

# The Wolf Within



We love dogs, all types of dogs: small dogs, big dogs, yappy dogs, lap dogs. Each year we spend billions of dollars on our canine pals, making sure our lovable mutts have enough to eat and lots of toys to play with.

For their part, dogs love us. They lick our faces, protect our homes, and come when we call them (sometimes).

But where did our favorite four-legged companions come from? How and when did dogs get to be our best friends? Some scientists believe they have found some of the answers.

## From Wolf to Woof

Scientists have long known that dogs evolved from wolves. Just when the transformation from wolf to

dog actually took place, however, remained a mystery.

Some said dogs evolved as a separate species 135,000 years ago in two parts of the world. One group of dogs developed in Europe and Asia from Asian wolves. Another group evolved in North, Central, and South America from American wolves.

Now, researchers say, those theories are wrong. New studies suggest that *domesticated*, or tamed, dogs first appeared 15,000 years ago in eastern Asia. They also say that every modern dog, from the Taco Bell Chihuahua to Frank, the adorable pug in the movie *Men in Black II*, descended from approximately five female Asian wolves, the mothers of all modern dogs.

## Old Bones

How did scientists come to those conclusions? Scientist Jennifer Leonard and a team of researchers began investigating the **origins** of dogs by collecting the bones of canines that once lived in North, Central, and South America before Christopher Columbus arrived in 1492.

Researchers then **extracted** a bit of DNA from the cells in those bones. DNA is the substance that makes up the genes of living things. Genes determine a dog's inherited characteristics, such as eye and fur color.

The scientists then compared the DNA samples to the DNA of modern dogs and wolves not only in North and South America, but also in Europe and Asia. Scientists found that the genes of the ancient American dogs were similar to the genes of dogs born in Europe and Asia. Scientists also concluded that every breed of dog, from English setters to Labrador retrievers, descended from wolves that lived in Europe and Asia and migrated to North and South America.

## Land Bridge

Scientists suspect dogs first set paw in North America by following settlers across a land bridge that once linked northern Asia and North America.

"We can't say in detail how [the dogs got to America]; that's something for the future," said Peter Savolainen, a scientist in Sweden. "But what's certain is that by 9,000 years ago, [dogs] were in America and all over Europe and Asia."

## Good Friends

No one knows exactly how dogs became domesticated. Some researchers believe that they accomplished that task themselves over a number of generations by hanging around human campsites sniffing for scraps of food. Those that were not afraid of people ate well, survived, and multiplied.

Other researchers say that humans manipulated every aspect of canine behavior by breeding dogs for certain traits.

Either way, dogs developed an uncanny ability to pick up human signals, endearing the pups to humans, scientists say. As the years passed, humans and dogs became fast friends, a relationship that has lasted thousands of years.

Today, there are 78.2 million owned dogs in the United States. In a recent survey of U.S. dog owners, 94 percent said they own dogs for companionship.

"He's really a good friend," 11-year-old Kerry Knott said about her family's Weimaraner. "I try to look out for him."

Name: \_\_\_\_\_ Date: \_\_\_\_\_

1. According to new studies, what did every modern dog descend from?

- A. the Taco Bell Chihuahua
- B. English setters and Labrador retrievers
- C. American wolves in North, Central, and South America
- D. approximately five female Asian wolves

2. What does the author describe in the section "From Wolf to Woof"?

- A. The author describes how dogs that were not afraid of people ate well, survived, and multiplied.
- B. The author describes how researchers say some theories about the way in which dogs evolved from wolves are wrong.
- C. The author describes how researchers extracted DNA from the cells in the bones of dogs.
- D. The author describes how genes determine a dog's inherited characteristics, such as eye and fur colors.

3. Read these sentences from the text.

"Some [scientists] said dogs evolved as two separate species 135,000 years ago in two parts of the world. Now, researchers say, those theories are wrong."

What evidence in the text supports the conclusion that those theories are wrong?

- A. Each year we spend billions of dollars on our canine pals.
- B. Asian wolves came to the Americas with Christopher Columbus in 1492.
- C. Scientists found that the genes of the ancient American dogs were similar to the genes of dogs born in Europe and Asia.
- D. Five female Asian wolves developed an uncanny ability to pick up human signals.

4. Scientists have long known that dogs evolved from wolves. But no one knows exactly how dogs became domesticated.

Based on these sentences, what can you infer about wolves?

- A. Wolves are not domesticated.
- B. Wolves became extinct.
- C. Wolves come when people call them.
- D. Wolves were raised by scientists.

5. What is the main idea of this text?

- A. Christopher Columbus arrived in the Americas in 1492.
- B. Researchers say every modern dog, including American dogs, descended from Asian wolves.
- C. A land bridge once linked northern Asia and North America.
- D. Dogs are the most popular type of pet in the United States.

6. Read these sentences from the text.

"Scientists have long known that dogs evolved from wolves. Just when the transformation from wolf to dog actually took place, however, remained a mystery."

Based on these sentences, what does the word "evolve" most likely mean?

- A. to develop and change
- B. to die off completely
- C. to outlive
- D. to tame

7. Read this sentence from the text.

"Scientists suspect dogs first set paw in North America by following settlers across a land bridge that once linked northern Asia and North America."

What word or phrase could replace "once linked" without changing the meaning of the sentence?

- A. later linked
- B. always linked
- C. still links
- D. used to link

8. Scientists used to think dogs evolved in two different groups in which two parts of the world?

9. According to new studies by scientists, how do the genes of ancient American dogs compare to the genes of dogs born in Europe and Asia?

10. Read these sentences from the text.

"Some [scientists] said dogs evolved as a separate species 135,000 years ago in two parts of the world. One group of dogs developed in Europe and Asia from Asian wolves. Another group evolved in North, Central, and South America from American wolves. Now, researchers say, those theories are wrong."

Explain how what scientists learned about the genes of ancient American dogs and the genes of dogs born in Europe and Asia affected their theories about how dogs evolved.

Support your answer with evidence from the text.