

Viorel D. Popescu, PhD

Columbia University

Ecology, Evolution and Environmental Biology (E3B)

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PROFILE

I am a quantitative conservation scientist with a background in ecology, geography and environmental sciences. I bring 15+ years of experience in leading collaborative conservation science projects, transposing science to practice, conservation education and outreach, facilitation and leadership, forged in the academic and NGO sectors in North America and Europe. My expertise draws on systematic conservation planning and animal population ecology and crosses discipline boundaries with the ultimate goal to identify conservation strategies and priorities to stop and reverse current biodiversity loss.

QUALIFICATIONS

Systematic conservation planning: proficient with multi-objective planning algorithms (e.g., Zonation, Marxan) and spatial ecology in program R and ArcGIS, R programming routines for handling large spatial datasets; co-developed spatial planning scenarios examining tradeoffs between renewable energy and biodiversity conservation in British Columbia; identified conservation priorities and protected area coverage for various taxa in Europe and USA

Expert knowledge elicitation and facilitation of multi-stakeholder groups (government, First Nations, industry, NGO, utility companies) for development of spatial decision-support tools for renewable energy planning and biodiversity conservation in Canada

Biostatistics and ecological data: proficient in occupancy, spatial capture-recapture and species distribution modeling, population viability analysis in program R; developed protocols for monitoring animal populations at broad spatial scales for USFS.

Supervising and management: supervised and mentored 10 graduate students, 3 postdocs and 30+ undergraduates working on conservation and ecology projects (often simultaneously in US, Romania and Canada)

Grant funding: co-developed projects and was awarded and managed >2 million USD in state, Federal and international grant funding for collaborative conservation projects in Europe, USA, Canada and China; engaged with donors and grant-making organizations

Academic research and output: author/co-author of 60 scientific papers (including ~20 focused on animal spatial ecology and systematic conservation planning), 1 textbook and several book chapters on spatial ecology; web-based tool for renewable energy and conservation planning in British Columbia

Knowledge transfer and scientific support: science advisor and facilitator for several LIFE NATURE biodiversity conservation projects in Romania (2012-present); facilitated knowledge transfer to state (OH and IN DNR, OH DOT, NYSDEC, BC Ministry of Environment) and Federal (USFS) agencies, utility companies (BC Hydro), NGO (Flora and Fauna Intl, WWF, Pacific Salmon Foundation) and academia (Chinese Academy of Sciences, University of Bucharest)

Outreach and communication: proficient in communicating science to broad audiences, popular science writing, media interviews

PROFESSIONAL APPOINTMENTS

2023 – Present: **Associate Research Scientist**, Columbia University, E3B

2021 – 2023: **Associate Professor**, Ohio University, Biological Sciences, Athens, USA

2016 – 2021: **Assistant Professor**, Ohio University, Biological Sciences, Athens, USA

2012 – Present: **Research Associate**, University of Bucharest, Romania

2012 – 2015: **David H. Smith Conservation Research Fellow**, Simon Fraser U & UC Santa Cruz

2011 – 2012: **Postdoctoral Researcher**, UC Berkeley

2000 – 2008: **Research Assistant**, University of Bucharest, Romania

EDUCATION

2007 - 2011 **PhD Wildlife Ecology**
University of Maine, Orono, ME, USA

2005 - 2007 **MSc Conservation Biology**
SUNY-ESF, Syracuse, NY, USA

1996 - 2001 **BSc Environmental Science**
University of Bucharest, Romania

FELLOWSHIPS

2024: **Research Fellow**, President's International Fellows Initiative, Chinese Academy of Sciences

2012 – 2014: **David H. Smith Conservation Research Fellowship**, Society for Conservation Biology and Cedar Tree Foundation

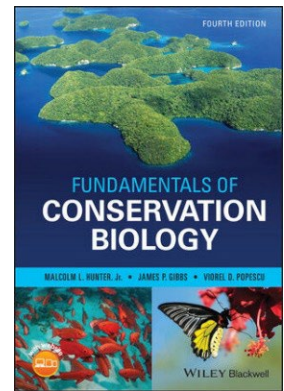
2010 – 2011: **Maine Economic Improvement Fund Doctoral Fellowship**, University of Maine

2005 – 2007: **Fulbright Scholarship**, U.S. Department of State, SUNY-ESF, Syracuse

RESEARCH OUTPUT (selection)

Books and book chapters

1. Hunter, M.L., J.P. Gibbs, and V.D. Popescu (2021) **Fundamentals of Conservation Biology, 4th edition, Wiley**
2. Böhm, M., and Popescu, V.D. (2016) *Landscape ecology, macroecology and GIS methods*. Pages 298-314 In C.K. Dodd (ed.) *Reptile Ecology and Conservation*, Oxford University Press
3. Popescu, V.D. and M.L. Hunter (2012) *Assisted colonization of wildlife species at risk from climate change*. In J. Brodie, E. Post, D. Doak (eds.) *Conserving wildlife populations in a changing climate*. U Chicago Press.
4. Popescu, V.D. and J.P. Gibbs (2009) *Landscape Ecology and GIS methods*. In C.K. Dodd (ed.) *Amphibian Ecology and Conservation*, Oxford University Press



Peer-reviewed articles (selection)

- Kaunert, M.D.D., R.K. Brown, S.F. Spear, P.B. Johantgen, and V.D. Popescu. 2023. *Restoring eastern hellbender (*Cryptobranchus a. alleganiensis*) populations through translocation of headstarted individuals*. *Population Ecology* 1–15.
- Pop, M.I., M. Dyck, L. Rozyłowicz, and V.D. Popescu. 2023. *Predictors of brown bear livestock predation events in the Romanian Carpathians*. *Conservation Science and Practice* 5: e12884
- Edwards, W.I., V.D. Popescu, N. Guma, H. Agaba, G. Balyesiima, L. Nakami and N.J. Stevens. 2023. *Living at the edge: Home range patterns of the Buraiga Chimpanzee Community, Kibale National Park, Uganda*. *Frontiers in Ecology and Evolution* 11:1267688
- Yinju, J., C.C.M. Baker, V.D. Popescu, J. Wang, C. Wu, Z. Wang, Y. Li, L. Wang, C. Hua, C. Yang, C.C.Y. Xu, Q. Wen, N.E. Pierce, and D.W. Yu. 2022 *Large-scale quantification of vertebrate biodiversity from leech iDNA in Ailaoshan Nature Reserve, China*. ***Nature Communications*** 13(1): 1555
- Geue, J., P.J. Rotter, C. Gross, Z. Benko, I. Kovacs, C. Fantana, V.D. Popescu and H.A. Thomassen. 2022 *Bird species and habitat types have limited use as reciprocal surrogates and are inconsistently represented in the current Natura 2000 network in Romania*. ***Plos ONE*** 17(2): e0251950
- Popescu, V.D., M. Kenyon, R. Brown, M. Dyck, S. Prange, W. Peterman and C. Dennison. 2021. *Habitat connectivity and resource selection in an expanding US Midwest bobcat population*. ***PeerJ*** 9: e12460
- Popescu, V.D., M.I. Pop, and L. Rozyłowicz. 2021. *Trophy hunting undermines public trust*. ***Science*** 372: 1049 LP – 1049
- Miu, I., L. Rozyłowicz, V.D. Popescu and P. Anastasiu. 2020. *Identification of areas of very high biodiversity value to achieve the EU Biodiversity Strategy for 2030 key commitments*. ***PeerJ*** 8: e10067
- Popescu, V.D., R. Munshaw, N. Shackelford, F. Montesino-Pouzols, E. Dubman, P. Gibeau, M. Horne, A. Moilanen and W.J. Palen. 2020. *Quantifying biodiversity trade-offs in the face of widespread renewable and unconventional energy development*. ***Scientific Reports*** 10(1): 7603
- Wyza, E., L. Dollar, L. Rahajanirina, V.D. Popescu and N. Stevens. 2020. *Spatial dynamics and activity patterns of the Fosa (*Cryptoprocta ferox*): Village avoidance and forest corridor use in a human-influenced landscape*. ***Oryx*** 1:10
- Treves, A., Santiago-Ávila, F.J., V.D. Popescu, Paquet, P.C., Lynn, W.S., Darimont, C.T., and Artelle, K.A. 2019. *Trophy hunting: Insufficient evidence*. ***Science*** 366: 435
- Popescu, V.D., M.I. Pop, S. Chiriac, and L. Rozyłowicz. 2019. *Romanian large carnivores at a crossroads*. ***Science*** 364: 1041
- Wood, C., V.D. Popescu, H. Klinck, J. Keane, R. J. Gutierrez, S. Sawyer, F. Atuo, and M. Z. Peery. 2019. *Detecting small population changes at landscape scales: A bioacoustic-site occupancy framework*. ***Ecological Indicators*** 98: 492-507 (CW and VDP had equal contributions)
- Miu, I., G. Chisamera, V.D. Popescu, R. Iosif, A. Nita, S. Manolache, V.D. Gavril*, I. Cobzaru and L. Rozyłowicz. 2018. *Conservation priorities for terrestrial mammals in Dobrogea Region, Romania*. ***Zookeys*** 792: 133-158
- Pop, M.I., I. Ruben, I.V. Miu, S. Chiriac, L. Rozyłowicz, and V.D. Popescu. 2018. *Combining resource selection functions and home range to identify conservation priorities for brown bears*. ***Animal Conservation*** 21: 352-362
- Nita, A., S. Manolache, C.M. Ciocanea, V.D. Popescu, and L. Rozyłowicz. 2018. *Power, influence and structure in Natura 2000 governance networks. Can NGOs make a difference as protected areas administrators in Romania?* ***Journal of Environmental Management*** 212: 54-64
- Popescu, V.D., K. Artelle, M.I. Pop, S. Manolache, and L. Rozyłowicz. 2016. *Assessing biological realism of wildlife population estimates in data-poor systems*. ***Journal of Applied Ecology*** 53(4): 1248-1259
- Souther, S., M. Tingley, V.D. Popescu, D. Hayman, T. Graves, M. Ryan, B. Hartl and K. Terrell. 2014. *Biotic impacts of energy development from shale: research priorities and knowledge gaps*. ***Frontiers in Ecology and Environment*** 12:330-338
- Popescu, V.D., L. Rozyłowicz, A. Cucu, I. Niculae and T. Hartel. 2014. *Species, habitats, society: An evaluation of research supporting EU's Natura 2000 network*. ***PLoS ONE*** 9(11): e113648
- Popescu, V.D., L. Rozyłowicz, D. Cogalniceanu, A. Cucu, and I. Niculae. 2013. *Moving into protected areas? Setting priorities for conservation for Romanian reptiles and amphibians at risk from climate change*. ***PLoS ONE*** 8: e79330.
- Popescu, V.D., P. de Valpine, D. Tempel, and M.Z. Peery. 2012. *Estimating population impacts via dynamic occupancy analysis of Before-After Control-Impact studies*. ***Ecological Applications*** 22: 1389-1404.
- Rozyłowicz, L., V.D. Popescu, M. Patroescu, and G. Chisamera. 2011. *The potential of large carnivores as conservation surrogates in the Romanian Carpathians*. ***Biodiversity and Conservation*** 20:561-579.
- Ioja, C.I., M. Patroescu, L. Rozyłowicz, V.D. Popescu, M. Verghelet, M.I. Zotta, and M. Felciuc. 2010. *The efficacy of Romania's protected areas network for conserving biodiversity*. ***Biological Conservation*** 143: 2468-2476.

LEADERSHIP and MENTORING (selection)

- 2016-23 Ohio University Wildlife Club – **academic mentor**
- 2014 BC Run of River Renewable Energy Decision Support Tool – **lead organizer** of several multi-stakeholder meetings, Vancouver
- 2014 **organizer** of symposium “*The opportunity and challenges of distributed renewable energy in North America*”, NACCB 2014, Missoula MT
- 2013 **co-organizer** of the *Conservation Leadership Workshop*, ICCB 2013, Baltimore MD
- 2012-13 **co-author** of the Smith Fellows *Policy Statement on Hydraulic Fracturing*
- 2002-13 **founder** of environmental NGO *Societas Herpetologica Romaniae*

PROFESSIONAL SERVICE (selection)

- Current **Senior Editor**: Scientific Reports
Associate Editor: Conservation Science and Practice
Associate Editor: Reclamation Science
reviewer: Global Change Biology, Conservation Biology, Conservation Letters, Ecological Applications, Biological Conservation, Diversity and Distributions, Environmental Management, Freshwater Biology, PLoS ONE, Acta Oecologica, European Journal of Wildlife Research, Wetlands
- Current grant reviewer** for NSF, Canada NSERC, European Science Foundation, Fulbright, David H. Smith Conservation Research Fellowship
- 2019-22 **member** of IUCN SSC Bear Working Group
- 2017-19 **board member** of *Ohio Wildlife Management Association*
- 2014-15 **Member** of Scientific Advisory Board: *Freshwater Threat Assessment in Canada* (WWF Canada)
- 2012-14 **Member** of Scientific Advisory Board, Pacific Salmon Foundation: *Review of ecological impacts from small hydropower projects in BC*

GRANTS (selection)

- 2020-26 NSERC Canada - *ResNet: A network for monitoring, modelling, and managing Canadian ecosystem services for sustainability and resilience*. Collaborator on *Landscape 5 Strategic planning to minimize development-environment trade-offs in British Columbia and Western Canada*
- 2022-24 Indiana Department of Natural Resources – *Assessment of ecosystem services and economic disservices from carnivores – a metagenomic approach* (Co-PI \$242,772)
- 2021-23 Romanian Ministry of Education and Research – *Assessment of trophic relations in a terrestrial carnivore guild in the Romanian Carpathians*, (PI; \$105,000)
- 2020-21 BC Hydro, Canada – *Environmental assessment of future renewable energy resources in British Columbia*, (Co-PI; \$42,700)
- 2018-21 Ohio Department of Natural Resources - *Developing monitoring methods for an endangered amphibian, the Eastern Hellbender (Chryptobranchus alleghaniensis)*, (PI; \$109,000)
- 2017-21 Ohio Department of Natural Resources - *Developing a Population Viability Analysis for Ohio's bobcat (Lynx rufus) population*, (PI; \$245,000)
- 2016-18 Harvard Global Initiative - *Developing an innovative and efficient performance indicator for biodiversity protection in Chinese Nature Reserves* (Collaborator; \$200,000)
- 2016-18 National Science Foundation of China – *Rapid biodiversity assessment in Chinese protected areas using iDNA*. (Co-PI; \$75,000)
- 2015-17 Romanian Ministry of Education and Research – *Incorporating sources of uncertainty in large carnivore management and conservation in Romania*. (PI; \$138,312)
- 2015 NSERC Engage - *Characterizing wind and small hydropower energy development in BC*. (PI; \$25,000)
- 2012-15 Gordon and Betty Moore Foundation & Wilburforce Foundation – *Tradeoffs between small hydropower development and conservation targets in British Columbia, Canada*. (Co-PI; \$836,000)
- 2011-14 Romanian Ministry of Education and Research – *Multi-scale spatial planning for conservation: accounting for habitat dynamics and uncertainty in planning inputs*. (Co-PI; \$236,000)

PROFESSIONAL AFFILIATIONS

Society for Conservation Biology (*life member*); The Wildlife Society; International Association for Landscape Ecology; Ohio Wildlife Management Association

PROFESSIONAL REFERENCES

- Dr. Malcolm L. Hunter**, Professor Emeritus Conservation Biology, University of Maine, mhunter@maine.edu; 207 217 3864
- Dr. Wendy Palen**, Professor Biological Sciences, Simon Fraser University, wpalen@sfu.ca; 415 548 3510
- Dr. David Patrick**, Conservation Programs Lead, The Nature Conservancy, david.patrick@TNC.ORG
- Dr. Michael Dombeck**, Executive Director David H. Smith Conservation Research Fellowship (retired), SCB, dombeck.mike@gmail.com