

TARTAN

Tidings

2011, Volume 4, Issue 2 *February 2011*

GORDON SETTER CLUB, INC

BREAKING NEWS! PRA BREAKTHROUGHS—SEE PRESS RELEASE, ARTICLE AND COMMENTS ON PAGES 2, 3/4 AND 8/9

TarTan Has Another Master Hunter!!

CH Celtic Fly Me to the Moon CD, MH was born on September 1, 2006. His sire was CH Celtic Jedburgh Abbey (Jed) and dam is CH SeaGem Woodsmoke Blues Diva MH (Bess). Never did I think that the little green boy would grow up and follow in his Mother's pawprints.

Flyer started his training with Janie Bristow, in mid-October 2008 and when he came home in December had added both a CD and a JH to his name. He is such a bird loving dog there seemed to be no doubt in Janie's mind that a SH was the next step! By the end of the Spring of 2009 season, he had earned two SH legs and ended up finishing his SH title in February 2010. There were still more tests before the end of that season so Janie made the decision to bump him up to Master level. When Flyer returned home in April, he returned with two legs towards his Master title.

Come October 2010, Janie found a weekend in Kentucky with four tests (two on each day) so she decided to



enter all her Gordon trainees, Flyer and Thule in Master, and Tess, Ginny and Rutu in Junior. It was a very successful weekend as all of the dogs did well with Ginny and Rutu finishing their JH titles, and Flyer, Thule and Tess all adding legs to their quest!

The clubs running the tests were very impressed with the Gordon contingent! I was impressed with Janie's energy!!!

Flyer finished the following weekend, and although I was not there to see him finish, I had been in Kentucky and had been thrilled to see his intensity and enjoyment in what he was doing. None of this would have been possible if it hadn't been for Flyer's good friend and trainer Janie Bristow.

Continued on page 11





Identification of Mutation for Progressive Retinal Atrophy in the Gordon Setter

A mutation responsible for the development of Progressive Retinal Atrophy (PRA) in the Gordon Setter has been identified by geneticists working in the Kennel Club Genetics Centre at the Animal Health Trust.

PRA is a well-recognised inherited condition that many breeds of dog are predisposed to. The condition is characterised by bilateral degeneration of the retina which causes progressive vision loss that culminates in total blindness. There is no treatment for PRA.

Owners report that their affected dogs develop night blindness in the first instance, which is indicative of a rod-cone degeneration, so we have termed this mutation *rcd4* (for rod-cone degeneration 4) to distinguish it from other, previously described, forms of rod-cone degeneration.

The mutation is recessive and 19 out of the 21 Gordon Setters in our study that had clinical signs of PRA were homozygous (carried two copies) for this mutation, indicating it is the major cause of PRA in the breed. Two dogs in our study had PRA but did not carry the *rcd4* mutation, indicating there might be another, genetically distinct, rarer form of PRA segregating in this breed.

The Animal Health Trust has developed a DNA test for the *rcd4* mutation that will be available from **Monday 14**th **March, 2011**. DNA test kits will be available to order online, via our website (www.aht.org.uk) from March 14th. The price of the test will be £48 per sample, which includes VAT.

The research that led to identification of the *rcd4* mutation was funded by many different organisations, including the Kennel Club Charitable Trust, the British Gordon Setter Club, the Gordon Setter Field Trial Society, the Gordon Setter Association, the Gordon Setter Club of Scotland and the LUPA project (www.eurolupa.org.uk) as well as several individuals who have also contributed significantly. The AHT would like to thank sincerely all the organisations and individuals who donated funds to help support the research as well as all the owners who contributed DNA and information from their dogs.

Comments on the Progressive Retinal Atrophy Gene *rcd-4* Identified in the Gordon Setter

Jerold S Bell, DVM, Tufts Cummings School of Veterinary Medicine jerold.bell@tufts.edu

The announcement of the identification of a novel Progressive Retinal Atrophy (PRA) gene causing blindness in the Gordon Setter is very exciting. Whenever a gene is discovered and a genetic test is developed, it provides a powerful tool for breed health improvement. In order to understand all of the parameters and implications of this gene and genetic test, the background research needs to be reviewed.

The research that identified this gene was funded by the British Gordon Setter Clubs. Contrary to information on internet Gordon Setter lists, the research was conducted solely by Dr. Mellersh's laboratory at the Animal Health Trust in the UK. There was no collaboration with any other research group. Since PRA also causes blindness in Gordon Setters in the United States, DNA samples from confirmed PRA affected Gordons, their relatives, and control dogs were sent to Dr. Mellersh for the research. Many of the DNA samples were sent from the OFA/AKC Canine Health Foundation administered CHIC DNA Repository. The research would not have been possible without the samples from the CHIC DNA Repository.

What the research found is that there are two different genetic forms of PRA in the Gordon Setter. The research found that all of the PRA affected Gordon Setters from the UK had the *rcd-4* form of PRA. Two of the confirmed US PRA affected Gordon Setters did not have this defective gene. These two dogs had a much earlier age of onset of blindness of 3 and 6 years of age, versus almost 10 years of age for the *rcd-4* form of PRA. The following summarizes what we know about both forms of PRA in the Gordon Setter:

rcd-4 form of PRA:

- -Autosomal recessive inheritance (both parents must be carriers to produce affected)
- -Average age of onset of blindness of almost 10 years of age
- -All current confirmed PRA affected UK Gordon Setters have this form
- -Approximately half of the confirmed PRA affected US Gordon Setters have this form
- -There will now be a test for carriers, affected, and normal dogs for the *rcd-4* form only

Unidentified earlier onset form of PRA:

- -Appears to be autosomal recessive inheritance (both parents must be carriers to produce affected)
- -Average age of onset of blindness of confirmed affected dogs is 5 years of age (range of 3 to 6 years).
- -Approximately half of the confirmed PRA affected US Gordon Setters have this form
- -There is no genetic test available

One issue that we will be dealing with in the US is the possibility that people with dogs who are related to Gordon Setters affected with the unidentified form of PRA will test their dogs for the *rcd-4* gene and think they are clear of PRA. Again, the test is only for the *rcd-4* form of PRA. In order to identify the gene causing the unidentified earlier onset form of PRA and have a test for this gene, we need more DNA samples from affected Gordon Setters and their close relatives. These can be donated through the CHIC DNA repository. You can contact me or Dr. Mellersh if you feel you may have dogs whose DNA may be useful.

We do not know the frequency of the defective *rcd-4* gene, or the pedigree/gene pool spread of the gene in the Gordon Setter breed. We know that the affected US dogs and UK dogs share the same mutation, and that they are not related (have no common ancestors) for seven to ten generations. This indicates a very old gene in the breed. Once a statistically sufficient number of Gordon Setters worldwide are genetic tested for the *rcd-4* gene, we will have a better understanding of its impact on the gene pool.

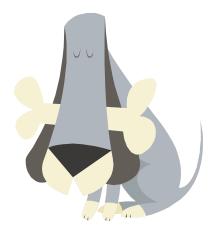
As per the Animal Health Trust press release, the genetic test for the *rcd-4* gene will become available from the not-for-profit Animal Health Trust in the UK for £48 per sample (approximately US\$77.25 as of Feb. 10, 2011 exchange rates). We are currently in negotiation to have the test offered in the United States by a not-for-profit testing corporation that will cost approximately the same, or possibly less than the AHT price. We hope to have that information available shortly.

Lastly, it is very important that we properly use the genetic test for *rcd-4* to the best benefit of the Gordon Setter gene pool. With the test we can ensure that from here on no Gordon Setter need

Continued from previous page

be affected with the *rcd-4* form of PRA. As long as you breed your quality carrier (or even affected) dog to a normal testing dog, you will never produce an affected offspring. You should replace quality carriers with quality, normal-testing offspring to maintain breeding lines and reduce the frequency of the defective gene. A genetic test should not alter WHO gets bred, only WHO the dog gets BRED TO. Please see the article, "The Effects of Genetic Testing: Constructive or Destructive?" on pages 3/4 of this newsletter for more information.

Please contact Dr. Bell if you wish to reproduce this article.



Donations to the AKC/CHF Tar-Tan Gordon Setter Donor Advised Fund

The American Kennel Club/Canine Health Foundation (AKC/CHF) TarTan GS DAF Fund was specifically established to sponsor health research for our breed. It is through your generous and continued support we are able to subsidize qualified researchers investigating genetic disorders affecting the Gordon Setter. Donation forms can be found in the TarTan Tidings, or downloaded at the TarTan web-site www.tartangsc.org Contributions are tax deductible. This month's donors are:

Dianne Avery & Beni Levi

Cindy Fitzgerald

Honoring Lena-Beana Woodsmoke's Best "Roo & Spin"

Liz Wilshere & Stella

In honor of: Jerold Bell for his friendship & support



Banana Biscotti

5 cups flour
1/4 cup peanuts, chopped
½ teaspoon baking soda
1 egg
¼ cup vegetable oil
1 ½ cups banana, pureed
2 teaspoons vanilla
water

Preheat oven to 325F. Place dry ingredients in large bowl. Make a well in the center. Blend egg, oil and banana together. Add into the dry ingredients in well. Start combining together. Add water, one teaspoon at a time as needed. Knead by hand on table until mixed thoroughly. Form into logs approximately 2" - 2 1/2" high. Flatten so that log is 6" - 7" wide by 1" high. Place on non-stick baking sheets or lightly greased ones. Bake 30 - 40 minutes. Remove and cool for 10 minutes. Slice into 1/2" - 3/4" slices. Place on baking sheets and bake for about 20 minutes or until golden brown. Cool. Store in airtight container.

TARTAN GORDON SETTER DONOR ADVISED FUND CANINE HEALTH FOUNDATION FOR THE HEALTH OF OUR BREED

Your kind gift honoring the memory of a special friend, and/or recognizing an occasion or achievement will assist us in reaching our goal of a genetically healthy breed of Gordon Setter.

of Gordon Setter.			
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Membership News

Address Change for Chuck Kushell:

2404 Sunningdale Drive Tustin Ranch, CA 92782

Email Correction for Jim MacWalter:

hdtravler@comcast.net

Please send changes/updates/corrections to Membership Chair Kathy King at Kinggordset@comcast.net





If you have a photo you'd like to submit for The Tail End, please email in jpeg format to ttgscnews@aol.com

Upcoming TarTan Supported Entries

Saturday & Sunday, March 19 & 20, 2011

New England Sporting Group Association

Royal Plaza Trade Center, Fitchburg, MA Judges Ruth Ann Freer-Godfrey (DE) & Jamie Hubbard (Aus) Sweeps Helene Nietsch (CT) & Meghan Riese Bassel (GA) Closes March 2 (MB-F)

Saturday, June 4, 2011

Ladies Dog Club

Crackerbarrel Fairgrounds, Wrentham, MA Judge Ann Bolus (TN) Closes May 18 (MB-F)

Preliminary 2012 National Information

2012 GSCA National Specialty and Obedience Trial Hosted by the TarTan Gordon Setter Club, Inc. Crown Royal Plaza, Warwick, RI

Judges:

Conformation & Junior Showmanship: Dana P. Cline
Obedience & Rally: Elizabeth 'Tibby' Chase
Puppy Sweepstakes: Christine Kirby
Veteran Sweepstakes: Gordon Chambers
Agility & Hunt Test Judges To Be Announced

Tentative Schedule:

Sunday, May 6, 2012 - Obedience & Rally Trial, Veteran Sweepstakes

Monday, May 7, 2012 - Puppy Sweepstakes, Agility Trial

Tuesday, May 8, 2012 - All Regular Dog Classes, Junior Showmanship, All Non Regular

Dog and Bitch Classes

Wednesday, May 9, 2012 - All Regular Bitch Classes, Best of Breed competition Thursday, May 10, 2012 - Hunt Test

The Effects of Genetic Testing: Constructive or Destructive?

By Jerold S. Bell, DVM, Tufts Cummings School of Veterinary Medicine (This article originally appeared in the June, 2001 issue of the AKC Gazette)

Every breed has genetic disorders. Finding tests that identify carriers of the genes which cause these disorders is a goal in all breeds. Once a genetic test is found, however, it is a double-edged sword: Its use can enable breeders to improve a breed or devastate it.

Without genetic tests, the number of that dogs can he identified as low, even many dogs may suspected of being limiting it. carriers because thev have relatives that are known to be affected. Without tests. though. genetic-disease control involves breeding higher-risk dogs to lower-risk Dog breeds have closed gene pools; in other words, the diversity of genes in a given breed is fixed. The number of dogs removed from consideration for breeding based on concerns regarding a specific genetic disease is usually low, and therefore does not greatly alter the breed's gene pool, or diversity.

a genetic However. once test is developed that allows positively Any quality dog that you breeders to a dog is a would have bred if it had however, that your dog determine if carrier a defective gene, many owners are bred if it tests as a carrier. likely to remove carrier from their breeding dogs stock. Although doing so is human nature, this temptation must be overcome. quality dog that you would have bred if it had tested normal should still be bred if it tests as a carrier.

In such circumstances, carriers should be bred to normal-testing dogs. This ensures that affected offspring will not be produced. Carrier breeding stock should be subsequently replaced with normal-testing offspring that exceeds it in quality. If the only quality offspring is also a carrier, then use that offspring to replace your original carrier. You have improved the quality of your breeding stock, even though the defective gene remains in this generation.

certainly true, though, carriers is A genetic test that should be that the health of the though used to help maintain breed breed does depend on diversity should not result in diminishing the carrier frequency and not increasing it. You therefore limit the number of

should carrier-testing offspring that you place in breeding homes. This does not however, that you mean. should prevent all of them from being bred. It is important to carry on lines. A genetic test that should be used to help maintain breed diversity should not result in limiting it.

Consider All Aspects

We know that most dogs carry some unfavorable recessive genes. The more genetic tests that are developed, the greater chance there is of identifying an

undesirable gene your dog. Remember, tested normal should still be is not a single gene, an eye, a hip, or a heart. Your dog carries tens

> of thousands of genes, and each dog is a part of the breed's gene pool. When considering a breeding, you must consider all aspects of the dog - such health issues. conformation. as temperament and performance - and weigh the pros and cons. When a good-quality dog is found to carry a testable defective gene, there is a better option than removing that

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Continued from previous page

from your breeding program. That option is to breed it, so that you can keep its good qualities in the gene pool, and then replace it in your program with a normal-testing dog.

There are breeders who contend that no more than 10 percent of carrier dogs should be removed from breeding in each generation. Otherwise, they say, the net loss to the gene pool would be too great. In fact, less than 10 percent of all dogs in a breed are ever used for breedina. Dog breeds do propagate according to what is known as the Hardy-Weinberg equilibrium, all members of a group reproduce and pass on their genes to the next generation. Breeders already place tremendous pressure on their gene pools through selective breeding decisions. Indeed, breeders who focus their selective pressure on the more elusive traits in their dogs, rather than on testable and predictable single-gene conditions, are right to do so.

The Dangers

It is important that breed clubs educate their owners on how genetic tests should be properly interpreted and used. History has shown that breeders can be successful in reducing breedwide genetic disease through testing and making informed breeding choices. You should remember, however, that there are also examples of breeds that have actually experienced more problems as a result of unwarranted culling and restriction of their gene pools.

These problems include: reducing the incidence of one disease and increasing the incidence of another by repeated use of stud dogs known to be clear of the gene that causes the first condition: creating bottlenecks diminishing diversity by eliminating all carriers of a gene from the pool, instead of breeding and replacing them; and concentrating on the presence or absence of a single gene and not the quality of the whole dog.

Breeders are the custodians of their breed's past and future. "Above all, do no harm" is a primary oath of all medical professionals. Genetic tests are powerful tools, and their use can cause significant positive or negative changes. Breeders should be counseled on how to utilize test results for the best interests of the breed.

(This article can be reproduced with the permission of the author. Jerold.Bell@tufts.edu)

ATTENTION:

All Committee and Events chairs.....

Club member mailing labels should now be attained from Candice Bell,4 Stepping Stone Drive,Broadbrook, CT 0601

fh2ovet@aol.com

Candice can also provide you with a list of member email addresses

Watch for information about the All-Setter Symposium Coming up in late April In Tolland, Connecticut

<u>TarTan GSC Committee Chairs Contact Information</u> (updated 2/09/2011)					
Agility Archives	Maureen McLatchy Donnah Brnger-	Pinebirch@juno.com DonnahB@aol.com	603.878.3155 207.408.8001		
Awards Banquet Field Trial	temp Coleen Banks Laura Bedford Susan DeSilver	aileyfan@optonline.net Halcyondog@mac.com	203.912.7448 860.489.9908 203.484.4738		
Hunt Test Health&	Mark Gallagher Ralph Schmid Candice Bell	ticket@metrocast.net Ralph_schmid@us.gbe.com fh2ovet@aol.com	203.464.4738 603.455.9719 860.669.9281 860.749.8348		
Genetics Inventory Membership	Laura Bedford Kathleen King	Halcyondog@mac.com Kinggordset@comcast.net	860.489.9908 413.648.9548		
Newsletter Nominating	Karol Paduch Jani Wolstenholme -yearly position-	ttgscnews@aol.com Vger4@verizon.net	860.349.9472 401.846.1779		
Picnic Public Education - Fidelco	Robin Marshall Jani Wolstenholme Val Schmid	Rpix05@aol.com Vger4@verizon.net	413.655.8943 401.846.1779 860.669.9281		
Rescue Scholarship Specialty	Ellen Shanahan Ginette Desrosiers Robin Marshall	valschmid@comcast.net tartanrescue@hotmail.com ginetteld@comcast.net rpix05@aol.com	413.528.1446 413.467.7919 413.655.8943		
Supported Entry Trophies	Karol Paduch Liz Wilshere	Trilogygordons@aol.com Devonwood4@aol.com	860.349.9472 860.489.6503		
Website	Donnah Brnger Jay Kitchener	webmaster@tartangsc.org DonnahB@aol.com jay.kitchener@yahoo.com	207.408.8001 207-646-8121		
Legislative Liaison	July Interiories	Rhodygordons@aol.com	207 040 0121		
Delegates: Flaherty Heldca GSCA	Susan DeSilver Maureen McLatchy Jane Matteson	Pinebirch@juno.com	203.484.4738 603.878.3155 909.986.8055		

Don't forget...

To get your cookbook recipes to Liz Wilshere by month end! See last month's Tidings for full information. devonwood4@aol.com



TARTAN GORDON SETTER CLUB, INC. NATIONAL SCHOLARSHIP PROGRAM

The TarTan Gordon Setter Club, Inc. has applications available for one (1) \$1,500 scholarship for the 2011-2012 academic year.

Applicant requirements:

Owns a Gordon Setter or

Is the child or spouse of someone who owns a Gordon Setter Will be enrolled as a full-time student at an accredited institution of higher learning for the 2011-2012 academic year

Major field of study shall be related to Animal Sciences (including, but not limited to, veterinary, zoology, wildlife management, ecology, behavioral science, etc.) or Comparative Medicine (including, but not limited to) microbiology, pathology, biotechnology, genomics, molecular genetics, etc.)

The application can be downloaded from the TarTan GSC Inc. website; www.tartangsc.org;

or is available from:

TarTan GSC Inc. c/o Ginette Desrosiers 32 Baggs Hill Rd. Granby, MA 01033-9508 (413)467-7919 email: ginetteld@comcast.net

The deadline for submitting completed applications is May 31, 2011

TarTan Tidings

Managing Editor &

Production Editor

Karol Paduch 673 Haddam Quarter Road Durham, CT 06422 ttgscnews@aol.com (860)349-9472

Managing Editor

Jani Wolstenholme 68 Malbone Road Newport, RI 02840 vger4@verizon.net (401) 846-1779

Newsletter Contributors

Candice Bell
Susan DeSilver
Cindy Fitzgerald
Karol Paduch
Kathy King
Jani Wolstenholme
Ellen Shanahan

Mailing:

Ginette Desrosiers

PLEASE SEND ITEMS FOR PUBLICATION

TO:

Karol and Jani.

Deadline is the 10th

of the month

TarTan Tidings
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Wags-n-Brags Wiggles-n-Giggles Or Small Lost & Found or In Memoriam Continued from page 1

He is home now, chasing tennis balls, squirrels and anything else that moves. When our lake froze over he decided that chasing the geese might be fun; however he fell through the ice and had to be rescued. Fortunately I am experienced at ice rescue, having retrieved Bess and Haley (Collie) when they fell through!

Cindy Fitzgerald trusted us with Bess, and agreed that breeding her to Jed might produce nice pups, but I don't think either of us thought that we would get another MH!!!

For me, Flyer is a great companion, ready to play, great with the grandchildren, and as many of you saw at the Colorado National, he and Bess make a great brace.

This year in Ohio we are planning a MH brace!!!

Submitted by Beth Beatty



Note from the Editors:

We hope that you, our readers and members, appreciate our efforts to present our beloved breed doing all the things they so love doing. Please do share the stories, exploits and achievements of your Black & Tans!

Karol & Jani

Ma! She's touching me!

Ma-a!!
She's leaning
on me!!

Maa-aa!!! She's hogging the whole chair!!!

HOW SOID RILL

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