physical or behavioral. For instance, around 9,500 years ago, ancient peoples began breeding dogs that were best able to survive and work in the cold. These dogs would become the family of sled dogs—including breeds such as huskies and malamutes—that remains relatively unchanged today.

Similarly, humans bred German shepherds for their ability to herd livestock, Labrador retrievers to help collect ducks and other game felled by hunters, and sausage-shaped Dachshunds for their ability to rush down a burrow after a badger. Many more breeds were created to fill other human needs, such as home protection and vermin control.

Certain breeds have also been created to make dogs more desirable as companions. For instance, the labradoodle, which combines the traits of a Labrador retriever and a poodle, was invented as an attempt to create a hypoallergenic guide dog.



Left: A portrait of Lola, a two-year-old boxer-husky mix.



Right: A portrait of Daisy, a five-year-old English springer spaniel.

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Modern working dogs

While people rely less on dogs for daily tasks than they did in the past, there are still many modern jobs for pooches.

Because the domestic dog's sense of smell is between 10,000 and 100,000 better than our own, canines now assist law enforcement by sniffing out drugs, explosives, and even electronics. They can also help conservationists find and protect endangered species using their super-powered schnozzes.

They assist search and rescue teams in the wake of natural disasters or reports of people lost in the outdoors. Dogs trained to warn of hidden explosives and enemies serve as allies in military operations. Other dogs assist police looking for jail escapees or the bodies of murder victims. Some partner instead with customs officials searching for contraband, from drugs to elephant ivory. Still others lead the way tracking down poachers, patrolling cargo ships for rats that might escape at distant harbors, or exposing forest insect pests in shipments of wood from abroad.

Similarly, dogs can sniff out early signs of Parkinson's disease, diabetes, several types of cancer, oncoming epileptic seizures, and antibiotic-resistant bacteria. They guide deaf and blind people, and they help people with autism and post-traumatic stress disorder manage with anxiety.

Living with dogs

Most dogs are a mix of breeds—in 2015, one study estimated that only 5 percent of dogs in shelters are purebred. Just as dogs come in all sizes, shapes, and colors, these animals also come in a spectrum of temperaments. A bulldog might look fierce but be cuddly as a kitten, whereas a cute cocker spaniel might nip at your finger without thinking twice.

This is why animal handling expert Jack Hanna recommends teaching children to always exercise caution around a dog they do not know. For instance, he says kids should ask for permission from the dog's owner before trying to pet or play with the animal. Offering an outstretched hand also allows the dog to familiarize itself with a new person before reaching behind its head where it can't see what you're doing, which might make a dog nervous or scared. Finally, never allow children to put their faces near the dog's muzzle.

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"I don't care what kind of dog it is," [Hanna told *National Geographic*](#). "The owner may say, 'Well, this dog's never bit anyone before.' But that's not the point. The point is it can happen."

Of course, when dogs are cared for properly and treated with respect, they can be incredibly loving, playful, and intelligent companions. What's more, by understanding where dogs come from, pet owners might learn to appreciate their canines even more.

After all, the yipping and tail-wagging your dog performs when you grab a bag of treats are carry-overs from when its ancestors needed to communicate with other members of its social group. Chasing sticks and balls may be linked to the pursuit of prey, while digging at the carpet or a dog bed echoes how a wild canid would prepare its sleeping area. And each time Fido stops to sniff a fire hydrant on your walk, it's analyzing the pheromones left behind by another dog's urine.

We take these behaviors for granted because dogs have become "man's best friend." But deep inside every pit bull and Pomeranian, there lie hints of the past.

Editor's note: Bringing a dog into your household is a major responsibility. More than [1.6 million dogs](#) ended up in shelters in 2020. Learn how to keep your dog happy and healthy with the National Geographic book [Complete Guide To Pet Health, Behavior, and Happiness](#).

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