



# Ontario Border Collie Club

**GENETIC TESTING  
IN CANADA**



**2018 CHAMPIONS AND  
RESERVE CHAMPIONS**

**2018 MOST PROMISING  
NOVICE AWARD**

**WINTER RELIEF FUN TRIAL**

**ADVENTURES IN IRELAND  
PART 2**

**WINTER**

**2019**

## WANT TO JOIN US?

On September 22, 1984, the Ontario Border Collie Club was formed near King City, Ontario. An enthusiastic group had gathered for a trial near Winchmore farm, and they sat down after supper on Saturday night to draw up the aims and objectives of the new club.

The primary objective of the club is to promote the traditional herding ability of the Border Collie by holding trials and training clinics. The club also encourages obedience and other non-traditional uses of the dog.

It was decided to publish a newsletter a few times each year to keep members up to date on upcoming activities. The club members are mainly farm people with a high regard for and a common interest in the Border Collie. We want to maintain the dog's natural working instinct and hope to prevent it turning into nothing more than another show dog,

If you have an interest in working dogs on stock, or are interested in being an informed spectator at sheep dog trials, please fill out the online membership form and send it along with your cheque to: Kim Gretton, 309 Lorneville Road, Woodville, ON K0M 2T0.

### 2019 CLUB OFFICERS

#### PRESIDENT

Tara Dier  
[presidentobcc@gmail.com](mailto:presidentobcc@gmail.com)

#### VICE PRESIDENT

Victoria Lamont  
[vicepresidentobcc.com](mailto:vicepresidentobcc.com)

#### TREASURER

Kim Gretton  
[treasurerobcc@gmail.com](mailto:treasurerobcc@gmail.com)

#### SECRETARY

Rebecca Lawrence  
[secretaryobcc@gmail.com](mailto:secretaryobcc@gmail.com)

#### DIRECTOR

Janet Fahey  
[directorobcc@gmail.com](mailto:directorobcc@gmail.com)

#### WEBMASTER:

Rebecca Lawrence  
[obccwebsite@gmail.com](mailto:obccwebsite@gmail.com)

### NEWSLETTER

#### EDITOR-IN-CHIEF

**ART DIRECTOR/DESIGN:** Michelle Lawrence

**CONTENT EDITOR:** Kris Kiviaho

[obcceditor@gmail.com](mailto:obcceditor@gmail.com)

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Jan 28, June 21, August 31, November 1

Opinions expressed are the opinions of the author(s) and are not necessarily those of the OBCC.

*Cover Photo by Anne Wheatley. Barn Quilt by Catherine Rae.*

## From the Editor

Here I sit, clad in a bulky sweater and sipping a hot drink while the sun shines brightly on the sparkling snow outside. It's a sure sign that it's bitterly cold out there still – I don't need the dogs leaping from foot to foot when they go outside or the lovely ice patterns on the windows to verify this. It certainly has been another challenging start to the year, with a wee blizzard (a mere 30 cm of snow here with drifts burying our car) and extreme cold days to let us know that we do live in the north, indeed. However, on the plus side, the days are getting longer so we can look forward to spring and new adventures.

In the meantime, settle down in a cozy spot with your own warm beverage and join me in reading through this issue. We say farewell to some retiring Board and Committee members, extend warm welcomes to the new and are grateful to those who are continuing to serve. We celebrate victories of the last trial season and are inspired by the successes of our Champions and Reserve Champions and we recognize our Most Promising Novice Award winner.

Winter arena fun trials are one way to avoid the winter trialing blues. Everyone who attends has a good time and the chance to work is appreciated by both handlers and their dogs. The late December trial was well attended, as we can see from Beth Devereaux's photos.

We look back to greener pastures of last summer with the final installment of the Palmer's adventures in Ireland.

While the Border Collie is a relatively healthy breed, there are some inheritable diseases that cause serious concern, so genetic testing is important in breeding programmes. Canadian breeders have been accustomed to using labs in the US and even the UK to do this testing. In her research, Carol Guy found a lab able to do genetic animal testing here in Canada and shares this valuable information with us.

Keep warm and safe, all. We'll see you back here when this white stuff turns to green!

*Michelle*

### 2019 COMMITTEES

<i>Trials:</i>	Tracy Hinton; Janet Fahey; Carol Guy; John Palmer
<i>Learning &amp; Outreach:</i>	Patrick Gosselin; Jane Kessler; Susan Shipton; Anne Wheatley
<i>Fundraising:</i>	Pamela Hall; Tania Costa

## *Message from the President*

It is January. I don't know what it is like where you are, but at my place it is very cold and very icy. No dog work happening here. Who knows when there will be? It feels like this is permanent. I keep scouring trial lists looking for the spring trials — when, when will they be posted?

For now, we can console ourselves with another excellent Newsletter. The stories our Champions tell will motivate us to work harder this year. The pictures will remind us of warmer times. Kevan and Kim's arena trials will tide us through.

We have new members on the OBCC executive. I want to thank Cynthia, Tracy and Werner for their hard work on the Board, as they step down. Victoria Lamont, Janet Fahey and I will try to step up to the work. I'm grateful that Michelle has agreed to continue with the newsletter, assisted by Kris. Rebecca will continue as Secretary and Kim as Treasurer. I'm also delighted that Pamela Hall will continue her excellent fundraising, assisted by Tania Costa. Please look around your house for items to put on the sale table at Grass Creek. And it is good too that the Trial Committee will remain unchanged, chaired by Tracy Hinton with John Palmer, Carol Guy and Janet Fahey as members. Contact information is on the website.

In addition, a new and vigorous Outreach and Learning Committee has agreed to serve: Jane Kessler, Patrick Gosselin, Susan Shipton and Anne Wheatley. They are already bubbling with ideas for learning opportunities. Help them out if you can.

This is my third time in the President's Chair, although it has been more than 10 years since the last time. In many ways (good ways) the Club has not changed. It still emphasizes good dog work and demanding trials, and rewards achievement rather than wishful thinking. I think the Championship program is the heart of the Club and it is a good program. Anyone winning one of those Championships or Reserve Championships can be proud. I am hoping this year that winners will attend the AGM to receive their trophies and accept congratulations.

The Club's membership has always been small and likely always will be. But we can be proud of the members who are among the top handlers in North America — Tracy, John, Kevan, Amanda — and the solid core of competence in the Club ranks. We also have some strong Novices making their way up through the ranks, taking advantage of the Club's events and encouragement and making their own contributions. It's a good group. I'm glad to be back.

*Tara Dier*

## **2018 Annual General Meeting**

The 2018 AGM was held on November 17<sup>th</sup> at Andrea deKenedy's lovely Cloudberry Farm, with delicious food provided by Andrea and Teresa Castonguay. It was well attended in person, and online! The latter provided the opportunity to our members who couldn't make the drive due to distance to listen and participate in the meeting, and the Club will offer it again this year.

This year we said good bye and a heartfelt thank you to Cynthia Palmer, Tracy Hinton & Werner Reitboeck as they stepped down from the Board. We had some new names who stepped forward for nomination; the new Board has been elected and positions have been filled per Tara's article above. The Club is always looking for volunteers for the various committees so if you are interested, please reach out to the Board.

The Club extends their congratulations to this year's Champions and Reserve Champions, it's been a pleasure watching everyone compete with their dogs.

The 2019 Meeting will take place in November with exact date and location to follow later this year.

Please note on February 15<sup>th</sup>, the password for the Members Only section on the website ([www.ontariobordercollielclub.com](http://www.ontariobordercollielclub.com)) will be changed to: **OBCC2019**. It is case sensitive.

*Rebecca Lawrence*

# 2019 OBCC FUNDING GUIDELINES

## *An Important Message from the Board*

The Ontario Border Collie Club offers financial support to clinics or other learning/outreach activities related to OBCC goals, as well as International style sheepdog trials on a case by case basis. Funds are intended to encourage high-quality events.

Clinics or trials must be managed or organized by an OBCC member in good standing to qualify. Any trials and events must be OBCC hosted. Sanctioning and funding requests should be made to the OBCC Trials Committee who will make a recommendation to the Board of Directors.

The trial manager must make a request in writing (email is accepted) and should include:

- A clear and concise description of the event and how it meets OBCC objectives
- Date(s) & place
- Name(s) of judge(s), clinician(s), speaker(s), etc. under consideration
- Amount & purpose of funding
- Description of anticipated involvement of and/or benefit to OBCC members

Priority will be given to

- Events with a focus on learning
- Events with a tangible benefit to OBCC members
- Events meeting OBCC objectives
- Financial need

The following will be considered when funding has been requested:

- The number of events seeking funding and the available funds for each year, as informed by the Secretary.
- That the events demonstrate a balance of the OBCC objectives – clinics, trials, etc.
- Partial funding may be given if budget does not allow for full support. Members should remember that the club will attempt to support as many events as possible, however it does have a set budget to adhere to for the year.

Requests should be submitted by **April 30** of each year. Requests submitted later in the year will be considered, but funds may be limited.

The Board of Directors will provide a report to the Annual General Meeting of applications considered and decisions made.

## 2019 MEMBERSHIP REMINDER

It's that time again! If you haven't sent in your renewal yet, please don't forget to do so! The annual costs are:

**\$30.00 for single OR \$35.00 for family**

Membership is required for eligibility for championship points. Points for a dog may be accumulated toward the year-end awards only by OBCC members in good standing at the time of the trial. Points will not be awarded retroactively.

Membership also entitles you to receive our quarterly newsletters. The contents of these include trial reports, informative articles, member profiles and photo features.

Please download the form from [www.ontariobordercollieclub.com](http://www.ontariobordercollieclub.com), complete and mail the form along with your cheque to the OBCC Treasurer:

Kim Gretton, 309 Lorneville Road, Woodville, ON K0M 2T0

Electronic fund transfer is also available. Please contact Kim at [treasurerobcc@gmail.com](mailto:treasurerobcc@gmail.com) for details.

***New members are always welcome!***

## 2018 Most Promising Novice Award

*By Tracy Hinton*

The 2018 board would like to congratulate Rebecca Lawrence for being awarded the 2018 OBCC Most Promising Novice Handler award at the AGM.

This award recognizes novice handlers who demonstrate:

- Good sportsmanship
- A willingness to learn and improve
- Concern for the welfare of stock
- A willingness to volunteer
- Awareness of and respect for the tradition and history of our sport



Rebecca is well deserving of this award. Here are some of the things our club members had to say about Rebecca when nominating and voting:

- Supports the OBCC by maintaining the website and is club secretary.
- In addition to her website work, at trials she is helpful, reliable, shows a great deal of respect for other handlers, dogs and livestock.
- Her enthusiasm for herding is contagious.
- She works hard at training
- Participates in and / or helps with events
- Posts scores at trials
- Has a long history of interest in sheep herding. Went to Grass Creek as a child.
- Has concern for the wellbeing of stock.
- Good sportsmanship and manners always displayed at trials and events.
- Performance at trials improving and is actively improving her skills to make the move to Open. She is not complacent with this goal, I am convinced she will make it!
- I can't remember a trial that I have been at where Rebecca has not been volunteering in some capacity.

Congratulations and we all wish you continued success on your journey!

Photo by Michelle Lawrence



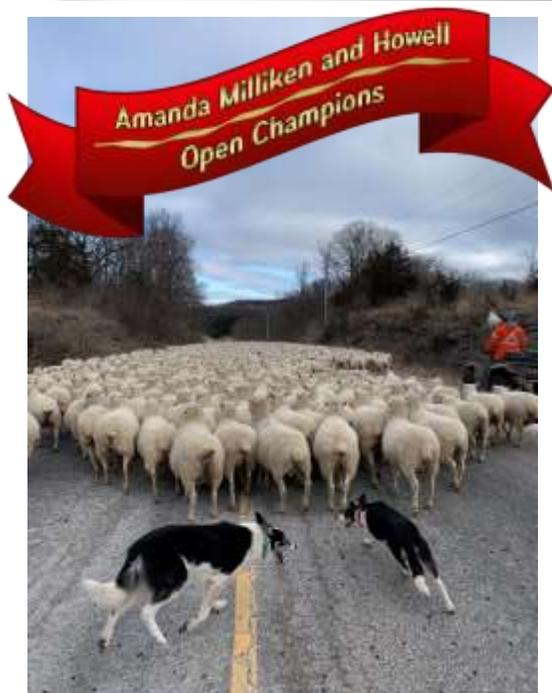
## 2019 OBCC EVENTS

*You'll want to mark the following dates on your calendar so that you don't miss these events:*

Mar 24	Winter Relief Fun Trial	KB Equestrian Facility; Woodville
May 4	Cloudberry Open and Nursery Trial	Roseneath
May 26	Swaledale Novice Trial #1 (NN, PN, Ranch)	Blackstock
Jun 23	Swaledale Novice Trial #2 (NN, PN, Ranch)	Blackstock
Jul 7	Handy Dog Novice Trial (NN, PN, Ranch)	St. Agatha
Jul 20 / 21	K9 Sports Fest SDT (NN, PN, Open – Unsanctioned)	Maxville Fairgrounds
Sep 7 – 8	Handy Dog Open Trial	St. Agatha

***See the website for more details!***

# CONGRATULATIONS TO THE 2018 OBCC CHAMPIONS!



*Howell & Hazel on Waupoos sheep  
Photo by Amanda Milliken*

Howell came to me as a left over. Barbara Ray said she couldn't sell one and I had to take him as a service pup. My Monty was the sire. I had seen another from the litter that looked ok, so I said yes, and someone delivered him a couple of weeks later. No wonder no one wanted him. He was a hang dawg. He lacked sense — he wouldn't come in from the extreme cold. As the winter wore on, he was not on the road to sheepdog scholarship. I nearly sold him. Everything comes to she who waits. On a single weekend, he trained up. In one month of work, he was winning pro-novice trials. In many respects, he was easier to run as a nursery dog, accepting direction readily — "Like this?" "Yes, like that."

He emerged from his first winter with an empowered confidence that made him more of a challenge to control than he was the year before. His unruliness remains true to this day, when he is a seven-year-old. Howell takes charge in a free-wheeling sort of way that would not please everyone. When the sheep are difficult, it is his time to shine, as on western fine wools. He has proven to be a bit much for re-run katahdins. There is no dirty job he will not do at home. Pen and chute work are his forte. He loves managing the sheep while I put out hay - no talking required between the two of us. Loading stock trailers. He rules at big flock moves, freely running up the sides to catch breakaways, and immediately back to the rear to pick up the pace. He is a wonderful outrunner in many different settings that could challenge a dog's imagination. He is nowhere tougher than at the pen, where he knows the job - "we can do this the nice way or the hard way". He instills lots of confidence and when the sheep have looked unpennable - he usually can.

He has bred a few nice youngsters. My Quark, now with Terry Folsom in California and my Hazel, reserve National Nursery Champion in the US and reserve Open Champion here in Ontario, after her first outings as an Open dog.

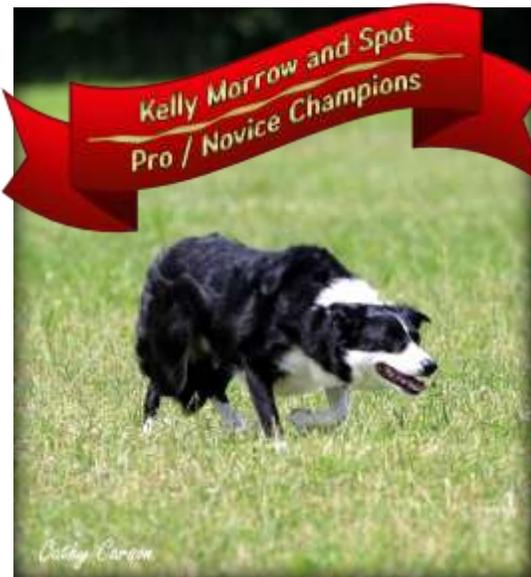


*Howell & Hazel on Waupoos sheep  
Photo by Amanda Milliken*

Hazel, sired by Howell and from my Dorey, started off the year gang busters. I thought so much of her, I took her to Ricky Hutchison's Jock, for April pups. The lambing started her, with every difficult ewe singled into the barn.

She won the first day of the Kingston trials with a near flawless run. After that, however, I had trouble with her confidence, coming at a bad time when I was embarking on a long road trip. I laid off as much as I could, shelving her for all intents and purposes and no shedding - avoid any arguments. It worked out all right as she is now back to her old self. She ran USBCHA Reserve National Nursery Champion, second to Barbara's Grantham, who is same way bred as Hazel's sire, Howell. The holiday suited her. Last week she gleefully participated in the big drive of the Waupoos sheep. Hazel and I get along.

*Amanda Milliken*



Spot Morrow

Photo by Cathy Carson

We are looking forward (with some trepidation) about entering the Open Field this year. I did mention to Viki that I should have started this sport before I retired when I actually had some money! LOL. Thank you to all Trial hosts, organizers, volunteers, judges, and competitors who make it all possible. Best of luck to everyone in 2019.

*Kelly Morrow*



Creed Thompson

Photo by Michelle Lawrence

Creed is a home bred, raised and trained son of my Mia and Diane Cox's Wull. It appears that he has inherited the best of both dam and sire; fast, pushy, smart, with scope and style. He's a wiry, black and white speed demon with all kinds of come forward on sheep. His nick-name is "SkinFlint" as he has no body fat and very long legs. I wish I had his metabolism as he eats like a pig but gains no weight.

Creed's trial career started out being a mite disappointing and somewhat of a surprise to me actually. At 15 months of age, he was completing open outruns and driving like an open dog at home, and then we arrived at the 2017 Bluegrass for his first trial outing. Little did I know that this big event with all the spectators would overwhelm him to the point that when I took him to the post in the 1<sup>st</sup> Nursery class, he ran out about 25 yards in front of me and laid down!! I was flabbergasted and tried to re-direct, but he just looked back at me as if to say "I'm scared,...you do it". After many extra commands and a cross over, he did finally get out to the sheep and bring them. This trial fear was something I hadn't been aware of, nor bargained for. The next Nursery trial was much the same. He did run a little better in the PN classes, but barely. On returning home I realized that his lack of confidence off the

farm needed to be addressed and I took several steps back and re-started him. I also withdrew him from all the Nursery classes for that spring/summer, knowing it would be a waste of money, and concentrated on getting him used to trialing at the PN level. Finally, in the fall of 2017 he got over his trial jitters and began to place in PN and was able to complete a Nursery course. This just proves that sometimes a trainer needs to return to the drawing board now and again.

May of 2018 saw a return to the Bluegrass with a confident young dog of 2 yrs, and a much better performance. We placed well in all four Nursery classes, winning #4 with a high score and a lovely compliment from the judge. We did equally well in PN with a 1<sup>st</sup> place and a score of 85, and even with a reluctant run-away ewe in our 2<sup>nd</sup> go around, he still managed to hold on to her and pen. Your dog's confidence plays a big role in his trial performance and should not be overlooked.

Creed continued to do well at most trials for the rest of the trial season, and we were honored to be the OBCC Pro Novice Reserve Champion. He's turning 3 yrs old in February 2019 and will run in the Ranch Classes for a little while. He will be making the move to Open mid-summer and trading off with my other Open dogs. He's ready.....I think! Thanks to the OBCC and all the trial managers for a lovely, competitive season in Ontario in 2018.

*Mary Thompson*



*Wren Kessler  
Photo by Peter Wilfred McAuley*

Thank you OBCC. The NN award is an unexpected honor. I extend my appreciation to those who host and manage trials, clinics and the terrific support behind the scenes.

My herding experience began with my English Shepherds. Infrequent lessons and running my film company in Toronto didn't quite add up. And so, my husband and I did the only reasonable thing to do. We bought a farm.

I began to attend the Grass Creek Sheep Dog Trials and was in awe of the remarkable partnerships built on instinct, training, and the crazy trust of "look back". The hook set.

Enter, Hawk, BC puppy. He is big, bombastic, powerful, and beyond my ability to handle for any trialing. He is my constant companion and helps with chores. Always fast. Hawk could lift an elephant.

The search for a trial prospect was fulfilled in the fall of 2017 when Beverly Lambert agreed to place Wren with us at Scout's Run Farm. Wren is out of Joe and Nan, Beverly's talented and beautiful tri's. Wren quickly slid into our lives and our hearts. And whaddaya' know, despite much pilot error, she worked with me. For a 1½ year old, Wren came with quite a skill set. Thank you, Beverly.

Days before our very first trial I had an attack of the dreaded "vague malaise". Surely Wren was limping, I likely have rickets and quite possibly, the Plague. In the absence of anything real, I had to face it – we simply weren't ready. Convinced by friends to go and make the best of it, off we went. Wren was more than ready, and we won our very first run. Positive reinforcement is a powerful thing. I started filling out trial premiums.

Wren is just 3 now. She has a solid sense of pressure and a lovely pace (sometimes). We have gotten to know each other, build trust and are engaged in the back and forth dance of progress.

To my husband, Bruce, and all the teachers, friends and dogs who have guided me, thank you for your generosity and encouragement.

All the gems passed on by the wonderful herding community are taking root; it's a journey, be patient, have fun. And hope someone else gets the naughty packet. Hurry Spring.

*Jane Kessler*



*Queen Gingras  
Photo by Michelle Lawrence*

2018 was the year that I finally decided to trial, with Queen. She is my third border collie. I got Queen at the beginning of June 2018 from Derek Fisher; she was his nursery dog in 2017 and competed in the USBCHA Nursery Finals that year. Queen has much more experience than I have in trialing and, more than once, she covered for the mistakes that I made due to my lack of experience as a handler. Queen is a dog with a big heart; she is affectionate, is always looking to please and she is very fast! Queen originally came from Patricia and Alasdair Macrae and is out of Gail and Patricia Macrae's Jim. Gail won the 2014 USBCHA Open Finals with Alasdair.

What impressed me most about the experience this year was the atmosphere of camaraderie. Several experienced handlers such as Mary Thompson, Dave Young, Cynthia Palmer and many others gave me several tips that became more pertinent after each run.

As for Queen and me, the more runs we had together, the more we started working as a team. I still remember Queen looking at me on certain occasions, telling me with her look: "Seriously you want me to obey this command? If it were just me, I would do this, but I will give you a second chance."

Queen and I are already looking forward to competing in the Pro Novice class next year. I still have a lot of experience to acquire but I strongly believe that Queen is the ideal dog to assist me in this adventure.

*Matthieu Gingras*

# Winter Relief Fun Trial

*By Rebecca Lawrence*

Another year of field trialing was over, and it was time for the Winter Relief Fun Trial, hosted by Viki Kidd and Kevan Gretton, on December 30<sup>th</sup>. This trial brought a change of venue, with the KB Equestrian Facility in Woodville as the new location. Kevan enlisted two new helpers (the Facility owner's sons!) who quickly grasped the concept and became quite talented at pushing the sheep off the trailer and through the barn door when "Ready!" was called. KB Equestrian Facility not only had a lovely room to keep warm and watch the action, they also had a veranda in the barn itself where we could sit to watch!

Morning winners were Kevan Gretton and Bud for the Open field and Tracy Hinton with Mead in the Novice group.

A break for lunch, and I don't think I've seen so many slow cookers in one area before! As usual, the OBBC members made sure no one was going to go hungry while spectating or running a dog.

A quick course change, and the members were back at it. Repeat winners for the afternoon for Kevan and Bud and Tracy and Mead!

A huge thank you to Viki, Kevan and Kim for arranging and hosting the trial and to Kim Gretton and Catherin Rae for being the judges!



*Winter Arena Trial*

*Photos by Beth Devereaux*

## Adventures in Ireland – Part Two

*By Cynthia Palmer*

The International was over and we met with the big northeast USA contingent for the last big meal together. It was fun to share thoughts over the handlers and the trials. Now on to becoming tourists. Carolyn West and Carol Campion recommended some spots and our Airbnb host gave us some fantastic driving tours to do before we left the area. We headed to the Mourne mountains and Slieve Donard and toured the dam. The stone walls took thousands of men 12 years to build and the sheer rugged beauty of the area was breathtaking. The Mourne mountains are the main source of water to the city of Belfast. The water flows through the rocks and fauna, where mountain sheep graze, to supply the water through the dams and down to the city. From the hike on Slieve Donard, John and I (I clutched the door, John drove) on some tiny country roads. We stopped for breakfast at a house that had to be 250 years old, built when they didn't have tall Dutch folk visiting! While walking through another town we saw our Texas neighbours Wyatt and Cyndi Flemming! Touring day for them too. Our plan had been to go to the west coast of Ireland for a day's drive but with bad weather (our only day) and the morning spent touring the east portion of County Down, we made it as far as Omagh on the west side of Northern Ireland.



Day two of touring was to be raining and we were headed to meet Michael Gallagher and Tierney Graham that evening. We decided to go to Derry / Londonderry where the conflict between the Irish/English (Catholic/Protestant) is alive and well. We walked on the city wall and read all of the plaques. So much history to take in. We took lots of selfies and headed to another pub for a pint. No pictures here because of the rain. I took John into his first Marks and Spencer, where we bought some biscuits and sweets. There were a pair of shorts on display, so we know that at some point there is some warm weather in this country.

In the afternoon we drove across the north coast past Royal Portrush again. When the British Open is on this year I'll know exactly where they are! Past Bushmills...no we didn't stop... and then we met up with Michael and Tierney at his family farm just outside of Ballycastle. We talked, had whiskey, toured the farm and talked some more. We headed to town for dinner where it seemed everyone else had the same idea. Lots of chatter and talk of dogs. Surprisingly the northern Irish accent is not too bad at all or the whiskey helped me understand it.



The next morning Tierney, John and I headed to see Giants Causeway along with about a million other tourists. Such interesting rock formations and I wasn't a fan of climbing to the top, but I managed to stand for a couple photos.





We met up with Michael for another pint and then headed to the old Scottish Dunluce castle on the north coast. It was fascinating to appreciate the architecture and skill (and brawn) to build these castles in what would have been quite a desolate place. Then we had a quick trip down to Dark Hedges. I must see Game of Thrones now; so much of it was filmed up there.

John and I said goodbye to our tour guides and drove down to Dublin. We had planned the last two days in Dublin and, finally, I was able to use some of my hotel points from my countless nights away from home. We were almost downtown, and I successfully drove (well a couple of redirects) to the hotel, parked the car and sighed.... John could drive back to the airport in two days' time.

On our last full day, we walked thousands of steps. First to Guinness for a tour and a lesson in pouring a proper Guinness. It was a beautiful day and we sat up and enjoyed our self-poured Guinness in the 360-degree view. We headed from there over to a distillery called Teelling. The tasting was excellent and, of course, lunch tastings are the best. Back for a walk-through the town and over to the Old Jamieson distillery. It was another interesting and unique overview of whiskey making and history. I learned so much history, both about alcohol and the Irish, and there was still so much more to see. Next time....



*Article photos submitted by Cynthia Palmer*

# Genetic Testing in Canada

By Carol Guy

*When I first got into border collies, most people I knew advised me about having the dog's eyes tested for CEA (Collie Eye Anomaly). Identifying the gene and being able to test for this disease has saved many from the heart break of having their border collie lose sight early in life.*

*In recent years more and more people are talking about additional genetic diseases that are appearing in our beloved working border collies. People who are considering the purchase of puppies and/or started dogs are asking if both parents have been tested for these inheritable diseases – the reply they receive may affect their decision to purchase the dog or not.*

*Most research on genetic diseases is funded both through government, public and private monies at teaching universities. This means that researchers are continually searching and identifying genes that cause a variety of diseases. Take for example Dr Hannes Lohi and his research team that have successfully identified the causal gene for Early Adult Onset Deafness (EAOD). It is a complex disease that will require additional studies to further understand its dimensions and variations. The American Border Collie Association has been very helpful and supportive in their research. We have been told that a genetic test will be available for this very soon. Without government and private funding much of this research would not take place.*

*I felt that a refresher on basic genetics was in order. For this, I went to Dr David W. Silversides' website and share it here.*

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## Dog Genetics 1.0: The Basics

Dog owners, dog breeders and veterinarians with dog practices should all have a basic understanding of dog genetics. Intuitively it is quite simple, and it's all about two. Two parents, but you already know that. Two copies of every gene. Two copies of every chromosome. The number to remember is two. Dog genetics doesn't get any simpler than this, and what is more, it's the same simplicity at the root of our genetics. Unfortunately, simplicity plus simplicity plus simplicity ..... can quickly give us complexity. But we'll try to keep it simple.

Think of **genes** as little biological paragraphs in a book. Each paragraph serves a function; it is biological information with something to say. It is a set of biological instructions. Now think of **chromosomes** as groups of paragraphs that make up the chapters of the book. Think of the book as all the paragraphs (genes) and all the chapters (chromosomes) put together. Let's call the book the **genome**. The genome is a very special book, a recipe book filled with sets of instructions that collectively tell a story. Think of the genome as a recipe book, something like a fusion between 'The Joy of Cooking' and 'The Joy of Sex', but much more clever. Now think of the genome as a double set of instructions since in genetics, everything (parents, genes, chromosomes) comes in twos.



**Oh what clever apes we are  
To know the alphabet of life  
To read our genes: A, C, G, T  
What power. What humility.**

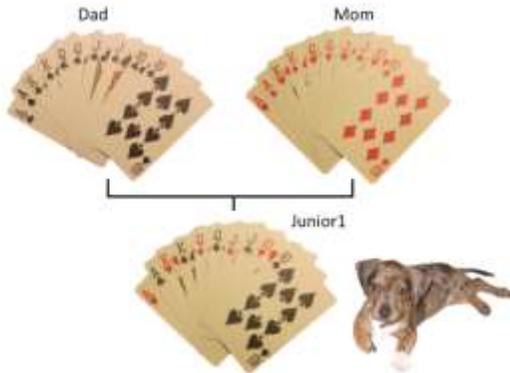
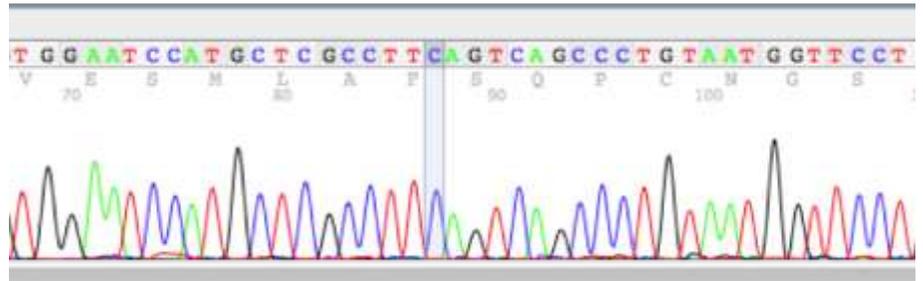
The dog's genome tells a very good story. First of all it tells how to make a dog. Then it tells how to be a dog.

Genes are written in a special text called '**bases**'. Bases are the biochemical alphabet of life, and there aren't very many of them, only four: **A, C, G,** and **T**. Simple, right? But remember, simplicity plus simplicity plus simplicity ..... eventually gives us complexity. It's like electricity, where the two conditions of current 'on' and current 'off' can eventually give us the internet. Or like the 26 letters of our English alphabet that can eventually give us 'Hamlet' or 'Ulysses'.

Back to the bases A, C, G and T. The bases are lined up one after the other, hundreds, thousands, millions of them, like beads on a string and making a special necklace. The necklace is our **DNA**.

In the laboratory we have learned how to read the bases that make up the genes that make up our genomes. We can read our DNA. We can read our dog's DNA. We can read the alphabet of life. And even understand a little bit of its logic.

Here is a sequencing profile for the mutation that causes a muscle degeneration disease in dogs (DM). The sequencing profile actually represents both copies of the gene in question, one superimposed upon the other. The shaded base (C) indicates that the dog has two normal copies of the gene in question. If a copy of the gene was mutated it would show up as a T.



Back to the genome. The genome contains biological information. How to transfer this information from one generation to the next? Once again, intuitively we know: this time it's all about sex. Now think of the genome as a deck of cards (actually a double deck of cards: everything comes in twos, remember?). Let's say that Dad has a genome consisting of only black cards and that Mom has a genome consisting of only red cards. Each parent now shuffles their cards (their genome), and then cuts their deck in two so that only half of their cards will get passed to the next generation. Sex happens. The resulting offspring (puppies in this example) will now have a new genome consisting of a full (double) deck of cards, half of which are black (from Dad), the other half of which are red (from Mom).

The fact that genes come in pairs (one copy from each parent) is a good thing as it allows biology to experiment with genetics and thus allows animals to evolve and become (just for example) dogs. But it can also be not so good in that bad copies of genes can stay hidden. A healthy dog can be a carrier for disease genes. If two healthy (carrier) dogs are mated they can have puppies that are diseased, and other puppies that are healthy. And that's at the heart of heredity.

Let's look at an example of heredity. Consider a black dog and a brown dog. Let's say that brown is the **recessive** trait, i.e. can be hidden, and that black is the **dominant** trait, i.e. always reveals itself. Let's call the gene responsible for the presence (or absence) of black or brown the gene 'B'. Furthermore, let's call the black version of the gene capital 'B', and the white version of the gene small 'b'. Now go back to the idea that you have two parents and that everything in genetics comes in pairs. To have a brown dog, we need two brown copies of the gene (bb). To have a black dog, we only need to have one black copy of the gene, while the other copy can be for black or for brown (BB or Bb). BB will give us a black dog that is 'clear' (not a carrier) for the brown copy of the gene. Bb will give us a black dog that is a carrier for the brown copy of the gene.

We now look at three possibilities for mating our black and brown dogs:

**Black X Brown ('Clear' X Affected)**

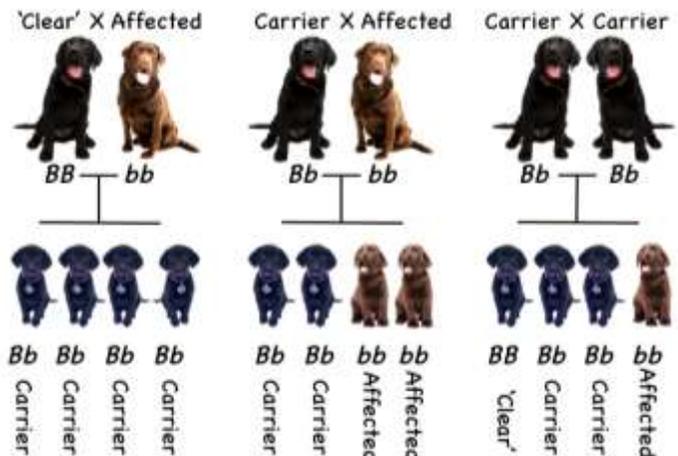
This will give all black puppies. All the puppies will be carriers for brown.

**Black X Brown (Carrier X Affected)**

This will give black puppies and brown puppies, in about equal numbers. The black puppies will be carriers for brown.

**Black X Black (Carrier X Carrier)**

This will give black puppies and brown puppies, but more black than brown. Some of the black puppies will be 'clear', while some of them will be carriers for brown.



Once again, genetics doesn't get any simpler than this. Once again, it can get more complicated. For more comprehensive explanations of basic genetics and the genetics for dogs, there is a lot of information available only a few taps away on the internet: <https://en.wikipedia.org/wiki/Genetics> <http://www.doggenetics.co.uk> <http://homepage.usask.ca/~schmutz/dogcolors.html> [https://en.wikipedia.org/wiki/Coat\\_\(dog\)](https://en.wikipedia.org/wiki/Coat_(dog))

*I decide I want to run genetic tests on my two young dogs. One is just two and has been previously tested and the other is 2.5 years old. What do I test for? Here is a list of the most common genetic diseases that labs are offering both in Europe and in North America; a brief description of each is included but I encourage you to go to one of the sites I have listed to see the details of each disease.*

## **BORDER COLLIE GENETIC DISEASES**

**CEA – Collie Eye Anomaly** - inherited disease with recessive mode of inheritance which results in abnormal development of the eye's choroid. The disease can be mild or severe, however, dogs with the mild form of the disease can produce severely affected offspring.

**TNS- Trapped Neutrophil Syndrome** - the bone marrow produces neutrophils (white cells) but is unable to effectively release them into the bloodstream. Affected puppies have an impaired immune system and most pups die by 4 months due to bacterial infections. This disease went undiagnosed for many years.

**\*MDR1- Multidrug Resistance** - considered a pharmacologic genetic disease due to a mutation in the multidrug resistance gene. Affected dogs, when treated with certain common drugs such as Ivermectin and loperamide (Imodium), are unable to pump out these drugs from the brain resulting in poisoning and neurologic symptoms ranging from tremors, anorexia and excess salivation to blindness, coma and even death. Some of these drugs, such as Ivermectin, which vets prescribe extensively for the treatment of parasite infections, are able to cause toxicity at 1/200th of the dose required to cause toxicity in healthy dogs. Scientists discovered that these dogs lack a protein (P-Glycoprotein), which is responsible for pumping out many drugs and toxins from the brain, and that affected dogs show signs of toxicity because they are unable to stop drugs from permeating their brains. There is a long list of drugs to be avoided if your dog has this.

**DM- Degenerative Myelopathy** - the Lou Gehrig's disease of dogs

**SN- Sensory Neuropathy** - a progressive degeneration of motor and sensory nerve cells. Affects pups between 2 and 8 months of age – euthanasia.

**\*PLL- Primary Lens Luxation** - timely and accurate diagnosis with lens replacement required

**IGS- Immerlind-Grasbeck Syndrome** - the vitamin B12, also known as cobalamin, fails to be absorbed from the intestine. Lack of cobalamin leads to changes in the hematopoietic system and to neurological symptoms due to irreversible damage of the brain and nervous system. This can be managed by supplementation with regular doses of cobalamin. (Cobalamin malabsorption BC) B12.

**NCL-5- Neuronal Ceroid Lipofuscinosis 5** - the clinical course includes increasing levels of agitation and possible outbursts of aggression, hallucinations, hyperactivity and epileptic fits. Most animals lose their ability to coordinate everyday muscular activities. As the extent of neurodegeneration increases, all affected dogs develop psychological abnormalities and ataxia nerve cells particularly affected; mortality by 32 months

**GGD- Canine Glaucoma and Goniodysgenesis** - Goniodysgenesis is a developmental abnormality of the eye's anterior chamber which is strongly associated with glaucoma and blindness.

## **Resistance to Phenobarbital in Ideopathic Epilepsy**

*So now that I have the list of what I can test for, where do I go? Most border collie owners in North America I spoke to use a testing lab in the United States. It originated with a human geneticist who saw there was a need for this service and now has a team of veterinarians and technicians that provide a very reliable, timely and professional result: Paw Print Genetics (PPG). Their website, [www.pawprintgenetics.com](http://www.pawprintgenetics.com), states that they are partners with the United States Border Collie Handlers Association (USBCHA).*

*I decided to run a full panel on my dogs using Paw Print Genetics. They had been used by folks I knew so I got on the website and opened an account. The cost was something I wasn't prepared for – mostly because it was in American dollars. The test panel included 7 genetic diseases for a total cost of approximately \$600 USD (exchange at time of article, \$800 CAD) for ONE dog. My search continued.*

*I looked on and off for several months. I talked to people about where they sent samples, what they tested for, etc. I googled anything remotely related to genetic testing in Canada...and all I got were sites for coat and breed type testing. I called the University of Guelph...no help there. I emailed the Canadian Veterinarian Medical Association (CVMA) and did not receive an answer. So, I started contacting ISDS members and lots of information came flowing back.*

The ISDS has some stringent guidelines on their genetic tests. A veterinarian must stamp the test form guaranteeing that the swab/blood has been taken from the dog listed on the form. Residents of the UK have access to several different laboratories but not all of them offer tests for the full list of Border Collie Genetic diseases. One lab used is Animal Genetics UK, [www.animalgenetics.eu](http://www.animalgenetics.eu). They don't have the most user-friendly website but do offer bundle specials for 5+ samples and combinations of tests. I have been told that Animal Diagnostics Company UK (ADNAD), [www.animaldnadiagnostics.co.uk](http://www.animaldnadiagnostics.co.uk) is an excellent lab; they do not have as many bundles but are recommended if you are looking for specific individual tests. The final one is LABKOKLIN [www.laboklin.co.uk/laboklin](http://www.laboklin.co.uk/laboklin), who offer a 6-test bundle with GGD included. They offer service to Canadians with a 2- 3 week turnaround for \$356.43. Most of the tests average at \$106.50 each.

Then just two weeks ago – I realized I hadn't checked the University of Prince Edward Island Faculty of Veterinarian Medicine site. I searched Canine Inherited Disorders and two thirds of the way down the page was a section on Genetic testing and it listed a Canadian website. Eureka!!

I opened the page and discovered that the lab is part of the University of Montreal Faculty of Veterinarian Medicine. The laboratory is headed by **Dr. David W. Silversides**, animal geneticist. The lab does genetic testing, research and provides education. Labgenvet has been in operation for about 10 years; they started out with genetic testing for cats and then dogs but communication was only in French. They are now fully bilingual. The list of breeds & genetic tests they include is extensive and comprehensive. I found Dr. Silversides' contact information and we arranged to have a conversation by telephone. Their website is incredibly helpful.

**“Dog owners, breeders and veterinarians that treat dogs should all have a basic understanding of dog genetics.”** states Dr David W. Silversides, animal geneticist and the lead for Research and Education at the University of Montreal Faculty of Veterinarian Medicine. He simplifies it all for us as seen above <http://labgenvet.ca/en/dog/>.

My conversation with him was very educational. He is somewhat frustrated that it took me so long to find the lab. However, he hopes that by sharing this with the Ontario Border Collie Club (OBCC) and the Canadian Border Collie Association (CBCA) that word will spread and the Labgenvet name will get out there to other Canadian dog owners. They are part of a university so do not advertise their service. Labgenvet receives some provincial funding so this does allow them to offer the tests tax free!

In addition to the educational component of basic genetics, there are also easy instructions to find a lab test form for your specific breed and the applicable genetic tests. There is a separate section on how to take the swab samples for the test and another section which includes the payment form that needs to be printed, completed and mailed with the swabs for payment. The more tests you do the better the price. For example: 1 test is \$75, 4+ tests are \$60 each. The price to do 6 tests at Labgenvet is comparable to 6 tests at Laboklin in the UK.

After my conversation, I noticed that Sensory Neuropathy was not included on the list of tests. I emailed Dr Silversides inquiring about it and he said he would rectify that immediately and within 24 hours SN was listed on the Border Collie form.

<http://labgenvet.ca/wp-content/uploads/2018/08/LabGenVet-Form-dog-general-en.pdf>  
<http://labgenvet.ca/wp-content/uploads/2018/06/LabGenVet-Instructions-buccal-swab.pdf>

I hope you find the information in this rather lengthy article helpful - thank you for listening. I encourage you to give the lab at the University of Montreal a try for your next tests; I am off to do my swabs for Dr Silversides. See you on the field.



**OBCC Fundraising & Merchandise Committee**  
Pamela Hall and Tania Costa

Thank you all for making last year's fundraising a huge success. This year our plan is to have 50/50 draws at trials and fun days. So, help support your club and bring your wallet, and maybe walk away with more money than you started with!

We also accept auction donations anytime.

Do you have an idea for merchandise? Strike while the iron is hot as we are sourcing out new items now.

Thank you,  
Pamela & Tania

Contact Pamela Hall: [pmhall22@bell.net](mailto:pmall22@bell.net) or 647-669-6063

 <b>\$30</b>	 <b>\$20</b>	 <b>\$35</b>
 <b>\$45</b>	 <b>\$20</b>	 <b>\$15</b>
		 <b>\$5</b>