Elly Knight

ellyknight@gmail.com
www.ellyknight.ca

Current Position

Postdoctoral Fellow, *Smithsonian Institution,* Smithsonian Migratory Bird Center, (2021 – present)
Range-wide migratory connectivity of the Long-billed Curlew, a declining species of the North American Prairies

Education

Ph.D. Biological Sciences (Ecology)
University of Alberta, Bioacoustics Unit (2015 – 2021; maternity leave Feb – Jun 2020)
Thesis: What does a detection mean? Spatial and behavioural context improves the use of passive acoustic monitoring for the conservation of a wide-ranging bird
Recipient: Governor General's Gold Medal; Faculty of Science Dissertation Award
Supervisors: Dr. Erin Bayne (University of Alberta), Dr. Mark Brigham (University of Regina)

M.Sc. Biological Sciences
Simon Fraser University, Centre for Wildlife Ecology (2010 – 2013)
Thesis: Impacts of fragmentation by agriculture on shrubsteppe breeding songbirds
Supervisors: Dr. David Green (Simon Fraser University), Dr. Nancy Mahony (Environment Canada)

B.Sc. Biology Honours (Co-op), Environmental Sciences Minor
University of Victoria with Distinction (2005 – 2010)
Langara College University transfer program (2003 – 2005)
Thesis: Population trends and habitat availability of nesting Great Blue Herons in south coastal BC
Supervisors: Dr. Neville Winchester (University of Victoria), Ross Vennesland (Parks Canada)

Research Statement

I am an applied quantitative ecologist interested in how environmental variation across temporal and spatial scales affects the ecology and population trends of wide-ranging species. My motivation in understanding that variation is to inform when and where wildlife conservation efforts will be most effective. I believe strongly in collaborative research because it facilitates knowledge transfer, standardizes datasets, and maximizes funding available for conservation.

Research Contributions

Full annual cycle conservation: Migratory populations experience pressures at multiple stages of the annual cycle, yet we know little about most avian species outside of the breeding season. Emerging technologies allow us to track individual birds year-round to understand the conditions they experience across their annual cycle. When individuals from multiple populations are tracked, we can begin to understand the conditions that contribute to differential population trends. I lead a large collaborative initiative to describe the migratory network for Common Nighthawks and assess potential hypotheses for their decline. The project is a collaboration with the Migratory Connectivity Project and is supervised by Peter Marra at the Smithsonian Migratory Bird Center, Steven Van Wilgenburg at Environment and Climate Change Canada, and Erin Bayne at the University of Alberta. For my postdoctoral work and Smithsonian

Migratory Bird Center, I am applying some of the principles developed with our Common Nighthawk project to another species of conservation concern, the Long-billed Curlew.

Common Nighthawk ecology & conservation (PhD): My PhD research focused on the ecology and conservation of the Common Nighthawk across its range, particularly in the boreal forest where the species is poorly understood. Common Nighthawk populations have declined precipitously in recent years, along with other aerial insectivorous birds. I used passive acoustic monitoring to understand behaviour-specific habitat relationships of the Common Nighthawk in the boreal forest. My Common Nighthawk research was supervised by Erin Bayne and Mark Brigham. I continue to work with a network of collaborators across North America to study variation in the ecology of the Common Nighthawk across its range.

Ecological applications of bioacoustic technology (PhD): Ecologists are increasingly using sound as a non-invasive method to study acoustic animals like birds. During my PhD, I tested and developed bioacoustic methods to improve their utility for ecology and conservation research, with particular focus on automated computer processing techniques. I used the Common Nighthawk as a bioacoustic model species because it has a simple, frequent, and consistent call, and its nocturnal behaviour precludes excessive sound masking from other acoustic species. My bioacoustic research was a collaboration with the Bioacoustic Unit.

Citizen science monitoring for nightjars (PhD): The Common Nighthawk is a member of the nightjar family, which is a group of poorly understood nocturnal birds. As part of the non-profit organization WildResearch, I developed and managed a national citizen science program that engages hundreds of volunteers to conduct surveys for nightjars. The freely available data has been used for a variety of applications, including independent research by several undergraduates at the University of Alberta. As manager for this program, I worked closely with wildlife managers across North America on the conservation of this group of species and regularly invited to provide input at technical meetings. In 2020, the WildResearch Nightjar Survey received formal support from Environment and Climate Change Canada and was transferred to Birds Canada for long-term management.

Edge effects on grassland songbirds (MSc): The objective of my MSc thesis was to investigate potential mechanisms of grassland songbird decline in the south Okanagan of British Columbia. I studied the impacts of fragmentation by agriculture on grassland songbirds in the sagebrush shrubsteppe habitat at multiple scales. At a reproductive scale, I examined potential causes for higher nest predation rates in habitat adjacent orchards. At a community scale, I investigated potential local and landscape mechanisms for an agricultural edge effect on songbird community composition.

Urban ecology of Pacific Great Blue Herons (BSc): My undergraduate thesis used a long-term colony survey data set to study the nesting ecology of the Pacific Great Blue Heron in south coastal British Columbia. I studied nesting habitat availability and colony location choice in an anthropogenic landscape.

Refereed Publications

E.C. Knight, R.M. Brigham, E.M. Bayne. 2021. The Big Boom Theory: Common Nighthawks use wingboom displays to defend nesting territories. Ornithology ukab066.

Knight, E.C., R.M Brigham, E.M. Bayne. 2021. Specialist or generalist? It depends. Context-dependent habitat relationships provide insight into forest disturbance effects for a boreal bird species. Submitted to Forest Ecology and Management 502:119720.

Elly Knight

ellyknight@gmail.com
www.ellyknight.ca

Knight, E.C., A.C. Smith, R.M. Brigham, E.M. Bayne. 2021. Combination of targeted monitoring and Breeding Bird Survey data improves population trend estimation and species distribution modelling for the Common Nighthawk. Ornithological Applications123(2):duab005.

Knight, E.C., A.-L. Harrison, A.L. Scarpignato, S.L. Van Wilgenburg, E.M. Bayne, J.W. Ng, E. Angell, R.Bowman, R.M. Brigham, B. Drolet, W.E. Easton, T.R. Forrester, J.T. Foster, S. Haché, K.C. Hannah, K.G. Hick, J. Ibarzabal, T.L. Imlay, S.A. Mackenzie, A. Marsh, L.P. McGuire, G.N. Newberry, D. Newstead, A. Sidler, P.H. Sinclair, J.L. Stephens, D.L. Swanson, J.A. Tremblay, P.P. Marra. 2021. Comprehensive estimation of spatial and temporal migratory connectivity across the annual cycle to direct conservation efforts. Ecography ECOG-05111.

Davidson, A., … **E.C. Knight** et al. 2020. New ecological insights from the Arctic Animal Movement Archive (AAMA). Science 370 (6517):712-715.

Nebel, S., J. Casey, M.-A. Cyr, K.J. Kardynal, E.A. Krebs, E.F. Purves, M. Bélisle, R.M. Brigham, **E.C. Knight**, C. Morrissey, and R.G. Clark. 2020. Falling through the policy cracks implementing a roadmap to conserve aerial insectivores in North America. Avian Conservation and Ecology 15(1):23.

Knight, E.C., P. Solymos, C. Scott, and E.M. Bayne.2020. Validation prediction: A protocol for increasing the efficiency of automated acoustic recognition. Ecological Applications. doi.org/10.1002/eap.2140

Lostanlen, V., K. Palmer, **E.C. Knight**, C. Clark, H. Klinck, A. Farnsworth, T. Wong, J. Cramer, and J.P. Bello. 2019. Long-distance Detection of Bioacoustic Events with Per-Channel Energy Normalization. In Michael Mandel, Justin Salamon and Daniel P.W. Ellis (Eds.), Proceedings of the Detection and Classification of Acoustic Scenes and Events 2019 Workshop (DCASE2019), New York University, NY, USA.

Knight, E.C., S. P. Hernandez, V. Bulitko, E.M. Bayne, B. Tucker. 2019. Pre-processing spectrogram parameters improve the accuracy of birdsong classification using convolutional neural networks. Bioacoustics. doi:10.1080/09524622.2019.1606734

D. Yip*, **Knight, E.C*.,** H. Audete, S. Wilson, C. Charchuk, P. Solymos, and E.M. Bayne. 2019. Sound level measurements from audio recordings provide objective distance estimates for distance sampling wildlife populations. Remote Sensing in Ecology and Conservation. doi:10.1002/rse2.118 ***Equal contributions**

Knight, E.C., and E.M. Bayne. 2018. Classification threshold and training data affect the quality and utility of focal species data processed with automated audio recognition software. Bioacoustics. doi:10.1080/09524622.2018.1503971

Ng, J.W., **E.C. Knight**, A.L. Scarpignato, A. Harrison, E.M. Bayne, and P.P. Marra. 2018. Full annual-cycle tracking identifies long distance migration route, nonbreeding habitat, and breeding site fidelity of a declining aerial insectivorous bird. Canadian Journal of Zoology 96(8):869-875. *Editor's Choice

Knight, E.C., J.W. Ng, C. Mader, R.M. Brigham, and E.M. Bayne. 2018. An inordinate fondness for beetles: first description of Common Nighthawk diet for the boreal biome. The Wilson Journal of Ornithology 130(2):525-531.

Knight, E.C., K. Hannah, G. Foley, C. Scott., M. Brigham, and E.M. Bayne. 2017. Recommendations for acoustic recognizer performance assessment with application to five common automated signal recognition programs. Avian Conservation and Ecology 12(2):14.

Elly Knight

ellyknight@gmail.com
www.ellyknight.ca

Knight, E.C., R.G. Vennesland, and N.N. Winchester. 2016. Importance of proximity to foraging areas for the Pacific Great Blue Heron (*Ardea herodias fannini*) nesting in a developed landscape. Waterbirds 39(2).

Knight, E.C., N.A. Mahony, and D.J. Green. 2016. Local and landscape effects on the bird community in sagebrush shrubsteppe habitat fragmented by agriculture. Agriculture, Ecosystems, and Environment 223:278-288.

Knight, E.C., N.A. Mahony, and D.J. Green. 2014. Crop type influences edge effects on the reproduction of songbirds in sagebrush habitat near agriculture. Avian Conservation and Ecology 9(1): 8.

Manuscripts in Review

Knight, E.C. *In revision.* Nightjars as a model taxon for passive acoustic monitoring. In Nightjars: From Mystery to Model in Ecology and Evolution (C. Camacho ed). Springer.

Hannah, K.G., L.L. Leston, **E.C. Knight**, R. Weeber. *In review*. In the twilight zone: patterns in Common Nighthawk (Chordeiles minor) acoustic signals during the breeding season and recommendations for surveys. Submitted to Avian Conservation and Ecology ACE-ECO-2020-1698.

Knight, **E.C.,** K.G. Hannah, J.M. DeMoor. *In review*. In the still of the night: Revisiting recommendations for Eastern Whip-poor-will surveys with passive acoustic monitoring. Submitted to Avian Conservation and Ecology ACE-ECO-2021-1902.

Knight, E.C., P. Sólymos, R.M. Brigham, E.M. Bayne. *In review*. Movement range corresponds to scale of effect for single scale models but not for individual variables within models. Submitted to Landscape Ecology LAND-S-21-00410.

Conference Posters & Presentations

Knight, E.C., A. Harrison, A. Scarpignato, S. Van Wilgenburg, P. Marra, E.M. Bayne. Full annual cycle insights on the Common Nighthawk: Migratory connectivity of habitat. American Ornithological Society and Society for Canadian Ornithologists joint conference. Virtual conference. **Invited thematic oral presentation.**

Knight, E.C., R.M. Brigham, E.M. Bayne. The Big Boom Theory: Interpretation and application of the Common Nighthawk wingboom display. Northeast Natural History Conference 2021. Virtual conference. **Oral presentation - Association of Field Ornithologists Student Award.**

Knight, E.C., P. Sólymos, E.M. Bayne. Improving the efficiency and utility of automated bioacoustic processing with simple acoustic principles. BES Festival of Ecology 2020. Virtual conference. **Invited thematic session oral presentation.**

Knight, E.C., E.M. Bayne. Automated acoustic mark-recapture of a migratory bird using signal recognition software. Acoustics Week in Canada 2019. Edmonton, AB. **Oral presentation.**

Knight, E.C., A. Harrison, A. Scarpignato, S. Van Wilgenburg, P. Marra, E.M. Bayne. Conservation implications of migratory connectivity for the Common Nighthawk. American Society of Ornithologists 2019 Conference. Anchorage, AK. **Oral presentation.**

Knight, E.C., A. Harrison, A. Scarpignato, S. Van Wilgenburg, P. Marra, E.M. Bayne. Migratory connectivity: Connecting Common Nighthawk populations across the annual cycle. Alberta Chapter of the Wildlife Society 2019 Conference. Canmore, AB. **Oral presentation.**

Knight, E.C., A.C. Smith, E.M. Bayne, R.M. Brigham. 2018. Shining a light on nocturnal species: Targeted citizen science surveys increase detections, trend estimate precision, and habitat prediction for nightjars. 27th International Ornithological Congress. Vancouver, BC. **Oral presentation.**

Knight, E.C., E.M. Bayne. 2018. Linking acoustic signal to Common Nighthawk habitat function in the boreal forest. Northern Research Day. Edmonton, AB. **Oral presentation.**

Knight, E.C., S. Van Wilgenburg, P. Marra, E.M. Bayne. 2018. Applications of a migratory network for a declining aerial insectivore, the Common Nighthawk. Movement Ecology of Aerial Insectivores Symposium. Lund, Sweden. **Invited oral presentation.**

Knight, E.C., K. Hannah, G. Foley, C. Scott, E.M. Bayne, R.M. Brigham. 2017. Assessment and optimization of automated acoustic species for wildlife practitioners. Alberta Chapter of the Wildlife Society 2017 Conference. Lac La Biche, AB. **Oral presentation.**

Knight, E.C., E.M. Bayne. 2016. Can you hear me? Assessing automated acoustic recognition for Common Nighthawk habitat modelling. R.E. Peter Biology Conference. Edmonton, AB. **Poster presentation – Ph.D. First Place Winner.**

Knight, E.C., E.M. Bayne. 2016. Automated acoustic recognition for Common Nighthawk habitat modelling: challenges & opportunities. Alberta Chapter of the Wildlife Society 2016 Conference. Drumheller, AB. **Oral presentation.**

N.A. Mahony, **E.C. Knight**, D.J. Green. 2014. Local and landscape effects on the bird community in sagebrush shrubsteppe habitat fragmented by agriculture. AOU, COS, and SCO 2014 Joint Meeting. Estes Park, CO. **Oral presentation.**

Knight, E.C., N.A. Mahony, D.J. Green. 2012. Grassland songbirds: do edge effects vary between agricultural types? North American Ornithological Conference. Vancouver, BC. **Poster.**

Knight, E.C., N.A. Mahony, D.J. Green. 2012. Grassland songbirds: do edge effects vary between agricultural types? Ecological Society of America 97th Annual Meeting. Portland, OR. **Poster**.

Knight, E.C. 2012 Life on the edge: impact of vineyards on the nest predator community and nest success of songbirds in adjacent shrubsteppe. BC Field Ornithologists Annual General Meeting. Princeton, BC. **Invited oral presentation.**

Knight, E.C., R.G. Vennesland, and N.N. Winchester. 2010. The cost of waterfront property: nesting habitat availability and colony location choice for Pacific Great Blue Herons (*Ardea herodias fannini*) on a highly urbanized landscape. University of Victoria Vertebrates of BC Symposium. Victoria, BC. **Invited oral presentation.**

Presentations at Technical Meetings

E.C. Knight. 2021. Shining a light on Common Nighthawk conservation. 2021 Nightjar Research Roundtable Meeting. **Invited online keynote presentation.**

Elly Knight

ellyknight@gmail.com
www.ellyknight.ca

E.C. Knight. 2020. Continuous estimation of migratory connectivity across the annual cycle. Road to Recovery Workshop Par 2. **Invited online presentation.**

P. Solymos, **E.C. Knight,** and S. Haché. 2020. From recognizers to density. Ontario Breeding Bird Atlas Technical Committee. **Invited online presentation.**

Knight, E.C., A.C. Smith, E.M. Bayne, R.M. Brigham. 2019. Targeted nightjar surveys: How and why. Partners in Flight Western Working Group Meeting. Ft. Collins, CO. **Invited online presentation.**

Knight, E.C., E.M. Bayne, R.M. Brigham. 2019. Occupancy models reveal habitat associations of a Species at Risk, the Common Nighthawk. Shell Enhanced Learning Fund Symposium. Edmonton, AB. **Poster presentation.**

Knight, E.C., A.C. Smith, E.M. Bayne, R.M. Brigham. 2018. Targeted nightjar surveys: How and why. Canadian Wildlife Service Landbird Technical Committee meeting. Ottawa, ON. **Invited online presentation.**

Knight, E.C., A.C. Smith, E.M. Bayne, R.M. Brigham. 2018. Shining a light on nocturnal species: Targeted citizen science surveys increase detections, trend estimate precision, and habitat prediction for nightjars. Canadian Wildlife Service Landbird Technical Committee meeting. Ottawa, ON. **Invited online presentation.**

Knight, E.C., S. Van Wilgenburg, P. Marra, E.M. Bayne. 2018. Common Nighthawk connectivity project update. Partners in Flight Western Working Group Meeting. St. George, UT. **Invited online presentation.**

Knight, E.C., E.M. Bayne. 2018. Recent advances in the use of ARUs in biodiversity monitoring. Alberta Biodiversity Chairs Summary Forum. Calgary, AB. **Oral presentation.**

Knight, E.C.., E. Upham-Mills. 2017. A grad student perspective on field work at the University of Alberta. University of Alberta Field Research Office Information Session. Edmonton, AB. **Invited oral presentation.**

Knight, E.C. 2017. Advances & applications in Common Nighthawk bioacoustic monitoring. Canadian Wildlife Service Critical Habitat Team Meeting. Ottawa, ON. **Invited online presentation.**

Knight, E.C., T. Luszcz. 2017. Current common Nighthawk migratory connectivity and recovery efforts. Partners in Flight Western Working Group Spring Meeting. Santa Fe, NM. **Invited online presentation.**

Knight, E.C., R.M. Brigham, E.M. Bayne. 2017. Interpreting nighthawk: can acoustic signal be used to differentiate between habitat components? Alberta Biodiversity Committee Chairs Annual Meeting. Edmonton, AB. **Poster presentation.**

Knight, E.C., E.M. Bayne. 2016. Investigation of automated acoustic recognition for Common Nighthawk Habitat Modelling. Alberta Biodiversity Committee Chairs Annual Meeting. Calgary, AB. **Poster presentation.**

Knight, E.C.. 2015. Preliminary nightjar detectability results for protocol optimization. Partners in Flight Western Working Group Spring Meeting. Tucson, AZ. **Online presentation.**

Knight, E.C., N.A. Mahony, D.J. Green. 2013. Do they fledge at the edge? Impacts of habitat fragmentation on Okanagan sagebrush songbirds. Canadian Wildlife Service Seminar Series. Vancouver, BC. **Oral presentation.**

Scholarships & Fellowships Awarded

- Smithsonian Institution Postdoctoral Fellowship ($60,000 USD; 2021)
- Andrew Stewart Memorial Scholarship ($5,000; 2019)
- Izaak Walton Killam Memorial Scholarship ($90,000; 2019 – 2021)
- CFUW Dr. Margaret McWilliams Pre-Doctoral Fellowship ($11,000; 2019)
- ACTWS William Wishart Postgraduate Scholarship ($1,500; 2019)
- Queen Elizabeth II Graduate Scholarship – Doctoral Level ($15,000; 2018)
- CFUW Margaret Brine Graduate Scholarship for Women ($4,500; 2018)
- Shell Enhanced Learning Fund ($1,350; 2018)
- Green & Gold Student Leadership and Professional Development Grant ($735; 2018)
- Alberta Society of Professional Biologists Graduate Scholarship ($1,800; 2017)
- Alberta Graduate Citizenship Award ($2,000; 2016)
- University of Alberta President's Doctoral Prize of Distinction ($5,000; 2016)
- Bill Shostak Wildlife Award ($11,100; 2016)
- University of Alberta Science Graduate Scholarship ($2,000; 2015)
- University of Alberta President's Doctoral Prize of Distinction ($10,000; 2015)
- University of Alberta Doctoral Recruitment Scholarship ($15,000; 2015)
- NSERC Postgraduate Scholarship-Doctoral ($63,000; 2015-2017)
- SFU Travel Award (2012)
- NSERC Alexander Graham Bell Canada Graduate Scholarship ($18,300; 2011)
- UVic President's Scholarship (2008)
- Jamila Vlasta Von Drak Thouvenelle Co-op Scholarship (2008)
- BC Federation of Naturalists Rene Savenye Scholarship ($1,500; 2007)

Research and Travel Grants Awarded

- J Gordin Kaplan Graduate Student Travel Award ($1,500; 2019)
- UofA Northern Research Awards; *Determining the importance of boreal populations for full annual cycle conservation of the Common Nighthawk* ($2,450; 2019)
- Northern Scientific Training Program; *Determining the importance of boreal populations for full annual cycle conservation of the Common Nighthawk* ($2,024; 2019)
- Various conference travel awards; *ACTWS, SCO, AOS* (~$1500; 2016-2019)
- Kay Ball Memorial Graduate Student Research Travel Award; *Common Nighthawk Migratory Connectivity Project* ($4,500; 2018)
- UofA Northern Research Awards; *Linking acoustic signal to Common Nighthawk habitat components* ($3,200; 2017)
- Northern Scientific Training Program; *Linking acoustic signal to Common Nighthawk habitat components* ($3,292; 2017)
- Alberta Conservation Association Grants in Biodiversity; *Linking Hierarchical Habitat Relationships of Common Nighthawks in a Dynamic Landscape* ($13,730; 2016-2017)
- Fairmont CARES; *WildResearch Foundation* ($10,000; 2016)
- TD Friends of the Environment Foundation; *WildResearch Nightjar Survey* ($5,000; 2016)
- Brink McLean Grassland Conservation Fund; *Roadside Monitoring of Nightjar Populations in BC's Grasslands* ($2,500; 2016)

Elly Knight

ellyknight@gmail.com
www.ellyknight.ca

- Canada Summer Jobs; *Nightjar Survey Coordinator* ($4,225; 2016)
- TD Friends of the Environment Foundation; *WildResearch Nightjar Survey Program* ($10,000; 2015)
- Bird Studies Canada Baillie Fund; *BC Nightjar Survey* ($3,500; 2015)
- BC Nature Club Grant; *Community Building for the BC Nightjar Survey* ($1,400; 2015)
- MEC Capacity Building Contribution; *BC Nightjar Survey Citizen Science Atlas* ($9,602; 2015)
- Science Horizons Youth Internship Program; *BC Nightjar Survey* ($12,000; 2014)
- Science Horizons Youth Internship Program; *BC Nightjar Survey* ($12,000; 2013)
- Pacific Conservation Assistance Fund; *WildResearch Nightjar Survey* ($5,300; 2013)
- Brink McClean Grassland Conservation Fund; *Impacts of Shrubsteppe Fragmentation by Agriculture on Nest Predation of Songbirds* ($2,500; 2011)

Teaching Experience

Biology of Birds TA, *University of Alberta*, Edmonton, AB (Jan – Apr 2019)

Conservation Biology TA, *Simon Fraser University*, Burnaby, BC (Jan – Apr 2011 & 2013)

Science Tutor, *Native Education Centre,* Vancouver, BC (Sept 2010 – April 2011)

Student Supervision & Mentorship

Supervisor - BIOL 499 Research Project, *University of Alberta* (Sep 2016 – Apr 2017)

Supervisor - BIOL 498 Research Project, *University of Alberta* (Sep 2016 – Dec 2016)

Supervisor - BIOL 298 Research Project, *University of Alberta* (Sep 2016 – Dec 2016)

Canada Summer Jobs Mentor, *WildResearch* (May 2016 – Aug 2016)

Supervisor - BIOL 398 Research Project, *University of Alberta* (Sep 2015 – Dec 2015)

Science Horizons Mentor, *WildResearch* (May – Oct, 2014 & 2015)

Co-op Program Mentor, *University of Victoria* (Jan – Apr 2009)

Leadership

Steering Committee Member, *Global Nightjar Network* (Feb 2021 – present)

Graduate Student Representative, *University of Alberta Biological Sciences Safety Committee*, Edmonton, AB (Jan 2018 – Jan 2020)

Coordinator, *Common Nighthawk Migratory Connectivity Project,* Edmonton, AB (Sept 2016-present)

Program Manager, *WildResearch Nightjar Survey*, Vancouver, BC (Jan 2012 – present)

Vice-President, Secretary, *WildResearch*, Vancouver, BC (Nov 2011 – Feb 2016)

Secretary, *SFU Biological Sciences Graduate Caucus,* Burnaby, BC (Nov 2010 – Nov 2011)

President/Founder, *UVic Natural History Club,* Victoria, BC (Sep 2008 – Apr 2009)

Coordinator, *UVic Wilderness Club*, Victoria, BC (Sep 2006 – Apr 2009)

Elly Knight

ellyknight@gmail.com
www.ellyknight.ca

Peer Review

Avian Conservation and Ecology

American Midland Naturalist

Bioacoustics

Canadian Journal of Zoology

Diversity and Distributions

Ecological Applications

Ecology

Journal of Caribbean Ornithology

Methods in Ecology and Evolution

Northwestern Naturalist

Ornithological Applications

Waterbirds

Wilson Journal of Ornithology

Ecology Experience

Ecological Consultant, *Independent,* Edmonton AB (various contracts for Parks Canada & Environment and Climate Change Canada; 2014 – present)

Bioacoustic Technician, *University of Alberta*, Edmonton AB (May 2015 – Aug 2015)

Project Biologist, *Spencer Environmental Management Services,* Edmonton AB (Dec 2013 – Apr 2015)

Pacific Great Blue Heron Consultant, *Parks Canada*, Vancouver, BC (part-time; 2009 - present)

Landbird Assessment Crew Leader, *Environment Canada,* Edmonton AB (May – Jul 2013)

Wildlife Technician, *Environment Canada,* Okanagan, BC (May – Jul 2010)

Mist-net Assistant, *University of Southern Mississippi,* Johnson's Bayou, LA (Mar – Apr 2010)

Herbarium Assistant, *University of Victoria*, Victoria, BC (Jan – Apr 2009)

Southwestern WIFL Bander, *SWCA Environmental Consultants*, Lake Havasu, AZ (May – Aug 2009)

Bird Banding Intern, *Institute for Bird Populations,* Ft. Leonard Wood, MO (May – Aug 2008)

Bird Banding Volunteer, *Vaseux Lake Bird Observatory*, Okanagan, BC (Aug 2007)

Song Sparrow Research Assistant, *University of Western Ontario,* Gulf Islands, BC (Apr – Aug 2006)

Elly Knight

ellyknight@gmail.com
www.ellyknight.ca

Recent Public Science Communication

- **Knight, E.C.** 2021. Migratory connectivity is a powerful tool for conservation and collaboration: The Common Nighthawk migratory connectivity project. Partners in Flight news story. **Blog post.**
- **Knight, E.C.,** and S. Mackenzie. 2021. Where do all the nightjars go? Birds Canada featured news story. **Blog post.**
- **Knight, E.C.,** and A.P. Coughlan. 2020. The Canadian Nightjar Survey Sheds Light on Some Fascinating Birds. Birdwatch Canada 91(3):10-16. **Article.**
- **Knight, E.C.** 2019. Getting the Whole Picture: What We've Learned by Studying Nighthawks Year-Round. Alberta Wildlife Association. Calgary, AB. **Presentation.**
- **Knight, E.C.** 2019. Eavesdropping on wildlife: Using sound to inform conservation. Canadian Federation of University Women Edmonton Academic Awards AGM. Edmonton, AB. **Presentation.**
- **Knight, E.C.** 2018. Birds of the Unknown: Ecology & Conservation of Nightjars in Canada. Red Deer River Naturalist Group. Red Deer, AB. **Presentation.**
- **Knight, E.C.** 2018. Strength in numbers: Collaboration and new technology reveal secrets of the Common Nighthawk. Prairie Conservation Action Plan. Edmonton, AB. **Webinar Presentation.**
- **Knight, E.C.** 2016. Birds of the Unknown: Ecology & Conservation of Nightjars in Canada. Edmonton Nature Club Bird Studies Group. Edmonton, AB. **Presentation.**
- **Knight, E.C.** 2016. Fighting fire with bikes: University of Alberta researchers use fat bikes to study birds in the wake of the Fort McMurray wildfire. Wild49. **Blog Post.**
- **Knight, E.C.** 2016. New Citizen Science Program Comes to Alberta: The WildResearch Nightjar Survey. Bios 31(3):3,11. **Article.**
- **Knight, E.C.** 2016. It's all fen and games – field ecology adventures in and around McClelland Lake fen. Wild49. **Blog Post.**
- **Knight, E.C.** 2016. What are Nightjars? BC Nature Magazine 53(1): 23. **Article.**
- **Knight, E.C.** 2015. WildResearch's BC Nightjar Survey Takes Flight. BC Nature Magazine 53(1): 14. **Article.**

Other Science Communication

- Twitter (@ellycknight): Tweeting about bioacoustics, movement ecology, conservation, the boreal forest, and nightjars to 2,000+ followers.
- Nightjar News: a bi-monthly newsletter about nightjar research and events sent to 400+ recipients (June 2016 - May 2020; 20 issues)
- PhyloBoreal: an educational card game about the boreal ecosystem. Available for sale here and at the Royal Alberta Museum.

Media

2021, October, *The Nighthawk's Evening: Notes of a Field Biologist.* **Book.**

2021, July 14, *CBC World at Six,* Common nighthawk news feature. **Radio.**

Elly Knight

ellyknight@gmail.com
www.ellyknight.ca

2021, June 20, *Global News,* Nightjar bird survey. **TV.**

2021, June 8, *770 CHQR,* Nightjar bird survey. **Radio.**

2021, June 3, *The Gateway,* Common nighthawk migration secrets revealed by U of A researchers. **Article.**

2021, March 4, *American Birding Association Podcast*, Unravelling a nighthawk migration mystery. **Podcast**.

2021, February 26, *CBC News Calgary*, Interview about Common Nighthawk migration tracking. **TV**.

2021, February 8, *Edmonton Journal*, University of Alberta researchers tracking nighthawks to save the species. **Article**.

2021, January 14, *Bird Watching Daily*, New tracking tools reveal bird migration secrets. **Article.**

2020, October 12, *CBC Radio*, Hidden Frequencies: How the invisible powers of sound shape our lives and world. **Radio documentary**.

2020, April 21, *Audubon*, Chuck-will's-widows Sometimes Swallow Songbirds Whole, Apparently? **Article**.

2019, October, *Believe it or Snot.* **Book.**

2018, July 30, *Global News 770 CHQR,* Nighthawk migration - what do we know about the bird? **Radio.**

2018, July 24, *Radio-Canada*, Sur les traces de l'engoulevent d'Amérique. **Article**.

2018, July 24, *The Globe and Mail,* 'Little backpacks': GPS used to track nighthawks' migration from northern Alberta to Brazil. **Article**.

2018, July 24, *CBC Edmonton,* 'Little backpacks': GPS used to track nighthawks from northern Alberta to Brazil. **Article.**

2018, July 24, *Canadian Science Publishing*, Unravelling the Mystery of Where Common Nighthawks Fly. **Article.**

2018, April 26, *Prairie Naturalist*, Episode 101. **Radio.**

2018, April, *Smithsonian Air & Space,* Penguin Spotting, and Other Cool Satellite Tricks. **Article.**

2017, December 1, *Alberta Wilderness Association*, Conservation corner: How to hunt for nighthawks. **Article.**

2017, November, *Firestorm: How Wildfire Will Shape our Future.* **Book.**

2017, July 24. *Government of Canada*, Science Horizons intern: Azim Shariff. **Article.**

2017, June 21, *Nature,* Sustainability: A greener culture. **Article.**

2016, December 21, *Hakai Magazine,* Big bird in the city. **Article.**

2016, October 31, *Contours*, Future focus: Life after the Fort McMurray fire. **Article.**

2016, October 11, *The Gateway*, Biologists swap ATVs for fat bikes in wake of Fort McMurray fires. **Article.**

2016, September 23, *CBC News,* Fort McMurray wildlife researchers ditch ATVs. **Article.**

Elly Knight

ellyknight@gmail.com
www.ellyknight.ca

2016, September 23, *Folio*, Rough-riding biologists turn to fat bikes for field work. **Article.**

2016, September 22, *CBC Radio Active,* Interview about using fat bikes for science. **Radio.**

2016, September 22, *CBC TV,* Interview about using fat bikes for science. **TV.**

2016, September 22, *Edmonton Metro*, Scientists on bikes: Alberta researchers ditch quads after Fort McMurray ban. **Article.**

2017, July 7, *CBC News,* Wildlife returns as forest regenerates after Fort McMurray wildfire. **Article.**

2015, November 20, *Yukon News,* Fewer nighthawks grace the aerial diner. **Article.**

Professional Development Courses

- Becoming Leaders: An Introduction to Leadership, WinSETT (2018)
- Occupancy Modelling, *Parks Canada* (2018)
- Introduction to Linear Mixed Effects Models and GLMM, *Highland Statistics* (2018)
- Data Visualization in R, *University of Alberta* (2016)
- Microsoft SQL Server Level II, *NAIT* (2016)
- Microsoft SQL Server Level I, *NAIT* (2016)
- Communication Skills for Leaders, *Mount Royal College* (2015)
- Fish Identification Workshop, *Alberta Society of Professional Biologists* (2015)

Technical Skills

- **Program Management:** Grant application and management, employee and volunteer coordination, stakeholder engagement, terms of reference and protocol documentation, information management.
- **Field Ecology** Bioacoustics, animal track ID, radiotelemetry, vegetation ID & surveys, ecosite classification, endangered species, herbarium & insect collection, camping in remote areas, GPS, 4WD, trailering, ATV, boat operation.
- **Field Ornithology** Point counts, mist-netting & banding, transmitter attachment, fecal and blood sampling, nest searching.
- **Ecology Research** Landscape, conservation & community ecology, avian behaviour, knowledge of provincial & federal environmental legislation, landcover classification, univariate and multivariate statistical analysis, machine learning, signal detection.
- **Computer** GIS (ArcGIS, Q), MS office esp. Excel and Access, SQL, R, PC-ORD.

Professional Memberships

Member, *American Ornithologists' Union* (intermittent 2017 – present)

Professional Biologist, *Alberta Society of Professional Biologists* (2014 – present; currently inactive)

Member, *Alberta Chapter of the Wildlife Society* (2015 – present)

Member, *Canadian Society of Ornithologists* (2011 – present)