Despite the vast diversity of the size, shape and behavior of dogs, they share a deep evolutionary history

The closest living relative to modern dogs is the gray wolf (*Canis lupus*). The ancestor of modern dogs and the ancestor of modern wolves probably split at some point in the late Pleistocene, the last ice age. Genetic studies put different dates on this split.

The oldest fossil that scientists agree came from a dog, rather than a wolf, comes from a site in Germany called Bonn-Oberkassel and dates back about 14,200 years. But archaeologists have found fossil specimens that might be domesticated dogs dating back more than 30,000 years. It’s difficult to confidently identify a Pleistocene fossil fragment as being from either a dog or a wolf, and because dogs and wolves interbred even after they diverged genetically, genomic studies are complicated. Researchers also debate whether dog domestication happened once or at multiple sites around the world.

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It is clear that humankind’s bond with dogs goes way back. The 14,200-year-old dog from Bonn-Oberkassel was buried with two humans and had been nursed through several episodes of canine distemper before it died. In a 12,000-year-old cemetery in Israel, a woman was found buried with her hand on a small wolf or dog puppy. A Stone Age dog from what is now Sweden was buried with a human companion about 8,400 years ago, researchers reported in 2020.

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