USGS WISCONSIN COOPERATIVE WILDLIFE RESEARCH UNIT

FISCAL YEAR 2026

(October 1, 2025-September 30, 2026)



Assistant Unit Leader Dr. Christian Che-Castaldo discussing novel ways to monitor wildlife populations from space

ANNUAL REPORT

USGS WISCONSIN COOPERATIVE WILDLIFE RESEARCH UNIT

Room 204 Russell Labs
1630 Linden Drive
University of Wisconsin-Madison
Madison, WI 53706

COOPERATING AGENCIES:

U.S. Geological Survey
University of Wisconsin
Wisconsin Department of Natural Resources
Wildlife Management Institute
U.S. Fish and Wildlife Service

October 1, 2025-September 30, 2026

MISSION STATEMENT
WISCONSIN COOPERATIVE WILDLIFE RESEARCH UNIT

The Cooperative Units Program of the U.S. Geological Survey has been an integral part of the Department of Forest and Wildlife Ecology at the University of Wisconsin-Madison since 1972. With direction from the Coordinating Committee, the Unit's research has been conducted on a wide variety of wildlife topics in cooperation with federal agencies, the University, the Wisconsin Department of Natural Resources, and various private organizations. The Unit's research spans the range from problem-oriented projects designed to provide cooperators with useful information on resource issues to basic scientific discovery to move the state of knowledge forward.

Work has been carried out in both terrestrial and aquatic environments. Major areas of present research include the effects of agriculture on wildlife populations, wildlife disease issues, and global climate change. The Unit, along with cooperating scientists, has the expertise to investigate environmental problems from the cellular to the landscape level. Current Unit personnel have research interests that include population ecology, community ecology, disease ecology, and landscape ecology. Future project selection is primarily dependent on the needs of the cooperators and the availability of funds.

PERSONNEL AND COOPERATORS

Coordinating Committee

Sammy King	Eastern Region Supervisor, Cooperative Research Units U.S. Geological Survey, Reston, VA
Timothy Van Deelen	Chair, Department of Forest and Wildlife Ecology University of Wisconsin–Madison
Scott Hull	Representative, Wisconsin Department of Natural Resources Office of Applied Science, Madison, WI
Scott Walter	Representative, Wisconsin Department of Natural Resources Bureau of Wildlife Management, McFarland, WI
William Moritz	Representative, Wildlife Management Institute Johnstown, OH
Sarena Selbo	Representative, U.S. Fish and Wildlife Service Midwest Region Headquarters, Bloomington, MN

Unit Staff

Wendy Turner	Unit Leader, Wildlife
Christian Che-Castaldo	Assistant Unit Leader, Wildlife
Kristina Van Wert	Administrative Specialist University of Wisconsin-Madison

ACADEMIC PERSONNEL

Academic Staff

Marie Gilbertson (Wendy Turner) (Scientist II). Marie is a quantitative ecologist studying deer movement ecology and chronic wasting disease (CWD) transmission in southwest Wisconsin and is the veterinarian overseeing our deer captures. Her project investigates the impact of CWD infection on deer movement behavior, and the impact of deer movements and contacts on CWD spread.

Bilgecan Şen (Christian Che-Castaldo) (Scientist I). Bilgecan is a quantitative ecologist building predictive models of deer movement and abundance. His project investigates the ability of the Snapshot Wisconsin camera trap network to reliably estimate unbiased abundance-based metrics from camera trap data.

Postdoctoral Researchers

Steven Winter (Wendy Turner and Christian Che-Castaldo). Steven is collaborating with partners at the USGS National Wildlife Health Center to study ecological drivers of white-nose syndrome in North American bats and disease surveillance systems.

Graduate Students

Kimberlie Vera (Wendy Turner) (Ph.D., Wildlife Ecology). Kimberlie is studying anthrax transmission dynamics in a guild of herbivorous mammals, investigating how environmental variation affects host physiology, movement patterns, anthrax exposure risk and predation risk.

Nurul Islam (Wendy Turner) (Ph.D., Wildlife Ecology). Nurul is studying white-tailed deer behaviors based on accelerometers and video camera collars to understand CWD transmission risk in southwest Wisconsin.

Elijah Smith (Wendy Turner) (Ph.D., Comparative Biomedical Sciences). Elijah is studying CWD prions and how the conformation of prion molecules affects the transmission of CWD, clinical progression, and environmental degradation.

Michael Menon (Wendy Turner, co-mentored with Timothy Van Deelen) (Ph.D., Wildlife Ecology). Michael is studying spatiotemporal patterns of wolf predation on white-tailed deer and CWD dynamics in northern Wisconsin.

Aaron Groves (Wendy Turner) (M.S., Wildlife Ecology). Aaron is studying coyote and bobcat movement ecology, predation/scavenging of white-tailed deer, and effects on chronic wasting disease spread.

Visiting Graduate Student

Bijit Khadka (Christian Che-Castaldo) (Ph.D., Wildlife Ecology, advised by Jon Pauli). Bijit is building a reproducible data pipeline and spatial databases of permit data collected for federally listed species managed by the U.S. Fish and Wildlife Service. (*End date December 2025*)

NEW PROJECTS ($639,097 in funding)

Mining national WNS surveillance data to mitigate disease impacts in North American bats (RWO-152)

Investigators:	Wisconsin Cooperative Wildlife Research Unit: Wendy Turner, Christian Che-Castaldo, Steven Winter USGS National Wildlife Health Center: Anne Ballmann, Travis McDevitt-Galles, Katie Richgels
Funding:	USGS National Wildlife Health Center, $211,211
Expected Completion:	October 23, 2028

White-nose syndrome (WNS), caused by the cold-adapted fungus *Pseudogymnoascus destructans* (Pd), has caused severe declines in several North American bat species since its detection in 2007. Bats provide important ecosystem services, including insect consumption that benefits agriculture and public health, and their loss has been linked to increased insecticide use. Pd is now established across the midwestern and eastern United States and Canada and has spread into western North America, with growing concern that novel strains could cause secondary epidemics. Over ten years of national Pd surveillance effort represents one of the most extensive wildlife disease surveillance efforts in the U.S., yet its effectiveness and limitations have not been formally evaluated. This project will (1) evaluate the Pd surveillance program relative to its stated goals and its contributions to understanding bat ecology and WNS, drawing lessons for future emerging wildlife diseases, and (2) combine the national surveillance dataset (over 25,000 bats of 38 species and 13,300 environmental samples collected since 2008) with data from the North American Bat Monitoring Database to evaluate how biotic factors (e.g., species abundance, diversity, and community composition) and abiotic factors (e.g., climate, spatial distribution, and karst occurrence) influence Pd occupancy and infection intensity. The project supports a postdoctoral researcher at the University of Wisconsin-Madison.

Experimental assessment of chronic wasting disease prion persistence in soils (RWO-153)

Investigators:	Wisconsin Cooperative Wildlife Research Unit: Wendy Turner, Marie Gilbertson, Elijah Smith USGS National Wildlife Health Center: Allen Herbst Wisconsin Department of Natural Resources: Daniel Storm
Funding:	USGS National Wildlife Health Center, $214,231
Expected Completion:	August 31, 2028

Key unknowns about chronic wasting disease (CWD) transmission, including how important transmission through the environment is relative to direct transmission, limit our ability to manage this disease in cervid populations. Modeling studies show that the duration of prion persistence in the environment strongly influences transmission, disease prevalence, and population declines, yet this duration remains unknown. The prevailing view that prions persist for years to decades comes largely from studies of captive sheep and captive mule deer held in small paddocks, with little empirical support from wild deer. We hypothesize that CWD prions degrade over short durations in natural environments and that environmental transmission is a minor component of overall transmission dynamics. This project will (1) measure how long

carcass-derived prions persist in soil under conditions relevant to transmission risk in wild deer, using a field experiment in which deer heads from CWD-positive and CWD-negative deer decompose on soil plots in three habitats, and (2) test detritivory as a mechanism of prion decay in laboratory experiments with field-derived soils and detritivores such as earthworms. Prion seeding activity will be measured with RT-QuIC. This project will improve our understanding of CWD transmission pathways and risk, inform targeted management, and support the training of a PhD student at the University of Wisconsin-Madison.

Social dynamics, group fidelity, and between-group chronic wasting disease transmission risk in white-tailed deer

Investigators:	Wisconsin Cooperative Wildlife Research Unit: Wendy Turner, Marie Gilbertson, Christian Che-Castaldo Wisconsin Department of Natural Resources: Daniel Storm
Funding:	USDA APHIS, Wild Cervid Chronic Wasting Disease Management and Response Activities, $123,554
Expected Completion:	September 29, 2027

Prior research has shown that chronic wasting disease (CWD) is readily transmitted within white-tailed deer social groups, but little is known about how transmission occurs between groups. This gap limits our ability to predict CWD spread, how disease dynamics may respond to management, and determine the relative roles of direct and environmental transmission. Studies of deer sociality typically use home range overlap as a proxy for social group membership, yet deer with overlapping home ranges do not necessarily move together as a social unit, and group membership changes through time. This project will use an unprecedented GPS-collar dataset from southwest Wisconsin to (1) identify close and casual associations among deer through time using hidden Markov models of pairwise movement, (2) compare these associations with those inferred from home range overlap, (3) determine how association frequency varies with deer age, sex, season, and CWD status, and (4) quantify social group fidelity by assessing the formation and longevity of associations. Results will identify the time periods and host characteristics associated with the greatest risk of between-group CWD transmission, improving transmission models and informing surveillance and management actions such as targeted surveillance and harvest.

Pathways of rodenticide exposure among non-target wildlife in Wisconsin

Investigators:	Wisconsin Cooperative Wildlife Research Unit: Marie Gilbertson, Wendy Turner UW–Madison Research Animal Resources Center: Julia Naber UW–Madison Department of Forest and Wildlife Ecology: David Drake
Funding:	Rodenticide Task Force, $90,101
Expected Completion:	February 28, 2030

Anticoagulant rodenticides are widely used to control rodents, yet they can poison non-target wildlife through direct consumption of bait and through predation or scavenging of exposed prey. Little is known about how people use rodenticides in the upper Midwest or which exposure routes matter most for wildlife, which limits our ability to design effective mitigation.

This project will identify the routes of rodenticide exposure among non-target wildlife in Wisconsin and determine their relative importance. In year 1, we will (1) characterize how, when, where, and why people use rodenticides along a rural-to-urban land use gradient, using a statewide WisconSays survey of 3,400 households conducted with the University of Wisconsin Survey Center and qualitative interviews in Dane and Iowa Counties, and (2) deploy bait boxes with camera traps on participating properties along the same gradient to quantify visits by rodents and non-target species. Results will identify predictors of rodenticide use and the species directly exposed to bait across space and time, informing efforts to reduce exposure. Progress will be reported to the Rodenticide Task Force, and the project will provide training for several undergraduate students at the University of Wisconsin-Madison.

ONGOING PROJECTS ($3,648,489 in funding)

Mechanisms of chronic wasting disease transmission (RWO-151)

Investigators:	Wisconsin Cooperative Wildlife Research Unit: Wendy Turner, Elijah Smith USGS National Wildlife Health Center: Allen Herbst
Funding:	USGS National Wildlife Health Center, $365,846
Expected Completion:	December 31, 2029

Chronic wasting disease (CWD) is a fatal neurologic disease of wildlife in the deer family (Cervidae), for which there is no cure or treatment. This disease is a major concern for the health of cervid populations in affected regions of North America. The causative agent of CWD is an infectious protein, called a prion, that is transmitted both directly, from infected to susceptible hosts in close contact, and indirectly, through exposure to long-lived infectious prions shed into the environment by infected hosts. In enzootic regions, disease prevalence often exceeds 30% of animals in the population. With time, this means that millions of infected cervids will be shedding infectious prions into the environment and exposing other mammals, including other wildlife, humans, and domestic animals, to a risk of disease spillover. Yet many fundamental questions critical to managing this important wildlife disease remain unanswered, including aspects of prion variation, prion survival in the environment, CWD transmission, disease processes in infected hosts, and spillover risk to other species. This award supports a graduate student research assistantship at the University of Wisconsin to perform CWD research in collaboration with the National Wildlife Health Center. With guidance and mentorship, the student will develop experiments to address knowledge gaps around CWD that focus on CWD prion detection, CWD prion strain variation, CWD transmission in cervids, the susceptibility of sympatric species, and the fate of CWD prions in ecosystems.

Leveraging commercial satellite data to characterize Pacific walrus responses to a changing Arctic

Investigators:	Wisconsin Cooperative Wildlife Research Unit: Christian Che-Castaldo
Funding:	NASA, $184,445
Expected Completion:	June 30, 2027

Pacific walrus (*Odobenus rosmarus divergens*) are important benthic predators in Arctic marine ecosystems and hold a place of substantial cultural and economic importance to many coastal Arctic communities. The future of this species, however, is uncertain due to rapid global change. Moreover, effective monitoring has proven logistically difficult, with significant costs and danger associated with traditional approaches. This proposed work seeks to use a leading-edge, AI-based approach in conjunction with commercial satellite imagery to develop a monitoring framework for Pacific walrus. The overall objectives of this work are to leverage the unique capabilities of the 3-m spatial resolution PlanetScope commercial satellite data product to (1) deliver trusted information on the spatiotemporal distribution of walrus and (2) determine how walrus distributions are responding to a changing Arctic, in support of the NASA Earth Science to Action goals. This project will use deep learning-based models to automate the classification of walrus in PlanetScope imagery from the North Pacific region collected over the last decade. These models will be used to identify walrus at 70 locations across the North Pacific. This will provide a record of the spatiotemporal distribution of this species across their range, leveraging the high spatial resolution and rapid revisit time of PlanetScope.

Advancing trail camera monitoring through simulation

Investigators:	Wisconsin Cooperative Wildlife Research Unit: Christian Che-Castaldo, Bilgecan Şen Wisconsin Department of Natural Resources: Jennifer Stenglein
Funding:	Wisconsin DNR, $327,985
Expected Completion:	August 31, 2028

The Snapshot Wisconsin trail camera network provides continuous photo data across the state that can be used to understand the status of wildlife populations, including distribution, relative abundance indices, sex and age ratios, and abundance estimates. However, Snapshot Wisconsin cameras are placed non-randomly, along trails and at the discretion of volunteer monitors, and are spaced far apart relative to the home range sizes of most Wisconsin wildlife. In addition, wildlife move and interact on a heterogeneous landscape and do not conform to the assumptions of many trail camera modeling methods, which assume random and independent movement. Variable detection probability among individuals and differences in camera viewshed further complicate accurate estimation. Because statewide wildlife populations cannot be censused, the best way to evaluate how well the network can provide accurate estimates and metrics is to test methods against known populations. This project will build a realistic simulation of Wisconsin and its wildlife, using integrated step-selection analyses coupled with agent-based models that give simulated individuals movement and social rules on a simulated landscape. The resulting This framework will provide a known animal population to serve as “truth” for developing and testing methods for occurrence, abundance indices, sex and age ratio metrics, and abundance estimates. It can also be used to simulate population change and assess how well these methods track population trends, a product of high value in wildlife decision-making.

Modeling host behavior and environmental transmission of chronic wasting disease

Investigators:	Wisconsin Cooperative Wildlife Research Unit: Wendy Turner, Marie Gilbertson, Nurul Islam University of Wisconsin–Madison Department of Statistics: Jun Zhu, Ian McGahan, Mahedi Hasan Montana Cooperative Wildlife Research Unit: Dan Walsh Utah State University: Jim Powell
Funding:	USDA NIFA, NSF-NIH-USDA Ecology and Evolution of Infectious Diseases program, $2.5 million
Expected Completion:	August 31, 2027

Understanding the principles of infectious disease transmission is crucial for identifying tools for disease control and prevention, but this is challenging when pathogens are transmitted both directly and indirectly through the environment. Researchers must disentangle multi-scale drivers, from fine-scale host interactions with environmental reservoirs to large-scale movements of populations across heterogeneous landscapes, and a general analytical framework linking direct and environmental transmission across spatiotemporal scales is lacking. This gap limits our ability to manage many human and animal pathogens, from cholera and African swine fever to white-nose syndrome and chronic wasting disease (CWD). This project will develop a broadly applicable model framework that links landscape structure, host movement ecology, pathogen distribution, and transmission modes, and will apply it to CWD, a fatal prion disease of free-ranging cervids that can be transmitted directly or from environmental reservoirs. We will develop a deterministic model scaffold that incorporates heterogeneity in host social behavior and movement together with prion retention, transport, and infection potential in complex landscapes, and will use multi-scale homogenization to link fine-scale infection pathways to population-level processes. Lab, field, and statistical analyses, drawing on data and expertise from the Wisconsin Department of Natural Resources, will parameterize prion transmission and host movement. Competing models will be embedded in an uncertainty framework to assess the relative importance of transmission pathways and to evaluate system responses to population management and landscape disturbance.

Building ecological data pipelines for listed species permit data (CESU agreement)

Investigators:	Wisconsin Cooperative Wildlife Research Unit: Christian Che-Castaldo, Bijit Khadka USFWS Midwest Regional Headquarters: Erik Olson, Andy Allstadt
Funding:	Wisconsin DNR, $45,213
Expected Completion:	October 31, 2026

The purpose of this project is to provide technical assistance to the U.S. Fish and Wildlife Service (USFWS) by developing semi-automated methods to organize and standardize the information it collects from permit holders, so that these data could be used more easily to manage federally endangered, threatened, and at-risk species. The University of Wisconsin-Madison built reproducible data workflows and pipelines, using the R programming language and SQL, that converted permit data for freshwater mussels Excel spreadsheets into standardized spatial databases united by a common data schema. The workflows were designed

so that USFWS can reuse them for additional species in the future. We authored a data paper for submission to a peer-reviewed journal describing the mussel dataset. Together, these activities better enable USFWS to use species permit data to address critical recovery and management needs. The project also supported the training of a University of Wisconsin-Madison graduate student in advanced data science methods, with an emphasis on building reproducible workflows.

Wolf predation and chronic wasting disease in Wisconsin

Investigators:	University of Wisconsin-Madison: Timothy Van Deelen Wisconsin Cooperative Wildlife Research Unit: Wendy Turner, Michael Menon SUNY College of Environmental Science and Forestry: Eliezer Gurarie
Funding:	Great Lakes Indian Fish and Wildlife Commission, $225,000
Expected Completion:	December 31, 2027

The potential for canids such as wolves and coyotes to selectively remove CWD-positive deer, and the effect this could have on CWD transmission dynamics, is an important but under-investigated consideration for wildlife managers. It is unknown whether canids preferentially target CWD-infected prey or what the consequences could be for the long-term dynamics of predators, prey, and disease, although given the chronic nature of CWD and its neurological and physical effects, symptomatic deer are expected to be at heightened risk of predation. The leading edges of expanding CWD prevalence and wolf re-establishment are just beginning to meet in Wisconsin. This project will (1) characterize spatial and temporal patterns of wolf and coyote predation on deer, (2) develop a spatially explicit model of deer (including CWD), canid, and human interactions, and (3) create a generalizable, web-based tool that allows managers to explore the consequences of targeted management strategies for CWD in the Great Lakes region. Understanding how predation might mitigate CWD spread will help managers quantify the benefit of maintaining wolves or coyotes on the landscape, identify areas where canid predation could aid disease control, and evaluate how recreational hunting of deer and their predators affects these processes. These questions have significant implications for the exercise of Native peoples' treaty rights, recreational deer hunting, and the resources generated for the conservation and management of all wildlife.

PUBLICATIONS AND PROFESSIONAL PAPERS

Unit Staff (bolded) and unit-associated students/scientists/postdocs (underlined)

Peer-reviewed articles

DuVivier, A. K., K. M. Krumhardt, L. Landrum, Z. Sylvester, B. Şen, S. Labrousse, **C. Che-Castaldo**, A. Eparvier, M. M. Holland, M. A. LaRue, C. Nissen, M. N. Levy, S. Jenouvrier, and C. Brooks. 2026. An Antarctic ecosystem value index to quantify ecological value across trophic levels and over time. *Nature Communications*, 17: 3203. https://doi.org/10.1038/s41467-026-69011-0.

Gomez, S., M. Boyers, A. Caron, D. Cornelis, H. de Knegt, J. A. J. Eikelboom, M. de Garine-Wichatitsky, J. W. Kilian, N. Owen-Smith, T. Prin, A. Shrader, J. A. Stabach, **W. C. Turner**, F. van Langevelde, and S. Chamaillé-Jammes. 2026. Wind conditions do not consistently affect large-scale movement decisions of large savanna herbivores. *Oecologia*, 408: 29. https://link.springer.com/article/10.1007/s00442-025-05860-8.

Katircioglu, S. J., H. N. Inzalaco, A. Herbst, D. J. Storm, S. S. Lichtenberg, R. Morales, R. McGinn, D. P. Walsh, and **W. C. Turner**. 2026. Digging into soil: effects of soil texture on RT-QuIC performance for environmental prion surveillance. *Environmental Science and Technology*, 60(29): 20598-20608. https://doi.org/10.1021/acs.est.6c03979.

Ventura, F., **C. Che-Castaldo**, P. Catry, K. Delord, A. Kuepfer, B. Mohring, S. Oppel, R. A. Phillips, E. Rouby, C. C. Ummenhofer, H. Weimerskirch, A. G. Wood, C. Barbraud, and S. Jenouvrier. 2026. Flying under the radar: the demographic importance of immatures in long-lived seabird populations. *Biological Conservation*, 323: 112102. https://doi.org/10.1016/j.biocon.2026.112102.

Ventura, F., B. Şen, **C. Che-Castaldo**, C. Barbraud, K. Delord, K. Krumhardt, M. Holland, L. Landrum, Z. Sylvester, P. Lukacs, and S. Jenouvrier. 2026. Ecological forecasts highlight opposing effects of long-term climate change on population demography. *Ecology*, 107(3): e70330. https://doi.org/10.1002/ecy.70330.

Youngflesh, C., **C. Che-Castaldo**, M. R. Schwaller, M. Polito, S. P. Serbin, and H. J. Lynch. 2026. Space-based monitoring of penguin diet links sea ice, food webs, and population change. *Current Biology*, 36: 3707-3714.e5. https://doi.org/10.1016/j.cub.2026.06.028.

Data Releases

Katircioglu, S. J., H. N. Inzalaco, A. Herbst, D. J. Storm, S. S. Lichtenberg, R. Morales, R. McGinn, D. P.Walsh, and **W. C. Turner**, 2026, RT-QuIC Florescence Data from Experimental Soils Varying in Soil Texture: U.S. Geological Survey data release, https://doi.org/10.5066/P13AJ49L.

Posters and Talks Presented at Professional Meetings

Eparvier, A., S. Jenouvrier, B. Şen, F. Ventura, **C. Che-Castaldo**, M. Holland, L. Landrum, K. Krumhardt, J. Garnier, K. Delord, C. Barbraud, and P. Trathan. 2026. Living with uncertainty: Using multi-model large ensembles to assess emperor penguin extinction risk for the IUCN Red List. World Seabird Conference 4, Hobart, Tasmania, Australia.

Eparvier, A., S. Jenouvrier, B. Şen, F. Ventura, **C. Che-Castaldo**, M. Holland, L. Landrum, K. Krumhardt, J. Garnier, K. Delord, C. Barbraud, and P. Trathan. 2026. Living with uncertainty: Using multi-model large ensembles to assess emperor penguin extinction risk for the IUCN Red List. 12th International Penguin Conference, Phillip Island, Australia.

Flynn, C. M., C. Hall, M. Schwaller, **C. Che-Castaldo**, and H. J. Lynch. 2026. Three decades of pan-Antarctic satellite imagery connects colony shape complexity and population trends of Adélie penguins. World Seabird Conference 4, Hobart, Tasmania, Australia.

Gilbertson, M. L. J., H. N. Inzalaco, H. Sykes, A. Groves, D. J. Storm, A. Herbst, and **W. C. Turner**. 2026. Decay of chronic wasting disease prion detection at infectious deer carcass sites. Wildlife Disease Association Annual Meeting, Chicago, Illinois.

Islam, M. N., M. L. J. Gilbertson, A. Groves, D. J. Storm, and **W. C. Turner**. 2026. Drivers of multi-pathogen exposure in white-tailed deer (*Odocoileus virginianus*) in southern Wisconsin. Wildlife Disease Association Annual Meeting, Chicago, Illinois (presented as both an oral presentation and a poster).

Joel, H., Y.-H. Huang, Z. R. Barandongo, A. Dolfi, K. Vera, J. K. E. Mfune, and **W. C. Turner**. 2026. The role of host identity in transmission dynamics of a multi-host infectious disease. Wildlife Disease Association Annual Meeting, Chicago, Illinois.

Peters, K. J., L. Salas, **C. Che-Castaldo**, D. Anderson, R. Foster-Dyer, D. Ainley, J. Rotella, M. Pinkerton, and M. LaRue. 2026. Trophic competition may shape geographic structure of Weddell seal colonies in the Ross Sea. SCAR Open Science 2026, Oslo, Norway.

Turner, W. C., N. J. Tourasse, C. A. Gulvik, C. A. Beesley, T. Maxson, Z. R. Barandongo, H. Joel, C. C. Cloete, W. R. Easterday, Z. P. Weiner, and O. A. Økstad. 2026. *Bacillus cereus* group isolates from anthrax-like mortalities in Namibian wildlife. *Bacillus anthracis, B. cereus* and *B. thuringiensis* 12th International Conference, Chicago, Illinois (invited oral presentation).

Ventura, F., **C. Che-Castaldo**, P. Catry, K. Delord, A. Kuepfer, B. Mohring, S. Oppel, R. A. Phillips, E. Rouby, C. C. Ummenhofer, H. Weimerskirch, A. G. Wood, C. Barbraud, and S. Jenouvrier. 2026. Flying under the radar: The demographic importance of immatures in long-lived seabird populations. World Seabird Conference 4, Hobart, Tasmania, Australia.

You, H., T. Park, **C. Che-Castaldo**, D. Hao, A. Chatterjee, F. Li, Z. Wang, F. Ji, B. Şen, Y. Wang, M. A. Lazzara, Y. Liu, T. Kurosu, N. Lauret, E. Chavanon, and M. Chen. 2025. Antarctica greening and its drivers. AGU 2025 Annual Meeting, New Orleans, Louisiana.

Research Seminars

Turner, W. C. 2026. Wildlife disease transmission from persistent environmental reservoirs: anthrax and chronic wasting disease. Invited seminar, Texas Tech University, Lubbock, Texas.

HONORS AND AWARDS

The Wildlife Society's Monograph Publication Award, 2026, for:
Gilbertson, M. L. J., A. C. Ketz, M. A. Hunsaker, D. P. Walsh, D. J. Storm, **W. C. Turner**. 2025. White-tailed deer (*Odocoileus virginianus*) habitat use and implications for chronic wasting disease transmission, *Wildlife Monographs*, 217(1): e70001. https://doi.org/10.1002/wmon.70001

PROFESSIONAL ACTIVITIES AND OUTREACH

Professional Activities

Unit Leader

June 2025-present	Review Editor, *EcoHealth*
August 2022-present	Associate Editor, *Journal of Wildlife Diseases*
December 2025-present	Organizer, Evolution of Infectious Diseases annual conference at hosted at UW–Madison, June 2027
August 2021–present	Member, Chronic Wasting Disease Science Team, U.S. Geological Survey
August 2021-present	Member, USGS Wildlife Disease Community of Practice, U.S. Geological Survey
March 2026	Member, USDA Research Grade Evaluation Panel
August 2025-present	Member, North American Interdisciplinary Chronic Wasting Disease Research Consortium
2026	Member, Hiring committee for administrative specialist for WCWRU/Department of Forest and Wildlife Ecology
Fall 2026-present	Member, Graduate Affairs Committee
Fall 2022-Spring 2026	Co-organizer, Departmental Seminar Committee, Department of Forest and Wildlife Ecology, UW–Madison

Assistant Unit Leader

2026	Space Use Committee, Department of Forest and Wildlife Ecology, UW–Madison
2026	Member, Hiring committee for administrative specialist for WCWRU/Department of Forest and Wildlife Ecology

Teaching

Unit Leader
Guest Lecture: *Environmental Variability and Disease Transmission Dynamics: A Case Study of Anthrax in Namibian Wildlife,* FWE 548 Diseases of Wildlife, UW–Madison

Media Coverage

Yale Environment 360, September 4, 2026. "Satellite Images of Penguin Droppings Reveal Impact of Antarctic Warming." https://e360.yale.edu/digest/penguin-guano-diet-climate-change

Clemson News (reprinted from The Conversation), September 3, 2026. "Satellite images show how penguins' diets are changing in response to Antarctic climate change." https://news.clemson.edu/satellite-images-show-how-penguins-diets-are-changing-in-response-to-antarctic-climate-change/

ZME Science, July 30, 2026. "Scientists Tracked Penguin Poop From Space and Noticed a Troubling Antarctic Shift." https://www.zmescience.com/ecology/animals-ecology/penguin-poop-from-space/

Space.com, July 30, 2026. "Satellites spy penguin poop on Danger Islands." https://www.space.com/astronomy/earth/pink-penguin-poop-on-the-danger-islands-space-photo-of-the-day-for-july-30-2026

Eos, July 29, 2026. "Tracking Penguin Poop from Space Reveals Antarctica's Changing Ecosystems." https://eos.org/articles/tracking-penguin-poop-from-space-reveals-antarcticas-changing-ecosystems

BBC Science Focus, July 28, 2026. "Experts spent 30 years studying penguin poop from space – and found something really weird." https://www.sciencefocus.com/news/penguin-poop-changed-over-time

NASA Earth Observatory, July 27, 2026. "Pink Penguin Guano Provides Diet Clues." https://science.nasa.gov/earth/earth-observatory/pink-penguin-guano-provides-diet-clues/

Discover Wildlife, July 17, 2026. "Scientists looked at Antarctica from the air. What they saw has them worried." https://www.discoverwildlife.com/animal-facts/birds/adelie-penguin-guano-satellite

Universe Today, July 16, 2026. "Satellite Images of Penguin Poo Reveal Climate Change's Impact on the Species." https://www.universetoday.com/articles/satellite-images-of-pengiun-poo-reveal-climate-changes-impact-on-the-species

Earth.com, July 10, 2026. "Penguin poop seen from space reveals Antarctica's changing food web." https://www.earth.com/news/penguin-poop-seen-from-space-reveals-antarcticas-changing-food-web/

UC Santa Cruz News, July 8, 2026. "The color of penguin poo: Satellites reveal the chilling truth of global warming's impact on an iconic polar species." https://news.ucsc.edu/2026/07/penguin-poo-satellite-images/

Stony Brook University News, July 8, 2026. "Stony Brook Researchers Use Satellites to Track What Penguins Eat from Space." https://news.stonybrook.edu/university/stony-brook-researchers-use-satellites-to-track-what-penguins-eat-from-space

Clemson News, July 7, 2026. "Clemson researcher uses satellites to track what penguins eat from space." https://news.clemson.edu/clemson-researcher-uses-satellites-to-track-what-penguins-eat-from-space/

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Screen capture from a video of a raccoon trying to catch a mouse at a rodenticide bait trap. Motion-sensing video camera traps are being used to monitor rodenticide bait stations across Dane and Iowa counties of Wisconsin, to understand the risk of non-target wildlife species being exposed to rodenticides, and how risk varies along an urban to rural land-use gradient.