

María J. Forzán, DVM (MVZ), MSc, PhD, DiplACVP
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Veterinary Sciences Department, WSVL
University of Wyoming
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Updated April 16th, 2024

EDUCATION: **Doctor of Philosophy – 2016**
Atlantic Veterinary College, UPEI

Dipl. of the American College of Veterinary Pathologists – 2004

Residency in Morphologic Veterinary Pathology - 2003
University of Connecticut, USA, and
Atlantic Veterinary College, UPEI, Canada

Master of Science - 2000
Atlantic Veterinary College, UPEI

Doctor of Veterinary Medicine (MVZ) - 1997
Universidad Nacional Autónoma de México (UNAM)
Facultad de Estudios Superiores Cuautitlán, Ced. Prof.: 2496899

PROFESSIONAL GOAL: Apply my experience in pathology, diagnostics and disease ecology to: a) advance wildlife pathology research, b) forge multidisciplinary collaborations that bridge gaps between veterinary medicine, immunology, biology, and conservation ecology.

ACTIVE MEMBERSHIPS AND ROLES IN PROFESSIONAL ORGANIZATIONS:

Wildlife Disease Association – SECRETARY (2017-2023) MEMBER (2010-present)

North American Bsal Task Force – CHAIR (2020-2021)

Global Ranavirus Consortium – N. AMERICAN REPRESENTATIVE (2017-2021) MEMBER (2014-present)

American College of Veterinary Pathologists – DIPLOMATE (2004-present)

Canadian Herpetological Society –MEMBER (2008-present)

Atlantic Society of Fish & Wildlife Biologists – MEMBER (2007-18), ORGANIZER 49th annual meeting ('12)

Canadian Veterinary Medical Association – MEMBER (2007-2016)

Royal College of Veterinary Surgeons – MEMBER (2004-2007)

LANGUAGES: Bilingual - English and Spanish

CITIZENSHIP and IMMIGRATION: USA Resident (Green Card); Mexican Citizen; Canadian Landed Immigrant

CAREER RELATED EXPERIENCE:

- April 2024-present **ASSOCIATE TENURED PROFESSOR in WILDLIFE PATHOLOGY**
Veterinary Sciences Department & Wyoming State Veterinary Laboratory
University of Wyoming, WY, USA
Diagnosis (necropsy/histopathology) and surveillance of wildlife disease
Research on wildlife diseases with a focus on amphibians, avian and game species
Development of diagnostic tests for targeted emerging wildlife diseases
Teaching undergraduate course(s)
- Oct 2019-April 2024 **ASSOCIATE PROFESSOR in ANATOMIC & WILDLIFE PATHOLOGY**
College of Veterinary Medicine
Long Island University, New York, USA
Teaching of histology (coordinator) and pathology courses
Research and consultation on wildlife diseases with particular focus on captive and free-ranging amphibians and avian species
- Jan 2017-June 2019 **WILDLIFE PATHOLOGIST Cornell's Wildlife Health Laboratory**
Animal Health Diagnostic Center
Cornell University School of Veterinary Medicine, New York, USA
Diagnosis (necropsy/histopathology) and surveillance of wildlife disease
Research and consultation on captive and free-ranging amphibians and avian species
Development of diagnostic tests for targeted emerging wildlife diseases
- Sept 2015-Dec 2016 **WILDLIFE PATHOLOGIST Canadian Wildlife Health Cooperative (CWHC) and ASSISTANT PROFESSOR (AVC)**
Atlantic Veterinary College (AVC), PEI, Canada
Diagnosis (necropsy/histopathology) and surveillance of wildlife disease
Instructor in rotations and veterinary and biology courses (see Teaching)
Research and consultation on amphibian diseases
- Sept 2011-Sept 2015 **ADJUNCT PROFESSOR (AVC) and WILDLIFE PATHOLOGIST (CWHC) / PhD CANDIDATE**
Atlantic Veterinary College (AVC), PEI, Canada
Diagnostic duties and wildlife health investigation
PhD research project on pathogenesis of ranavirus in wood frogs built on my previous diagnostics and field research while a Wildlife Pathologists for CWHC
- Jun 07- Aug 11 **WILDLIFE PATHOLOGIST (CCWHC) / ASSISTANT PROFESSOR (AVC)**
Canadian Cooperative Wildlife Health Centre (now CWHC),
Atlantic Veterinary College (AVC), PEI, Canada
Diagnosis (necropsy/histopathology) and surveillance of wildlife disease
Instructor in rotations and veterinary and biology courses (see Teaching)
Maintenance of the Atlantic Centre's website
Supervision of undergraduate, honour's and graduate student research projects
- Jun 04-April 08 **VETERINARY HISTOPATHOLOGIST**
Finn Pathologists, Norfolk, UK
Diagnostic histopathology of companion animals and exotic species
Development of necropsy protocols for client information literature (outreach material for submitting veterinarians)

Oct 03-May 04 **VETERINARY PATHOLOGIST**
Atlantic Veterinary College, PEI, Canada
Diagnostic duties in the necropsy and biopsy services of domestic animals
Instruction of gross pathology laboratories for 2rd year veterinary students
Instruction of the senior year veterinary student diagnostic rotation

April 02-Sept 03 **VETERINARY RESIDENT/CONTRACT PATHOLOGIST (CCWHC)**
Atlantic Veterinary College, PEI, Canada
Diagnostic duties in the necropsy and biopsy services of domestic animals Diagnosis
(necropsy/histopathology) and surveillance of wildlife disease
Instruction of gross pathology laboratories for 2rd year veterinary students

Sept 00-March 02 **RESIDENT IN VETERINARY ANATOMIC PATHOLOGY**
Department of Pathobiology & Veterinary Science, University of Connecticut, USA
Diagnostic duties in the necropsy and biopsy services (companion animals and livestock), and
wildlife cases from the Wildlife Clinic at Tufts University, Mass.

Aug 98-Aug 00 **MSc STUDENT IN WILDLIFE PATHOLOGY**
Atlantic Veterinary College, PEI, Canada
Research on pathology of intestinal trematodes on immunosuppressed marine birds
Diagnostic duties in the necropsy/histopathology of wildlife submissions

Sept 97-Apr 98 **STAFF VETERINARIAN**
Criadero "El Oyameyo", Tlalpan, Mexico City
Acting clinician and gross morphologic pathologist
Supervise daily staff on husbandry and disease prevention protocols
Develop feeding programs for the different species in the collection
Maintain an inventory of the animal collection (exotic birds and cervids)

Jun 97-Aug 97 **EXTERN**
The Marine Mammal Center, Sausalito, CA
Participate in the veterinary staff daily routine (clinical cases diagnoses and treatments),
husbandry, handling, transportation and release of sea lions, elephant seals, harbour seals
and sea otters
Necropsy of pinnipeds (harbour seals, sea lions and elephant seals)

Feb 97-May 97 **INTERN**
Africam Safari Zoo, Valsequillo, Puebla
Assist the park's Veterinarians in their daily routine
Perform necropsies and submit pertinent samples to referring laboratories
Develop a Rabies Prevention and Control protocol for the park

Mar 96-Jan 97 **ENGLISH TEACHER**
Interlingua, S.A.

Mar 95-Nov 95 **HONOR'S THESIS (Social Service)**
Facultad de Medicina Veterinaria y Zootecnia, UNAM, C.U., Mexico City
Hematologic survey of California Sea Lion pups in the Gulf of California.
Merge various databases into a single Marine Mammal Database

Mar 94-Jul 94 **VOLUNTEER**
San Juan de Aragón Zoo, Aragón, Mexico City
Assist the medical staff in clinical treatments and husbandry

Mar 92-Aug 92 **VETERINARY ASSISTANT**
"KENNEL" Veterinary Clinic, Mexico City

PEER-REVIEWED PUBLICATIONS (*publications from student projects I supervised/mentored):

36. Olson DH, Cambell Grant EH, Bletz M, Piovia-Scott J, Lesbarreres D, Kerby JL, Adams MJ, Breitman MF, Christman M, **Forzán MJ**, Gray MJ, Hill AJ, Koo MS, Milenkaya O, Rebollar EA, Rollins-Smith LA, Serr, Shepack A, Shirose L, Sprague L, Walke J, Warwick AR, Mosher BA. Preparing for a Bsal invasion into North America has improved multi-sector readiness. *Frontiers in Amphibian and Reptile Science*, 2024, 2:1348541.
35. Wirth W, **Forzán MJ**, Schwarzkopf L, Ariel E. Pathogenesis of Bohle iridovirus infection in krefft's freshwater turtle hatchlings (*Emydura macquarii krefftii*), *Veterinary Pathology*, 2023, 60(1):139-150
34. *Crouch EV, Reinoso-Perez M, Vanderstichel R, Dhondt K, Dhondt A, Cruz Otero J, Piech Tara, **Forzán MJ**. The effect of dexamethasone on hematological profiles, hemosporidian infection, and splenic histology in house finches (*Haemorhous mexicanus*), *Journal of Wildlife Disease*, JWD, 2022, 58(3):512-523
33. Hanley BJ, Dhondt AA, **Forzán MJ**, Bunting EM, Pokras MA, Hynes KP, Dominguez-Villegas E, Schuler KL. Environmental lead reduces the resiliency of bald eagle populations, *Haliaeetus leucocephalus*. *Journal of Wildlife Management*, DOI: 10.1002/jwmg.22177, 1-18
32. Hauser K, Popovic M, Yaparla A, Koubourli D, Reeves P, Batheja A, Web R, **Forzán MJ**, Grayfer L. Discovery of granulocyte-lineage cells in the skin of the amphibian *Xenopus laevis*. *FACETS*, 5:571-597, doi 10.1139/facets-2020-0010
31. Rhoo KH, Edholm ES, **Forzán MJ**, Khan A, Waddle AW, Pavelka MS, Robert J. Distinct host-mycobacterial pathogen interactions between resistant adult and tolerant tadpole life stages of *Xenopus laevis*. *Journal of Immunology*, 2019, Oct 7, doi:10.4049/jimmunol.1900459
30. **Forzán MJ**, Bientreux J, Schock DM, Lesbarrères D. Multi-tool diagnosis of an outbreak of ranaviriosis in amphibian tadpoles in the Canadian boreal forest. *Diseases of Aquatic Organisms*, 2019,135:33-41
29. **Forzán MJ**, Renshaw R, Bunting E, Buckles E, Okoniewski J, Hynes K, Melendez R, Ableman A, Laverack M, Fadden M, Dastjerdi A, Schuler K, Dubovi E. Novel orthoreovirus associated with epizootic necrotizing enteritis and splenic necrosis in American crows, *Corvus brachyrhynchos*. *Journal of Wildlife Disease*, 2019, 55(4):812-822
28. Needle D, Burnell VC, **Forzán MJ**, Dubovi ED, Schuler KL, Bernier C, Hollingshead NA, Ellis JC, Stevens BA, Tate P, Anis E, Wilkes RP. Infection of eight mesocarnivores in New Hampshire and Vermont with a distinct clade of canine distemper virus in 2016-2017. *Journal of Veterinary Diagnostic Investigation*, 2019:1-6
27. Saucedo B, Garner T, Kruithof N, Allain S, Goodman M, Cranfield R, Sergeant C, Vergara D, Kik M, **Forzan M**, vanBeurden S. Common midwife toad ranaviruses replicate first in the oral cavity of smooth newts (*Lissotriton vulgaris*) and show distinct strain-associated pathogenicity. *Scientific Reports* 2019, 9:4453
26. **Forzán MJ**, Okoniewski J, Lejeune M, Morrissey S, Zitek W, Hollingshead N, Bunting E. Necrotizing enteritis in nesting adult eastern bluebirds, *Sialia sialis*, in New York State. *Journal of Wildlife Disease*, 2019, 55(4):889-896
25. Maclaine A, **Forzán MJ**, Mashkour N, Scott J, Ariel E. Pathogenesis of Bohle iridovirus (genus *Ranavirus*) in experimentally infected juvenile eastern water dragons (*Intellagama lesueurii lesueurii*). *Veterinary Pathology*, 2019, 56(3):465-475
24. *S McBurney, W Kelly-Clark, **MJ Forzán**, R Vanderstichel, K Teather, S Greenwood. Persistence of *Trichomonas gallinae* in bird seed. *Avian Diseases*, 2017, 61(3):311-317
23. *H Fenton, PY Daoust, **MJ Forzán**, RV Vanderstichel, JKB Ford, L Spaven, S Lair, S Raverty. Causes of mortality of harbor porpoises (*Phocoena phocoena*) along the Atlantic and Pacific coasts of Canada. *Diseases of Aquatic Organisms*, 2017, 122(3):171-183
22. **MJ Forzán**, KM Jones, E Ariel, RJ Whittington, J Wood, RJF Markham, PY Daoust. Pathogenesis of *Frog Virus 3* (*Ranavirus* sp, *Iridoviridae*) infection in wood frogs, *Rana sylvatica*. *Veterinary Pathology*, 2017, 54(3):531-548

21. **MJ Forzán**, J Heatley, KE Russell, B Horney. Clinical Pathology of Amphibians: A Review. *Veterinary Clinical Pathology*, 2017, 46(1):11-33
20. Pessier AP, **MJ Forzán**, JE Longcore, L Berger, L Rollins-Smith, L Skerratt. Letter to the editor: Comment on chytrid *Batrachochytrium dendrobatidis* fungal infection in freshwater prawn, *Macrobrachium rosenbergii* (de Man)-a new report. *Aquaculture*, 2017, 468(1):326-327
19. CL White, **MJ Forzán**, AP Pessier, MC Allender, JR Ballard, A Catenazzi, H Fenton, A Martel, F Pasmans, DL Miller, RJ Ossiboff, KD Richgels, JL Kerby. Amphibian: A case definition and diagnostic criteria for *Batrachochytrium salamandrivorans* chytridiomycosis. *Herpetological Review*, 2016, 47(2):207-209
18. **MJ Forzán**, TG Smith, RV Vanderstichel, NS Hogan, CV Gilroy. Hematological reference intervals for *Rana sylvatica* (*Lithobates sylvaticus*) and effect of infection with Frog Virus 3 (*Ranavirus* sp., Iridoviridae). *Veterinary Clinical Pathology*, 2016, 45(3):430-443
17. *LA Maxham, **MJ Forzán**, NS Hogan, RV Vanderstichel, CV Gilroy. Hematological reference intervals for *Xenopus tropicalis* with partial use of automatic counting methods and reliability of long-term stored samples. *Veterinary Clinical Pathology* 2016, 45(s):291-299 (MF corresponding author)
16. *H Fenton, **MJ Forzán**, M Desmarchelier, M Woodland, S Sayi, CV Gilroy. Poorly-differentiated cutaneous carcinoma of non-sebaceous origin in a three-year-old Mongolian gerbil (*Meriones unguiculatus*). *Canadian Veterinary Journal*, 2016, 57(1):80-83 (MF corresponding author)
15. **Forzán MJ**, KM Jones, RV Vanderstichel, J Wood, FSB Kibenge, T Kuiken, W Wirth, E Ariel, P-Y Daoust. Clinical signs, pathology and dose-dependent survival of adult wood frogs, *Rana sylvatica*, inoculated orally with frog virus 3 (*Ranavirus* sp., *Iridoviridae*). *Journal of General Virology*, 2015, 96:1138-1149
14. Vanderstichel, R, **MJ Forzán**, GE Pérez, JA Serpell, and E Garde. Changes in blood testosterone concentrations following surgical and chemical sterilization of male free-roaming dogs in southern Chile. *Theriogenology*, 2015, 83(6):1021-1027
13. *McBurney S, WK Kelly-Clark, **MJ Forzán**, B Lawson, KM Tyler, SJ Greenwood. Molecular characterization of *Trichomonas gallinae* isolates recovered from the Canadian Maritime provinces' wild avifauna reveals the presence of the genotype responsible for the European finch trichomonosis epidemic and additional strains. *Parasitology*, 2015, 142(8):1053-1062
12. **Forzán MJ**, LV Ferguson, TG Smith. Calcium Oxalate Nephrolithiasis and Tubular Necrosis in Recent Metamorphs of *Rana sylvatica* (*Lithobates sylvaticus*) Fed Spinach During the Premetamorphic (Tadpole) Stage. *Veterinary Pathology*, 2015, 52(2):384-384 [doi: 0300985814535607]
11. **Forzán MJ**, E Garde, GE Pérez, RV Vanderstichel. Necrosuppurative Orchitis and Scrotal Necrotizing Dermatitis Following Intratesticular Administration of Zinc Gluconate Neutralized with Arginine (EsterilSol™) in Two Mixed-breed Dogs. *Veterinary Pathology*, 2014, 51(4):820-823 [doi: 10.1177/0300985813505875]
10. **Forzán MJ**, Wood J. Low detection of ranavirus (PCR) in wild post-metamorphic green frogs, *Rana* (*Lithobates*) *clamitans*, despite previous or concurrent tadpole mortality. *Journal of Wildlife Diseases*, 2013, 49(4):879-886
9. *Kelly-Clark WK, McBurney S, **Forzán MJ**, Desmarchelier M, Greenwood SJ. Detection and characterization of a *Trichomonas* isolate from a rehabilitated bald eagle (*Haliaeetus leucocephalus*). *Journal of Zoo and Wildlife Medicine*, 2013, 44(4):1123-1126
8. **Forzán MJ**, RV Vanderstichel, CT Ogbuah, JR Barta, TG Smith. Blood collection from the facial (maxillary)/musculo-cutaneous vein in true frogs (family Ranidae), a practical technique. *Journal of Wildlife Diseases*, 2012, 48(1):176-180
7. *Lemon M, Pack L, **Forzán MJ**. Valvular Endocarditis and Septic Thrombosis Associated with a Radial Fracture in a Red-Tailed Hawk (*Buteo jamaicensis*). *Canadian Veterinary Journal*, 2012, 53(1):79-82 (MF corresponding author)
6. Gilroy C, **Forzán M**, Drew A, Vernau W. Eosinophilia in a cat with acute leukemia. *Canadian Veterinary Journal*, 2011, 52:1004-1008

5. **Forzán MJ**, Vanderstichel, R.V., Hogan N.S., Teather K., Wood, J. Prevalence of *Batrachochytrium dendrobatidis* in three species of wild frogs on Prince Edward Island, Canada. *Diseases of Aquatic Organisms*, 2010, 91(2):91-96
4. **Forzán MJ**, Vanderstichel RV, Melekhovets YF, McBurney S. Trichomoniasis in finches from the Canadian Maritime provinces, an emerging disease. *Canadian Veterinary Journal*, 2009, 51(4):391-396
3. **Forzán MJ**, Gunn H, Scott P. Chytridiomycosis in an Aquarium Population of Frogs: Diagnosis, Treatment and Control. *Journal of Zoo and Wildlife Medicine*, 2008, 39(3):406-411
2. **Forzán MJ**, McClure J Aganglionosis is a 3-month-old Holstein calf. *Canadian Veterinary Journal*, 2005, 46:342-344
1. **Forzán MJ**, Frasca S. Systemic Toxoplasmosis in a 5-month-old beaver, *Castor canadensis*. *Journal of Zoo and Wildlife Medicine*, 2004, 35(1):113-115

MANUSCRIPT(S) UNDER REVIEW or Pre-SUBMISSION (*publications by student projects I supervised):

- Abarca JG, Estrella-Morales J, Alvarado-Fernández JC, Aspinall V, González Barrientos R, **Forzán MJ**. First report of corneal dermoid in a Red-eyed Tree Frog, *Agalychnis callidryas* (Anura, Hylidae), from the Tenorio Volcano, Costa Rica. *Journal of Herpetological Medicine and Surgery*, *submitted (JHMS-D-24-00007)*
- Crump P, **Forzán MJ**, Cossic B, Renshaw RW, Laverack M, Houlahan JE. Wood frog larvae survivorship is reduced in the presence of green frog larvae. *Herpetological Conservation and Biology*, HCB 2020-074, *being re-written*
- Hanley BJ, Dhondt AA, **Forzán MJ**, Bunting EM, Pokras MA, Hynes KP, Dominguez-Villegas E, Schuler KL. Bald eagle dashboard: a toll to assess the population scale impact of human-associated mortality of bald eagles. *Ecosphere* (ECS21-0749), *being re-written*

BOOK CHAPTERS:

- Miller DL, Pessier AP, Hick P, Whittington RJ and **Forzán MJ**. "Chapter 8: Pathology and Diagnostics.", *In: Ranaviruses: Emerging pathogens of ectothermic vertebrates (2024) in press*
- MJ Forzán**. Amphibians, *In: Pathology and Epidemiology of Aquatic Animal Diseases for Practitioners*, L Urdes, C Walster & J Tepper, editors (2023). Wiley & Sons Ltd. *e-Book* available (ISBN: 978-1-119-83971-2); *print* (ISBN: 9 978-1-119-83967-5)
- MJ Forzán** & B. Horney. Amphibian Hematology and Clinical Chemistry, *In: Exotic Animal Laboratory Diagnosis*, J Heatley and K Russell, editors (2020). *e-Book* available (ISBN: 978-1-118-81427-7); *print* (ISBN: 978-0-470-96035-6)
- W Baumgartner, A Alcivar-Warren, FG Aydin, K Bateman, M Clinton, P Duignan, M El-Matbouli, **MJ Forzán**, L Foyle, S Hatem, G Lewbart, R Loh & NM Nemeth. Pathology of Aquatic Animal Diseases, *In: Fundamentals of Aquatic Veterinary Medicine*, L Urdes, C Walster & J Tepper, editors (2022). Wiley & Sons Ltd. *e-Book* available (ISBN: 9781119612728); *print* (ISBN: 9781119612704)

GRANTS, CONTRACTS AND AWARDS (received or currently under review)¹:

| Name of award | Value | Level | Type | Location of tenure | Period held |
|---|-----------------|---------------|----------------|--------------------|-------------------|
| Environment & Climate Change Canada - PI | \$39,800 CAD | International | Research | LIU, USA | 2022-2023 |
| National Science Foundation, Career Award - PI | \$1,145,610 USD | National | Research | LIU/UW,USA | 2021-2026 |
| Environment & Climate Change Canada - PI | \$34,650 CAD | International | Research | LIU, USA | 2020-2021 |
| Wildlife Disease Assoc., Small Grants - PI | \$3,480 USD | International | Communication | LIU, USA | 2020-2021 |
| Environment & Climate Change Canada - PI | \$24,500 CAD | International | Communication | Cornell, USA | 2019 |
| Morris Animal Foundation, Wildlife - CoPI | \$105,043 USD | International | Research | Cornell, USA | 2018-2021 |
| Governor General's Award | \$0 | National | Academic | UPEI, Canada | 2016 |
| NSERC MSFSS | \$6,000 CAD | National | Foreign Travel | JCU, Australia | 2015/03 |
| NSERC CGS-D3 | \$105,000 CAD | National | Academic | UPEI, Canada | 2012/05-2015/04 |
| Sir James Dunn Foundation Grant (SJDFG) - CoPI | \$17,949 CAD | National | Research | UPEI, Canada | 2012/06-2013/03 |
| AVC Research Grant - PI | \$9,900 CAD | Institutional | Research | | 2011/05 - 2012/04 |
| SJDFG - CoPI | \$28,715 CAD | National | Research | UPEI, Canada | 2010/05 - 2012/08 |
| PEI Wildlife Conservation Fund (WCF) - PI | \$3,600 CAD | Provincial | Research | UPEI, Canada | 2010/05 - 2010/12 |
| UPEI Major Research Grant (MRG) - CoPI | \$4,000 CAD | Institutional | Research | UPEI, Canada | 2010/05 - 2011/04 |
| UPEI MRG - CoPI | \$4,000 CAD | Institutional | Research | UPEI, Canada | 2009/05 - 2010/04 |
| PEI WCF - PI | \$4,000 CAD | Provincial | Research | UPEI, Canada | 2009/05 - 2009/12 |
| Government of Canada Award (MSc Scholarship) | \$21,900 CAD | International | Academic | UPEI, Canada | 1998/09 - 2000/08 |
| Mejor Promedio Patología General | \$50 MXN | Institutional | Academic | UNAM, Mexico | 1994/01 - 1995/01 |

¹ DEC: Department of Environmental Conservation; CUCVM: Cornell University College of Veterinary Medicine; NSERC: Natural Sciences and Engineering Research Council of Canada; MSFSS: Michael Smith Foreign Study Supplements; JCU: James Cook University; CGS-D3: Alexander Graham Bell Canada Graduate Scholarship CU: Cornell University; AVC: Atlantic Veterinary College; UPEI: University of Prince Edward Island; UNAM: Universidad Nacional Autónoma de México; UW: University of Wyoming.

NATIONAL AND INTERNATIONAL PRESENTATIONS¹ (selected):

- “Amphibians”, part of the Wildlife Health and Pathology Short Course, Taronga Zoo, Sydney, Australia, February 2024 – **INVITED SPEAKER**
- “Validation of point-of-care molecular testing for the detection of emerging pathogens in North American amphibians” Wildlife Disease Association, 71st Annual Conference, Athens, GA, USA, August 2023
- “World Wildlife Day 2023 – WOA (OIE) – Wildlife Health, what is at stake?”, Virtual webinar, March 2023 – **INVITED PANELIST**
- “Amphibian chytrid fungus: *Bsal*”, Northwest PARC (Partners in Amphibian and Reptile Conservation) and APB (Association of Professional Biology) joint meeting, Virtual meeting, May 2021 – **INVITED REMOTE SPEAKER**
- “Un cliente, un niño y una rana entran a tu clínica...los anfibios en medicina veterinaria” {A client, a kid and a frog walk into your clinic...veterinary medicine for amphibians}, Instituto de Biología [Biology Institute], Universidad Nacional Autónoma de México, Mexico City (Virtual), May 2021 – **INVITED REMOTE SPEAKER**
- “Un cliente, un niño y una rana entran a tu clínica...” {A client, a kid and a frog walk into your clinic...}, Facultad de Veterinaria Lugo, Universidad de Santiago de Compostela, Spain, May 2020 – **INVITED REMOTE SPEAKER**, series Patólogos por el Mundo [Pathologists around the World]
- “Mortality investigations in wild birds: emerging diseases & unsolved mysteries”, Symposium: ‘Ongoing and emerging threats to wildlife health in the northeast’, 76th [Virtual] Meeting of the Northeast Association of Fish & Wildlife Agencies, April 2020 – **INVITED REMOTE SPEAKER**
- “¿Qué pasó con la ciencia que iba a salvar al mundo?” [What happened with the science that was going to save the world?], Universidad Anáhuac, Mexico City, February 2020 – **INVITED SPEAKER**, available at: <https://www.youtube.com/watch?v=SJ79MzfrqDE>
- Esther EV Crouch, MT Reinoso-Perez, KV Dhondt, AA Dhondt, JD Cruz Otero, **MJ Forzán**. “The effect of dexamethasone on hematological profiles, haemosporidian infection, and splenic histology in house finches (*Haemorhous mexicanus*)”, American College of Veterinary Pathologists’ Annual Meeting, San Antonio, TX, USA, November 2019
- _____ Wildlife Disease Association’s 68th Annual Meeting, Tahoe, CA, USA, August 2019
- “Veterinary diagnostics applied to amphibian conservation and research”, Annual Earth Day Symposium, George Washington University Biological Sciences, Washington, DC, USA, May 2019 – **INVITED SPEAKER**
- “What can we really do about emerging diseases in amphibians?”, “Diagnostics 101: techniques and how to apply them to research and monitoring of wildlife diseases”, “Adventures of a wildlife pathologist, from little birds to blue whales”. World Veterinary Association Congress, San José, Costa Rica, April 2019. – **INVITED SPEAKER**

¹When no names are noted, MJ Forzán was the presenting and, in most cases, main author.

- “What can we really do about emerging diseases in amphibians?” Special Species Symposium, Cornell University, Ithaca, NY, USA, March 2019. – **INVITED SPEAKER**
- “Do mortalities in tadpoles due to *Perkinsae* parasites indicate an emerging disease?” Amphibian Pathogens Annual Meeting, Phoenix, AZ, USA, November 2018
- “*Perkinsus*-like infection in amphibians - an emerging disease?” 74th Annual Northeast Association of Fish and Wildlife Agencies Conference, Burlington, VT, USA, April 2018
- “What can we really do about emerging diseases in amphibians?” Pest, Pathogens and Invasive Species Symposium, Yellowknife, NWT, Canada, April 2018. – **INVITED SPEAKER**
- _____ Cornell University WDA Student Chapter lunch talk, Ithaca, NY, USA (May 2018). – **INVITED SPEAKER**
- “Forensic Pathology in Wildlife Cases”. Mini-Symposium on Veterinary Forensic Pathology, Cornell College of Veterinary Medicine, October 2017.
- “Pilot Ring-Test Evaluating PCR Testing for Selected Wildlife Pathogens in 19 Diagnostic and Research Laboratories”. Canadian Animal Health Laboratorians Network, 15th Annual Meeting, Charlottetown, PE, Canada, June 2016
- _____ Canadian Herpetological Society 3rd Annual Meeting, Toronto, ON, September 2016
- _____ Amphibian Pathogens Annual Meeting, Phoenix, AZ, USA, November 2016
- “Pathogenesis of Frog Virus 3 (*Ranavirus* sp) in wood frogs”. Wildlife Disease Association, 65th Annual Conference, Ithaca, NY, USA, July 2016
- “Influence of Climate on Emerging Diseases of Amphibians”. Special Species Symposium, Cornell University, Ithaca, NY, April 2017 – **INVITED SPEAKER**
- “Emerging Amphibian Diseases Workshop”, with Dr Matt Allender. 2nd Annual Meeting of the Canadian Herpetological Society, St. John, NB, September 2015
- “Hematological reference intervals and effect of Frog Virus 3 (*Ranavirus* sp) infection in wood frogs, *Rana sylvatica*”. 3rd International Symposium on Ranaviruses, Gainesville, FL, USA, June 2015
- _____ Canadian Herpetological Society 2nd Annual Meeting, St. John, NB, September 2015
- “Investigating Frog Virus 3, a deadly pathogen of frogs, fish and reptiles” and “Adventures of a wildlife pathologist in Canada: from blue whales to little song birds and frogs”. Univ. of Tennessee Center for Wildlife Health Organized Research Unit, Knoxville, TN, USA, May 2015 – **INVITED SPEAKER**
- “Enfermedades en fauna silvestre: investigación y monitoreo”. XXI Congreso Veterinario, Heredia, Costa Rica, November 2014. – **INVITED SPEAKER**
- “Clinico-pathology of Frog Virus 3 (*Ranavirus* sp, *Iridoviridae*) infection in wood frogs, *Rana sylvatica* [*Lithobates sylvaticus*]”. 11th European Wildlife Disease Association Conference, Edinburgh, Scotland, August 2014
- “Maintaining *Xenopus* in a laboratory environment”. Aquatic Laboratory Animal Health, Husbandry and Medicine-Advanced, Atlantic Veterinary College, UPEI, May 2013 and 2014.
- “The wood frog, *Rana sylvatica* (*Lithobates sylvaticus*), as a model to study the pathogenesis and host-pathogen interactions of Frog Virus 3 (FV3)”. 2nd International Symposium on Ranaviruses, Knoxville, TN, USA, July 2013

- Parent M, RV Vanderstichel, **MJ Forzán**. “Correlating anthropogenic causes of wildlife mortality with human population density estimated by night-light radiance in the Canadian Maritimes”. Wildlife Disease Association, 62nd Annual Conference, Knoxville, TN, USA, July 2013
- “The wood frog, *Rana sylvatica* (*Lithobates sylvaticus*), as a model to study the pathogenesis and host-pathogen interactions of Frog Virus 3 (FV3)”. Atlantic Society of Fish and Wildlife Biologists, 50th Annual Meeting, Sackville, NB, October 2013.
- “Collaborative Research on Amphibian Diseases”. Biology Seminar Series, UPEI, September 2012 –
INVITED SPEAKER
- Kelly-Clark WK, S McBurney, S Greenwood, **M Forzán**, R Vanderstichel and K Teather. “The trick to safe bird feeding: Survivability of *Trichomonas gallinae* in bird feed and water”. Canadian Society of Zoologists 51st Annual General Meeting, Mount Allison University, Sackville, NB, May 7-11, 2012
- “Medicina y Cirugía de Reptiles y Amphibios” [Reptile and Amphibian Medicine and Surgery]. Required course for the MSc in Conservation Medicine with emphasis in Internal Medicine of Wild Fauna, Universidad Nacional de Costa Rica (UNA), Heredia, March 2012. **REQUESTED BY DR KINNDLE BLANCO, UNA**
- Fleming T, **MJ Forzán**, CV Gilroy. “Determination of hematological reference intervals in adult, wild green frogs (*Rana* (*Lithobates*) *clamitans*)”. Morris Animal Foundation Meeting, 2012
- Mitchell J, **Forzán MJ**, Vanderstichel R. “Prevalence and intensity of *Hepatozoon* sp infection in green frogs (*Lithobates* [*Rana*] *clamitans*) of Prince Edward Island, Canada. Wildlife Disease Association, 60th Annual Conference, Quebec City, QC, August 2011
- Kelly-Clark, WK, S McBurney, S Greenwood, **M Forzán** and R Vanderstichel. “The trick to safe bird feeding: Survivability of *Trichomonas gallinae* in bird feed and water”. Wildlife Disease Association, 60th Annual Conference, Quebec City, QC, August 2011
- “Failure to detect ranavirus in toe clips and blood of wild green frogs, *Lithobates* (*Rana*) *clamitans*, through PCR testing, Wildlife Disease Association, 60th Annual Conference, Quebec City, QC, August 2011
- “Amphibian Diseases”, Aquatic Rounds organized by the AVC Aquatics and Marine Wildlife Club, Charlottetown, PEI, Jan 12, 2011
- “Trichomoniasis (trichomonosis) in wild finches in Eastern Canada, an emerging disease”, Wildlife Disease Association Annual Meeting, Iguazú, Argentina, August 2010
- “Wildlife Necropsy, Behind the Scenes”, Nova Scotia Dept. of Natural Resources’ Wildlife Workshop 2010, Deber, N.S., Feb 1-2, 2010. **REQUESTED BY J. TOWERS, then Director of Nova Scotia Dept. of Natural Resources**
- “Un Mundo, Una Salud (One World, One Health)”, Taller Avances en el Fortalecimiento de las Capacidades de Vigilancia y Respuesta en el Marco de la Implementación del RSI, OMS (WHO)/OPS(PAHO), Panama City, Panama, December 10-11, 2009. **REQUESTED BY DR RAYMUND DUGAS, PAHO-WHO**
- “*Batrachochytrium dendrobatidis* in frogs on Prince Edward Island”, Canadian Amphibian and Reptile Conservation Network (CARCNET) 23rd Annual Meeting, Saskatoon, Saskatchewan, September 26-27, 2009

- _____ Atlantic Society of Fish and Wildlife Biologists, 46th Annual Meeting, Kouchibouguac National Park, New Brunswick, October 20-22, 2009
- “Amphibian Week”, organized by the AVC Wildlife and Exotics Club, Charlottetown, PEI, Oct 5-9, 2009.
- “Enfermedades Emergentes y Vigilancia Sanitaria en Fauna Silvestre”, Taller dirigido a los Puntos Focales de la OIE para los Animales Salvajes (sic), OIE, Panama City, Panama, September 8-10, 2009.
- REQUESTED BY OIE, as part of the CCWHC’s role of Collaborating Centre**
- “Zoonotic diseases and wildlife”, General Meeting of the Nova Scotia Department of Natural Resources, Debert, N. S., April 2008. **REQUESTED BY J. TOWERS, then Director of Nova Scotia Dept. of Natural Resources**
- “Keeping your birds healthy”, Bird Health Information Session with CFIA, Ch’town, PEI, 2008
- “Chytridiomycosis in an aquarium collection of frogs: diagnosis, treatment and control”. European Association of Zoo and Wildlife Veterinarians, 6th Scientific Meeting, Budapest, Hungary, May 2006
- “Leukoencephalacia in a Red-tailed Hawk, *Buteo jamaicensis*” Canadian Association of Veterinary Pathologist Annual Meeting, Dartmouth, N.S., July 2002
- “Multiple myeloma in a cat” 2001 Northeastern Veterinary Pathology Conference, Cobleskill, N. Y., Oct. 2001
- “Adiaspiromycosis in a Muskrat, *Ondatra zibethicus*” Canadian Association of Veterinary Pathologist Annual Meeting, St. John, N.B., July 2000
- “Infection of Double-crested Cormorants with the trematode *Cryptocotyle lingua*” Graduate Studies and Research Days, AVC, Charlottetown, PEI, May 2000
- Forzán, M. J., and Gulland F. M. D. “Influence of inflammation on iron (Fe) serum levels in California Sea Lion, *Zalophus californianus californianus*”. Memoirs of the XV Symposium on Wildlife, FMVZ UNAM, Mexico City, Oct. 1997, p. 68-70
- Forzán, M. J., Godinez C., and Rosiles R. “Determination of the concentration of mineral elements in blood from California Sea Lion Pups, *Zalophus californianus californianus*”. Memoirs of the XIV Symposium on Wildlife, FMVZ UNAM, Mexico City, Sept. 1996, p. 177-92

MENTORSHIP & POST-GRADUATE EXAMINER EXPERIENCE:

- Shaniece Lawrence**, Master in Biomedical Sciences (Long Island University), **Mentor**. Project: Detection of Frog virus 3 in experimentally-infected developing tadpoles of *Xenopus laevis* using *in situ* hybridization – finished, graduated May 2021
- Esther Crouch**, Anatomic Pathology Resident (Cornell University), **Research advisor**. Project: Effect of dexamethasone in the immune response of house finches infected with *Mycoplasma gallisepticum* – in progress, manuscript submitted to JWD July 2021
- Gilbert Alvarado**, PhD (Univ. Sao Paulo, Brazil), **Supervisory Committee**. Project: Ecopathology of chytridiomycosis in native frogs, comparison of highly susceptible and putative resistant species – in progress
- Ana Manuela de Azevedo**, PhD Thesis **External Examiner** (Universidad de Santiago de Compostela, Spain), 2017
- Heather Fenton**, MVSc (AVC UPEI), **Co-supervisor** with P-Y Daoust. Project: Morbidity and mortality in the harbor porpoise (*Phocoena phocoena*) in Canada – finished, manuscript published in Journal of Wildlife Disease, 2017
- Lily Maxham**, BSc Biology Honor's (UPEI), **Co-supervisor** with NS Hogan. Project: Determination of Hematological Reference Intervals in African clawed frogs, *Xenopus tropicalis* – finished, manuscript published in Veterinary Clinical Pathology, 2016.
- Whitney Kelly-Clark**, MSc (AVC UPEI), Member of **Supervisory Committee**. Project: Emergence of Trichomonosis (trichomoniasis) in Wild Finches on Prince Edward Island, Canada – finished, manuscript published in Parasitology, 2015
- Ana María Torres Mejía**, MSc (Univ. Nacional, Costa Rica), **Supervisory Committee**. Project: Parámetros Hematológicos y Bioquímicos, e Inventario Parasitario de Tucanes en Cautiverio en Costa Rica – finished 2014
- Sithar Dorjee**, PhD (AVC UPEI), Member of **Supervisory Committee**. Project: Modelling of Avian Influenza in Canada – finished 2013
- Tricia Fleming**, summer student (AVC, UPEI), **Supervisor**, 2011. Project (supported by Morris Animal Foundation Student Stipend): Determination of reference intervals in adult wild green frogs (*Rana [Lithobates] clamitans*). Presented by TF at Morris Animal Foundation – Wildlife Meeting, Orlando, FL, USA, March, 2012
- Marianne Parent**, summer student (UPEI), **Co-Supervisor**. Project: Relationship between habitat characteristics and disease occurrence in anuran populations of Prince Edward Island. Presented by MP at the Wildlife Disease Association, 60th Annual Conference, Quebec City, QC, August, 2011
- Eva Jenkins**, MSc (UPEI, Biology Department), Member of the **Examination Committee**, 2010. Project: Distribution and movement patterns of African wild dogs and red foxes in relation to habitat structure and anthropogenic influence.

TEACHING EXPERIENCE & CERTIFICATION:

- Academic (university-based) teaching: Veterinary Histology (3 credits, coordinator and lecturer), Veterinary General Pathology (2 credits, lecturer), Veterinary Systemic Pathology I (3 credits, lecturer), Veterinary Systemic Pathology II (3 credits, lecturer), Exotic Animal Medicine and Surgery (2 credits, lecturer), Veterinary Anatomy/Avian (3 credits, lecturer), Wildlife Conservation: Linking Natural and Social Sciences (2 credits, coordinator and lecturer).
- Histopathology Master Class, **Co-Instructor**. One-day workshop organized by the Australian Registry of Wildlife Health to precede the Wildlife Health and Pathology Short Course, Taronga Zoo, Sydney, Australia, February 2024
- Clinical examination, diagnostic techniques, clinical pathology and necropsy of amphibians, **Co-Instructor** in the Course on medicine of amphibians in *ex situ* colonies (Curso teórico-práctico de medicina de anfibios en programas *ex situ*). Organized by Amphibian Ark, Buenos Aires, Argentina, August 31-September 2, 2023.
- Essential Skills in Medical Education (ESME) **Certificate in Medical Education**. Organized by the Association for Medical Education in Europe, based in Dundee, England, and presented by Dr Ronald Harden. Completed online July 2020
- Amphibian diseases and conservation medicine, **Invited Lecturer** in the course “Conservation medicine: a veterinary perspective” taught by Dr Robin Radcliffe (Cornell University, NY, USA), July, 2017 and 2018
- Bleeding techniques for amphibians, remote training **Instructor** for the Filariasis Research Reagent Resource Center (Department of Biology and Microbiology, University Wisconsin – Oshkosh), April 2017
- Advanced Special Topics: Wildlife Disease, **Invited Lecturer** on Amphibian Diseases (University of Vermont, USA, WFB295), April 2016, March 2017 and March 2018
- Medicina de la conservación aplicada a anfibios y reptiles en vida libre y cautiverio [Conservation Medicine Applied to Wild and Captive Amphibians and Reptiles], **Instructor** (Instituto Regional de Estudios en Sustancias Tóxicas de la Universidad Nacional Costa Rica), October 2016
- Curso Básico en Diagnóstico Clínico y Patológico en Anfibios, Reptiles y Peces [Introduction to Diagnostic Techniques and Pathology of Amphibians, Reptiles and Fish], **Co-Instructor** (Universidad de Santiago de Compostela, Spain), Sep 2016 and May 2019
- Emerging infectious diseases of amphibians and reptiles, **Instructor** in remote seminar for the North East Wildlife Disease Cooperative, December 2014 and 2016

- Master's in Conservation Medicine, **Instructor** (Universidad Nacional de Costa Rica): Amphibian and Reptile Medicine and Conservation (3 credit course, delivered as 2-week block), May 2012 and November 2014
- Special Topics in Biology: Wildlife Health, **Co-Instructor** undergraduate course (UPEI), April 2012, '15, '16, '17
- OIE National Focal Points for Wildlife Workshops, **Co-Instructor** in 1st (Panama, September 2009) and 2nd (Buenos Aires, 2011) workshops
- Veterinary Medicine, **Co-Instructor** undergraduate and graduate courses (AVC, UPEI): General Pathology (1st year course), Systemic Pathology (2nd year course), Diagnostic Pathology (4th year rotation), Cellular Pathology (graduate course), 2007-2016

OTHER PROFESSIONAL ACTIVITIES:

CONSULTING, WORKING GROUPS, COMMUNITY ENGAGEMENT and OTHER PUBLICATIONS:

- OIE, Revue Scientifique et Technique (Scientific and Technical Review), Vol.40 (1), April 2021: Diagnostic test validation science: a key element for effective detection and control of infectious animal diseases.
 - **Reviewer** of Chapter: Diagnosis of infectious diseases in wildlife: challenges and opportunities, December 2020
- Neurological Surgery P.C.'s Health Science Competition, Online, USA, June 2020
 - **Science (Virtual) Fair Judge** of digital posters and 10-min presentations on projects developed by high school students in Long Island. Projects involved an experimental portion and included any topic within the health sciences. More information at: <https://www.cstl.org/nspc/competition-details/>
- St. Francis Xavier University, Antigonish, Nova Scotia, Canada, July 2017
 - Oral consultation and written evaluation of the husbandry protocols in a collection of spotted salamanders, *Ambystoma maculatum*, for research on the association between amphibian embryos and unicellular algae – Research lead by Dr Cory Bishop
- Research and Diagnostics Working Groups of the *Batrachochytrium salamandrivorans* (Bsal) Task Force, **Founding Member and Current Chair (Dx)** – formed as a collaborative effort between numerous organizations (USGS, NWHC, CWHC, PARC, etc.) in 2015 – on going
 - Advice on diagnostic questions
 - Organize ring tests for wildlife pathogen testing, particularly those for emerging amphibian pathogens
 - Participate in coordinated efforts to solve specific questions regarding Bsal ecology and pathogenesis
- Canadian Herp Health Working Group, Founding Member – formed by Environment and Climate Change Canada in 2015 – on going

- Advice on policy regarding the status of amphibians and reptiles in Canada
- Review documentation pertaining to health monitoring of amphibians and reptiles, prepared by ECCC or outside organizations
- Systemic Necropsy for Pathology – co-authored with Dr Annalize Ide, Finn Pathologists, England, 2008
 - Published in the Veterinary Times as a practical approach to autopsy (necropsy) of domestic animals
- Canadian Wildlife Health Cooperative newsletter articles
 - Ranavirus outbreak in New Brunswick (Vol 14, 2010, p 8)
 - Blackpoll warblers, a mortality incident during the fall migration (Vol 14, Spring/Summer 2009, p 4-5)
 - Distemper epizootic in raccoons from Nova Scotia (Vol 13, Fall/Winter 2008, p 7-8)
 - Mortality Continues in Maritime Purple Finch Population (Vol 13, Fall/Winter 2008, p 8-9)
 - Trichomoniasis in Purple Finches – An Emerging Disease? (Vol 13, Spring 2008, p 6)
 - “Flesh-eating disease” in Two Raccoons due to *Streptococcus* group G (Vol 13, Fall/Winter 2007, p 5)
 - CCWHC International: Costa Rica (Vol 10, Summer 2004, p 4-5)
 - Esophageal Lesions in Crows (Vol 9, Fall 2003, p n/a)

GRANT REVIEWS (national and international):

- National Science Foundation (NSF), SII Directorate, **ad hoc grant reviewer**, FY24, 2024
- National Science Foundation (NSF), PFI (Partners for Innovation), **grant reviewer & panelist**, FY22, 2022
- National Science Foundation (NSF), SII Directorate, **grant reviewer & panelist**, FY21, 2021
- Consejo Nacional de Rectores (CONARE), Costa Rica. *Ad honorem grant reviewer*, DFG-CONARE, 2020

EDITORIAL ROLES (summarized):

Journal of Wildlife Disease, **Editorial Board** (April 2021 onwards)

Frontiers in Veterinary Science, **Associate Editor** (Jan 2020 onwards)

MANUSCRIPTS REVIEWED (year : number of manuscripts):

Animal Biology (2020:1), Biological Conservation (2021:1), BMC Research (2012:1), Condor (2014:1), Conservation Physiology (2020:1), Cytokine (2018:1), Diseases of Aquatic Organisms (2012:2, 2015:1, 2016:1, 2017:4, 2018:1; 2019:2, 2020:3, 2022:1, 2022:2, 2023:1, 2024:1), EcoHealth (2017:2, 2018:2), FACETS (2020:1), Fontiers (2020:1), Herpetological Conservation and Biology (2016:1), Herpetological Review (2015:1, 2016:1, 2017:1, 2018:1), Journal of Herpetological Medicine and Surgery (2017:1), Journal of Aquatic Animal Health (2012:1), Journal of Comparative Pathology (2021:1), Journal of Ecological & Integrative Physiology (2021:1), Journal of Parasitology (2012:1), Journal of Veterinary Diagnostic Investigation (2018:2, 2019:1, 2020:1), Journal of Virological Methods (2017:1), Journal of Wildlife Disease (2009:1, 2012:2, 2013:4, 2014:1, 2016:1, 2018:1, 2019:1, 2020:1, 2021:2), Journal of Zoo and Wildlife Medicine (2011:1, 2016:1), Microbial Ecology (2018:1), Nature’s Scientific Reports (2021:1), New Zealand Veterinary Journal (2015:1, 2018:1), PeerJ (2023:1), Philosophical Transactions of the Royal Society B (2017:1), Plos One (2013:1, 2017:1, 2020:1), Veterinary Clinical Pathology (2022:1), Veterinary Pathology (2022:1, 2024:1), Veterinary Quarterly (2014:1), Viruses (2019:2), Zoo Biology (2014:1)

MEDIA EXPERIENCE, SOFTWARE & DATA PACKAGES, ANALYTICAL DASHBOARD:

- Hanley, B., Dhondt, A., **Forzán, M.**, Bunting, E., Pokras, M., Hynes, K., Domínguez-Villegas, E., & Schuler, K. 2020. EagleDashboard: Assessing the population scale impacts of a disease, toxin, or contaminant in Bald Eagles [Software]. Cornell University Library eCommons Repository. doi: <https://doi.org/10.7298/Odm3-tf51>
- Hanley, B., Dhondt, A., Bunting, E., Pokras, M., Hynes, K., **Forzán, M.**, & Schuler, K. 2019. CounterPOPd Web Interactive: Software to investigate the population scale impact of lead in bald eagles in the Northeast United States from 1990-2018 [Software]. Cornell University Library eCommons Repository. doi: <https://doi.org/10.7298/Ov1k-wq39>
- Hanley, B., Dhondt, A., Bunting, E., Pokras, M., Hynes, K., **Forzán, M.**, & Schuler, K. 2019. ClosedCounterPOPd Web Interactive: Software to investigate the population scale impacts of lead in hypothetically closed bald eagle populations [Software]. Cornell University Library eCommons Repository. doi: <https://doi.org/10.7298/q4t7-1y54>
- Hanley, B., Dhondt, A., Bunting, E., Pokras, M., Hynes, K., **Forzán, M.**, & Schuler, K. 2019. DensiPOPd Web Interactive: Software to investigate the impacts to density dependence by lead in bald eagles in the Northeast United States [Software]. Cornell University Library eCommons Repository. doi: <https://doi.org/10.7298/6yb8-5c25>
- Hanley, B., Dhondt, A., Bunting, E., Pokras, M., Hynes, K., **Forzán, M.**, & Schuler, K. 2019. *ClosedDensiPOPd Web Interactive: Software to investigate the impacts to density dependence by lead in bald eagles in hypothetically closed systems* [Software]. Cornell University Library eCommons Repository. doi: <https://doi.org/10.7298/n2x8-6p10>
- Hanley, B., Dhondt, A., Bunting, E., Pokras, M., Hynes, K., **Forzán, M.**, & Schuler, K. 2019. PlastiPOPd Web Interactive: Software to investigate the life history plasticity in bald eagles in the Northeast United States [Software]. Cornell University Library eCommons Repository. doi: <https://doi.org/10.7298/7rxj-ee77>
- Hanley, B., Dhondt, A., **Forzán, M.**, Bunting, E., Pokras, M., Hynes, K., Domínguez-Villegas, E., Ponce Cosío, A E, & Schuler, K. 2021b. *Cleaned And Standardized Bald Eagle Case Reports From Massachusetts, USA, 2013* [Data]. Cornell University Library eCommons Repository. doi: <https://doi.org/10.7298/3p9p-j249>.
- Hanley, B., Dhondt, A., **Forzán, M.**, Bunting, E., Pokras, M., Hynes, K., Domínguez-Villegas, E., Ponce Cosío, A E, & Schuler, K. 2021c. *Cleaned And Standardized Bald Eagle Case Reports From The Northeastern USA, 2012-2017* [Data]. Cornell University Library eCommons Repository. doi: <https://doi.org/10.7298/3p9p-j249>.
- Hanley, B., Dhondt, A., **Forzán, M.**, Bunting, E., Pokras, M., Hynes, K., Domínguez-Villegas, E., Ponce Cosío, A E, & Schuler, K. 2021d. *Cleaned And Standardized Bald Eagle Case Reports From The Northeastern USA, 1991-2018* [Data]. Cornell University Library eCommons Repository. doi: <https://doi.org/10.7298/3p9p-j249>.
- Hanley, B., Dhondt, A., **Forzán, M.**, Bunting, E., Pokras, M., Hynes, K., Domínguez-Villegas, E., Ponce Cosío, A E, & Schuler, K. 2021e. *Cleaned And Standardized Bald Eagle Case Reports From The United States, 1963-2014* [Data]. Cornell University Library eCommons Repository. doi: <https://doi.org/10.7298/3p9p-j249>.
- Hanley, B., Dhondt, A., **Forzán, M.**, Bunting, E., Pokras, M., Hynes, K., Domínguez-Villegas, E., & Schuler, K. 2020. *EagleDashboard: Assessing the population scale impacts of a disease, toxin, or contaminant in Bald Eagles* [Software]. Cornell University Library eCommons Repository. doi: <https://doi.org/10.7298/Odm3-tf51>.
- Cornell Wildlife Health Laboratory website – postings throughout 2017 and 2018
- Radio interview on *B. salamandrivorans*, CBC Charlottetown April 2016
- Radio interview on trichomoniasis mortalities of Maritime finches, CBC Charlottetown August 2016