

Anatomically Same

by Penny Randell

When considering a cat, any cat, it would seem somewhat obvious that they are all anatomically same. Take a closer look at your basic tabby house cat and compare it with a mountain lion. Simply stated, wild and domestic cats share the same dental, skeletal, and circulatory structures and even teeth. Both have the same number and placement of incisors, canines, molars, and premolar teeth. In addition, both wild and household felines have the same 230 bones, and 30 spinal vertebrae. Circulatory organs, meaning heart, lungs, veins, and arteries are remarkably similar in function and structure. Scientists have long recognized these facts of similarity and agree that there is very little physiological difference between a house cat and a large, wild cat.

Moving on, we can readily recognize that paws and claws are used in the same manner in both wild and domestic species. It is vital that claws are sharpened at all times, for sharp claws give traction for speed and easier climbing. Besides defense, claws are used to scratch surroundings, accessing them in the ability to mark territory. All cats have scent glands in their paws, and can readily send the message, “this belongs to me,” to other animals when on the prowl.

Cats often breathe through an open mouth, especially if there is something new in their path. Surprisingly, this has nothing to do with need for more air or even aggression. This exercise has to do with smell, for an open mouth allows for a better comprehension of the environment. Although the cats are able to pick up on all scents, this organ is primarily used to analyze pheromones from other cats. The most pungent pheromone is found in urine, especially prevalent in the urine of females in heat. The scent is collected in the mouth and then flicked by the tongue to the roof of their mouth where the Jacobson’s, or Vomeronasal organ, exists. This behavior is easily recognized, for the cat takes on a facial expression akin to a grimace. The expression is known as the flehmen reaction, or in lay terms, “stink face.”

All cats are known for rubbing against stationary obstacles, even human beings. These animals are equipped with a collection of scent glands on both sides of their face, mouth, mainly front paws, and at the base of the tail. Again, this is how territory is marked, and the pheromones help to track pack members as well as establishing territory. Lions and other large cats are often seen bumping their heads against trees, rocks, and other outcroppings to announce their presence. When domestic cats rub against something they are simply letting the world know what belongs to them. Therefore, when rubbing against you the cat is saying, “you are both my packmate and property.”

Of course, it is quite clear that cats are by nature clean. Cleanliness is a must when it comes to all felines. Continued grooming on a daily basis keeps them and their young sanitized and healthier. Domestic cats are particularly clean because of living indoors. On occasion cats can lick on another animal, like a dog that they like and are comfortable with. Both wild and tame spend 30% to 50% of their time bathing. All these critters are naturally playful, too. Give either of the species a box and watch them roll. Cats in the wild are always on the lookout for something to play with. And, catnip is a serious turn on to all cats, both wild and domestic.

And what about that sleepy cat you own? All cats sleep roughly 12 to 16 hours a day, obviously designed to sustain high energy. Larger cats maintain a sleep cycle known as feed-rest-hunt. The larger the meal, the more sleep is required. On days which allow for scant or no meals, the cat will sleep even longer. Different species have varying sleep cycles. In the wild, lions and tigers can rest up to 20 hours a day. The entire cycle is dependent upon the last kill and how much is ingested.

These particular animals are known for their stealth and preference for night hunting. Their excellent night vision is attributed to the tapetum lucidum, an ocular structure that allows the cat's eye to react as a mirror that reflects light into the eye. This valuable feature permits a cat to combine their agility with the capacity to stalk during dusk, dawn, and darkness. These sly hunters often bring you their victims of prey, just as a large cat brings the kill to the pride. These acts of triumph can be considered as a prize. Both feral and house cats kill anywhere from 100 to 350 million birds a year. The smaller cats do so out of biological instinct, but not for food.

People ask if a domestic cat can breed with a large cat. Perhaps so; depending on size. Lions can mate with tigers and leopards, and a leopard can hybridize with a puma. The Bengal is a crossbreed between an Asian leopard and a house cat. It is possible for a puma to mate with an ocelot, and the ocelot can also crossbreed with a domestic cat. This is possible because of like genes. A domestic cat and a tiger share 96% of their genetic material, and have the same number of chromosomes, which are remarkably similar in appearance.

Scientists have discovered that original cats had small bodies with long tails. It has been proven that the earliest ancestors evolved 62 to 63 million years ago during the Miocene Period, thus all cats belong to the family Felidae. It should be remembered that all these critters are dependent on a carnivorous diet. When times are tough, even a tiger will stalk a rodent or grasshoppers to sustain its life. Once pondering the likenesses of all cats, be sure to include all this information. In doing so you may have more appreciation for the wild cats, just as you do for the pussy cat at home.