

Dr. Brendan Reid

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Education

PhD: University of Wisconsin, WI, USA, in Wildlife Ecology

Jan 2010 - May 2015

MA: Columbia University, NY, USA, in Conservation Biology

Jan 2004 - May 2009

BA: Williams College, MA, USA, in Biology and English

Sept 1998 - May 2002

Employment History

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|------------------------------------|---|--------------|
| <i>Assistant Project Scientist</i> | UC Santa Cruz, CA, USA | 2023-present |
| <i>Postdoctoral Associate</i> | Rutgers University, NJ, USA | 2020-present |
| <i>Postdoctoral Researcher</i> | Michigan State University, MI, USA | 2018-2020 |
| <i>Adjunct Professor</i> | CUNY-Baruch College, NY, USA | 2017 |
| <i>Postdoctoral Fellow</i> | American Museum of Natural History, NY, USA | 2015-2017 |
| <i>Postdoctoral Researcher</i> | University of Wisconsin-Madison, WI, USA | 2015 |
| <i>Research Intern</i> | American Museum of Natural History, NY, USA | 2008-2009 |
| <i>Research Technician</i> | Columbia Presbyterian Medical Center, NY, USA | 2002-2008 |

Museum/Curatorial Experience

American Museum of Natural History, NY, USA (2015-2017). Worked with collections in the Herpetology Department and conducted field collections of snakes in Arizona, USA.

Philippines PIRE Project, USA and Philippines (2020-2025). Worked with extensive ichthyological collections in the Smithsonian Museum paired with contemporary collections from the Philippines.

Grants and Awards

2024- FWS Great Lakes Fish and Wildlife Recovery Act, "Using genomics to support Blanding's turtle recovery in the Great Lakes" (co-PI, \$246,000)

2024- NSF-DEB, "The Albatross Re-Collection Project for a century of genomic change in the tropics" (co-PI, \$1,302,224/3 years)

2020- RCN-ECS Temporal Genomics Working Group Grant (as collaborator, \$10,000)

2019- Black Rock Forest David Redden Conservation Grant (\$5,012)

2017- Best Dissertation Award in Wildlife Ecology, UW-Madison (\$500)

2016- Experiment.com (\$4,250, collaborator: Nathan Byer)

2015- Hatch Grant (\$112,556, PI : Zach Peery)

2015- Gerstner Fellowship, American Museum of Natural History (\$120,000/2 years)

2015- McCabe-Keith Award (\$500)

2012- Aldo Leopold Scholarship (\$1500)

2011- Ruffed Grouse Society Award (\$500)

2010- EPA STAR Fellowship (\$112,000/ 3 years)

Educational Experience

Philippines PIRE 'Omics Workshop Co-Instructor (2022, Dumaguete, Philippines)

K-12 Partnership Workshop (2018-2019, Kellogg Biological Station, MI, USA)

Career Pathways Seminar Co-Instructor (Spring 2019, Michigan State University, MI, USA)

Fundamentals of Biology Instructor (Fall 2017, CUNY - Baruch College, NY, USA)

Cold-Blooded Creatures Instructor (Summer 2016-2017, Black Rock Forest, NY, USA)

Extinction of Species/Conservation Genetics/Demographic Methods (2012-4, UW-Madison, WI, USA)

in Wildlife Ecology TA (Fall 2012, University of Wisconsin, WI, USA)

Herpetology TA (Spring 2009, Columbia University, NY, USA)

Genetics TA (Fall 2001, Williams College, MA, USA)

Peer-reviewed Publications

1. **Reid, B.N.**, Hofmeier, J., Crockett, H., Fitzpatrick, R., Waters, R., Fitzpatrick, S.W. 2025. Balancing inbreeding and outbreeding risks to inform translocations throughout the range of an imperiled darter. *Evolutionary Applications*, in press.
2. Jordan, MA, **Reid, BN**, Guinto, DJ, Anthonyamy, WJB, Davy, CM, Rhymwer, J, Marchand, M, Cross, M, Lipps, G, Lee, YM, Kingsbury, B, Willey, L, Jones, M, Mays, J, Johnson, G, Erb, L. 2024. Patterns of contemporary genetic variation and effective population size in Blanding's turtle populations. *Northeastern Naturalist* 31: e131-e150.
3. **Reid, BN**, Star, B, Pinsky, ML. 2023. Detecting parallel polygenic adaptation to novel evolutionary pressure in wild populations: a case study in Atlantic cod (*Gadus morhua*). *Philosophical Transactions of the Royal Society B* 378: 20220190.
4. Clark, R, Catalano, K, Fitz, K, Garcia, E, Jaynes, K, **Reid, B**, Sawkins, A, Snead A, Whalen, J, Pinsky, M. 2023. The practice and promise of temporal genomics for measuring evolutionary responses to global change. *Molecular Ecology Resources*.
5. Meek, MH, Beever, EA, Barbosa, S, Fitzpatrick, SW, Fletcher, NK, Mittan, CS, **Reid, BN**, Campbell-Staton, SC, Green, N, Hellmann, JJ. 2023. Understanding local adaptation to prepare populations for climate change. *BioScience* 73: 36-478
6. **Reid, BN**, Pinsky, ML. 2022. Simulation-based evaluation of methods, data types, and temporal sampling schemes for detecting recent population declines. *Integrative and Comparative Biology* 62: 1849-1863
7. **Reid, BN**, Servis, JA, Timmers, M, Rohwer, F, Naro-Maciel, E. 2022. 18S rRNA sequence data (v1-V3) of the Palmyra Atoll national Wildlife Refuge, Central Pacific. *Metabarcoding and Metagenomics* 6: 89-99.
8. Naro-Maciel, E, Ingala, MR, Werner, IE, **Reid, BN**, Fitzgerald, AM. 2022. COI amplicon sequence data of environmental DNA collected from the Bronx River Estuary, New York City. *Metabarcoding and Metagenomics* 6: 161-170.
9. Byer, NW, **Reid, BN**. 2022. The emergence of imperfect philopatry and fidelity in spatially and temporally heterogeneous environments. *Ecological Modelling* 468: 109968.
10. Espindola, S, Vazquez-Domingues, E, Nakamura, M, Osorio-Olvera, L, Martínez-Meyer, E, Myers, EA, Overcast, I, **Reid, BN**, Burbrink, FT. 2022. Complex genetic pattern and distribution limits mediated by native congeners of the worldwide invasive red-eared slider turtle. *Molecular Ecology* 31(6): 1766-1782.
11. Byer, NW, Fountain, ED, **Reid, BN**, Miller, K, Kulzer, PJ, Peery, MZ. 2021. Land use and life history constrain adaptive genetic variation and reduce the capacity for climate change adaptation in turtles. *BMC Genomics* 22(1): 1-16.
12. **Reid, BN**, Moran, RL, Kopack, CJ, Fitzpatrick, SW. 2021. Rapture-ready darters: choice of reference genome and genotyping method (whole-genome or sequence capture) influence population genomic inference in *Etheostoma*. *Molecular Ecology Resources* 21(2): 404-420.
13. Oliveira, DA, **Reid, BN**, Fitzpatrick SW. 2021. Genome-wide diversity and habitat underlie fine-scale phenotypic differentiation in the rainbow darter (*Etheostoma caeruleum*). *Evolutionary Applications* 14(2): 498-512.

14. Servis JA, **Reid BN**, Timmers MA, Stergioula V, Naro-Maciel E. 2020. Characterizing coral reef biodiversity: genetic species delimitation in brachyuran crabs of Palmyra Atoll, Central Pacific. *Mitochondrial DNA Part A*, 31(5): 178-189.
15. Byer, NW, **Reid, BN**, Peery, MZ. 2020. Genetically-informed population models improve climate change vulnerability assessments. *Landscape Ecology* 35(5): 1215-1228.
16. Byer, NW, **Reid, BN**, Thiel, RP, Peery, MZ. 2020. Strong climate associations but no temporal trends in nesting phenology for the Blanding's Turtle. *Herpetologica* 76(4): 396-402.
17. **Reid, BN**, Naro-Maciel, EN, Torres Hahn, A, FitzSimmons, NN, Gehara, M. 2019. Geography best explains patterns of genetic diversity and post-glacial co-expansion in marine turtles. *Molecular Ecology* 28(14): 3358-3370.
18. Fitzpatrick, SW, **Reid, BN**. 2019. Does gene flow aggravate or alleviate maladaptation to environmental stress in small populations? *Evolutionary Applications* 2019(12): 1402-1416.
19. Byer, NW, **Reid, BN**, Peery, MZ. 2019. Implications of slow pace-of-life for nesting behavior in an armored ectotherm. In press at *Behavioral Ecology and Sociobiology* 73(47): 1-12.
20. **Reid, BN**, Kass, JM, Wollney, S, Jensen, EL, Russello, MA, Viola, E, Pantophlet, J, Iverson, JB, Peery, MZ, Raxworthy, CJ, Naro-Maciel, E. 2019. Disentangling the genetic effects of refugial isolation and range expansion in a trans-continently distributed species. *Heredity*, 122: 441-457.
21. Byer, NW, **Reid, BN**, Seigel, RA, Peery, MZ. 2018. Applying lessons from avian ecology to herpetological research: techniques for analyzing nest survival. *Herpetological Conservation and Biology*, 13: 517-532.
22. Hamilton, CM, Bateman, BL, Gorzo, JM, **Reid BN**, Thogmartin, WE, Peery, MZ, Heglund, PJ, Radeloff, VC, and AM Pidgeon. 2018. Slow and steady wins the race? Future climate and land use change leaves the imperiled Blanding's turtle (*Emydoidea blandingii*) behind. *Biological Conservation*, 222: 75-85.
23. Garces-Restrepo, MF, Peery, MZ, **Reid, BN**, and JN Pauli. 2017. Individual reproductive strategies shape the mating system of tree sloths. *Journal of Mammalogy*, 98 (5): 1417-1425.
24. **Reid, BN**, Mladenoff, DJ, and MZ Peery. 2017. Genetic effects of landscape, habitat preference, and demography on three co-occurring turtle species. *Molecular Ecology*, 26 (3): 781-798.
25. **Reid, BN**, Thiel, RP, and MZ Peery. 2016. Linking genetic kinship and demographic analyses to characterize dispersal: methods and application to Blanding's turtle. *Journal of Heredity*, 107 (7): 603-614.
26. **Reid, BN**, Thiel, RP and MZ Peery. 2016. Population dynamics of endangered Blanding's turtles in a restored area. *Journal of Wildlife Management*, 80(3): 553-562.
27. Fountain, ED, Pauli, JN, **Reid, BN**, Palsbøll, PJ, and MZ Peery. 2016. Finding the right coverage: the impact of coverage and sequence quality on single nucleotide polymorphism genotyping error rates. *Molecular Ecology Resources*. 16(4): 966-978.
28. Naro-Maciel, E, **Reid, BN**, Alter, SE, Amato, G, Bjørndal, K, Bolten, AB, Martin, M, Nairn, CJ, Shamblin, B, and O Pineda-Catalan. 2014. From refugia to rookeries: phylogeography of Atlantic green turtles. *Journal of Experimental Marine Biology and Ecology* 461(2014): 306-316.

29. **Reid, BN** and MZ Peery. 2014. Land use patterns skew sex ratios, decrease genetic diversity, and trump the effects of recent climate change in an endangered turtle. *Diversity and Distributions* 20(12): 1425-1437.

30. Le, M, **Reid, BN**, McCord, WP, Naro-Maciel, E, Raxworthy, CJ, Amato, G, and A Georges. 2013. Resolving the phylogenetic history of the short-necked turtles, genera *Elseya* and *Myuchelys* (Testudines: Chelidae) from Australia and New Guinea. *Molecular Phylogenetics and Evolution* 68(2): 251-258.

31. Peery, MZ, Kirby, R, **Reid, BN**, Stoelting, R, Doucet-B  er, E, Robinson, S, Vasquez-Carrillo, C, Pauli, JN, and PJ Palsb  ll. 2013. More precisely biased: increasing the number of markers is not a silver bullet in genetic bottleneck testing. *Molecular Ecology* 22(13): 3451-3457.

32. Georges, A, Zhang, X, Unmack, P, **Reid, BN**, McCord, WP, and M Le. 2013. Contemporary genetic structure of an endemic freshwater turtle reflects Miocene orogenesis of New Guinea. *Biological Journal of the Linnean Society* 111(1): 192-208.

33. Peery, MZ, Kirby, R, **Reid, BN**, Stoelting, R, Doucet-B  er, E, Robinson, S, Vasquez-Carrillo, C, Pauli, JN, and PJ Palsb  ll. 2012. Reliability of genetic bottleneck tests for detecting recent population declines. *Molecular Ecology* 21(14): 3403-3418.

34. Naro-Maciel E, **Reid BN**, Holmes KE, Brumbaugh DR, Martin M, and R DeSalle. 2011. Mitochondrial DNA sequence variation in spiny lobsters: Population expansion, panmixia, and divergence. *Marine Biology*, 158(9): 2027-2041.

35. **Reid, BN**, Le, M, McCord, WP, Iverson, JB, Georges, A, Bergmann, T, Amato, G, DeSalle, R, and E Naro-Maciel. 2011. Comparing and combining distance-based and character-based approaches for barcoding turtles. *Molecular Ecology Resources*, 11(6): 956-67.

36. Naro-Maciel E, **Reid BN**, Fitzsimmons NN, Le M, Soares L, Desalle R, and G Amato. 2010. DNA barcodes for globally threatened marine turtles: a novel registry approach to documenting biodiversity. *Molecular Ecology Resources* 10(2): 252-263.

37. **Reid BN**, Ables GP, Otlivanchik OA, Schoiswohl G, Zechner R, Blaner WS, Goldberg IJ, Schwabe RF, Chua SC, and LS Huang. 2008. Hepatic overexpression of hormone-sensitive lipase and adipose triglyceride lipase promotes fatty acid oxidation, stimulates direct release of free fatty acids, and ameliorates steatosis. *Journal of Biological Chemistry* 283(19): 13087-13099.

38. Goldberg IJ, Hu Y, Noh HL, Wei J, Huggins LA, Rackmill MG, Hamai H, **Reid BN**, Blaner WS, and LS Huang. 2008. Decreased lipoprotein clearance is responsible for increased cholesterol in LDL receptor knockout mice with streptozotocin-induced diabetes. *Diabetes* 57(6): 1674-1682.

Presentations

Inferring recent demographic patterns across species with temporal genomic data. American Society of Naturalists, Pacific Grove, CA (2025).

Using historical specimens and temporal genomics to understand species and community responses to environmental change. CUNY Biology Colloquium, New York, NY (2024).

Life history and distribution influenced historical demography of Coral Triangle fishes. Western Society of Naturalists, Monterey, CA (2023).

Using historical specimens and temporal genomics to understand species and community responses to environmental change. Rutgers – Newark Department of Earth and Environmental Science Seminar, Newark, NJ (2023).

Novel genomes from Coral Triangle fishes reveal correlates of past demographic processes in the epicenter of marine biodiversity. Joint Meeting of Ichthyologists and Herpetologists (JMIH), Norfolk, VA (2023).

Detecting polygenic adaptation to novel evolutionary pressure in wild populations: a case study in Atlantic cod (*Gadus morhua*). Evolution, Albuquerque, NM (2023).

Detecting polygenic adaptation to novel evolutionary pressure in wild populations: a case study in Atlantic cod (*Gadus morhua*). American Society of Naturalists, Pacific Grove, CA (2023).

Genetics of aquatic communities through space and time. Rutgers University Graduate Program Seminar, New Brunswick, NJ (2021).

Optimizing methods and sampling strategy for the detection of recent population declines with genomic data. Evolution, online (2021).

Targeting translocations with genomic data: a case study in Arkansas darters. American Fisheries Society/The Wildlife Society Joint Conference, Reno, NV (2019).

Dynamics of additive genetic variation during population admixture in guppies. Evolution, Providence, Rhode Island (2019).

Can gene flow prevent extinction in small, maladapted populations? North American Congress for Conservation Biology, Toronto, Ontario (2018).

Don't fear the Rapture: efficient and inexpensive generation of genomic data for the Arkansas darter (*Etheostoma cragini*). JMIH, Rochester, NY (2018).

Genomic insights into evolution and introgression in mud turtles (Kinosternidae). Evolution, Portland, OR (2017).

Demographic responses to quaternary climate change at local and global scales in aquatic turtles. American Museum of Natural History Russ Gilder Graduate School Comparative Biology Seminar, New York, NY (2017).

Keeping up with a changing world, at a turtle's pace. New York Turtle and Tortoise Society Annual Meeting, Yonkers, NY (2017).

Life history, effective population size, and landscape genetics: a case study in Wisconsin turtles. North American Congress for Conservation Biology, Madison, WI (2016).

Reconciling taxonomy phylogeography, and historical demography in the widespread painted turtle. Joint Meeting of Ichthyologists and Herpetologists, New Orleans, LA (2016).

If you build it they will (slowly) come: population dynamics of endangered Blanding's turtles in a restored area. Joint Meeting of Ichthyologists and Herpetologists, Reno, NV (2015).

A tale of three turtles: conservation and genetics of wetland chelonians in Wisconsin. Wisconsin Wetland Association Annual Meeting, Madison, WI (2015).

A tale of three turtles: conservation and genetics of wetland chelonians in the Midwest. Joint Annual Meeting, Minnesota and Wisconsin Wildlife Society, Duluth, MN (2015).

Using genetic and demographic methods to characterize nesting philopatry in a long-lived turtle (*Emydoidea blandingii*). JMIH, Chattanooga, TN (2014).

Urbanization skews sex ratios, decreases genetic diversity, and trumps the effects of recent climate change in an endangered turtle. Wisconsin Ecology Symposium, Madison, WI (2014).

Comparing the effects of urban development on turtles across Wisconsin Midwest Partners in Amphibian and Reptile Conservation, Port Washington, WI (2013).

Phylogeography of Atlantic green turtles (*Chelonia mydas*): insights from multiple molecular markers. Conference on Conservation Science, New York, NY (2012).

Estimating population connectivity using kinship methods in *Emydoidea blandingii*. Poster presentation at Wisconsin Ecology Symposium, Madison, WI (2012).

Turtle crossings: conserving chelonian populations in the arboretum and beyond. University of Wisconsin Arboretum Science Day, Madison, WI (2012).

Estimating population connectivity using kinship methods in *Emydoidea blandingii*. Joint Meeting of Ichthyologists and Herpetologists, Minneapolis, MN (2011).

Assessing connectivity in two turtle species (*Chrysemys picta* and *Emydoidea blandingii*) across Wisconsin's wetlands. Wisconsin Wetlands Association Conference, Baraboo, WI (2011).

Keeping tabs on turtles: mark-recapture studies at Sandhill Wildlife Area, Wisconsin. Midwest Partners for Amphibian and Reptile Conservation Conference, Oregon, IL (2010).

Distance-based and character-based approaches to barcoding turtles. Third International Barcode of Life Conference, Mexico City, Mexico (2009).

Guest Lectures

Tropical Conservation and Environmental Science (2023-2024, University of Hawai'i Hilo)

Molecular Ecology (2023, Rutgers University)

Advanced Ecological Data Analysis (2021, Rutgers University)

Wetland Ecology and Management (2018, Kellogg Biological Station)

Biology Department Seminar (2014, University of Wisconsin-Parkside)

Wildlife Techniques (2013-2014, University of Wisconsin-Madison)

Vertebrates of Wisconsin (2013, University of Wisconsin-Madison)

Tropical Herpetology (2012-2013, University of Wisconsin-Madison)

Professional Outreach

-Symposium organizer, "Unlocking the power of genetic time series data to understand microevolutionary and ecological dynamics." American Society of Naturalists, Pacific Grove, CA (2024).

-Art x Science discussion on Atlantic cod declines and evolution, Brattleboro Museum, VT (2024).

-Online Temporal Genomics Seminar organizer (2021)

-Temporal Genomics Twitter Symposium presenter (2021)

-RCN-ECS Reading Group organizer (2022-2023)

Mentorship

- Three NSF Research Experience for Undergraduates (REU) mentees, Philippines PIRE project, 2022.
- Undergraduate research mentee, Rutgers University, 2021-2023.
- Two REUs, Kellogg Biological Station (KBS), Michigan State University (MSU), 2018-2019.
- Undergraduate Research Apprenticeship mentee, KBS, MSU, 2019.
- Mentor for MSU GRFP workshop, 2018.
- Two high school student mentees in the American Museum of Natural History's SRMP program, 2017.
- Six undergraduate student mentees at UW-Madison in lab and field techniques.

Academic service

Chair of Equity Inclusion and Diversity Committee, Society for Conservation Biology, 2022-2025
Head of Allyship Committee, Society for Conservation Biology, 2019-2022
Postdoc representative, Kellogg Biological Station, 2018-2019
PhD student representative, UW-Madison, 2012-2013

Committee member for:

Nathan Byer, PhD candidate, University of Wisconsin-Madison, 2015-2019

Reviewer for:

Amphibia-Reptilia, Aquatic Biology, Biodiversity and Conservation, Bioinformatics, Canadian Journal of Zoology, Conservation Genetics, Diversity, Ecological Applications, Evolutionary Applications, Heredity, Herpetological Conservation and Biology, Gene, Journal of Biogeography, Journal of Fish and Wildlife Management, Journal of Wildlife Management, Marine Biology, Mitochondrial DNA, Molecular Ecology, Molecular Ecology Resources, National Science Foundation, Scientific Reports, Nature Communications

Professional Affiliations

American Society of Ichthyologists and Herpetologists, American Society of Naturalists, Society for Conservation Biology