

Robert A. Newman – Curriculum Vitae (2026)

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University of North Dakota
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Education: 1987 Ph.D. (Biology), University of Pennsylvania
1981 B.S. (Zoology), Duke University

Academic Positions:

2025-present Chair, Biology, University of North Dakota
2018-present Professor, Biology, University of North Dakota
2006-2007, 2012-2025 Director of Graduate Studies in Biology, University of North Dakota
2002-2005 Director, Research Networks for Enhancing Science and Technology (RNEST-Biocomplexity Cluster), University of North Dakota
2001-2018 Associate Professor, Biology, University of North Dakota
1995-2001 Assistant Professor, Biology, University of North Dakota
1994-1995 Director, Research Experience for Undergraduates (REU Site), Kellogg Biological Station, Michigan State University
1993-1995 Coordinator, Research Training Group Kellogg Biological Station, Michigan State Univ
1989-1992 Visiting Assistant Professor, Virginia Tech
1987-1989 Instructor, University of Pennsylvania

Professional Associations

Ecological Society of America –
Diversity Committee (2021-2023, 2023-2026)
Communication and Engagement Section, (Chair, 2020-21)
Climate Adaptation Section, (Treasurer, 2025-)
Traditional Ecological Knowledge Section, (leadership team, 2019 – present)
The Wildlife Society –
Climate Change and Sustainability Advisory Committee (2021-2022)
Climate Change and Wildlife Working Group, (Chair, 2020-2021, Board member, 2015-present)
Native Peoples' Wildlife Management Working Group, (Board member, 2019 – present)
National Adaptation Forum
Program Committee member (2017 – 2023)
Equity and Climate Justice Working Group member (2019 – present)

Recent Awards

2026 UND Foundation / Lydia & Arthur Saiki Faculty Award for Excellence in Service
2022 UND Martin Luther King, Jr. Social Justice Award

Recent Teaching

Undergraduate Courses Taught

BIO 333 Population Biology (1996 – present)
ENRV 100 Environmental Studies Seminar (

Graduate Courses Taught:

BIO 571 Research Design and Statistical Analysis (2014 - 2024)

BIO 503 Seminar (Science Communication, Science and Policy, Climate Adaptation (1999 – present)

Graduate Students:

committee chair: 14

committee member: 77

Recent Service

Department of Biology

- Chair of Biology (July 1, 2025 – present)
- Director of Graduate Studies (2006-2007, 2012 – 2025)
- Faculty Search committees (3 since 2020)

College Service

- Arts and Sciences Executive Committee (2026 -)
- Arts and Sciences Council (2025 – present)

University and ND University System Service:

- Council of College Faculties (NDUS, 2024-2027, including President in 2026-27)
- University Senate Community Engagement and Opportunity Committee (formerly the Diversity, Equity, and Inclusion Committee) (2024-2027, Chair)
- University Senate Legislative Affairs Committee (2022-23, 2024-2027, co-Chair 2025-26)
- School of Graduate Studies Strategic Planning Committee (2024 – 2025, co-Chair)
- University Senate (College of Arts & Sciences Representative, 2020-26)
- UND Strategic Enrollment Management Committee (2023 – present)
- UND LEADS Strategic Plan Implementation Committee (2023-2024)
- University Senate Chair-elect (2021-22), Chair (2022-23), past-Chair (2023-24)
- Senate Executive Committee (2021-24, 2025 – present)
- Future of Higher Education Task Force (2021)
- McNair Review committee (2016 – present)

Professional Service:

- Ecological Society of America (ESA)
 - Diversity Committee, (2021-2026)
 - Diversity, Equity, Inclusion and Justice (DEIJ) Task Force member (2020-2021)
 - Climate Adaptation Section (Treasurer, 2025 -)
 - Communication and Engagement Section, (Chair, 2020-21)
 - Traditional Ecological Knowledge Section, (leadership team, 2019 – present)
 - SEEDS meeting mentor (2020, 2021, 2024, 2025)
 - Associate Editor, Frontiers in Ecology and the Environment (2021 – present)
 - Associate Editor, Earth Stewardship 2023 - 2026

- The Wildlife Society (TWS)
 - Climate Change and Sustainability Council Advisory Committee (2021 – 2022)
 - Climate Change and Wildlife Working Group (Chair, 2020-2021)
 - Native Peoples' Wildlife Management Working Group, (Board member, 2019 – present)

North Dakota Chapter of The Wildlife Society

Past-President (2024 – 2025)

President (2023 – 2024)

President-elect (2022 – 2023)

Board member (2022 – 2025)

Association of Fish and Wildlife Agencies (AFWA) founding member of National Fish, Wildlife, and Plants Climate Adaptation Network (2018 – 2025)

North Dakota Game and Fish Department subject matter expert for State Wildlife Action Plan

National Adaptation Forum

Program Committee member (2017 – 2023)

Equity and Climate Justice Working Group member (2019 – present)

USGS Climate Adaptation Science Center 5-year Review Team

2016-2017 North Central Climate Science Center

2022 Southeast Climate Adaptation Science Center

Recent Research

Selected Publications:

Cid, C. et al (15 co-authors). in press. Growing an inclusive ecological professional society for a diverse environmental workforce. *Bulletin of the Ecological Society of America*. accepted 5/12/2026.

Jacobs, Lara A., Jonathan Fisk, Andrew Kalani Carlson, Ashley D'Antonio, Serina Payan Hazelwood, Elizabeth E. Perry, Melinda Adams, Robert Newman, et al (9 others). 2025. "U.S. Parks and Protected Area Power Structures: From Historic Policies to Indigenous Futurities." *Earth Stewardship* 2(3): e70016. <https://doi.org/10.1002/eas2.70016>

Gustafson, KD, Tkach VV, Newman R. 2025. Amphibian parasites exhibit idiosyncratic relationships with spatiotemporal environmental and host-community variation. *J Parasitology* 111: 262-275.

Jacobs, LA. ... Newman, R et al (20 authors). 2025. Political Challenges and Opportunities for Indigenous-led Conservation. Ch. 6 In *Status of Tribes and Climate Change Working Group (STACCWG). (2025). Status of Tribes and Climate Change Report*, Vol. 2, Institute for Tribal Environmental Professionals, Northern Arizona University, Flagstaff, AZ. [Panek, B. (ed.)] <https://sites.google.com/view/staccreport/access-the-reports/stacc-volume-2>

- Jacobs, LA. ... Newman, R et al (33 authors). 2025. Indigenous-Led Conservation. Ch. 7 In Status of Tribes and Climate Change Working Group (STACCCWG). (2025). *Status of Tribes and Climate Change Report*, Vol. 2, Institute for Tribal Environmental Professionals, Northern Arizona University, Flagstaff, AZ. [Panek, B. (ed.)]
<https://sites.google.com/view/staccreport/access-the-reports/stacc-volume-2>
- Ward NK, Lynch AJ, ... Newman R et al. (24 authors). 2023. Reimagining large river management using the Resist-Accept-Direct (RAD) framework in the Upper Mississippi River. *Ecological Processes*, 12, 48. <https://doi.org/10.1186/s13717-023-00460-x>. published Oct 4 2023.
- Vaughan JA, Newman R, Turell MJ. 2022. Bird species define the relationship between West Nile viremia and infectiousness to *Culex pipiens* mosquitoes. *PLOS Neglected Tropical Diseases* 16(10): e0010835. <https://doi.org/10.1371/journal.pntd.0010835>
- Lenzi J, Felege CJ, Newman R, McCann B, Ellis-Felege SN. 2022. Feral horses and bison at Theodore Roosevelt National Park (North Dakota, United States) exhibit shifts in behaviors during drone flights. *Drones* 6, 136. doi.org/10.3390/drones6060136.
- Kalinowski E, Parent C., Newman R, Boulanger J. 2022. A comparison of mixed-mode survey designs for collecting deer and fall turkey harvest data in North Dakota. *Wildlife Society Bulletin* 2022;e1304. doi.org/10.1002/wsb.1304
- Lynch, A.J., Thompson, L.M., Morton, J.M., ... Newman, R. and 12 others (alphabetically listed after 1st 3 authors). 2022. RAD adaptive management for transforming ecosystems. *Bioscience* 72: 45-56. doi.org/10.1093/biosci/biab091
- Lynch, A. J., Thompson, L. M., ... Newman, R., and 14 others (alphabetical after 1st 2 authors). 2021. Managing for RADical Ecosystem Change: Applying the Resist, Accept, or Direct (RAD) Framework. *Frontiers in Ecology and the Environment* 19:461-469. doi.org/10.1002/fee.2377
- Newman, R. 2021. Human Dimensions: Traditional Ecological Knowledge – finding a home in the Ecological Society of America. *Bulletin of the Ecological Society of America*. 102(3):e01892. <https://doi.org/10.1002/bes2.1892>
- Thompson, L. M., Lynch, A. J., Newman, R., and 14 others (alphabetical after 1st 2 authors). 2020. Responding to ecosystem transformation: resist, accept, or direct? *Fisheries* 46: 8 – 21. [doi:10.1002/fsh.10506](https://doi.org/10.1002/fsh.10506).
- Gustafson KD, Bly BL., Newman, RA. 2019. Color and pigment polymorphisms of northern leopard frogs on a prairie landscape. *Herpetological Conservation and Biology* 14(1):223–234
- Amor JM, Newman RA, Jensen WF, Walter WD, Boulanger J. 2019. Seasonal home ranges and habitat selection of three elk (*Cervus elaphus*) herds in North Dakota. *PLoS ONE* <https://doi.org/10.1371/journal.pone.0211650>.
- Black K, Jensen W, Newman R, Boulanger J. 2018. Motivations and satisfaction of North Dakota deer hunters during a temporal decline in deer populations. *Human-Wildlife Interactions* 12(3):427–443,

- McCann BE, Schmit BS, Smyser TJ, Newman R, Piaggio AJ, Malek MJ, Swafford SR, Sweitzer RA, Simmons RB. 2018. Identification of molecular population structure for feral swine in the United States. *J Wildlife Management* 82: 821-832.
- Kludt N, Kelsch S, Newman R, Rundquist B. 2017. Riparian and landscape disturbance effects on stream fish community composition in an agriculturally-dominated drainage. *Aquatic Ecosystem Health and Management* 20: 445–456.
<https://doi.org/10.1080/14634988.2017.1368831>
- Barnas A, Newman R, Felege CJ, Corcoran MP, Hervey SD, Stechmann TJ, Rockwell RF, Ellis-Felege SN. 2017. Evaluating behavioural responses of nesting lesser snow geese to unmanned aircraft surveys. *Ecology and Evolution*. DOI: [10.1002/ece3.3731](https://doi.org/10.1002/ece3.3731).
- Gustafson KD, Newman RA, Rhen TE, Tkach VV. 2017. Spatial and genetic structure of directly-transmitted parasites reflect the distribution of their specific amphibian hosts. *Population Ecology* 60: 261-273. DOI: [10.1007/s10144-018-0605-x](https://doi.org/10.1007/s10144-018-0605-x).
- Burr P, Robinson AC, Larsen RT, Newman R, Ellis-Felege S. 2017. Sharp-tailed grouse nest survival and nest predator habitat use in North Dakota’s Bakken oil field. *PLoS ONE* 12(1): e0170177.
- Gustafson KD, Newman RA. 2016. Multi-scale occupancy patterns of anurans in prairie wetlands. *Herpetologica* 72: 293-302.
- Gustafson, KD, Newman, RA, Pulis, EE, and Cabarle KC. 2015. A skeletochronological assessment of age-parasitism relationships in Wood Frogs (*Lithobates sylvaticus*). *J Herpetology* 49:122-130.

Technical Reports:

- Dec. 2024. [~~released planned for Fall 2025 or Spring 2026~~ Completed Winter 2024-25, publication cancelled for political reasons]. Climate Adaptation Strategy for America’s Fish, Wildlife, and Plants. Association of Fish and Wildlife Agencies, Washington, DC. (1 of XX co-authors). ZZ pp.
- Jan. 2023. Designing a Mixed-mode Survey for Collecting Hunter Harvest Data in North Dakota. Final report to North Dakota Game and Fish Department. Newman R, Boulanger J, and Parent C. (submitted Jan 23, 2023). 24 pp.
- Oct. 2022. Voluntary Guidance to States to Incorporate Climate Adaptation in State Wildlife Action Plans and Other Management Plans. Association of Fish and Wildlife Agencies, Washington, DC. (1 of 23 co-authors). 76 pp.
- Jan. 2021. National Fish, Wildlife, and Plants Climate Adaptation Network. 2021. Advancing the national fish, wildlife, and plants climate adaptation strategy into a new decade. Association of Fish and Wildlife Agencies, Washington, DC. (1 of 15 co-authors). 93 pp.
https://www.fishwildlife.org/application/files/4216/1161/3356/Advancing_Strategy_Report_FI_NAL.pdf

Sept 2015. Technical Report for ND Game and Fish Dept / US Fish and Wildlife Service. Diseases and parasites of North Dakota Amphibians, Final Report (prepared with M. Firkins and V. Tkach), 19 pp. <https://gf.nd.gov/publications/581>

Additional Manuscripts in prep based on completed datasets

- 1) Powers, J, Hodge, JA, Newman, R, McCann, B. in prep. Chemical immobilization as a technique for management of feral horses.
- 2) Levin, J., Huseby, J., Price, D., Ruffing, S., Newman, R. in prep. Performance of Home Range estimators for gray wolves (*Canis lupus*) on Red Lake Indian Reservation and Surrounding Areas.
- 3) Levin, J., Huseby, J., Price, D., Ruffing, S., Newman, R. in prep. Habitat selection of gray wolves (*Canis lupus*) on Red Lake Indian Reservation and Surrounding Areas.
- 4) Holm, T., Yurkonis, K., and Newman, R. in prep. Generating a land use/land cover map in the Prairie Pothole Region from high-resolution aerial photography and machine learning.
- 5) Holm, T. and Newman, R. in prep. Inferring functional connectivity for amphibians inhabiting intensively and extensively transformed agricultural landscapes.
- 6) Firkins, M, Tkach VV and Newman RA. in prep. Distribution and ecological correlates of ranavirus in amphibians in North Dakota.
- 7) Firkins, M, Tkach VV and Newman RA. in prep. Distribution and community structure of helminth parasites in North Dakota amphibians.

Presentations (since 2019)

Newman R. Inter-college collaborations in graduate education. School of Graduate Studies, University of North Dakota, Mar 2, 2026.

Newman R (organizer). Repairing the World through Buffalo Restoration on Tribal Lands. Symposium, Ecological Society of America Annual Meeting, Baltimore, MD, Aug. 12, 2025.

Newman R (co-organizer). Ecology is for Everyone. Networking Event, Ecological Society of America Annual Meeting, Baltimore, MD, Aug. 12, 2025.

Newman R (organizer). Tribal Leadership and Co-management for Sustainable Stewardship of our Natural Heritage. Symposium, Ecological Society of America Annual Meeting, Baltimore, MD Aug. 13, 2025.

Newman R. Advancing Tribal Leadership and Indigenous Knowledges in Conservation and Climate Adaptation. Tribal Leadership and Co-management for Sustainable Stewardship of our Natural Heritage. Symposium, Ecological Society of America Annual Meeting, Baltimore, MD Aug. 13, 2025.

Newman R. Why Indigenous Communities should lead Conservation Efforts. Decolonizing and Diversifying Ecology Inspire session oral presentation, Ecological Society of America Annual Meeting, Baltimore, MD Aug. 13, 2025.

Newman R. Advancing Tribal Leadership and Indigenous Knowledges in Conservation and Climate Adaptation. How to Make an Impact Symposium, Ecological Society of America Annual Meeting, Baltimore, MD, Aug. 14, 2025.

Newman R. Strategic Leadership for Ecology: Broadening Partnerships and Open Science Frontiers. Panel discussion panelist, Ecological Society of America Annual Meeting, Baltimore, MD Aug. 14, 2025.

Newman R (organizer). Supporting Indigenous Ecologists throughout their Career. Inspire session, Ecological Society of America Annual Meeting, Long Beach, CA, Aug. 7, 2024.

Newman, R (co-organizer), Ignace, D, Gazing Wolf J, Smiles D (co-organizer). Applications of Traditional Ecological Knowledge in Climate Crisis. National Adaptation Forum, St. Paul, MN, May 15, 2024.

Newman, R. Learning about Indigenous Knowledges and Tribal Climate Adaptation. In session Applications of Traditional Ecological Knowledge in Climate Crisis. National Adaptation Forum, St. Paul, MN, May 15, 2024.

Lake, FK, Newman R (co-organizers). Indigenous Knowledge and Stewardship of Portland's Urban Forests: What All Ecologists Can Learn Internationally to Locally for Developing Partnerships. Field Trip, Ecological Society of America Annual Meeting, Portland, OR, Aug. 6, 2023.

Newman R. Things I said, things they heard: Everything I know about communicating science I learned from farmers and ranchers. Joint Meeting of the Ecological Society of America and the Canadian Society for Ecology and Evolution, Montreal, Canada, Aug. 17, 2022.

Newman R (co-organizer). The Human Dimensions Series in the ESA Bulletin: Highlighting DEI Efforts from ESA Member-led Sections and Chapters. Joint Meeting of the Ecological Society of America and the Canadian Society for Ecology and Evolution, Montreal, Canada, Aug. 15, 2022.

Newman R (co-organizer). Workshop: Creating a Place for Critical Pedagogy in Ecology Education. Joint Meeting of the Ecological Society of America and the Canadian Society for Ecology and Evolution, Montreal, Canada, Aug. 18, 2022.

Newman R (organizer), Rattling Leaf J, Gazing Wolf J (co-organizers). TEK in ESA: A Change is Going to Come in the Relationship Between Indigenous Traditional Ecological Knowledges and Ecological Science. Workshop, Joint Meeting of the Ecological Society of America and the Canadian Society for Ecology and Evolution, Montreal, Canada, Aug. 15, 2022.

Newman R (organizer), Rattling Leaf J, Gazing Wolf J (co-organizers). Intentional Relationality: Braiding Knowledge Systems for Ecological Restoration, Climate Adaptation, and Environmental Justice. Symposium, Joint Meeting of the Ecological Society of America and the Canadian Society for Ecology and Evolution, Montreal, Canada, Aug. 15, 2022.

Newman R. RADical responses to ecological change in a transforming world. Invited talk at the Black Hills Area Botany and Ecology Workshop, Mar. 18, 2022.

Newman R (organizer), Rattling Leaf J, Gazing Wolf J (co-organizers). Traditional Ecological Knowledge: Connecting Past and Future, People and Place, and Ways of Knowing. Ecological Society of America annual meeting, virtual (Aug 2, 2021).

Newman R (organizer), Rattling Leaf J, Gazing Wolf J (co-organizers). Workshop: Reciprocity of Indigenous Knowledge in Ecology Education: Towards a More Inclusive Ecology. Ecological Society of America annual meeting, virtual (Aug 2, 2021).

Newman R (presenter). Special Session: Vital Connections Tribal Culture and Ecology. Ecological Society of America annual meeting, virtual (Aug. 2, 2021).

Newman R (organizer). Workshop: Telling Stories, Sharing Knowledge, and Seeing the Nature of Things: Teaching Scientific Communication in Ecology Courses. Ecological Society of America annual meeting, virtual (Aug. 3, 2021).

Newman R. Preface: Climate change is happening, but we have a strategy, right? Invited oral presentation, The Wildlife Society Annual Conference, Virtual, Oct. 1, 2020.

Newman R, Johnson M. (organizers). The National Fish, Wildlife, and Plants Climate Adaptation Network: Advancing Understanding of Climate Change Impacts and Adaptation. Symposium, The Wildlife Society Annual Conference, Virtual, Oct. 1-2, 2020.

Newman R, Holm T. Walking the tightrope in farm country: resolving landscape connectivity in the Prairie Pothole Region of North Dakota. Oral presentation, The Wildlife Society Annual Conference, Virtual, Sept 28, 2020.

Newman, R., Holm, T. Landscape connectivity on an agricultural landscape in the Prairie Pothole Region of North Dakota. Ecological Society of America, virtual. (August 3, 2020).

Newman R. Wildlife conservation on human-dominated landscapes: the importance of spatial and temporal scale. Invited oral presentation, North Dakota Chapter of The Wildlife Society, Mandan, ND. Feb. 12, 2020.

Newman R. Conservation when the train has already left the station: ecology of amphibians in changed and changing ecosystems. Invited oral presentation for symposium: Responding to Ecosystem Transformations: Resist, Accept, or Direct?. The Wildlife Society Annual Conference, Reno, NV. Sept. 30, 2019.

Newman R. The conservation map for amphibians on an intensively worked agricultural landscape. Oral presentation, Ecological Society of America Annual Conference. Louisville, KY, Aug. 2019.

Selected Research Grants:

2020-22. ND Game & Fish. Designing a mixed-mode survey for collecting small-game hunter harvest data in North Dakota. (with J. Boulanger). \$106,800.

2014 ND EPSCoR. Remote sensing / UAS applications in wildlife ecology. (Aug 2014 – July 2017, \$85,632, Newman, R (PI), Ellis-Felege, S (PI)).

2014 State Wildlife Grant, ND Game and Fish Dept / US Fish and Wildlife Service, Dept of the Interior: SWAP climate addendum- Planning for climate change: A collaborative effort to develop recommended conservation actions to meet ND fish and wildlife needs under future

climate scenarios. (July 2014-Febr 2015, \$39,885. Yurkonis, K (PI), Goodwin, B (co-PI), Newman, R (co-PI)).

2013 ND EPSCoR. Developing unmanned aircraft (UAS) for wildlife ecology studies at UND. (Sept. 2013 – Aug 2014, \$80,000. Newman, R (PI) and Ellis-Felege, S (PI)).

2012 ND EPSCoR. Environmental genetics and genomics. (Aug 2012 – June 2013, \$58,265. Rhen, T (PI), Newman, R (co-PI), Simmons, R (co-PI), Darland, D (co-PI)).

2012 State Wildlife Grant, ND Game and Fish Dept / US Fish and Wildlife Service, Dept of the Interior: Diseases and parasites of North Dakota amphibians (Apr 1, 2013-Mar 31 2015, co-PIs R Newman and V Tkach, \$50,000).

2009 USDA Forest Service: Amphibian population trends on the Sheyenne National Grassland (May 2009 – Dec. 2011, \$32,000).

2002-2005 NSF/ND-EPSCoR: RNEST Biocomplexity Cluster, Host-parasite interactions on heterogeneous and dynamic landscapes (co-PI and director, \$605,067).

2001-2005 U.S.D.A Forest Service: Leopard frog survey of Sheyenne National Grassland (\$28,000).

1998-2002 NSF CAREER grant (DEB-9733276): Environmental heterogeneity, population structure, and larval life history evolution of wood frogs on the northern Great Plains (\$315,000).

Other Grants

2024 Mellon Foundation: Expanding Digital Humanities Across Northern Plains Indigenous Higher Educational Institutions. Crystal Alberts is the UND PI. I helped write the proposal but not involved in the work itself. It is a \$1,000,000 award that will train Tribal College faculty, staff, and students in digital humanities and establish an Indigenous digital humanities certificate at UND. <https://www.mellon.org/grant-details/expanding-digital-humanities-across-northern-plains-indigenous-higher-educational-institutions-20455788>