Brianne Du Clos, PhD

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Landscape ecologist and geospatial analyst with experience in remote sensing, project management, and interdisciplinary collaboration. 10+ years of work with raster and vector data, including creation, classification, manipulation, and statistical modeling. Continuing GIS education with coursework in programming, workflow automation, data management, and web map development.

PROFESSIONAL EXPERIENCE

Research Data Analyst, March 2021-Present, Department of Entomology, University of California, Riverside, Riverside, CA (fully remote)
- Conducting project management for the National Native Bee Monitoring Research Coordination Network
- Summarizing and synthesizing existing efforts and information into an actionable monitoring strategy
- Running logistics for planning and executing national workshops to gather input from a large network
- Communicating with engaged citizens through email; sharing citizen science information online
- Orienting to biodiversity informatics: GBIF, Symbiota, NatureServe, TDWG, Darwin Core standards

Postdoctoral Research Associate, September 2019-February 2021, Department of Wildlife, Fisheries, and Conservation Biology, University of Maine, Orono, ME
- Applied best management practices to conduct a literature review on roadside habitat for pollinators
- Summarized a large body of literature qualitatively and quantitatively for non-academic stakeholders
- Analyzed landscape pattern surrounding highway field sites to assess effects on pollinators

Graduate Research Assistant, September 2012 – May 2019, Department of Wildlife, Fisheries, and Conservation Biology, University of Maine, Orono, ME
- Created and edited feature class data; used analysis and data management tools in ArcGIS to classify and summarize raster data describing Maine's wild blueberry production landscape
- Designed and conducted two field studies, sampled wild bee communities across coastal Maine
- Curated and identified >4000 wild bee specimens; managed specimen datasets in Microsoft Excel; connected bee communities to landscape pattern using ArcGIS, Python, Fragstats, and R
- Led an interdisciplinary team to develop BeeMapper, an interactive GIS web tool for crop growers

Stewardship Intern, June-August 2012, Coastal Mountains Land Trust, Camden, ME
- Managed small teams of farm workers, coordinated volunteer work, recorded and distributed customer orders at an organic blueberry farm stand, communicated with Stewardship Manager on operations
- Performed trail maintenance, assisted preserve visitors, enforced preserve policies

Graduate Research Assistant, September 2009 - May 2012, Maine Image Analysis Laboratory, School of Forest Resources, University of Maine, Orono, ME
- Gathered raster and vector data from state and federal databases; classified and analyzed raw satellite imagery in ERDAS Imagine; created maps for land managers in ArcGIS Layout
- Contributed to lab "cookbooks" detailing data processing and handling practices
- Completed coursework in advanced GIS, remote sensing, and spatial statistical techniques

TECHNICAL SKILLS

Proficient in: ArcGIS Pro, ArcGIS Desktop, Python, ERDAS Imagine, Fragstats, Microsoft Excel, R, linear models, multivariate and nonparametric statistics, HTML, CSS
Experience with: ArcGIS Online, VisualBasic, SQL, JavaScript

EDUCATIONAL BACKGROUND

Pennsylvania State University – World Campus
Graduate Certificate, Geospatial Programming and Web Map Development, 2022-2023

University of Maine – Orono, ME
PhD, Ecology and Environmental Sciences, 2019
MS, Forest Resources, 2012

University of Wisconsin-Superior – Superior, WI
BS, Biology, minor in Geographic Information Systems, 2009

ADDITIONAL TRAINING

Imagery in Action. ESRI MOOC in ArcGIS Pro. Completed September 2021.
Intro to SQL, Master the Tidyverse. Online workshops, University of Oregon. Completed November 2020.
Cartography. ESRI MOOC in ArcGIS Pro. Completed May 2020.
Spatial Data Science: The New Frontier in Analytics. ESRI MOOC in ArcGIS Pro. Completed April 2020.

GRANTS

Increasing parameter accuracy of an agriculturally-focused, spatially-explicit bee abundance model. USDA Northeast SARE Grant, 2014-2016. $14,652.

REFEREED PUBLICATIONS

Du Clos B, Loftin CS, Drummond FA. Effects of an early mass-flowering crop on wild bee communities and traits in power line corridors vary with floral resources and landscape context. In revision.

Du Clos B, Loftin CS, Drummond FA. (2020) Noncrop habitat use by wild bees in a mixed-use agricultural landscape. Environmental Entomology 49(2): 502-515.

Drummond F, Ballman ES, Eitzer BD, **Du Clos B**, Dill J. (2018) Exposure of Honey Bee Colonies to Pesticides in Pollen, A Statewide Assessment in Maine. Environmental Entomology 47(2): 378-387.

SELECTED PRESENTATIONS AND OUTREACH

Mapping how wild bees use Maine's landscape. Portland Pollinators Partnership, 2/2016. Portland, ME.

Honey bees and the landscape: Choosing an optimal apiary site. Maine State Beekeepers Association, 11/2015. Hampden, ME.

BeeMapper: a tool for grower assessment of wild bee abundance. Wild Blueberry Research and Extension Workers Conference. 10/2015. Bar Harbor, ME.

Landscape Ecology of Maine's Native Bees. Maine Entomological Society, 2/2014. Augusta, ME.

PROFESSIONAL AFFILIATIONS

Northwest GIS User Group, September 2021-Present

Oregon Branch of the Urban and Regional Information Systems Association, September 2021-Present