MATTHEW J. WELDY

ECOLOGY | ANALYTICS | WILDLIFE | GEOSPATIAL

Port Townsend, WA | +1 (651) 210-8959 | MatthewJWeldy@gmail.com | ResearchGate

DURING FES ENROLLMENT

EDUCATION

2021–Present	Doctor of Philosophy in Forest Ecosystems and Society
	Oregon State University, Department of Forest Ecosystems, and Society
	Advisor: Dr. Matthew G. Betts, Dr. Damon B. Lesmeister
	GPA: 3.86

PROFESSIONAL EXPERIENCE

2021–Present	PhD Candidate
	Oregon State University
	Developing machine learning and probabilistic tools to process and analyze bioacoustics data.
2019–Present	Oak Ridge Institute for Science and Education
	USDA Forest Service, Pacific Northwest Research Station
	Developed machine learning approaches to analyze avian bioacoustics data and conducted Bayesian analysis of mark-recapture and occupancy data. Prepared analyses for peer-reviewed publication. Provided regular statistical support for lab members and external collaborators.

TEACHING

2021	Invited Tutorial
	Adams Lab
	"Amphibian audio classification"

PUBLICATIONS

Peer Reviewed

1. Darras, K. F. A., R. A. Rountree, S. L. V. Wilgenburg, … M. J. Weldy, …, C. W. Martin. *In Press*. Worldwide Soundscapes: a synthesis of passive acoustic monitoring across realms. Global Ecology and Biogeography.
2. Balvanera, S. M., O. M. Aodha, **M. J. Weldy**, H. Pringle, E. Browning, and K. E. Jones. 2025. Whombat: An open-source audio annotation tool for machine learning assisted bioacoustics. Methods in Ecology and Evolution 16:19-28. DOI: 10.1111/2041-210X.14468
3. Navine, A. K., R. J. Camp, **M. J. Weldy**, T. Denton, and P. J. Hart. 2024. Counting the chorus: A bioacoustic indicator of population density. Ecological Indicators 169: 112930.

DOI: 10.1016/j.ecolind.2024.112930

4. Barry, B., J. Holbrook, J. Vogeler, L. Elliott, **M. J. Weldy**, D. B. Lesmeister, C. W. Epps, T. W. Wilson, and K. Vierling. 2024. Using spaceborne LiDAR to reveal drivers of animal demography. Ecological Applications. Ecological Applications 34: e3048. DOI: 10.1002/eap.3048

5. Knight, E. C., T. Rhinehart, D. R. de Zwaan, **M. J. Weldy**, M. Cartwright, S. H. Hawley, J. L. Larkin, D. B. Lesmeister, E. M. Bayne, and J. Kitzes. 2024. Individual identification in acoustic recordings. Trends in Ecology and Evolution. DOI: 10.1016/j.tree.2024.05.007

6. **Weldy M. J.**, T. Denton, A. B. Fleishman, J. Tolchin, M. McKown, R. S. Spaan, Z. J. Ruff, J. M. A. Jenkins, M. G. Betts, and D. B. Lesmeister. 2024. Audio tagging of avian dawn chorus recordings in California, Oregon, and Washington. Biodiversity Data Journal 12: e118315. DOI: 10.3897/BDJ.12.e118315

7. Duarte, A., **M. J. Weldy**, D. B. Lesmeister, Z. J. Ruff, J. J. Jenkins, J. J. Valente, and M. G. Betts. 2024. Passive acoustic recorders and convolutional neural networks facilitate near real-time monitoring of marbled murrelets across forested landscapes. Ecological Indicators 162: 112016. DOI: 10.1016/j.ecolind.2024.112016

8. Navine, A. K., T. Denton, **M. J., Weldy**, and P. J. Hart. 2024. All thresholds Barred: Direct estimation of call density in bioacoustic data. Frontiers in Bird Science 3. DOI: 10.3389/fbirs.2024.1380636

9. Epps, C. W., R. S. Crowhurst, R. S. Spaan, **M. J. Weldy**, H. F. Tavalire. 2023. Influence on climate and landscape on genetic differentiation of aardvarks (*Orycteropus afer*). Diversity and Distributions 00:1-16. DOI: 10.1111/ddi.13792

10. Valente J. J., D. G. Gannon, J. Hightower, H. Kim, K. G. Leimberger, R. Macedo, J. Rousseau, **M. J. Weldy**, R. Zitomer, L. Fahrig, R. J. Fletcher Jr., J. Wu, M. G. Betts. Toward conciliation in the habitat fragmentation and biodiversity debate. 2023. Landscape Ecology 38: 2717-2730. DOI: 10.1007/s10980-023-01708-9

11. **Weldy, M. J.**, D. B. Lesmeister, C. B. Yackulic, C. L. Appel, C. McCafferty, and J. D. Wiens. 2023. Long-term monitoring in transition: Resolving spatial mismatch and integrating multistate occupancy data. Ecological Indicators 146: 109815. DOI: 10.1016/j.ecolind.2022.109815

12. Appel, C. L., D. B. Lesmeister, A. Duarte, R. J. Davis, **M. J. Weldy**, and T. Levi. *2023*. Using passive acoustic monitoring to estimate northern spotted owl landscape use and pair occupancy. Ecosphere 14(2): e4421. DOI: 10.1002/ecs2.4421

13. Painter, L. E., **M. J. Weldy**, R. S. Crowhurst, L. N. Carraway, and C. W. Epps. 2022. Landscape genetics of the camas pocket gopher (*Thomomys bulbivorus*), an endemic mammal of Oregon's Willamette Valley. Western North American Naturalist 82(3): 479–493. DOI: 10.3398/064.082.0305

14. **Weldy, M. J.,** C. W. Epps, D. B. Lesmeister. 2022. Emigration effects on estimates of age- and sex-specific survival of two sciurids. Ecology and Evolution 12: e883. DOI:

Preprint, In Review, Revisions, or Preparation

1. **Weldy**, **M. J.**, et al. *In Review*. Simulated soundscapes boost the performance of acoustic classifiers under data scarcity.
2. Anselmetto, N., **M. J. Weldy**, et al. *In Review*. An evaluation of microclimate-based distribution modelling in a multi-taxa system.
3. Tosa, M. I., **M. J. Weldy**, D. B. Lesmeister, C. W. Epps, D. J. Morin, and T. R. Levi. *In Review*. Assessing unmarked models for estimating density of small mammals using camera traps.
4. Lesmeister, D. B., C. B. Yackulic, **Weldy, M. J.**, and others. *In Prep*. Northern spotted owl occupancy dynamics across a methodological transition.
5. **Weldy, M. J.**, N. Ferrari, S. Lapp, T. Rhinehart, A. Juncosa, E. K. Knight, S. M. Balvanera, K. Kelly, T. Denton, M. G. Betts, D. B. Lesmeister, and others. Developmental guidelines for terrestrial bioacoustic programs.
6. Betts, M. G., **M. J. Weldy**, and others. *In Prep*. Post-fire recovery in the H. J. Andrews Experimental Forest.

Reports and Technical Documents

1. Lesmeister, D. B., C. L. Appel, **M. J. Weldy**, and M. Ngosi. 2024. African Elephant (*Loxodonta africana*) Abundance Estimates at Nkhotakota Wildlife Reserve, 2019–2023. USDA Forest Service, Pacific Northwest Research Station. Corvallis, OR. 14 p.
2. Duarte, A., B. Vernasco, M. J. Weldy, R. S. Spaan, and J. Ratliff. 2024. Northern Blue Mountains Wildlife Monitoring, 2022-2023. USDA Forest Service, Pacific Northwest Research Station. Olympia, WA. 36 p.
3. Lesmeister, D. B., Z. J. Ruff, **M. J. Weldy**, A. Habib, C. Gates, N. Rugg, H. Hester, and A. Chibwana. 2024. Passive acoustic monitoring in Malawi: A pilot study. Research report. USDA Forest Service, Pacific Northwest Research Station, Corvallis, OR. 151 p.
4. Lesmeister, D. B., **M. J. Weldy**, C. L. Appel, M. Ngosi, R. S. Spaan, A. Chibwana, J. Kerkering, and L. Minney. 2024. Common Warthog (*Phacochoerus africanus*) abundance estimates at Nkhotakota Wildlife Reserve, 2018–2020. Research report. USDA Forest Service, Pacific Northwest Research Station. Corvallis, OR. 12 p.
5. Lesmeister, D. B., **M. J. Weldy**, C. L. Appel, R. S. Spaan, A. Chibwana, J. Kerkering, and M. Ngosi. 2022. Eland (*Taurotragus oryx*) abundance estimates at Nkhotakota   Wildlife Reserve, 2018–2020. Research report. USDA Forest Service, Pacific Northwest Research Station. Corvallis, OR. 12 p.
6. Lesmeister, D. B., **M. J. Weldy**, C. L. Appel, R. S. Spaan, A. Chibwana, J. Kerkering, and M. Ngosi. 2022. Sable antelope (*Hippotragus niger*) abundance estimates at Nkhotakota Wildlife Reserve, 2018–2020. Research report. USDA Forest Service, Pacific Northwest

Research Station. Corvallis, OR. 12 p.

7. Lesmeister, D. B., **M. J. Weldy**, C. L. Appel, R. S. Spaan, A. Chibwana, J. Kerkering, and M. Ngosi. 2022. Greater kudu (*Tragelaphus strepsiceros*) abundance estimates at Nkhotakota Wildlife Reserve, 2018–2020. Research report. USDA Forest Service, Pacific Northwest Research Station. Corvallis, OR. 12 p.

PRESENTATIONS

1. **Weldy, M. J.**, M. G. Betts, D. B. Lesmeister, A. Duarte, and T. Denton. Using passive acoustic monitoring to estimate behavioral states and link them to conservation indicators. **Invited talk**. The Ecological Society of America Annual Meeting, Inspire Session, 2024.

2. **Weldy, M. J.,** 2024. Integrating historic northern spotted owl territory and bioacoustic data in multi-state occupancy. **Invited talk**. 2024 Annual Meeting of the Interagency Northern Spotted Owl Monitoring Program. Corvallis, OR. May 1, 2024.

3. Barry, B., J. Holbrook, J. Vogeler, L. Elliott, **M. J. Weldy**, D. B. Lesmeister, C. W. Epps, T. W. Wilson, and K. Vierling. Using spaceborne LiDAR to reveal drivers of animal demography. **Accepted talk**. The Wildlife Society Annual Meeting. November 2024.

4. Navine, A. K., T. Denton, **M. J., Weldy**, and P. J. Hart. All thresholds Barred: Direct estimation of call density in bioacoustic data. **Accepted talk**. Hawai'i Conservation Conference. July 2024.

5. **Weldy, M. J.**, A. Duarte, D. B. Lesmeister, and M. G. Betts. Discerning use and site occupancy for marbled murrelets (*Brachyramphus marmoratus*) using passive acoustic monitoring. **Poster**. Oregon Chapter of The Wildlife Society Annual Meeting, Hood River, Oregon. February 2024.

6. Duarte, A., T. Alaina, D. B. Lesmeister, J. Peterson, J. Valente, J. M. Jenkins, M. Gostin, M. Betts, **M. J. Weldy**, Z. Ruff. Exploring the use of bioacoustic surveys to detect marbled murrelets in forest habitats. **Accepted talk**. The Wildlife Society Annual Meeting. November 2023.

7. Lesmeister, D. B., R. Davis, J. Jenkins, Z. Ruff, C. Appel, **M. J. Weldy**, S. Gremel, J. Swingle, A. Thomas. A new phase of northern spotted owl population monitoring. **Accepted talk**. The Wildlife Society Annual Meeting. November 2023.

8. **Weldy, M. J.,** 2023. Integrating historic northern spotted owl territory and bioacoustic data in multi-state occupancy. **Invited talk**. 2023 Annual Meeting of the Interagency Northern Spotted Owl Monitoring Program. Corvallis, OR. May 1, 2023.

9. Epps, C. W., R. S. Crowhurst, R. S. Spaan, **M. J. Weldy**, H. F. Tavalire. Influence of climate and landscape on genetic differentiation of aardvarks (*Orycteropus afer*). **Accepted talk**. ICCB. 2023.

10. Anselmetto, N., M. G. Betts, **M. J. Weldy**, M. Tosa, J. LaManna, H. Kim, D. B. Lesmeister, C. Epps, D. Bell, M. Schulze, C. Daly, and M. Garbarino. Assessing spatiotemporal resolution of variables in landscape-scale species distribution models. **Accepted talk**. EGU General Assembly. 2023.

11. ***Weldy, M. J.**, D. B. Lesmeister, C. B. Yackulic, C. L. Appel, C. McCafferty, and J. D. Wiens. Long-term monitoring in transition: Resolving spatial mismatch and integrating multistate occupancy data. **Accepted talk**. The Wildlife Society Annual Meeting. November 2022.

12. Appel, C., D. Lesmeister, A. Duarte, R. Davis, **M. J. Weldy**, and T. Levi. Estimating occupancy and pair status of Northern Spotted Owls using passive acoustic monitoring. **Accepted talk**. The Wildlife Society Annual Meeting, Spokane, WA. November 2022.

13. **Weldy, M. J.***, D. B. Lesmeister, C. B. Yackulic, C. L. Appel, C. McCafferty, and J. D. Wiens. Bioacoustic applications. **Invited talk**. 2022 All Hands Bioacoustic Meeting, Corvallis, Oregon. March 2022.

14. Appel, C. L., D. B. Lesmeister, T. Levi, R. J. Davis, **M. J. Weldy**, and A. Duarte. Estimating occupancy and pair status of Northern Spotted Owls using passive acoustic monitoring. **Invited talk**. 19th Annual Research Advances in Fisheries, Wildlife, and Ecology Symposium, Corvallis, Oregon. February 2022.

15. Appel, C. L., D. B. Lesmeister, T. Levi, R. J. Davis, **M. J. Weldy**, and A. Duarte. Estimating occupancy and pair status of Northern Spotted Owls using passive acoustic monitoring. **Accepted talk**. Oregon Chapter of The Wildlife Society Annual Meeting, Newport, Oregon. February 2022.

16. ***Weldy, M. J.**, C. W. Epps, D. B. Lesmeister. Survival and emigration of two small mammal species. **Accepted talk**. The Wildlife Society Annual Meeting, virtual. November 2021.

MEDIA

Interviews, podcasts, and science communication

1. Oregon State University. 2024. Artificial intelligence enhances monitoring of threatened marbled murrelet Available: https://www.sciencedaily.com/releases/2024/05/240502113710.htm Topic: Highlighting research (Publication: 2) on the use of AI to monitor marbled murrelet terrestrial habitat use.

AWARDS AND SCHOLARSHIPS

1. Ph. D. Student Achievement Award. College of Forestry, Oregon State University. 2023.
2. Jack & Lila Saubert Scholarship. College of Forestry, Oregon State University. 2023. $2000
3. Arnold and Vera Meier Forestry Education Scholarship. College of Forestry, Oregon State University. 2023. $2000

PRIOR TO FES ENROLLMENT

EDUCATION

2015–2018	Master of Science in Wildlife Science
	Oregon State University, Department of Fisheries and Wildlife
	Advisor: Dr. Clinton W. Epps
	GPA: 3.86
	    Weldy, M. J. 2018. Spatiotemporal associations of abundance and vital rates of co-occurring small mammals in a late successional forest (Master's Thesis).
	    ScholarsArchive@OSU.

2012–2013	Geographic Information Systems Certificate California State University, Fresno GPA 3.75
2004–2009	Bachelor of Science in Plant Biology University of Minnesota, College of Biological Sciences GPA 3.47

PROFESSIONAL EXPERIENCE

2019–Present	Oak Ridge Institute for Science and Education USDA Forest Service, Pacific Northwest Research Station Developed machine learning approaches to analyze avian bioacoustics data and conducted Bayesian analysis of mark-recapture and occupancy data. Prepared analyses for peer-reviewed publication. Provided regular statistical support for lab members and external collaborators.
2018–2019	Faculty Research Assistant Oregon State University Analyzed mark-recapture, species distribution, and landscape genetics data and prepared manuscripts for peer-reviewed publication. Provided regular statistical support for lab members.
2013–2019	Independent Environmental Consultant Supported environmental impacts assessments for a range of private and utility projects.
2015–2018	Master's Student Oregon State University Conducted 3 years of small mammal live-trapping, field crew supervision, analyzed mark-recapture data, and prepared manuscripts for peer-reviewed publication.

2014–2015	Lidar Technician, Quantum Spatial Edited LiDAR point clouds for classification errors in support of ground and bathymetric model development.
2015	Avian Point Count Technician, National Council for Air and Stream Improvement Conducted visual and auditory identification of Oregon Coast Range forest birds.
2012–2013	Field Contact Representative Applied Biological Consulting LLC. Supervised monitoring of biological and environmental compliance with federal mitigation requirements in support of public utility developments.
2012	Desert Tortoise Authorized Biologist Applied Biological Consulting LLC. Monitored biological and environmental compliance with federal mitigation requirements in support of public utility developments.
2011	Desert Tortoise Authorized Biologist Southern Nevada Environmental Inc. Monitored biological and environmental compliance with federal mitigation requirements in support of public utility developments.
2010	Biotech Student Conservation Association National Park Service Conducted field work in support of multiple projects including habitat restoration, invasive plant management, hydrological monitoring, wildlife radio telemetry, reptile capture, audio monitoring.

TEACHING

2021	Invited Tutorial Research Advances in Fisheries, Wildlife, and Ecology Symposium "Reproducible analysis in R"
2020	Invited Tutorial Lesmeister Lab "Introducing Git, GitHub, and RStudio"
2015–2018	Instructor Mammalogy, Oregon State University FW 317

	Online Mammalogy instructor
2018–2019	Teaching Assistant
	Mammalogy, Oregon State University FW 317
	Teaching Mammalogy

PUBLICATIONS

Peer Reviewed

1. Milward L. S., T. M. Wilson, **M. J. Weldy**, M. M. Rowland, A. Duarte, D. B. Lesmeister, and W. J. Ripple. 2022. Small mammal relative abundance within riparian ecosystems of the Blue Mountains. Forest Ecology and Management 505: 119899. DOI: 10.1016/j.foreco.2021.119899

2. Epps, C. W., V. M. Petro, T. G. Creech, R. S. Crowhurst, **M. J. Weldy**, and J. D. Taylor. 2021. Landscape genetics of American beaver in Coastal Oregon. Journal of Wildlife Management 85: 1462–1475. DOI: 10.1002/jwmg.22102

3. Epps, C. W., **M. J. Weldy**, R. S. Crowhurst, and R. S. Spaan. 2021. Estimating the distribution and habitat suitability of aardvarks (*Orycteropus afer*) in Kruger National Park, South Africa. African Journal of Ecology 59: 854–865. DOI: 10.1111/aje.12916

4. **Weldy, M. J.**, C. W. Epps, D. B. Lesmeister, T. Manning, and E. D. Forsman. 2020. Spatio-temporal dynamics in vital rates of Humboldt's Flying Squirrels and Townsend's Chipmunks in late successional forests. Journal of Mammalogy 101: 187–198. DOI: 10.1093/jmammal/gyz204

5. **Weldy, M. J.**, T. M. Wilson, D. B. Lesmeister, and C. W. Epps. 2019. Effects of trapping effort and trap placement on estimating abundance of Humboldt's Flying Squirrels. PeerJ 7: e7783. DOI: 10.7717/peerj.7783

6. **Weldy, M. J.**, C. W. Epps, D. B. Lesmeister, T. Manning, M. A. Linnell, and E. D. Forsman. 2019. Abundance and ecological associations of small mammals. Journal of Wildlife Management 83: 902–915. DOI: 10.1002/jwmg.21641

Preprint, In Review, Revisions, or Preparation

1. Spaan, R. S., C. W. Epps, **M. J. Weldy**, C. M. Aiello, D. G. Whittaker, M. Cox, and A. Duarte. *In Prep*. Spatial, temporal, and sexual variation in habitat use, resource selection, and site fidelity of bighorn sheep (*Ovis canadensis*): implications for metapopulation-level restoration and maintenance.

2. Spaan, R. S., C. W. Epps, R. S. Crowhurst, D. G. Whittaker, J. D. Burco, M. Cox, A. Duarte, and **M. J. Weldy**. *In Prep*. Assessment of adult bighorn sheep (*Ovis canadensis*) survival in southeastern Oregon and northern Nevada.

3. **Weldy**, **M. J.**, et al. *In Prep*. Differentiating between marbled murrelet (*Brachyramphus marmoratus*) occupancy and use by acoustic cues.

4. **Weldy**, **M. J.**, et al. *In Prep*. Multilabel classification and error analysis for dawn-chorus recordings in Oregon and Washington
5. **Weldy**, **M. J.**, et al. *In Prep*. Acoustic-based individual identify of Northern Spotted Owls (*Strix occidentalis caurina*) and its demographic applications.

Reports and Technical Documents

1. Lesmeister, D. B., C. L. Appel, A. Chibwana, J. Kerkering, and **M. J. Weldy**. 2022. African buffalo (*Syncerus caffer*) abundance estimates at Nkhotakota Wildlife Reserve, 2018–2020. Research report. USDA Forest Service, Pacific Northwest Research Station. Corvallis, OR. 12 p.
2. Lesmeister, D. B., C. L. Appel, A. Chibwana, R. J. Davis, A. Gaylard, S. Kamoto, J. Kazembe, J. Kerkering, M. Ngosi, D. Robertson, Z. J. Ruff, **M. J. Weldy**. 2021. African elephant (*Loxodonta africana*) abundance estimates at Nkhotakota Wildlife Reserve, 2018-2020. Research report. USDA Forest Service, Pacific Northwest Research Station. Corvallis, OR. 6 p.
3. **Weldy, M. J**. 2020. Desert tortoise occupancy on the Boulder City Conservation Easement: Data Management Plan. Unpublished report to Bio-Logical, LLC.
4. Hyde, T., and **M. J. Weldy**. 2019. Desert tortoise pre-project survey report for the Iron Age Mine Road improvement project. Unpublished report to First Carbon Solutions.
5. *Weldy, M. J*. 2017. Letter report for San Bernardino flying squirrel (*Glaucomys sabrinus californicus*) habitat assessment for the high trails outdoor school project in Angelus Oaks, San Bernardino County, California. Unpublished report to First Carbon Solutions.
6. **Weldy, M. J.**, T. A. Miller, S. R. Wood, M. Strager, and T. Katzner. 2014. Using public data and satellite imagery to construct natural resource management databases: wind turbine installations in Nevada and California. Energy.

PRESENTATIONS

1. *****Millward, L. S., T. M. Wilson, **M. J. Weldy**, M. M. Rowland, A. Duarte, D. B. Lesmeister, and W. J. Ripple. Habitat associations of small mammals in riparian ecosystems in the Blue Mountains, Eastern Oregon. **Accepted talk**. The Wildlife Society Annual Meeting, virtual. September 2020.
2. Epps, C. W., R. Crowhurst, R. Spaan, H. Tavalire, and **M. J. Weldy**. Noninvasive genetics to illuminate landscape connectivity and phylogeographic history of aardvarks. **Accepted talk**. Symposium: "The genes among us: molecular methods for species monitoring and biodiversity surveys in aquatic and terrestrial ecosystems". The Wildlife Society and American Fisheries Society Joint Annual Meeting, Reno, Nevada. September 2019.

3. Wilson, T. M., **M. J. Weldy**, C. W. Epps, and D. B. Lesmeister. Evaluation of trapping duration and trap placement for estimating Humboldt flying squirrel abundance in the Pacific Northwest. **Poster**. Oregon Chapter of The Wildlife Society Annual Meeting, Bend, Oregon. February 2019.
4. ***Weldy, M. J.** Spatiotemporal associations of co-occurring small mammal abundance in a late successional forest. **Poster**. H. J. Andrews Annual Meeting, Corvallis, Oregon. June 2018.
5. ***Weldy, M. J.**, C. W. Epps, and D. B. Lesmeister. 2017. Abundance and survival of northern flying squirrels in late-successional forests in the Central Oregon Cascades. **Poster**. American Society of Mammalogists Annual Meeting, Manhattan, Kansas. June 2018.
6. ***Weldy, M. J.** Abundance and effects of habitat on demographic processes of northern flying squirrels in late successional forests in the central Oregon Cascades. **Accepted Talk**. The Oregon Wildlife Society Annual Meeting, Pendleton, Oregon. February 2017.
7. ***Weldy, M. J.**, T. Miller, S. R. Wood, M. Strager, and T. Katzner. Using public data and satellite imagery to construct natural resource management databases: wind turbine installations in Nevada and California. **Poster**. The Western Section of The Wildlife Society Annual Meeting, Reno, Nevada. January 2014.

* Indicates presentations where I was the presenter

PEER REVIEWER
Diversity and Distributions
Ecology and Evolution
Ecological Indicators
Journal of Mammalogy
Journal of Wildlife Management
Landscape Ecology
Northwest Science
PLOS ONE
Wildlife Society Bulletin

SERVICE

2019	Letter of support for the Promotion and Tenure Committee Oregon State University Department of Fisheries and Wildlife
2019	Letter of support for the Promotion and Tenure Committee Oregon State University School of Electrical Engineering and Computer Science
2017	Graduate student mentorship program Oregon State University Department of Fisheries and Wildlife

PROFESSIONAL WORKSHOPS

2022	Introduction to Bayesian networks O. Woodberry
2019	Bayesian integrated population modelling using JAGS M. Schaub, F. Abadi, M. Kery
2014	Certified Erosion and Sediment Control Lead in OR and WA
2014	Wildlife Necropsy Workshop The Wildlife Society
2014	Bird Banding and Mist Netting Rocky Point Bird Observatory

ADDITIONAL RESEARCH AFFILIATIONS

GIS Research Technician, Dr. Todd Katzner, West Virginia University, 2014

SKILLS

Basic Maintenance Skills: soldering, small engine maintenance, basic car maintenance

Programming languages: R, Python, Julia, BUGS (JAGS, MultiBUGS), Stan, Pytorch, Keras, Tensorflow, Jax

Software: Microsoft Office, ArcGIS, QGIS, MicroStation

Project Management: daily oversight, scheduling, and training

Reporting: NEPA, SWPP, CEQA, OSHA, ESA

Resource mapping: biological, and aquatic

Equipment: 4WD, ATV, OHV Operation small machinery