

Plenary 1: Role of Conservation Breeding and Release of At-Risk Prairie Species – Insights from the Wilder Institute/Calgary Zoo

February 22, 2023, 9:30- 10:20 AM

Abstract: The need for action to support the recovery of species-at-risk is growing and conservation translocations—likely in conjunction with conservation breeding programs—have been identified as a relevant tool in the recovery plans of many Canadian species. The Wilder Institute/Calgary Zoo’s team of ecologists, veterinarians, and animal husbandry experts have been working collaboratively for over 20 years on the conservation of at-risk species in the Canadian prairies. The team’s approach involves breeding, maintaining healthy, genetically diverse populations under human care, and the release of animals into their prairie habitats. This is coupled with scientific research to understand the best strategies to support species recovery, continually improve methods and communicate learnings. This panel will be sharing our team’s current efforts on conservation initiatives focused on the burrowing owl, half-moon hairstreak butterfly, greater sage-grouse, and northern leopard frog, including progress to date, the essential role of collaborations and partnerships, key research questions and findings, and conservation impacts. This work is done in collaboration with a breadth of partners and often contributes to provincial or national recovery strategies. The team will share on how they adapt each conservation program depending on the unique needs of each species. Discussions will include head-starting, wild-to-wild translocations, conservation breeding for release to the wild, soft and hard releases, post-release monitoring, the importance of habitat assessments and long-term population data. The team will also speak about working to achieve meaningful conservation impact, while navigating challenges, so that species-at-risk have a future on the Canadian prairies.

Presenters:

Colleen Baird

Colleen is the Senior Manager of Animal Care at the Wilder Institute/Calgary Zoo, where she leads a dedicated team of professionals that care for animals at the zoo and at the offsite wildlife conservation centre. Her career has spanned almost three decades with respected expertise in caring for animals large and small from all regions of the world at multiple accredited zoos across North America. A native Calgarian, Colleen has a B.Sc. from Thompson University and is proud to be part of the critical conservation work being done locally and globally by the zoo and the Wilder Institute, together.

Graham Dixon-MacCallum

Graham leads the burrowing owl project at the Wilder Institute. His job requires coordinating with the federal and provincial governments, local ranchers, soldiers, graduate students, and multiple departments across the Wilder Institute. Graham has also studied anti-predator behavior in the conservation breeding population of Vancouver Island marmots at the Wilder Institute. Graham completed a B.Sc. in Biology at Acadia University and an M.Sc. in Biology at the University of Victoria, where he studied garter snake habitat ecology in urban parks. Graham has worked on a wide variety of species across Canada, and in Costa Rica, Peru, and Gabon.

Darío Fernandez-Bellon

Darío leads the greater sage-grouse project at the Wilder Institute. He completed a B.Sc.+M.Sc. in biology at the University of Barcelona, an M.Sc. in conservation biology at Doñana Research Station/Pablo de Olavide University, and a PhD in ecology at University College Cork. Darío has worked on wildlife conservation and research projects in Central, and South America, Europe, and Africa, focusing mainly on birds, but also on different mammal, reptile and amphibian species. Darío also works as an advisor on wildlife-wind energy research in Ireland and as a researcher for nature documentaries.

James Glacier

James leads the half-moon hairstreak butterfly recovery project in Waterton Lakes National Park where he studies the natural history and distribution of this endangered butterfly. Passionate about scientific discovery, James received a B.Sc. in Paleontology and an M.Sc. in Conservation Biology from the University of Alberta, in Edmonton. He then travelled to Australia for his Ph.D. in Biology from the University of New South Wales. For both his graduate degrees he focused on ants and insect ecology. He has since returned to Canada and has focused his studies on biodiversity, conservation, and biological interactions.

Caitlin Slade

Caitlin has been working with the zoo in animal care since 2010 and in 2022; Caitlin accepted the Manager position for the zoo's two off-site facilities for animal care: the Archibald Biodiversity Centre (ABC) and the Wildlife Conservation Centre (WCC). Caitlin has worked with the whooping crane, Vancouver Island marmot and greater sage-grouse breeding programs. She has also worked with the Burrowing Owl Head-Starting program since that program's inception in 2017. She is excited about her new role as she leads the Animal Care, Health & Welfare team and the conservation programs through the transition from WCC to ABC.

Rebecca Stanton

Rebecca is the Interim Population Ecologist for the Northern Leopard Frog Reintroduction project. Her role includes leading field work, management and analysis of field data, and drafting technical reports. She completed her B.Sc. in Biology at Wilkes University and her M.Sc. in Biology at the University of Saskatchewan. She has accumulated over ten years of research experience in the United States, Costa Rica, and Canada, working with government, universities, private consulting firms, and non-profit organizations. She has experience with banding and measuring more than 100 bird species and conducting surveys for a wide variety of taxa.

Kristina Stephens

Kristina is an Animal Care Technician at the Wilder Institute/Calgary Zoo and has been working with the greater sage-grouse breeding program for the last three years. Her background in wildlife rehabilitation led her to her involvement in the management, care, and breeding of the greater sage-grouse population at the zoo. Kristina has a B.Sc. in Zoology from the University of Calgary and has spent the last ten years working at various wildlife institutions in B.C. and Alberta. Her passion for birds and conserving native wildlife led to her work in conserving some of North America's most endangered species.

Patrick Thompson

Patrick is an Animal Care Manager at the Wilder Institute/Calgary Zoo. Amongst his many responsibilities, Patrick leads the animal care team responsible for the care and breeding of the Wilder Institute/Calgary Zoo's northern leopard frog population.

Dr. Doug Whiteside

Dr. Doug Whiteside is the Head Veterinarian and Senior Manager for Animal Health at the Wilder Institute/Calgary Zoo. He is also an Associate Professor of Conservation Medicine at the University of Calgary's Faculty of Veterinary Medicine. Doug is an internationally recognized specialist in zoological medicine, a field which integrates conservation, ecology, and veterinary medicine. His collaborative research focuses on One Health interactions through a conservation lens, and on bridging knowledge gaps between wildlife under human care and free ranging wildlife with the aim of improving the welfare and success of wildlife conservation efforts.