

DIANE LE BOUILLE

◇ Curriculum Vitae ◇

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Dept. of Nat. Resources Management
USGS Cooperative Research Unit
Texas Tech University

EDUCATION

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| Postdoctoral Researcher 2022 - current | Texas Tech University / USGS Lubbock, USA |
| Postdoctoral Researcher 2020 - 2022 | Baylor University Waco, USA |
| Ph.D. Student 2014 - 2020 | University of Tennessee Knoxville, USA |
| M.Sc. - Ecology, Biodiversity, Evolution - Specialization in Conservation 2010 - 2012 | University P. and M. Curie Paris, France |
| M.Sc. - Ecology 2009 - 2010 | University of Aberdeen Aberdeen, Scotland |
| B.Sc. - Organismal Biology 2008 - 2009 | University of Bordeaux 1 Bordeaux, France |
| French Prep. School - Mathematics, Physics, Chemistry, Geology and Biology 2006 - 2008 | Montaigne Bordeaux, France |

SKILLS

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| Programming Languages | Python, R, C/C++, Matlab, VBA |
| Theoretical knowledge | Ecology, Evolution, Conservation & Restoration Ecology Micro Economics, Natural Resources Economics Mathematical Optimization, Spatial Analysis, Statistics |
| Ecological software & Tools | GIS tools (ArcGIS, Arcpy) and GPS tracking, Network sciences (Pajek, Netdraw) Data bases (Access, MySQL), Optimization (Maple, GAMS), Markup languages (HTML, CSS, LaTeX), Misc. (Git, Windows/Mac/Linux OS) |
| Field-Based skills | Fieldwork in strenuous and remote settings, Handling/Marking of vertebrates, Plant and animal systematics |

RESEARCH EXPERIENCE

Freshwater conservation and water rights

2020 - 2021

Postdoctoral research - Ryan McManamay

Baylor University, Waco TX

- Relating U.S. stream and lake network structures with likelihood of zebra and quagga mussels establishment
- Comparing flow recommendations and current inflow conditions across Texas's major basins, in relation to present and projected water use and withdrawal laws

Costs of Protected Areas in the U.S.

2014 - 2020

PhD Dissertation - Paul ARMSWORTH

University of Tennessee, Knoxville

- Describing and explaining the spatial and temporal variations in conservation costs and funding for protected areas across the U.S.

Behavioural Shifts and Human Avoidance in Wolves

2012 - 7 months

Master Thesis 2 - Luigi BOITANI, Paolo CIUCCI

University of Rome, Italy

- Activity budgets and movement patterns of GPS-collared wolves in the Abruzzo, Lazio and Molise National Park (central Italy) in relation to human activity in the park

Road Kill Risk Assessment and Snake Conservation

2011 - 6 months

Master Thesis 1 - Jean CLOBERT, Xavier BONNET

CNRS Labs of Moulis (Eco-Ex) and Chizã (CEBC), France

- Demographic study of snake populations in France by mark-capture-recapture, assessing population movements and deriving conservation measure - seasonal road closures

Metapopulation Dynamics and Iterated Dispersal in Water Voles

2010 - 3 months

Graduate Research Project - Xavier LAMBIN

University of Aberdeen, Scotland

- Characterisation of Highland water vole dispersal network within and among metapopulations using kinship analyses and network sciences

Sex-biased Dispersal During Range Advance

2010 - 6 weeks

Graduate Research Project - Justin TRAVIS

University of Aberdeen, Scotland

- Modelling the erosion of sex-biased dispersal at the advancing range edge for an invasive species - theoretical modelling, Australian Cane Toads used as case study

Acid Rains and Prairie Diversity in France

2009 - 3 months

Undergraduate Thesis - Didier ALARD, Emmanuel CORCKET

University of Bordeaux 1, France

- Impacts of nitrogen atmospheric pollution on acid prairie biodiversity (S-W of France) in term of soil seed bank composition and germination, growth and survival rates

PUBLICATIONS

- **Le Bouille D.**, Armsworth P. and Fargione J. (2022) *Spatio-temporal variation in costs of managing protected areas*. Conservation Science and Practice
- Hyman A., **Le Bouille D.**, Zhu G. and Armsworth P. (2022) *Disagreements about how to value the future among conservationists lead to conflicting recommendations about where to protect today*. Biological Conservation
- Pinnschmidt A., Hoogstra M., Fovargue R., **Le Bouille D.**, Fisher M., Harris J., Armsworth P. (2021) *Protecting land leads to increased philanthropic giving to conservation*. Ecological Economics
- Armsworth P., Benefield A., Dilkina B., Fovargue R., Jackson H., **Le Bouille D.** and Nolte C. (2019) *Allocating resources for land protection using continuous optimization: biodiversity conservation in the United States*. Ecological Applications

MANUSCRIPTS IN REVISION

1. **Le Bouille D.** and Armsworth P. (2022) *The cost of buying land for protected areas in the united states.* Biological Conservation
2. Armsworth P., Dilkina B., Fargione J., Fisher M., Fovargue R., Harris J., Jackson H., **Le Bouille D.**, Nolte C. and Richards C. (2023) *Multiplying the impact of biodiversity conservation funding using spatial exchange rates.* Conservation Letters

MANUSCRIPTS IN PREPARATION

1. **Le Bouille D.** and McManamay R. (2022) *Analysis of flow standards and recommendations in Texas rivers*
2. **Le Bouille D.** and Powers S. (2022) *Can network topology of freshwater systems predict the risk of invasion?*
3. **Le Bouille D.** and Armsworth P. (2023) *Predicting bargains sales occurrence and magnitude in land transactions for conservation in the U.S.*

BOOK CHAPTER

Lambin X., **Le Bouille D.**, Oliver M.K., Sutherland C., Tedesco E. and Douglas A. (2012) *High connectivity despite high fragmentation: iterated dispersal in a vertebrate metapopulation.* In: Dispersal Ecology and Evolution (chap. 32) Clobert *et al.* Editors, Oxford University Press.

AWARDS AND FELLOWSHIPS

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| 2020 to 2022 - PNNL, Integrated Multisector Multiscale Modeling initiative | \$6,000 |
| 2019 - NIMBioS Graduate Awards - Competitive, Project-Based Award | \$2,500 |
| 2015 to 2019 - UT Competitive Yearly Research Awards and Project-based Travel Grants | \$5,000 |
| 2015 to 2019 - Chancellor Funds - Based on Application and Research Proposal Merit | \$25,000 |
| 2017 to 2018 - NIMBioS Graduate Research Assistant Fellowship | \$50,000 |
| 2012 - Six-Month Scholarship for MSc Research Project and Thesis | Equiv. \$3,300 |
| 2010 to 2012 - French Governmental Grant - Merit Based, Gov. Sponsorship for MSc | Equiv. \$10,000 |
| 2009 to 2010 - Erasmus Waivers and Scholarship to Study Abroad - U. of Aberdeen | Equiv. \$31,500 |

CONFERENCES AND PRESENTATIONS

- NACCB 2022 - **Le Bouille D.** (*moderator*) and Nolte C. (*organizer*), Symposium: : Strategies to Estimate the Costs of 30x30 Protection Actions Over Large Scales in the United States: Approaches, Standards and Evidence
- ESA 2021 - **Le Bouille D.** and McManamay R., Analysis of Flow Standards and Recommendations in Texas Rivers
- ESA 2019 - **Le Bouille D.**, Armsworth P. and Fargione J., What drives the cost of U.S. conservation?
- NACCB 2018 - **Le Bouille D.**, Armsworth P. and Fargione J., Accurate acquisition cost prediction for optimal reserve planning
- ESA 2016 - **Le Bouille D.** and Armsworth P., The real cost of acquiring lands for conservation
- NACCB 2016 - **Le Bouille D.** and Armsworth P., Investigating the dynamic patterns of management costs in protected areas
- ESA 2015 - **Le Bouille D.**, Armsworth P. and Iacona G., The time path of investments for the management of protected areas

TEACHING AND MENTORING EXPERIENCE

ADJUNCT LECTURER - UTK

Landscape Ecology - EEB 422

Perspective in Eco. and Ev. Bio. - EEB 409

TEACHING ASSISTANT - UTK

Mathematical Models in Biology - EEB/MATH 406

GIS and Niche Modeling - EEB/GEO 550

Research Ethics - PHILO/EEB 504

Organismal and Ecological Biology, *Hons.* - BIO 158

Cell Biology - BIO 140

OTHER APPOINTMENTS

IT Assistant - UTK

Departmental Computer Maintenance

Workshop Facilitation - NIMBioS

NIMBioS International Working Groups

Mentoring

Undergraduate Mentoring Program

Women in STEM Mentoring Group

EXTRA TRAINING AND WORKSHOPS

Science Communication and Policy - ESA (Spring 2020)

Associate Level of CIRTL certification (Summer 2017)

ORI Research Ethics Certification (Spring 2017)

Best Practice in STEM Teaching (Fall 2016)

OUTREACH

EKEE - University of Tennessee

2015-2019 - Graduate Outreach Committee

Head of Tabling Events

Outreach activities in zoos, farmers' market, fairs

KidsU - University of Tennessee

Summer 2019 - Learning Summer Camp

Class Design, Teaching, Field Trips - Age 9-12

UT's Darwin Day - University of Tennessee

2018 - Science Communication Event

Advertisement and material creation

Design of activities, Open seminars organizer

Naturalist Organization Timarcha - UPMC, Paris

2011-2012 Graduate Organization, UPMC

Board Member, Event Leader

PROFESSIONAL ACTIVITIES AND SERVICES

Manuscript Review

University Services

Professional Membership

for Conservation Letters, J. of Environmental Management

Departmental Senator - UTK Graduate Student Senate

Vice President - Baylor University Postdoc Association

Ecological Society of America (ESA), Society for Conservation Biology (SCB),

French Society for Ecology and Evolution (SFE²)

LANGUAGES

English

Fluent

French

Native

Spanish

Working Proficiency