

# L. LEANN KANDA

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Affiliated Faculty, Dept. of Environmental Studies & Sciences  
Ithaca College  
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## Education:

Ph.D. (2005) Organismic & Evolutionary Biology,  
University of Massachusetts, Amherst  
M.S. (2001) Organismic & Evolutionary Biology,  
University of Massachusetts, Amherst  
B.A. (1998) *magna cum laude*, Dual Major: Environmental & Evolutionary Biology  
(High Honors) and Religion, Dartmouth College

## Teaching

### Experience:

(2007-present) Assistant Professor, Dept. of Biology, Ithaca College &  
Affiliated Faculty in Environmental Studies & Sciences  
(2005-2007) Visiting Assistant Professor, Dept. of Biology, Siena College  
(2004) Instructor, Dept. of Biology and the Honors College,  
U. of Massachusetts, Amherst  
(1999-2004) Teaching Assistant, Dept. of Biology, U. of Massachusetts, Amherst

## Ithaca College

### Courses:

#### *Principles in Biology II*

One of the introductory required courses for Biology and ENV5 majors.  
Topics include evolutionary theory, population and community ecology, and  
the diversity of life. Each year I and my co-lecturer substantially revised the  
course, developing new lecture and laboratory modules.

#### *Literature in Biology*

An upper-level required course for biology majors on scientific literacy and  
presentation. In 2012, I revised the course with new modules on good writing  
practices.

#### *Evolution of Evolution: Society and the Theory of Natural Selection*

A seminar I designed for the Honors program. We explore both the theory of  
evolution by natural selection as an explanation of the natural world and as a  
concept that has shaped and been shaped by society.

#### *Field Biology*

I thoroughly redesigned this experientially-based course to introduce students  
to the terrestrial ecosystems in the Ithaca area and the basic sampling designs  
and census methods used in ecological research.

*Environmental Senior Research*

This is a new required senior course in ENVS predicated on team research. With the assistance of ornithologist Dr. John Confer, I offered this as a research opportunity on saw-whet owl migration. Hands-on experience with experimental design and banding of owls was combined with data query and analysis using nearly a century of banding records.

*Invasive Species*

I developed this seminar-style course focusing on the ecological and evolutionary theories involved in understanding how species become invasive and what their impacts are upon the invaded communities.

*Independent Study in Population Ecology*

By popular request from students, in the spring I offer a senior-level weekly discussion on current primary literature in population ecology.

**Research  
Interests:**

\* **Factors determining local variation in animal distribution and movement**

The role of environmental heterogeneity

- microhabitat associations, especially in human-dominated landscapes

The role of individual animal personality with a focus on mammals

- correlation among social and movement personality traits
- personality and routine behaviour and space use

\* **Epistemology of science and religion**

**Undergraduate**

**Research**

*Students in 300 or higher level research projects are listed individually; underline*

**Collaborations:**

*denotes summer internship.*

\* **Siberian dwarf hamster social and movement behaviours**

Laura Louon (2008-2009) Exploratory behaviour in the dwarf hamster

Kit Straley (2008-2010) Boldness in the dwarf hamster

Yameleck Tabora (2009-2011) Density dependence of individual activity

Caitlin Erickson (2009-2011) Development and activity; Role of trial length in measuring behaviour

(also supported in the hamster lab: K. Noonan, A. Skeen-Hector, A. Wallitsch, L. Easton, B. McCullough, A. Abdulhay, E. Edwards, K. Bixby, S. Burnside, D. Piazza, J. Hetterich, A. Baron, M. Armstrong, L. Johnson, K. MacKellar, S. McKenna, C. Ludington)

\* **Muskrat temperament and space use**

Bryonna Albrecht (2007) Parasites of the common muskrat

Michelle Rhoades (2008) Muskrat temperament

Jessica Treacy (2009) Space use of juvenile muskrat

Christina Konnaris (2009) Muskrat behaviour and genetics

Laura Easton (2010) Captive activity and wild space use of muskrat

Jeff Hatzel (2010) Captive activity and wild space use of muskrat

Anthony Veroline (2010) Muskrat temporal activity patterns

\* **Ithaca College wetlands and amphibian habitat associations**

- Anna Novine (2010-2011) Survey of Ithaca College fauna  
Elise Edwards (2010-2011) Amphibian microhabitat associations  
Angeline Richards (2012) Amphibian community compositions  
(also supported in the wetland lab: E. Shelley, J. Burgher, N. Kessler)

\* **Eastern chipmunk temperament and space use**

- Laura Louon (2010-2011) Honors: Open field behaviours in chipmunks  
Kelsey MacKellar (2011) Activity and home range in chipmunks  
Dylan O'Leary (2011) Captive and wild behaviour in chipmunks  
(also supported in the chipmunk lab: R. Lowy)

**Student  
Undergraduate  
Conferences:**

- Erickson, C. (2012). The role of trial length in measuring personality characteristics in the Siberian hamster, *Phodopus sungorus*. Poster. National Conference for Undergraduate Research. Weber State University, Ogden, UT.
- O'Leary, D. (2012) The relationship between individual personality and everyday behavioral activity budget of eastern chipmunks, *Tamias striatus*. Presentation. National Conference for Undergraduate Research. Weber State University, Ogden, UT.
- Edwards, E. (2011) Amphibian distribution: Environmental factors surrounding new mitigated wetlands. Poster. National Conference for Undergraduate Research. Ithaca College, Ithaca, NY.
- Straley, K. (2011) Does personality change in different settings? Evaluating boldness in the Siberian dwarf hamster. Poster. National Conference for Undergraduate Research. Ithaca College, Ithaca, NY.
- Veroline, A. (2011) Learning and performing wildlife research through the muskrat. National Conference for Undergraduate Research. Presentation. Ithaca College, Ithaca, NY.
- Hatzel, J. (2011) The relationship between free-ranging space use patterns and captive open arena behavioral tests in muskrat (*Ondatra zibethicus*). Presentation. National Conference for Undergraduate Research. Ithaca College, Ithaca, NY.
- Louon, L. (2011) Natural movement behavior in the eastern chipmunk (*Tamias striatus*). Poster. Northeast Regional Sigma Xi Undergraduate and Graduate Research Poster Conference, SUNY Stonybrook, Stonybrook, NY.
- Louon, L. (2010) Got personality? Exploratory behavior in the Siberian dwarf hamster, *Phodopus sungorus*. Presentation. National Conference for Undergraduate Research. U. of Montana, Billings, MT.
- Straley, K. (2010) Does personality change in different settings? Evaluating boldness in the Siberian dwarf hamster. Presentation. Eastern Colleges Science Conference. Pace University, Pleasantville, NY.
- Novine, A. (2010) Hello, anyone home? A survey of Ithaca College's wetland fauna. Poster. Eastern Colleges Science Conference. Pace University, Pleasantville, NY.

## Peer-Review

**Articles:** *Underline denotes undergraduate student.*

- Kanda, L.L., A. Abdulhay, and C. Erickson. (in prep) Adult access to a running wheel does not change activity or boldness temperaments in Siberian dwarf hamsters (*Phodopus sungorus*). aimed for Behavioural Processes.
- Edwards, E., and L.L. Kanda. (in prep) Autumn amphibian-vegetation associations in a new mitigation wetland. aimed for Northeastern Naturalist.
- Kanda, L.L., and J. Hatzel. (in review) Captive behavior and home range size in subadult muskrat (*Ondatra zibethicus*): Does personality relate to space use? Canadian Journal of Zoology.
- Kanda, L.L., L. Louon and K. Straley. (in press) Stability in activity and boldness across time and context in captive Siberian dwarf hamsters. Ethology.
- Kanda, L.L. and R. Wagner. (2010) "I see you": Na'vigating the bridge between scientific observation and religious apprehension in *Avatar*. Journal of Religion and Film, 14(1).  
[http://www.unomaha.edu/jrf/Vol14no1/Reviews/WagnerKanda\\_Avatar.html](http://www.unomaha.edu/jrf/Vol14no1/Reviews/WagnerKanda_Avatar.html)
- Kanda, L. L., T.K. Fuller, P.R. Sievert, and R.L. Kellogg. (2009) Seasonal source-sink dynamics at the edge of a species' range. Ecology, 90(6):1574-1585.
- Kanda, L.L., T.K. Fuller, and P.R. Sievert. (2006) Landscape associations of road-killed Virginia opossums (*Didelphis virginiana*) in central Massachusetts. American Midland Naturalist, 156:128-134.
- King, R.L., A.L. Rosenberger, and L.L. Kanda. (2005) Artificial neural networks and 3D digital morphology: a pilot study. Folia Primatologica, 76:303-324.
- Kanda, L.L., T.K. Fuller, and K.D. Friedland. (2005) Temperature sensor evaluation of opossum winter activity. Wildlife Society Bulletin, 33(4):1425-1431.
- Kanda, L.L., T.K. Fuller, P.R. Sievert, and K.D. Friedland. (2005) Variation in winter microclimate and its potential influence on Virginia opossum (*Didelphis virginiana*) survival in Amherst, Massachusetts. Urban Ecosystems, 8(2):215-225.
- Kanda, L.L. (2005) Winter energetics of Virginia opossums (*Didelphis virginiana*) and implications for the species' northern distributional limit. Ecography, 28(6):731-744.
- Kanda, L.L., and T.K. Fuller. (2004) Demographic responses of Virginia opossums to limitation at their northern boundary. Canadian Journal of Zoology, 82(7):1126-1134.

## Other

**Publications:** *Kanda née Kellogg*

- Kellogg, L.L. (2001) Limitations on the distributions of North American carnivores. Pages 10-16 *In* Carnivore Ecology, Behavior, and Conservation, T.K. Fuller and P.R. Sievert, Editors. Departmental Report Series No. 3, Department of Natural Resources Conservation, University of Massachusetts, Amherst.
- Goodenough, J. and L.L. Kellogg, eds. (2001) Laboratory Exercises for Introductory Biology, 5<sup>th</sup> ed. Kendall /Hunt, Iowa.
- Goodenough, J. and L.L. Kellogg, eds. (2000) Laboratory Exercises for Introductory Biology, 4<sup>th</sup> ed. Kendall /Hunt, Iowa.

## Professional Conferences:

*Underline denotes undergraduate student. Kanda née Kellogg*

- Kanda, L.L., L. Easton, J. Hatzel, L. Louon. (2011) Temperament and space use in wild muskrat. Presentation. American Society of Mammalogists Annual Meeting, Portland, Oregon.
- Hatzel, J., L. Easton, and L.L. Kanda (2010) The relationship between free-ranging space use patterns and captive open arena behavioral tests in muskrat. Poster. The Wildlife Society Annual Meeting, Snowbird, Utah.
- Veroline, A. and L.L. Kanda (2010) Investigating influences on muskrat (*Ondatra zibethicus*) activity in a New York population. Poster. The Wildlife Society Annual Meeting, Snowbird, Utah.
- Novine, A. and L.L. Kanda (2010) Monitoring wetland success through the faunal community. Poster. The Wildlife Society Annual Meeting, Snowbird, Utah.
- Kanda, L.L., L. Louon, and K. Straley (2010) Just gotta be me: Individual personalities in captive Siberian dwarf hamsters, *Phodopus sungorus*. Poster. Animal Behavior Society Annual Meeting, Williamsburg, Virginia.
- Kanda, L.L. (2009) Behavioral syndromes and mammalian movement: Does personality count? Poster. International Mammalogical Congress, Mendoza, Argentina.
- Kanda, L. L., J. Confer, K. Straley, and E. Alvey. (2009) Community cooperation and a mixed conservation strategy to reduce amphibian road mortality during the spring migration in Tompkins County, New York. Presentation. Urban Wildlife and Ecology Management Conference, Amherst, Massachusetts.
- Kanda, L.L., R.L. Kellogg, and M.C. Sullivan. (2007) A software-based multichannel geolocation system. Poster. Animal Tracking and Physiological Monitoring Workshop, Princeton University.
- Kanda, L.L., T.K. Fuller, and P.R. Sievert. (2006) Source-sink dynamics at the Virginia opossums' distributional edge. Presentation. American Society of Mammalogists Annual Meeting, Amherst, Massachusetts.
- Kanda, L.L. (2004) Winter energetics and northern distribution of Virginia opossums. Presentation. American Society of Mammalogists Annual Meeting, Arcata, California.
- Kanda, L.L., T.K. Fuller, and P.R. Sievert. (2003) Virginia opossum population persistence in New England: Theoretical and actual life history parameters. Presentation. The Wildlife Society Annual Meeting, Burlington, Vermont.
- Kanda, L.L., T.K. Fuller, P.R. Sievert, K.D. Friedland. (2003) Winter foraging activity of Virginia opossums (*Didelphis virginiana*) at the northern edge of their distribution. Poster. Animal Behavior Society Annual Meeting, Boise, Idaho.
- Kellogg, L.L. and T.K. Fuller. (2002) Virginia opossums at their northern distributional limit: hypotheses and preliminary evidence for species persistence. Presentation. Northeast Fish and Wildlife Conference, Portland, Maine.

## External Grant

### Activity:

#### Recent awards

- 2012 Upper Susquehanna Coalition. Partnership to monitor *Ambystoma* salamanders at a major migration road crossing. \$5000 in 2012 for phase I development of monitoring array.
- 2010 American Wildlife Conservation Foundation. "Movement ecology in muskrat: the influence of personalities, kinship, and predators." \$2000

#### Recent

#### Submissions

- 2011 NSF. "Collaborative Research: Integrating Technology, Field Experience and Collaboration in the Undergraduate Science Curriculum." M. Grigione, D. Farkas, L.L. Kanda, J. Brenner. \$177,500, not reviewed - IC grants office failed to correctly provide IC final signature on this multi-institution grant.
- 2009 NSF. "RUI: Virtual Community for Movement Ecology." L.L. Kanda and A. Erkan; \$193,000 not funded. Project rolled over to MoveBank colleagues.

#### Past Awards

- 2003 Massachusetts Agricultural Experiment Station McIntire/Stennis Grant
- 2002 Klingener Scholarship
- 2001 Max McGraw Wildlife Foundation
- 2001 Sigma Xi Grant-in-Aid-of Research
- 1997 Richter Memorial Trust
- 1997 Claire Garber Goodman Fund
- 1997 Sigma Xi Grant-in-Aid-of-Research

## Ithaca College

### Internal Grants:

- 2011 H&S Educational Grant Initiative: Field Biology overnight field immersion at Arnot Forest
- 2010 H&S Educational Grant Initiative: Honors Research for Laura Louon
- 2010 Provost Travel Funding: Faculty and students to The Wildlife Society Annual Meeting
- 2010 H&S Educational Grant Initiative: Student travel to The Wildlife Society Annual Meeting
- 2010 H&S Educational Grant Initiative: Student travel to Eastern Colleges Science Conference
- 2009 Provost Summer Faculty Research Grant. "Movement ecology in muskrat: The influence of personalities, social interactions, and predators."
- 2008 Center for Faculty Research and Development. Research Release Time
- 2008 H&S Educational Grant Initiative: Student attendance Northern Forests Climate Change Undergraduate Conference

## Invited Talks and Workshops:

- (2010) Just gotta be me: Individual variation in mammalian behaviour. Natural Sciences Seminar Series, LeMoyne College, Syracuse, NY.
- (2008) E-science infrastructure for animal tracking workshop. Universiteit van Amsterdam. (Participant)
- (2008) Tooth and skull: natural history of bones. Primitive Pursuits Wilderness Skills Class, Ithaca, NY
- (2007) Out in the cold: factors influencing the northern distribution of Virginia opossums. Paul Smith's College, Dept. of Fisheries and Wildlife Science, Paul Smiths, NY

## Professional Membership:

- American Society of Mammalogists
- Animal Behavior Society
- The Wildlife Society
  - The Wildlife Society Urban Wildlife Working Group
  - The Wildlife Society Spatial Ecology and Telemetry Working Group
- Sigma Xi

## Professional Service:

- Development consultant*, Movebank-Virtual Research Environment (2010-present). Movebank is an internationally funded project to develop a repository and analysis tools for animal location data sets. The VRE is funded at the University of Konstanz, Germany to integrate data, analysis, and collaboration.
- Founder, Administrator, and Programmer*, Community for Remote Animal Monitoring. (2007-2011) An online international community of biologists and engineers working on geospatial organism data. This has since been folded into Movebank-VRE.
- Judge*. (2010) Student talks at The Wildlife Society Conference, Snowbird, UT.
- Judge*. (2010) Student talks at the Eastern Colleges Science Conference, Pace University, Pleasantville, NY.

## Peer Referee and Review

- Professional Journals*
  - Journal of Mammalogy, Journal of Zoology (London), Southeastern Naturalist
  - Mammalian Biology, Journal of Ethology, Urban Ecosystems
- Grants Programs*
  - Department of Defense SERDP for ecology in source-sink dynamics (2010)
- Book reviewer for Choice Magazine* (2011)
- Book proof review*
  - Goodenough, J., B. McGuire, and R. Wallace. (2004) *Biology of Humans*. Pearson, New Jersey.

L. L. KANDA

**Community  
Service:**

*Conservation coordinator.* (2008-present) Volunteer conservation effort to mitigate amphibian road mortality during spring migration in the town of Caroline. (with J. Confer).

**College Service:**

*All-college*

Ithaca College Natural Lands Committee (Fall 2007- present)

Ithaca College IACUC (Fall 2007-present; chair Spring 2012)

Center for Faculty Research and Development Proposal Review (Fall 2010)

Judicial Affairs Conduct Review Board, Faculty Judge (Fall 2010 – present)

*School of Humanities and Sciences*

Ad Hoc Liberal Arts Education Committee (Spring 2008)

C.P. Snow Committee (Fall 2008 – present; co-chair Fall 2010-present)

Educational Grant Initiative (Fall 2009-Spring 2011)

*Department of Biology*

Assessment Committee (Fall 2008 – present)

Curriculum Committee (Fall 2009 – present)

NTEN Search Committee (Fall 2010 – Spring 2011)

Procedures Committee (Fall 2011)

Scholarship Committee (Spring 2012 - present)

*Department of Environmental Studies and Sciences*

ENVS Transition Committee (formerly ESP Steering) (Fall 2008- Spring 2011)

Search Committee for Geographer, co-chair (Fall 2009 – Spring 2010)