

# WEST COAST VETERINARIAN

SEPTEMBER 2017 | Nº 28

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ON STORMY SEAS

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COREY VAN'T HAAFF  
EDITOR

» TO THE EDITOR

Letters from members are welcome. They may be edited for length and clarity. Email us at [wceditor@gmail.com](mailto:wceditor@gmail.com).

» ON THE COVER

Cst. Shanks and his dog during training.

**M**y dogs are spoiled, no one would dispute that. They choose where to sit in every room in the house, and it isn't at all odd to find my husband and me on the floor so our dogs can spread out and truly lounge. We spend weekends coring and freezing apples so the big dogs have special treats to chase in our fully fenced backyard. We strategically place our multiple bird feeders so the flickers, juncos, chickadees, finches, and grosbeaks can entertain my pooches for hours.

And yet, I believe that dogs exist to serve us, their humans. My dogs will drop everything when we call them, and look up at us and make what I am sure is meaningful eye contact, awaiting our next command. And why? For a loving pat on the head, and an enthusiastic *good girl*.

Checking out the wider community, there are dogs that serve, like the dogs trained to be service or seeing eye dogs for people who need them. And then there are police dogs that tackle bad guys, search out bombs or drugs, or simply look intimidating, all in the name of law enforcement. These dogs risk their own safety, willingly (if you ever watch them train and work, you'll agree it's willingly). And they do it for the same reason: a toss of the ball, a hearty pat, and an equally enthusiastic *good boy*.

I cannot document here the exhaustive list of the qualities I most love about dogs; I only know that my love for them grows continually, and I cannot imagine my life without dogs. I remain in awe of their willingness to serve us in whatever way possible, even—as I learned a few months ago with Olive—to cheerfully accept re-assignment after flunking out of a lengthy and strict training program to be a seeing eye dog. These dogs all deserve the best we have for them. *Good dogs*.

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CVMA-SBCV Chapter members get a 50% discount on placing an ad, and it's always free to look at or respond to an ad. The CVMA-SBCV Chapter Online Classified Ads website was created when the College of Veterinarians of BC decided to close its classified ads, came to your CVMA-SBCV Chapter, and asked us to create a solution to serve BC veterinarians. We eagerly accepted that challenge and are proud to share with you our wish to make this website your first choice to visit if you are looking for work, or wanting to hire.

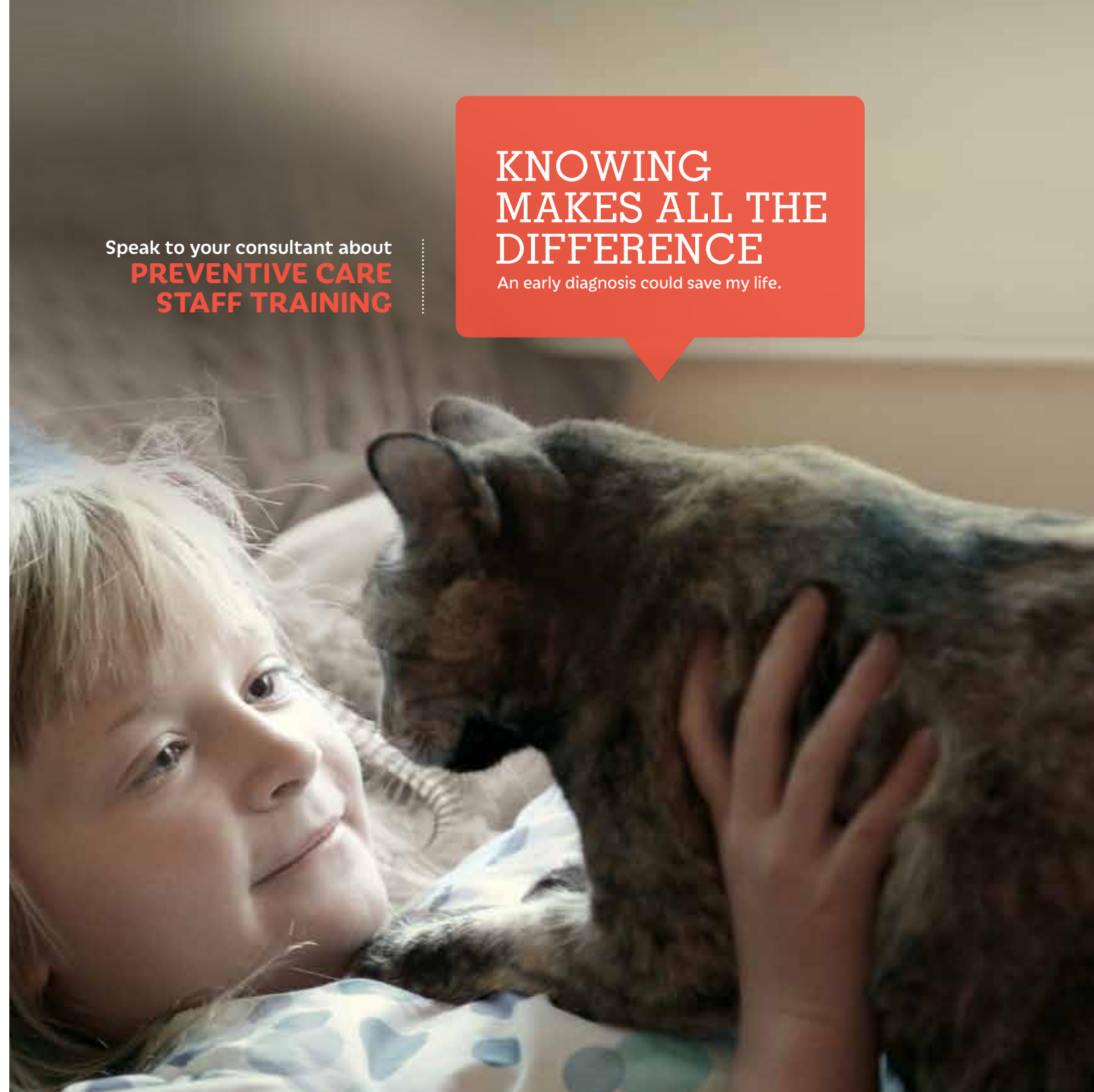
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**LAUREN FRASER, CHBC**, is an IAABC-certified horse behaviour consultant. She helps horse owners address behaviour problems, using evidence-based, low-stress techniques. Currently enrolled in an MSc program in Clinical Animal Behaviour through the University of Edinburgh, she is also an educator, offering monthly workshops for horse owners and RACE-certified online courses for equine veterinarians.



**MIKE HIGGINS, DVM, MSc, DIPL. ACVIM (NEUROLOGY)**, graduated from the Ross University School of Veterinary Medicine, in St. Kitts in 2002. He completed a Small Animal Internship at Auburn University College of Veterinary Medicine in Alabama, in 2003, and did his Veterinary Neurology/Neurosurgery Residency at VA-MD Regional College of Veterinary Medicine, in Virginia, in 2006. He is on the Neurology/MRI team at Canada West Veterinary Specialists.



**TARA MacKAY, DVM**, was born and raised in Kamloops. She received a degree in Animal Biology from TRU before graduating from the WCV in 2015. She now works at the Kamloops Veterinary Clinic. She and her partner live with a Cocker Spaniel, and a rescue cat.



**KAI NG, DVM**, graduated from AVC in 2008 and then did a one-year rotating internship at the WCV. In 2013, he became part owner of three clinics, Fairfield Animal Hospital, Westbank Animal Care Hospital, and Central Valley Animal Hospital. He and his wife and two children live on a small hobby farm with horses and chickens.



**ROSE TUBMAN-BROEREN, RVT**, has been interested in shelter medicine and working in low-income/low-access communities ever since she was a kid. She graduated as an RVT in the spring of 2014 from TRU.



**MARINA VON KEYSERLINGK, BSc, MSc, PhD**, grew up on a cattle ranch in British Columbia. She joined UBC's Animal Welfare Program in 2002, and was appointed as a NSERC Industrial Research Chair in 2008. She is recognized internationally for her research on care and housing for dairy cows and calves.



**KATHRYN WELSMAN, DVM**, graduated from OVC in 2007. She practised emergency medicine in Langley for several years and completed a diploma in veterinary public health. In 2011, she moved to the Kamloops area where she has been practicing small animal medicine.

# WCV

SEPTEMBER 2017

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#### EDITORIAL COMMITTEE

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Christiane Armstrong, DVM  
Sarah Armstrong, DVM  
Rick Stanley, DVM  
Kathryn Welsman, DVM

#### EDITOR

Corey Van't Haaff  
Email: wcveditor@gmail.com

#### ART DIRECTOR

Aileen Fulgueras, B Des

#### COPY EDITOR

Clélie Rich

#### PUBLISHER

CVMA-SBCV CHAPTER  
Email: cvma-sbcv@cvma-acmv.org  
Telephone: 604.406.3713  
PO Box 21088 Maple Ridge Square RPO  
Maple Ridge BC V2X 1P7  
www.canadianveterinarians.net/SBCV

#### PUBLISHER'S ASSISTANT

Debbie Crowe

#### AD SALES

Inga Liimatta  
Email: ingal@telus.net  
Phone: 604.420.0663

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#### WEST COAST VETERINARIAN



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## RVT COLUMN ANIMAL RESCUE IN BOTSWANA



## SPECIAL TEAR-OUT POSTER FOR MEMBERS ONLY



Summer has flown by, and I didn't get to do all the things on my long, unattainable list. I do this to myself each summer. I make a long list of 20+ places to see, and activities to do. I consider it a success if I even knock off a few on the list. My goal this summer was to see more of BC where many of our members live and practise. I am proud to say that I achieved a visit to Haida Gwaii, a trip to the Kootenays/Nelson, a trip to Salt Spring Island with my Mum, and a four-day trek along the Juan de Fuca trail.

As always, the CVMA-SBCV Chapter has been busy working for our members. Some of the activities and projects that kept us busy this summer were the CVMA Convention in Charlottetown in PEI, extending our CE to provide local seminars, CVBC correspondence and consultation, the addition of BC online classified ads to our services, a strategic planning session with the CVMA-SBCV Chapter Board of Directors in June, organizing donations to the Canadian Disaster Animal Response Team, and continued planning for our 2017 Fall Conference and Trade Show.

At the CVMA national conference, Dr. Marco Veenis attended the presidents' meetings on my behalf, and Dr. Christiane Armstrong attended meetings as the CVMA Council member representing the CVMA-SBCV Chapter. At the provincial forum, the topic of counselling services for members in crisis came up as a provincial issue. Most provinces use commercial providers. At the presidents' meeting, several regulatory topics came up: regulating and licensing of RVTs, regulating telemedicine, regulating alternative and complementary medicine under the scope of practice. Some of the member service topics were combatting antimicrobial resistance and associated dispensing rules, and wellness/counselling programs for registrants. Both Dr. Veenis and Dr. Armstrong also met with the current registrar and president of the CVBC to touch base and go over common themes. The CVMA-SBCV Chapter will try to make sure that the information that is disseminated from the CVBC is clear to our members by communicating with the College on key issues.

Our 'Cat Healthy' seminars in May were a great success. The seminars were six hours long and held in two locations: Victoria and Langley. The goal of this was to provide local CE to our members, and evaluate the degree of interest. As there was much interest, we will try and expand on this initiative and provide some other helpful local seminars to our members at different locations throughout BC. Please stay tuned.

The Board of Directors attended a day-long strategic planning session in June. It was a great meeting of the minds, and we used the day to clarify and define our committees, address how we as a Chapter want to move forward in the coming years as we grow in membership, and lastly to

brainstorm ideas on ways to give back to our members and to enhance our veterinary public image.

The CVMA-SBCV Chapter Board decided to put some of the Chapter's earned revenue to good use; the money was sorely needed to deal with animal welfare during this time of natural disaster and at the same time provided our Chapter members with an opportunity to show their hearts and their willingness to help. We made a donation of \$10,000 to the Canadian Disaster Animal Response Team (CDART) to support its work with animals at risk due to the BC wildfires. We strongly believe that this was a wise decision and that the money went to a good cause. We are also working with CDART to address some of their non-monetary needs.

As some of you may already know, the CVBC has decided to stop providing classified ads as a service to registrants, mainly because they do not see this as a regulatory service, but as a member service. Thus, once this issue of *West Coast Veterinarian* has gone to print, it will be the sole responsibility of the CVMA-SBCV Chapter to provide BC online classifieds (see page 4 for further details) rather than the College. We appreciate the College's request for our assistance with this project.

Lastly, we are busy getting ready for our upcoming yearly Fall Conference and Trade Show, November 3-5 2017, at the Pinnacle Hotel Harbourfront in Vancouver. As always, the Conference will provide top quality CE for a total of 15 hours CE credit.

Hope you have all enjoyed a wonderful summer with your friends and loved ones. Cheers! [WCV](#)



Sarah Armstrong, DVM, graduated from OVC in 2007. Following graduation, she worked full time in general practice and worked part time at a local emergency practice in Southern Ontario before moving to Vancouver, BC, where she currently works as a locum veterinarian.

### THE CANADIAN DISASTER ANIMAL RESPONSE TEAM (CDART)



CVMA-SBCV Chapter Treasurer Dr. Rob Ashburner presenting a cheque for \$10,000 to Janette King, Vice-President of CDART SW. The CVMA-SBCV Chapter donated this money to assist CDART in its efforts to help animals at risk due to the BC wildfires. In the months to come, the Chapter hopes to continue its support of CDART in BC and the work it does to assist animals throughout the province at times of disasters large and small.



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**I**n May, the CVMA held a workshop with invited stakeholders to mark the start of a process to develop ready-for-delivery, practical tools to assist veterinarians in the prudent use of antimicrobials for six defined species groups (beef, dairy, poultry, swine, small ruminants, and companion animals). Next steps include establishing five work streams: antimicrobial stewardship principles and practice decision support; guidelines for prudent use of antimicrobials; platform hosting of tools and templates; sustainability; and communications.

The CVMA Transportation of Dogs and Cats position statement was approved in March 2017 and is available under the Policy & Advocacy section of the CVMA website.

The CVMA has produced the following reports to aid practitioners: the 2017 Report on Veterinarians in Government, Industry and Academe (contact [admin@cvma-acmv.org](mailto:admin@cvma-acmv.org) for access); the 2016 New Graduate Survey Report (access under News & Events on [www.canadianveterinarians.net](http://www.canadianveterinarians.net)); and Non-DVM Wages and Trends Across Canada (read more under News & Events on [www.canadianveterinarians.net](http://www.canadianveterinarians.net)).

Enjoy three new member benefits: the new CVMA Petcard Program—financing options for your clients and exclusive benefits for your practice; the CVMA's Group Insurance Plan—save on Home and Auto Insurance; and discounted gym memberships, offered to members by GoodLife Fitness. Find out more under News & Events on [www.canadianveterinarians.net](http://www.canadianveterinarians.net).

This year's Animal Health Week, October 1–7, will emphasize the importance of Animal Welfare. The theme, Animal Welfare: Safeguarding the Five Animal Freedoms, highlights the five basic freedoms animals require to survive and thrive: adequate shelter, proper nutrition, appropriate veterinary care, proper socialization, and the ability to exhibit normal behaviours.

2017 World Rabies Day is September 28. A common goal of zero by 30—zero human deaths from canine rabies by 2030—was agreed upon by the World Health Organization, World Organisation for Animal Health, UN Food and Agriculture Organization, and Global Alliance for Rabies Control. Visit [rabiesalliance.org/world-rabies-day](http://rabiesalliance.org/world-rabies-day) to find information on how to organize your own World Rabies Day event. #WorldRabiesDay.

The CVMA recognizes the following individuals who were presented with awards during the AGM and Awards Luncheon on July 13, 2017:

- Dr. David Condon – Small Animal Practitioner Award
- Dr. Stephen LeBlanc – Merck Veterinary Award
- Dr. Anne McDonald – CVMA Humane Award
- Mona Campbell Centre for Animal Cancer – CVMA Practice of the Year Award
- Dr. Jeanne Lofstedt – CVMA Life Membership
- Ms. Elizabeth Hartnett – R.V.L. Walker Award
- Dr. Bob Bellamy – CVMA President's Award



*Troye McPherson, DVM, was born in Cape Breton, NS, and graduated from the Ontario Agricultural College in 1984 and the Ontario Veterinary College in 1989. She headed to western Canada where she worked in large animal and small animal veterinary medicine, taught agricultural courses at Lakeland College in Vermilion, AB, and became the Acting Director of the Animal Health Technologist Program at the College for two semesters. She returned to Nova Scotia to continue expanding her knowledge in the profession: in mixed practice, small animal, and emergency medicine; and, as a Federal Veterinarian, meat inspector for a year. She also helped develop a Veterinary Assistant Program at a private business college in Halifax. However, her true calling is as a small animal practitioner. Dr. McPherson is a member of the American Association of Feline Practitioners, is currently the CVMA representative for the Federation of Veterinarians of Europe, and has served on the Council of the Nova Scotia Veterinary Medical Association twice. She lives in Dartmouth with her husband, Patrick, five Border Collies, and four cats.*

Please join us in welcoming Dr. Troye McPherson as the 69th national president of the Canadian Veterinary Medical Association (CVMA). Dr. McPherson succeeds Dr. Troy Bourque whose term came to an end in July 2017.

**YOUR 2017–2018 CVMA EXECUTIVE MEMBERS**

- |  |                                      |
|--|--------------------------------------|
| Dr. Troye McPherson, President             | Dr. Terri Chotowetz, President-Elect |
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| Dr. Troy Bourque, Immediate Past-President | Dr. Barry Stemshorn, Treasurer       |



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**IN MEMORIAM**



**BARBARA ELIZABETH COUGHLIN, DVM | APRIL 1944–AUGUST 14TH, 2017**

After a valiant battle, Kelowna's highly respected veterinarian succumbed to ovarian cancer at the Kelowna General Hospital.

Barbara (née Jenkins) was born in New Westminster and graduated from Delbrook Senior High School in North Vancouver, followed by the School of Nursing at Vancouver General Hospital. Moving to Toronto, Barbara was hired as an OR nurse by the Humber Memorial Hospital and the Scarborough General Hospital.

Looking for even greater challenges, Barbara returned to BC and enrolled at Simon Fraser University where she earned an honours science degree. She was accepted into the Veterinary Medicine program at the University of Saskatchewan, where she graduated in 1976.

Barbara was hired by Dr. "Paddy" Clerke in Kelowna in 1977 and soon purchased his veterinary practice and established the current location of the Kelowna Veterinary Hospital on Kent Road in 1981 which will continue to operate under the professional guidance of her protégée Dr. Ellen Nicklassen.

Barbara's marriage to John Allan Wilson in 1982 was followed by many happy years together appreciating the Okanagan Symphony and membership in the Kelowna Yacht Club with two Catalina sailboats named "My Fair Lady" and "Why Not."

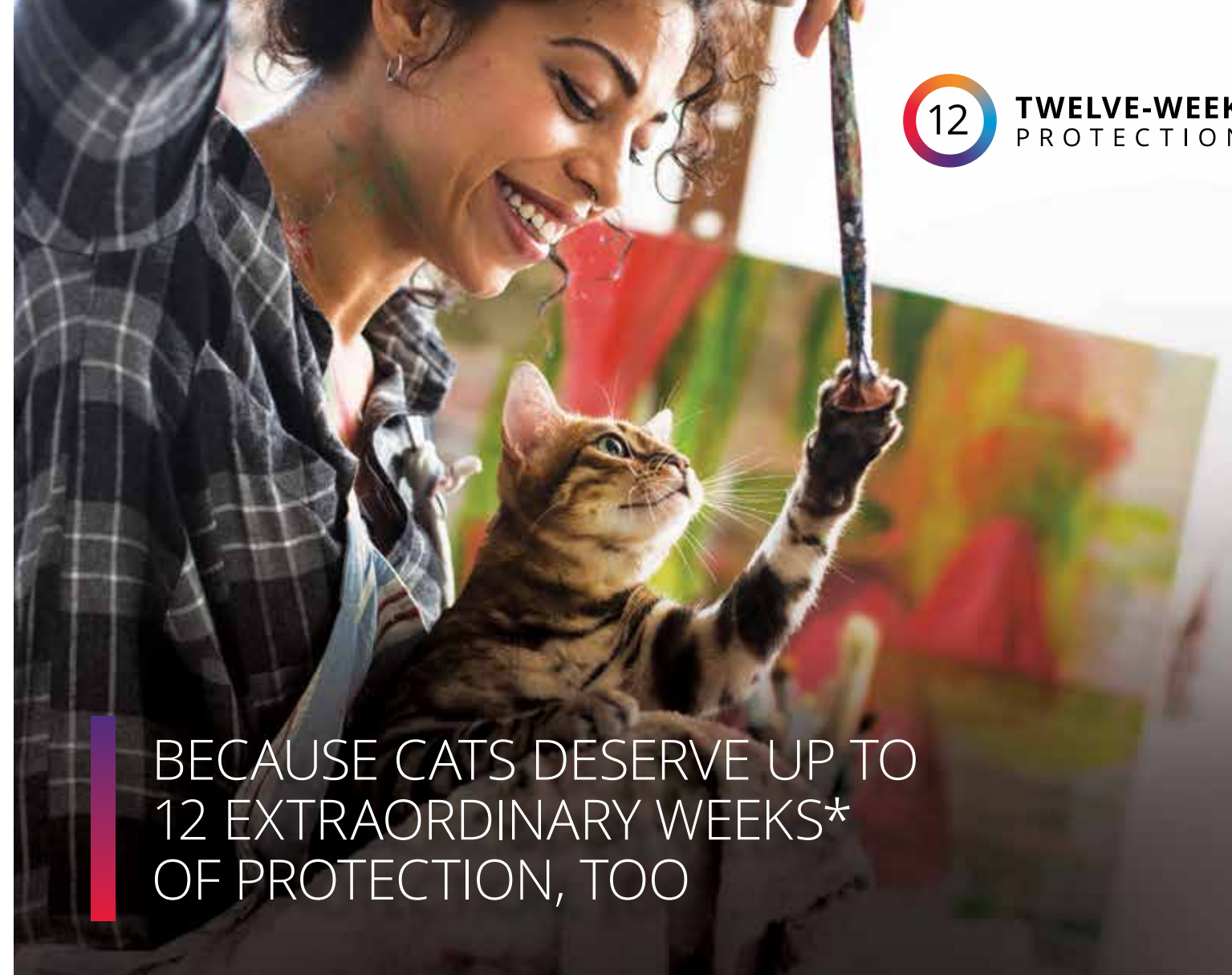
Barbara was a key volunteer with the Kelowna Yacht Club, faithfully attending each sailing evening and event for 22 years, where she processed the sailing race data and handicaps to determine the winners and the "also rans." Some 11 years ago, she met James Anderson at the club and, after a long courtship, they were married this past April in Kelowna.

Barbara was predeceased by her sister Pamela Jenkins in May of this year and is survived by her brother Bob Jenkins (Mary) of West Kelowna and her husband James C. Anderson of Kelowna.

For all who knew her, an "After Party" was held in the main lounge at the Kelowna Yacht Club on Thursday, August 31st.

Respected by all, and loved by many: Dr. Barbara Elizabeth Coughlin 1944-2017.

Condolences may be sent to the family by visiting [www.springfieldfuneralhome.com](http://www.springfieldfuneralhome.com), 250.860.7077.



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CVMA-SBCV Chapter

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**CVMA-SBCV CHAPTER FALL CONFERENCE & TRADE SHOW**

FRIDAY NOVEMBER 3, 2017	SATURDAY NOVEMBER 4, 2017	SUNDAY NOVEMBER 5, 2017
6:00pm – 9:00pm Dr. Miranda Sadar Exotics (3 CE hours)	8:00am – 11:30am Dr. Shea Cox Geriatrics (3 CE hours)	8:00am – 11:30am Dr. Marco Cervi Orthopedic Issues and Surgery (3 CE hours)
	1:00pm – 4:30pm Dr. Kathleen Cooney Palliative Care (3 CE hours)	1:00pm – 4:30pm Dr. David Lane Orthopedic Issues and Rehab (3 CE hours)
	4:30pm – 5:30pm Trade Show Reception	
	5:30pm – 6:30pm CVMA-SBCV Chapter AGM	

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# REFLECTIONS ON FIRST YEAR

BY CHLOE GUSTAVSON



**I**t goes without saying that veterinary students are no strangers to the title of volunteer. For many of us, not only would it have been a component of our high school graduation requirements, it may very well have been our first look at what it is like to be a veterinarian. Of course, we continue to volunteer because it is a fulfilling use of our time. We are dedicated to gaining as much experience as we can and want to demonstrate our commitment to being involved in our communities.

Students at the WCVM spend countless hours volunteering both on and off campus. Whether it is a call for help in organizing student club activities or community engagement events, I am never surprised to see

so many of my peers signing up to lend a hand. Before we receive our personalized white coats and engraved stethoscopes, a diverse range of volunteer experiences allows us an insight into the breadth of the veterinary profession. As veterinary student hopefuls, it is important to know what it is like working with all kinds of animals, from small

and large to marine and exotics—and all the types of people who come with them. Surely, we all remember being asked to discuss this diversity of career options as part of our veterinary school interviews. For me, this was just over a year ago, and little did I know at the time that in the near future there would be an entire course devoted to this exploration.

The Survey of Veterinary Medicine course consists of a series of unique presentations given by alumni, faculty, and related professionals in the community and is described as a welcome break to our dark winter mornings otherwise filled with lectures on renal physiology, the adaptive immune system, and biochemistry case studies. With as much diversity as the veterinary profession itself, lectures took us through a day in the life of veterinarians working with laboratory animals and wildlife, to veterinary social workers and animal protection officers. As course coordinator Dr. Murray Woodbury put it, “I give the first-year students role models... The lectures are about things I think students entering the profession need to know.” A required course for all first-year DVM students at the WCVM, Survey of Veterinary Medicine gave us a timely introduction to the topics of professionalism, ethics, and work-life balance.

As each speaker shared a unique story, perhaps what struck me most was the common voice of passion with which each of these journeys was shared. Seated in our very familiar lecture hall, a place of endless learning, we were reminded what it is like to be subject to not just knowledge, but also inspiration. I think I can speak for my classmates when I say that inspiration is largely what got us here. Whether we owe that to a childhood dream, an admired mentor, or a certain four-legged friend, it is this shared

passion for our profession that we are told we must cling to throughout our careers. Student Olivia Bos says, “When school started to get tough, and I found myself asking, ‘Is this worth it? Why am I even here?’ it was this class, with its various speakers and interesting topics, that reminded me of why I want to be a veterinarian. For me, veterinary medicine goes far beyond animals and their well-being. This career allows us to touch the lives of people in so many different ways and to give back to our communities. Survey of Veterinary Medicine simply showed us how other veterinarians are putting these ideas into practice.”

One role model is guest lecturer Dr. Michelle Lem, the founder and director of Community Veterinary Outreach. The clinics run by Community Veterinary Outreach offer veterinary services to pets and owners who might not otherwise, for a variety of reasons, have access to such care. Through partnering with community health and social work professionals, these clinics are positively contributing to One Health. Hearing Dr. Lem’s passion for her work inspired me and many of my classmates to want to help, and soon after her presentation she began making connections for us across the country. Dr. Lem put many of us in

touch with partners in our home provinces. One such student, Nicole Becker, says of her time with Community Veterinary Outreach, “Participating in the program pilot in Winnipeg this spring further opened my eyes to the role of pets in the lives of those in need. All of the interactions I had with participants

(clients) and their pets throughout the day proved that vets can play an important role in making a difference in our communities through their understanding of the human-animal bond.”

Dr. Lem’s dedication to outreach work is a shining example of how doing what we love can manifest itself as fulfillment beyond measure. It is the essence of our profession. We are tomorrow’s veterinarians, and the time for us to start giving back is now; we know that we do not have to go far to be able to make a difference. At this impressionable stage of our careers, we are grateful for this advice from our future colleagues: to make time for what drew us to veterinary medicine in the first place. [WCV](https://vetoutreach.org)

FOR MORE INFORMATION ON COMMUNITY VETERINARY OUTREACH, PLEASE VISIT [HTTPS://VETOUTREACH.ORG](https://vetoutreach.org).



Chloe Gustavson holds a BSc from the University of Victoria and is currently a member of the Class of 2020 at WCVM. She grew up in North Vancouver, where she most enjoys spending time outside with her dog, Leo. She is interested in focusing her career on contributing to One Health.



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# OLIVE, THE UNOFFICIAL FIRST DOG OF BC

BY COREY VAN'T HAAFF



PAGE 16 Olive on the staircase in the foyer at Government House. THIS PAGE FROM LEFT TO RIGHT Olive with RCMP officers and Her Honour, the Lieutenant Governor of British Columbia, at a Canada Day citizenship ceremony at Government House; Olive in Her Honour's office at Government House (desk is by Arthur Vickers).



**W**e've all been there, holding one end of the leash while at the other end, a dog barks inappropriately. We might laugh it off, shrink in embarrassment, or even enrol in some positive reinforcement dog training.

The stakes were a little higher for Olive, a purebred yellow Labrador Retriever born at the end of October 2015. Olive came from guide dog breeding stock and had been a guide dog hopeful belonging to BC & Alberta Guide Dogs. The registered charity, funded by corporate and private donations and legacies, breeds, raises, and trains dogs intended for careers as seeing eye dogs for the visually impaired or as service dogs for young children with autism.

"For most pet owners, they wouldn't care about the barking," says Linda Thornton, Director of Breeding and Puppy Raising at BC & Alberta Guide Dogs, "but we need a dog that can work under pressure and think things out."

If a dog barks at things that go by on the street, she adds, the visually impaired person at the end of the harness won't have any idea how to interpret the barking. Since this barking didn't appear to be just a phase for Olive, her career as a guide dog was over.

"So, we set her free, set her free with love," says Thornton. There's usually a very long list for these non-qualifier dogs, with the puppy raisers and others all keen to take such dogs that are excellent family pets, or the 12 remarkable dogs each year that become compassion dogs for veterans with PTSD.

"We had a nice non-qualifier dog, and a potential owner became available the next day, looking for a low-key lovable dog."

That owner was a grandmother whose work in Victoria was taking her away from her family and her ranch in Merritt for long periods of time. That owner was also Her Honour, the Honourable

**"MADAME SPEAKER SAID TO ME, 'YOU NEED A DOG,' AND I SAID, 'YOU'RE RIGHT.'"**

Judith Guichon, Lieutenant Governor of British Columbia. She had been chatting with the then-Speaker of the House, the Honourable Linda Reid, while

meeting for their regular book club.

"Madame Speaker said to me, 'You need a dog,' and I said, 'You're right,'" says Her Honour. "I have five dogs on the ranch, but I spend a lot of time in Victoria." Olive, she adds, gets her outside walking after sitting far too long behind a desk. "She's a wonderful pooch who didn't make the grade as a seeing eye dog. She's far too friendly and can't resist children."

Since Government House is a six-hour drive from home, Her Honour often finds herself alone on weekends.

"I may only have one event on a weekend, so it's wonderful to have company when it's quiet. Olive fills a big gap," she says, adding that she gets much more exercise now, which is so much healthier.

Thornton says the decision to rehome Olive with Her Honour at Government House was an easy one. "We skipped the home check," she said, and instead, she showed up with Olive, only to find the entire staff there to welcome this very special dog. Her Honour kicked off her shoes, and knelt on the floor, providing the warmest of welcomes for Olive. "It was love at first sight; I knew it would work immediately."

The Lieutenant Governor also is smitten with the dog, which begins each night in her own dog bed but ultimately, says Her Honour, "migrates into mine." Olive shares a coffee break most days with Her Honour in the fenced garden off Government House's Maclure Room, and otherwise is meeting guests, playing with visiting children, or just being a dog in the company of another dog brought in by a staff member.

It was all because of some wayward barking that Olive experienced an early career change, relinquishing the high hopes of being a service dog for the visually impaired, and arriving instead at Government House and becoming the unofficial First Dog of British Columbia. For Olive, it is exactly where she belongs. **WCV**

OLIVE NOW CARRIES THE TITLE OF VICE REGAL GREETER AND HAS HER OWN FACEBOOK PAGE [WWW.FACEBOOK.COM/VICEREGALOLIVE/](http://WWW.FACEBOOK.COM/VICEREGALOLIVE/)

PHOTOS COURTESY OF RACHEL RILKOFF



# FARM SIZE AND ANIMAL WELFARE

BY JESSE ROBBINS, BSc, PhD; MARINA VON KEYSERLINGK, BSc, MSc, PhD; DAVID FRASER, CM, PhD; AND DANIEL WEARY, D PHIL.

Concerns about farm animal welfare often revolve around increases in farm size, and these concerns fall into three broad categories:

## 1 TECHNOLOGIES INHERENT TO LARGE FARMS ARE DETRIMENTAL TO THE ANIMALS.

We find no clear relationship between technologies used on larger farms and animal welfare. Indeed, some technologies can have important advantages. Consider a milking parlour in a large, modern farm. In the above photo, you notice the worker and equipment, but you have to look closely to see the cows' legs peeking out from beneath all the hardware. A legitimate concern is that this technology somehow interferes with the relationship between workers and the cows. In many smaller farms, cows are still milked in tie-stalls. This system requires less technology and more direct contact with the workers, but cows in tie-stall barns are often restrained in their stalls 24 hours a day, sometimes even 365 days a year. In contrast, the milking parlour is part of a loose housing system that provides animals much greater control over their environment, including when to eat, to socialize with other cows, and even deciding which stall they wish to use. Like many other technologies, milking parlours are often not scale-neutral, meaning that larger farms are more likely to use these systems.

**“MILKING PARLOURS ARE OFTEN NOT SCALE-NEUTRAL, MEANING THAT LARGER FARMS ARE MORE LIKELY TO USE THESE SYSTEMS.”**

## 2 THE STANDARD OF CARE PROVIDED TO INDIVIDUAL ANIMALS WILL DECLINE BECAUSE WORKER EFFORT IS DILUTED OVER A LARGER NUMBER OF ANIMALS.

Somewhere deep in our conception of what makes for a good life for farm animals and for the people who care for them is the idea that the contact and connection between people and farm animals enrich and improve their lives. If this is true, then large farms will likely be worse off in terms of welfare, as larger farms employ fewer workers per cow.

Despite the importance of this idea, very little work has examined the relationship between farm animals and farm workers, and how this relationship changes with farm size. Austrian researchers measured how willing cows were to allow people to approach, and used this measure to infer how fearful the cows were of people. Approach distances varied widely across farms, from 0 metres (i.e., the cows allowed people to touch them) to more than 2 metres, but distance showed no relation to farm size. The results suggest that there is no simple relationship between farm size and the quality of the cow-caregiver relationship.

Other work has shown some advantages to larger farms. For example, these farms are more likely to use a designated calving area, more likely to systematically evaluate dystocia, more likely to feed colostrum more rapidly, and more likely to assess the quality of the colostrum-feeding practices. More generally, larger farms are more likely to employ standard operating procedures and provide formal training to their employees. In combination, these differences suggest an advantage to larger farms. One factor potentially accounting for some of the variation in all these features is the quality of advice the farmer receives. The norm on dairy farms is for the farmers to have a close and on-going relationship with a veterinarian who can provide such advice, but US data suggests that smaller farms are less likely to receive input from their veterinarian (Figure 1).

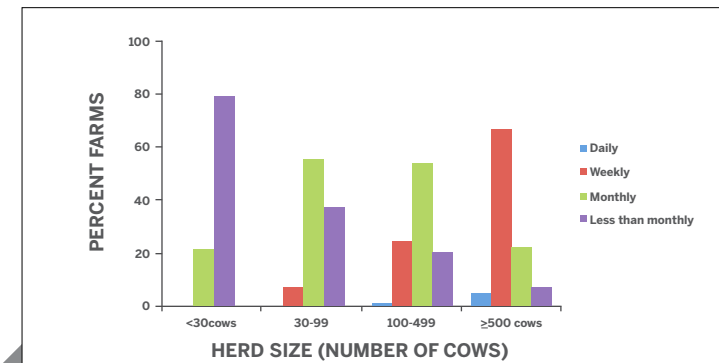


FIGURE 1. The frequency of visits by a veterinarian to dairy operations in the US (adapted from the USDA, 2016).

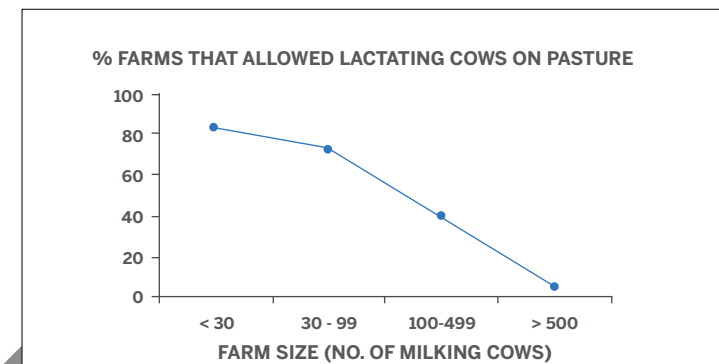


FIGURE 2. The percentage of farms that allow some or all of the lactating cows access to pasture in relation to farm size (number of milking cows) (adapted from the USDA, 2016).

## 3 SOME ESPECIALLY BENEFICIAL MANAGEMENT PRACTICES, LIKE ACCESS TO THE OUTDOORS, MAY BECOME IMPRACTICAL ONCE FARMS REACH A CERTAIN SIZE.

Although we did not find evidence of a reduced standard of care on larger dairy farms, it is the case that some especially beneficial practices are less common on these farms. One of the most discussed examples is the availability of pasture, in part because access to pasture is closely linked to good welfare in the minds of both farmers and the public.

Data from the US shows a clear negative relationship between pasture access and farm size (Figure 2). Many smaller farms provide lactating cows with some access to pasture, and even among intermediate-sized farms, some pasture access is common. However, on the largest farms (with more than 500 cows) pasture access is the exception.

In conclusion, increases in farm size can provide opportunities to improve the welfare of farm animals but can also create certain welfare risks. Policy and advocacy efforts are unlikely to reverse increases in farm size and would be better directed toward generalizing the welfare benefits and minimizing the risks we have described. [WCV](#)

THIS ARTICLE IS A SUMMARY OF AN INVITED REVIEW: ROBBINS ET AL., 2016. INVITED REVIEW: FARM SIZE AND ANIMAL WELFARE. J. ANIM. SCI. 94:5439-5455.



# EQUINE MUSCULAR AND NEUROLOGIC DISORDERS

12 hours CE | October 23–24, 2017

- ▶ **Stephanie Valberg, DVM, PhD, Dipl. ACVIM, Dipl. ACVSMR (Equine),** will speak on muscular disorders including diagnostic approaches, exertional and non-exertional rhabdomyolysis, PSSM, shivers, and cases: diagnostic approach and management of myopathies.
- ▶ **Carrie J. Finno, DVM, PhD, Dipl. ACVIM,** will present on neurologic disorders including examination and localizing diseases, EHV-1, WNV, spinal cord ataxia, lower motor neuron diseases, and cases: diagnostic approach and management.

Organized by the Equine Committee of the CVMA-SBCV Chapter, the 46th Annual Equine Seminar will be held at the Town and Country Inn, Delta, BC. Registration includes coffee breaks, lunches, and a seafood buffet on October 23, 2017.

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# POSITIVE VETERINARY CARE FOR EQUINE CLINICS

BY LAUREN FRASER, CHBC



PHOTO BY LAUREN FRASER

Canadian veterinarians take an oath to relieve suffering and enhance the welfare of animals in their care. But good welfare isn't just the absence of ill health; instead, it's both physical and behavioural health playing an integral role in determining welfare states.

Veterinarians have opportunities to enhance the behavioural health of patients, such as by advising clients about behavioural conditions with medical origins. The American Veterinary Society of Animal Behavior (AVSAB) recently put out a position statement on how veterinarians can further enhance behavioural health, through positive veterinary care. The organization defined positive veterinary care as '...methods of veterinary practice that promote calm emotions for patients of all species and their caregivers by encouraging awareness of the patient's experience throughout the visit.'

For equine veterinarians, such approaches during veterinary care can not only enhance the horse's experience, but can also provide numerous benefits to veterinary staff and clients.

## BENEFITS TO EQUINE PATIENTS

Veterinarians who are able to recognize and respond appropriately to arousal levels and affective states can offer numerous benefits to equine patients. Calm handling can increase patient compliance with procedures, even those which are mildly aversive. For young or naïve horses, how they are handled during exams or procedures can set the stage for how they will behave under similar circumstances in the future. Whether on their home turf, or in a veterinary clinic, horses are continually learning via operant and classical conditioning. Operant conditioning results in an increase or decrease of a target behaviour, depending on whether the consequences that follow that behaviour are desirable or undesirable.

Simultaneously, associations about stimuli are created involuntarily through the process of classical conditioning. For example, in as little as one learning trial, the initially neutral appearance of a veterinarian can predict that something feared follows. In short order, the horse may begin to display fear as soon as the veterinarian comes in sight, without anything else occurring. Such associations can profoundly affect a horse's behaviour—as any veterinarian who has dealt with a needle-phobic horse can attest. Fortunately, this process can also work to positive effect, where the sight of the veterinarian predicts pleasant things are about to occur.

Positive veterinary care focuses on ensuring that the experience of being handled and treated is as pleasant as possible for the horse, and that desirable consequences occur for the horse following wanted behaviour. This maximizes the likelihood of the horse behaving in a desired way, at the time of the exam and on future occasions. Working with horses in such a manner encourages lower states of arousal and positive affective states. It also conveys physiological benefits, such as decreased cortisol production and decreased risk of complications during sedation or anesthesia.

## BENEFITS TO THE VETERINARY STAFF AND PRACTICE

Positive veterinary care benefits both veterinary staff and the practice itself. Horses who are less stressed are more compliant, making a veterinarian's workday

“THE OUTDATED AND INCORRECT NOTION THAT A DIFFICULT-TO-HANDLE HORSE IS BEING DOMINANT HAS ABOUT AS MUCH RELEVANCE IN THE MODERN VETERINARY CLINIC AS THE USE OF BLOODLETTING TO CURE DISEASE.”



## THIS PAGE

Left: Recognizing subtle signs of anxiety or fear early can prevent fear-based behaviours from escalating (photo by Jayme Ellis); bottom left: Cord trailer loading (photo by David Taylor); bottom right: Using systematic desensitization to work with a horse with ear shyness (photo by Lauren Fraser).

more efficient. Calm horses are safer to handle for all staff and are less likely to injure themselves while in a clinic's care. Clients also appreciate seeing their horses handled in ways that minimize stress and fear; word of mouth about a clinic's practices is powerful advertising—for better or worse. Equine clinics who commit to practising positive veterinary care could be viewed as industry leaders.

## BENEFITS TO THE CLIENT

Positive veterinary care also benefits the client, resulting in increased client satisfaction that the horse's emotional needs are being considered. In a survey on what clients value most in a veterinarian, *kindness* ranked number one, even over *competency*. How a client's animal is treated is also valued, with clients ranking *lack of concern and compassion* or *roughness and brutality* with their animal high on a complaint list. Another benefit of positive veterinary care is that horses that have learned that procedures or treatments are nothing to fear are more likely to be compliant when medicated by clients at home.

## EXAMPLES OF LOW-STRESS HANDLING IN EQUINE PRACTICE

All equine veterinary clinics can implement steps to minimize stress and fear, and maximize positive experiences for patients. An important first step is to ensure that clinic staff have current, evidence-based information on equine behaviour, and the perceptual and cognitive abilities of the horse. For example, the outdated and incorrect notion that a difficult-to-handle horse is being dominant has about as much relevance in the modern veterinary clinic as the use of bloodletting to cure disease.

A basic understanding of learning principles, particularly positive and negative reinforcement, and systematic desensitization can help staff implement low-stress handling techniques with patients. Other protocols to decrease stress and minimize fear include:

- Having another calm horse in the vicinity during exams and procedures.
- The appropriate use of food, for example, giving a treat immediately after a desired behaviour has been performed, or used as a distraction during mildly unpleasant procedures (e.g., access to 'Likit' treats or hay bags). Where possible, in-clinic horses should also be allowed to eat from slow-feeder hay nets to increase time spent foraging.
- Minimizing restraint, e.g., the use of a loose lead rope when the horse is behaving as desired (standing calmly), and good timing when using negative reinforcement (pressure and release).
- Having a quiet clinic environment and calm, confident staff who use reinforcement-based handling practices that foster low arousal levels.

“HORSES MAY BENEFIT FROM A BREAK TO CALM DOWN BEFORE THE EXAM BEGINS, WITH A HAY BAG, AND A RELAXED HORSE VISIBLE NEARBY.”



- The use of systematic desensitization with young, naïve, or anxious horses to introduce and habituate them to scary stimuli such as clippers, or water from a hose, keeping the horse under threshold so that they do not display escape or avoidance behaviours.
- Allowing the horse extra time for their eyes to adjust to changes of light (e.g., going from daylight outside into a darker barn).
- Accepting that not all clients will have taken the time to teach their horses to load, or leave the property, and thus horses hauled in may be at an emotional disadvantage before they are even examined. Such horses may benefit from a break to calm down before the exam begins, with a hay bag, and a relaxed horse visible nearby.
- Better handling through chemistry—anxiolytic sedatives should be considered whenever possible for procedures which are painful or distressing, before the horse becomes aroused.

- Upon arrival at a barn, dispense treats to equine clients—even those not scheduled for exams that day. Not only will this foster positive associations between the horse and the veterinarian, clients will appreciate the sentiment.

In summary, positive veterinary care impacts not only equine patients, but support staff, veterinarians, clients, and the veterinary clinic's reputation and image. For more information, the full position statement from the AVSAB can be downloaded as a PDF here: [www.avsab.org/wp-content/uploads/2017/01/Positive-Veterinary-Care-Position-Statement-download.pdf](http://www.avsab.org/wp-content/uploads/2017/01/Positive-Veterinary-Care-Position-Statement-download.pdf). [WCV](#)



THIS PAGE Left to right: equine dental work; veterinarian examining horse (photos by Lauren Fraser).





TREATING THOSE THAT

**SERVE**

AND

**PROTECT**

BY KATHRYN WELSMAN, DVM





**“THEY ARE RAISED WITH VERY FEW BOUNDARIES.”**

**PAGES 22 AND 23**  
2016 CPS-K9 High Risk, Day 2.  
**THIS PAGE**  
Cpl. Prior, his police dog, and quarry—apprehension in a stairwell.

PHOTOS COURTESY OF RCMP IN INNISFAIR, ALBERTA, AT THE POLICE DOG SERVICE TRAINING CENTRE



**THIS PAGE** Left: Cst. Shanks moving his dog out of a helicopter during a training exercise with Calgary Police Service; top right: Cst. Shanks and his dog during a training exercise; bottom right: Cst. Shanks moving his dog over a fence while training in Calgary.



I saw a meme the other day that said, “Do regular dogs see police dogs and think, Oh shit, it’s the cops?” I showed it to my husband who is an RCMP officer, and we both had a chuckle. It’s a good question though, isn’t it?

In our clinic, we deal with several police dogs, and I’m always amazed at the stares these dogs get from other owners and their dogs. Maybe some people are staring at them because the dogs and handlers make quite a striking pair, or others are thinking, “Oh crap, what did I do?” or perhaps some of the dog patients sense they are in the presence of authority, as I’ve never seen any of my non-police patients venture over to one of the police dogs for a friendly howdy-do. I know when I’m around these police dogs, I’m usually a little bit in awe.

I’ve been lucky enough to be involved with the RCMP dogs for several years, providing veterinary care as well as providing canine first aid training for their handlers and for the RCMP medics who might need to assist the dogs in an emergency, so I’ve become somewhat accustomed to them. However, recently, I had several coworkers comment to me about how they were surprised that the police dogs weren’t easier to handle, given how well-trained they are.

I realized our staff didn’t completely understand exactly what these police dogs actually do when they are working, which likely is the case for many veterinary clinics across BC. I’m hoping that this article might provide a bit of insight as well as help any clinics that might be asked to provide veterinary care in the future.

The RCMP dogs are nearly all German Shepherds that are bred and raised by the RCMP in Innisfail, Alberta, at the Police Dog Service Training Centre (PDSTC). Puppies that are selected from each litter are raised by puppy imprinters, who are General Duty RCMP officers across Canada who raise and provide

basic training for the first year or longer. The puppies are usually tested for their suitability as a police dog (courage, ball drive, etc.) every four months, until the age of around 18 months when they are considered fully developed and ready to be assessed as police dogs. Only then are the chosen few selected to complete a final six-month training course before being released to active field duty. They need to complete three training levels. Cst. Shanks, an RCMP dog handler in Kamloops, explained that “each level requires the dog handler team to show constant progression and consistent ability to work all areas with more difficulty and complete tasks more challenging than the level prior. Throughout training, the dog handler must be able to understand and decipher the dog’s indications including body gesture or movement (i.e., tail, ears, eyes, and pace of movement).” The dogs are evaluated by the Senior Trainer at the PDSTC.

Cst. Shanks outlined the areas in which these dogs are trained and tested: obedience, agility, criminal apprehension, searching for objects, searching for drugs, and tracking people. This list is mind-boggling. Even our most specially trained patients might be expert agility dogs, or very good at bird retrieving, or fantastic herders, and some might be protection dogs and even others search and rescue, but most of them don’t and can’t do all of these demanding tasks. Heck, my family Labrador could barely retrieve a ball without getting distracted!

Police dogs, much like their human police counterparts, sometimes get a bad rap, which is totally undeserved. They conjure up an image of gnashing teeth, fierce barking, and chasing and holding the bad guy. True, they do display a strong bite and loud bark when they are working, but they do not use their skills indiscriminately. Many of them are quite laid-back dogs when off duty. However, these dogs do all share one common trait: they are highly motivated and driven, which usually means they don’t like to sit still. Police dogs aren’t usually willing to roll over and receive a belly rub either, nor are they prone to giving us a high five on command.

Similarly, at first glance, some of them seem to be lacking basic manners. That’s okay. People might say the same thing about my children! Behaviours we might discourage (such as jumping up on the couch or kitchen countertop) are actually somewhat encouraged in these dogs as they need to be curious, fearless, and in impeccable physical condition. They are raised with very few boundaries.

I had a lovely example of this, when I was talking to Cst. Challoner, a General Duty member who is also a puppy imprinter in Kamloops, at the clinic. Suddenly, his one-year-old female German Shepherd leaped onto the exam table, sniffed around, and jumped back down to get her ball, all without being asked. Because of their unique personalities, these dogs can make for somewhat interesting veterinary patients and can present some unique challenges.

Over the years, I’ve watched the dog handlers put their dogs through some tracking exercises, searching for small objects to represent evidence searches, searching for drugs, searching vehicles, and practising their bites. The dogs might not have the best clinic manners, but when they have a task, they suddenly become very focused and listen intently to their handler’s commands. For the dogs, this is playtime, and they are driven for their reward, which, for many of them, is a Kong or similar toy.

Cst. Shanks explained that “potential police dogs are taught using the positive reinforcement method.” The dog is rewarded for completing a task properly as the natural tendency of a domesticated dog is to please. As a result of this, a police dog will perform a trained task in a consistent manner to please its handler. This creates a positive working relationship between the handler and the dog.

“By understanding the dog’s movements, the handler can read the dog’s behaviour as it relates to the location of a specific scent, as well as factors which may affect how and where the dog is locating the scent,” explained Cst. Shanks. A remarkable bond is created when human and dog have to work in tune to perform their job. It was very apparent to me, when watching these dogs, that they love what they are doing, and that the handlers have immense respect and care for their dogs.

Even though the handlers and dogs have a very strong bond, much like many owners and their dogs, these dogs are not pets. This was reiterated to me by all of the handlers I spoke with. Cst. Lewis, another Kamloops RCMP dog handler, explained that “they are animals, so we give them the respect and care an animal deserves, but they are working dogs, not pets.”

He elaborated that some of the dogs, when off duty, can behave much like pets living in their handlers’ homes, whereas others can’t. Part of the difference, he explained, between a working dog and a pet is that working dogs don’t get praised unless they have done something deserving of that praise, which is what keeps the dogs interested and motivated.

So, when we, as veterinarians, are working around these dogs, they don’t usually need, nor do the handlers want, constant praise or an offer of a dog cookie or treats. This is vastly different from what many of our regular owners expect of us when they attend with their pooches in tow. Cpl. Steve Prior, the dog handler who runs the dog program in Kamloops, reminded me that veterinary staff shouldn’t be asking the dogs to do things—those commands must come from the handlers, which again is a different protocol than with Fluffy the Cocker Spaniel.

I also recommend that veterinarians who may treat police dogs have a frank discussion with the handler on the dog’s particular behaviour and what can be expected. Cst. Shanks agrees that always taking a few minutes to talk to the handler, even before the dog is brought into the clinic, is beneficial to the entire VCPR.

**“WORKING DOGS DON’T GET PRAISED UNLESS THEY HAVE DONE SOMETHING DESERVING OF THAT PRAISE”**



Before the dog enters the clinic, it might be advisable to empty out the reception area of other dogs and their owners, and put the police dog immediately into an exam room, preferably the biggest exam room possible. On one occasion, we unknowingly put a police dog into our smallest exam room (usually used for cats) where even the most relaxed dog may feel a bit threatened with the lack of escape route. This smaller space didn't appear to sit very well with the dog, so we moved him to a much larger exam room with two doors and plenty of breathing room. The handler lifted him onto the table and distracted the dog, and he was much happier and better behaved, and I was able to complete the required task with minimal fuss.

Doors are an issue. Cpl. Prior recommended that clinic staff alert the handler each time before opening the exam room door, either by knocking or speaking through the door. Police dogs are already on high alert in the clinic, and a door suddenly opening can really get them going.

I've learned to use the handler to the advantage of both me and the dog, and I would never separate the two. Many of these dogs growl throughout the exam and will bite, but in my experience, the handlers will put themselves in harm's way. However, without that frank conversation prior to examining the dog, you may not know what you should be alert to, and what you should avoid. Each dog, even a highly trained

abscess. I needed to take the sutures out around his face. This dog doesn't tolerate a muzzle well, so because I know Cst. Lewis, his handler, and trust him implicitly, I asked him to distract the dog and position himself between me and the dog's face so I could sedate the dog. Only then could I safely remove the sutures.

Cst. Shanks also explained that some of the dogs have been trained on two types of muzzles, and each means something different to the dog. His own dog, a five-year-old male German Shepherd, has been trained to accept a soft mesh muzzle for times when the dog is meant to stay calm, like in the vet clinic or sitting in a helicopter. However, the dog was also trained to wear a cage muzzle to help him learn that if he couldn't bite something, he could still fight with his body and legs. So, if I were to put a cage muzzle on this dog, I would end up escalating his behaviour, which would not be productive in the veterinary setting.

Many of these dogs also will not allow themselves to be fully restrained, like in lateral recumbency, and will often fight. Being police dogs, they will often not give up. This is somewhat different than most of our patients who we can encourage and reassure with calm words and a gentle pressure. Again, it can seem surprising that these dogs won't just lie down on command. Cst. Lewis reminded me that these dogs aren't machines. Although highly trained to listen to their handlers, they have also been trained to think for themselves and assess situations. So, we need to be aware that they might not react to a situation in the same way we would expect from another dog. Cpl. Prior commented on this, by circling back to discussing the plan with the handler before attempting any restraint, and understanding whether struggling with the dog for a few seconds is acceptable to accomplish the needed task, versus giving up and moving on to sedation.

That brings me to my next point—sedation, sedation, sedation. Most of the handlers are receptive to sedating their dogs as they recognize this is often the safest and most efficient way of getting a diagnosis or treatment. That being said, you should always ascertain if the dog is required to be back on duty immediately or whether he can have the time necessary without work duties to recover from the sedation. These dogs are responsible for helping to police vast areas of land, especially

outside of the Lower Mainland, so it is important to recognize that even though we as veterinary professionals may expect a dog to be able to take as much recovery time as it needs, sometimes that isn't logistically or tactically feasible. We need to be flexible in how we approach these dogs.

The handlers are extremely dedicated to their dogs. Cst. Lewis mentioned that he is always assessing his and the dog's current situation to determine if the dog is going to be put at undue risk or be exposed to something hazardous. Again, because they aren't machines, sometimes the dog has to be pulled out of a situation as the dog's health would be put at risk unnecessarily. All the handlers explained that they will lift their dogs over obstacles as much as possible to make the dog's job easier.

Most of the handlers I know carry first aid kits specifically tailored to the unique situations these dogs will experience. There is no standardization as to what each team has available to them; all handlers carry naloxone, others may have diphenhydramine, diazepam, meloxicam, apomorphine, activated charcoal, and hydromorphone, and, of course, handlers receive the proper training regarding each drug's use and application. What they specifically carry often comes down to what the handler and veterinarian are comfortable dispensing. We should consider where the dog is working

**“PRETTY MUCH EVERY HANDLER I’VE ENCOUNTERED HAS A GENUINE INTEREST IN LEARNING MORE ABOUT THEIR DOG’S MEDICAL CONDITIONS AND IS ABLE TO HELP, IF DIRECTED TO.”**

working dog, is different. I suggest you give the handler direction and explain to them what you are about to do and why. Pretty much every handler I've encountered has a genuine interest in learning more about their dog's medical conditions and is able to help, if directed to.

But don't assume they know how to restrain a dog like a veterinary professional. Handlers, as you would expect, are usually extremely fit and able to restrain a human, but some of the principles they use for humans don't work with the dogs, so show the handler what needs to be done and seek their assistance. They aren't afraid of getting their hands dirty.

A lot of the RCMP dogs have been muzzle-trained and are quite comfortable with a muzzle in place, which makes our lives so much easier. However, some RCMP dogs, like many of our patients, hate being muzzled. Several months ago, we saw a two-year-old male German Shepherd post-operatively for a facial



Police dog being lowered from a building during a training exercise.

**“I WAS APPALLED TO HEAR THAT MANY OF THESE DOGS HAVE BEEN CHOKED, HIT, STABBED, HAD GASOLINE POURED ON THEM, OR HAD BEEN PEPPER- OR BEAR-SPRAYED DURING THE COURSE OF THEIR POLICE WORK.”**



Cpl. Prior's dog getting a reward Kong.

and how far from veterinary care it might be when assessing what is prudent to dispense. Many of the dogs posted outside of the Lower Mainland could be hours from the closest veterinary facility, so arming the handlers with as many tools as possible can make the difference between life and death for the dog.

Another factor to consider when working with police dogs is that their bodies need to be fully operational. What might be a somewhat annoying problem in a pet dog could end up sidelining a police dog. For example, a handler brought up a concern that his dog sneezed every time he tried to sniff a track. The dog was otherwise perfectly fine. If this were a client's pet, we would likely just say wait it out.

That doesn't work when your job is to use your nose to track people or objects.

Police dogs' teeth and jaws also need to be in top shape. I know our BC veterinary dentists have helped many working dogs with dental issues over the years. I would highly recommend any RCMP dog with dental problems be referred to a Board-certified veterinary dentist if at all possible. What might be tolerable in a pet's mouth will likely not be tolerable for an RCMP dog whose bite is so important.

In practice, though, the most common injuries you will likely be asked to assess will be environmental- and musculoskeletal-related: heat exhaustion, cut pads, soft tissue injuries, fractures, strain injuries, or torn nails. Some of the dogs are trained as avalanche dogs, so they will be exposed to the cold and hot elements in their careers. On top of that, they might be exposed to more toxins than the average dog, but thankfully they

are trained not to eat what they are sniffing out.

Suffering from a traumatic injury is another reason why these dogs may show up unexpectedly in your clinic. Such injuries include stab wounds, gunshot wounds, dog bite wounds, and motor vehicle accident injuries. I was appalled to hear that many of these dogs have been choked, hit, stabbed, had gasoline poured on them, or had been pepper- or bear-sprayed during the course of their police work. These dogs are extremely valuable in the sense they have an impor-

**“WHAT MIGHT BE TOLERABLE IN A PET’S MOUTH WILL LIKELY NOT BE TOLERABLE FOR AN RCMP DOG WHOSE BITE IS SO IMPORTANT.”**

tant job to help keep the public safe, but they are also valuable in the strict sense of the word. They are worth about \$80,000 because of the cost of breeding, raising, training, and maintaining them. I think it is imperative to place high priority on these dogs when they are your patients. [WCV](#)

*Special thanks to dog handlers Cpl. Steve Prior, Cpl. Bentley Johannson, Cst. Rob Shanks, and Cst. Dave Lewis, as well as puppy imprinter Cst. Kevin Challoner, for showing me the ropes over the years and teaching me about your jobs and your dogs.*





**“MENINGIOMAS ARE SLOW-GROWING TUMOURS, WHICH ACCOUNTS FOR AN INSIDIOUS AND PROGRESSIVE ONSET OF NEUROLOGIC DYSFUNCTION.”**

## MENINGIOMAS IN DOGS AND CATS

BY MIKE HIGGINS, DVM, MSc, DIPL. ACVIM (NEUROLOGY)

**M**eningiomas are the most common primary intracranial tumour in dogs and cats. Meningiomas are usually histologically benign, though they may have biologically malignant behaviour. Canine and feline meningiomas have several differences, and the prognosis and treatment of these tumours differ between species.

### CLASSIFICATION

Meningiomas arise from any of the three meningeal layers and have numerous sub-classifications in dogs and cats, including: psammomatous, fibroblastic, and papillary. Meningiomas are further classified into three types: benign (Grade I), atypical (Grade II), and anaplastic (Grade III or malignant). In dogs, the incidence of Grade I tumours is 50–60%, 40–45% for Grade II tumours, and < 5% for Grade III tumours. Benign meningiomas have features such as rare mitosis and mild nuclear pleomorphism, while malignant meningiomas have a high number of cells undergoing mitosis, necrosis, and rarely, metastasis. Immunohistochemical studies used to evaluate hormonal receptors have found that canine and feline meningiomas have a high number of cells that express intranuclear progesterone receptors and a low number of cells that express estrogen receptors. High progesterone receptor expression is more common in benign meningiomas, while malignant meningiomas tend to have a decreased or absent progesterone receptor expression.

In dogs, intracranial meningiomas are the most common central nervous system (CNS) tumour. They most commonly occur in older dogs (older than 7 years of age), and large breeds (e.g., Golden Retrievers, German Shepherds, and Collies) are more frequently affected. A female sex predisposition has been shown with a female:male ratio of 1.6, which is similar to that among humans with meningiomas. In cats, these tumours develop mostly in geriatric patients (i.e., older than 10 years of age). Development of meningiomas in young cats has also been associated with mucopolysaccharidosis type 1. There is no breed predisposition for development of meningiomas among affected cats, but male cats have a slight predominance. Histologically, intracranial meningiomas in cats have more similarities to those in humans in that they are often fibrotic and benign, and do not typically infiltrate brain tissue. Multiple meningiomas have also been seen in up to 17% of affected cats.



**THIS PAGE** Top of page: Oreo; top right: Oreo in surgery where a transfrontal approach was performed to excise the tumour; bottom right: Oreo undergoing an MRI of his brain.

PHOTOS COURTESY OF MIKE HIGGINS



**THIS PAGE** Oreo post-op.

**Oreo** is an 8yo MN Border Collie who in January 2015 had three generalized seizures within a 24-hour period. He was referred to the neurology department at Canada West where he exhibited proprioceptive deficits in the rearlimbs. He underwent diagnostic evaluation including general lab work, thoracic radiographs, and an abdominal ultrasound. In February 2015, an MRI of his brain revealed a suspected meningioma in the right frontal lobe. He was then taken to surgery in April where a transfrontal approach was performed to excise the tumour. Histopathology confirmed a Grade I transitional meningioma. Following his recovery, he underwent radiation therapy at Washington State University where he received 18 fractions of 2.5Gy radiation. As of August 2017, despite acquiring an infection of aspergillus, he continues to do well and is solely maintained on anti-seizure medication with no seizures reported since treatment.

### CLINICAL SIGNS

Typically, meningiomas are slow-growing tumours, which accounts for an insidious and progressive onset of neurologic dysfunction. Clinical signs can vary and often depend on the size and location of the tumour. Unilateral forebrain tumours can cause a change in behaviour or mental status, circling (usually toward the side of the lesion), central blindness, contralateral menace deficit with intact pupillary light reflex and palpebral reflex, contralateral decreased conscious proprioception, and contralateral facial sensation deficit. In dogs, seizure activity is the main initial clinical sign associated with forebrain meningiomas. In contrast, the most common initial clinical signs seen in cats with forebrain meningiomas are lethargy and behavioural changes. Paradoxical vestibular syndrome can be seen when meningiomas are located in the cerebello-pontine angle. Tumours that arise from the brain stem can result in other clinical signs including cranial nerve deficits and hemi- or tetraparesis. Cerebellar meningiomas can cause circling, dysmetria, ataxia, and intention tremours.

### DIAGNOSTIC EVALUATION

The history of CNS signs in middle-aged or older dogs should raise the suspicion of neoplasia especially with seizures and no other clinical signs. A minimum database for a dog or cat with brain dysfunction should include a complete blood count, serum chemistry panel, and urinalysis. Thoracic radiographs and an abdominal ultrasonographic examination can also help rule out a primary tumour or metastatic malignancy. Advanced imaging techniques such as computed tomography (CT) and magnetic resonance imaging (MRI) are recommended for further evaluation of intracranial disease. On CT and MRI, meningiomas usually present as a mass effect with distortion of brain symmetry. Meningiomas on CT are usually characterized by contrast enhancement throughout the lesion; however, other CNS disorders can have a similar appearance (e.g.,

inflammatory disease and other neoplasms). Calvarial hyperostosis is a common feature on CT scan in cats with intracranial meningiomas. Hyperostosis is associated with bone erosion caused by pressure atrophy of the calvaria. Clumps of tumour cells in the medullary spaces will also lead to subsequent bone thickening. MRI is superior to CT in detecting other features associated with brain tumours, such as edema, hemorrhage, necrosis, and cyst formation. MRI provides superior soft tissue resolution compared with CT, especially in certain regions including the brain stem (which is often obscured on CT due to beam-hardening artifact).

The appearance of intracranial meningiomas on MRI in dogs and cats is characterized by contrast enhancement, which results in increased contrast between the tumour and normal tissue. The enhancement may be homogenous or heterogenous, and often with well-defined margins. Cysts within or associated with meningiomas can also be seen. Tumour mass effect and edema can be mild or quite prominent. The size of the tumour as well as location and severity of the associated edema will influence the appearance of the mass effect. The “dural tail” sign is often associated with meningiomas. This is a linear enhancement of thickened dura mater adjacent to the extra-axial mass seen on post-contrast T1-weighted images. Although MRI and CT abnormalities can be highly suggestive of meningiomas, a definitive diagnosis can be made by CT-guided stereotactic brain biopsy or by collecting a sample during surgery for histopathology.

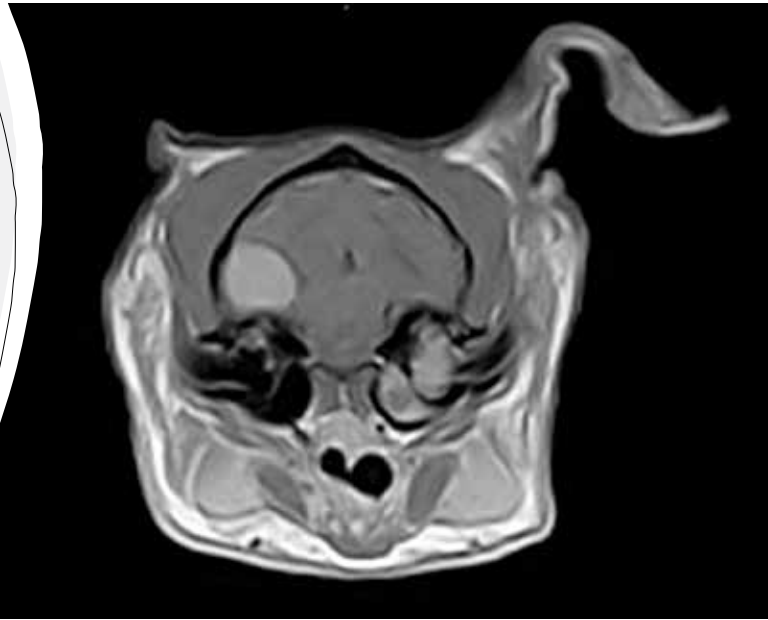
Analysis of cerebrospinal fluid (CSF) can also be a useful aid in the diagnosis of intracranial diseases.

**“THE SIZE OF THE TUMOUR AS WELL AS LOCATION AND SEVERITY OF THE ASSOCIATED EDEMA WILL INFLUENCE THE APPEARANCE OF THE MASS EFFECT.”**



**Diesel** is a 15yo MN Maine Coon who had two generalized seizures in September 2015. He was started on phenobarbital and referred for further diagnostic evaluation. Aside from chronic kidney disease, he was otherwise healthy. He underwent an MRI scan of his brain which revealed an extradural contrast enhancing mass in the right temporal lobe. He was then taken to surgery and a rostrtentorial approach was made to excise the mass. Histopathology confirmed a low-grade meningioma. Since surgery, he has been tapered off phenobarbital and remains seizure-free today. He is enjoying living life sailing the Gulf Islands with his owners to this day.

[www.katrinaarcher.com/journal/2015/11/22/poster-kitty-for-modern-veterinary-medicine/](http://www.katrinaarcher.com/journal/2015/11/22/poster-kitty-for-modern-veterinary-medicine/)



## “SURGICAL REMOVAL IS THE TREATMENT OF CHOICE FOR OPERABLE MENINGIOMAS IN CATS.”



However, if the CT or MRI findings suggest features of a meningioma, a CSF tap is generally avoided. Care should be used in collecting CSF due to increased intracranial pressure (ICP), which is often present with a brain tumour. Pressure alteration associated with CSF drainage may lead to brain herniation. Administration of mannitol prior to CSF collection may be helpful in decreasing ICP. In general, increased CSF protein content and a normal to increased CSF leukocyte count are present with intracranial meningiomas. In dogs, more than 50% of the cells can be polymorphonuclear leukocytes. Similar alterations have been described in cats as well.

### TREATMENT STRATEGIES

Current therapeutic strategies for intracranial meningiomas include palliative and primary therapies. Palliative therapy consists of corticosteroids and anti-epileptic drug therapy, depending on clinical signs. The clinical effects of corticosteroids are directed at decreasing the permeability of tumour capillaries which helps to reduce ICP, decrease brain edema, and reduce clinical signs. Corticosteroids are palliative and provide a median survival time of 2.5 months. Seizures may also be less responsive to anti-convulsant therapy. Primary therapy in dogs includes surgical excision, radiation therapy, or a combination. Median survival time for dogs treated with surgery alone is seven months. Survival time may be improved if regional cerebral resection is used with gross tumour excision.

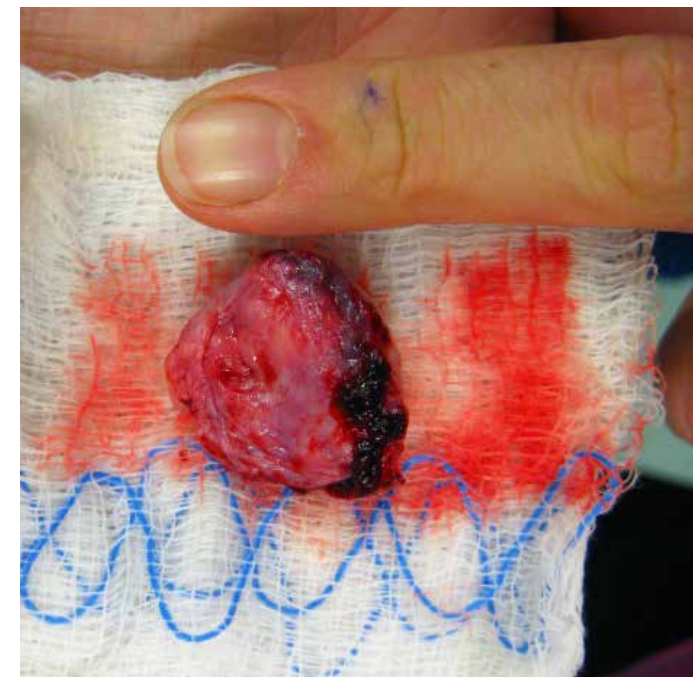
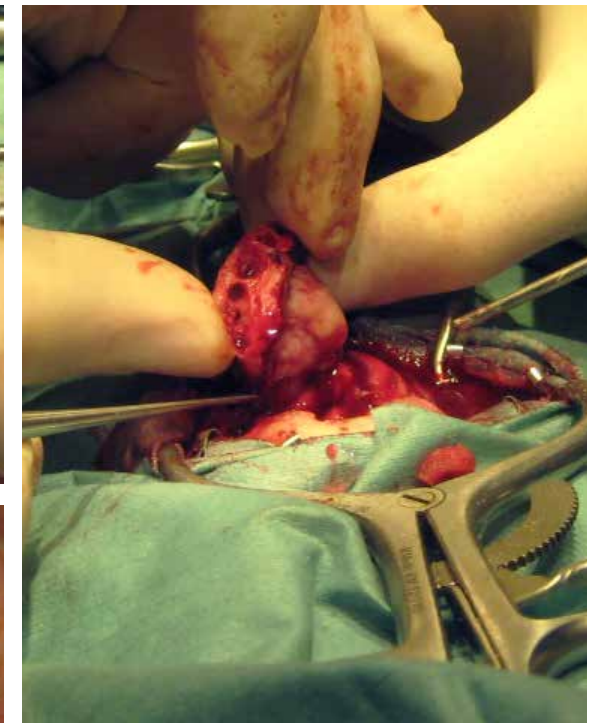
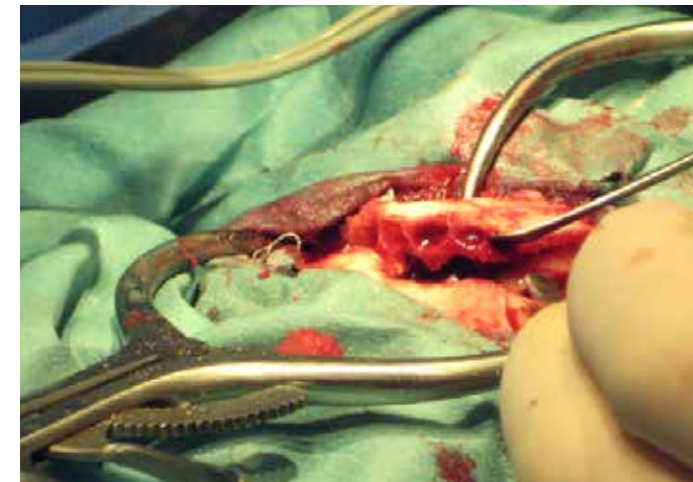
Radiation therapy has also been used alone, in combination with corticosteroids and as adjunctive therapy following surgical excision of intracranial meningiomas in dogs. Survival times for dogs treated with surgery and radiation therapy are longer (18–30 months) than survival times for dogs treated with surgery alone. Radiation therapy can cause adverse secondary delayed effects. Early delayed effects can occur two weeks to three months after treatment and may be due to transient demyelination. Animals present with signs similar to those at initial presentation, but often these signs respond to systemic corticosteroids. Late delayed effects can occur six months to years after treatment, with the most serious being brain necrosis. Secondary effects may be difficult to distinguish from tumour recurrence.

Surgical removal is the treatment of choice for operable meningiomas in cats. The medical survival time after surgical excision of meningiomas in cats is 26 months. Recurrence following surgical excision is about 22% within a follow-up range up to four years. Although cats have been successfully treated with surgery and post-operative radiation, a clear advantage of this method over surgery alone has not been demonstrated. Adjuvant radiation could be considered when surgical resection is incomplete or in cases of tumour recurrence.

There have been no large controlled studies clearly demonstrating the benefits of systemically administered chemotherapies to animals with meningioma. BCNU (carmustine) and CCNC (lomustine) have been used for their ability to penetrate the blood brain barrier, but have not been shown to increase survival compared to palliatively-treated dogs. Oral hydroxyurea has also been given as adjuvant therapy after surgical resection of intracranial meningiomas with variable results. Alternative therapies such as gene therapy and immunotherapy have also been attempted, but are not widely accepted therapeutic options. Anti-progesterone treatment for meningiomas in humans may also provide another target of therapy for canine and feline tumours that are non-resectable or recur after excision.

### PROGNOSIS

The prognosis of meningiomas is typically more favourable in cats than in dogs due to their histologic features (not infiltrative), relative ease of surgical removal, and longer survival time with surgery alone. Dogs have a more guarded prognosis because their meningiomas tend to be more infiltrative. Even following surgical removal and adjuvant radiation therapy, meningiomas tend to recur in dogs. Other approaches and alternative treatments are necessary for meningiomas located near more critical structures (e.g., cavernous or sagittal sinuses) or along the cranial base. **WCV**



**PAGE 30** MRI scan of Diesel's brain revealed an extradural contrast enhancing mass in the right temporal lobe: **THIS PAGE** Diesel in surgery for removal of his brain tumour.



## EMERGING LEADERS PROGRAM: TWO VIEWS

### TARA MacKAY, DVM

I would like to start by saying thank you to the CVMA and CVMA-SBCV Chapter for giving me the opportunity to participate in this year's Emerging Leaders Program (ELP). I had originally heard about this program from a peer and mentor who had participated in the program previously and had highly recommended it to me. I had read some testimonials and thought that this program would be an excellent opportunity to challenge myself and go beyond the medicine to learn how to be a more effective leader in my field.

When I think of leadership, I think about how leaders come in many different forms, and how an excellent leader is able to both challenge and encourage the people around them to be the best that they can be. As fairly recent graduates, it can be hard for us to find our leadership roles as most of us are entering well-established practices with roles already defined, and we ourselves are still learning each day. I want to lead by example for my coworkers and peers, as well as my community.

I found the ELP program to be both highly informational and also extremely empowering. Dr. DeBowes is such an engaging and encouraging speaker that I walked out of each session with a vision of what I need to do to become the veterinarian I want to be. The sessions didn't focus only on us as individuals, but also on how we can help to make our teams the best they can be by building up our coworkers and leading them to their best potential. Dr. DeBowes spoke a lot about focusing on what our core values are for individuals and for our teams and how integral core values are to any working practice.

I had never looked at core values this simply, but the program reinforced that ultimately everything we do and the decisions we make for our patients must align with these values.

The ELP allowed us an opportunity to interact with CVMA council members and fellow veterinarians at all stages of their careers. Everyone involved had a great perspective to bring to the table and could share stories of different things that had worked for them in practice or how they had dealt with difficult situations. The ELP was a really great experience, and I took away a lot from the program. I highly recommend it to anyone who has the opportunity to participate.



DR. NG AND  
DR. MacKAY  
WITH DR. RICK  
DEBOWES.

### KAI NG, DVM

I have recently become a clinic owner and have found it quite challenging to create a positive work environment. So, I applied to the Emerging Leaders Program (ELP) to learn more about leadership and creating a cohesive team. Prior to the program, I did not fully understand what it means to be a leader. Now, I have realized that leadership means supporting those around you, creating a safe and positive work environment in which members of your team can excel.

I learned the importance of having the team come up with core values, and that each member should be held accountable. Members who do not have the same values should not be part of the team as they would always undermine the progress of the clinic and hamper those who want to drive the clinic forward.

A safe work environment is another discussion topic that I would like to create at my clinic. Team members should not have to fear dealing with other employees or even clients. They should not dread coming to work because of certain other team members. That negativity flows over to negative interactions with other team members and clients. I had previously learned from other management continuing education that terminating these toxic, negative employees is the most productive action by ownership and management. The other employees will then feel safer and happier to work, thus becoming more productive.

During the program's eight hours of lectures, we covered many topics. However, the ones I wish to work on pertain to creating a positive work environment. To move my clinic forward, we will come up with core values that the staff all believe in. I will work to provide a positive safe work environment where team members will be allowed to put forth ideas to move the clinic forward. Hopefully, this will increase job satisfaction, and in return, make the team members more productive.

**"THE IMPORTANCE OF  
HAVING THE TEAM COME  
UP WITH CORE VALUES."**

### THE DR. CAROL MORGAN MEMORIAL AWARD

Dr. Carol Morgan, former College Deputy Registrar and the CVMA Humane Award recipient in 2012, passed away in late 2015, and in her honour a new grant was created by the Animal Welfare Foundation of Canada and her colleagues.

The Award is to be used for continued education and training-related costs in the areas of ethics and/or animal welfare for veterinarians working to increase the application of these subjects within the profession broadly. The Award is open to any practising veterinarian in Canada in good standing with their provincial veterinarian association.

Applications for the Award are to be received by October 15 for courses to be taken in the following year. Applications are to be submitted by email to Sara Dubois, [sdubois@spca.bc.ca](mailto:sdubois@spca.bc.ca).

For more information about Dr. Morgan and the Award, please visit [www.awfc.ca/grants/the-dr-carol-morgan-memorial-award/](http://www.awfc.ca/grants/the-dr-carol-morgan-memorial-award/).



# ON STORMY SEAS

BY VERONICA GVENTSADZE, MA, PhD, DVM



On Canada Day Monday, I was late in meeting Deana Lancaster, Communications Officer for the Vancouver Aquarium, due to the volume of traffic coming into Stanley Park and specifically the Aquarium parking lot. The two remaining cetaceans, Chester the false killer whale and Helen the Pacific white-sided dolphin, are the main focus of interest. During my visit, school was out, which is appropriate for a statutory holiday. Helen and Chester are regularly kept busy with training sessions, which have been called displays due to public attendance, but which would be held with or without an audience as they are for the benefit of the animals. These highly intelligent beings need stimulation, interaction with humans to whom they have become accustomed, and variety in their activities. Chester, rescued at a young age and imprinted on humans, is now a three-year-old adolescent and master of his watery domain with a favourite corner and comfort blanket—a buoy to which he huddles. A close-up photo of Chester shows a most impressive set of teeth in the wide-eyed head of a large child. At one point in his childhood, he showed a cheeky side, says Deana, and even now he often teases Helen. Her journey to the Aquarium started in Japan where she was rehabilitated after her pectoral fins were mangled in a fishing net and had to be amputated. She was offered to the Vancouver Aquarium because of its superior ability to look after her, and was not purchased but simply handed over. Watching her relaxed gliding through the water from a distance, I would not have guessed that she has limitations. A close look shows stumps in place of her pectoral fins, something for which she has learned to compensate enough to do fine in an aquarium. An animal's resilience,

and adaptability, and will to live are humbling to witness. While no expert on wildlife welfare and the ethics of captivity, I sense with a primal gut feeling that she takes pleasure in her movements and her very life. With the recent passing of the Vancouver Parks Board's bylaw banning new cetaceans from the Aquarium, animals like Helen and Chester would not get a chance at life. The fact that they have brought delight to countless people, most importantly children learning about animals, is sadly no longer trusted to be something good.

The Parks Board has made it clear that its decisions since 2014 have been motivated by public sentiment, at least that segment of the public that favours banning captivity of cetaceans for any reason. It is not surprising that the Board's emphasis has been on ending displays as something distasteful and rapidly going out of fashion. Would the situation be different if the cetaceans were trained behind closed doors, with no public attendance? The optics might be, but not the nature and purpose of the exercises that stimulate the animals and keep them busy. In 1996, the Aquarium became the first facility in the world to undertake to never again capture, or cause to be captured, a wild whale or dolphin, and it is disingenuous to claim that the cetaceans housed there over the years were brought in for the sake of human entertainment. While training sessions attended by the public clearly cause distress to many animal rights activists, it is not certain that the animals

**"IT IS NOT CERTAIN THAT THE ANIMALS THEMSELVES ARE BOTHERED OR HUMILIATED BY HUMAN ENJOYMENT OF THEIR ACTIVITIES."**



## “SCIENCE IS IMPORTANT.”

themselves are bothered or humiliated by human enjoyment of their activities. Watching the two of them, I suspected they have a better developed sense of humour and mischief than people who believe that life in an aquarium is not worth living.

The Board acknowledges, at least formally, that science is important. When the spring of 2014 saw increased public attention to whales in captivity, this prompted the Board to commission a study into the Aquarium's operations by an independent third party, Dr. Joseph Gaydos, a renowned marine biologist and veterinarian. As a conscientious specialist, he did not take it on himself to evaluate the moral and ethical issues of keeping cetaceans in captivity, and recommended that such a study be conducted separately. (It was never done.) Seeing that the Board ignored Dr. Gaydos' findings in its subsequent decisions, it is regrettable that effort and funds went toward what was only a token show of appreciation for science.

Dr. Gaydos reported that 75% of the research conducted using cetaceans at the Aquarium has benefited free-ranging cetacean management and conservation. Specifically, studies on persistent organic pollutants and other pollutants “would simply not be possible in the wild where controlled understanding of diet (exposure) and pharmacokinetics (in cetaceans) is lacking.”<sup>1</sup> The Aquarium's cetacean stranding and response program has allowed it to develop cetacean emergency care and transport protocols, critical care and neonatal diets and feeding protocols, and techniques for the antemortem diagnosis of diseases such as cryptosporidiosis using advanced techniques like magnetic resonance imaging. The Aquarium has adapted ultrasound, radiography, and endoscopy for use in cetaceans. The ability to detect pathogens, especially those with zoonotic potential, has increased due to its cetacean response and rehabilitation program. It has helped pioneer satellite-linked telemetry and post-release monitoring of stranded cetaceans. The impact of these achievements reaches well beyond BC. The Aquarium team has provided response to bottlenose dolphins stranded during the BP oil spill in the Gulf of Mexico, and has provided consultation on stranded beluga calves in the Gulf of St. Lawrence and on a large number of cetacean strandings in Washington State and around the world. Among his conclusions, Dr. Gaydos states that,

If the Vancouver Aquarium were to no longer house cetaceans, it would have the option to continue both its research program and its stranding and response program, but the quality of those programs could be compromised. It would no longer be able to use captive cetaceans to learn information that could benefit the management and conservation of free-ranging cetaceans. Similarly, it could respond to cetacean strandings, but would no longer have an option for the long-term care of animals that could not be released back into the wild.<sup>2</sup>

Almost immediately after this report was presented, the Board responded to perceived public pressure by passing a motion to ban captive breeding. Such a ban would impose unnatural segregation on animals accustomed to being together, and was potentially in contravention of the agreement to grant the Aquarium autonomy in its day-to-day activities. The tragic deaths of the mother and daughter belugas were the pretext for the Board's decision to pass its latest bylaw. No definitive answer has been found as to the nature and source of the toxin responsible for their deaths, and criticism of this fact highlights the vulnerable nature of science in today's society. Claims to know the truth are far more welcome than admissions of uncertainty and open-endedness, which are too often seen as a sign of weakness or even an attempt to hide something.

While presented as a natural progression in phasing out cetaceans in captivity, the Board's decision in fact puts an abrupt end to a program of renovation already underway. At this time, the Aquarium has spent \$45 million of a \$100-million budget for its improvements. Much of the money comes from a grant specifically designated for the Arctic exhibit. It puts an abrupt end to the prospect of life for cetaceans who cannot be released following rescue and treatment, because there is simply nowhere for them to go at this time. “Except to the great ocean in the

### “AS A RESULT OF THE NEW BYLAW, A RESPONSE TO STRANDING WOULD INDEED MEAN EUTHANASIA.”

sky,” Dr. Martin Haulena, Head Veterinarian at the Aquarium and Marine Mammal Rescue Centre (MMRC), says with sad irony. As a result of the new bylaw, a response to stranding would indeed mean euthanasia. A rescue always begins with a decision by the Department of Fisheries and Oceans (DFO), and the Aquarium is the only facility with the knowledge, skills, and logistics to undertake not only such rescue but the long-term housing and care of a cetacean who cannot be released. If there is no prospect for such housing and care, it would be cruel and counterproductive to simply save a life; thus, the DFO will most likely call for euthanasia. A rescued animal's first port of call is the MMRC, which the Aquarium operates but whose facilities are separate and not appropriate for long-term keeping for anything larger than a porpoise. Here, the animal receives treatment for its injuries, or supportive care, and is evaluated for its ability to survive if released. Such an evaluation often takes time, so it is not the case that a stranded cetacean can be pronounced releasable—or not—immediately after it is found. Thus, the bylaw also ends the prospect of life for a cetacean who may turn out to be releasable after short-term care at the MMRC.

Perhaps there is hope. Given how few cetaceans actually need rescue compared to pinnipeds (who can stay at the MMRC

long-term), the Board suggests that “the bylaw amendments are expected to minimally impact the aquarium's rescue and rehabilitation program.” Still, this is a double standard: while itself acting on principle, the Board expects the Aquarium to take comfort in projected statistics. If there are indeed so few cetaceans who might need the Aquarium, why not allow them to stay for that very reason, asks Dr. Haulena. Though this would be fair, statistical projections should not matter in a question of principle: if rescue is to continue, there must be a place for long-term housing of these animals, no matter how few or how many. The words “expected to minimally impact” become meaningless when you are the veterinarian called upon to euthanize even one animal that could be saved. Certainly, Dr. Haulena's 25 years of experience in marine wildlife medicine can be put to better use. As veterinarians, we are motivated by ideals but cannot afford to be pure idealists, and often the work we do is messy. What makes it worthwhile is watching an animal you have saved taking simple delight in its life. We follow sterile procedure and scrub in, but we do not wash our hands of animals that have nowhere else to go.

The alternative to housing non-releasable cetaceans at the Aquarium is neither close to being available, nor all that different in principle from the Aquarium. The Whale Sanctuary project, currently at the stage of finding a suitable location, upholds both the importance of veterinary monitoring if not scientific studies, and the importance of interaction with humans. “We will be conducting the same veterinary care procedures (e.g., taking blood, checking dentition, assaying hormones, etc.) that are done at the Vancouver Aquarium and other facilities that house cetaceans. We will employ training to ensure that there is communication between each resident and the care staff.”<sup>3</sup> Nor would such a sanctuary be closed to the public. “[P]eople will be able to visit them at regularly scheduled times. Bear in mind, though, that a sanctuary is not for our entertainment and that the needs of the whales will always be the priority.”<sup>4</sup> As Charles M. Schutz admonishes, “Try not to have a good time ... this is supposed to be educational.” Or, perhaps it is time to admit the truth about our species—flawed, curious, meddlesome, and compassionate for the weak and injured—in any decision regarding wildlife. In our best efforts to speak for animals, we cannot transcend our own humanity, and should not be ashamed of it. The nature of the human-animal bond is evolving to include wild animals we cannot own, but which are affected by our activity, and for which we are therefore responsible in one way or another. In the case of Helen and Chester, this bond is strong on both sides. Chester has his favourite people among his caretakers and trainers, while Helen is content to spend more time on her own, but both animals enjoy interaction with humans. So, I will stop feeling bad about calling them downright cute. But, oh, those teeth of Chester's ...

<sup>3</sup> The Whale Sanctuary Project: Response to the Vancouver Aquarium. Online: <http://www.whalesanctuaryproject.org/2017/05/22/response-to-the-vancouver-aquarium/>

<sup>4</sup> The Whale Sanctuary Project: Frequently Asked Questions. <http://www.whalesanctuaryproject.org/frequently-asked-questions/>



VERONICA GVENTSADZE, MA, PhD, DVM, graduated from Ontario Veterinary College in 2008. She moved to Squamish, BC, where she worked for two years as an associate veterinarian in a small animal practice. She currently travels across BC as a locum and enjoys learning something new from each practice.

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<sup>1</sup> A review of the Vancouver Aquarium's current operations pertaining to cetaceans with comparison to other aquariums. Report to the Vancouver Board of Parks and Recreation July 23, 2014. Joseph K. Gaydos, VMD, PhD., Karen C. Drayer Wildlife Health Center, UC Davis School of Veterinary Medicine, - Orcas Island Office, 942 Deer Harbor Road, Eastsound, WA 98245.

<sup>2</sup> Ibid.



# ANIMAL RESCUE IN BOTSWANA

BY ROSE TUBMAN-BROEREN, RVT



Zuka, post-amputation.

PHOTOS COURTESY OF ROSE TUBMAN-BROEREN



Surgery under the trees at Etsha 13.



The team.

Ever since I was a kid, I've been interested in shelter medicine and working with low-income/low-access communities. I fostered animals for the SPCA for many years and twice had the opportunity to volunteer in wildlife rescue and rehabilitation in Thailand. Shortly after graduating as an RVT in the spring of 2014, I joined the Canadian Animal Assistance Team (CAAT), and in 2015 I participated in a two-week trip to Fort St. James and Hazelton where we spayed, neutered, and vaccinated 282 dogs and cats. In 2017, I was feeling the itch again, and when CAAT opened applications for a five-week trip to Botswana, I jumped at the opportunity.

Founded in 2005, CAAT works primarily within remote and low-income communities in BC and Ontario, sending veterinary teams to sterilize and vaccinate the animals while educating community members and providing much-needed medical services. In 2011, they partnered with the Maun Animal Welfare Society (MAWS), an NGO in Botswana, and began to send veterinary teams every one to two years to assist with their spay/neuter/vaccinate program. MAWS has been active in Maun since 1998 and has been able to sterilize over 17,000 animals to date. The Society operates a small clinic with the help of volunteer veterinarians and technologists

from all over the world and does frequent outreach work up and down the Okavango Delta for communities with no access to veterinary care.

I was the sole technologist for a team of up to four CAAT

volunteer veterinarians; two arrived with me and remained for roughly two and a half weeks, and two more arrived two weeks into the project and remained until the end. Prior to our arrival, MAWS had been without a veterinarian for over three months, and we started working literally the day we arrived, flying into Maun around 3 PM and anesthetizing a laceration repair at 4 PM. Although our mandate was primarily spay/neuter, there were plenty of medical cases; dogs with distemper and parvo to keep on fluids

and to provide nursing where possible, lacerations and wounds from dog fights and hit-by-cars, broken limbs to amputate, and of course, more tick-borne diseases than you could shake a stick at.

As a technologist, I quickly realized that not only was I required to use absolutely all my skills, but that I needed to learn on the fly and be ready to roll with the punches. Most of our surgeries had ehrlichiosis, and profuse bleeding was the norm rather than the exception; gauze swabs needed to be wrung out and reused during surgery, and I often found myself positioning kidney dishes to catch the runoff from a mature spay. Veins were universally superficial and hilariously delicate; catheter placement for the first couple of days was an exercise in frustration before I adjusted to the idea of sneaking just below the skin and accepting that



Botswana Bair Hugger.

## “POWER OUTAGES WERE FREQUENT ENOUGH THAT THE VETERINARIANS WORE HEADLAMPS.”

everything was going to bruise. Although MAWS has two amazing assistants who could wrangle any dog and keep a straight face through the craziest days, they were often kept busy with up to 17 hospitalized patients at any given time (plus those in for sterilization), and I generally prepped animals on my own. One-handed catheters and intubations were commonplace; when I returned to my own practice after the five weeks, I almost found it uncomfortable to have someone hold off veins and hold open mouths for me. On the busiest days in Maun, I was responsible for pre-medicating, catheterizing, inducing, intubating, prepping, monitoring, and recovering all 20+ patients, something which took all my energy and occasionally left me scrambling to give meds with one hand while extubating with the other and keeping a foot on a recovering patient trying to stagger away.

During our five weeks, the veterinarians were able to spay and neuter 279 dogs and cats. We also did outreach in three villages—Gumare, Etsha 13, and Motopi—where we were able to make a significant dent in the population of breeding animals. We amputated four limbs (two fore, two hind), one of which was gangrenous from a suspected snakebite, enucleated an eyeball destroyed in a dogfight, sutured more gaping wounds than I've ever seen in my life, and still had time to hand-raise a litter of kittens and an ehrlichiosis puppy. On Saturdays, we treated dogs with transmissible venereal tumours, giving IV vincristine as safely as possible without access to any real PPE except for latex gloves.

Our resources were few: most non-anesthetic drugs were donated and out-of-date, or labelled in languages

none of us read. Our single pair of clippers had only two 40 blades and frequently threw tantrums about working, leaving us with disposable straight razors. Power outages were frequent enough that the veterinarians wore headlamps. Syringes and needles were expensive and hard to come by, so they were reused whenever possible, with a single syringe/needle assigned to a specific drug per day. On outreach, we would set up our tables under trees for shade, which had the unfortunate side effect of having to try and protect open abdomens from falling leaves, sticks—and on one memorable occasion, bird feces. Whipping wind would send drapes flying unless weighted with towel clamps, and between drawing up drugs, prepping, monitoring, and recovering our patients, I would need to chase down runaway sutures and instruments.

Despite all this, I don't think I've ever been happier at work. Our team worked like a well-oiled machine, slamming through upwards of 20

## “SLAMMING THROUGH UPWARDS OF 20 SURGERIES PER DAY AND STILL HAVING TIME TO EXPLORE MAUN AND BOND OVER NIGHTLY BRAAIS.”

surgeries per day and still having time to explore Maun and bond over nightly braais. We laughed and cried together and kept each other strong through long days and longer nights, good cases and bad. We marvelled at the incredible stoicism and resilience of the Africanis breed, watching as our amputees ate and ambulated willingly within hours of surgery. We shared joyful moments with thankful owners as their pets recovered and returned home, and we shared their pain when there was nothing we could do but allow their pets the peace of euthanasia.

I learned a huge amount, not just about my capabilities as a technologist, but also about who I was as a person. I feel so lucky to have been able to spend those five weeks with MAWS and represent British Columbia's veterinary technologists, and I can't wait until the day I can return! [WCV](#)



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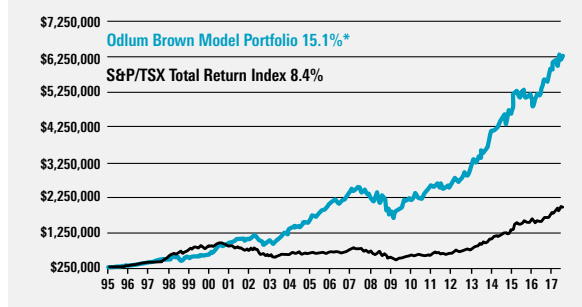


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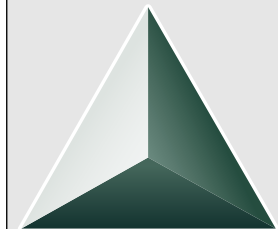


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**SEPTEMBER**

4-8 **26th International Conference of the World Association for the Advancement of Veterinary Parasitology (WAAVP 2017)**  
Kuala Lumpur, Malaysia  
[www.waavp2017kl.org/](http://www.waavp2017kl.org/)

8-10 **2017 SVMA Conference, AGM and Trade Show**  
Regina, SK  
[www.svma.sk.ca/index.php?p=ce-events](http://www.svma.sk.ca/index.php?p=ce-events)

23-24 **Veterinary AFAST**  
Kamloops, BC  
[www.mieducation.ca/event/veterinary-afast-kamloops-bc/](http://www.mieducation.ca/event/veterinary-afast-kamloops-bc/)

29-  
OCT 1 **WSVMA Pacific Northwest Veterinary Conference**  
Tacoma, WA  
<http://www.svma.org/pacific-northwest-veterinary-conference/>

30-  
OCT 1 **Basic Ultrasound**  
Kelowna, BC  
[www.scilvet.ca/scil-vet-academy/seminar-schedule/event/822/](http://www.scilvet.ca/scil-vet-academy/seminar-schedule/event/822/)

**OCTOBER**

1 **Scan Only**  
Kelowna, BC  
[www.scilvet.ca/scil-vet-academy/seminar-schedule/event/837/](http://www.scilvet.ca/scil-vet-academy/seminar-schedule/event/837/)

14-17 **2017 CanWest Veterinary Conference**  
Banff, AB  
[www.cvent.com/events/2017-canwest-veterinary-conference/event-summary-c02e965b646e4e6480fc96d845f9fc8a.aspx](http://www.cvent.com/events/2017-canwest-veterinary-conference/event-summary-c02e965b646e4e6480fc96d845f9fc8a.aspx)

21-24 **2017 AVHMA Annual Conference**  
San Diego, CA  
[www.avhma.org](http://www.avhma.org)

23-24 **The 46th Annual DELTA EQUINE SEMINAR**  
Stephanie Valberg, DVM, PhD, Dipl. ACVIM, Dipl. ACVSMR (Equine), and Carrie J. Finno, DVM, PhD, Dipl. ACVIM, from the University of Michigan, will be speaking about all things related to muscle disease and neurological issues in the horse.  
Delta, BC  
[www.deltaequineseminar.com](http://www.deltaequineseminar.com)

26-28 **2017 AETA & CETA/ACTE JOINT CONVENTION**  
Orlando, FL  
[www.ceta.ca/future-conventions.html](http://www.ceta.ca/future-conventions.html)

27-29 **Primary Care Veterinary Educators World Symposium**  
Colombia, MO  
<https://aavmc.z2systems.com/np/clients/aavmc/event.jsp?event=43>

**OCTOBER**

31-  
NOV 2 **First Annual International Veterinary Point-of-Care Ultrasound Symposium**  
Austin, TX  
[www.wsava.org/event/first-annual-international-veterinary-point-care-ultrasound-symposium](http://www.wsava.org/event/first-annual-international-veterinary-point-care-ultrasound-symposium)

**NOVEMBER**

3-5 **CVMA-SBCV CHAPTER FALL CONFERENCE AND TRADE SHOW** The extended three-day CVMA-SBCV Chapter Fall Conference and Trade Show will be held Friday, November 3 to Sunday, November 5, 2017 at the Pinnacle Hotel Harbourfront. The Friday evening session will feature Miranda Sadar, DVM, Dipl. ACZM, speaking about Exotics. Saturday is themed around gerontology and aging, and the palliative pet. Shea Cox, DVM, CHPV, CVPP, CPLP, will speak on gerontology and the geriatric pet, and Kathleen Cooney, DVM, MSc, CHPV, Pet Loss Companioning Certification Program, will talk about palliative care and euthanasia. Sunday will focus on dogs and cats with orthopedic issues. Marco Cervi, DVM, Dipl. ACVS, will be speaking about Orthopedic Issues and Surgery, and David Lane, DVM, Dipl. ACVSMR (Canine), will speak about Orthopedic Rehabilitation. The Trade Show takes place on Saturday, November 4, and Sunday, November 5, 2017.  
Vancouver, BC  
[www.canadianveterinarians.net/sbcv/events.aspx](http://www.canadianveterinarians.net/sbcv/events.aspx)

3-5 **2017 SAVT Annual Conference**  
Saskatoon, SK  
[www.savt.ca/html/savt-conference/index.cfm](http://www.savt.ca/html/savt-conference/index.cfm)

18-19 **Pearls GIT/Adrenals**  
Mill Bay, BC  
[www.scilvet.ca/scil-vet-academy/seminar-schedule/event/820/](http://www.scilvet.ca/scil-vet-academy/seminar-schedule/event/820/)

**DECEMBER**

2 **39th South American Dental Congress**  
São Paulo, Brazil  
<http://southamericandental.conferenceseries.com/>

3 **FAST Ultrasound**  
Vancouver, BC  
[www.scilvet.ca/scil-vet-academy/seminar-schedule/event/818/](http://www.scilvet.ca/scil-vet-academy/seminar-schedule/event/818/)

7-10 **CVC San Diego**  
San Diego, CA  
<http://veterinarycalendar.dvm360.com/cvc-san-diego-5>

**JANUARY 2018**

25-27 **Annual OVMA Conference and Trade Show**  
Toronto, ON  
[www.ovma.org/veterinarians/continuing-education/ovma-conference-trade-show/](http://www.ovma.org/veterinarians/continuing-education/ovma-conference-trade-show/)

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A woman with long dark hair is smiling and holding a black and white dog. The dog is looking up and has its mouth open, showing its teeth. The background is a soft, out-of-focus green.

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