

Christopher Rota

West Virginia University

Division of Forestry and Natural Resources

Wildlife and Fisheries Resources Program

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PROFESSIONAL INTERESTS

Statistical ecology, habitat ecology, wildlife demography, population ecology, species distribution modeling, conservation biology

EDUCATION

Doctor of Philosophy, Fisheries and Wildlife Sciences May 2013

The University of Missouri, Columbia, MO

Major Advisor: Joshua Millspaugh

Committee Members: Chad Lehman, Mark Rumble, Mark Ryan, Frank Thompson III, Christopher Wikle

Dissertation Title: Not all forests are disturbed equally: Population dynamics and resource selection of Black-backed Woodpeckers in the Black Hills, South Dakota

Graduate Minor: Statistics

Master of Arts, Statistics May 2015

The University of Missouri, Columbia, MO

Major Advisor: Christopher Wikle

Committee Members: Scott Holan, Joshua Millspaugh

Project Title: A two-species occupancy model accommodating simultaneous spatial and interspecific dependence

Master of Science, Wildlife Ecology and Conservation May 2009

The University of Florida, Gainesville, FL

Major Advisor: Robert Fletcher, Jr.

Committee Members: Robert Dorazio, John Hayes

Thesis Title: Confronting assumptions of occupancy estimation and species distribution models: The problem of detectability in wildlife populations

Bachelor of Science, Wildlife Biology December 2006

The University of Montana, Missoula, MT

Graduated with High Honors

Bachelor of Arts, Environmental Studies December 2001

State University of New York, University at Buffalo, Buffalo, NY

Graduated Cum Laude

PROFESSIONAL APPOINTMENTS

- Associate Professor** August 2022 – Present
West Virginia University, Morgantown, WV
- Assistant Professor** January 2016 – August 2022
West Virginia University, Morgantown, WV
- Research Associate & Affiliate Graduate Faculty** July 2015 – December 2015
The University of Missouri, Columbia, MO
- Postdoctoral Fellow** May 2013 – July 2015
The University of Missouri, Columbia, MO
Supervisor: Joshua Millspaugh

PEER-REVIEWED PUBLICATIONS

- Chen, C., A. Granados, J.F. Brodie, R. Kays, T.J. Davies, R. Liu, J.T. Fisher, J. Ahumada, W. McShea, D. Sheil, J. Mohd-Azlan, B. Agwanda, M.H. Andrianarisoa, R.D. Appleton, R. Bitariho, S. Espinosa, M.M. Grigione, K.M. Helgen, A. Hubbard, C.M. Hurtado, P.A. Jansen, X. Jiang, A. Jones, E.L. Kalies, C. Kiebou-Opepa, X. Li, M.G.M. Lima, E. Meyer, A.B. Miller, T. Murphy, R. Piana, R.C. Quan, **C.T. Rota**, F. Rovero, F. Santos, S. Schuttler, A. Uduman, J.K. van Bommel, H. Young, and A.C. Burton. *Accepted*. Combining camera trap surveys and IUCN range maps to improve knowledge of species distributions. *Conservation Biology*. <https://doi.org/10.1111/cobi.14221>
- Bryzek, J.A., W. Veselka IV, **C.T. Rota**, and J.T. Anderson. 2023. Woody vegetation indicators vary with time since wetland restoration. *Wetlands* 43:89. <https://doi.org/10.1007/s13157-023-01735-x>
- Caylor, P.A., S.H. Augustine, and **C.T. Rota**. 2023. No effect of geolocators on apparent return rates of a declining Neotropical migrant, the Canada Warbler (*Cardellina canadensis*). *Journal of Field Ornithology* 95:5. <https://doi.org/10.5751/JFO-00276-940305>
- Tyl, R.M., **C.T. Rota**, and C.P. Lehman. 2023. Factors influencing survival of female eastern wild turkeys in northeastern South Dakota. *Wildlife Society Bulletin* 47:e1429. <https://doi.org/10.1002/wsb.1429>
- Skelly, B.P., H.L. Clipp, S.M. Landry, R. Rogers, Q. Phelps, J.T. Anderson, and **C.T. Rota**. 2023. A flexible Bayesian approach for estimating survival probabilities from age-at-harvest data. *Methods in Ecology and Evolution* 14:1061–1073. <https://doi.org/10.1111/2041-210X.14077>

- Roche, D.P., S.H. Stoleson, **C.T. Rota**, W.K. Oldland, and C.M. Lituma. 2023. Fruit parasitism and abundance of a non-native insect pest affects abundances of some songbirds. *Biological Invasions* 25:2185–2198. <https://doi.org/10.1007/s10530-023-03033-3>
- Huntsman, B., E.R. Merriam, J.T. Petty, and **C.T. Rota**. 2023. Non-native species limit stream restoration benefits for brook trout. *Restoration Ecology* 31:e13678. <https://doi.org/10.1111/rec.13678>
- Kays, R., Cove, M.V., Diaz, J., Todd, K., Bresnan, C., Snider, M., Lee, T.E., Jr., Jasper, J.G., Douglas, B., Crupi, A.P., Weiss, K.C.B., Rowe, H., Sprague, T., Schipper, J., Lepczyk, C.A., Fantle-Lepczyk, J.E., Davenport, J., Zimova, M., Farris, Z., Williamson, J., Fisher-Reid, M.C., Rezendes, D., King, S.M., Chrysafis, P., Jensen, A.J., Jachowski, D.S., King, K.C., Herrera, D.J., Moore, S., van der Merwe, M., Lombardi, J.V., Sergeyeve, M., Tewes, M.E., Horan, R.V., III, Rentz, M.S., Driver, A., Brandt, L.S.E., Nagy, C., Alexander, P., Maher, S.P., Darracq, A.K., Barr, E.G., Hess, G., Webb, S.L., Proctor, M.D., Vanek, J.P., Lafferty, D.J.R., Hubbard, T., Jiménez, J.E., McCain, C., Favreau, J., Fogarty, J., Hill, J., Hammerich, S., Gray, M., Rega-Brodsky, C.C., Durbin, C., Flaherty, E.A., Brooke, J., Coster, S.S., Lathrop, R.G., Russell, K., Bogan, D.A., Shamon, H., Rooney, B., Rockhill, A., Lonsinger, R.C., O'Mara, M.T., Compton, J.A., Barthelmess, E.L., Andy, K.E., Belant, J.L., Petroelje, T., Wehr, N.H., Beyer, D.E., Jr., Scognamillo, D.G., Schalk, C., Day, K., Ellison, C.N., Ruthven, C., Nunley, B., Fritts, S., Whittier, C.A., Neiswenter, S.A., Pelletier, R., DeGregorio, B.A., Kuprewicz, E.K., Davis, M.L., Baruzzi, C., Lashley, M.A., McDonald, B., Mason, D., Risch, D.R., Allen, M.L., Whipple, L.S., Sperry, J.H., Alexander, E., Wolff, P.J., Hagen, R.H., Mortelliti, A., Bolinjar, A., Wilson, A.M., Van Norman, S., Powell, C., Coletto, H., Schauss, M., Bontrager, H., Beasley, J., Ellis-Felege, S.N., Wehr, S.R., Giery, S.T., Pekins, C.E., LaRose, S.H., Revord, R.S., Hansen, C.P., Hansen, L., Millspaugh, J.J., Zorn, A., Gerber, B.D., Rezendes, K., Adley, J., Sevin, J., Green, A.M., Şekercioğlu, Ç.H., Pendergast, M.E., Mullen, K., Bird, T., Edelman, A.J., Romero, A., O'Neill, B.J., Schmitz, N., Vandermus, R.A., Alston, J.M., Kuhn, K.M., Hasstedt, S.C., Lesmeister, D.B., Appel, **C.T., Rota**, C., Stenglein, J.L., Anhalt-Depies, C., Nelson, C.L., Long, R.A., Remine, K.R., Jordan, M.J., Elbroch, L.M., Bergman, D., Cendejas-Zarelli, S., Sager-Fradkin, K., Conner, M., Morris, G., Parsons, E., Hernández-Yáñez, H. and McShea, W.J. 2022. SNAPSHOT USA 2020: A second coordinated national camera trap survey of the United States during the COVID-19 pandemic. *Ecology* 103: e3775.
- Ryan, M.R., B.G. Root, **C.T. Rota**, G. Ryan, M.J. Bergee, and J.J. Millspaugh. 2022. Changes in nesting habitat availability for piping plovers at the John E Williams Preserve, ND 1992 - 2021. *Natural Areas Journal* 42:278–283.
- Noe, K.L., **C.T. Rota**, M.W. Frantz, and J.T. Anderson. 2022. Restored and Natural Wetland Small Mammal Communities in West Virginia, USA. *Land* 11: 1482.

- Lehman, C.P., M.J. Yarnall, A.R. Litt, **C.T. Rota**, and J.J. Rotella. 2022. Factors influencing rate of decline in a Merriam's wild turkey population. *Journal of Wildlife Management* 86: e22240.
- Kellner, K., A.W. Parsons, R. Kays, J. Millspaugh, and **C.T. Rota**. 2022. A two-species occupancy model with a continuous-time detection process reveals spatial and temporal interactions. *Journal of Agricultural, Biological, and Environmental Statistics* 27: 321–338.
- Chen, C., J.F. Brodie, R. Kays, T.J. Davies, R. Liu, J.T. Fisher, J. Ahumada, W. McShea, D. Sheil, B. Agwanda, M.H. Andrianarisoa, R.D. Appleton, R. Bitariho, S. Espinosa, M.M. Grigione, K.M. Helgen, A. Hubbard, C.M. Hurtado, P.A. Jansen, X. Jiang, A. Jones, E.L. Kalies, C. Kiebou-Opepa, X. Li, M.G.M. Lima, E. Meyer, A.B. Miller, T. Murphy, R. Piana, R.C. Quan, **C.T. Rota**, F. Rovero, F. Santos, S. Schutler, A. Uduman, J.K. van Bommel, H. Young, and A.C. Burton. 2022. Global camera trap synthesis highlights the importance of protected areas in maintaining mammal diversity. *Conservation Letters* 15:e12865.
- Dimmig, G., **C. Rota**, P. Wood, and C. Lituma. 2022. Understory structure and heterospecifics influence occupancy of a ground-nesting species of conservation concern, the Canada Warbler. *Avian Conservation and Ecology* 17:20.
- Margenau, E.L., P.B. Wood, and **C.T. Rota**. 2022. Habitat management for stopover and breeding songbird communities along rights-of-way in forest-dominated landscapes. *Ecological Applications* 32:e2540.
- Parsons, A., K.F. Kellner, R. Kays, **C. Rota**, S. Schuttler, and J. Millspaugh. 2022. The effect of urbanization on spatiotemporal interactions between gray foxes and coyotes. *Ecosphere* 13: e3993.
- Clipp, H.L., D.J. Brown, **C.T. Rota**, and P.B. Wood. 2022. Distinct forest bird communities are strongly associated with red spruce-northern hardwood ecosystems in Central Appalachia, USA. *Ecological Indicators* 135: 108568.
- Clipp, H.L., A.L. Evans, B.E. Kessinger, K. Kellner, and **C.T. Rota**. 2021. A penalized likelihood for multi-species occupancy models improves predictions of species interactions. *Ecology* 102: e03520.
- Wright, C.A., J.T. McRoberts, **C.T. Rota**, K.H. Wiskirchen, B.J. Keller, and J.J. Millspaugh. 2021. Female white-tailed deer (*Odocoileus virginianus*) behavior during pregnancy, parturition, and lactation in two contrasting eco-regions. *Wildlife Society Bulletin* 45:430 – 444.

Cove, M.V., R. Kays, H. Bontrager, C. Bresnan, M. Lasky, T. Frerichs, R. Klann, T.E. Lee Jr., S.C. Crockett, A.P. Crupi, K.C.B. Weiss, H. Rowe, T. Sprague, J. Schipper, C. Tellez, C. A. Lepczyk, J.E. Fantle-Lepczyk, S. Lapoint, J. Williamson, M.C. Fisher-Reid, S.M. King, A.J. Bebeko, P. Chrysafis, A.J. Jensen, D.S. Jachowski, J. Sands, K.A. Maccombie, D.J. Herrera, M. Van Dermerwe, T.W. Knowles, R.V. Horan III, M.S. Rentz, L.S.E. Brandt, C. Nagy, B.T. Barton, W.C. Thompson, S.P. Maher, A.K. Darracq, G. Hess, A.W. Parsons, B. Wells, G.W. Roemer, C.J. Hernandez, M.E. Gompper, S.L. Webb, J.P. Vanek, D.J.R. Lafferty, A.M. Bergquist, T. Hubbard, T. Forrester, D. Clark, C. Cincotta, J. Favreau, A.N. Facka, M. Halbur, S. Hammerich, M. Gray, C.C. Rega-Brodsky, C. Durbin, E.A. Flaherty, J.M. Brooke, S.S. Coster, R.G. Lathrop, K. Russell, D.A. Bogan, R. Clicheé, H. Shamon, M.T.R. Hawkins, S.B. Marks, R.C. Lonsinger, M.T. OMara, J.A. Compton, M. Fowler, E.L. Barthelmess, K.E. Andy, J.L. Belant, D.E. Beyer Jr., T.M. Kautz, D.G. Scognamillo, C.M. Schalk, M.S. Leslie, S.L. Nasrallah, C.N. Ellison, C. Ruthven, S. Fritts, J. Tleimat, M. Gay, C.A. Whittier, S.A. Neiswenter, R. Pelletier, B.A. Degregorio, E.K. Kuprewicz, M.L. Davis, A. Dykstra, D.S. Mason, C. Baruzzi, M.A. Lashley, D.R. Risch, M.R. Price, M.L. Allen, L.S. Whipple, J.H. Sperry, R.H. Hagen, A. Mortelliti, B.E. Evans, C.E. Studds, A.P.K. Sirén, J. Kilborn, C. Sutherland, P. Warren, T. Fuller, N.C. Harris, N.H. Carter, E. Trout, M. Zimova, S.T. Giery, F. Iannarilli, S.D. Higdon, R.S. Revord, C.P. Hansen, J.J. Millspaugh, A. Zorn, J.F. Benson, N.H. Wehr, J.N. Solberg, B.D. Gerber, J.C. Burr, J. Sevin, A.M. Green, Ç.H. Şekercioğlu, M. Pendergast, K.A. Barnick, A.J. Edelman, J.R. Wasdin, A. Romero, B.J. O'Neill, N. Schmitz, J.M. Alston, K.M. Kuhn, D.B. Lesmeister, M.A. Linnell, C.L. Appel, **C. Rota**, J.L. Stenglein, C. Anhalt-Depies, C. Nelson, R.A. Long, K.J. Jaspers, K.R. Remine, M.J. Jordan, D. Davis, H. Hernández-Yáñez, J.Y. Zhao, and W.J. McShea. 2021. SNAPSHOT USA: the first coordinated national camera trap survey of the United States – data from 2019. *Ecology* 102: e03353.

Tyl, R.M., **C.T. Rota**, and C.P. Lehman. 2020. Factors influencing productivity of eastern wild turkeys in northeastern South Dakota. *Ecology and Evolution* 10:8838 – 8854.

Lewis, K.E., **C.T. Rota**, and J.T. Anderson. 2020. A comparison of wetland characteristics between Agricultural Conservation Easement Program and public lands wetlands in West Virginia, USA. *Ecology and Evolution* 10:3017 – 3031.

Kellner, K, R. Renken, J. Millspaugh, P. Porneluzi, A. Wolf, D. Fantz, R. Gitzen, J. Faaborg, S. Timm, S. Ehlers, M. Buchanan, J. Haslerig, A. George, and **C.T. Rota**. 2019. Effects of forest management on vertebrate communities: Synthesizing two decades of data. *Ecological Applications* 29:e01993.

Parsons, A.W., **C.T. Rota**, T. Forrester, M. Baker-Whatton, W.J. McShea, S. Schuttler, J.J. Millspaugh, and R. Kays. 2019. Urbanization focuses carnivore activity in remaining natural habitats, increasing species interactions. *Journal of Applied Ecology* 56:1894–1904.

- Lehman, C.P., **C.T. Rota**, and J.J. Millspaugh. 2019. Nutritional condition and physiological stress levels of elk in the Black Hills, South Dakota. *PeerJ* 7:e7185.
- Jensen, M.K., S. Hamburg, **C.T. Rota**, D.F. Brinker, D.L. Coles, M.A. Manske, V.A. Slabe, M.J. Stuber, A.B. Welsh, and T.E. Katzner. 2019. An improved mechanical owl for efficient capture of nesting raptors. *Journal of Raptor Research* 53:14–25.
- Lewis, K.E., **C.T. Rota**, C.M. Lituma, and J.T. Anderson. 2019. Influence of the Agricultural Conservation Easement Program wetland practices on winter occupancy of Passerellidae sparrows and avian species richness. *PLoS ONE* 14:e0210878.
- Smith, T.N., **C.T. Rota**, B.J. Keller, M.C. Chitwood, T.W. Bonnot, L.P. Hansen, and J.J. Millspaugh. 2019. Resource selection of a recently translocated elk population in Missouri. *Journal of Wildlife Management* 83:365–378.
- Rizzo, A.A., **C.T. Rota**, P.A. Thompson, D.J. Brown, and S.A. Welsh. 2018. Effects of an extreme flood event on federally endangered diamond darter abundances. *The American Midland Naturalist* 180:108-118.
- Parsons, A.W., T. Forrester, M.C. Baker-Whatton, W.J. McShea, **C.T. Rota**, S.G. Schuttler, J.J. Millspaugh, and R.W. Kays. 2018. Mammal communities are larger and more diverse in moderately developed areas. *eLife* 7:e38012.
- Lehman, C.P., **C.T. Rota**, J.D. Raithel, and J.J. Millspaugh. 2018. Pumas affect elk dynamics in absence of other large carnivores. *Journal of Wildlife Management* 82:344-353.
- Fremgen, A.L., **C.T. Rota**, C.P. Hansen, M.A. Rumble, R.S. Gamo, and J.J. Millspaugh. 2017. Male greater sage-grouse movements among leks. *Journal of Wildlife Management* 81:498-508.
- Lehman, C.P., **C.T. Rota**, M.A. Rumble, and J.J. Millspaugh. 2017. Characteristics of successful puma kill sites of elk in the Black Hills, South Dakota. *Wildlife Biology* DOI: 10.2981/wlb.00248.
- Kays, R., A.W. Parsons, M.C. Baker, E.L. Kalies, T. Forrester, R. Costello, **C.T. Rota**, J.J. Millspaugh, and W.J. McShea. 2017. Does hunting or hiking affect wildlife communities in protected areas? *Journal of Applied Ecology* 54:242-252.

- Rota, C.T.**, A.J. Wolf, R.B. Renken, R.A. Gitzen, D.K. Fantz, R.A. Montgomery, M.G. Olson, L.D. Vangilder, and J.J. Millsaugh. 2017. Long-term impacts of three forest management strategies on herpetofauna abundance in the Missouri Ozarks. *Forest Ecology and Management* 387:37–51.
- Rota, C.T.**, A.J. Wolf, R.B. Renken, R.A. Gitzen, D.K. Fantz, R.A. Montgomery, M.G. Olson, L.D. Vangilder, and J.J. Millsaugh. 2016. Simulated data and code for analysis of herpetofauna response to forest management in the Missouri Ozarks. *Data in Brief* 9:477-479.
- Rota, C.T.**, M.A.R. Ferreira, R.W. Kays, T.D. Forrester, E.L. Kalies, W.J. McShea, A.W. Parsons, and J.J. Millsaugh. 2016. A multi-species occupancy model for two or more interacting species. *Methods in Ecology and Evolution* 7:1164-1173.
- Jachowski, D.S., **C.T. Rota**, C.A. Dobony, W.M. Ford, and J.W. Edwards. 2016. Seeing the forest through the trees: Considering roost-site selection at multiple spatial scales. *PLoS ONE* 11:e0150011.
- Lehman, C.P., M.A. Rumble, **C.T. Rota**, B.J. Bird, D.T. Fogarty, G.C. Brundige, and J.J. Millsaugh. 2016. Elk resource selection at parturition sites in the Black Hills, South Dakota. *Journal of Wildlife Management* 80:465-478.
- Hutto, R.L., R.E. Keane, R.L. Sherriff, **C.T. Rota**, L.A. Eby, and V.A. Saab. 2016. Toward a more ecologically informed view of severe forest fires. *Ecosphere* 7:e01255.
- Rota, C.T.**, C.K. Wikle, R.W. Kays, T.D. Forrester, W.J. McShea, A.W. Parsons, and J.J. Millsaugh. 2016. A two-species occupancy model accommodating simultaneous spatial and interspecific dependence. *Ecology* 97:48-53.
- Rota, C.T.**, M.A. Rumble, C.P. Lehman, D.C. Kesler, and J.J. Millsaugh. 2015. Apparent foraging success reflects habitat quality in an irruptive species, the Black-backed Woodpecker. *Condor: Ornithological Applications* 117:178-191.
- Rota, C.T.**, J.J. Millsaugh, M.A. Rumble, C.P. Lehman, and D.C. Kesler. 2014. The role of wildfire, prescribed fire, and mountain pine beetle infestations on the population dynamics of black-backed woodpeckers in the Black Hills, South Dakota. *PLoS ONE* 9:e94700.
- Rota, C.T.**, M.A. Rumble, J.J. Millsaugh, C.P. Lehman, and D.C. Kesler. 2014. Space use and habitat associations of Black-backed Woodpeckers (*Picooides arcticus*) occupying recently disturbed forests in the Black Hills, South Dakota. *Forest Ecology and Management* 313:161-168.

- Rota, C.T.**, J.J. Millsbaugh, D.C. Kesler, C.P. Lehman, and M.A. Rumble. 2013. A re-evaluation of a case-control model with contaminated controls for resource selection studies. *Journal of Animal Ecology* 82:1165-1173.
- McCarthy, K.C., R.J. Fletcher, Jr., **C.T. Rota**, and R.L. Hutto. 2012. Predicting species distributions from samples collected along roadsides. *Conservation Biology* 26:68-77.
- Lehman, C.P., D.C. Kesler, **C.T. Rota**, M.A. Rumble, E.M. Seckinger, T.M. Juntti, and J.J. Millsbaugh. 2011. Netguns: A technique for capturing black-backed woodpeckers. *Journal of Field Ornithology* 82:430:435.
- Rota, C.T.**, R.J. Fletcher, J. Evans, and R.L. Hutto. 2011. Does addressing imperfect detection improve species distribution models? *Ecography* 34:659-670.
- Rota, C.T.**, R.J. Fletcher, R.M. Dorazio, and M.G. Betts. 2009. Occupancy estimation and the closure assumption. *Journal of Applied Ecology* 46:1173-1181.

BOOK CHAPTERS

- Rota, C.T.**, J.J. Millsbaugh, R.A. Gitzen, R.A. Montgomery, T.W. Bonnot, J.L. Belant, C.R. Ayers, D.C. Kesler, D.A. Eads, and C.M. Bodinof Jachowski. 2020. Chapter 14 exercises: Analysis of resource selection by animals. *In* D. Murray and B.K. Sandercock, editors. *Population Ecology in Practice*. Wiley Blackwell, Hoboken, NJ, USA. <https://media.wiley.com/product_ancillary/48/04706741/DOWNLOAD/Chapter_14.zip> Accessed March 30, 2020.
- Millsbaugh, J.J., **C.T. Rota**, R.A. Gitzen, R.A. Montgomery, T.W. Bonnot, J.L. Belant, C.R. Ayers, D.C. Kesler, D.A. Eads, and C.M. Bodinof Jachowski. 2020. Analysis of resource selection by animals. Pages 333-351 *in* D. Murray and B.K. Sandercock, editors. *Population Ecology in Practice*. Wiley Blackwell, Hoboken, NJ, USA.
- Skelly, B.P., K. Lewis, R. Tyl, G. Dimmig, and **C.T. Rota**. 2018. Occupancy models – multi-species. Pages 22-1 – 22-13 *in* E.G. Cooch and G.W. White, editors. *Program MARK: A gentle introduction, 18th edition*. <<http://www.phidot.org/software/mark/docs/book/>> Accessed December 18, 2018.
- Millsbaugh, J.J., D.C. Kesler, R.W. Kays, R.A. Gitzen, J.H. Schulz, **C.T. Rota**, C.M. Bodinof, J.L. Belant, and B.J. Keller. 2012. Wildlife radiotelemetry and remote monitoring. Pages 258-283 *in* N. Silvy, editor. *Wildlife Techniques Manual*. John Hopkins University Press, Baltimore.
- Millsbaugh, J.J., R.A. Gitzen, J.L. Belant, R.W. Kays, B.J. Keller, D.C. Kesler, **C.T. Rota**, J.H. Schulz, and C.M. Bodinof. 2012. Analysis of radiotelemetry data. Pages 480-501 *in* N. Silvy, editor. *Wildlife Techniques Manual*. John Hopkins University Press, Baltimore.

Fletcher Jr., R.J., J.S. Young, R.L. Hutto, A. Noson, and **C.T. Rota**. 2011. Insights from ecological theory on temporal dynamics and species distribution modeling. Pages 91-107 *in* C.A. Drew, Y.F. Wiersma, and F. Huettmann, editors. Predictive Species and Habitat Modeling in Landscape Ecology: Concepts and Applications. Springer, New York.

Millsbaugh, J.J., D.C. Kesler, R.W. Kays, R.A. Gitzen, J.H. Schulz, J.L. Belant, **C.T. Rota**, B.J. Keller, and C.M. Bodinof. 2010. Wildlife radio-tracking and remote monitoring. Pages 20-30 *in* K. Sivakumar and B. Babib, editors. Telemetry in Wildlife Science, ENVIS Bulletin: Wildlife & Protected Areas Vol. 13 No. 1. Wildlife Institute of India, Dehradun, India.

EXTERNAL GRANTS & CONTRACTS

USGS Climate Adaptation Science Center 2023 – 2026
Title: Projecting the Distribution of Aquatic Species of Greatest Conservation Need throughout the mid-Atlantic region
Role: Co-Principle Investigator
Amount: \$495,000

National Wild Turkey Federation 2023 – 2025
Title: Vital Rates and Population Growth of Merriam's Turkeys in South-Central South Dakota.
Role: Principle Investigator
Amount: \$62,215

West Virginia Division of Natural Resources 2023 – 2028
Title: Snowshoe Hare (*Lepus americanus*) and Appalachian Cottontail (*Sylvilagus obscurus*) Population Status and Risk Assessment to Rabbit Hemorrhagic Disease Virus Serotype 2 (RHDV2).
Role: Principle Investigator
Amount: \$237,083

West Virginia Division of Natural Resources 2023 – 2025
Title: Statistical Analysis – Wildlife Resources.
Role: Principle Investigator
Amount: \$18,057

US Fish & Wildlife Service 2023
Title: Analysis of Ohio River Islands National Wildlife Refuge Point Count Data
Role: Principle Investigator
Amount: \$2,401

- West Virginia Division of Natural Resources** 2021 – 2026
Title: Statistical Analysis – Fisheries.
Role: Principle Investigator
Amount: \$10,000
- West Virginia Division of Natural Resources** 2020 – 2024
Title: Survival, Cause-specific Mortality, Resource Selection, and Movement of White-tailed Deer (*Odocoileus virginianus*) in West Virginia.
Role: Principle Investigator
Amount: \$129,162
- Panthera** 2020 – 2021
Title: Survival, Reproductive Rates, and Den Site Selection of Bobcats (*Lynx rufus*) in the Black Hills, South Dakota.
Role: Principle Investigator
Amount: \$8,000
- West Virginia Division of Natural Resources** 2020 – 2022
Title: West Virginia Division of Natural Resources Statistical Analysis.
Role: Principle Investigator
Amount: \$15,289
- American Wildlife Conservation Foundation** 2019 – 2022
Title: Quantifying the Effects of Local Habitat Factors, Patch Size, Management Activities, and Landscape Context to Optimize Wildlife Openings for Game Bird Occupancy and Overall Avian Diversity
Role: Principle Investigator
Amount: \$1,992
- South Dakota Department of Game, Fish and Parks** 2019 – 2023
Title: Reproductive Rates, Kitten Survival, and Den Site Selection of Bobcats in the Black Hills, South Dakota
Role: Principle Investigator
Amount: \$172,418
- Nuttall Ornithological Club** 2019 – 2021
Title: Spatial Demography of Canada Warblers in the Central Appalachians
Role: Principle Investigator
Amount: \$8,157
- University of Missouri and Missouri Department of Conservation** 2017 – 2019
Title: White-tailed Deer Survival, Recruitment, and Movement Patterns in Missouri.
Role: Principle Investigator
Amount: \$49,216

- University of Missouri and Mule Deer Foundation** 2017
Title: Effects of Oil and Gas Development on Mule Deer in North Dakota
Role: Principle Investigator
Amount: \$9,689
- West Virginia Division of Natural Resources** 2016 – 2019
Title: West Virginia Division of Natural Resources Statistical Analysis
Role: Statistical Analysis Contractor
Amount: \$33,000
- South Dakota Department of Game, Fish and Parks** 2016 – 2019
Title: Survival and Reproduction of Eastern Wild Turkeys in Northeastern South Dakota
Role: Principle Investigator
Amount: \$154,376
- Natural Resources Conservation Service** 2016 – 2019
Title: Evaluating Wetland Functions and Ecosystem Services in West Virginia Wetlands
Role: Co-Principle Investigator
Amount: \$127,830
- National Wild Turkey Federation** 2016 – 2017
Title: Survival and Reproduction of Eastern Wild Turkeys in Northeastern South Dakota
Role: Principle Investigator
Amount: \$16,000
- Missouri Department of Conservation** 2015
Title: Population Demographics of a Restored Elk Population
Role: Co-Principle Investigator
Amount: \$1,500,000
- Bureau of Land Management, North Dakota Game & Fish,
Oil & Gas Research Program in North Dakota, and
Mule Deer Foundation** 2012
Title: Effects of Oil and Gas Development on Mule Deer Populations in Western
North Dakota
Role: Co-Principle Investigator
Amount: \$750,000
- South Dakota Game, Fish, & Parks Wildlife Diversity Small Grants
Program** 2012
Title: The importance of prescribed fire in creating habitat for Black-backed Woodpeckers
in the Black Hills, South Dakota
Role: Principle Investigator
Amount: \$5,000

AWARDS

- West Virginia University Division of Forestry and Natural Resources** 2022
Title: Researcher of the year
- West Virginia University Faculty Travel / Development Award** 2022
Title: Travel to International Statistical Ecology Conference in Cape Town, South Africa
Amount: \$900
- West Virginia University Division of Forestry and Natural Resources** 2020
Title: Researcher of the year
- West Virginia University, Anderson Faculty Enrichment Fund** 2020
Title: Travel to The Wildlife Society 27th Annual Conference, Louisville, KY
Amount: \$2,500
- West Virginia University Libraries** 2016 – 2022
Title: Open access author fund
Amount: \$3,845
- West Virginia University Research and Scholarship Advancement Grant** 2018
Title: Spatial Demography of Canada Warblers in the Central Appalachians
Amount: \$15,000
- West Virginia University Faculty Travel / Development Award** 2018
Title: Travel to International Statistical Ecology Conference in St. Andrews, Scotland
Amount: \$900
- Dr. David E. Samuel Faculty Excellence Award** 2017
Title: Conference Travel for 12th International Mammalogical Congress in Perth, Australia
Amount: \$3,000

GRADUATE ADVISING

PhD Students, Current

- *Madison Miller* (co-advised with Dr. Amy Welsh). Dissertation: Snowshoe Hare (*Lepus americanus*) and Appalachian Cottontail (*Sylvilagus obscurus*) Population Status and Risk Assessment to Rabbit Hemorrhagic Disease Virus Serotype 2 (RHDV2).
- *Brett Skelly*. Dissertation: Survival, Cause-specific Mortality, Habitat Selection, Movement Rates, and Population Dynamics of White-tailed Deer (*Odocoileus virginianus*) in West Virginia.

MS Students, Current

- *Luke McCray*. Thesis: Vital Rates and Population Growth of Merriam's Turkeys in South-Central South Dakota.
- *Sarah Pesi*. Thesis: Density and Home Range Size of White-tailed Deer (*Odocoileus virginianus*) in West Virginia.

PhD Students, Graduated

- *Hannah Clipp* (co-advised with Dr. Petra Wood). Dissertation: Effects of climate change and landscape-scale forest management on songbird communities, abundance, and nest success in the Appalachian Mountains.

MS Students, Graduated

- *Stephanie Augustine*. Thesis: Population and Migratory Ecology of Canada Warblers (*Cardellina canadensis*) in the Central Appalachian Mountains, West Virginia, USA.
- *Gordon Dimmig*. Thesis: Avian Occupancy Dynamics and Canada Warbler (*Cardellina canadensis*) Environmental Correlates on a Central Appalachian Elevation Gradient in West Virginia.
- *Katharine Lewis* (co-advised with Dr. James Anderson). Thesis: Wetland Characteristics and Wintering Passerellidae Occupancy on Agricultural Conservation Easement Program Wetlands in West Virginia.
- *Erin Morrison*. Thesis: Demography and Resource Selection of Bobcats (*Lynx rufus*) in the Black Hills, South Dakota.
- *Brett Skelly*. Thesis: Potential Effects of Oil and Natural Gas Development on Mule Deer (*Odocoileus hemionus*) Survival and Fawn Rearing Resource Selection.
- *Reina Tyl*. Thesis: Factors Influencing Survival, Productivity, and Population Growth of Eastern Wild Turkeys in Northeastern South Dakota.

Committee Service

- *Kirsten Belcher*, MS Student, complete (Dr. John Edwards, advisor)
- *Jessica Bryzek*, MS Student, graduated (Dr. James Anderson, advisor)
- *Sindupa DeSilva*, PhD Student (Dr. James Anderson, advisor)
- *Amber Evans*, MS Student, complete (Dr. John Edwards, advisor)
- *Laurel Glover*, MS Student (Dr. Laura Gigliotti, advisor)
- *Laura Graham*, MS Student (Dr. Christopher Lituma, advisor)
- *Sam Grinstead*, MS Student (Dr. Caroline Arantes, advisor)
- *Sneha Haridas*, PhD Student (Dr. Elizabeth Rowan, advisor)
- *Josiah Jensen*, MS Student (Dr. Patricia Mazik, advisor)
- *Eric Margenau*, PhD Student, graduated (Dr. Petra Wood, advisor)
- *Krista Noe*, MS Student, graduated (Dr. James Anderson, advisor)
- *Lucas Price*, PhD Student, graduated (Dr. John Edwards, advisor)

- *Daniel Roche*, MS Student, graduated (Dr. Christopher Lituma, advisor)
- *Robert Ryan*, PhD Student (Dr. Christopher Lituma, advisor)
- *Erin Shepta*, PhD Student (Dr. Brent Murry, advisor)
- *Sara Yanuzzi*, MS Student, graduated (Dr. James Anderson, advisor)

TEACHING

Instructor

- Introduction to Quantitative Ecology (WMAN 411, 100% responsibility)
West Virginia University, Morgantown, WV Fall Semesters, 2022 – Present
3 Credits
- Wildlife and Fisheries Techniques (WMAN 300, 50% responsibility)
West Virginia University, Morgantown, WV Fall Semesters, 2020 – 2022
4 Credits
- Wildlife and Fisheries Techniques (WMAN 300, 100% responsibility)
West Virginia University, Morgantown, WV Fall Semesters, 2016 – 2019
4 Credits
- Advanced Wildlife and Fisheries Management (WMAN 450, 50% responsibility)
West Virginia University, Morgantown, WV Spring Semesters, 2021 – Present
4 Credits
- Advanced Wildlife and Fisheries Management (WMAN 450, 66% responsibility)
West Virginia University, Morgantown, WV Spring Semesters, 2017 – 2020
4 Credits
- Advanced Wildlife and Fisheries Management (WMAN 450, 33% responsibility)
West Virginia University, Morgantown, WV Spring 2016
4 Credits
- Quantitative Ecology (WMAN 633)
West Virginia University, Morgantown, WV Spring, odd years, 2017 – Present
3 Credits
- Readings in Quantitative Ecology (WMAN 693)
West Virginia University, Morgantown, WV Spring Semesters, 2019 – 2021
1 Credit
- Introduction to Graduate Computing (WMAN 693)
West Virginia University, Morgantown, WV Fall Semesters, 2018 – 2020
1 Credit
- Independent Study (WMAN 495 & 695)
West Virginia University, Morgantown, WV Misc. Semesters, 2019 – 2023
1 Credit
- Population Dynamics and Management (FW 4500/7500)
The University of Missouri, Columbia, MO Spring 2014
3 Credits

Workshops

- Multi-species Occupancy Modeling November 2021
The Wildlife Society 28th Annual Conference, Virtual Meeting
- Multi-species Occupancy Modeling September 2020
The Wildlife Society 27th Annual Conference, Virtual Meeting
- Multi-species Occupancy Modeling October 2018
The Wildlife Society 25th Annual Conference, Cleveland, OH

Guest Lecturer

- Introduction to Bayesian Modeling (WILD 7970) Spring 2015
Auburn University, Auburn, AL

Teaching Assistant

- Population Dynamics and Management (FW 4500/7500) Spring 2012
The University of Missouri, Columbia, MO
- Ornithology Lab (BIOL 2600) Spring 2011
The University of Missouri, Columbia, MO
- Wildlife of Florida Lab (WIS 3402L) Spring 2009
The University of Florida, Gainesville, FL
- Wildlife Techniques (WIS 4645C) Spring 2009
The University of Florida, Gainesville, FL

Student Tutor

- Algebra and Pre-calculus 2005-2006
The University of Montana, Missoula, MT

INVITED PRESENTATIONS, SEMINARS, AND WORKSHOPS

† indicates presenting author if somebody other than C.T. Rota

Rota, C.T., R.A. Erickson, and M.J. Weber. 2022. Introduction to Occupancy Models. MICRA Invasive Carp Inter-basin Coordination Meeting. Tiptonville, Tennessee, USA.

Rota, C.T.. 2022. Multi-species (Species Interactions) Occupancy Modeling. Ecological Forecasting Initiative, Statistical Methods Seminar Series (virtual).

Rota, C.T., P.B. Wood, and G. Dimmig. 2018. Avian dynamics along an elevation gradient in the central Appalachians. Association of Field Ornithologists and Wilson Ornithological Society Joint Meeting, June 7 – 9, Chattanooga, TN.

- Rota, C.T.** 2017. Data analysis: occupancy and co-occurrence in program R. Workshop: The Design, Logistics and Data Use of Large Camera-Trapping Projects. 12th International Mammalogical Congress, Perth, WA, Australia.
- Rota, C.T.** 2016. Recent advances in modeling spatial and interspecific dependence with detection / non-detection data. Department of Environmental and Forest Biology Adaptive Peaks Seminar Series. State University of New York College of Environmental Science and Forestry, Syracuse, NY.
- Rota, C.T.** 2016. Recent Advances In Modeling Interspecific Interactions With Detection / Non-detection Data. Symposium: Studying species interactions from camera-trap data - analyzing the space time continuum. The Wildlife Society 23rd Annual Conference, Raleigh, NC.
- Rota, C.T.**, J.H. Schulz[†], J.J. Millspaugh, R.A. Reitz, K.D. Richkus, B. Harvey, S.L. Oldenburger, M.J. Rabe. 2016. National and state-scale attitudes and opinions of mourning dove hunters about lead (Pb) poisoning. Copper Round Table Working Group. Big Lake, MN.
- Rumble, M.[†], J. Millspaugh, S. Mohren, K. Vierling, T. Bonnot, J. Pierson, M. Schwartz, **C. Rota**, and E. Matsuer. 2015. Status of knowledge: Black-backed woodpeckers in the Black Hills. National Forest Advisory Board. Rapid City, SD.
- Rota, C.T.** 2015. The context of forest disturbance matters: differential response of Black-backed Woodpeckers to fire and mountain pine beetle infestations in the Black Hills, South Dakota. School of Forestry and Wildlife Sciences Seminar Series. Auburn University, Auburn, AL.
- Rota, C.T.** 2014. Generalizing occupancy models to account for space and interacting species. Forestry / Fisheries and Wildlife Joint Seminar Series. The University of Missouri, Columbia, MO.
- Rota, C.T.**, J.J. Millspaugh, M.A. Rumble, C.P. Lehman, and D.C. Kesler. 2014. Not all habitats are disturbed equally: Black-backed Woodpecker population dynamics in burned forests and mountain pine beetle infestations. Large Wildland Fires: Social, Political & Ecological Effects. The University of Montana, Missoula, MT.
- Rota, C.T.**, and J.J. Millspaugh. 2014. Tutorial: Resource selection functions. Symposium on Animal Movements and the Environment. North Carolina Museum of Natural Sciences, Raleigh, NC.
- Rota, C.T.**, D.C. Kesler, M.A. Rumble, C.P. Lehman, and J.J. Millspaugh. 2012. Black-backed woodpecker home range size and resource selection in habitat created by mountain pine beetle infestations in the Black Hills of South Dakota. Vertebrate Response to Bark Beetles. The University of Wyoming, Laramie, WY.

CONTRIBUTED ORAL PRESENTATIONS

* indicates student

† indicates presenting author if somebody other than C.T. Rota

Pesi, S.*†, J. Edwards, C. Ryan, and **C.T. Rota**. 2023. Estimating density of white-tailed deer in West Virginia using camera traps. The Wildlife Society 30th Annual Conference, Louisville, Kentucky, USA.

Brown, D.J.†, J. Staggs, **C.T. Rota**, M.M. Cochrane, and R.A. Moen. 2023. Diel and seasonal aquatic/terrestrial habitat selection patterns for a northern population of wood turtles. 2023 Ecological Society of America Annual Meeting, Portland, Oregon, USA.

Shepta*†, E., B. Murry, C. Arantes, **C.T. Rota**, and A. Stump. 2023. Modeling factors impeding the spawning success of invasive carp in the Ohio River. American Fisheries Society 153rd Annual Meeting, Grand Rapids, Michigan, USA.

De Silva*†, S., J.T. Anderson, J.A. Hubbart, M.P. Strager, E.A. Byers, and **C.T. Rota**. 2023. Water quality in West Virginia wetlands and their relationships with watershed land cover/ land-use practices. Society of Wetland Scientists South Atlantic Chapter meeting. Georgetown, South Carolina, USA.

Clipp, H.L.*†, P.B. Wood, and **C.T. Rota**. 2022. Potential broad-scale effects of future climate and land cover change on forest songbird distributions in the Appalachian Mountains. The Wildlife Society 29th Annual Conference, Spokane, Washington, USA.

Clipp, H.L.*†, **C.T. Rota**, and P.B. Wood. 2022. Occupancy of three game bird species in wildlife openings of the Monongahela National Forest, West Virginia. Southeastern Association of Fish and Wildlife Agencies 76th Annual Conference, Charleston, West Virginia, USA.

Clipp, H.*, A. Evans*, B. Kessinger*, K. Kellner, and **C. Rota**. 2022. A penalized likelihood for multispecies occupancy models improves predictions of species interactions. International Statistical Ecology Conference 2022, Cape Town, South Africa.

Clipp, H.L.*†, D.J. Brown, **C.T. Rota**, and P.B. Wood. 2022. Identifying forest bird communities associated with red spruce forests in the central Appalachian Mountains. North American Congress for Conservation Biology, Reno, Nevada, USA.

Augustine, S.H.*†, M.P. Strager, and **C.T. Rota**. 2022. Potential population migratory connectivity in Canada Warblers revealed by geolocator tags. American Ornithological Society (140th Stated Meeting) & BirdsCaribbean (24th Annual Meeting). San Juan, Puerto Rico.

- Clipp, H.L.*†, S. Augustine*, B. Murry, M. Campos-Cerqueira, T.M. Aide, and **C.T. Rota**. 2022. Distribution of the Pearly-eyed Thrasher and its interactions with endemic species of conservation concern in Puerto Rico. American Ornithological Society (140th Stated Meeting) & BirdsCaribbean (24th Annual Meeting). San Juan, Puerto Rico.
- Morrison, E.*†, B. Neiles, C. Lehman, and **C.T. Rota**. 2022. Den site selection of bobcats (*Lynx rufus*) in the Black Hills, South Dakota. 101st Meeting of the American Society of Mammalogists, Tucson, AZ, USA.
- De Silva, S.*†, J.A. Hubbart, M.P. Strager, E. Byers, R.E. Kellner, **C.T. Rota**, and J.T. Anderson. 2022. Influences of watershed scale stressors and local climate to wetland ecosystem health. Joint Aquatic Sciences Meeting 2022, Grand Rapids, MI, USA.
- Noe, K. *†, M.W. Frantz, **C.T. Rota**, and J.T. Anderson. 2022. Mitigated versus natural wetlands: How do small mammal communities compare? Joint Aquatic Sciences Meeting 2022, Grand Rapids, MI, USA.
- Bryzek, J. *†, **C.T. Rota**, E. Byers, W. Veselka, and J.T. Anderson. 2022. Feasibility of stem-area-at-groundline to access woody vegetation development in mitigated wetlands. Joint Aquatic Sciences Meeting 2022, Grand Rapids, MI, USA.
- Bryzek, J.A. *†, **C. Rota**, W. Veselka, E. Byers, and J.T. Anderson. 2022. Chronosequence approach to woody vegetation as an indicator of wetland mitigation restoration trajectory. National Mitigation and Ecosystem Banking Conference, Boise, ID, USA.
- De Silva, S.*†, J. Anderson, J. Hubbert, M. Strager, R. Kellner, **C. Rota**, and E. Byers. 2021. Relationships between land-use practices, geography and global climate change to wetland water quality functions. 11th INTECOL International Wetlands Conference (virtual meeting).
- Augustine, S.*†, and **C. Rota**. 2021. Demography and destination: Modeling summer survival and winter migration of Canada Warblers in the Central Appalachian Mountains. The Wildlife Society 28th Annual Conference (virtual meeting).
- Morrison, E.*†, **C. Rota**, and C. Lehman. 2021. Kitten survival and cause-specific mortality of bobcats in the Black Hills, South Dakota. The Wildlife Society 28th Annual Conference (virtual meeting).
- Price, L.E.*†, J.W. Edwards, **C.T. Rota**, S.F. Owen, A.E. Maxwell, and R.E. Rainbolt. 2021. Modeling nymph and adult black-legged tick relative abundance at Fort Drum Military Installation in New York using geographically referenced data. The Wildlife Society 28th Annual Conference (virtual meeting).

- Clipp^{*†}, H.L., **C.T. Rota**, and P.B. Wood. 2021. Managing wildlife openings to benefit game and non-game bird species in Central Appalachian forests. The Wildlife Society 28th Annual Conference (virtual meeting).
- Roche, D.P.^{*†}, S.H. Stoleson, **C.T. Rota**, W.K. Oldland, and C.M. Lituma. 2021. Response of forest birds to invasion by spotted wing Drosophila, a novel invasive fruit pest, at Allegheny National Forest. The Wildlife Society 28th Annual Conference (virtual meeting).
- Belcher, K.^{*†}, J.W. Edwards, R.E. Rogers, and **C.T. Rota**. 2020. Bobcat home range in the eastern panhandle of West Virginia. The Wildlife Society 27th Annual Conference (virtual meeting).
- White, D., Jr.[†], J. McVey, C.L. Watt, and **C.T. Rota**. 2020. Resource selection of a translocated elk population in North Carolina. 23rd Eastern Elk Management Workshop (virtual meeting).
- Rota, C.T.**, K.F. Kellner, A.W. Parsons, R. Kays, and J.J. Millsbaugh. 2020. A multi-species occupancy model with a continuous-time detection process reveals spatial and temporal interactions. virtual International Statistical Ecology Conference.
- Price, L.^{*†}, J.W. Edwards, S.F. Owen, **C.T. Rota**, and R. Rainbolt. 2019. Taking nothing for granite: wildlife usage of historic rock walls at Fort Drum Military Installation, New York. American Fisheries Society & The Wildlife Society 2019 Joint Annual Conference. Reno, NV, USA.
- Anderson, J.T.[†], S. Yannuzzi*, M. Peters, I. Gregg, and **C.T. Rota**, 2019. American Black Duck and Mallard Wintering Habitat Use in Western Pennsylvania and West Virginia. Society of Wetland Scientists 2019 Annual Meeting, Baltimore, MD, USA.
- Price, L.^{*†}, J.W. Edwards, M. Aaron, S.F. Owen, **C.T. Rota**, and R. Rainbolt. 2019. Influence of Habitat Characteristics on Nymphal Black-legged Tick Abundance at Fort Drum Military Installation, New York. 76th Annual Northeast Fish & Wildlife Conference. Groton, CT, USA.
- Price, L.^{*†}, J.W. Edwards, M. Aaron, S.F. Owen, **C.T. Rota**, and R. Rainbolt. 2019. Influence of Habitat Characteristics on Nymphal Black-legged Tick Abundance at Fort Drum Military Installation, New York. 2019 West Virginia Chapter of The Wildlife Society Conference, Morgantown, WV, USA.
- Dimmig, G.^{*†}, **C.T. Rota**, P.B. Wood, and C.M. Lituma. 2019. Spatial and Temporal Dynamics of Songbirds on a Central Appalachian Elevation Gradient. 2019 West Virginia Chapter of The Wildlife Society Conference. Morgantown, WV, USA.

- Kellner, K.*†, and **C.T. Rota**. 2018. Effects of Forest Management on Vertebrate Communities: Synthesizing Two Decades of Results From a Long-Term Study. The Wildlife Society 25th Annual Conference, Cleveland, OH.
- Dimmig, G.*†, **C.T. Rota**, P.B. Wood, and C.M. Lituma. 2018. Canada Warbler Environmental Correlates in the Central Appalachian Mountains. The Wildlife Society 25th Annual Conference, Cleveland, OH.
- Anderson, J.T.†, A. Gulette, K. Lewis, D.J. Brown, and **C.T. Rota**. 2018. Function of Agricultural Conservation Easement Program Wetlands in West Virginia. Northeast Agricultural and Biological Engineering Conference, Morgantown, WV.
- Rota, C.T.**, S.M. Landry, Q.E. Phelps, and J.T. Anderson. 2018. The best of both worlds: Combining strengths of wildlife and fisheries statistical models for estimating survival probability from age at harvest data. International Statistical Ecology Conference, St. Andrews, Scotland, UK.
- Lewis, K.*†, **C.T. Rota**, and J. Anderson. 2018. Influence of the Agricultural Conservation Easement Program and Interspecific Interactions on Winter Avian Occupancy of West Virginia Wetlands. 74th Annual Northeast Fish & Wildlife Conference, Burlington, VT.
- Lewis, K.*†, **C.T. Rota**, and J. Anderson. 2018. Wintering Sparrow Occupancy on Private Agricultural Conservation Easement Program Wetlands and Public Wetlands in West Virginia. Spring 2018 West Virginia Chapter of the Wildlife Society Conference, Morgantown, WV.
- Yannuzzi, S.*†, M. Peters, I. Gregg, **C.T. Rota**, and J.T. Anderson. 2018. Wintering American Black Duck Occupancy in Central Appalachia. Spring 2018 West Virginia Chapter of the Wildlife Society Conference, Morgantown, WV.
- Lehman, C.P.†, **C.T. Rota**, J.D. Raithel, and J.J. Millsbaugh. 2018. Pumas affect elk dynamics in the absence of other large carnivores. South Dakota Chapter of the Wildlife Society Annual Meeting, Oacoma, SD.
- Lewis, K.*†, **C.T. Rota**, and J. Anderson. 2017. Wintering Avian Occupancy on West Virginia Agricultural Conservation Easement Program Wetlands. The Wildlife Society 24th Annual Conference, Albuquerque, NM.
- Anderson, J.†, **C.T. Rota**, S.M. Landry*, S. Cua*, and H.L. Clipp*. 2016. Hunters and trappers as citizen-scientists. XVI Nordic Congress of Wildlife Research, Rovaniemi, Finland.

- Rota, C.T.**, A.J. Wolf [†], R.B. Renken, R.G. Jensen, R.A. Gitzen, R.A. Montgomery, and J.J. Millspaugh. 2016. Long-term impacts of three forest management practices on herpetofauna in the Missouri Ozarks. Central Hardwoods Forest Conference, Columbia, MO, USA.
- Wolf, A.[†], **C.T. Rota**, R.B. Renken, R.G. Jensen, R.A. Gitzen, and J.J. Millspaugh. 2016. Response of Ozark herpetofauna to different forest management practices over two decades. Missouri Natural Resources Conference, Osage Beach, MO.
- Rota, C.T.**, J.H. Schulz[†], J.J. Millspaugh, R.A. Reitz, K.D. Richkus, B. Harvey, S.L. Oldenburger, M.J. Rabe. 2016. National and state-scale attitudes and opinions of mourning dove hunters about lead (Pb) poisoning. The 76th Midwest Fish & Wildlife Conference.
- Rota, C.T.**, C.K. Wikle, R.W. Kays, T. Forrester, A. Parsons, W.J. McShea, and J.J. Millspaugh. 2015. A two-species spatial occupancy model accommodating simultaneous spatial and interspecific dependence. The 2015 Ecological Society of America Annual Meeting.
- Rota, C.T.**, E. Kalies, W. McShea, T. Forrester, R. Kays, M. Ferreira, and J.J. Millspaugh. 2014. Modeling multi-species occupancy probabilities with zero-inflated multivariate Bernoulli models: Generalizing occupancy models to ≥ 3 species. The Wildlife Society 21st Annual Conference.
- Fremgen, A.L.*[†], **C.T. Rota**, C. Hansen, M. Rumble, and J.J. Millspaugh. 2014. Use of multi-state mark-recapture models to assess male greater sage-grouse movements between leks. The Wildlife Society 21st Annual Conference.
- Fremgen, A.L.*[†], **C.T. Rota**, C. Hansen, M. Rumble, and J.J. Millspaugh. 2014. Use of multi-state mark-recapture models to assess male greater sage-grouse movements between leks. The Wildlife Society Central Mountain and Plains Section Annual Meeting.
- Rota, C.T.**, J.J. Millspaugh, M.A. Rumble, C.P. Lehman, and D.C. Kesler. 2013. The role of wildfire, prescribed fire, and mountain pine beetle infestations on the population dynamics of Black-backed Woodpeckers. The Wildlife Society 20th Annual Conference.
- Rota, C.T.**, J.J. Millspaugh, M.A. Rumble, C.P. Lehman, and D.C. Kesler. 2013. Not all habitats are disturbed equally: Black-backed Woodpecker population dynamics in burned forests and mountain pine beetle infestations. 131st Stated Meeting of the American Ornithologists' Union.
- Rota, C.T.** and J.J. Millspaugh. 2013. A Bayesian kernel density estimator for evaluating animal home range. Ecological Society of America 98th Annual Meeting. Available from Faculty of 1000 <http://f1000research.com/slides/1094274>.

- Rota, C.T.**, J.J. Millspaugh, D.C. Kesler, C.P. Lehman, M.A. Rumble, and C.M. Bodinof. 2012. A Bayesian modified case-control model for estimating absolute probability of use from use-availability data. Ecological society of America 97th Annual Meeting.
- Rota, C.T.**, D.C. Kesler, M.A. Rumble, C.P. Lehman, and J.J. Millspaugh. 2011. Do mountain pine beetle infestations provide similar foraging resources for Black-backed Woodpeckers as recently burned forests? 72nd Midwest Fish & Wildlife Conference.
- Rota, C.T.**, D.C. Kesler, M.A. Rumble, C.P. Lehman, and J.J. Millspaugh. 2011. Foraging behavior of Black-backed Woodpeckers in burned forests and mountain pine beetle infestations. 129th Stated Meeting of the American Ornithologists' Union.
- Rota, C.T.**, R.J. Fletcher Jr., J.M. Evans, and R.L. Hutto. 2010. Does addressing imperfect detection improve predictive performance of species distribution models? Ecological Society of America 95th Annual Meeting. Available from Nature Precedings <http://dx.doi.org/10.1038/npre.2010.5201.1>.
- Rota, C.T.**, R.J. Fletcher Jr., and R. Dorazio. 2008. Estimating bird detectability from single visit point count surveys. The Wildlife Society 15th Annual Conference.
- Rota, C.T.**, R.J. Fletcher Jr., and R. Dorazio. 2008. Occupancy estimation from single visit surveys. 126th Stated Meeting of the American Ornithologists' Union / Cooper Ornithological Society / Society of Canadian Ornithologists.

CONTRIBUTED POSTER PRESENTATIONS

* indicates student

† indicates presenting author if somebody other than C.T. Rota

- Miller, M.*†, M. Frantz, **C.T. Rota**, and A. Welsh. 2023. Assessing the reliability of skull measurements in identifying Appalachian cottontails and eastern cottontails using RAD-seq genomic data. The Wildlife Society 30th Annual Conference, Louisville, Kentucky, USA.
- Pesi, S.*†, B. Skelly *, J. Edwards, and **C.T. Rota**. 2022. Population Dynamics of White-tailed Deer in West Virginia. The Wildlife Society 29th Annual Conference, Spokane, Washington, USA.
- Pesi, S.*†, B. Skelly *, J. Edwards, C. Ryan, and **C.T. Rota**. 2022. Population Dynamics of White-tailed Deer (*Odocoileus virginianus*) in West Virginia. Southeastern Association of Fish and Wildlife Agencies 76th Annual Conference, Charleston, West Virginia, USA.

- Chen, C.*†, J. Brodie, R. Kays, J. Davies, R. Liu, J. Fisher, J. Ahumada, W. McShea, D. Sheil, B. Agwanda, M. Andrianarisoa, R. Appleton, R. Bitariho, S. Espinosa, M. Grigione, K.H. Helgen, A. Hubbard, C. Hurtado, P. Jansen, X. Jiang, A. Jones, E. Kalies, C. Kiebou-Opepa, X. Li, M. Lima, E. Meyer, A. Miller, T. Murphy, R. Piana, R.C.Q. Quan, **C. Rota**, F. Rovero, F. Santos, S. Schuttler, A. Uduman, J. van Bommel, H. Young, and C. Burton. 2022. Global Camera Trap Synthesis Highlights the Importance of Protected Areas in Maintaining Mammal Diversity. North American Congress for Conservation Biology, Reno, Nevada, USA.
- Clipp, H.L.*†, **C.T. Rota**, and P.B. Wood. 2021. Potential effects of climate and land cover change on forest songbirds of the Appalachian Mountains. American Ornithological Society 2022 Meeting (virtual meeting).
- Augustine, S.*†, and **C.T. Rota**. 2021. Influence of elevation on Canada Warbler population dynamics in the central Appalachian Mountains. 2021 Northeast Natural History Conference (virtual meeting).
- Augustine, S.*†, and **C.T. Rota**. 2020. Influence of elevation on Canada Warbler (*Cardellina canadensis*) population dynamics in the central Appalachian Mountains, USA. The Wildlife Society 27th Annual Conference (virtual meeting).
- Clipp, H.*†, C. Johnson, **C.T. Rota**, and P.B. Wood. 2020. Optimizing multi-species occupancy of game and non-game birds species in wildlife openings within central Appalachian forests. The Wildlife Society 27th Annual Conference (virtual meeting).
- Morrison, E.*†, **C.T. Rota**, and C. Lehman. 2020. Reproductive rates, kitten survival, and den site selection of bobcats in the Black Hills, South Dakota. The Wildlife Society 27th Annual Conference (virtual meeting).
- Evans, A.*†, J.W. Edwards, C. Ryan, **C.T. Rota**, and M.P. Strager. 2020. Examining translocation protocols of reintroduced elk herds in the eastern United States. The Wildlife Society 27th Annual Conference (virtual meeting).
- Roche, D.*†, S. Stoleson, W. Oldland, **C.T. Rota**, and C.M. Lituma. 2020. Response of forest birds to the invasive fruit pest spotted wing drosophila. Ecological Society of America 2020 Annual Meeting (virtual meeting).
- Augustine, S.*†, and **C.T. Rota**. 2020. Influence of elevation on Canada Warbler (*Cardellina canadensis*) population dynamics in the central Appalachian Mountains, USA. North American Ornithological Conference (virtual meeting).
- Clipp, H.L.*†, **C.T. Rota**, and P.B. Wood. 2020. Post-breeding bird use of wildlife openings in a heavily forested landscape. North American Ornithological Conference (virtual meeting).

- Evans, A.*†, J.W. Edwards, C. Ryan, **C.T. Rota**, and M.P. Strager. 2019. An assessment of the first two years of West Virginia's elk reintroduction program. American Fisheries Society & The Wildlife Society 2019 Joint Annual Conference. Reno, NV, USA.
- Clipp, H.L.*†, C. Johnson, **C.T. Rota**, and P.B. Wood. 2019. Optimizing multi-species occupancy of game and non-game bird species in wildlife openings within Central Appalachian forests. American Fisheries Society & The Wildlife Society 2019 Joint Annual Conference. Reno, NV, USA.
- Belcher, K.*†, J.W. Edwards, R. Rogers, **C.T. Rota**, and M.P. Strager. 2019. Spatial Ecology of Bobcats in West Virginia. American Fisheries Society & The Wildlife Society 2019 Joint Annual Conference. Reno, NV, USA.
- Anderson, J.T.†, S. Yannuzzi*, M. Peters, I. Gregg, and **C.T. Rota**. 2019. Wintering American Black Duck Time Activity Budgets and Daily Energy Expenditure. Society of Wetland Scientists 2019 Annual Meeting, Baltimore, MD, USA.
- Scheibe, A.*†, and **C.T. Rota**. 2019. Home Range of Song Sparrows Across an Urban Rural Gradient. 2019 West Virginia Chapter of The Wildlife Society Conference. Morgantown, WV, USA.
- Tyl, R.*†, **C.T. Rota**, and C.P. Lehman. 2018. Survival of Eastern Wild Turkeys in Northeastern South Dakota. The Wildlife Society 25th Annual Conference, Cleveland, OH.
- Skelly, B.P.*†, **C.T. Rota**, J.J. Millsbaugh, and J.W. Edwards. 2018. Does Oil and Gas Development Effect Female Mule Deer Rearing Resource Selection? Spring 2018 West Virginia Chapter of the Wildlife Society Conference, Morgantown, WV.
- Stollings, L.R.*†, C. Ryan, R. Tucker, and **C.T. Rota**. 2018. Utilization of Special Youth Hunt Days by Young Hunters in West Virginia. Spring 2018 West Virginia Chapter of the Wildlife Society Conference, Morgantown, WV.
- Skelly, B.P.*†, **C.T. Rota**, J.J. Millsbaugh, and J.W. Edwards. 2017. Potential effects of gas and oil development on mule deer survival. The Wildlife Society 24th Annual Conference, Albuquerque, NM.
- Stollings, L.*†, H. Warner*, D.M. Wood*, and **C.T. Rota**. 2017. Survey and analyses of current uses and needs of West Virginia natural resources police officers. The Wildlife Society 24th Annual Conference, Albuquerque, NM.
- Tyl, R.*†, **C.T. Rota**, and C.P. Lehman. 2017. Survival and reproduction of eastern wild turkeys in northeastern South Dakota. The Wildlife Society 24th Annual Conference, Albuquerque, NM.

Matejczyk, E.*†, C.M. Lituma, and **C.T. Rota**. 2017. Forest management influence on Cerulean Warbler populations in West Virginia. West Virginia University Summer Undergraduate Research Experience Poster Symposium.

Crawford, T.*†, G. Dimmig*, and **C.T. Rota**. 2017. The future of birds in the Appalachian Mountains. West Virginia University Summer Undergraduate Research Experience Poster Symposium.

Lewis, K.*†, **C.T. Rota**, and J. Anderson. 2017. Wintering Avian Occupancy and Richness in West Virginia Agricultural Conservation Easement Program Wetlands. Northeast Association of Fish and Wildlife Agencies Annual Conference.

Lewis, K.*†, **C.T. Rota**, and J. Anderson. 2017. Avian Occupancy and Richness in West Virginia Agricultural Conservation Easement Wetlands. West Virginia Chapter of the Wildlife Society Spring 2017 Meeting.

PROFESSIONAL SERVICE

Reviewer for *Science of the Total Environment*; *Methods in Ecology and Evolution*; *mSystems*; *Ecology*; *Ecography*; *Journal of Applied Ecology*; *Conservation Biology*; *Urban Forestry & Urban Greening*; *Biological Conservation*; *Ecological Applications*; *American Naturalist*; *Scientific Reports*; *Journal of Environmental Management*; *Oecologia*; *Forest Ecology and Management*; *PLoS ONE*; *Restoration Ecology*; *PeerJ*; *Ecosphere*; *Condor*; *Ornithological Applications*; *Environmental and Ecological Statistics*; *Journal of Mammalogy*; *European Journal of Wildlife Research*; *Journal of Wildlife Management*; *Ornithology*; *Ibis*; *Community Ecology*; *Wildlife Society Bulletin*; *Journal of Agricultural, Biological, and Environmental Statistics*; *Avian Conservation and Ecology*; *Journal of Field Ornithology*; *Wildlife Biology*; *The Prairie Naturalist*; *Journal of Arid Land*; *Northwestern Naturalist*

Associate Editor 2022 – Present
Journal of Wildlife Management

Vice President 2022 – Present
Mountaineer Chapter of the National Audubon Society

Book Reviewer 2022
Introduction to Statistical Modeling for Ecologists, Elsevier

Science and Analytics Committee 2018 – 2021
Wildlife Insights

Secretary 2016 – 2018
The Wildlife Society Biometrics Working Group

UNIVERSITY SERVICE

Faculty Senator West Virginia University	2021 – Present
Member, Promotion and Tenure Committee West Virginia University Division of Forestry and Natural Resources	2022 – Present
Chair, Search Committee, Assistant Professor West Virginia University Wildlife & Fisheries Resources Program	2022 – 2023
Member, Learning Assessment subcommittee West Virginia University Wildlife & Fisheries Resources Program	2023 – present
Faculty Advisor, Herpetology Club West Virginia University Wildlife & Fisheries Resources Program	2022 – 2023
Faculty Search Committee Member, USGS Co-op Unit West Virginia University Wildlife & Fisheries Resources Program	2021 – 2022
Search Committee Member, Assistant Professor West Virginia University Wildlife & Fisheries Resources Program	2021 – 2022
Student Recruitment Initiative Davis College, West Virginia University	2021 – 2022
Search Committee Member West Virginia University, Director of the Office of Undergraduate Research	2021
Diversity, Equity, and Inclusion Committee West Virginia University, Division of Forestry and Natural Resources	2020 – 2021
Office of Undergraduate Research Advisory Council West Virginia University	2018 – 2022
Ad Hoc PhD Methodologies Classes Committee West Virginia University	2020
Faculty Support Committee Member Davis College of Agriculture, Natural Resources, and Design	2017 – 2020
Faculty Advisor The Wildlife Society, West Virginia Student Chapter	2016 – 2022
Teaching Lab Coordinator West Virginia University Wildlife & Fisheries Resources Program	2016 – 2021
Faculty Search Committee Member West Virginia University Wildlife & Fisheries Resources Program	2016

GRADUATE STUDENT SERVICE

President	2010 – 2012
University of Missouri Fisheries & Wildlife Graduate Student Organization	
Organizer	2009
University of Florida Southeastern Ecology and Evolution Conference	
Coordinator	2008 – 2009
University of Florida, Eco think-tank graduate student lunches	

PROFESSIONAL DEVELOPMENT

WVU Teaching and Learning Commons Peer Support Program	2016 – 2017
Write Winning Grant Proposals Seminar	2016
West Virginia Great Teachers Seminar	2016
WVU Teaching and Learning Commons First Friday Seminar Series	2016
University of Missouri Celebration of Teaching	2013 & 2015
Preparing Future Faculty	August 2014 – May 2015
Practical Training in the use of GIS for Natural Resource Applications	2008

GRADUATE AND POSTDOCTORAL AWARDS

Travel Grant	2014
University of Missouri Postdoctoral Association	
Outstanding Graduate Student	2013
University of Missouri Graduate Student Association	
Outstanding Graduate Student	2013
University of Missouri Fisheries & Wildlife Graduate Student Organization	
Student Travel Scholarship	2012
University of Missouri Graduate Professional Council	
TransWorld Airlines Scholarship	2012
The University of Missouri	
Judy Southern Fellowship	2012
University of Missouri Department of Fisheries & Wildlife Science	
James D. Chambers Memorial Scholarship	2012
Missouri Chapter of the Wildlife Society	
Student Travel Grant	2011
University of Missouri Organization Resource Group	
Graduate Fellowship Award	2011
Missouri Chapter of the Wildlife Society	

Student Travel Grant	2010
University of Missouri Organization Resource Group	
Student Travel Grant	2008
The Wildlife Society	
Student Travel Grant	2008
University of Florida Wildlife Graduate Student Association	
Student Travel Grant	2008
University of Florida Graduate Student Council	

GRADUATE AND UNDERGRADUATE FIELD RESEARCH EXPERIENCE

Graduate Research Assistant	2009 – 2011
University of Missouri / U.S. Forest Service	
Graduate Research Assistant	2007 – 2008
University of Florida / University of Montana Avian Science Center	
Warbler Research Technician	2007
Smithsonian Institute	
Bird Song Research Assistant	2006 – 2007
University of Montana Avian Science Center	
Invasive Plant Research Technician	2006
University of Montana College of Forestry and Conservation	
Bat Research Technician	2005
University of Montana Cooperative Wildlife Research Unit	