

PAWS FOR EFFECT



*The PolyTrak
Newsletter
May 2007*

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Maine Coon Polydactyl



International Database



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Welcome to our 5th Issue of *"Paws for Effect"*. We have added some new subscribers since our last issue and we would like to welcome our new readers to the PolyTrak newsletter. You may always visit the PolyTrak website regarding our Newsletter. Just click on the button on the left marked "Newsletter". From that page you may, by clicking on the link at the top, view previous archived issues of this newsletter (the current issue is generally posted by the middle of the month). Here you may also look at answers to quizzes and questions each month. On the main newsletter page you may add or cancel your subscription or just send us a comment or question. We value your input, suggestions and even articles, if you would like to be published in PolyTrak or comment on topics that are being discussed. Or if you prefer you can send an email to us anytime at ptnewsletter@polytrak.net



"Dogs come when they're called; cats take a message and get back to you later." - Mary Bly

TO BE POLY OR NOT TO BE POLY

By Vonne Bode

We all have used the term "2WD" and "4WD" once in a while, when talking about our MC polys. A term generally used in the car industry. 😊 But in the cat fancy we use it to indicate how many of the cat's paws are polydactyl. In other words: how many paws

have extra toes?...or better-said "digits". So when we say: "my poly is a 2WD", we mean this cat has 2 poly paws and 2 standard paws. And a 4WD means the cat is poly on all 4 feet, or differently said, has at least 1 extra digit on each paw. At least...if we go with the general description of "polydactyl", as written in many articles and veterinary/scientific literature. They explain polydactyl as having more than the standard toes or having extra toes/digits/fingers. Which of course is logical, when we have a closer look at the Latin words "poly", meaning = many and "daktulos" meaning = fingers/toes.

When we had enough data on Polytrak I decided to make a cumulative table of the toe info on the submitted poly kittens. This way I could do some calculations and statistics. Going over my kitten file, I found the following cases:

-Kittens having 3 standard paws and 1 front paw that had a thumb instead of the standard dewclaw.

-Kittens with thumbs instead of the standard dewclaw, but also an extra digit on both back paws.

Since I wanted to specify the kittens as 1-,2-, 3- or 4WD, these kittens were a bit of a problem to categorize. It was time to discuss this issue (again) with Ken. 😊

As the first cats with these types of paws were entered in the Polytrak database, we had a discussion about it. The question was should we call a cat with 5 digits in front and 4 on the back paws a polydactyl - when one of the 5 digits in front isn't the standard digit? Tough question! If we would go with the general definition, often from veterinary literature, the answer would be NO. But then we have to keep in mind these definitions have been made a long time ago, and probably have been copied many times during the years without any adjustments. And then there're our findings from the collected data in Polytrak. For me this all was a big dilemma. There was what I knew and there was what I found to be true polydactyl. And then... also not to forget... we have the Cat Fancy with it's breeders and the current MC show standards. 😊 In TICA a MC polydactyl can't be shown in the regular MC class, this because article 216.2.2 says cats with more than five toes on each front foot and four toes on each back



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foot have to be disqualified. IMO they goofed by using the word “toes” and by not specifying the digits they expect to see. A standard front foot of a cat has 5 digits - 1 dewclaw and 4 toes. Since they chose to use the word “toes” and not to specify this, there’s no reason why a cat with 1 thumb and 4 toes or a cat with 5 toes, couldn’t be shown in the regular MC class. It still has no more than 5 toes. Technically these cats fit the description of the “5 toes” standard better than the “1 dewclaw and 4 toes” cats, since their digits really touch the ground. 😊 Apparently these cats are not seen as polydactyls in the Cat Fancy. Which brings us back to the general definition of polydactyl, having one or more extra digits/toes. It’s this “extra” that makes people call them polydactyls.

Which leaves the question: What’s this cat with 5 digits of which the dewclaw became a thumb? So far we’ve collected poly data for only just a year now. But we’ve already seen that the way the Pd gene affects the pre-axial limb bud, is much more complicated than the general definition of polydactyl indicates. And the cats with 5 digits in front, of which the dewclaw has become a thumb, are the proof of that. We’re pretty sure that the Pd gene is the cause of this change. But we have more complicated feet in the database too. For example, the cat with the standard digits, but also has a double nail in a foot bed. Is this cat polydactyl technically? - No. Genetically? - Maybe. We know at least one parent is poly and likely to be homozygous too. So the chance is high the Pd gene was involved here and the “adding another digit” was somehow stopped at an early stage in the process. So far we haven’t heard of cases with double nails in standard footed MC’s (out of a non poly x non poly mating) either. So to find out if this cat is genetically a poly, a mating with a nonpoly could be the answer. 😊

But for all of these cases counts...to be 100% sure if only the Pd gene causes these changes in the front and or back feet digits, only a DNA test could tell. That’s if we had one. 😊 But YOU can make sure we get one! For this we need you to send in the DNA of your poly(s), cats and kittens (poly x poly / poly x non-poly offspring, In-other-words: ALL kittens in the litter) to the UC, Davis lab! And don’t forget the DNA of the parents either!! If Dr. Leslie Lyons

receives enough DNA, she can start her research on the Pd gene and who knows, maybe she’ll find another polygene too. 😊 You can use Q-tips (cotton buds) to get the DNA from your cat’s mouth or order cheek swabs. At: http://www.polytrak.net/msc/dr_lyons_dna.htm you can find all the info and links to the “Instruction” page and the “submission form” (that has to be sent with the swabs/Q-tips). So please people, continue to send in your cats DNA for the polydactyl gene research!



POLYTRAK FACT!

It has been stated in many web sites, published articles, journals/reports and just everyday conversation that rear paw polydactylism (extra digits on rear paws or Pd gene expression on the rear paws) occurs “rarely” if the front paws are not polydactyl and “occasionally” if the front paws are polydactyl. The first half of that statement appears to be true. The second half of the statement is doubtful, at least according to statistics from submitted poly litters to PolyTrak

Of the 176 poly kittens listed: 101 of the kittens have polydactyl or Pd gene expression on at least one of the rear paws. This is 57% of the time. This is far more than “occasionally” or “rarely”. In summary it can be stated that if your kitten is a Maine Coon polydactyl, it is more likely to be 3 or 4 WD than it is to just be a 2WD in front. MYTH BUSTED!



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WHAT CAN I DO?

By Ken Bussard

As mentioned earlier; this is our 5th issue of "Paws for Effect". We have spent a lot of time introducing you to PolyTrak. We have explained a lot of what we do, why we do it and how we do it. There is a lot of information regarding the Maine Coon polydactyl cat contained in our website. But this is not just about us; it is about you and your cats, kittens and breeding programs for the polydactyl Maine Coon.

Breeders and fanciers of the world have submitted a good share of this information. For this we are truly grateful. We have, and are learning new things everyday. We hope the readers of this newsletter and visitors to our website are also gaining knowledge and are having their questions answered as a result of the efforts. We are encouraged by the slow, but steady increase in subscription requests to "Paws for Effect". The website numbers continue to grow. As of last Friday we went over the 4 million mark on successful requests. Well over 5000 different visitors have had a look at PolyTrak.

As great as the response has been there is always more that each of us, as individuals can do to help educate and promote the poly. The Glacier Coons website from Kitty of our staff has a great list of things that we all can do to help promote the polys of the world. It is:

<http://www.glaciercoons.com/Polydactyl.htm>

Many of the Catteries also listed as poly breeding catteries on the PolyTrak website contain great information about the Maine Coon polydactyl. There is a link to each of these participating breeders in the PolyTrak Cattery Listing as well as the MCPI supporters list...both of which are available from the main page of PolyTrak. Check them out. These listings are visited over 300 times per month and the Cattery listings are quite popular with our visitors. And of course we here at PolyTrak are always available to answer questions to the best of our ability and to help you get your cat or kitten listed.



Pd (poly) Paws

Presently we have 317 kittens listed in our litter-tracking program. 176 of these are kittens that are polydactyl or expressing the Pd gene. These range from kittens with just one paw affected to the largest group in which all 4 paws are affected. The breakdown is as follows:

- 1 Paw Only - Total of 2 kittens or 1.2%
- 2 Front Paws Only - Total of 60 kittens or 35.3%
- 2 Rear Paws Only - Total of 7 kittens or 4.1%
- 3 Paws Only - Total of 13 kittens or 7.6%
- 4 Paws - Total of 88 kittens or 51.8%
- 6 with unknown configurations

"I put down my book, The Meaning of Zen, and see the cat smiling into her fur as she delicately combs it with her rough pink tongue. Cat, I would lend you this book to study but it appears you have already read it. She looks up and gives me her full gaze. Don't be ridiculous, she purrs, I wrote it.

- from "Miao" by Dilys Laing

Well that is it for another month. We will take off our editor's hats, get out the litter scoops and go back to work. We will see you next month with an all-new issue. In the meantime send your cat and kitten information for PolyTrak.



☺ Thank You and.....

BYE FOR NOW!

