CANADIAN
WILDLIFE HEALTH
COOPERATIVE

CWHC ANNUAL WORKSHOP

An Atlantic and Canadian Perspective on Wildlife Health

Charlottetown, PEI, 9 June 2016

CREATING A WORLD THAT IS SAFE AND SUSTAINABLE FOR WILDLIFE AND SOCIETY

LOCATION & REGISTRATION FEE

McCain Foundation Learning Commons (Rm 287)
Atlantic Veterinary College, University of Prince Edward Island, 550 University Ave, Charlottetown, PE, C1A 4P3

* Attendees are required to pay a $20 registration fee at the door, **in cash** (we cannot process credit cards). This is to help offset the cost of food and refreshments.

AGENDA

8:00 Registration

9:00 – 9:10 **Introduction**

9:10 – 9:35 **Overview of the CWHC.** Craig Stephen, Executive Director, CWHC

9:35 – 10:10 **Influenza A virus diversity in wild birds in Newfoundland and Larbador.**
Andrew S. Lang, Department of Biology, Memorial University of Newfoundland and Labrador.

The natural reservoir and primary hosts for influenza A viruses are wild birds, which are responsible for the movement of these viruses around the globe. Influenza virus genomes are segmented, with 8 individual pieces of negative-sense RNA making the full genome complement. This segmented nature of the genome facilitates rapid diversification through the generation of novel reassorted viruses when an individual host is co-infected with more than one virus. Avian influenza virus genes can be separated phylogenetically into geographic lineages (e.g., North American, South American and Eurasian). This is caused by the geographic separation of host species between regions, and there is also some further phylogenetic segregation of the virus genes by host species taxonomy (e.g., waterfowl and gull). We have been characterizing the influenza viruses from wild birds in Newfoundland and Labrador, with a particular focus on gulls and pelagic seabirds. Through this work we have identified a number of viruses that contain mixtures of genes from both North America and Eurasia, indicating that Newfoundland is an important location for the interaction of viruses from these two regions. These virus interactions are facilitated by the bird host movements, with some of the sampled species moving across the Atlantic Ocean.

10:10 – 10:40 **BREAK**

10:40 – 11:15 **Bat White-nose Syndrome in Maritime Canada: history and aftermath.**
Don McAlpine, New Brunswick Museum

White-nose Syndrome (WNS), a lethal fungal disease recently introduced to North America, is responsible for the deaths of more than 6 million bats. The fungal disease agent, *Pseudogymnoascus destructans*, was first detected in Maritime Canada in 2011, but base-line studies in anticipation of disease arrival began in 2009. Here we trace the history of the WNS outbreak in Maritime Canada, where data on disease progression, impact on winter bat populations, and associated studies have been some of the most detailed on the continent. Drawing on recent published and unpublished research from the region, we review knowledge gained in the aftermath of WNS in New Brunswick, Nova Scotia, and Prince Edward Island.

11:15 – 11:50 **Challenges for surveillance and control of emerging pathogens (rabies, vector-borne pathogens) in New Brunswick.**
Jim Goltz, New Brunswick's Chief Provincial Veterinarian

The coordination of surveillance and management activities for rabies and tick-borne pathogens is very complex since a number of different agencies and jurisdictions share responsibilities and/or have interest in being engaged and involved, yet generally want to limit their involvement and not lead responses. As a second incursion of raccoon variant rabies has entered New Brunswick and as tick populations expand their range in the province, the many challenges to effectively mobilize resources and engage partners and stakeholders to help with surveillance and/or control activities are being addressed.

11:50 – 12:25 **The Long-term Experimental Wetlands Area (LEWA): Providing evidence from natural systems.** Jeff Houlahan, University of New Brunswick

The Long-term Experimental Wetlands Area (LEWA) was established at CFB Gagetown in New Brunswick in 2008. The objective of LEWA is to provide an opportunity for replicated, whole-system experiments on small and mid-sized wetlands. LEWA is approximately 8 km2 of young mixed forest and early successional scrubland with 100-200 ponds and wetlands of varying sizes. The first experiment used a split-pond design and examined the effects of 1) RoundUp WeatherMaxTM and New VisionMaxTM, two glyphosate-based herbicides, designed for agricultural and forestry applications, respectively, and 2) nutrients/interspecific competition on plant, phytoplankton, invertebrate and amphibian communities. I will talk about the philosophy behind LEWA, the advantages and disadvantages of whole-system experiments and what we were able to find out about the impacts of herbicides and nutrients on a wide variety of living organisms.

12:25 – 1:30 **LUNCH**

1:30 – 2:05 **Fostering the conservation of marine animals through emergency response networks.** Andrew Reid and Tonya Wimmer, Marine Animal Response Society, Nova Scotia.

In collaboration with partners throughout Canada, including members of the CWHC, the Maritime Marine Animal Response Network (MMARN) aims to ensure that effective, timely and consistent response is available for all incidents involving dead and distressed marine animals throughout the region. Of particular concern are at risk cetaceans, pinnipeds, sea turtles and sharks. Responding to such incidents has been identified as a priority in Canada's federally mandated Species At Risk Act Recovery Strategies and Action Plans for species which have been listed. The collection of accurate and thorough data from all incidents is critical for us to better understand threats to marine species and to enable us to identify opportunities for mitigation measures to aid in their protection and recovery. A key component of response networks have been the involvement of highly trained personnel, particularly veterinarians, to conduct necropsies and investigate evidence of human interactions. Representatives from MMARN also work closely with those from regional response networks in Québec, British Columbia, and Newfoundland & Labrador as well as the Canadian Wildlife Federation to enhance national response capacity and collaboration. The overall goal is to ensure Canada is doing its part to understand and mitigate threats to these species. This session will provide participants with information on MMARN, its network members and operations and specifically how data is collected, compiled and utilized to achieve these overall goals.

2:05 – 2:40 **Species at risk in Atlantic Canada: response and recovery.**
Mark F. Elderkin and Dr. J. Sherman Boates, Nova Scotia Department of Natural Resources

White-nose Syndrome and Near Extirpation of Three Species of Bats in Maritime Canada: Reflections on lessons learned in the wake of an unprecedented biological disaster.
Our presentation reviews the milestones, actions and responses by the research community, governments, ENGOs and public, before and after the arrival of white nose syndrome in Nova Scotia and Maritime Canada. We will discuss strengths and weaknesses of the existing 'box' of legal, management and stewardship tools to evoke timely, effective response to an impending biological disaster. We make positive suggestions for change, propose new tools, lament the sequence and outcome of events that transpired and celebrate the tight network and community of dedicated professionals that came forward to meet the challenges. It is our hope that other jurisdictions not yet affected by WNS can perhaps benefit from some of our experience..

2:40-3:00 **BREAK**

3:00 – 3:35 **Atlantic Wildlife Emergency Response Service.**
Barry Rothfuss and Pam Novak, Atlantic Wildlife Institute, New Brunswick.

The Atlantic Wildlife Institute (AWI) is working with industry as part of the Canadian "Polluter Pay" system to develop regional capacity for wildlife emergency response. This initiative is complementary to the new National Wildlife Emergency Framework being introduced this summer by the Canadian Wildlife Service. Through the support of industry, AWI will bring together diverse stakeholders throughout Atlantic Canada to build a sustainable Network, focusing efforts on developing regional infrastructure and trained personnel to meet the challenges of responding to all types of environmental emergencies which impact indigenous species populations.

3:35 - 4:10 **We all know about lead poisoning in wildlife, but what are we doing about it?**
Helene Van Doninck, Cobequid Wildlife Rehabilitation Centre, Truro, Nova Scotia

Poisoning from spent lead ammunition has been documented in many species worldwide and is an issue that occurs repeatedly in Atlantic Canada in Bald Eagles. Lead poisoning from discarded lead-based angling tackle occurs in loons and other waterfowl. Lead can also enter the human food chain through ingestion of lead-harvested game. An effective way to decrease the incidence of lead poisoning in wildlife is hunter and angler education to encourage transition to non-lead ammunition and tackle. In 2012, the Cobequid Wildlife Rehabilitation Centre in Nova Scotia started a science-based outreach program for hunters and anglers, encouraging voluntary transition to non-lead ammunition and angling tackle. This ongoing effort has resulted in positive and ground-breaking results and initiatives, including a non-lead ammunition and angling tackle exchange program. This discussion will summarize the main points, progression and continuation of this program. When outreach is delivered in a manner that seeks common ground, cooperation between groups can result in positive change and a solution to this solvable problem.

4:10 – 4:30 **Closing remarks and conclusions**

SOCIAL EVENT

All attendees are invited to attend a social function at Upstreet Craft Brewing at 7:30pm on June 8th. The brewery is located at 41 Allen Street, Charlottetown. For directions, please see the following link: **http://www.upstreetcraftbrewing.com/#!contact-us/c1fog**

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