

HISTORY OF THE DOMESTICATION OF ANIMALS

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Gascoigne, Bamber. HistoryWorld. From 2001, ongoing. <http://www.historyworld.net>
Grateful thanks to Bamber Gascoigne and History World for allowing us to use this text.

Hunting species: 20,000-10,000 years ago

During the most recent ice age, from about 20,000 years ago (see Ice Ages), large mammals such as bison roamed on the sub-arctic tundra of Europe and Asia. They are preyed upon by two groups of hunters, both much smaller and weaker than themselves - but both with a sufficiently developed social system to enable them to hunt and kill in packs.

These hunters are humans and wolves.



The typical pack of wolves and of humans is surprisingly similar. It is family-based, led by a dominant male whose female partner is likely to have an authority second only to his. Members of the group are friendly to each other but deeply suspicious of outsiders. All members (not just the parents) are protective of the newly born and the young. Both species are good at interpreting the moods of others in the group, whether through facial expression or other forms of

body language.

Legend acknowledges these shared characteristics in stories of children suckled by wolves. The other side of the same coin, in real life, means that wolf cubs adapt easily to life among humans.

For mutual benefit

Humans and wolves are competing for the same prey, but there are advantages for both in teaming up. For the wolf, human ingenuity and the use of weapons mean a share in a greater number of kills - and perhaps even an occasional taste of larger victims, such as mammoth. For humans, the wolf's speed and ferocity is equivalent to a new weapon.

The partnership is natural. So, undoubtedly, is how it first comes about. People love to nurture any abandoned young animal, and a wolf cub is well adapted to learn the rules of a hierarchical human society (in which its place will be low). From this partnership all dogs derive. Unbelievable though it seems, every single breed of dog is descended from wolves.

For a species to become domesticated, it must be willing to breed in man's company. 'Breed in captivity', the more usual phrase, implies a simple case of exploitation. The reality is more complex. In terms of survival, those species which have developed a relationship with man have far outstripped their wild cousins.

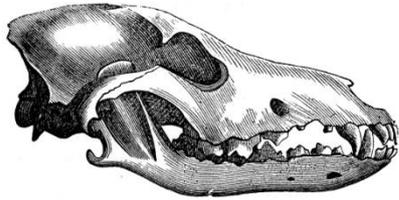
The most numerous large mammals, apart from humans, are cows, sheep, goats, pigs, horses and dogs. Domestic cats easily outnumber their wild equivalents, as do chickens and turkeys. The domestication of animals is based on an ancient contract, with benefits on both sides, between man and the ancestors of the breeds familiar to us today.

Symbiosis: interaction between two different organisms living in close physical association, typically to the advantage of both : the living together of two dissimilar organisms, as in *mutualism*, *commensalism*, *amensalism*, or *parasitism*.

Task: Look up the words in bold italics and write their meanings.

Dogs: from 12,000 years ago

The earliest known evidence of a domesticated dog is a jawbone found in a cave in Iraq and dated to about 12,000 years ago. It differs from a wolf in that it has been bred to have a smaller jaw and teeth. Selective breeding affects a species quite rapidly, and is a natural process for man to initiate - probably at first by accident rather than intention. A particular puppy in a litter is favoured because it has an attractive coat, barks well, is unusually friendly or obedient, noticeably large or small.



<http://thegraphicsfairy.com/vintage-clip-art-wolves-wolf-skull/> Public domain.

This is the dog which is kept and in its turn has puppies. Its desirable characteristics become perpetuated.

Images in Egyptian paintings, Assyrian sculptures and Roman mosaics reveal that by the time of these civilizations there are many different shapes and sizes of dog. To use the word 'breed' may be anachronistic, though there is evidence that a dog very like the present-day Pekingese (almost as far as one can get from a wolf) exists in China by the 1st century AD.

By that time Roman ladies also have lap dogs; their warmth is believed to be a cure for stomach ache. A Roman writer of the period gives similarly practical reasons for selecting the colour of a dog: shepherds' dogs should be white (to distinguish them from wolves in the dark) but a farmyard dog should have a black coat (to frighten thieves).

Task: Use flash-fiction to write a short story about a wolf cub becoming part of the family of early man.

Flash fiction is a style of fictional literature of extreme brevity. There is no widely accepted definition of the length of the category. Some self-described markets for flash fiction impose caps as low as fifty-three words, while others consider stories as long as a thousand words to be flash fiction.

https://en.wikipedia.org/wiki/Flash_fiction

Your teacher will decide how long they want your story to be.

Sheep and goats, cattle and pigs: 9000-7000 BC

The first animals known to have been domesticated as a source of food are sheep in the Middle East. The proof is the high proportion of bones of one-year-old sheep discarded in a settlement at Shanidar, in what is now northern Iraq. Goats follow soon after, and these two become the standard animals of the nomadic pastoralists - tribes which move all year long with their flocks, guided by the availability of fresh grass.

Cattle and pigs, associated more with settled communities, are domesticated slightly later - but probably not long after 7000 BC. The ox may first have been bred by humans in western Asia. The pig is probably first domesticated in China.

The first reason for herding sheep and goats, or keeping cattle and pigs in the village, is to secure a regular supply of fresh meat. The hunter is dependent on the luck of the chase; if more animals are killed than can be immediately consumed, meals from the surplus will be increasingly unpleasant as the days go by. The herdsman, by contrast, has a living larder always to hand and a supply of dairy products as well.

These animals also provide for almost every other need of neolithic man. While they are alive, they produce dung to manure the crops. When they are dead, they provide leather and wool for garments; horn and bone for sharp points, of needles or arrows; fat for tallow candles; hooves for glue.

Task: You might notice that some of this text sounds a little more 'present tense' than a usual recount of facts, even though the subject matter and time-line is way into the past. Can you re-write it in the full past tense?

Draught animals: from 4000 BC

Of the four basic farm animals, cattle represent the most significant development in village life. Not only does the cow provide much more milk than its own offspring require, but the brute strength of the ox is an unprecedented addition to man's muscle power.

From about 4000 BC oxen are harnessed and put to work. They drag sledges and, somewhat later, ploughs and wheeled wagons (an almost simultaneous innovation in the Middle East and in Europe). The plough immeasurably increases the crop of wheat or rice. The wagon enables it to be brought home from more distant fields.

India and Southeast Asia use another version of the domesticated ox, well adapted to hot wet conditions - the water buffalo. Whether dragging a plough-like tool through a flooded field or hauling a cart on a dry track, the buffalo is ideally suited to the role of a farm animal in rice-growing areas. Like other members of the ox family, it also provides a good supply of milk.

The buffalo is first domesticated somewhere in the near-tropical regions of Asia. Precisely where or when is not known, but buffaloes feature as domestic animals on the seals of the Indus civilization.

Task: Write five questions that you might ask a primary school pupil to answer if this section about draught animals was a comprehension exercise.

Cats: from before 3000 BC

Apart from dogs, cats are the only domesticated animals to dwell indoors with humans. It is also the only one which is solitary in the wild, as opposed to living in packs, herds or flocks. As a result the cat has been able to take what it wants from man (food, shelter, play) and to pay its dues in return (pest control) without losing contact with its original identity.

Cats have remained closer than other domesticated animals to their wild cousins, partly because it is so difficult to control their breeding. And they are more able than any other to fend for themselves, in the country or even in a city, if human support is withdrawn.

It is not known when cats are first domesticated. But by the time of the earliest civilization they have already acquired in the human mind a characteristic which they have never lost - the quality of mystery.



In the temples of Egypt cats are sacred animals, and are mummified in their millions. In folk stories of all nations a cat is the natural companion for people who possess an alarming second sight, such as witches.

Task: Make inferences and refer to evidence in the text to show that we consider cats to be 'mysterious'.

The lynx is sometimes referred to as 'The Keeper of Secrets'. Why do you think that might be?

@Ervin Van Maanen

Horses: 3000 BC

Humans acquire their most important single ally from the animal kingdom when they domesticate the horse, in about 3000 BC.

Wild horses of various kinds have spread throughout most of the world by the time human history begins. Their bones feature among the remains of early human meals, and they appear in cave paintings with other animals of the chase. Some of their earliest fossil remains have been found in America, but after arriving across the Bering Land Bridge they become extinct in that continent. They are reintroduced by European colonists in the 16th century.

A natural habitat of the wild horse is the steppes of central Asia. Here, with its ability to move fast and far, it can gallop out of harm's way and make the most of scarce grazing. And here, some 5000 years ago, humans first capture, tame and breed the horse. The original purpose, as with cattle, is to acquire a reliable source of meat and subsequently milk. But then, in a crucial development, tribesmen discover that they have at their disposal a means of transport



With a horse beneath him, man's ability to move is improved out of all recognition. The next comparable moment in the story of human speed does not arrive for another 5000 years - with steam trains.

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<http://kolekzioner.net/modules/smartsection/item.php?itemid=224>

The first domesticated horses are of a size which we would describe as ponies. Horses of this kind were still living in the wild in Mongolia until quite recent times. Discovered there in the 1870s, and named Przewalski's horse, they survive now only in zoos.

The entire range of horses known to us, from the mighty carthorse down to the smallest ponies, is the result of human breeding. Other wild breeds, now extinct, have been added to the stock. One such example is the tarpan, which was the native breed in Europe.

Task: The text about horses is 288 words long. (Disregard the attribution of the image.)

Take the piece about horses and precis it down to words. (Your teacher will decide on number of words.)

Asses: 3000 BC

At much the same time as the wild horse is being domesticated in the region of the Black Sea and the Caspian, its cousin the ass or donkey (a member of the same equus family) is tamed in Egypt. At this time the donkey appears to have roamed wild in northeast Africa and up through the Fertile Crescent into Mesopotamia.

So both horse and the ass, from north and from south, become available to two of the earliest civilizations - in Mesopotamia and Egypt.



Silk moths: 3000 BC

In China an indigenous silk moth is co-opted for man's purposes. *Bombyx mori* is still the only insect to have been fully domesticated (in the sense that, unlike the bee, it cannot live in the wild and is not known in a wild form). The silk moth has lost the power to fly; its caterpillar can find no mulberry leaves for itself. The species exists, and survives, only because humans like silk.

The earliest known silk from *Bombyx mori* was found in a bamboo basket unearthed by archaeologists in China. Other pieces in the same basket were from wild silkworms. The fragments date from between 2850 and 2650 BC.

Task: *Comment on the following text: 'The silk moth is still the only insect to have been fully domesticated (in the sense that, unlike the bee, it cannot live in the wild and is not known in a wild form). The silk moth has lost the power to fly; its caterpillar can find no mulberry leaves for itself. The species exists, and survives, only because humans like silk.'*

Can you give any other examples where man's interference has severely damaged a living creature, (or still does?)

Camels: 3000-1500 BC



As beasts of burden and transport, camels occupy an important place alongside horses and donkeys. Two small members of the camel family, the llama and the alpaca of South America, are domesticated first - probably before 3000 BC. At that time both species appear to have been on the verge of extinction. Domestication by the American Indians saves them. Neither the llama nor the alpaca exists now in the wild.

The larger of the two, the llama, is primarily a beast of burden, while the shaggy alpaca is valuable for its wool. Neither animal is strong enough to pull a plough or drag a cart - two important steps in the story of civilization which are denied to the early Americans.

In the parched regions of North Africa and Asia two different species of camel become the most important beasts of burden - the single-humped Arabian camel (in North Africa, the Middle East, India) and the double-humped Bactrian camel (central Asia, Mongolia). Both are well adapted to desert conditions. They can derive water, when none is available elsewhere, from the fat stored in their humps.

It is probable that they are first domesticated in Arabia sometime after 1500 BC. By about 1000 BC caravans of camels are bringing precious goods up the west coast of Arabia, linking India with the Mediterranean and Mesopotamia.

Task: *What evidence is there in the text that the opposite of what happened to the silk moth happened to the llama and alpaca?*

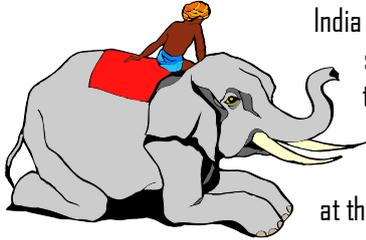
Think about it: Do you think that the llama and alpaca could be reintroduced to their former ecosystem? Why/why not? Do North African and Asian camels store water in their humps?

Poultry and pigeons: 2000 BC

The red jungle fowl, a member of the pheasant family, lives in the forests and bamboo jungles of India and Southeast Asia. The male makes an impressive crowing sound and is dignified by a comb on his head and wattles under his beak. Jungle fowl of this kind are captured and kept for their eggs and their flesh by about 2000 BC in Asia. It is thought that all domestic poultry in the world today are descended from this one species.

At much the same period, in Egypt, pigeons are first persuaded to live and breed in the proximity of humans - again as a reliable source of protein. But some 3000 years later it is discovered that they have an extra and unusual talent. Some of them can be trained to fly home.

Elephants: 2000 BC



India is the region where elephants are first tamed, during the Indus civilization. The two species of elephant are at this time widespread - the Indian elephant throughout temperate Asia as far west as Syria, and the African elephant in regions north and south of the Sahara. (The mammoth has become extinct by the end of the last glacial period, about 10,000 years ago - partly through climatic changes and partly at the hands of human hunters.)

It is not known when elephants are first trained to take part in war, but by the 3rd century BC they are a valuable military force in both India and North Africa. An ability to learn tricks also makes the elephant a performing animal, popular in the arena of the Roman circus.

Task: *We see very few performing elephants in circuses these days. Why do you think that is? Do you think performing animals are a good thing or a bad thing? Why?*

*Dancing bears are still common across some countries. How do you feel about that? What could **we** do about it?*

The honey of the bee: before the 6th century BC

No doubt hunter-gatherers, when they find the honey of bees in a hollow tree, often risk a sting for the pleasure of sweetness. The story of beekeeping can be described as the search for safer and more convenient ways of robbing a bees' nest.

The turning point in the domestication of the bee is the discovery that a swarm of bees can be coaxed into a specific nest - one designed by man for his own convenience in collecting the honey, and with it the useful substance of beeswax.

It is not known when the beehive is first developed, but the Greeks in classical times use a design which for centuries remains standard in much of Europe. Known as a skep, it is a dome constructed from a continuous coil of woven straw - looking much like an upturned basket. It stands on a wooden platform with a hole in, through which the bees enter.

The disadvantage of such a system is that the removal of the honey involves disturbing the nest of the bees. From the 17th century, when wooden hives come into use, extra chambers are added for the collection of honey. But the major improvement in beekeeping techniques is the achievement of a 19th-century clergyman, L.L. Langstroth.

Task: *For what could you use **beeswax**?*

Try this experiment: Put some honey into a petri dish and leave it on a windowsill for a number of weeks. (I've sometimes left it for a whole term.) What happens to the honey?

*Now write up your experiment, using these headings: **Experiment question, hypothesis, equipment, method, data to be used, results, data analysis, conclusions.** (Of course, you can't yet fill in some of the parts of the experiment. Just leave those blank for a later session.)*

Rabbits: from the 1st century BC

Since Roman times, if not before, people have encouraged rabbits to breed in captivity for the sake of their meat, and have then regretted doing so because of the animal's ability to burrow to freedom and eat the crops. The only safe place to keep rabbits is on an island. (Almost every island of the world has rabbits on, brought by humans to establish a living larder for passing ships.)

Rabbits are inaccessible in their burrows, so man domesticates a species of **polecat** (in the form of the ferret) to flush them out. As early as the 1st century AD Pliny describes the use of ferrets in the Balearic Islands, as the inhabitants struggle to control the rabbits (see Pliny and the ferrets). <http://www.historyworld.net/wrldhis/PlainTextHistories.asp?historyid=384>



Task: Go to: <http://www.bbc.co.uk/earth/story/20150211-the-polecat-comeback>

1. To which group of animals do polecats belong?
2. Why were they almost eliminated from the British environment?
3. What clue did we first find that polecats were spreading?
4. What is a 'hybrid' animal?
5. What has changed to allow polecats to re-occupy large areas of southern and midland England and spread north and east?
6. How do we usually see polecats? (Please ask drivers to slow down at night to avoid animal deaths on the road.) Why do you think reports of dead polecats are useful?
7. What are baby polecats called? When are they usually born?
8. Badgers are all born in February, and come out of the sett in early May. Why do you think that might be?
9. How can polecats be useful to us?
10. Why are they often called 'foul marten'?
11. Apart from the website, how else can you follow BBC Earth?
12. Go to: <http://www.vwt.org.uk/species/polecat-2/> to read the report of their survey, and also more about animals and their situation in the ecosystem.
13. Of course, there are many animals on this planet that could never be domesticated, for one reason or another. Think of one and write a brief account as to why they couldn't live alongside us.



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