

**Scott D. LaPoint****Research Scientist, Black Rock Forest**

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e-mail: [slapoint@blackrockforest.org](mailto:slapoint@blackrockforest.org)twitter: [@sdlapoint](https://twitter.com/sdlapoint)website: <http://scottlapoint.weebly.com/>RESEARCH SUMMARY

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My research improves our understanding of how species, populations, and individuals respond to their dynamic environments. My work combines data collection, via biotelemetry, camera traps, or specimen measurements, with advanced spatial and statistical analyses to reveal wildlife behavior and to develop conservation relevant information.

RESEARCH INTERESTS

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- **Small carnivore behavior, ecology & conservation** – Using biotelemetry, camera trap data, and advanced spatial analyses to quantify how prey, predators, and competitors interact with dynamic environments to affect the spatio-temporal patterns of animal behaviors.
- **Arctic warming and wildlife phenology** – Quantifying wildlife responses, particularly golden eagle migration phenology, in response to arctic warming using a 25-year, continental-scale movement data set.
- **Functional skull morphology** – Using morphometrics and repeated x-rays to quantify ontogenetic and seasonal skull size, shape, and density changes in small carnivores and insectivores.
- **Improving methods** – Quantifying camera trap detection probabilities for mammals of various body masses and camera trap model. Facilitating novel models for animal space use estimation.

EDUCATION

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- 2008 – 2013    Dr.rer.nat – Universität Konstanz (Biology; honors, equivalent to PhD)  
advisors: [Roland Kays](#) & [Martin Wikelski](#)
- 2003 – 2007    M.S. – SUNY College of Environmental Science and Forestry (Conservation Biology; honors)  
advisor: [Mark Lomolino](#)
- 1998 – 2001    B.A. – Paul Smith's College (Natural Resources Policy and Management; honors)  
advisor: [Justina Ray](#)

POSITIONS HELD

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- 2018 –            Research Scientist – Black Rock Forest, NY, USA  
Hudson Highlands Wildlife Connectivity project lead: grant writing • outreach • coordinating and executing field logistics (including camera and live-trapping and telemetry) • developing technological tools with [SayCel](#) and [Hise Scientific Instrumentation](#) • coordinating volunteers, students, and field assistants • data analysis • publishing.
- 2018 –            Adjunct Associate Research Scientist – Lamont-Doherty Earth Observatory, NY, USA
- 2016 –            Associate Scientist – Max-Planck Institute of Animal Behavior, Radolfzell, Germany
- 2016 – 2018      Postdoctoral researcher – Lamont-Doherty Earth Observatory, Columbia University, NY, USA

- quantifying species responses to arctic climate change; supervisor: Natalie Boelman
- 2013 – 2016 Postdoctoral researcher – Max-Planck Institute for Ornithology, Radolfzell, Germany  
– investigating Dehnel’s Phenomenon in *Mustela* sp.; supervisor: Dina Dechmann
- 2008 – 2013 Doctoral student – New York State Museum & Max-Planck Institute for Ornithology
- 2007 – 2008 Field technician – Wildlife Conservation Society, CA, USA  
– capture, handling, and VHF-telemetry of carnivores; supervisor: J. Mark Higley
- 2004 – 2005 Graduate research assistant – SUNY College of Environmental Science and Forestry, NY, USA  
– masters thesis field work (road-kill and snow tracking surveys); supervisor: Mark Lomolino
- 2003 – 2007 Graduate student – SUNY College of Environmental Science and Forestry, NY, USA
- 2002 – 2003 Project coordinator – Adirondack Park Agency, NY, USA  
– coordinated two Agency projects on wetland delineation and GIS; supervisor Sunita Halasz
- 2001 – 2002 Field supervisor – Wildlife Conservation Society, Adirondack Park, NY, USA  
– led non-invasive surveys of carnivores; supervisors: Justina Ray and Roland Kays

#### GRANTS & AWARDS RECEIVED

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- 2020 – 2021 Sarah K. deCoizart Perpetual Charitable Trust in support of “The Hudson Highlands Wildlife Connectivity Project”; \$90,000.
- 2019 – 2021 Samuel Freeman Charitable Trust grant for “The Hudson Highlands Wildlife Connectivity Project ”; \$90,000.
- 2018 – Golden Foundation matching fund in support of fisher ecology work; \$7,500.
- 2018 – Private donor contribution in support of fisher ecology work; \$7,500.
- 2018 – Huyck Preserve Research Grant for “Mammal Watching II: inferring carnivore behavior and abundance via snow tracking and camera traps”; \$2,500 (maximum).
- 2017 – PloS Early Career Researcher travel award; Raptor Research Foundation Conference; \$500.
- 2017 – Best Poster Presentation Award; European Molecular Imaging Meeting.
- 2017 – Huyck Preserve Research Grant for “Mammal Watching I: inferring carnivore behavior and abundance via snow tracking and camera traps”; \$3,281.
- 2013 – Student Travel Award; Wild Musteloid Conference at Oxford University; £200.
- 2012 – Best Poster Presentation Award; 2<sup>nd</sup> Asia Regional Conference of the Society for Conservation Biology.
- 2011 – National Geographic Society Waite Grant for “Animal-defined corridors: using animal movement and behavior to determine corridors.”; \$9,900.
- 2004 – Edna Baily Sussman Foundation award for “Investigating mammalian road crossing patterns and under-road passageway use along a major highway.”; \$4,000.

#### MANUSCRIPTS in PREPARATION

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**LaPoint SD** & Gurarie E (in prep) Body size, distance to camera, and camera trap model affect mammal species detection rates at camera traps.

**LaPoint SD**, Davidson SC, Gurarie E, Mahoney PJ, Bohrer G, Hebblewhite M, Prugh LR, Booms T, Katzner T, Miller T, McIntyre C, Craig E, Smith J, Domenech R, Bedrosian B, Crandall R, Lewis S, Boelman NT (in prep) Recent Arctic warming is affecting golden eagle migration phenology in western North America.

**LaPoint SD** & Kays RW (in prep) Ecology and behavior of fishers (*Pekania pennanti*) inhabiting a suburban landscape.

Davidson SC et al. (submitted) New Ecological insights from the Arctic Animal Movement Archive. *Nature*

Fleming CH et al. (accepted) A comprehensive framework for location error in animal tracking data. *Ecological Monographs*

Noonan MJ et al. (in press) Effects of body size on estimation of mammalian area requirements. *Conservation Biology*

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PEER REVIEWED MANUSCRIPTS

Hofman MPG et al. (2019) Right on track? Performance of satellite telemetry in terrestrial wildlife research. *PloS One* doi: 10.1371/journal.pone.0216223

Noonan MJ, et al. (2019) A comprehensive analysis of autocorrelation and bias in home range estimation. *Ecological Monographs* doi: 10.1002/ecm.1344

Tucker MA et al. (2019) Large birds travel farther in homogeneous environments. *Global Ecology and Biogeography* doi: 10.1111/geb.12875

Boelman NT, Liston GE, Hebblewhite M, Prugh LR, Meddens AJH, Kimball JS, Mahoney PJ, Gurarie E, Nolin AW, Kirchner PB, Cosgrove CL, Bohrer G, **LaPoint SD**, Vierling LA, Eitel JUH, Brinkman TJ, Pedersen SH (2019) Integrating snow science and wildlife ecology in Arctic-boreal North America. *Environmental Research Letters* doi: /10.1088/1748-9326/aaec1

Mahoney PJ, Liston G, **LaPoint SD**, Gurarie E, Mangipane B, Wells A, Brinkman T, Eitel JUH, Hebblewhite M, Nolin AW, Boelman NT, Prugh LR (2018) Navigating snowscapes: scale-dependent responses of mountain sheep to snowpack properties. *Ecological Applications* doi: 10.1002/eap.1773

Tucker MA, Mueller T, et al. (2018) Moving in the Anthropocene: global reductions in terrestrial mammalian movements. *Science* doi: 10.1126/science.aam9712

Lázaro J, Hertel M, **LaPoint SD**, Wikelski M, Stehler M, Dechmann DKN (2017) Cognitive skills of common shrews vary with seasonal changes in skull size and brain mass. *Journal of Experimental Biology* doi: 10.1242/jeb.166595

Lázaro J, Dechmann DKN, **LaPoint SD**, Wikelski M, Hertel M (2017) Profound reversible seasonal changes of individual skull size in a mammal. *Current Biology* 27:R1106–R1107 doi: 10.1016/j.cub.2017.08.055

Fleming CH, Sheldon D, Gurarie E, Fagan WF, **LaPoint SD**, Calabrese JM (2017) Kálmán filters for continuous-time movement models. *Ecological Informatics* 40:8–21 doi: 10.1016/j.ecoinf.2017.04.008

Dechmann DKN\*, **LaPoint SD**\*, Zub K, Taylor JRE, Hertel M, Wikelski M (2017) Profound seasonal shrinking and regrowth of the ossified braincase in phylogenetically distant mammals with similar life histories. *Scientific Reports* doi: 10.1038/srep42443 \*equal contributions

**LaPoint SD**, Keicher L, Wikelski M, Zub K, Dechmann DKN (2017) Growth overshoot and seasonal size changes

in the skulls of two weasel species. *Royal Society Open Science* doi: 10.1098/rsos.160947

Scharf AK, **LaPoint SD**, Wikelski M, Safi K (2016) Acceleration data reveal highly individually structured energetic landscapes in fishers. *PLoS ONE* doi:10.1371/journal.pone.0145732

Blackwell PG, Niu M, Lambert MS, **LaPoint SD** (2015) Exact Bayesian inference for animal movement in continuous time. *Methods in Ecology and Evolution* doi:10.1111/2041-210X.12460

**LaPoint SD**, Balkenhol N, Hale J, Sadler J, van der Ree R (2015) A review of ecological connectivity research in urban areas. *Functional Ecology* doi:10.1111/1365-2435.12489.

**LaPoint SD**, Belant J, Kays R (2015) Mesopredator release facilitates range expansion in fisher. *Animal Conservation* doi:10.1111/acv.12138.

Ascensão F, Grilo C, **LaPoint SD**, Tracey J, Clevenger A, Santos-Reis M (2014) Inter-individual variability of stone marten behavioral responses to a highway. *PLoS ONE* doi:10.1371/journal.pone.0103544.

**LaPoint SD**, Gallery P, Wikelski M, Kays R (2013) Animal behavior, cost-based corridors, and real corridors. *Landscape Ecology* 28:1615–1630 doi: 10.1007/s10980-013-9910-0.

Kranstauber B, Kays R, **LaPoint SD**, Wikelski M, Safi K (2012) A dynamic Brownian bridge movement model to estimate utilization distributions for heterogeneous animal movement. *Journal of Applied Ecology* 81:738–746 doi: 10.1111/j.1365-2656.2012.01955.x.

Brown D, **LaPoint SD**, Kays R, Heidrich W, Kümmeth F, Wikelski M (2012) Accelerometer-informed GPS telemetry: reducing the trade-off between resolution and longevity. *Wildlife Society Bulletin* 36:139–146 doi:10.1002/wsb.111.

Gompper M, Kays R, Ray J, **LaPoint SD**, Bogan D, Cryan J (2006) A comparison of noninvasive techniques to survey carnivore communities in northeastern North America. *Wildlife Society Bulletin* 34:1142–1151 doi:http://dx.doi.org/10.2193/0091-7648(2006)34[1142:ACONTT]2.0.CO;2.

**LaPoint SD**, Kays R, Ray J (2003) Animals crossing the Northway: are existing culverts useful? *Adirondack Journal of Environmental Studies* Spring/Summer, 11–17.

## BOOK CHAPTERS

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Powell R, Gabriel M, Higley J, **LaPoint SD**, McCann N, Spencer W, Thompson C (2017) The fisher as a model organism. In: *Biology and Conservation of Musteloids*. Eds: D MacDonald, C Newman, and LA Harrington.

Ascensão F, **LaPoint SD**, van der Ree R (2015) Roads traffic and verges: big problems and big opportunities for small mammals. In: *The Handbook for Road Ecology*. Eds.: R van der Ree, C Grilo, and D Smith.

## TEACHING & MENTORING

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2020 – Bachelor thesis mentor for Nicholas Vandenbos, SUNY Cobleskill

2019 – 2020 Bachelor thesis mentor for Ann-Katrin Pohle, Universität Konstanz

2019 – 2020 Bachelor thesis mentor for Emma Palmer, Barnard College

2019 – 2020 Master's thesis committee member for Dan Winters, SUNY Albany

- 2018 – Numerous lectures and field and lab activities with Black Rock Forest Consortium member public and private schools, colleges, and universities, on wildlife ecology, field biology, and conservation.
- 2016 – Guest instructor, “Introduction to animal movement analyses in R”; Universität Konstanz
- 2015 – Guest lecture for the Vertiefungskurs of the Universität Konstanz
- 2014 – Master’s thesis mentor for Marion Muturi, Universität Konstanz
- 2014 – Bachelor thesis supervisor for Lara Keicher, Universität Konstanz
- 2013 – Guest lecture for the Vertiefungskurs of the Universität Konstanz
- 2011 – Trained SUNY Cobleskill staff on the safe capture and handling of carnivores
- 2010 – Field advisor for undergraduate honors theses (Laura Licht; SUNY-Albany, and Sara Rolf; SUNY-ESF)
- 2009 – 2011 Taught biotelemetry methods to high school, undergraduate, and graduate students volunteers
- 2006 – Teaching assistant for Conservation Biogeography (1 semester)
- 2004 – 2005 Lab instructor for Mammalogy (2 semesters)
- 2003 – 2004 Lab instructor for Botany and Zoology

## POPULAR MEDIA (since 2011)

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- 2019 – The Highlands Current: “[Behind the Scenes... in the Forest](#)”  
Organic Hudson Valley: “[Wherever They May Roam](#)”  
Cornwall Local: “Connectivity project aims to make roads safer”
- 2018 – Our paper in *Science* on global reductions in mammalian movements was covered widely (Altmetric score of 777), including the [New York Times](#), [Science](#), [Nature](#), [Der Spiegel](#), and [El Pais](#).
- 2017 – BBC News: “[Golden eagle migration out of sync with climate change](#)”  
Our paper on shrew skull size changes in *Current Biology* was reported by over 400 international news outlets, including television, radio, online, and print. A few highlights include: [Nature](#), [The Guardian](#), [DailyMail.com](#), [Newsweek](#), [Yahoo](#), [ScienceDaily.com](#), [Phys.org](#), [Smithsonian.com](#), [USNews&WorldReport.com](#), [New York Times](#), and the Discovery Channel.  
Südkurier: “Schrumpfköpfe in unserer Natur”,  
Stuttgarter Zeitung: “Schrumpfende Nager”,
- 2016 – New York Times: “[Weasels are built for the Hunt](#)”,  
Book: “[Where the Animals Go: the Fishers Sneaking Through Suburbia](#)”,
- 2014 – JSTOR Daily: “[Keeping up with the Carnivores](#)”,  
Deutschlandfunk radio program: “Ein storch geht online”,  
National Geographic News: “[Fierce, furry fishers are expanding their range - and bulk](#)”,  
Popular Science: “[Weasel-like predators are reclaiming territory in the US and getting larger](#)”,  
Yottafire.com: “Just ask the animals!”,
- 2013 – Vet Journal: “Der klügere Forscher berechnet nicht, er beobachtet lieber”,  
Naturschutz.ch: “[Modelle versagen bei Korridor-Vorhersage](#)”,  
Txchnologist.com: “[GPS data reveal shy carnivores are intrepid urban explorers](#)”,  
RedOrbit.com: “[Using animal behavior data to better inform models of animal movements](#)”,  
Sciencedaily.com: “[Just ask the animals: fishers with GPS sensors show animal movements](#)”,  
Phys.org: “[Using animal behavior data to better inform mathematical models of animal movements](#)”,  
Conservationcorridor.org: “[New ideas for improving corridor models](#)”,
- 2012 – The Wildlife Professional: “Dynamic GPS fine-tunes tracking”,

Practiceconservation.com: “Fisher-Man”,  
2011 – New York Times: “[Albany’s urban weasels](#)”

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#### PUBLIC OUTREACH (since 2011)

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2020 – “Leroy, the fisher who learned no the hard way”; [Wild Animals podcast](#)  
2019 – “Camera traps for ecology and conservation: the return of an extirpated carnivore signals hope for connectivity efforts”; Hudson Highlands Land Trust Community Forum  
2017 – “The Comeback (Fisher) Kings”; Huyck Preserve Myosotis Messenger Newsletter article  
AGU meeting press panel: “[Climate change and consequences for animal populations](#)”  
2014 – “[Animal-defined movement corridors](#)”; YouTube; tutorial  
“[Tracking Animal Migration](#)”; National Geographic GeoStory; interactive online education tool  
2011 – “Ecology and behavior of urban fishers”; Saratoga County Fur Trappers Association; invited talk  
“The fisher: our old neighbor is back”; Save the Pine Bush; invited talk for conservation organization  
“Our old neighbor the fisher is back”; Thatcher Park Nature Center; invited talk

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#### INVITED PRESENTATIONS (since 2011)

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2020 – “Fishers, past and present”; SUNY New Paltz – Mohonk Preserve Shawangunk Lecture Series  
2019 – “Fisher ecology and and range recovery”; Palisades Interstate Parkway League of Naturalist  
2018 – “Camera traps and emammal.org for science, conservation, and education”; E. N. Huyck Preserve  
“Ecology and behavior of fishers in suburbia”; Thacher Park Nature Center  
“Fishers as a model organism for assessing landscape connectivity in and across Black Rock Forest”; Black  
Rock Forest Executive Board Annual Meeting  
2017 – “Suburban fishers: how a once rare carnivore is adapting to life at the forest fringe”; E. N. Huyck Preserve  
“Earth to Sky” course; Sponsored by NASA, NPS, and the USFWS (declined)  
2014 – “Using animal-movement data to quantify functional landscape connectivity”; Georg-August-Universität  
Göttingen  
“From refugia to suburbia: how fishers are re-colonizing their former range”; Mammal Research Institute  
2013 – “Using animal behavior data to identify corridors”; Universität Potsdam  
“Animal-defined corridors: using animal movement data to identify corridors”; Universität Konstanz  
2012 – “Animal-defined corridors: using animal movement data to identify corridors”; Ugyen Wangchuck Institute  
for Conservation and Environment of Bhutan

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#### CONFERENCE PRESENTATIONS (since 2011)

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Bohrer G, Davidson S, Gurarie E, Hebblewhite M, Jennewein J, **LaPoint SD**, Mahoney P, Prugh L, Boelman N “A shared archive for animal movement data in the Arctic”; ESA, Louisville, Kentucky, USA, August 2019.

**LaPoint SD** & Schuster WS “The Hudson Highlands Wildlife Connectivity Project: carnivore surveys within and around Black Rock Forest”; Black Rock Forest Research Symposium, Cornwall, New York, USA, June 2019.

**LaPoint SD**, Bohrer G, Davidson S, Gurarie E, Mahoney P, Boelman N “Arctic warming and Golden eagle migrations: potential for desynchrony between spring and eagle arrival dates”; NASA Arctic Boreal Vulnerability Experiment Symposium, Seattle, USA, January 2018.

Bohrer G, \*Davidson SC, **LaPoint SD**, Boelman N, Wikelski M. “New tools for environmental annotation of animal movement tracks at the ABoVE domain and beyond”; NASA Arctic Boreal Vulnerability Experiment Symposium, Seattle, USA, January 2018.

**LaPoint SD**, Bohrer G, Davidson S, Gurarie E, Mahoney P, Boelman N “Golden eagle migratory behaviors in response to arctic warming”; American Geophysical Union, New Orleans, USA, December 2017.

**LaPoint SD**, Bohrer G, Davidson S, Gurarie E, Mahoney P, Boelmea N “Golden eagle migratory behaviors in

response to arctic warming”; Raptor Research Foundation Conference, Salt Lake City, USA, November 2017.

**LaPoint SD** “Mammalian responses to dynamic environments: behavior and morphology”; Lamont-Doherty Earth Observatory Postdoctoral Symposium, Palisades, USA, April 2017.

Lázaro J, Dechmann DKN, **LaPoint SD**, Dullin C, Hertel M, Taylor JRE, Zub K, Wikelski M “CT scans reveal profound seasonal changes in the ossified skull of two mammals”; European Molecular Imaging Meeting, Cologne, Germany, April 2017.

**LaPoint SD**, Gurarie E, Davidson S, Bohrer G, Boelman N “Golden eagle migratory behavior and arctic warming”; NASA Arctic Boreal Vulnerability Experiment Symposium, Boulder, USA, January 2017.

Davidson S, Bohrer G, **LaPoint SD**, Gurarie E, Eitel J, Hebblewhite M, Jennewein J, Mahoney P, Meddens A, Oliver R, Palm E, Prugh L, Vierling L, Boelman N “Animals on the Move: status of data acquisition and archiving”; NASA Arctic Boreal Vulnerability Experiment Symposium, Boulder, USA, January 2017.

**LaPoint SD** “Sex, age, geographic, and seasonal differences in *Mustela* skulls”, Max-Planck Institute Annual Research Symposium, Munich, Germany, February 2015.

**LaPoint SD** “Animal-defined movement corridors: an introduction to the *corridor()* function within the *move* package for R”; Symposium on Animal Movement and the Environment, Raleigh, USA, May 2014.

Kranstauber B, **LaPoint SD** “The R package *move*”; Symposium on Animal Movement and the Environment, Raleigh, USA, May 2014.

**LaPoint SD**, Wikelski M, Kays R “Re-wilding suburbia: ecology and behavior of fisher in a semi-urban landscape”; Wild Musteloid Conference, Oxford, England, March 2013.

**LaPoint SD**, Gallery P, Wikelski M, Kays R “Animal-defined corridors: using animal movement data to identify functional wildlife corridors”; Biodiversity Asia 2<sup>nd</sup> Asia Regional Conference of the Society for Conservation Biology, Bangalore, India, August 2012.

**LaPoint SD**, Kays R, Wikelski M, Powell R “Movement patterns and corridor use of fisher (*Martes pennanti*) within a developed landscape”; 85<sup>th</sup> Annual Conference of the German Society of Mammalogy, Luxembourg City, Luxembourg, September 2011.

**LaPoint SD**, Kays R, Wikelski M, Powell R “Fisher (*Martes pennanti*) movement patterns and corridor use across an urban gradient”; VI<sup>th</sup> European Congress of Mammalogy, Paris, France, July 2011.

**LaPoint SD** & Kays R “Behavior and ecology of fisher (*Martes pennanti*) inhabiting an urban ecosystem”; American Society of Mammalogists meeting, Portland, Oregon, June 2011.

**LaPoint SD** & Kays R “Ecological and behavioral adaptations for survival in urban fisher (*Martes pennanti*)”; Urban Wildlife Management and Planning Conference, Austin, Texas, May 2011.

## PROFESSIONAL SERVICE

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**Journal Editor (1)** – Journal of the Bhutan Ecological Society

**Journal Reviewer (18)** – African Journal of Ecology, Animal Conservation, Annals of the New York Academy of Sciences, Bhutan Ecology Society, Diversity and Distributions, Ecology and Evolution, Ecosphere, Environmental Conservation, Functional Ecology, Ibis, International Journal of Geographical Information Science, Journal of Applied Ecology, Journal of Raptor Research, Journal of Wildlife Management, Landscape Ecology, Mammal Research, Methods in Ecology and Evolution, Movement Ecology, Northeastern Naturalist, PeerJ, PLoS One, Ursus.

**Grant Reviewer (1)** – National Geographic Society’s Northern Europe Program, David Redden Conservation Small Grants Program.

**Symposium Organizer** – Organized the 11th biennial Hudson Highlands Research Symposium.

PROFESSIONAL MEMBERSHIPS

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- American Society of Mammalogists
- Society for Conservation Biology
- The Wildlife Society