DAY 1 - SUNDAY, MAY 22, 2022

REGISTRATION - ALL DAY
12:00 p.m. - 5:00 p.m.
Conference level

PRE – CONFERENCE WORKSHOP
3:30 – 5:30 p.m.
White River II
Planning a project on wildlife fertility control: what could possibly go wrong? Tips, ideas, and warnings from the field
Moderators:
Giovanna Massei, BIWFC Europe, UK
Jens Jacob, Julius Kühn-Institut, Germany
Douglas Eckery, United States Department of Agriculture Animal and Plant Health Inspection Service, National Wildlife Research Center, Wildlife Services, USA

DAY 2 - MONDAY, MAY 23, 2022

REGISTRATION DESK
7:00 a.m. – 5:00 p.m.
Conference Level

BREAKFAST
7:00 – 8:15 a.m.
Mountain View Restaurant

EXHIBITOR TABLES
8:00 a.m. - 5:00 p.m.
Conference Level

WELCOME
8:15 – 8:45 a.m.
Grand Rivers Ballroom
Terrance Kline, Trustee, Botstiber Foundation
Nicole Paquette, Chief Programs & Policy Officer, Humane Society of the United States
President & Board Chair, Humane Society Wildlife Land Trust
Stephanie Boyles Griffin, Science and Policy Director, BIWFC
Giovanna Massei, Director, BIWFC Europe
Monique Principi, Managing Director, BIWFC

OPENING PLENARY
8:45 – 9:00 a.m.
Grand Rivers Ballroom
Wild equid fertility control and stakeholder engagement
David Jenkins
Assistant Director, Resources and Planning
Bureau of Land Management,
U.S. Department of Interior, USA

9:00 – 9:15 a.m.
Creating connections to increase acceptance and use of fertility control for wildlife population management
Cheryl Asa
Advisory Board Chair
Association of Zoos and Aquariums
Reproductive Management Center, USA

SESSION 1
HUMAN DIMENSIONS
9:15 - 9:30 a.m.
Engaging stakeholders and publics when biotechnology goes "wild"
Jason Delborne
North Carolina State University, USA

9:30 - 9:45 a.m.
Stakeholder perceptions of fertility management and free-roaming equids: A gap analysis and guide to strategic engagement
Terry Messmer
The Berryman Institute
Utah State University, USA

9:45 - 10:00 a.m.
Check your assumptions! The importance of human dimensions research in wildlife management
Keith Carlisle
United States Department of Agriculture Animal and Plant Health Inspection Service
National Wildlife Research Center, USA

(continued)
10:00 - 10:15 a.m.
Stakeholder views on grey squirrel population control by gene drive technology
**Sarah Hartley**  
*University of Exeter, UK*

10:15 - 10:30 a.m.
**Q & A**

10:30 - 10:40 a.m.
**THE HONORABLE JARED POLIS**  
**GOVERNOR OF COLORADO**

10:40 - 11:00 a.m.
**COFFEE BREAK**

**SESSION 2**  
**RECENT RESEARCH IN CONTRACEPTIVE METHODS**

11:00 - 11:15 a.m.
Development of an appropriate adjuvant for a novel immuncontraceptive for use in feral mares  
**Jason Bruemmer**  
*United States Department of Agriculture  
Animal and Plant Health Inspection Service  
National Wildlife Research Center, USA*

11:15 - 11:30 a.m.
Prospects for sustainable rodent pest control using synthetic hormones levonorgestrel and quinestrol  
**Steven Belmain**  
*University of Greenwich, UK*

11:45 a.m. - 12:00 p.m.
Contraceptive efficacy and safety profile of porcine and recombinant zona pellucida vaccines formulated with a non-freund’s adjuvant in Caribbean donkeys  
**Brittany Middlebrooks**  
*Colorado State University, USA*

12:00 - 12:15 p.m.
Viral vectors as a tool for the development of a non-surgical sterilant  
**Thomas Conlon**  
*Found Animals Foundation, USA*

12:15 - 12:30 p.m.
Gene drive for controlling invasive vertebrates and risk mitigation approaches  
**Antoinette Piaggio**  
*United States Department of Agriculture  
Animal and Plant Health Inspection Service  
National Wildlife Research Center, USA*

12:30 - 12:50 p.m.
**Q & A**

12:50 - 2:15 p.m.
**LUNCH**  
Mountain View Restaurant

**SESSION 3**  
**ADVANCEMENT IN PRACTICAL APPLICATION**

2:15 - 2:30 p.m.
Long-term immunocontraception to manage feral cattle in Hong Kong  
**Giovanna Massei**  
*BIIWFC Europe, UK  
Animal and Plant Health Agency, UK*

2:30 - 2:45 p.m.
Two treatments of PZP-22 yield five or more years of contraception in white-tailed deer (*Odocoileus virginianus*)  
**Allen Rutberg**  
*Cummings School of Veterinary Medicine  
Tufts University, USA*

2:45 - 3:00 p.m.
Hop to it! Advancing fertility control for kangaroo management in Australia  
**Catherine Herbert**  
*University of Sydney, Australia*

3:00 - 3:15 p.m.
Fertility control of wild boar in northeastern Spain: a pilot study in urban areas  
**Manel Lopez-Bejar**  
*Universitat Autonoma de Barcelona, Spain*

3:15 – 3:30 p.m.
**COFFEE BREAK**

**SESSION 3 - continued**

3:30 – 3:45 p.m.
Population level effects and behavior impacts on white-tailed deer (*Odocoileus virginianus*) treated with PZP-22 in a suburban community in New York  
**Kali Pereira**  
*The Humane Society of the United States, USA  
Cummings School of Veterinary Medicine,  
Tufts University, USA*
DAY 3 - TUESDAY, MAY 24, 2022

BREAKFAST
7:00 – 8:30 a.m.
Mountain View Restaurant

REGISTRATION DESK
7:00 a.m. – 5:00 p.m.
Conference level

EXHIBITOR TABLES
8:00 a.m. – 5:00 p.m.
Conference level

SESSION 4
ADVANCEMENT IN IDENTIFICATION AND DELIVERY METHODS
8:30 – 8:45 a.m.
Grey squirrel population control by gene drive technology
Bruce Whitelaw
University of Edinburgh, UK

8:45 – 9:00 a.m.
Remote delivery of contraception, vaccines, and RFID chips to wild/feral horses (Equus caballus) using a humane and stress-free system
Roch Hart
Wildlife Protection Management, USA

9:00 – 9:15 a.m.
Delivering oral contraceptives to grey squirrels
Sarah Beatham
National Wildlife Management Centre
Animal and Plant Health Agency, UK

9:15 – 9:30 a.m.
Developing a primate-specific bait delivery system for crop-foraging primates in South Africa
Russell Hill
Durham University, UK

SESSION 5
BREAK-OUT SESSIONS
10:15 a.m. – 12:15 p.m.
White River Rooms I and II
(these sessions will run concurrently)

Scenario Deliberations to Engage Stakeholders
Jason Delborne, Katie Barnhill-Dilling
North Carolina State University, USA
Antoinette Piaggio
United States Department of Agriculture
Animal and Plant Health Inspection Service
National Wildlife Research Center, USA

This breakout session will be an interactive exercise to showcase a methodology to engage stakeholders in conversations and creative ways to express opinions, communicate perspectives, and wrestle with priorities and tradeoffs when making difficult decisions to test or deploy emerging technologies for conservation.

Discussion Meeting on Human-Wildlife Interface:
The Indian Scenario
Polani Seshagiri, Raman Sukumar
Indian Institute of Science, India

In this breakout session, Polani Seshagiri, Raman Sukumar, Douglas Eckery, Satish Gupta, Andre Ganswindt and G. Umaphay will be lead discussants. They will aim to:
(1) discuss and deliberate India-specific issues in the wild fauna-human interface context in terms of the need to consider key target Indian species that are frequently confronted with humans in shared habitats; and, consider the global scenario, (2) evolve potential mitigating measures

(continued)
with expertise in animal ecology and reproductive technology, (3) effectively connect interested international group(s) to foster potential collaboration and strategy development and (4) take up potential and practical fertility control-related projects to mitigate human-animal conflicts.

Following the interactive session with participants, lead-discussants will consolidate the meeting outcome, draft possible research action plans and develop potential future consideration or implementation by stakeholders.

12:30 – 1:30 p.m.
LUNCH
Mountain View Restaurant

**SESSION 6**
**MODELLING, MONITORING, AND DATA MANAGEMENT**

1:30 – 1:45 p.m.
Multi-objective modelling as a decision-support tool for free-roaming horse management
**Brian Folt**
*United States Geological Survey, USA*

1:45 – 2:00 p.m.
Modelling the management of an invasive species at landscape scale: are oral contraceptives the missing ingredient for success?
**Simon Croft**
*National Wildlife Management Centre, Animal and Plant Health Agency, UK*

2:00 – 2:15 p.m.
Field approaches to wild burro (*Equus asinus*) identification and remote-delivery of ZonaStat-H in an American western landscape
**Stephanie Boyles Griffin**
*The Humane Society of the United States, USA*
*The Botstiber Institute for Wildlife Fertility Control, USA*

2:15 – 2:30 p.m.
Q & A

2:30 – 2:50 p.m.
COFFEE BREAK

**SESSION 7**
**WELFARE IMPLICATIONS OF FERTILITY CONTROL**

2:50 – 3:00 p.m.
Applications of fertility control to improve wild animal welfare
**Simon Eckerström Liedholm**
*Wild Animal Initiative, USA*

3:00 – 3:10 p.m.
Measuring the welfare impact of fertility control
**Heather Browning**
*London School of Economics and Political Science, UK*

3:10 – 3:20 p.m.
Wilderness, zoo, ranch, or something else? Framing our thinking about the welfare of free-roaming horses and burros
**Allen Rutberg**
*Cummings School of Veterinary Medicine, Tufts University, USA*

3:20 – 3:30 p.m.
Optimizing population density for wild animals’ welfare
**Luke Hecht**
*Wild Animal Initiative, USA*

3:30 – 4:00 PM
Panel Discussion - Welfare implications of fertility control
Facilitated by Vittoria Elliott
*Wild Animal Initiative, USA*

Panelists:
Simon Eckerstrom Liedholm, Heather Browning, Allen Rutberg, Luke Hecht, Jason Bruemmer (USDA, USA), Brandy Pyzyna (Senestech, USA), Christi Yoder (formerly USDA, USA)

4:00 - 4:15 p.m.
Q & A

**SESSION 8**
**REGULATORY, LEGAL, AND POLITICAL CHALLENGES**

4:15 – 4:30 p.m.
Female African elephant (*Loxodonta africana*) immunocontraception in South Africa: from pipe dream to policy
**Audrey Delsink**
*Humane Society International/Africa*

4:30 – 4:45 p.m.
Fertility control should be considered for rodent eradication from islands?
**Loretta Mayer**
*FYXX Foundation, USA*

4:45 – 5:00 p.m.
Twenty-five years of OvoControl® (nicarbazin 0.5%)
**Erick Wolf**
*Innolytics, LLC, USA*

5:00 - 5:15 p.m.
Q & A

**POSTER SESSION**
5:30 - 6:00 p.m.
Conference Level

**DINNER**
6:00 - 8:00 p.m.
Mountain View Restaurant
**Breakfast**
7:00 – 8:30 a.m.
Mountain View Restaurant

**Exhibitor Tables**
8:00 a.m. – Noon
Conference Level

**Session 9**
**Social-Economic Aspects of Fertility Control Methods**
8:30 – 9:45 a.m.
The shifting context of fertility control within conservation practice
Paul Cryer
African Conservation Trust, South Africa

8:45 – 9:00 a.m.
International perspectives of rodent ecology and management
Jens Jacob
Julius Kühn-Institut, Germany

9:00 – 9:15 a.m.
Deer impact management in New York City
Sarah Grimké Aucoin
New York City Parks and Recreation, USA

9:15 – 9:30 a.m.
Species Conflict Resolution from the Galápagos Islands to the Magdalena River Basin, Colombia
Emma Clifford
Animal Balance, USA

9:30 – 9:45 a.m.
Testing a GnRH vaccine towards the management of feral hippopotami in Colombia
Jason Bruemmer
United States Department of Agriculture
Animal and Plant Health Inspection Service
National Wildlife Research Center, USA

9:45 – 10:05 a.m.
Q & A

10:05 – 10:30 a.m.
Coffee Break

**Session 10**
**The Future of Fertility Control**
10:30 a.m. – 12:00 p.m.
Establishing, Enhancing, and Maintaining Connections
Moderated by: Cheryl Asa, Douglas Eckery

In this interactive event, panelists and participants will meet to discuss the future of wildlife fertility control. We hope that the outcome of the discussion will help provide conference attendees and the BIWFC with ideas on how to continue to build upon the significant progress that has been made in this field over the last five years. The conversation will be guided by three questions that will be presented at the beginning of the conference and that participants will be encouraged to discuss with fellow attendees – in-person or on the WHOVA conference app – and then will be invited to share their perspectives in the final session of the conference.

1. How can we better engage and communicate with stakeholders, end users and the public to increase understanding about the role that wildlife fertility control can play in human-wildlife conflict mitigation and to manage expectations?

2. How can we foster interdisciplinary cooperation and share our work with other fields?

3. How can we improve channels of communication and increase opportunities for collaboration?

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