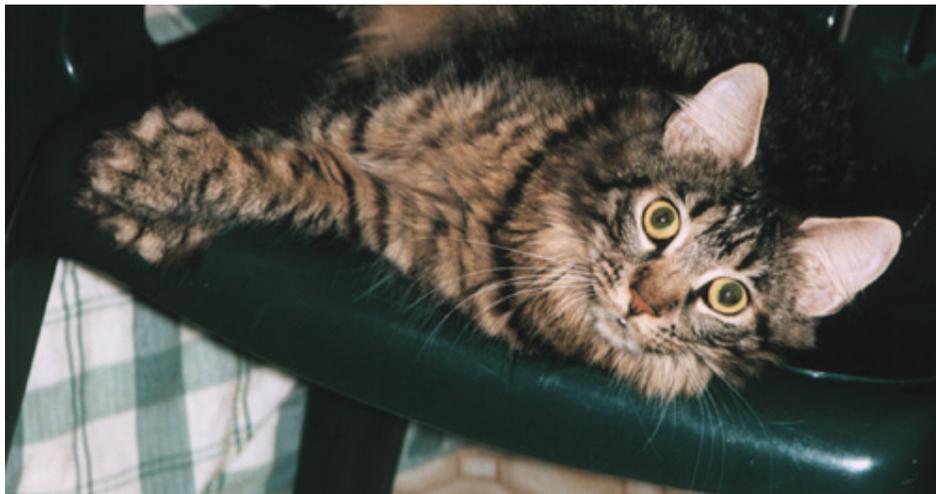


## Maine Coon Polydactyls, Our American Mitten Pawed Cat

by Janet Marr

I grew up in New England, as a child, and felt I had a mission to befriend as many living things as was possible. My favorite choice was the local tomcat. They were large, friendly and often had extra toes. My family told stories of how this was our American native cat or the Maine Coon Cat. Local folk tales claim that these cats were fierce hunters and could use their oversized paws to catch live fish right out of the streams. These tales included stories of cats bringing fresh fish home to help feed their human families. They were the cats on the pirate ships and even the cats that rode with the Pilgrims. Sailors traditionally treasured polydactyl cats because they were believed to be adept at mousing, an important shipboard duty of cats (Buck, 1998).



Above is Mainemade Beatrix P Potter who has one extra toe on each foot.

She is the type of cat that I remember from my youth. I would have called her a mitten pawed black tabby. As an adult I have come to learn that there is no such thing as a black tabby and that the mitten pawed cat is not a treasured characteristic for a Maine Coon Cat. It is the purpose of this article to help to correct some of the misinformation on polydactylism and to support the statement that the polydactyl is a part of our American Heritage.

An article from Cornell University, Cat Watch, (1998) stated that studies done on polydactylous cats, beginning in the 1940's and continuing into the 1970's, showed that the trait probably initially occurred in cats who came over from England to the Boston area with the Puritans in the mid-1600. This article also speculated that it was possible that the mutation developed in cats already in the Boston area. Scientist surmise that the immediate descendents of these cats may have lived on board trading ships, and soon

found their ways to Halifax, Yarmouth MA, and Nova Scotia, which now have sizable multi-toed cat populations. In Europe, polydactyl cats are virtually non-existent, because during Medieval times any cat which was unusual was put to death due to superstitions regarding witchcraft (Kelly, Larson, 1993). A reliable source in Sweden (1998) reported that they do see polys in the household pet population and a reliable source in Europe (1998) reported never having seen a poly household pet. The only polys that my European source had seen were registered Maine Coons. (It should be noted that any type of cat can be a polydactyl not just the Maine Coon.) When researchers were taking censuses of polydactylous cats, they found that areas close to Boston had greater populations of polydactylous cats than New York City or Chicago.

Most Americans are not aware that the Polydactyl Maine Coon made up a significant number of the original Maine Coons. The standard front paw has 4 toes and one dewclaw and the back paw has 4 toes. A polydactyl will usually have one or two extra toes on each foot. This may be an extra toe or an extra or double dewclaw. In the October, 1968 issue of the *Journal Veterinary Medicine/Small Clinician*, R. F. Sis, D.V. M., M. S., Ph.D. and R. Getty, D.V.M., M.S., Ph.D. published an article called "Polydactylism in Cats". They reported that the cat normally has 18 digits, 4 on each hind foot and 5 on each front foot, however, polydactyl or hyperdactyl cats are not uncommon. Such cats sometimes have as many as 8 or even 10 digits on each paw. There is considerable range in the number and size of these extra digits and the structures related to them. Descriptions of feet from individual polydactyl cats were published as early as 1868. If the parent has an extra toe the kittens may have an extra toe and if the parent has a double dewclaw the kittens may have that trait. When the kitten is a poly, it seems to have the same toe configuration as the poly parent.

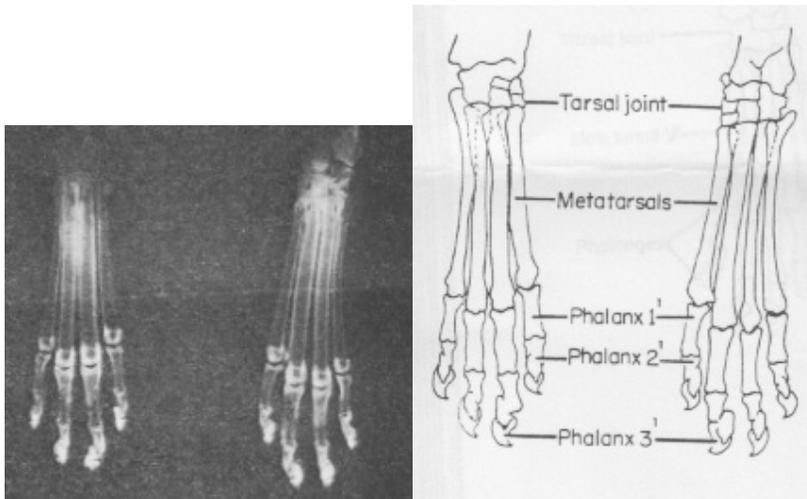


by Lou Kritz of Pro Pet Photography.

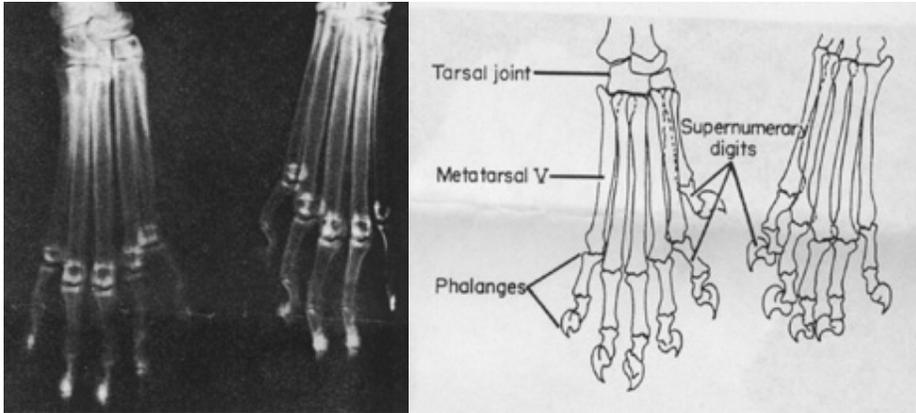
Above is Furkats Air P Jordon who is a blue mctabby and white poly. He has a double dewclaw and a dewclaw on his back legs

The gene is a dominant gene that only seems to express itself from 40% to 50% of the time. However the nonpoly kittens of a poly parent seem to have heavier boning than kittens of a non-poly mating. The increased boning is more noticeable in the front legs and chest. Some breeders report that the extra toe causes greater width than the double dewclaw. According to Dr. Montgomery, Auburn College of Veterinary Medicine, historically many owners are not even aware their cat has polydactylism. He also stated that owners of polydactyls have not seen adverse affects. Polydactylism is a fairly common anomaly in cats that is not detrimental to their orthopedic soundness.

A literature search done at Auburn College of Veterinary Medicine showed that there has not been much research done on this topic. The medical view of polydactylia is that the presence of extra digits on one or more feet is not uncommon (Danforth, 1947; Chapman & Zeiner, 1961; Sis & Getty, 1968). Sis and Getty (1968) further reported that the trait is not related to sex. The forefeet are most often affected and usually five toes are present in addition to the dewclaws. The condition is inherited as an autosomal single dominant trait, the probable effect of which is to incite some change in the pre-axial (i.e. medial) part of the limb causing an excess of growth in that area (Sis & Getty, 1968). They also reported that in cats observed at the Iowa State University Small Animal Clinic, the anomaly had been limited to the medial side of the limb. In addition to the extra digits, each with its own terminal pad, there is one extra palmar pad and usually at least one extra plantar pad. According to the Cornell University College of Veterinary Medicine, Cat Watch, (1998) cats that have supernumerary toes have the dominant gene, Pd. This means that a cat needs to have only one copy of this gene from either parent to have the trait. The gene specifically affects the tissue formed at the very end of the limb, where the toe will form in the developing embryo. The tissue at the end of the limb is called the apical cap. Sometimes the limb cells will stimulate the cap cells, causing the cap to be larger than would normally be expected. These feline embryos will develop extra toes.



Above is an X-ray of a normal back foot



Above is an X-ray of a poly back foot

The only major problem seems to be that the nails require extra trimming. If nails are not kept trimmed there may be interdigital infections or recurrent traumatic injury (Chandler, E.G. et al, 1994). The toenails tend to grow too long and may grow in a semicircle back into the paw (Cornell University College of Veterinary Medicine, Cat Watch, 1998). It may seem that the nail grows faster than in the small-footed cats but there is not documentation to support this idea. Veterinarians do not consider polydactylism to be a deformity or a handicapping condition. It is considered an anomaly and an anomaly is defined as a deviation or departure from the normal form or rule.

Polys can be registered with the various cat registries in the United States. This includes Cat Fanciers Association (CFA), The International Cat Association (TICA), American Cat Fanciers Association (ACFA) and Cat Fanciers Federation (CFF). In fact the registration of a poly Maine Coon does not indicated whether or not the cat is a poly. It is traditional but not required to include a P some place in the name to indicate that the cat is a poly. Polys can not be shown in championship completion as extra toes are considered a deviation from the show standard, but they can be used for breeding and shown in Household Pets (HHP). It is perfectly acceptable with the cat associations to show a non-registered pedigreed cat (a pedigreed cat with papers that have not been officially filed) as a HHP. Cats that are not altered can be shown up until they are 8 months. After this age the cat must be altered to be eligible to compete in HHP, or they must be retired. They do very well in HHP and are big crowd pleasers. In TICA and ACFA Household Pets can be shown for National Wins and other titles. In ACFA cats earn different degrees of titles called Royals. They must be registered as a Household Pet. If the cat has a cattery name it is acceptable to register the cat with the cattery name as a suffix. Air P Jordon is registered in ACFA as a HHP by the name of Air P Jordon of Furkats. In CFA, Air Jordon is registered for breeding purposes as a purebred Maine Coon as Furkats Air P Jordon. When Air was shown as a kitten, he was often the judges' pick for Best HHP. He also was a real showman and enjoyed kissing judges on the lips. [Furkats' Polys](#)

It was also reported in the book called That Yankee Cat, The Maine Coon (Hornidge, 1981) that the number of claws in the paws was the most controversial of all issues in setting up a standard for the Maine Coon. According to Hornidge the traditional Maine Coon was frequently a polydactyl or a many-toed cat. She claimed that this was a genetic

mutation, which occurred with great frequency in the upper northeast of the United States. In the greater Boston area, for example, almost twelve percent of the feline population show this trait, which to some people is endearing but to others is a deformity. Whatever the reason for its abundance in this geographic area, the poly or snowshoe-footed cat is part of the legend of the Maine Coon. She further stated that the polys were so dear to the hearts of the original group of enthusiasts who drew up the Maine Coon Breeders and Fanciers Association (MCBFA) standard, that rather than divide the ranks, a special classification with its own standard was set up for them. She also noted that this was the last variation on the standard to fall victim to the striving for a single standard to be adopted fancy wide. Breeders at the time were busy trying to get the Maine Coon recognized as a breed, without the added distractions of permitting polys.

There is a pedigreed breed of dogs called the Lunehund that is a polydactyl. This breed is a spitz type dog that has been known from the 15th century. The fisherman on the coast of Norway used the dogs to catch puffins. These penguin sized birds nest in tunnel in the rocky cliffs. The 6 toed dogs were able to climb the rocky cliffs and were more adapt at digging in the tunnels.

To my knowledge there has never been a breed of cats with the polydactyl characteristic accepted for show status. As documented above this characteristic is basically not harmful. It is unclear why this harmless variation is not accepted, yet other breeds with lethal characteristics are accepted for show status. According to [The Book of The Cat](#) (Wright, Walters, eds, 1980) the Manx, Japanese Bobtail and Scottish Fold breeds all produce genetic deformities. The Manx and the Japanese Bobtail gene can produce kittens with abnormalities of the lower spinal region such as spina bifida. Kittens can be born alive but with an open spine that makes them crippled. Cats with ears that fold such as the Scottish Fold can cause abnormalities of cartilage growth around the leg joints, affecting the ability to walk.

There have been many famous polys. Our President Theodore Roosevelt had a poly named Slippers. Slippers was one of the first feline residents of the White House. At press conferences and official functions, Slippers was often the center of attention. The author Ernest Hemingway had a Maine Coon poly who was named Snowball. He reportedly had 6 toes on his front paws. The author had an estate on the island of Key West in the Florida Keys. One story sited that Snowball was a gift from one of Hemingway's drinking buddies who was a sea captain named Stanley Dexter. Another chronicle claims that a sea captain gave Hemingway a female double pawed cat who was named Princess. Sailors believed six-toed cats were lucky. Cats arrived on Key West in the early 19<sup>th</sup> century in the company of sailors looking for sunken treasure.

It is interesting to note that for approximately 100 years the descendents of Hemingway's poly Maine Coon were allowed to free breed with the local cats. This population produced poly cats with the ratio 50/50 or one poly to every small-footed cat. If the gene was going to cause crippling or deformities this population should have produced many such cats. The cats would certainly have bred poly to poly so that the poly gene would have been homozygous in many animals. [Link to Definitions](#)

I am aware of another claim from an individual who reported that they witnessed a colony of barn cat with so many toes that they could not walk. It was noted that in this colony of barn cats each generation had more and more toes that resulted in crippling. When the poly male cat disappeared and was replaced by a non poly male the problem slowly disappeared. The literature search did not support this claim. If this report is true it could be explained because the colony of barn cats would have been inbreeding for generation after generation and the gene pool could be so limited that they would be homozygous for the poly trait as well as many others. This is probably a good example to show that heterozygote animals are more fit than homozygote animals. This may not be a reflection on the trait of polydactylism, because according to the article in *Veterinary Medicine/Small Animal Clinician*, there is no evidence that the gene is lethal when homozygous. It should be noted that there have not been any studies on this issue but to be conservative it would probably be best to keep the trait heterozygous. This would mean that only one parent in a mating should be a polydactyl to insure that the trait is kept heterozygous. R. Robinson (1977) in his book Genetics for Cat Breeders noted that it is possible for the same gene to have arisen by mutation in different localities and at different times, and this is an explanation that could account for the similar heredity. Robinson (1977) also stated in reference to separate cases of polydactyl cats, the cause may not be due to the same mutant gene.

### [Link to Hybrid Vigor](#)

To purchase a polydactyl Maine Coon you may need to go on a waiting list. There are only a very limited number of breeders worldwide who breed Maine Coon polydactyls. (See Poly Breeders List). You may also have to pay a little extra for a poly and the pet price will average between \$500 to \$600. The Maine Coon poly will be exactly like the smaller footed Maine Coon except for the number of toes. You can expect polys to be the same colors and patterns as any Maine Coon.

I have personally been breeding polys for 4 years and have not had any problems with the extra toes. I was surprised to find that even though the poly gene is a dominant gene, it is often difficult to get polys. I have not done poly to poly matings but I have heard of other people doing poly to poly mating with no ill effect.

For personal accounts from pet owners go to the link on [Fun Things Polys Do With Their Extra Toes](#) and [Showing Polys at the Cat Shows](#)

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A polydactyl cat is a cat with a congenital physical anomaly called polydactyly (or polydactylism, also known as hyperdactyly), which causes the cat to be born with more than the usual number of toes on one or more of its paws. Cats with this genetically inherited trait are most commonly found along the East Coast of North America (in the United States and Canada) and in South West England and Wales. Polydactyl cats are known by various names - "mitten cats", "thumb cats", "six-finger cats", "Cardi cats" and "Hemingway cats". The latter is because of writer Ernest Hemingway who made his home on the small island of Key West, Florida. Some American cat lovers, cat publications and breeders (notably early advertising literature about PixieBobs) have claimed that polydactyly is unique to America. In early PixieBob promotional literature "Bigfoot is in the Building!" I have received a report of a Maine Coon with hind foot polydactyly and apparently normal fore paws; it seems likely that it was genetically polydactyl for all four paws, but that the extra toes had not been visibly expressed in the fore paws for some reason. I love polydactyl paws. I have 2 polydactyl cats. Mother & son. This condition is referred to as polydactyly, which means "many fingers." Cats with this condition are commonly called mitten foot, mitten cat or thumb cat. Polydactyly is an inherited trait that is not uncommon and may have arisen from a genetic mutation. Most common forms of polydactyly affect only the paws and do not harm the cat in any way. Hemingway Cats All Cat Breeds Polydactyl Cat Baby Dolphins Maine Coon Cats Cat Health Kittens Creatures Cute. Polydactyl Cat, Mittens, Oven, Kitty, Cats, How To Wear, Animals, Fingerless Mitts, Little Kitty. Hemingway Cats, My Friend, Friends, Meet, Babies, Animals, Amigos, Babys, Animaux. Pinterest.