

History and Evolution of the Domestic Cat, *Felis catus*

All cats, large and small, wild and domestic, belong to the cat family Felidae. Within this family are two subfamilies: Pantherinae — the great cats, including the lion, tiger, leopard, snow leopard, clouded leopard and jaguar, and Felinae — the small cats. Felinae includes more than 30 different species, such as the lynx, ocelot, serval, margay, leopard cat, bobcat, jungle cat, wildcat, and the domestic cat. The small cats are found throughout Africa, Asia, Europe, and the Americas.

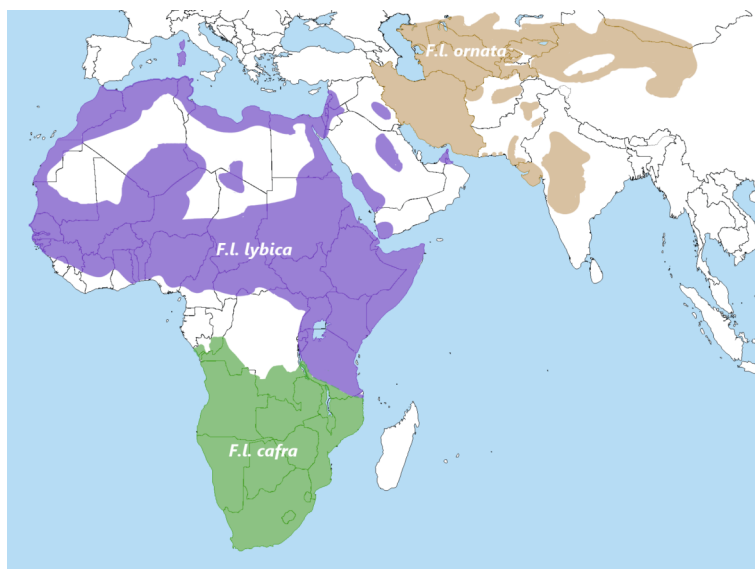
Several small wildcats, like the European wildcat, *Felis silvestris*, are similar in appearance to the average house cat. However, it is specifically the African wildcat, *Felis lybica*, who is considered the ancestor of what is now the most popular companion animal in the world: the domestic cat, *Felis catus* (Driscoll et al., 2007).

Felis lybica is a little larger and stockier than *catus*, but its coat is similar to that of the modern tabby cat. Even today, African wildcats have been successfully socialized to humans, whereas the European wildcat, *Felis silvestris*, is almost impossible to tame (Serpell, 2000). Young European

wildcats who live in captivity will quickly revert to a wild state as they grow older. Mummified cat remains have also shown the domestic cat's origins to be closer to *lybica* and modern molecular techniques show that the domestic cat is genetically most similar to the African wildcat. In 2007, scientists established the origin of the domestic cat by analyzing the DNA of one thousand wild and domestic cats (Driscoll et al., 2007). By sampling genes from several subspecies across three continents, they found that *Felis lybica* living in the Near East were likely domesticated between 10,000 to 12,000 years ago (Handwerk, 2007).

Dr. Jim Sanderson, the Founder and Director of Small Wild Cat Conservation Foundation, described the African wildcats as such:

Felis lybica is a separate species with three subspecies. In Eastern and Southern Africa, the subspecies is *Felis lybica cafra*. The ancestor of the domestic cat is *Felis lybica lybica*. The wildcat of Asia is *Felis lybica ornata*.



Domestication of the cat occurred when humans settled the Fertile Crescent, which stretches from the Nile in Egypt to the Tigris and Euphrates rivers in the modern-day Middle East. Around this time, human settlements started to grow crops such as wheat and barley, and with that came the necessity to store used grain. The wildcat found easy prey at the grain storage bins, which attracted large numbers of rodents (DK Publishing, 2014). Humans and wildcats recognized what could be a mutually beneficial relationship;



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African wildcat (Felis silvestris lybica), considered the ancestor of today's domestic cat.

cats benefited from the availability of food sources around humans (as well as shelter from weather and other predators), while humans profited from a feline form of rodent control.

Most domestic animals were tamed by people, but geneticist Dr. Carlos Driscoll has written, "The cats were adapting themselves to a new environment, so the push for domestication came from the cat, not the human side" (Driscoll et al., 2007). Today, the descendants of the domestic cat number more than 600 million (Driscoll et al., 2009). Unfortunately, the cat's wild cousins are not faring as well and are in great jeopardy. Habitat loss from the rampant overdevelopment of land has resulted in the loss of prey animals, thus causing a near-extinction crisis for most of these wildcats.

Studies have discovered genetic markers that distinguish native wildcats from domestic house cats or feral cats (Randi et al., 2001). However, these cats have a similar enough genetic makeup that they easily in-

terbreed; in some cases, such as with African and Scottish wildcats, interbreeding threatens to "hybridize" the genetically pure wild form.

The Cats of Ancient Egypt

Because of this new evidence, domesticated cats are now believed to have arrived in Egypt from the Near East, rather than tamed from the resident wildcat species. However, some scientists admit that the African wildcats in Egypt could have been tamed by humans.

In any case, cats were treated with great respect in ancient Egypt. Many revered the cat goddess Bastet, and celebrated her connection with the moon, fertility, and protection. Another name for Bastet or Bast, was Pasht, from which the word "puss" is thought to have been derived (Zax, 2007). Bubastis, the city of Bastet, became one of the major religious centers of Egypt and in 945 B.C., it was made the capital of Egypt (Mercer, 1919). Bastet was one of the most popular goddesses (Mark, 2012). The Egyptians portrayed Bastet either as a giant cat or as a woman with the head of a cat. The celebration of Bastet at Bubastis continued for two thousand years until it was finally outlawed by the Christian Emperor, Theodosius (Quammen, 2012).

Ancient wall paintings show cats and kittens sitting under chairs and on laps in much the same way as our household cats act today. Wall paintings depict the cat as a welcome member of Egyptian households, as well as a prominent figure in myth and legend (Wilkinson and Hill, 1983).

In ancient Egypt the death of a cat was deeply mourned. The entire household shaved their eyebrows to display their grief over the loss (Herodotus, 2008). Millions of cats were mummified and buried in cat cemeteries in Bubastis and other centers (Kurushima et al., 2012). These mummified

cats were kept for centuries, but before valuable research could be done to establish the true origins of the domestic cat, the scientific value of these remains was overlooked and most were used as fertilizer (Lorenzi, 2012).

During this period in Egypt, cats were not allowed to be taken out of the country (Mark, 2012). However, the cultural significance of the cat and her ability to control rodent populations so entranced many foreign visitors that slowly many cats were smuggled out of Egypt and began their journey to the four corners of the world (DK Publishing, 2014).

Cats were first taken to the Far East, then, in the 10th century, to Europe and England. Unknowingly, crusaders also brought rats and mice to Europe from the Middle East and these quickly proliferated in their new environment. The cat's ability to maintain control of the newly burgeoning rodent populations made her welcome in most countries (Serpell, 2000). Her popularity rose quickly in Japan when mice began destroying silk farms. Soon cats were taken on ships to control stowaway rodent populations. When the ships docked in new countries, many cats jumped ship. These seafaring cats are the ancestors of the feral cat colonies found across the world today.

Cats were deliberately introduced to most of the world's islands to control rodent populations (Rodríguez et al., 2006; Courchamp et al., 1999). At least 65 major island groups have populations of introduced cats (Courchamp et al., 2003). This topic will be discussed in more detail in the "Cats and Predation" chapter.

The Persecution of Cats

The early Christian church became aware of the link between so-called pagan reli-



The ancient Egyptians revered cats and immortalized them in statue form.

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gions and cats as deities. As a result, the cat began to fall from favor in the Christian world during the Middle Ages. Western religions started encouraging the cruel torture and burning of cats, condemning them as pagan demons (Lawrence, 2003). During the 13th century the church blamed witchcraft for the social problems of the time, and cats became a scapegoat — along with witches and non-Christian believers (Serpell, 2000).

Many women who practiced ancient healing crafts using old folk medicines were accused of being witches. In some cases, women were killed solely because they cared for cats, because the church said they were conversing with the devil (Lawrence, 2003). Cats were accused of being witches' familiars or even witches in disguise. The Festival of St. John was celebrated annually with the burning alive of cats in the town square (Darnton, 1986).

Australian ecologist Frankie Seymour explains in "The Great Feral Cat Con Job: The Ungentle Art of Scapegoating and Scaremongering:"

By the late Middle Ages, cats in Europe had been hunted, hanged and burned almost to extinction. Then, of course, the Black Death (Bubonic Plague) arrived in Europe and 25 million people died in five years be-

Famous Cat Haters

Dwight D. Eisenhower (1890-1969). Eisenhower's loathing for cats was so great, he gave his staff orders to shoot any seen on the grounds of his home.

Johannes Brahms (1833-1897). One of his favorite forms of relaxation was to sit at an open window and attempt to kill neighborhood cats with a bow and arrow.

Napoleon Bonaparte(1769-1821). This emperor was once found sweating with fear and lunging wildly with his sword at the tapestry-covered walls. The source of his fear was a small kitten.

Source: PetHelpful, 2023

cause, for several hundred years before, there hadn't been enough cats to keep the rat population healthy. (Seymour, accessed 2014).

The persecution of witches and cats spread to the New World in cities such as Salem, Massachusetts.

This dark age left behind a legacy of superstition, myth, and misinformation about cats, some of which persist to this very day. Although more and more people have cats as companion animals, many others have an unreasonable aversion to cats. Some even suffer from ailurophobia — the irrational and panic-laden fear of cats.

Conclusion

It is unfortunate that this “war on cats” is

perpetuated to this day, as negative views of cats are not based upon facts. We of course no longer believe that cats are predators who kill for sport and spread disease. Animal control agencies still euthanize untold numbers of feral cats under the assumption that they are unwanted, uncared for, and have no place in our ecosystem.

Modern science has proven these misconceptions wrong and has brought us a deeper understanding of the feline species. Attitudes are shifting — and humane policies for cat care and management are spreading. It seems we are finally waking up to our shared responsibility to care for the cats in our communities. This handbook is meant to be an informative and important tool for those working on behalf of cats.