



57th Annual International Conference of the
Wildlife Disease Association
August 3-8, 2008
Edmonton, Alberta

Program & Abstracts

Conference Co-hosts



Regional Partner Hosts



Held in Conjunction with



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Federation of Alberta Naturalists
WDA Student Chapter presentation
WDA Sections presentation
US Geological Services
AAWV

Continuing Education

Special thanks to the American College of Zoological Medicine for sponsoring continuing education

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Volunteers are the heart and 'sole' of any event. Very special thanks to our volunteers!!

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WDA 2008 Program

SUNDAY, AUGUST 3

- 8:30 – 12:00** **Journal of Wildlife Diseases Editorial Board Meeting**
Aurora
- 12:00 – 1:00 **Lunch**
- 1:00 – 5:00** **WDA Council Meeting**
Aurora
- 4:30 – 5:45** **Student Career Workshop**
Wild Rose
- 6:00 – 7:00** **Student Mentor Kick-off**
Wild Rose
- 7:00 – 10:00** **Alberta Welcome: Opening reception**
Wild Rose

MONDAY MORNING, AUGUST 4

- 8:00 – 8:30** **Opening Ceremonies & Conference Welcome**
Maple Leaf
Fish and Wildlife Honour Guard with RCMP Representatives
Lorne Babiuk, Vice President Research, University of Alberta
Ken Crutchfield, Fisheries Management Director, Fish and Wildlife Division
Charles van Riper III, President, Wildlife Disease Association
- 8:30 – 11:45** **Feature Symposium: Wildlife Health in a Changing North**
Maple Leaf
Presiding: Brett Elkin and Susan Kutz
- 8:30 1 International Polar Year and it's Legacy
***David S. Hik**
- 9:00 2 Landscape Change: Drivers for Ecosystem and Wildlife Health
***John Nishi and *Brad Stelfox**
- 9:30 – 10:00 **BREAK**
- 10:00 3 Grizzly Bears: Coupling Landscape Change and Population Performance
***Marc Cattet**
- 10:30 4 Climate Change and Disease in Norwegian Wildlife: Case Studies
***Bjornar Ytrehus**

- 11:00 5 Wildlife Health in a Changing North: A Model for Global Change
*Brett Elkin and *Susan Kutz

MONDAY AFTERNOON, AUGUST 4

1:00 – 4:00 Contributed Papers: Socio-political Challenges of Disease Management

Maple Leaf

Presiding: Scott Wright

- 1:00 6 The Cured Approach for the Management of Animal Disease in Nunavut, Canada
*Carla R. Baker
- 1:15 7 Facilitating the ‘Talking and Walking Together’ of Indigenous and Mainstream Sciences
*Cheryl M. Bartlett, Albert Marshall and Murdena Marshall
- 1:30 8 Engaging Indigenous and Rural People in Detecting Emerging Infectious Diseases
*Ryan K. Brook and Susan J. Kutz
- 1:45 9 Sociopolitical Challenges to Disease Prevention and Biosecurity in Live Bird Marketing Systems in Central America
*Patrice N. Klein, Fidelis N. Hegngi, Jose J. Bruzual, Cesar A. Sandoval and Mara E. Gonzalez Ortiz
- 2:00 10 Veterinary Students and Wildlife Conflicts in Uganda
*Jerry Haigh, Claire Card, John-Bosco Nizeyi, Ludwig Siefert, Nigel Caulkett and Gil Basuta
- 2:15 11 The Influence of Human Visitor Activity on Spatial Patterns of Parasite Infection
Chris O’Brien and *Charles van Riper III
- 2:30 12 Surveillance and Training Activities of Highly Pathogenic Avian Influenza H5N1 in Migratory Birds in Mexico
*A. Alonso Aguirre, Hector M. Zepeda-Lopez, Ana Lilia Sandoval, Eduardo Carrera, Alberto Lafon-Terrazas, Luis Lecuona and Antonio Gomez-Mendieta
- 2:45 13 Lead Toxicity in Wisconsin Wildlife
*Julia A. Langenberg, Sean M. Strom and Nancy K. Businga

3:00– 3:30 BREAK

- 3:30 14 Wildlife and Zoonotic Diseases: Potential Impact of Climate Change
*James N. Mills
- 3:45 15 Improving Guidance for Safe Handling of Wildlife: Insights from a Wildlife Biologist’s Death
*M. A. Wild, D. Wong, C. Higgins, J. G. Powers, T. R. Spraker, E. Perez, P. Mead and A. Chanlongbutra

4:00 – 4:30 American Association of Wildlife Veterinarians Cutting Edge Speaker
Maple Leaf

4:00 Introduction: Jonathan Sleeman

4:05 16 Climate Change: Trends, Future Scenarios, and Impacts on Wildlife Populations and
Disease Dynamics
* **Susan Haseltine**

4:30 WDA 2009: Semiahmoo Resort and Spa, Blaine Washington USA
Joe Gaydos

MONDAY EVENING, AUGUST 4

5:00 – 6:45 Student Speed Dating
Tuckey Gym

7:00 – 10:00 WDA Poster Session
Tuckey Gym

7:00 **Student Snappies.** A fun session for all conference registrants. Students in the WDA poster competition will provide short snappy summaries of their posters.

7:30 **General Poster Viewing.** The only scheduled session for viewing all posters. Judging of the Student Poster Competition also occurs. All posters remain in place for opportunistic viewing until Tuesday afternoon.

Posters in WDA Student Poster Competition

P1 Retrospective Identification of Canine Papillomaviruses in Captive African Wild Dogs
Susan K. SchommerWm. Kirk Suedmeyer, Dae-Young Kim and *Jennifer R. Ballard

P2 Evaluation of Hematological Values in Free-Ranging African Buffalo
***B. R. Beechler, A. E. Jolles and V. O. Ezenwa**

P3 Health Assessment of American Oystercatchers (*Haematopus palliatus palliatus*) in Georgia and South Carolina
***Daphne Carlson Bremer, Terry Norton, Kirsten Gilardi and Christine Kreuder Johnson**

P4 Diseases in Dogs Parapatric to Wolves in Coastal British Columbia
***Heather M. Bryan, Paul. C. Paquet, Chris T. Darimont and Judit E. Smits**

P5 Qualitative Analysis of Farmed and Wild Cervid CWD Data in Alberta
***Paul E. Clyburn, Sylvia Checkley, Robert Hudson and John Berezowski**

P6 Endoparasites of Greater Sage-Grouse in Oregon
***Brian S. Dugovich, Robert J. Bildfell, Colin M. Gillin, Christian A. Hagen and Michael L. Kent**

- P7 Survey for Infectious Agents in Mule Deer in Southern Saskatchewan
***Champika Fernando, Janet Hill and Trent Bollinger**
- P8 Three Years of Surveillance for Avian Influenza in Hunter-Harvested Waterfowl on the Texas Gulf Coast, What Have We Learned?
***Pamela J. Ferro, Todd Merendino, Dayna Cox, Markus J. Peterson, Matt Nelson, David Hailey, Kevin Kreigel, David Butler and Blanca Lupiani**
- P9 A Pantropic Study of Rabies Virus in Arctic Fox
***Lori A. Gildehaus and Erich H. Follmann**
- P10 Influence of Mercury Toxicity on Hemoparasite Prevalence in *Tachycineta bicolor*
***M. Camille Harris, Daniel A. Cristol and Dana M. Hawley**
- P11 Population Dynamic Consequences of Impaired Survivorship and Reproductive Success in Deer Mice following Sin Nombre Virus Infection
***Sean M. Laverty and Frederick R. Adler**
- P12 Hair Cortisol Concentration: A Potential Non-Invasive Biomarker of Long-Term Stress in Free-Ranging Grizzly Bears
***Bryan J. Macbeth, Marc R.L. Cattet, Gordon B. Stenhouse and David M. Janz**
- P13 Evaluation of the Elk Brucellosis Test-and-Slaughter Program and Continued Studies on the Epidemiology of Brucellosis in Feedground Elk
***Laura L. Meadows, William Edwards, Terry Kreeger, Cynthia Tate and Todd Cornish**
- P14 Seroprevalence of West Nile Virus and Other Arboviruses in Crested Caracaras (*Caracara cheriway*) in Florida
***Nicole Nemeth, James Dwyer, Joan Morrison, Richard Bowen and James Fraser**
- P15 Experimental Exposure of Swallow Bugs to West Nile Virus
***Paul Oesterle, Nicole Nemeth, Paul Doherty, Richard Bowen, Jeffrey Hall, Robert McLean and Larry Clark**
- P16 Frequency of Rabies Antibodies in Tropical Bat Communities in Fragmented Landscapes in Puebla, Mexico
***Oscar Rico, Elizabeth Loza-Rubio, Edith Rojas, Rodrigo Medellín and Gerardo Suzán**
- P17 Effects of Hunting Pressure for Chronic Wasting Disease Control on Movement Patterns of Mule Deer in Southern Saskatchewan
***Erin Silbernagel, Nicole Skelton and Trent Bollinger**
- P38 “Project Tripwire” – Monitoring Wildlife Health through Wildlife Rehabilitation Centers
***Dave L. McRuer, Edward E. Clark, Jr**

General Posters

- P18 Longitudinal Studies of Population Cycles and Hantavirus in Montana Voles (*Microtus* spp).
***Arlene Alvarado, Amy Kuenzi and Richard J. Douglass**

- P19 Canine Distemper Virus Discovered in Feces of North American Bobcats (*Lynx rufus*)
*Anne Ballmann, James Guy, Roger Powell and Michael Stoskopf
- P20 Health Assessment of Steller Sea Lions in Alaska, USA
Camilla Lieske, *Kimberlee Beckmen and Kathy Burek
- P21 DNA Extraction Method for *Histoplasma capsulatum* in Soil and Feces
*Kevin T. Bentler and Jenny Carlson
- P22 Influence of Previous LPAI Virus Infection on Susceptibility of Wood Ducks to H5N1 HPAI Virus
*Taiana P. Costa, David E. Stallknecht, Justin D. Brown, Elizabeth W. Howerth and David E. Swayne
- P23 Detection of Volatiles in the Uropygial Gland Secretions of Gray Catbirds (*Dumetella carolinensis*)
Rebecca Whelan, Tera Levin and *Mary Garvin
- P24 Avian Pathology Atlas on the Web
*Romona Haebler, Mark Pokras and Lou Sileo
- P25 Thirty Years of Mortality Assessment in Whooping Crane Reintroductions: Patterns and Implications
*Barry K. Hartup, Marilyn G. Spalding, Nancy J. Thomas, Gretchen A. Cole and Young Jun Kim
- P26 Use of Genetic Analysis to Evaluate the Alabama River as a Barrier to the Movement of Raccoons and the Raccoon Rabies Virus Variant
*Shylo R Johnson, Antoinette J. Piaggio, Melissa Neubaum and Mike Dunbar
- P27 Population Size, Aggression, and Infection with Sin Nombre Virus (SNV) in Adult Female Deer Mice (*Peromyscus maniculatus*) in Montana
*Amy Kuenzi, Arlene Alvarado and Richard Douglass
- P28 Alopecia in Moose infested with Deer Keds (*Lipoptena cervi*)
*Knut Madslie, Jonas Malmsten, Ketil Isaksen, Erling J. Solberg and Bjørnar Ytrehus
- P29 Epizootic Hemorrhagic Disease Virus in Captive Bison, Elk, White-Tailed Deer, Cattle, and Goats from Colorado
*Pauline Nol, Will K. Reeves and Jack C. Rhyan
- P30 Role of Gray Catbirds (*Dumetella carolinensis*) in the Overwintering of Eastern Equine Encephalitis Virus
*Jennifer C. Owen, Mary Garvin, Amanda Jo Williams and Frank R. Moore
- P31 Described Diversity of Influenza Subtypes is Dependent on Amplified Length and Specificity of PCR Primer Sets for Sediment Samples from Alaskan Migratory Bird Ponds
*Jonathan A. Runstadler, Danielle Mondlach and Lori Gildehaus
- P32 Blood Lead, Cadmium and Mercury Concentrations in Endangered Marine Species Inhabiting Andaman Sea and the Gulf of Thailand
*S. Siripattawan, P. Yatmark, N. Trakranrungsie, S. Munanunsup, P Jull, K. Adulyanukoson, K. Kittiwatanawong, P. Ratanakorn and U. Siripattawan

- P33 Johnes's Disease in a Free-Ranging White-Tailed Deer from Virginia and Subsequent Surveillance for *Mycobacterium avium* subspecies *paratuberculosis*
*Jonathan M. Sleeman, Elizabeth J. B. Manning, John H. Rohm, Jerry P. Sims¹, Susan Sanchez, Richard W. Gerhold and M. Kevin Keel
- P34 Low-Pathogenic Avian Influenza Detection in Mallards (*Anas platyrhynchos*)
Kaci VanDalen, *Heather Sullivan, Susan Shriner, Nicole Mooers, Kevin Bentler and Alan Franklin
- P35 Molecular Ecology of Rabies in the Arctic
*Sara M. Turner and Jonathan A. Runstadler
- P36 Wildlife and Foodborne Zoonoses at the Agriculture/Wildlife Interface
*Joaquín Vicente and Christian Gortazar
- P37 Degenerative Cardiomyopathy in Vancouver Island Marmots (*Marmota vancouverensis*)
*Douglas P. Whiteside, Sandra R. Black, Stephen R. Raverty and Malcolm McAdie

TUESDAY MORNING, AUGUST 5

7:15 – 8:15 **Prayer Breakfast**
Evergreen

8:15 – 8:45 **WDA Graduate Research Recognition Award Presentation**
Maple Leaf

8:15 Introduction: Kevin Keel

8:20 17 Enzootic and Epizootic Vertebrate Hosts of Buggy Creek Virus (Togaviridae)
*Valerie A. O'Brien and Charles R. Brown

8:45 – 12:00 **Terry Amundsen Student Oral Competition**
Maple Leaf
Presiding: Kevin Keel

8:45 18 Detection of an Exotic Orbivirus, Epizootic Hemorrhagic Disease Virus Serotype 6 (EHDV-6) in the United States
*Andrew B. Allison, Virginia H. Goekjian, and David E. Stallknecht

9:00 19 Manipulative Experiments Monitoring SNV Transmission and Viral RNA Shedding in Deer Mouse Populations in Outdoor Enclosures
*Karoun H. Bagamian, James N. Mills and Richard J. Douglass

9:15 20 The Ecology of Aspergillosis in Seabirds: Evaluation of Available Diagnostic Tests
*Julia D. Burco, Lisa A. Tell, J. Gregory Massey, Judy St. Leger and Michael H. Ziccardi

9:30 21 Serodiagnosis of Dengue Virus in Black Howlers (*Alouatta pigra*) in Southeastern Mexico
*Salomé Cabrera, Gerardo Suzán, Rosa María del Angel, Juan Ludert, Domingo Canales Espinosa, Enrique Yarto and Pedro Américo D. Dias

9:45 22 Evidence of Persistent Viral Infections in Semi-Domesticated Reindeer (*Rangifer tarandus tarandus*) in Northern Norway: Impact on Animal Health, Husbandry, and the Ecosystem
***Carlos das Neves and Morten Tryland**

9:45 – 10:15 **BREAK**

10:30 23 Host/Parasite Adaptation seen during the course of a *Sarcoptes scabiei* Epidemic in Red Foxes (*Vulpes vulpes*) in Norway
***Rebecca K. Davidson, Set Bornstein and Kjell Handeland**

10:45 24 Application of a Molecular Tool to Describe the Diversity and Distribution of GI Parasites in Northern Cervids
***Nathan P. deBruyn, Eric P. Hoberg, Neil Chilton, Kathreen Ruckstuhl and Susan Kutz**

11:00 25 White-Tailed Deer Habitat Use in New York: Implications for Disease Management
***Amy C. Dechen, David M. Williams and William F. Porter**

11:15 26 The Effects of Biodiversity on Zoonotic Disease
***Laurie Dizney, Philip D. Jones and Luis A. Ruedas**

11:30 27 Validation of Diagnostic Tests and Development of Molecular Epidemiological Tools for Brucellosis
***Amanda M. Fluegel, Todd Cornish, William Edwards and Ken Mills**

11:45 28 Coccidiosis Epornitic in Lesser Scaup on a North Dakota Lake
***Richard Gerhold, Michael Yabsley, Krysten Schuler, David Green, Mauritz Sterner and Erika Butler**

TUESDAY AFTERNOON, AUGUST 5

1:00 – 4:45 **Terry Amundsen Student Oral Competition, continued**
Maple Leaf
 Presiding: Holly Ernest

1:00 29 Forest Fragmentation affects Vector Abundance and Infection with *Trypanosoma cruzi* and *Trypanosoma rangeli* in a Panamanian Landscape
***N. L. Gottdenker, A.M. Santamaría, H. Membache, J. Calzada, A. Saldaña, V. Pineda and C.R. Carroll**

1:15 30 First Report of *Trypanosoma cruzi* Infection in Raccoons and Opossums from Kentucky
***Chad Groce and Cheryl D. Davis**

- 1:30 31 Incorporating Heterogeneous Deer Distribution into Chronic Wasting Disease Management in the Aspen Parkland of East-Central Alberta
***Thomas J. Habib and Evelyn H. Merrill**
- 1:45 32 Suitability of a Synthetic Semen Extender for the Cryopreservation of Epididymal Sperm from Plains Bison (*Bison bison bison*)
***S. Krishnakumar, D. Whiteside, R. Jaiswal, B. Elkin and J. Thundathil**
- 2:00 33 Use of the North American Animal Disease Model for the Study of Avian Influenza
***Nicole L. Lewis, Javier Sanchez, John Vanleeuwen and Caroline Dube**
- 2:15 34 Local Movement and Habitat Use of Avian Influenza Shorebird Hosts at Delaware Bay, USA
***Angela M. Maxted, M. Page Luttrell, Ginger Goekjian and David E. Stallknecht**
- 2:30 35 The Interacting Effects of Social Aggregation and Sex on the Ectoparasite Burden of Free-Ranging Raccoons
***Ryan J. Monello and Matthew E. Gompper**
- 2:45 36 Japanese Encephalitis Virus Reservoir Competency in North American Birds
***Nicole Nemeth, Angela Bosco-Lauth and Richard Bowen**

3:00 – 3:30 **BREAK**

- 3:30 37 Cliff Swallows, Swallow Bugs, and West Nile Virus: A Mechanism for Overwintering?
***Paul Oesterle, Nicole Nemeth, Ginger Young, Nicole Mooers, Stacey Elmore, Richard Bowen, Paul Doherty, Jeffrey Hall, Robert McLean and Larry Clark**
- 3:45 38 First Detection of *Borrelia* spp. in Mongolian Reindeer (*Rangifer tarandus*)
***Sophia Papageorgiou, Tsetseg Battsetseg and Janet E. Foley**
- 4:00 39 Prevalence of Antibodies against Rift Valley Fever Virus in Kenyan Wildlife
***Melinda K. Rostall, Alina Evans, F. Gakuya, J. T. Paweska, L. Akoolo, P. J. Van Vuren, T. Manyibe, J. M. Macharia, T. G. Ksiazek, D. R. Feikin, R. F. Breiman and M. Kariuki Njenga**
- 4:15 40 Zoonotic Disease Surveillance at the Human-Wildlife Interface
***Jennifer Siembieda, Woutrina Miller, Carol Cardona, Christian Sandrock, Walter Boyce, Nancy Anderson, Michael Ziccardi and Christine Johnson**
- 4:30 41 Experimental Infection of Black-Tailed Deer (*Odocoileus hemionus*) with Deerpox Virus
***Kimberly A. Thompson, Rob Bildfell, Ling Jin, Peregrine L. Wolff and Colin M. Gillin**

5:00 – 6:00 **American Association of Wildlife Veterinarians Business Meeting**
Maple Leaf

6:00 – 7:00 **Canadian Association of Zoo and Wildlife Veterinarians Business Meeting**
Maple Leaf

TUESDAY EVENING, AUGUST 5

7:00 – 10:00 WDA Auction
Wild Rose

WEDNESDAY, AUGUST 6

8:00 – 9:30 Contributed Papers, concurrent session: Rabies and Hendra Viruses
Maple Leaf
Presiding: Rick Gerhold (AAWV)

8:00 42 Management of an Outbreak of Rabies (West Texas Gray Fox Strain) in Coyotes in West Texas
***Ken Waldrup, Ernest Oertli, Tom Sidwa, Katherine Parker and Erika Quinones**

8:15 43 Lack of Field Performance of Raboral V-RG® in Producing Antibody Responses in Free-Ranging Striped Skunks (*Mephitis mephitis*) in Flagstaff, Arizona
***Krista Wenning, David Bergman, Dennis Slate, Charles Rupprecht, Barbara Worgess, Elisabeth Lawaczeck and Chad Heuser**

8:30 44 National Wildlife Health Center Update on Bat White-Nose Syndrome
***A. Ballmann, D. Blehert, D. Green, H. Ip, C. Meteyer, K. Miller, V. Stearns-Bocshler, M. Sterner and N. Thomas**

8:45 45 Bats, Rabies, and African Lyssaviruses
Ivan V. Kuzmin, Wanda Markoteer, Louis Nel and *Charles E. Rupprecht

9:00 46 Reproduction and Nutritional Stress are Risk Factors for Hendra Virus Infection in Little Red Flying Foxes (*Pteropus scapulatus*)
***Raina K. Plowright, Hume E. Field, Craig Smith, Anja Divljan, Carol Palmer, Gary Tabor, Peter Daszak and Janet E. Foley**

9:15 47 Modeling the Effects of Flying Fox Urbanization on Hendra Virus Dynamics
***Raina K. Plowright, Patrick Foley, Peggy Eby, Andy Dobson, Janet Foley, Hume Field and Peter Daszak**

8:30 – 9:15 Contributed Papers, concurrent session: Herptiles
Aurora
Presiding: Valerie O'Brien

8:30 48 Mortality Summary (2000-2007) in Endangered Captive Kihansi Spray Toads (*Nectophrynoides asperginis*)
***Denise McAloose, Jennifer Pramuk, Bonnie Raphael, Paul Calle, Wynona Shellabarger, Andrew Odum, Michael Garner and Ann Duncan**

8:45 49 Parasites in Cold-Stunned Green Turtles (*Chelonia mydas*) in Florida
***E.C. Greiner, B.A. Stacy, T McIntosh, A.M. Foley, B.F. Sears and J.L. Miller**

9:00 50 Investigating Factors Influencing Ranavirus Infection and Disease
***Debra L. Miller, Matthew J. Gray and Jason T. Hoverman**

9:30 – 9:50 **Primer on Elk Island National Park (EINP): M. J. Pybus**
Maple Leaf

10:15 – 10:30 Buses leave for EINP

11:45 – 5:00 **Lunch, tours, hikes**

5:00 - 10:00 WDA Picnic at Oster Lake, EINP

8:00 – 10:00 **Buses return to Edmonton periodically**

THURSDAY MORNING, AUGUST 7

8:15 – 9:45 Contributed Papers, concurrent session: Disease Ecology- Avian I
Maple Leaf
 Presiding: Joe Gaydos

8:15 51 Ecological Models for the Community Dynamics of Avian Influenza in Waterfowl
 Communities
***Andy Dobson, Leslie Reperant and Thijs Kuiken**

8:30 52 Laboratory Evaluation of Abiotic Environmental Factors affecting Avian Influenza Virus
 Persistence in Aquatic Habitats
***Justin D. Brown and David E. Stallknecht**

8:45 53 The Wild Bird Global Avian Influenza Network for Surveillance (GAINS) Project
***Damien O. Joly, Kristine Smith, Marcela Uhart, Martin Gilbert and William Karesh**

9:00 54 Ecological Divergence of Two Sympatric Lineages of Buggy Creek Virus, an Arbovirus
 associated with Birds
***Charles R. Brown, Abinash Padhi, Amy T. Moore, Mary Bomberger Brown, Jerome E.
 Foster, Stephanie A. Strickler, Martin Pfeffer, Valerie A. O'Brien and Nicholas Komar**

9:15 55 Aspergillosis associated with Presumed Infectious Bursal Disease in Captive Whooping
 Cranes (*Grus americana*)
***Marie E. Pinkerton and Barry K. Hartup**

9:30 56 Bald Eagle Reintroduction to the Channel Islands - DDTs And PCBs
**A.E. Little, D.K. Garcelon, P.B. Sharpe, J.E. Haas, *S.K. Taylor, L. S. Cesh and C.S.
 Gorbic**

8:15 – 9:45 Contributed Papers, concurrent session: Wildlife-Domestic Interface
Aurora
 Presiding: Terry Kreeger

8:15	57	Transmission of <i>Pasteurella haemolytica</i> between Free-Ranging Bighorn and Domestic Sheep *David L. Hunter, Lisa M. Cowan, Karen M. Rudolph and Alton C. S. Ward
8:30	59	<i>Mycoplasma</i> in a Desert Bighorn Sheep Population in Northwestern Arizona *Lisa A. Shender
8:45	59	Long Term Monitoring of Bighorn Sheep (<i>Ovis canadensis</i>) that have been in Contact with Domestic Livestock *Mark L. Drew
9:00	60	Distribution and Habitat Selection of Parturient Elk on Cattle Summer Pasture around Riding Mountain National Park: Potential Implications for Bovine Tuberculosis Transmission *Ryan K. Brook
9:15	61	Ecological Complexity and the Management of TB in a Wildlife Reservoir *Richard J. Delahay
9:30	62	Progress in the Control of Tuberculosis in Spanish Wild Boar *J. Vicente, J. de La Fuente, C. Ballesteros, V. Naranjo, I. G. Fernandez de Mera, J. Francisco Ruiz Fons, M. P. Martín-Hernando, J. M. Pérez-de-la-Lastra, R. Juste, A. Aranaz and C. Gortazar

9:45 – 10:15 BREAK**10:15 – 11:30 Contributed Papers, concurrent session: Tools & Techniques***Maple Leaf*

Presiding: Justin Brown (AAWV)

10:15	63	Surgical Placement of Abdominal Transmitters in Two Mule Deer (<i>Odocoileus hemionus</i>) *Mark L. Drew
10:30	64	Physiological and Pathological Effects of Surgical Implantation of Radiotransmitters in Massasauga Rattlesnakes (<i>Sistrurus catenatus catenatus</i>) Andrew M. Lentini, *Graham Crawshaw and David McLelland
10:45	65	<i>In Vivo</i> Imaging reveals the Pathogenesis of Monkeypox Viruses in Prairie Dogs *Tonie E Rocke, Nicola Pussini, Angela Londono-Navas, Elizabeth Falendyz, and Jorge E Osorio
11:00	66	Effectiveness of FTA® Cards for Avian Influenza Virus Field Surveillance *Shamus P. Keeler, Rebecca Poulson, Ginger Goekjian and David E. Stallknecht
11:15	67	Impact of Trapping Method on Detection of Avian Influenza Viruses *Jane Parmley, Catherine Soos, Keith McAloney, Bruce Pollard, Fred Kibenge, Emily Jenkins and F.A. Leighton

10:15 – 11:30 Contributed Papers, concurrent session: Genes, Vaccines & Immobilization*Aurora*

Presiding: Elena Garde (CAZWV)

10:15	68	Integrating Genetic Tools in Disease Ecology: Value-Added Wildlife Sampling Strategy *Holly B. Ernest
10:30	69	Humoral Immune Responses of White-Tailed Deer (<i>Odocoileus virginianus</i>) to <i>Mycobacterium bovis</i> BCG Vaccination and Experimental Challenge with <i>M. bovis</i> *P. Nol, K. P. Lyashchenko, W. R. Waters, J. C. Rhyan and M. D. Salman
10:45	70	Oral Vaccination of Wildlife against TB using a Lipid Bait Matrix *Matthew R. Lambeth, Frank M. L. Cross, Bryce M. Buddle and Frank E. Aldwell
11:00	71	Capture Mortalities in Moose, Brown Bears, Wolverines, Eurasian Lynx, and Gray Wolves: A Review of 5,959 Captures *Jon M. Arnemo
11:15	72	Butorphanol, Azaperone and Medetomidine (BAM) for Field Immobilization of Plains Bison *Todd K. Shury, William R. Lance and David L. Hunter

11:30 – 12:30 WDA Business Meeting (open to all registrants)*Maple Leaf***12:30 – 1:40 LUNCH****THURSDAY AFTERNOON, AUGUST 7****1:45 – 3:45 Contributed Papers, concurrent session: Disease Ecology- Avian II***Maple Leaf*

Presiding: Jane Parmley

1:45	73	Avian Filarioid Nematodes of the World: A Synopsis with Emphasis on Pathogenic Species *Cheryl M. Bartlett
2:00	74	Pox Virus Outbreak in Magellanic Penguins from Argentine Patagonia *Marcela Uhart, Virginia Rago, Ariel Pereda and Pablo Beldomenico
2:15	75	West Nile Virus Surveillance in Wild Birds and Mammals from the state of Chiapas, Mexico *Gerardo Suzán, José Estrada, Andres Gómez, Héctor Zepeda and A. Alonso Aguirre

2:30	76	Lead in Free-Ranging Ducks from Argentina Wetlands Hebe Ferreyra, Marcelo Romano, *Marcela Uhart and Pablo Beldomónico
2:45	77	Exposure of Black Vulture (<i>Coragyps atratus</i>) to Various Viruses in Mississippi *Richard B. Minnis, Sherman Jack, Danny L. Magee, Amanda Deese and Kyle VanWhy
3:00	78	Natural Highly Pathogenic Avian Influenza H5N1 Infection of Wild Birds: Species-Related Variations in Severity of the Encephalitic Disease *D. Gavier-Widén, C. Bröjer, E. Ågren, H. Uhlhorn, K. Bernodt and T. Mörner
3:15	79	Molecular Analysis of Temporally-Sampled Avian Influenza *Sara M. Turner and Jonathan A. Runstadler
3:30	80	Spatial Epidemiology of Avian Influenzas in Wild Migratory Waterfowl across the Conterminous United States 2006-2007 *Matthew L. Farnsworth, Alan B. Franklin, Thomas J. DeLiberto, Susan A. Shriner, Seth Swafford, Kaci VanDalen, Brandon B. Schmit, Heather Sullivan and Kerri Pedersen

1:45 – 3:45 Contributed Papers, concurrent session: Surveys & New Reports

Aurora

Presiding: Ryan K. Brook

1:45	81	Seroprevalence against Sin Nombre Virus in Resident and Dispersing Deer Mice Brent N. Lonner, Dean Waltee, *Richard J. Douglass, Amy J. Kuenzi and Kevin Hughes
2:00	82	Cowpox Virus Infection in Eurasian Lynx (<i>Lynx lynx</i>) in Sweden *Morten Tryland, Marie-Pierre Ryser-Degiorgis, Malachy I. Okeke, Carl Hård af Segerstad, and Torsten Mörner
2:15	83	Disease Surveillance in Wisconsin Free-Ranging Fisher <i>Martes pennanti</i> *Matt Watrud, Julia Langenberg, Nancy Businga
2:30	84	Necropsy Findings in Grey Squirrels (<i>Sciurus carolinensis</i>) in Ontario, Canada, 1993-2008 G. D. Campbell, *K.M. Welch and I.K. Barker
2:45	85	A Previously Unidentified <i>Chorioptes</i> Species infesting Outer Ear Canals of Moose (<i>Alces alces</i>): Characterization of the Mite and Pathology of Infestation *Gete Hestvik, Monika Zahler-Rinder, Dolores Gavier-Widén, Ronny Lindberg, Roland Mattsson, David Morrison and Set Bornstein
3:00	86	First Report of Phocine Distemper Viral Infection in Northern Sea Otters (<i>Enhydra lutris kenyoni</i>) from Alaska *Tracey Goldstein, John A. Hammond, Jonna A. K. Mazet, Verena A. Gill, Angela M. Doroff and Kathy A. Burek
3:15	87	Amyloid-Producing Disseminated Carcinosarcoma in a California Sea Lion (<i>Zalophus californianus</i>) *Howard Steinberg, Roberta Wallace and Vickie Clyde
3:30	88	Prevalence of Intestinal Helminth Parasites in Rhesus Monkey of Nepal *D. D. Joshi and V. Malla

3:45 – 4:15 BREAK

4:15 – 5:00 Carleton Herman Lecture
Maple Leaf

4:15 Introduction: Ed Addison

4:20 89 Disease, Wildlife Research, and the Public's Perception of Risk
***Mark S. Hafner**

THURSDAY EVENING, AUGUST 7

6:00 – 12:00 WDA Banquet and Awards
University of Alberta Faculty Club, Second Floor

FRIDAY MORNING, AUGUST 8

8:30 – 10:00 Contributed Papers: Disease Ecology - Ungulates
Wild Rose
Presiding: Damien Joly

8:30 90 Incidence of Hemorrhagic Disease in Virginia is Associated with Winter and Summer Climatic Conditions
***Jonathan M. Sleeman, Jay E. Howell, W. Matthew Knox and Philip J. Stenger**

8:45 91 Factors Affecting Epizootics of Winter Ticks
***Bill Samuel**

9:00 92 Evidence of Embryonal Death in Scandinavian Moose (*Alces alces*)
***Jonas Malmsten and Anne-Marie Dahlin**

9:15 93 Pathological Investigations of the Decline of North Slope Muskoxen
***Kimberlee Beckmen, Stephen Arthur, Josephine Afema, Jonna Mazet, Kathy Burek and Elizabeth Lenart**

9:30 94 Is Paratuberculosis an Emerging Disease in Spanish Wildlife?
***Christian Gortazar, Maria Paz Martín-Hernando, Jose Manuel Pérez-de-la-Lastra, Rafael Reyes-García and Joaquín Vicente**

9:45 95 Transmission through the Wildlife-Livestock Interface: Foot and Mouth Disease in Mongolia
***Damien O. Joly, Enkhtuvshin Shiilegdamba, Amanda Fine, Angela Yang, Wendy Weisman and Bolortsetseg Sanjaa**

10:00 – 10:30 BREAK

10:30 – 12:00 Contributed Papers: Chronic Wasting Disease
Wild Rose
Presiding: Matt Farnsworth

10:30	96	Ecology of Chronic Wasting Disease-Positive and Negative White-Tailed Deer in Wyoming *David R. Edmunds, Frederick G. Lindzey, Ronald G. Grogan, Walter E. Cook, Terry J. Kreeger and Todd E. Cornish
10:45	97	Selective Predation and the Control of an Emerging Wildlife Disease: Can Wisconsin Hunters Limit CWD? *Erik E. Osnas
11:00	98	Deer, Corridors, and Disease: Using Corridor Theory to Project Routes of CWD Spread *Chris Garrett, Evelyn Merrill, Margo Pybus, David Coltman and Fangliang He
11:15	99	Genetic Analysis of CWD-Infected Deer in Western Canada *David Coltman, Trent Bollinger, Evelyn Merrill, Stephanie Nakada, Margo Pybus and Greg Wilson
11:30	100	Infectivity of Prions following Ingestion and Excretion by American Crows (<i>Corvus brachyrhynchos</i>) Kurt C. VerCauteren, John L. Pilon, Paul B. Nash, *Gregory E. Phillips and Justin W. Fischer
11:45	101	Evaluation of Rectal Biopsy for Preclinical Diagnosis of Chronic Wasting Disease in Free-Ranging Rocky Mountain Elk *Jenny G. Powers, Terry R. Spraker, Mark S. Graham, Katherine O'Rourke, Michael W. Miller and Margaret A. Wild