

Morgan Brown

PhD Candidate, University of Amsterdam

Email: j.m.brown@uva.nl

EDUCATION

Master of Science in Biology

Degree requirements met: Nov 2016

Acadia University, Wolfville, NS, Canada

Graduation: May 2017

Thesis: Regional scale movements of locally breeding and migratory Blackpoll Warblers (*Setophaga striata*) during fall in the Gulf of Maine region.

Supervisor: Dr. Phil Taylor

Honours Bachelor of Science in Biology

April 2012

The University of Western Ontario, London, ON, Canada

Thesis: Genetically-based behavioural morph affects stopover refuelling performance in white-throated sparrows (*Zonotrichia albicollis*)

Supervisor: Dr. Chris Guglielmo

- Terence Laverty Gold Medal winner for highest graduating average in Biology
- Completed 3rd year abroad at the University of St Andrews, Scotland

PEER-REVIEWED PUBLICATIONS

Brown JM, & Taylor PD. 2017. Migratory Blackpoll Warblers (*Setophaga striata*) make non-goal-oriented movements at regional scales during fall stopover: variation with age, natal origin and time of season. *Movement Ecology* 5:15

Brown JM, & Taylor PD. 2015. Adult and hatch-year blackpoll warblers exhibit radically different regional-scale movements during post-fledging dispersal. *Biology Letters* 11(12), 20150593.

Brown JM, McCabe BJ, Kennedy LV and Guglielmo CG. 2014. Genetically-based behavioural morph affects stopover refuelling performance in white-throated sparrows (*Zonotrichia albicollis*). *Journal of Avian Biology* 45(5): 522-527.

Morbey Y, Guglielmo C, Taylor P, Maggini I, Deakin J, MacKenzie S, **Brown JM**, Zhao L. Evidence against sex-specific stopover behaviour as an important mechanism of avian protandry. Accepted to Behavioural Ecology.

SCHOLARSHIPS AND AWARDS

NSERC Alexander Graham Bell Canada Graduate Scholarship – Doctoral	2017 - present
Best graduate student presentation, Acadia student research conference	2016
NSERC Canadian Graduate Scholarship – Master’s Award, Acadia University	2014 - 2015
NSERC Industrial Undergraduate Student Research Award, Bird Studies Canada	2012
Dean’s Honour’s List, University of Western Ontario	2009, 2010 and 2012
Terence Laverty Memorial Gold Medal, University of Western Ontario	2012
Best oral presentation in Ecology and Evolution, Ontario Biology Day conference	2012
Dean’s List, University of St. Andrews	2011
The Canadian Robert T. Jones Jr. Scholarship, University of Western Ontario	2010 - 2011
Western Scholarship of Excellence, University of Western Ontario	2008
Beta Sigma Phi Scholarship, Milton District High School	2008

Morgan Brown

RESEARCH EXPERIENCE

Research Assistant

Jan 2017 – Apr 2017

Acadia University

- Stopover departure decisions: Analyzing how intrinsic (age, energetic condition) and extrinsic (weather, time of season, stopover habitat quality) factors influence the decision to depart a stopover area for local-, regional-, and broad-scale flights. Using automated radio telemetry data collected during my MSc thesis, and weather data obtained from NOAA North American regional reanalysis dataset (interpolated using Movebank track annotation service) and Environment Canada historical records.
- Fine-scale movement patterns during stopover: Analysing how intrinsic (age, energetic condition) and extrinsic (stopover habitat quality) factors influence fine-scale movement patterns within a local stopover site. Habitat foraging potential was compared between two sites using arboreal insect sampling, and differences in refuelling rate were compared using plasma metabolite analysis. Fine-scale movements were recorded using a fine-scale automated telemetry grid from which position will be triangulated, and verified using manual tracking data.

Master's Thesis

Sep 2014 – Nov 2016

Acadia University

- Movement Ecology: Examined intrinsic (age, natal origin) and extrinsic (time of season) effects on regional-scale movement behaviours of a small migratory songbird during the post-breeding and fall migratory periods. Movements were tracked using the Motus Wildlife Tracking System, a coordinated network of automated radio telemetry towers
- Data analysis: Telemetry data resulted in a large data set with over 5 million data points. All data were managed and analysed using R.
- Field work involved running a migration monitoring station to capture and radio tag study species. Feather samples were collected for stable isotope analysis to determine breeding origins. Work was carried out on two remote islands where I was responsible for training and supervising up to 6 volunteers at one time and coordinating efforts between the two stations.

Field Research Technician

Apr - May 2014

Western University

- Protandry: Helped design and collect data for a research project studying sex-based differences in movement and stopover behaviors of migrating songbirds using radio telemetry. Collected and analyzed blood samples for plasma metabolite analysis. Provided feedback on the scientific manuscript.
- Telemetry tower setup: Help with setup of an array of receiving towers across SW Ontario, programming and data collection from receivers, preparation of radio transmitters for deployment

Chimney Swift NSERC Research Technician

Aug 2012

Bird Studies Canada

- Data collection: Analysed chimney swift entrance and exit intervals at nest sites from video recordings
- Report: Completed a background literature review and drafted a report advising on a standardized chimney swift nest monitoring protocol to be used for consulting and monitoring programs.

B.Sc. Honour's thesis

Sep 2011 – Apr 2012

The University of Western Ontario

- Fieldwork: captured a migratory songbird during migration, took blood samples for plasma metabolite analysis and genetic determination of sex and plumage morph, assessed fat and lean mass composition using quantitative magnetic resonance.
- Lab work: PCR and electrophoresis of DNA from red blood cells to determine sex and morph, plasma metabolite profiling using spectrometry to assess fat mobilization and deposition.
- Data analysis: All data were analysed using SPSS.

Morgan Brown

Research Technician

Sep 2011 – Apr 2012

Advanced Facility for Avian Research, University of Western Ontario

- Lab work: Assisted graduate students with avian laboratory research including serial bleeding of songbirds to measure decay rates of a polysaccharide marker, and training birds to fly in a wind tunnel.
- Animal care: Prepared semisynthetic diet for, and fed, captive songbirds; cleaned cages and aviaries.

Volunteer Lab Assistant

Sep 2009 – Apr 2010

Sinclair Lab, University of Western Ontario

- Animal care: Care of Lepidoptera larva research specimens in an insect physiology lab.

TEACHING EXPERIENCE

Teaching Assistant

Jan – Apr 2016

Acadia University

- Taught laboratory component for first year biology course, including weekly 15 minute lectures, assistance with laboratory activities, and marking lab reports.

RELATED PROFESSIONAL EXPERIENCE

Wildlife Specialist

Jun 2014

Hatfield Consultants, Fort McMurray, Alberta

- Assessing nesting activity: Completed pre-construction surveys to established buffers in areas suspected of containing an active nest based on behavioral observations or by locating the nest, to assure compliance with the Migratory Birds Act and Endangered Species Act
- Daily report: Wrote a daily report of the area surveyed, buffer locations, and bird species detected for the client's environmental and engineering groups, advised on work protocols that would help minimize disturbance to breeding migratory birds.
- Documentation: Maintained a detailed notebook of all activities, conversations and findings as well as photographic evidence of all buffers and nests for legal insurance.

Assistant Bander

Aug - Sep 2013

Tatlayoko Lake Bird Observatory, Tatlayoko Lake, British Columbia

- Station operation: Set up and maintenance of station, daily operation following station protocol, and helped to train volunteers in data entry, bird handling and net extractions
- Report: Co-wrote a year-end report summarizing data from banding, daily species totals and census data, reporting on between year species abundance trends, and detailing station protocol, and any changes to methods and the environment that may impact monitoring results

Migration Monitoring Volunteer

Long Point Bird Observatory, Ontario

Spring & Fall 2012, Fall 2013

Tatlayoko Lake Bird Observatory, British Columbia

Fall 2012

- Banding: 7 months of volunteer experience with >2500 individuals banded of >100 species including passerines, near passerines, diurnal raptors, hummingbirds and owls. Included aging, sexing, assessing fat score, measuring wing chord and weighing individuals

Casual Field Biologist

May - Jul 2013

Canadian Wildlife Service, Saskatoon, Saskatchewan

- Protocol design and shorebird monitoring: Responsible for helping organize and lead data collection for the first year of a shorebird monitoring project. Provided input and recommended improvements to protocol design, supervised two field assistants.
- Marsh monitoring: Marsh bird point counts, caught and banded yellow rails for a 5-year population demographic study, and analyzed song meter recordings

Morgan Brown

Neotropical Migratory Warbler Field Assistant Estación de Biología Chamela, Jalisco, Mexico

Jan - Mar 2013

- Fieldwork: Assisted with data collection for a PhD thesis project. Caught, radio tagged and manually tracked a migratory warbler species on their wintering grounds to measure territory sizes.

Wetland Bird and Amphibian Survey Technician Birds Studies Canada, Long point, Ontario

May - Jul 2012

- Field work: Morning, evening and night time avian and amphibian point counts in coastal marshes.
- Logistics: Was responsible for organising morning, evening and night time survey schedule, coordinating travel between sites spread over a wide geographic location (Eastern, Southern and Central Ontario), maintaining field equipment and vehicle, and organizing and entering data. Chose survey points using aerial photographs, secured private landowner permission for site access

Resource Conservation Summer Student Parks Canada – Rideau Canal National Historic Site

May - Aug 2011

- Communication: Gave a formal presentation to local stakeholders at a lake association meeting about how they can help with species at risk conservation as private landowners. Ran informal public education and awareness sessions about species at risk and contaminated sites.
- Field work: Marsh bird point counts; trapped, identified (species and sex), collected morphometrics, and marked species at risk turtles; Vegetation surveys for habitat classification

Natural Heritage Educator

Summer 2009 & 2010

Ontario Parks – Grundy Lake and Murphy's Point Provincial Parks

- Communication: Wrote, presented and led both structured and informal interpretive programs about the park's natural heritage, including children's programs, amphitheatre presentations and "ask the naturalist" sessions.
- Field work: Caught and recorded morphometrics on gray rat snakes, supported pit tag insertions, and monitored hibernaculum sites

CONFERENCES

-
- Brown, JM & Taylor, PD.** 2016. Blackpoll warblers (*Setophaga striata*) make regional-scale, non-migratory movements during fall migration. North American Ornithological Conference, Washington, D.C. and North-eastern Regional Migration Monitoring Network Meeting, Acadia National Park, ME.
- Brown, JM, Cormier, DA, Crysler, Z, & Taylor, PD.** 2016. Automated radio telemetry reveals expanded scale of movement across multiple species and life-history stages. In S.A. MacKenzie (Chair), Automated radio telemetry in bird research and conservation. Symposium conducted at North American Ornithological Conference, Washington, D.C.
- Brown, JM & Taylor, PD.** 2016. Adult and hatch-year blackpoll warblers exhibit different regional-scale movements post-breeding. Acadia Student Research Conference, Wolfville, NS. Best presentation by a graduate student.
- Brown, JM & Taylor, PD.** 2015. Regional-scale movement behaviour of Blackpoll Warblers in the Gulf of Maine during the post-fledging and fall migratory periods. In P. D. Taylor (Chair), Atlantic Canada and the Gulf of Maine: a nexus for migratory birds. Symposium conducted at AFO/WOS/SCO joint meeting, Wolfville, NS.
- Brown, JM & Taylor, PD.** 2015. Using multi-state capture-recapture models to analyse broad-scale movements. North-eastern Regional Migration Monitoring Network Meeting, Acadia National Park, ME.
- Brown, JM, McCabe, BJ, Kennedy, LV, & Guglielmo, CG.** 2012. Genetically-based behavioural morph affects stopover refuelling performance in white-throated sparrows (*Zonotrichia albicollis*). Ontario Biology Day, Sudbury, ON. Best presentation in Ecology and Evolution.

Morgan Brown

INVITED PRESENTATIONS

Brown, JM & Taylor, PD. 2016. Post-breeding dispersal of island-nesting Blackpoll Warblers. NS Federation of Anglers and Hunters annual meeting, Truro, NS.

ACADEMIC SERVICES

Biology Seminar Series Coordinator, Acadia University 2015 – 2016

Contacted, scheduled, and hosted speakers for weekly biology seminars

Conference volunteer

North American Ornithological Conference 2016

AFO/WOS/SCO joint meeting 2015

Reviewer, Wilson Journal of Ornithology

References available upon request.