

# THE SCOTTIE GUARDIAN

## **Quarterly Newsletter of the STCA's Health Trust Fund**

## Meet Your Trustees!



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Fran Sanden, Newsletter Editor

elcome to a New Year and to the 2021 Edition, Issue #1 of the Scottie Guardian, the quarterly e-Newsletter of the STCA's Health Trust Fund!



We are excited to launch 2021 with new articles, amusing anecdotes and helpful information that we hope our readers will enjoy.

In this issue, be sure to take a moment and enjoy the following:

- \*Updates on HTF projects such as the STCA-HTF DNA Bank and Bladder Screening Clinics;
- \*Get to know another one of your HTF Trustees, her many talents and love of the breed;
- \*Breeders: are you a Progesterone Pro? Take a fun quiz to test your PG IQ!
- \*STCA member Jessie Borgman offers many useful tips to answer the eternal question "How can I housebreak my new puppy?" in Glad You Asked!
- \*News on upcoming National Specialty deals and health incentive clinics, as well as fund raisers and seminars;
- \*And much more!

Thanks to the skills of our intrepid Editor, Franny Sanden, and her trusty sidekick, Ragin, we are sure that you will continue to enjoy our little newsletter with a big mission: to deliver the latest and best health info for your Scotties!

Happy New Year to all and stay well! Marcia Dawson, HTF Chairman hijinkscot@gmail.com

Be sure to visit the STCA webpage at <a href="www.stca.biz">www.stca.biz</a> for more details on Health and the Health Trust Fund pages, including links to the ScottiePhile Health library and HTF donation pages.

## Meet Joanne Orth

Being a trustee of the STCA
a natural fit for me -- health,
professional career focused
with the goal of
reproductive cells, ova and
stem cells and then mature. I
Professor of Anatomy and
University School of Medicine
they say, Temple was very,
years, the NIH awarded
pursuing my research at Temple.
opportunity to help educate
doctors-to-be. With my
reproduction, breeding dogs —
seem to be a natural choice. But

Thanks to my dad, I've had a nature in general since I was a when he started taking me on woods of Long Island – there days. I learned about trees and other plants, insects, rabbits,



Fraser on Xmas duty at Barnes & Noble, 2019



Kelsey, CH Glengala's Seven of Nine

birds, etc., from him, and I've loved the natural world ever since.



Health Trust Fund seems science and Scotties. My on reproductive science, understanding how the sperm, originate from retired in 2011 as a Cell Biology at Temple in Philadelphia and, as very good to me. For 31 grants to me, aimed at And the school gave me the

graduate students and
background in
Scotties, of course — may
actually, that took a while.

deep love of animals and little kid. I could barely walk weekend strolls in the were lots in those



Gillie & Pal at Library 2018

My dad also loved dogs and we knew every dog in our neighborhood, including Miss Dundee, the spunky and sweet black scottie down the street. So when I was finishing my dissertation in Philadelphia and my new husband Cliff Schultz and I wanted a dog, I remembered that wonderful neighborhood Scottie. We found a sturdy, good-looking little female pup, naming her Dundee, of course. She was a little pistol, a loving dog who stood up to the local HUGE police dog patrolling our North Philly neighborhood, tugging on his face in play. She survived

that and more and gave us a pup, who

Then, in about 1988, we show, Montgomery County show dogs in the ring, and our first show pup from Conn - sired by the great CH Scarista - and then-handler him for us. Phineas (CH Finn) was joined by a lovely Dun-Kell's Gala Glencora) and seriously. We produced quite a few name Glengala, and I learned to



MCKC Best Brace IS, 2006: Ch Glengala's Seven of Nine, CH Glengala's Llewelyn

gave us another pup. discovered our first dog KC., saw those lovely were hooked. We bought Anstruther Kennels in Killisport Rox at Tom Natalini finished Glengala's Phineas female pup, Cory (CH we started breeding litters under the kennel groom for show while

Cliff took care of the ring work. We had some ring successes, especially the time we won Best Brace in Show at MCKC with a brother-sister pair. But the greatest joy for me was the puppies. I always say, there's nothing more fun that a scottie puppy, once you get past day 10! Of course, being a scientist, I always used science wherever possible, timing the breeding, supervising the pregnancy, and helping bring the pups into the world. I was often asked, "How did you get that litter of six girls??"













Cliff and I also got hooked on attending auctions during a 3-year stint in Lancaster County where I was doing a fellowship. We started collecting clocks, brilliant period cut glass, and, of course, Scottie-related pieces. That passion lasted for many years and brought us lots of fun. We searched out everything Scotty, in iron, bronze, pot metal, English brass, etchings and, for me, bakelite jewelry and boxes. We developed an extensive collect on that we've pared down over the past few years. But it sure was fun searching!

We retired from breeding about IO years ago and I found a new Scottie-related love. After some basic training for all of us, two of our Scotties, Gillie (Glengala's Gilding the Lily, ThD) and Fraser (Welwyn's Fraser at Glengala, ThD), became therapy dogs. Gillie and I do library visits, where children sign up to "read

to the dog". I'm not sure who Gillie or her pals. And Fraser love, weekly at an assisted visiting his resident fan club, as a special school visitor, and Santa-substitute at the local Nobel where he's the official wonderful to see the joy the course, all therapy-related hold or have gone virtual due I'm doing my best to keep Gillie entertained.



Chester County Studio Tour, 9/2020

loves it more, really spreads living home now and then yearly as a Barnes & greeter. It's dogs bring. Of things are on to COVID, so and Fraser

Besides my love of dogs, my dad gave me something else very special. He was a German-born master woodcarver with amazing artistic skill who worked in Manhattan producing intricate, one-of-a-kind pieces of furniture, altar rails, baptismal fonts, etc. I've always loved to draw, but my mother convinced me I'd starve as an artist, so I chose science as a career. Now retired, I've spent the last years getting "serious" about my passion for art, working in acrylics and pastels and making art my post-retirement career. I've been accepted into several art societies and I've been fortunate to find a little success here in Chester County, PA, the home of Andrew Wyeth and an area with many devoted art patrons. I've developed a website (<a href="https://www.artby.joanneorth.com">www.artby.joanneorth.com</a>) and I exhibit at regional art shows throughout the year.

My art studio has helped keep me sane during 2020, but I'm really looking forward to the end of virtual exhibits and a return to "talking art" in person.



"Night Visitor"
Acrylic



## **BULLETIN BOARD**

Announcing Tentative HTF Plans for National Rotating Specialty Saturday June 19, 2021

The HTF will be selling orders for discounted vWD and CMO DNA test kits from VetGen

The HTF trustees will have Sample Collection Kits and all necessary paperwork for the STCA-DNA Bank.

Note: Kits will be distributed only to those who register on the Database.

Note: there will not be blood draws at this event.

If possible, the HTF hopes to contract with a local veterinarian to provide FREE patella exams for the CHIC registry.

More to come!



Rescheduled Regional Club Bladder Cancer Screening Clinics for 2021:

These will be announced when the Clubs make their plans.

Stay tuned!



## DNA Banking Service Available for Scottie Owners



An agreement between Scottish Terrier Club of America and Resero Genomics affirms the rights of owners when it comes to DNA material.

(Salt Lake City, Utah) — The feisty but lovable Scottish Terrier has a new friend in the genomics business.

Resero Genomics and the Scottish Terrier Club of America's Health Trust Fund (STCA-HTF) have launched a unique, breed-specific DNA bank that affirms the rights of dog owners to control and store their pets' DNA material, and ensures future research into emerging and existing genetic disorders.

The agreement represents a significant advancement for Scottie owners because, unlike other genetic repository services available today, ownership, control and access to the dog's DNA remain with the designated owner and never an outside entity.

"With Resero Genomics, owners do not relinquish control of their dog's DNA unless they choose to do so," says Marcia Dawson, chairman of STCA-HTF. "In the past, the owner has had to relinquish all control, knowledge and decision-making as to how the DNA is used. Over the years, Scottie owners and breeders have generously contributed samples to study genetic abnormalities, but far too many times, irreplaceable genetic material has been lost and is now unavailable to us. That is not the case with this breakthrough agreement."

The focus of the founders of Resero Genomics, who have successfully stored and maintained both animal and human DNA since 2003, is to provide secure, long-term storage of DNA to their customers.

"A powerful aspect of this agreement

can be used for genetic testing that eliminates the need for extract samples for testing," says manager for Resero Genomics. customers the ability to store DNA secure locations for up to 50 happy to run a genetic analysis on



is that banked DNA samples long into the future, something owners to recollect and Jared Larsen, genomics "At Resero, we offer samples in multiple safe and years. Upon request, we are your animals' DNA as well as

transfer said DNA to a third-party lab, or release it back to you at any time."

By having stored DNA, Scottie owners eliminate the need to collect multiple samples from their dogs. Rather, ample stored DNA allows for future DNA tests and sequencing efforts if needed.

## New DNA Banking Service Available for Scottie Owners (continued)

Scottie owners will have two options to manage their DNA:

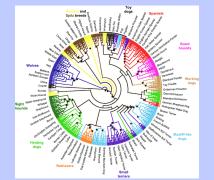
Option I is the STCA-HTF Managed Account. It is available free of charge to the owner except for costs for collection and shipping of blood samples.

Under this option, owners agree to include their dogs' DNA in the STCA-HTF Managed DNA Account through which all costs for DNA extraction and yearly storage fees will be covered by the STCA-HTF. The owner agrees to allow SCTA-HTF to manage the account and to have access to the stored DNA for research purposes, but only with the owner's consent after full disclosure of how the DNA will be used and how the information derived will be communicated.

Option 2 is an individual account in which the owner will bear all costs for sample collection, DNA extraction and annual storage. Total annual storage cost depends on the number of samples in

the customer's inventory.

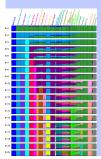
"Either way, there may be samples involved in research request access to DNA samples or projects," explains Dawson. granted without the consent of the the STCA membership about the the Scottish Terrier breed."



opportunities to have your studies, and researchers may genetic data for their research "However, access will not be owners or full disclosure to study and how it could benefit

"The Scottish Terrier Club of America is proud of its breed's heritage, especially this year as we celebrate the club's 120<sup>th</sup> anniversary", says STCA President, Lori Kelly. "Together, we have an unwavering commitment to promote, protect, and preserve the Scottish Terrier. We encourage all Scottie owners to participate in this one-of-a-kind DNA Bank."

For more information, visit <u>www.reserogenomics.com</u> or <u>https://www.stca.biz</u>



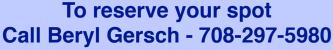
NOTE: Details on the new on-line database for signing up, shipping protocols and all paperwork involved will be provided soon. Stay tuned!



# Bladder Cancer Screening Clinic Hosted by the Scottish Terrier Club of Chicago For all Scotties Ages 6 and older COST: \$45.00 per Scottie

Cost includes a flash drive with scan image to take to your Vet

WHEN: June 20, 2021 10:00 A.M. to Finish
WHERE: DoubleTree by Hilton
510 E. Rte. 83, Mundelein,IL
PRE-REGISTRATION IS REQUIRED!
To reserve your spot



or email Carol Mallquist - cmallquist@gmail.com

"Bladder cancer (TCC) in our Scotties is a serious health problem. We need to beat this devastating disease to the punch and detect it as early as we possibly can.

Don't wait until your Scottie is straining to urinate, passing bloody urine, and acting uncomfortable. By then, it may be too late to do much good at all."

Marcia Dawson DVM - STCA Health Trust Chair.

State of Illinois restrictions and advisements related to COVID-19 will be adhered to.

### **Test Your PG IQ**

Have some fun with progesterone!

Note: Questions may have more than one answer.

- 1. Ovulation in our Scottie girls occurs:
  - a. 9-12 days after the beginning (first blood) of the heat cycle
  - b. When the stud is very excited
  - c. When PG is 5-8 ng/ml, @48 hours after the Luteinizing Hormone (LH) surge
  - d. When the bitch is giving off a strong odor
- 2. For best results in serial PG testing:
  - a. Use only a canine Pg test since this hormone is species-specific
  - b. Use the same testing protocol (time of day, machine and clinic or lab) each time
  - c. Get a baseline early in the cycle and continue to test every other day
  - d. You can rely on the in-house, color change PG testing to pinpoint ovulation
- 3. You can be certain that ovulation has occurred:
  - a. When the bitch is flagging and accepts the stud
  - b. When the vaginal discharge is straw colored and markedly decreased in volume
  - c. When the vaginal cytology cells are fully cornified
  - d. When the PG rises sharply by 3-4 ng/ml, 24 hours after reaching 5-8 ng/ml
- 4. *True or False?* The predicted rise in PG levels can slow down, plateau, or even appear to "back up" due to stress in the bitch (shipping or strange environment), thereby postponing ovulation in some cases.
- 5. The oocytes (eggs) released at ovulation:
  - a. Take 48 hours to mature before they can be fertilized
  - b. May remain fertile for up to 4 days after maturation
  - c. Decrease rapidly in fertility 4-7 days after ovulation
  - d. Are all fertilized at the same time, regardless of method or date of insemination.
- 6. *True or False?* An elevated PG for several weeks after breeding is a sure sign of pregnancy.
- 7. The due date for your litter will be:
  - a. 63 days from the first breeding
  - b. 63 days from the last breeding
  - c. 9 weeks after estrus, in accordance with the full moon cycle
  - d. 63 (62-64) days from ovulation
- 8. The safest time to perform a scheduled C-section is:
  - a. 63 days after the last breeding
  - b. When the bitch is nesting
  - c. When the temperature of the bitch has dropped a full degree
  - d. When the PG has dropped below 1-2 ng/ml







# Answers to Test Your PG IQ Quiz How Did You do?



- 1. Correct answer is c. The Pg test removes all doubt. The time of ovulation can vary tremendously between individuals and even from one estrus cycle to the next in the same individual. A bitch can keep herself scrupulously clean during her early days so you might miss the "first day". Some young stud dogs can be excited during the entire cycle, and odors given off by the bitch are very variable.
- 2. Correct answer is b. It is always best to use the same protocol for each test, including time of blood draw, since hormone levels do fluctuate throughout the day. Pg is not species specific, so even a human lab can run the test for you. It can be an expensive proposition to just test every other day, especially very early on in the bitch's cycle. Go by the recommendations of your veterinarian and the lab for scheduling the next test. The color change Pg tests may be helpful to show a progression of proestrus into estrus, but they are not at all reliable for pinpointing ovulation.

PROESTRUS - 9 10 des

3. Correct answer is d. This because the word that of the answers represent usually occur around the time certain ovulation has that spike of 3-4 ng/ml in the suspected day. A flagging bitch

question is a bit tricky matters here is "certain". All events and conditions that of ovulation, but to be truly occurred, you want to see Pg result 24 hours after the

suspected day. A flagging bitch that accepts the stud is a good marker of the right time to try breeding, but remember: some bitches don't flag much and a few will never accept the stud no matter how adorable he is! Vaginal cytology is a valuable tool for assess the progression of the heat cycle into estrus (full cornification of the cells), but it does not pinpoint the moment of ovulation.

- 4. Correct answer is True. Bitches can respond to stress by slowing down or even interrupting the progression of a heat cycle. Many breeders have experienced this in a visiting bitch who just seems to slow down the process and hold off the awaited event until she is settled and less upset buy the change in her routine. Consider ways to minimize stress in the bitch you want to breed.
- 5. Correct answer is all of them!
- 6. Correct answer is False. Regardless of pregnancy status, Pg will continue to elevate in a diestrus (post-heat) bitch and then decline after about 2 months. Elevated Pg means she ovulated, not that you were successful in getting her pregnant.
- 7. *Correct answer is d*. No matter when or how the bitch is inseminated, the puppies will arrive @ 63 days from ovulation.
- 8. Correct answer is d. The safest time for the puppies to be delivered is when the Pg has dropped to baseline levels. If this is a high-risk pregnancy and you have scheduled a C-section, check the Pg and go to surgery at the right time, even if the bitch has not even begun stage one of labor. We all would like to have free-whelping Scotties with 100% live puppies, but sadly for a variety of reasons, that is not always the case. Get these puppies out alive at the right time, and be prepared to help the bitch adjust to her new role.





#### **GLAD YOU ASKED!!**

This column will appear in each issue of the Newsletter. You ask the question and we'll attempt to answer it.

Q: "Help! We just welcomed a new Scottie puppy to our family, and I need advice on housebreaking him. Any good ideas?"

A: Good questions! There's no one single answer, but there are a lot of options to help you get your little Scottie puppy house trained.

First, it's important to understand that puppies don't usually have full control over their bladders until about 4-6 months of age (<a href="https://www.petmd.com/dog/training/how-keep-new-puppy-peeing-house">https://www.petmd.com/dog/training/how-keep-new-puppy-peeing-house</a>). PetMD notes that "The general rule of thumb with puppies is they can hold their bladder for their age in months plus one." This means that potty training prior to this time might not always be perfect. Puppies must first recognize when they need to go, and then they must learn to communicate that need to you! Teaching them to go to the door to go outside and teaching

them to pee on command are the ultimate goals of potty training.

One of the most important things to do is establish some guidelines with your puppy. Teach him simple word commands associated with going outside. I like to use "Outside" and "Go pee!" with my dogs.

Vocal praise is key! Always praise the puppy when he goes outside. Make a big deal about it! Some people use treats to reward the puppy for going outside. If you choose to reward with treats, add vocal praise and make sure you give the puppy the treat right after he goes.

What about accidents? It's so important to catch him in the act! No scolding after the fact. Light vocal scolding in a calm voice (no yelling!), such as "No, no, we don't do that in the house" is fine, but it should be as you pick up the puppy



house" is fine, but it should be as you pick up the puppy and take him quickly outside so that he associates outside with relieving himself. Do not scold the puppy after he has already gone in the house and never use any physical scolding, such as rubbing the puppy's nose in the feces or smacking him on the rear. Bottom line, establish some guidelines and make sure that everyone in the house uses the same words or phrases.

## GLAD YOU ASKED!! (continued...)

#### **Options**

Whether you have a fenced yard or you walk your puppy on a leash, the following suggestions can be combined to help you achieve your house-breaking goal. Always go out with your puppy, even if you have a fenced yard. There are too many temptations in the yard and puppies always look for trouble. And you need to be there to praise him immediately for success! Sometimes leash training works better because the puppy learns that outside on the leash means it is time to go, even in a fenced yard.

So, let's look at some of the options!

#### **Crate Training**

What is crate training? Crate training involves crate to isolate you puppy overnight, or at set throughout the day. Crate training works well most puppies don't want to soil their sleeping they usually will whine to let you know they need outside.



using a times because space, so to go

Some people think crates are cruel, but I promise you they are not! Yes, a puppy may whine and bark and throw an absolute fit about the crate at first. But after a few short weeks, your puppy will get used to the crate and learn to love it. A crate provides a sense of "den" space, familiar comfortable and secure. My three-year-old Luna still uses her crate by choice sometimes at night and during stressful times, such as the neighborhood fireworks celebrations. I have used a crate with all of my dogs and am a huge believer in crate training during the early months of puppyhood.

The best part about a crate is that it limits the space for the puppy to have an accident. As already mentioned, a puppy doesn't want to soil his sleeping space, so when he starts to whine or become restless, you will know it is time to go out. Crates are also great for short times during the day: for example, when you have to leave the house or you have to get some work done and can't watch the puppy's every move.



Now, not all that you pay When my every 2-3 doesn't have that we have weeks), but it him not have



puppies will whine to get out, so it's important attention to the time they've been in their crate. husband and I get a puppy, we set the alarm for hours during the night and take him out so he the opportunity to soil his bed. The period of time to do this is minimal (usually only the first few helps the puppy get on a schedule and it helps an accident in his crate.

Additionally, crates also help with boundaries, teaching the puppy about "down time" and teaching the puppy that not all the time is "play time."

The AKC offers nine steps to crate training: <a href="https://www.akc.org/expert-advice/training/https://www.akc.org/expert-advice/training/how-to-crate-train-your-dog-in-9-easy-steps/">https://www.akc.org/expert-advice/training/https://www.akc.org/expert-advice/training/how-to-crate-train-your-dog-in-9-easy-steps/</a>

## GLAD YOU ASKED!! (continued...)

#### **Puppy Playpen**

What is a puppy playpen? A puppy playpen functions just like a human baby playpen. It keeps the puppy safe and confined to a specific area in the house.

Lisa Hills (KinRoss Kennels) told me about using a puppy playpen about three years ago when we got our Luna, and it changed our life. The use of a playpen helps to keep your pup in one area of the house. I put it between the kitchen and the living room because it allows me to do things like watch TV on the couch or cook while still being able to keep an eye on the puppy. This way, I can see when a puppy gets restless and catch him in the act, before an accident happens.



This is the one I have used for my last two puppies: <a href="https://">https://</a> www.amazon.com/IRIS-4-Panel-Playpen-Door-35-25/dp/B00D5P846Y

I really like this one because you can buy extra panels. I usually use 6-panels for my puppy training which allows for a small area for a bowl of water and gives enough room for a bed and toys.

A variation of using a pen is Stationing, but the area allowed is much smaller. Stationing involves tying the puppy's leash to a table in your living space and clipping the leash on the puppy's collar. This allows the puppy only 4 or 6 feet of space (depending on leash size).

I use stationing with puppies when I'm working or watching T.V. I like stationing because I can keep a close eye on the puppy, and it teaches him that this is time to be "quiet" and chew a bone or play with a toy.

#### **Potty Bell**

I started using a potty bell about eight years ago after reading about it online. I didn't have a puppy at the time, but I did have a bossy Scottie named Gus who liked to go outside and would tell me (by barking) when he wanted to go out. I ordered the bell, put working with Gus to learn

it on the door, and started

how to use it.

The way the training works is your puppy and you shake the you open the door and let the this exercise multiple times, the he goes to the door and dings Another method with Gus was to bell and say "good boy, outside!"



that you go to the door with bell and say "outside?" then dog outside. After repeating dog eventually learns that if the bell, it means "outside". gently push his nose on the and then let him outside.

Continued on next page...

## GLAD YOU ASKED!! (continued...)

Now, Gus was a smart dog and got the bell dinging within a matter of hours, but it took Luna a little longer. I would shake the bell and say "outside" or Gus would ding the bell, and I'd let them both outside. Eventually, Luna learned by watching Gus, and she began using the bell as well.

Some dogs, however, may never use the potty bell. My Zoey is 11 years old and has never used the bell. She knows what it means, and she'll come running to go outside, but she won't ding it herself. Instead, she'll just sit by the back door and rely on the other dogs to ding it. They are all different!

Here is the potty bell I have: <a href="https://smile.amazon.com/gp/product/B0185ZPW2C/ref=ppx">https://smile.amazon.com/gp/product/B0185ZPW2C/ref=ppx</a> yo dt b search asin title?ie=UTF8&psc=1

Here is a training guide from the AKC: <a href="https://www.akc.org/expert-advice/training/teach-dog-ring-bell-go-outside/">https://www.akc.org/expert-advice/training/teach-dog-ring-bell-go-outside/</a>

#### **Potty Pads**

The main goal of using puppy potty pads is to teach your to go in one place. Many breeders use puppy pads, newspaper, kitty litter boxes when the puppies move to the weaning pen, they go to their new homes. The use of potty pads is a good teach puppies early on not to go in their bed or living space rather to go somewhere different to do their business. (the pad). The hope is that this concept of going somewhere else translates to house training and the puppy ultimately associates the familiar odor of "somewhere else" with outside



puppy or even before way to but potty

(grass).

#### **Final Thoughts**

Bottom line: don't expect perfection. The goal is to minimize the number and frequency of accidents in the house. Also, do your best to not give your puppy the opportunity to fail. Take the puppy out frequently (every hour or two, even more frequently if they are really young) to avoid accidents in the house. Every puppy I've had is usually fully potty trained by 6 months, most sooner than that! So, if you get a puppy at 10-12 weeks, you're really looking at a very short timeframe of potty training, 2-3 months at the most. In my experience, 16 weeks is when you really start seeing progress and the puppy really appears to start "getting it." Potty training takes commitment and it really takes a lot of trial and error and finding out what works for you and what works for the puppy.

#### **Guest Author**

STCA Member Jessie Borgman professor. She currently lives in Justin and three Scotties (Zoey, introduced to Scottish Terriers by a that's when her passion and began. She has owned five (pet) three, and two very special first childhood Scottie) and Gus Scottie).



(Ph.D.) is a college writing Indiana with her husband Luna and Norman). She was family friend at age 9, and enthusiasm for the breed Scotties including her current deceased boys: Charcoal (her (her first adulthood)



## From Your Editor's Desk

I've been thinking (ya know, that's a Scottie trait) about why I'm a brindle Scottie. So, I asked my dad, a molecular biologist, to explain it to me. Here's what he said:

Well, it all starts with two colors, black and red. But, I need to go back a bit. You see, each of the cells in your wee body, the nucleus specifically, contain your genetic information. You have 39 pairs of chromosomes (39 from your mother and 39 from your father). One of these pairs determines whether you're a boy or a girl and the rest determine everything else that makes you special. Chromosomes are made up of thousands of genes that carry traits chiseled into your DNA.

Now, each of those genes has a pair of thingys on them that are called alleles. They're always in the same place (locus) on the gene, btw.

When your mom and dad got together to make you, one of the alleles at each locus

that is dominant determined your traits, like coat color.

Back to black and red: There are lots of different coat colors but all are created by these two colors (called pigments, a form of melanin).

A bunch of genes influence the color of your coat BUT of all of your genes, only 8 are linked with coat color. Wow!!

The eight are called:

- 1. Agouti (different coat patterns, like plaid [just kidding]). Really, I've never seen a plaid dog!!
- 2. Extension (black facial masks, for example).
- 3. Dominant black (this one controls black, brindle [like me], and fawn colors).
- 4. Brown
- 5. Dilute (lighter color)
- 6. Merle
- 7. Harlequin
- 8. Spotting (like a particular Cocker Spaniel)

It's a lot more complicated but I'm ready to take you on a walk. Ready? Let's go!!!

...wonder which gene caused this pretty coat...

BTW, help Lynn article

Basics-in



Dad had from DVM Buzhardt's called "Genetic Coat Color Dogs."

The Scottish Terrier Club of America's Health Trust fund is a 501c3 organization established in 1994 for the purpose of supporting research to benefit all Scotties, investigating and monitoring health issues in the breed using registries, databases and health surveys, and communicating important new health information and research findings to all Scottie owners. All donations made to the HTF are tax deductible to the extent allowed by the law.