

Brendan Casey

ECOLOGIST

Edmonton, Alberta

☎ 780 920 1787 | ✉ bgcasey@ualberta.ca | 📱 bgcasey

Qualifications and Research Interests

Ecologist specializing in species distribution modeling and the application of remote sensing in ecological research. Proficient in geospatial analyses and statistical modeling with a strong background in project management and fieldwork coordination. Adept at managing large, complex projects and collaborating with interdisciplinary teams.

Education

PhD Ecology

UNIVERSITY OF ALBERTA

Edmonton, Alberta

2017 - 2023

- Thesis: Evaluating remote sensing covariates for understanding habitat selection by boreal forest birds

MSc Biodiversity and Conservation

TRINITY COLLEGE DUBLIN

Dublin, Ireland

2013 - 2014

- Thesis: Enhancing Connectivity Between Ireland's Native Woodlands.

BFA Art and Design

ALFRED UNIVERSITY

Alfred, New York

2002 - 2007

Employment

Postdoctoral Fellow

UNIVERSITY OF ALBERTA

Edmonton, Alberta

2023 - Present

- Using spectral indicators of tree senescence to improve Pileated Woodpecker habitat models.
- Developing programmatic modules to source and extract spatial data.
- Examining how bird species diversity and composition varies across a coniferous-deciduous gradient.

Lab Coordinator

UNIVERSITY OF ALBERTA

Edmonton, Alberta

2024 - 2024

- Lab coordinator for a graduate level landscape ecology course.
- Taught GIS applications in ecology.
- Provided instruction on conducting spatial analyses using ArcPro, R, and Google Earth Engine.

Research Assistant

UNIVERSITY OF ALBERTA

Edmonton, Alberta

2022 - 2023

- Generated topographically downscaled climate layers using remote sensing, terrain modelling, and environmental data loggers.

Graduate Research Assistant

UNIVERSITY OF ALBERTA

Edmonton, Alberta

2017 - 2023

- Conducted bioacoustic and vegetation surveys in Alberta's boreal forests.
- Programmed, deployed, and maintained autonomous recording units.
- Managed field logistics and supervised research technicians.

Graduate Teaching Assistant

UNIVERSITY OF ALBERTA

Edmonton, Alberta

2017 - 2021

- Facilitated undergraduate ecology and population ecology labs.
- Lab curriculum included experimental design, statistical analyses, and bioacoustics.

Sustainability Scholar

Edmonton, Alberta

UNIVERSITY OF ALBERTA

2021 - 2021

- Edmonton River Valley Connectivity Analysis.
- Evaluated wildlife connectivity through Edmonton's city core using remote camera data, wildlife movement models, and GIS.
- Created communication materials including cross sectional maps and Shiny apps.

Yellowstone Program Supervisor

Missoula, Montana

ECOLOGY PROJECT INTERNATIONAL

2016 - 2017

- Supervised Yellowstone field programs and contributed to research on the population dynamics of cougar and bison and the impacts of grazing on grasslands.
- Partnered with park biologists, government agencies, landowners, and community stakeholders to develop conservation research and education programs.
- Recruited, trained, and supervised field staff.
- Coordinated service projects including invasive species removal and fence modification to remove barriers to wildlife migration.
- Drafted grant proposals and reports, and wrote social media content, program handbooks, and research summaries.
- Planned community outreach and fundraising events.

Chapter Services Program Coordinator

Missoula, Montana

NATIONAL AUDUBON SOCIETY

2015 - 2016

- Liaised with local Audubon chapters and partner organizations on programming that supports bird conservation across North America's major migratory flyways.
- Was the primary contact between the national office and local chapters on new conservation initiatives, policy changes, and annual financial reports.
- Managed organization databases and wrote monthly, quarterly, and annual reports.

Wilderness Expedition Supervisor

Sitka, Alaska

SOUTHEAST ALASKA REGIONAL HEALTH CONSORTIUM

2009 - 2013

- Managed all aspects of outdoor leadership courses, including program development, budgeting, and the hiring, training, and supervision of field staff.
- Collaborated with tribal councils, state regulatory agencies, and community partners to develop substance abuse treatment programs in First Nations communities.
- Created program wide risk management protocols, an incident command system, medical standing orders, and a policies and procedures manual.
- Developed curriculum on Alaskan coastal ecology, wildlife biology, and human-carnivore conflict

Senior Field Instructor

Belgrade, Montana

THREE RIVERS MONTANA

2007 - 2009

- Supervised wilderness survival courses and provided technical support to field crews.
- Designed and taught field courses on astronomy, ecology, and natural history.
- Managed expedition logistics including gear maintenance, risk management, and route planning.

Additional Experience

Wetland Restoration Volunteer

Dublin, Ireland

IRISH PEATLAND CONSERVATION COUNCIL

2013 - 2014

- Contributed to wetland restoration and monitoring projects.
- Surveyed peatland indicator species and installed peat dams and plastic drain pilings.

Pre-Doctoral Internship Orientation Faculty

Sitka, Alaska

ALASKA PSYCHOLOGY INTERNSHIP CONSORTIUM, SITKA, AK

2010 - 2012

- Taught pre-doctoral psychology interns courses on Southeast Alaskan coastal ecology and social-ecological resilience.

Certifications

Snowmobile Safety

ALBERTA SNOWMOBILE ASSOCIATION

Edmonton, Alberta

2018

ATV Safety

ALBERTA CONSERVATION ASSOCIATION

Edmonton, Alberta

2017

Chemical Dependency Counselor

ALASKAN COMMISSION FOR BEHAVIORAL HEALTH

Sitka, Alaska

2013

Behavioral Health Counselor

ALASKAN COMMISSION FOR BEHAVIORAL HEALTH

Sitka, Alaska

2013

Awards

Funded Fellow

COMPUTATIONAL BIODIVERSITY SCIENCE AND SERVICES (BIOS₂)

Sherbrooke, Québec

2021

ACA Grants in Biodiversity

ALBERTA CONSERVATION ASSOCIATION

Edmonton, Alberta

2019

U of A Northern Research Awards (UANRA)

UNIVERSITY OF ALBERTA

Edmonton, Alberta

2019

Doctoral Recruitment Scholarship

UNIVERSITY OF ALBERTA

Edmonton, Alberta

2019

Graduate Student Teaching Award

UNIVERSITY OF ALBERTA

Edmonton, Alberta

2019

ISSS Teaching Award

UNIVERSITY OF ALBERTA

Edmonton, Alberta

2018

Skills

Ecology Ecological modelling, Remote sensing, Spatial analyses, Wildlife monitoring

GIS Google Earth Engine, ArcGIS, R

Programming R, Python, JavaScript, Shell