Julie W. Turner

Email: jwturner@ualberta.ca

Contact Information

Email: jwturner@ualberta.ca
Website: www.julwturner.com

Career Highlights

- Skilled in data management, statistics, and coding
- Skilled communicator with diverse audiences
- Experienced leader and mentor with mentees moving on to their desired positions
- 18 peer-reviewed papers published/in review

Education

August 2011 - May 2018	Michigan State University; East Lansing, MI Dual Ph.D. in Integrative Biology and the interdisciplinary program in Ecology, Evolutionary Biology, and Behavior Major Advisor: Dr. Kay Holekamp
August 2007 - May 2011	Grinnell College; Grinnell, IA Double major in Biology and History (B.A.) Biology advisor: Kathryn Jacobson; History advisor: Elizabeth Prevost

Research and Work Experience

Positions

January 2025 - present	Adjunct Professor Department of Biology University of British Columbia - Okanagan
September 2022 - present	Wildlife Recovery Ecologist Wildlife Science Centre, Biodiversity Pathways Identifying critical habitat, examining the role of cumulative effects on behavior and demography, and developing monitoring plans. Supervisor: Melanie Dickie
June 2021 - September 2022	Ecosystem Management Ecologist, Government of Newfoundland and Labrador, Department of Fisheries, Forestry and Agriculture, Wildlife Division Boreal caribou range plan development for Labrador Supervisor: Shelley Moores
December 2020 - June 2021	Postdoctoral Fellow, University of British Columbia Western Boreal Initiative (WBI) Cumulative effects of landscape change on movement, habitat selection, and social behaviors Advisors: Josie Hughes (ECCC), Eliot McIntire (NRCan)
September 2018 - November 2020	Postdoctoral Fellow, Memorial University of Newfoundland Wildlife Evolutionary Ecology Lab (WEEL) How movement, habitat use, and sociality relate to disease and cause-specific mortality. Advisor: Eric Vander Wal
August 2011 - June 2018	PhD candidate, Michigan State University Mara Hyena Project Social development and its influence on adult traits in the spotted hyena Advisor: Kay Holekamp

Julie W. Turner

Email: jwturner@ualberta.ca

May 2010 - August 2010	Summer Research Assistant Oak Ridge National Laboratory, TN Analyzing behavioral responses after exposing fresh water organisms to magnetic fields (w/ Mark Bevelhimer and Glenn Cada; 40 hrs/week)
May 2009 - August 2009	Summer Research Assistant Oak Ridge National Laboratory, TN Campus Sustainability Initiative implementing a new recycling program (w/ Susan Michaud; 40 hrs/week)

Technical skills

- Coding (primarily R, but experience with SQL and Python)
- Rmarkdown/Quarto
- GIS skills (ArcGIS, QGIS, and R)
- Developing reproducible workflows
- Managing large, long-term databases (MS Access and SQLite)
- Resource selection and step selection analyses
- Social network analysis
- Hierarchical models
- Bayesian and frequentist statistics
- Writing technical reports

Collaborative skills

- Collaborative programming with Git
- Leading (online) training sessions (R, Statistics)
- Planning and hosting multi-agency, trans-timezone meetings
- Setting up and maintaining cyber infrastructure for communication

Field work experience

Wildlife Evolutionary Ecology Lab

- Elk calf captures (Manitoba, Canada, 1 month, 2019)
- Wolf kill site investigations (Manitoba, Canada, 1 week, 2019)
- Snowshoe hare captures (Newfoundland, Canada, 1 week, 2018)

Skills:

- Radio-telemetry
- Remote GPS navigation
- Live animal captures

Mara Hyena Project

- Wild spotted hyena behavioral research (Masai Mara, Kenya, 2 years over 2012 – 2016; 1 year straight 2013 – 2014)

Skills:

- Behavioral observation techniques
- Radio-telemetry
- Remote GPS navigation
- Processing immobilized animals
- Predator/prey surveys
- Field site management
- Permit acquisition
- Hiring assistants
- Basic car maintenance

Julie W. Turner

Email: jwturner@ualberta.ca

Publications

*Mentee

Peer-reviewed

Prokopenko, CM, KA Kingdon, DLJ Dupont, BM Carswell, TM Naaykens, J Prokopenko, **JW Turner**, S Zabihi-Seissan, E Vander Wal. (2026) Resource availability and anthropogenic disturbance alter how wolves move and feed: comparing two populations. *Movement Ecology* 14(1): 51.

Dyson, M, S Endicott, C Simpkins, **JW Turner**, S Avery-Gomm, CA Johnson, M Leblond, E Neilson, R Rempel, P Wiebe, JL Baltzer, FEC Stewart, J Hughes. (2026) Existing caribou habitat and demographic models are poorly suited for Ring of Fire impact assessment: A roadmap for improving the usefulness, transparency, and availability of models for conservation. *Ecology and Evolution* 16(5): e73199.

Palm, EC, CD Apps, T Avgar, M Dickie, BN McLellan, JM Northrup, MA Sawaya, **JW Turner,** J Whittington, EL Landguth, KA Zeller, CT Lamb. (2025) Changing grizzly bear space use and functional connectivity in response to human disturbance in the southern Canadian Rocky Mountains. *Conservation Science and Practice:* e70088.

Kingdon, KA*, CM Prokopenko, D Dupont, **JW Turner**, J Wiens, V Harriman, E Vander Wal. (2025) Movement-integrated habitat selection reveals wolves balance ease of travel with human avoidance in a risk–reward trade-off. *Journal Applied Ecology.*

Benson, JF, DA Keiter, PJ Mahoney, BL Allen, L Allen,… **JW Turner,**… BR Patterson. (2025) Intrinsic and environmental drivers of pairwise cohesion is wild *Canis* social groups. *Ecology* 106(1): e4492.

Webber, QMR*, CM Prokopenko, KA Kingdon, **JW Turner**, E Vander Wal. (2024) Effects of the social environment on movement-integrated habitat selection. *Movement Ecology* 12:61.

Turner, JW, CM Prokopenko, KA Kingdon, DLJ Dupont, S Zabihi-Seissan, and E Vander Wal. (2023) Death comes for us all: an interplay of habitat selection, movement, and social behavior relate to cause-specific mortality among grey wolves. *Oecologia* 202(4): 685-697.

Collins, SM*, JG Hendrix, QMR Webber, SP Boyle, KA Kingdon, RJ Blackmore, KJN d'Entremont, J Hogg, JP Ibáñez, JL Kennah, J Lamarre, M Mejías, L Newediuk, C Richards, K Schwedak, C Wijekulathilake, **JW Turner**. (2023) A systematic examination of the intersection between animal personality and conservation. *Conservation Biology* 37(2): e14021.

Laubach, ZM, JR Greenberg, **JW Turner**, TM Montgomery, MO Pioon, MA Sawdy, L Smale, R Cavalcante, K Padmanabhan, C Lalancette, B vonHoldt, CD Faulk, DC Dolinoy, KE Holekamp, W Perng. (2021) Early-life social experience affects offspring DNA methylation and later life stress phenotype. *Nature Communications* 12: 4398.

Gering, E, ZM Laubach, P Weber, GS Hussey, KDS Lehmann, TM Montgomery, **JW Turner**, W Perng, MO Pioon, KE Holekamp, and T Getty. (2021) *Toxoplasma gondii* infections are associated with costly boldness toward felids in a wild host. *Nature Communications* 12: 3842.

Newediuk, L, J Ethier, SP Boyle, JA Aubin, J Baluffi-Fry, E Dedeban, MP Laforge, CM Prokopenko, **JW Turner**, QMR Webber, E Vander Wal. (2021) Sociopolitical factors drive conservation planning timelines: a Canadian case study with global implications. *Biological Conservation* 257(2021): 109091.

Turner, JW, AL Robitaille, PS Bills, and KE Holekamp. (2021) Early life relationships matter: Social position during early life predicts fitness among female spotted hyenas. *Journal of Animal Ecology* 90(1): 183-196.

Robitaille, AL*, QMR Webber*, **JW Turner**, E Vander Wal. (2020) The problem and promise of scale in multilayer animal social networks. *Invited contribution to Current Zoology* Special Issue: Embracing the complexity of animal social systems using multilayer network analysis. 67(1): 113-123.

Turner, JW, RM LaFleur*, AT Richardson*, and KE Holekamp. (2020) Risk-taking in free-living spotted hyenas is associated with anthropogenic disturbance, predicts survivorship, and is consistent across experimental contexts. *Ethology* 126(1): 97-110.

Turner, JW, PS Bills, and KE Holekamp. (2018) Ontogenetic change in determinants of social network position in the spotted hyena. *Behavioral Ecology and Sociobiology* 72:10.

In review/preprints

Turner, JW, S Haché, J Hodson, PD McLoughlin, T Micheletti, MJL Peers, A Pelletier, and E McIntire. (*In review*). Inferring wildlife population trends from hierarchical habitat selection: a case study with boreal caribou. Preprint.

Prokopenko, CM*, S Zabihi-Seissan, DLJ Dupont, KA Kingdon, **JW Turner,** and E Vander Wal. (*In review*). Hunger drives switching and searching response in a social predator. BioRxiv preprint.

Denief, ED*, **JW Turner**, CM Prokopenko, AL Robitaille, and E Vander Wal. (*In review*) At a snail's pace: the influence of habitat disturbance on terrestrial snail movement using experimentally manipulated mesocosms. BioRxiv preprint.

Other publications and reports

ABMI (JW Turner - writing lead). (2023) Habitat mapping of forest regeneration: 2022-23 Technical report for the Oil Sands Monitoring Program. Link to report.

Turner, JW, T Avgar, C DeMars, R Serrouya. (2022). Recommendations for monitoring boreal caribou in Ontario. Prepared for Ontario Ministry of Environment, Conservation, and Parks.

Turner, JW, CM Prokopenko, AL Robitaille (2022). How to iSSA. https://doi.org/10.5281/zenodo.6423520

Robitaille, AL, J Baluffi-Fry, QMR Webber, **JW Turner**, IC Richmond, CM Prokopenko, KA Kingdon (2021). Wildlife Evolutionary Ecology Lab: Guide. https://doi.org/10.5281/zenodo.5535038

Gering, E, ZM Laubach, P Weber, GS Hussey, **JW Turner**, KE Holekamp, and T Getty. (2020) Time makes you older, parasites make you bolder: *Toxoplasma gondii* infections predict hyena boldness toward definitive lion hosts in a human-altered landscape. Evolution in Action: Past, Present and Future. W Banzhaf, BHC Cheng, K Deb, KE Holekamp, RE Lenski, C Ofria, RT Pennock, WF Punch, DJ Whittaker, Eds. Springer International Publishing.

Johnson-Ulrich, L, KDS Lehmann, **JW Turner**, and KE Holekamp. (2018) Testing cognition in the *umwelt* of the spotted hyena. The experimental *umwelt*. A practical guide to animal cognition. N Bueno-Guerra & F Amici, Eds. Cambridge University Press. Cambridge, UK.

Cada, G, M Bevelhimer, K Riemer, and **J Turner**. (2011) Effects on freshwater organisms of magnetic fields associated with instream hydrokinetic turbines. FY2010 Annual Progress Report to the Wind and Water Power Program, U.S. Department of Energy, Washington, DC.

Presentations

Turner, JW, E McIntire. When data deficiencies matter: a tale of forecasting two ecotypes of caribou. **Invited.** Ecological Forecasting Initiative Conference, Toronto, ON. August 2026.

Turner, JW. Inferring boreal caribou population trends from hierarchical habitat selection. North American Caribou Workshop, Yellowknife, NT. June 2026.

Turner, JW. Inferring wildlife population trends from hierarchical habitat selection: a case study with boreal caribou. The Wildlife Society Conference, Edmonton, AB. October 2025.

Turner, JW. Sick as a dog: the influence of disease and behavior on wolf population dynamics. **Invited.** North American Conference on Conservation Biology, Vancouver, BC. June 2024.

Turner, JW, CM Prokopenko, KA Kingdon, D Dupont, S Zabihi-Seissan, and E Vander Wal. Integrating social dynamics into movement ecology with socially informed step selection. **Invited.** Canadian Society for Ecology and Evolution Joint Conference, Winnipeg, MB. June 2023.

Turner, JW. Habitat selection, movement, and social behavior in a changing world. **Invited** Memorial University Biology Graduate Student Association seminar series. November 2022.

Rojas, CA, **JW Turner**, K Theis, KE Holekamp. Do host social interactions predict gut microbiota variation in a fission-fusion mammalian society? The Animal Behavior Society Virtual Conference. August 2021.

Webber, QMR, CM Prokopenko, KA Kingdon, **JW Turner**, E Vander Wal. Moving together, foraging apart: effects of the social environment on movement-integrated habitat selection. Ecological Society of America Annual Meeting, Virtual. August 2021.

Turner, JW. Habitat selection, movement, and social behavior in a changing world: causes and consequences. **Invited** Alaska Chapter, The Wildlife Society seminar series. July 2021.

Turner, JW, C Johnson, C Daniel, E McIntire, J Hughes. Past, present and future cumulative effects of harvest, fire, & roads on boreal caribou. North American Caribou Workshop, Virtual, Quebec. May 2021.

Webber, QMR, CM Prokopenko, KA Kingdon, **JW Turner**, E Vander Wal. Integrating habitat selection, sociality, and movement to inform caribou conservation. North American Caribou Workshop, Virtual, Quebec. May 2021.

Dyson, M, C Simpkins, **J Turner**, S Endicott, R Rempel, P Wiebe, E Nielson, C Johnson, M Leblond, J Baltzer, F Stewart, J Hughes. Evaluating the relevance and utility of existing caribou resource selection functions for assessment of cumulative effects of disturbance in Ontario. North American Caribou Workshop, Virtual, Quebec. May 2021.

Turner, JW. Social development and its effects on adult traits in spotted hyenas. **Invited** Pop. Bio. Seminar, Duke University, Durham, NC (virtual presentation). Feb. 2021.

Turner, JW, CM Prokopenko, KA Kingdon, D Dupont, S Zabihi-Seissan, and E Vander Wal. The walking dead: behaviors leading to cause-specific mortality in gray wolves. The Animal Behavior Society Virtual Conference. July 2020.

Denief, E, **JW Turner**, CM Prokopenko, and E Vander Wal. At a snail's pace: the influence of habitat disturbance on terrestrial snail movement. The Animal Behavior Society Virtual Conference. July 2020.

Laubach, ZM, R Cavalcante, DC Dolinoy, CD Faulk, JR Greenberg, C Lalancette, TM Montgomery, K Padmanabhan, W Perng, MO Pioon, L Smale, **JW Turner**, B vonHoldt, and KE Holekamp. Early social experiences contribute to DNA methylation and development of future stress phenotype. The Animal Behavior Society Virtual Conference. July 2020.

Turner, JW, CM Prokopenko, KA Kingdon, D Dupont, S Zabihi-Seissan, and E Vander Wal. The walking dead: testing whether end-of-life behaviors can be used to predict cause-specific mortality. The Wildlife Society Joint Conference, Reno, NV. Oct. 2019.

Dupont DLJ, CM Prokopenko, KA Kingdon, S Zabihi-Seissan , **JW Turner**, VB Harriman, and E Vander Wal. To Eat or Not to Eat: Testing a Predictive Model of Large Carnivore Behaviour to Estimate Prey Kill Rates in Multi-Prey Systems. The Wildlife Society Joint Conference, Reno, NV. Oct. 2019.

Turner, JW, CM Prokopenko, KA Kingdon, D Dupont, S Zabihi-Seissan, and E Vander Wal. The walking dead: testing whether end-of-life behaviors can be used to predict cause-specific mortality. Canadian Society for Ecology and Evolution Joint Conference, Fredericton, NB. Aug. 2019.

Turner, JW. Social development and its effects on adult traits in spotted hyenas. Invited Biology Department Seminar, Memorial University of Newfoundland, St. John's, NL. Oct. 2018.

Turner, JW and KE Holekamp. Effects of early social bonds on adult fitness in free-living spotted hyenas (*Crocuta crocuta*). EEBB Colloquium, Michigan State University, East Lansing, MI. Mar. 2016.

Julie W. Turner

Email: jwturner@ualberta.ca

Turner, JW and KE Holekamp. Effects of early social bonds on female fitness in free-living spotted hyenas (*Crocuta crocuta*). Animal Behavior Society Conference, University of Alaska Anchorage, Anchorage, AK. Jun. 2015.

Turner, JW. The effects of static magnetic fields on fresh water organisms. Biology Seminar, Biology Department, Grinnell College, Grinnell, IA. Oct. 2010.

Turner, JW. The effects of static magnetic fields on fresh water organisms. Fishheads Seminar, Environmental Sciences Department, Oak Ridge National Laboratory, Oak Ridge, TN. Aug. 2010.

Science Communication

July 2021	Interviewed for *Why Do Animals Kill Each Other?* By Katherine J. Wu in The Atlantic.
October 2020	Soapbox Science - St. John's, NL • 3 minute lightning talk on spotted hyenas • Panelist for Q&A
December 2018 - January 2020	Consultant on "Family Secrets" in Animal Social Networks (2021) by Rotating Planet • Story development • Hyena and social network expertise • Travel guidance when filming in Kenya
March 2017 - August 2018	Freelance science communicator/naturalist, Masai Mara, Kenya • Invited formal/informal talks to school and tourist groups • Groups of 1-50 people of all ages and nationalities
January 2018	Interviewed for *Girl Power - why do female spotted hyenas rule the pack?* by Stewart Wallis in Discover Wildlife
September 2014	Consultant on *Mama Hyena* (2015) by FL Concepts Paris • Guided film crew through the Mara • Interviews

June 2012 - August 2018	Outreach events associated with Holekamp Lab and Mara Hyena Project
	• MSU Museum Darwin Discovery Day (East Lansing, MI, 2012, 2013, 2016)
	• ABS Science Day (Anchorage, AK, 2015)
	• Hyena and Mara Ecosystem talks to students and tourists (Kenya)
	• Science nights at local schools (East Lansing, MI)
	  ○ Targeted towards families and children
	  ○ Developed games and content

Julie W. Turner

Email: jwturner@ualberta.ca

Blogging

Turner, JW. (Jan. 2021) Growing up Hyena. *Animal Ecology in Focus*.

Turner, JW. (Nov. 2016) Social networks in spotted hyenas. *BEACON blog*.

Turner, JW. (May 2014) A hyena is a hyena, no matter how small. *Notes From Kenya blog*.

Turner, JW. (Feb. 2014) Routine and adventure. *Notes From Kenya blog*.

Turner, JW. (Feb. 2014) February is hatari time with hyenas. *Notes From Kenya blog*.

Turner, JW. (Jul. 2013) Alien abduction! *Notes From Kenya blog*.

Turner, JW. (Jun. 2013) Battle for the elephant carcass. *Notes From Kenya blog*.

Turner, JW. (Aug. 2012) An ode to Target and welcoming Junior. *Notes From Kenya blog*.

Turner, JW. (Jul. 2012) Pan ate Target! *Notes From Kenya blog*.

Service

April 2022	How-to iSSA workshop co-leader and developer • Developed materials presented in a workshop (See How to iSSA)
September 2018 - December 2020	Cognitive and Behavioural Ecology Program Journal Club Coordinator Memorial University of Newfoundland • Lead a review paper completed by the group
September 2018 - Present	Mentor Undergraduate and Graduate Students Memorial University of Newfoundland, Wildlife Evolutionary Ecology Lab • 1 high school, 2 undergraduates, 1 honors student, 6 graduate students
April 2019	Judge, Biology Graduate Student Symposium at MUN
October 2018	Judge, Conservation Science Species-at-risk Poster Session
April 2016	Judge, University Undergraduate Research and Arts Forum at MSU
December 2015	Panelist, MSU Zoology Student Association Graduate School Forum
August 2014 - May 2015	Service on MSU Zoology Department Curriculum Committee
August 2012 - August 2018	Mentor Undergraduate and Post-Undergraduate Research Assistants Michigan State University and Mara Hyena Project • 22 undergraduates and 2 post-undergraduates

Teaching Experience

May 2012 - present	Guest Lectures (# of times given) • African Mammals and Personality (x4) • Animal Personality (x3) • Hyena Physiology and Behavior (x3) • Behavioral Ecology Techniques in the Wild (x3) • Employing Social Network Analysis (x1)

Julie W. Turner

Email: jwturner@ualberta.ca

August 2014 - June 2016	Instructor, Behavioral Ecology of African Mammals (BEAM) (ZOL 490) (*Lead instructor July 2015 - June 2016*) Michigan State University Integrative Biology Department • 3 week field course in Kenya
August 2012 - May 2016	Teaching assistant (6 semesters, 20 hrs/week) Michigan State University • Ecology Lab (ZOL/PLB 355L) • Organismal Biology Lab (BS 172) • Cell and Molecular Biology Lab (BS 171) • Marine Biology (ZOL 353)

Awards and honors

- Michigan State University Excellence-in-teaching Citation (2016-2017)
- Phi Kappa Phi Honor Society (2013)
- Graduate with honors in biology at Grinnell College (2011)
- Phi Beta Kappa Honor Society (2011)
- Mortarboard Honor Society (2010)

Other skills

- Conversational Spanish
- Photography
- Skilled at off-road, 4x4 driving
- Wilderness first aid and CPR certified
- Wildlife Chemical Immobilization certified