

Brendan Casey

ECOLOGIST | DATA SCIENTIST

Edmonton, Alberta

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Education

PhD Ecology

Edmonton, Alberta

UNIVERSITY OF ALBERTA

2017 - 2023

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

MSc Biodiversity and Conservation

Dublin, Ireland

TRINITY COLLEGE DUBLIN

2013 - 2014

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

BFA Art and Design

Alfred, New York

ALFRED UNIVERSITY

2002 - 2007

Employment

Research Assistant

Edmonton, Alberta

UNIVERSITY OF ALBERTA

2022 - Present

- Generate topographically downscaled climate layers using remote sensing, terrain modeling, and environmental data loggers.
- Develop high resolution spatial data layers reflecting microrefugia for Alberta and British Columbia.
- Create a reproducible workflow that can used as more environmental data is acquired.

Graduate Research Assistant

Edmonton, Alberta

UNIVERSITY OF ALBERTA

2017 - 2023

- Conduct bioacoustic and vegetation surveys in Alberta's boreal forests.
- Program, deploy, and maintain autonomous recording units.
- Manage field logistics and supervise wildlife technicians.

Graduate Teaching Assistant

Edmonton, Alberta

UNIVERSITY OF ALBERTA

2017 - 2021

- Helped facilitate undergraduate ecology and population ecology courses.
- Taught lessons on experimental design, statistical analyses, and bioacoustics.

Sustainability Scholar

Edmonton, Alberta

UNIVERSITY OF ALBERTA

2021 - 2021

- Worked on the 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 including 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 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 the field program, 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 field operations 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

Edmonton, Alberta

ALBERTA SNOWMOBILE ASSOCIATION

2018

ATV Safety

Edmonton, Alberta

ALBERTA CONSERVATION ASSOCIATION

2017

Chemical Dependency Counselor

Sitka, Alaska

ALASKAN COMMISSION FOR BEHAVIORAL HEALTH

2013

Behavioral Health Counselor

Sitka, Alaska

ALASKAN COMMISSION FOR BEHAVIORAL HEALTH

2013

Awards

Funded Fellow

Sherbrooke, Québec

COMPUTATIONAL BIODIVERSITY SCIENCE AND SERVICES (BIOS2)

2021

ACA Grants in Biodiversity

Edmonton, Alberta

ALBERTA CONSERVATION ASSOCIATION

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