



## The Invaders – Volume 5, Issue 1 Spring 2020

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### About TWS Invasive Species Working Group

The Invasive Species Working Group (ISWG) is composed of scientists engaged in invasive species research and management. The goals of the ISWG are to:

1. Facilitate communication and the exchange of information among members of The Wildlife Society interested in invasive species management.
2. Enhance knowledge and technical capabilities of wildlife professionals in

### TNR as a Method to Manage Feral Cat Colonies: A Review of the Science

Steve A. Johnson, Ph.D.

Free-ranging domestic cats, be they feral, indoor-outdoor pets or otherwise, are known to have severe impacts on native wildlife globally. Such cats have been implicated in the decline and extinction of numerous species of native vertebrates, especially of birds and mammals. One of the earliest and most profound extinctions was that of the Stephen’s Island Wren, a flightless songbird endemic to the island off the coast of New Zealand. As the story goes, a lighthouse keeper and his family took up residence on the island in the late 1800s and they brought Tibbles, their pet cat who was apparently pregnant at the time. Within a few years at most, Tibbles and her feral offspring had caused the extinction of the wren. To read the entire story check out “[\*The Obituary of the Stephens Island Wren\*](#)” at Cornell’s All About Birds website.



Free-ranging cats are problematic for native wildlife. Photo by Steve A Johnson

the area of invasive species management.

3. Increase public awareness and understanding of invasive species management issues and decision-making processes.

#### Membership

To renew your ISWG membership for only \$5/year, log in to the TWS member portal and click Membership.

<https://wildlife.secure.force.com/customlogin>

#### Connect with TWS ISWG

Website:

[www.wildlife.org/iswg](http://www.wildlife.org/iswg)

Facebook:

[TWS Invasive Species Working Group](#)

Email:

[tws.iswg@gmail.com](mailto:tws.iswg@gmail.com)

#### Meet the ISWG Board Members

TWS ISWG held an election in Fall 2019 to select new leadership and guide our Working Group into the 2020s. We are pleased to introduce your new Officers:

##### Chair

##### **Steve Johnson, University of Florida**

Dr. Steve A. Johnson is an Associate Professor in the Department of Wildlife Ecology and Conservation at the University of Florida. Invasive vertebrate ecology and management is a common theme in his teaching, research, and outreach programs. Steve is a native Floridian and a beer snob.

##### Chair-Elect

##### **Jennifer Ketterlin, National Park Service**

Jenny Ketterlin is an Invasive Species Biologist with Everglades and Dry Tortugas National Parks where she is responsible for invasive wildlife management. She has worked on invasive plant and animal issues in Florida for over 16 years with the National Park Service, the University of Florida, the Miami-Dade County Environmentally Endangered Lands Program, and the Florida Fish and Wildlife Conservation Commission.

##### Secretary / Treasurer

##### **Tessie Offner, Florida Fish and Wildlife Conservation Commission**

Tessie Offner coordinates a voluntary task force known as the Ridge Rangers, whose goal is to protect wildlife resources in Florida. Prior to this position, she was part of Florida Fish and Wildlife Conservation

Though an extreme example, major negative impacts on native wildlife by cats are not limited to island situations. For example, researchers from the Smithsonian Conservation Biology Institute, in collaboration with a colleague from the U.S. Fish and Wildlife Service, estimated the magnitude of mortality to native birds and small mammals in the United States from free-ranging cat predation, and those estimates are staggering. They found that free-ranging cats kill 1.3-3.7 billion birds and 6.3-22.3 billion mammals in the United States each year. Un-owned (e.g., feral) cats, as opposed to owned pets, were thought to cause the most damage and the researchers suggested that predation by cats is “likely the single greatest source of anthropogenic mortality for US birds and mammals.”

Given the deleterious impacts domestic cats are known to have on native wildlife, deployment of effective cat management strategies is essential for conserving wildlife. One strategy, which continues to grow in popularity is Trap-Neuter-Release, commonly referred to as TNR. The way TNR is designed to work is through capture, sterilization, and release of sterilized cats. The method is touted as an effective way to manage feral cats without euthanasia. The process of trap-neuter-release is repeated and over time the target cat colony should decline and eventually disappear because of continually reduced birthrates in the colony. However, critical assumptions, such as population closure must be met for TNR to work properly.

Some wildlife biologists question the efficacy of TNR as a reliable and effective method to manage feral cats. Published studies on the topic of TNR are equivocal—some claim TNR works; others refute the strategy as misguided and ineffective. An additional concern of TNR is its humaneness. It is well established that indoor cats live substantially longer and healthier lives than outdoor and feral cats. Because cats are simply abandoned back into the environment after they are neutered in TNR programs, even some animal rights groups, such as PETA, do not feel TNR is in the best interest of the cats.

Wildlife Extension Specialists from the University of Florida’s Department of Wildlife Ecology and Conservation recently wrote a fact sheet summarizing the effectiveness and humaneness of Trap-Neuter-Release for feral cat management. The article can be accessed in html or PDF format via UF’s Electronic Data Information Source (EDIS) here: <https://edis.ifas.ufl.edu/uw468> Please share the document with anyone who may be interested, especially local governmental entities who currently support or are considering TNR in their communities. You may also be interested in The Wildlife Society’s position statement on feral cats: <http://wildlife.org/wp-content/uploads/2014/05/28-Feral-Free-Ranging-Cats.pdf>

Commission's Invasive Species Program and obtained her master's degree in 2016 from University of Florida in Wildlife Ecology and Conservation where her species of focus was the Argentine black and white tegu.

**Member-at-large**

**Rob Gosnell, USDA APHIS Wildlife Services**

Rob "Goose" Gosnell is the State Director for Wildlife Services, New Mexico. He was a State Biological Director for Louisiana Department of Wildlife & Fisheries, a Complex Biologist for USFWS and Chief of Wildlife Operations for DoD, FT Stewart, Ga. He spent six years in the Air force as a pj "pararescueman".

**Member-at-large**

**Susan Jewell, U.S. Fish and Wildlife Service**

Susan "Su" Jewell, CWB, is the Injurious Wildlife Listing Coordinator for the U.S. Fish and Wildlife Service in HQ. She spent 11 years in the Endangered Species Program and 12 years in the Everglades for USFWS, National Park Service, and National Audubon Society. She is also an accomplished environmental writer.

**Member-at-large**

**Andrea Darracq, Murray State University**

Andrea Darracq is an Assistant Professor at Murray State University in the Department of Biology and a Certified Wildlife Biologist. In Andrea's position at Murray State, she is fortunate to teach our future wildlife biologists, advise the Murray State Student Chapter of The Wildlife Society, to be the program coordinator of the Wildlife and Conservation Biology program, and to mentor undergraduate and graduate students as they complete research related to how management and anthropogenic stressors, including invasive species, influence wildlife.

**Member-at-large**

**Jane Anderson, Texas A&M University – Kingsville**

Jane Anderson is an Assistant Professor of Research in the Caesar Kleberg Wildlife Research Institute of Texas A&M University – Kingsville. She has held positions in the public, private, and non-profit environmental sectors. She is particularly interested in the challenges of studying and managing charismatic invasive species, with research including non-native monkeys, capybaras, and parakeets. She is excited to be serving as the 2020 editor of *The Invaders*.

## Global Invasives Update

Pete Caldwell and Helen Blackie, [Boffa Miskell](#)

### Predator Free New Zealand

Predator Free 2050 is an ambitious goal to rid New Zealand of the introduced species that threaten the island nation's native flora and fauna. New Zealand has one of the worst extinction records of any nation and, in 2020, some 4,000 native species are considered to be at some kind of risk, primarily due to the impact of introduced predators.

The species being targeted for eradication across the entire country are rats, stoats (a small mustelid) and brushtail possums, which are key predators of native wildlife. Achieving the goal will require a herculean effort, with huge community buy-in and public support as well as the backing of government, businesses and the knowledge of relevant experts.

In addition to the country-wide 2050 goal, by 2025 the programme also plans to:

- eradicate predators from blocks of at least 20,000 hectares
- suppress introduced predators on a further 1 million hectares
- eradicate all predators from offshore island nature reserves
- achieve the capability to eradicate at least one introduced predator

In an effort to make this target more achievable, significant funds are being invested in a range of R&D projects. It is widely recognised that achieving a Predator Free environment will not be possible using current tools and technologies, and that new innovations will be required. Boffa Miskell Ltd is involved in a range of these projects to support the Predator Free objective, ranging from the development of long-life, highly attractive lures for target pest species; new traps; species-specific toxins and new automated, pest monitoring systems. These new tools aim to achieve significant improvements in the efficacy of pest control as well as improving cost-efficiency.

Momentum for the Predator Free objective is already spreading, with hundreds of community conservation projects already springing up around the country, and several large landscape-scale eradication projects already receiving funding to achieve their ambitious aims.

See this link for more information on Predator Free New Zealand 2050: <https://predatorfreenz.org/big-picture/pf-2050-vision/>

### New challenges: Wallaby management to prevent dispersal across New Zealand

The continued increase in wallaby abundance and distribution in New Zealand has been a growing concern over the past several years. Wallabies have breached designated "containment areas" and are dispersing rapidly into new landscapes. In the South Island of New Zealand, Bennett's wallabies are moving through iconic high-country areas, and adversely impacting indigenous biodiversity and agricultural values. The challenge for New Zealand is to stop dispersal of wallabies

### Member-at-large

#### Christina Romagosa, University of Florida

Christina Romagosa is a Research Assistant Professor in the Department of Wildlife Ecology and Conservation at the University of Florida. In her current position at UF, she serves as the faculty advisor for the UF Student Chapter of The Wildlife Society and the Natural Resources Diversity Initiative. Her research focus is on biological invasions and the effects on biological diversity and ecosystem restoration/management.

### Member-at-large

#### Ben Wishnek, U.S. Fish and Wildlife Service

Ben Wishnek is currently a Fish and Wildlife Biologist with the USFWS Invasive Species Program in Southern Alaska. Previously, he was the Wildlife Biologist at Bear Lake National Wildlife Refuge and Oxford Slough Waterfowl Production Area in southeast Idaho. He served on the board of the TWS Wildlife and Habitat Restoration Working Group from 2012-2018 and was on the scholarship committee for the Idaho Chapter of The Wildlife Society from 2018-2020. Much of his professional experience has centered around wetlands and riparian restoration and management with invasive species, primarily plants, being a focus area. He looks forward to the opportunity to bring his perspectives to the Working Group.

### Submitting an Article to The Invaders

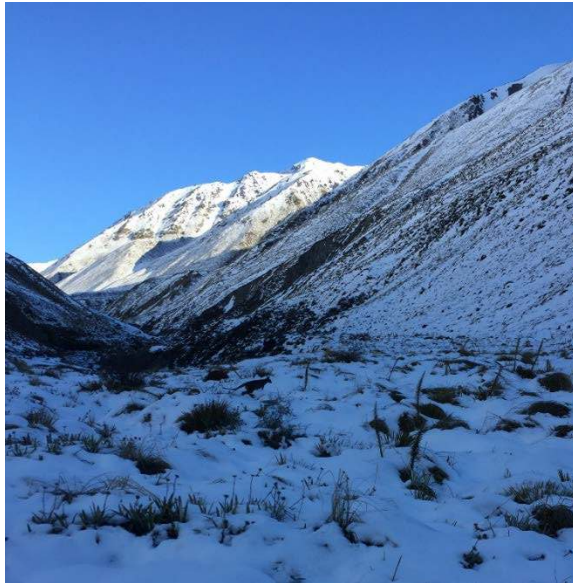
Our goal with The Invaders is to share interesting stories and recent findings in invasive species ecology, research, and management. If you have a story you would like to share, please email The Invaders editor Jane Anderson at [jane.anderson@tamuk.edu](mailto:jane.anderson@tamuk.edu)

### Invasive Species Working Group Meeting at TWS Annual Meeting

The Wildlife Society Annual Meeting is scheduled for September 27 – October 1, 2020, in Louisville, Kentucky. The Annual Meeting is a great opportunity for Wildlife Professionals to come together to learn, communicate, and share their passion for the natural world. The ISWG will be holding our annual meeting during the TWS Annual Meeting. Please join us to meet the ISWG board members and learn how you can become more involved with TWS ISWG! Keep an eye on our website and our Facebook page for information on the time and location of this year's ISWG meeting.

across the landscape. However, this is easier said than done, as wallabies are an extremely cryptic species.

See this link for more information on the wallaby situation in NZ: <https://www.mpi.govt.nz/dmsdocument/11764-review-of-current-and-future-predicted-distributions-and-impacts-of-bennetts-and-dama-wallabies-in-mainland-new-zealand>



*An invasive Bennett's wallaby (center-left) at the invasion front. Credit: Pete Caldwell*

## Impacts of COVID-19 on Invasive Species Research and Management

Those of us who work in the wildlife field tackle many unforeseen challenges to our work – natural disasters that destroy field sites or threaten populations of managed species, permits that don't come through, study designs that don't pan out the way we envisioned, or having one of our projects go viral. The COVID-19 pandemic has dramatically changed all of our lives, both professionally and personally. We are all having to quickly adapt and find new and creative ways to continue our work in the conservation field. We want to hear how the pandemic has impacted the work of ISWG members studying and managing invasive species. Has your fieldwork been cancelled or postponed? Have you seen positive or negative impacts from having fewer people around where you work? Are you trying to teach field techniques online? Has your research team come together in ways that have encouraged and surprised you? What have been the biggest challenges the pandemic has posed for your long-term management or research? Please share your stories (or funny videoconference images) with us on our Facebook page: [TWS Invasive Species Working Group](#).

### Reference Links

The Wildlife Society Homepage:  
<https://wildlife.org/>

TWS Annual Conference:  
<https://wildlife.org/network/conferences-network/>

TWS Working Groups:  
<https://wildlife.org/network/tws-local/working-groups/>

Join TWS: <https://wildlife.org/join/>



Find us on Facebook

## National Invasive Species Awareness National Invasive Species Awareness Week Part II

National Invasive Species Awareness Week is the largest invasive species awareness effort in the United States. Part I took place February 24 – 28 and included a webinar series, the release of tools and resources for communicating with policy makers, and many stories and tips from around the world shared through social media via #NISAW. Part II will take place May 16 – 23. Make sure to keep an eye on [www.nisaw.org/nisaw-2020](http://www.nisaw.org/nisaw-2020) for news and updates and share your invasive species observations and knowledge using #NISAW.



Edited by Jane Anderson, Ph.D.  
Layout Design by Tessie Offner

*ISWG is a working group of The Wildlife Society that promotes the control, mitigation, and prevention of invasive species' introduction to improve natural resources for wildlife.*