

# CURRICULUM VITAE

## TOM A. LANGEN

Depts. of Biology & Psychology, Box 5805, Clarkson University, Potsdam NY 13699-5805

Phone: 315 268 7933 (office) 315 261 0182 (cell)

Email: [tlangen@clarkson.edu](mailto:tlangen@clarkson.edu)

<https://www.clarkson.edu/people/tom-langen>

<https://scholar.google.com/citations?user=0ePGCP8AAAAJ&hl=en>

Orcid: 0000-0003-4267-820X

### APPOINTMENTS

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Professor, Dept. of Biology & Dept. of Psychology, Clarkson University	2014 – present
Interim Dean, School of Arts & Sciences, Clarkson University	2020 – 2021
Chair, Dept. of Biology, Clarkson University	2014 – 2020
Associate Professor, Dept. of Biology & Dept. of Psychology, Clarkson University	2006 – 2014
Fulbright Scholar & Visiting Professor, International Institute of Wildlife Conservation & Management, National Autonomous University of Costa Rica	2007-2008
Assistant Professor, Dept. of Biology & Dept. of Psychology, Clarkson University	2000 - 2006
Visiting Assistant Professor, Dept. of Biology, Clarkson University	1999 - 2000
Lecturer, Dept. of Organismic Biology, University of California, Los Angeles	1997 - 1998
Lecturer, Dept. of Biology, University of California, San Diego	1997 - 1998
Lecturer, University of California Education Abroad Program	1997

### EDITORIAL BOARDS

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Senior Editorial Board, Scientific Reports	2016-present
Editorial Board, Social Evolution, in <i>Frontiers in Ecology and Evolution</i>	2016-present
Editorial Board, Environmental Management	2014-present
Associate Editor, Journal of Environmental Management	2016-2017

### EDUCATION

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Purdue University	Biology (Honors)	B.Sc., 1984
University of California, San Diego	Biology	Ph.D., 1994
University of California, Los Angeles	Biology	Postdoc 1994-1999

### EXTERNAL AWARDS & RECOGNITIONS

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Editor's Choice of December 2014 issue of <i>Biological Conservation</i> , for Consentino et al. (2014) <i>Biological Conservation</i> 180:31-38.	December, 2014
Network of Conservation Educators & Practitioners (NCEP) Professor of the Month	October, 2011
Ecological Society of America Education Scholar Award	2011
National Geographic Explorer	2008
Fulbright Scholar, Costa Rica	2007-2008
Presidential Award, Society of American Naturalists for the best paper of the previous year in the journal <i>American Naturalist</i> , as judged by the Society's President	2005
National Institutes of Health National Research Service Award	1994-1996

## CLARKSON UNIVERSITY AWARDS & RECOGNITIONS

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Clarkson Million Dollar Club (million dollars in external grants)	2019
Clarkson University Outstanding Advisor Award	2011
Accommodative Services RESPECT Award Nominee	2011
US Professor of the Year Award Nominee	2007
Clarkson University Student Association Outstanding Teacher Award	2003

## PROFESSIONAL CERTIFICATIONS

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Certified Senior Ecologist, Ecological Society of America  
 Master Bird Bander, Biological Resource Division, United States Geological Survey

## GRANTS & FELLOWSHIPS

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Erasmus+ Lectureship “Measuring and Mitigating Environmental Impact of Roads” (PI, travel and one week support at the Alexandru Ioan Cuza University of Iasi in Iasi, Romania).	2021
National Endowment for the Humanities’ Connections Planning Grant “Connecting Values with Scientific Innovation: Developing a Bioethics Minor” (Key Personnel, PI: P. Cummins, N. Gligorov, J. Oppenlander; \$35,000)	2021-2023
National Science Foundation “STEM Leadership, Equity, and Advancement for Faculty” (Key Personnel, PI: J. Ball, L. Ettinger, S Schuckers; \$999,934)	2019-2022
Northeastern Association of Fish & Wildlife Agencies “Strategic Implementation of Regional Conservation Priorities for Freshwater Turtles at Risk in the Northeast: RCN Opportunity, Initiative 3. Road Mortality Hotspot Identification, Targeted Road Mitigation Assessment, & Best Management Practices.” (PI, \$137,500)	2018-2023
SUNY Potsdam Walker Fellowship, “Using Environmental DNA (eDNA) to Detect Blanding’s Turtles, a Species of Conservation Concern, in St. Lawrence Valley Wetland Sediments.” (PI; \$4750)	2017-2018
St Lawrence River Research & Education Fund “Can Populations of Blanding’s Turtles in Northeastern New York be Detected and Monitored using Environmental DNA? A Validation Study.” (PI, \$15,000)	2017-2018
Northern New York Audubon Cullman Grant “Breeding golden-winged warbler population size re-survey & success of habitat improvement at Upper and Lower Lakes Wildlife Management Area” (PI, \$2,500)	2017
University of Michigan Water Center "Environmental and Socioeconomic Factors Associated with Public-Private Partnership Wetland Restoration Projects Benefiting Wildlife in the Great Lakes Watershed" (PI, co-PI: M. Twiss, M. Heintzelman, R Welsh (Syracuse U), D. Chandler (Syracuse U); \$390,100)	2013-2015
St Lawrence River Research & Education Fund “Predictive model for Blanding’s turtle distribution in northern New York; a tool for conservation and management.” (PI, \$15,042)	2013-2014
Northern New York Audubon Cullman Grant “Breeding Golden-winged Warbler Population Size and Opportunities for Habitat Improvement at Upper and Lower Lakes and Fish Creek State Wildlife Management Areas” (PI, \$2,150)	2013
Northern New York Audubon Cullman Grant “Avian Biodiversity Indicators to Diagnose the Health of Estuarine Wetlands in the Massena Great Lakes Area of Concern” (PI, \$1,000)	2012
St Lawrence River Research & Education Fund “Evaluation of Biodiversity and Water Quality Indicators of Putative Beneficial use Impairments and Ecosystem Services in Wetlands of the Massena (New York) Area of Concern” (PI, co-PI: M. Twiss \$19,162)	2012-2013
US Fish & Wildlife Service / New York State Department of Environmental Conservation State Wildlife	

- Grants Program “Value of Wetland Restoration Incentive Programs on Privately Owned Land for Species of Greatest Conservation Need”** (PI, co-PI: G. Johnson (SUNY Potsdam); Partners: US Fish & Wildlife Service, USDA National Resource Conservation Service, \$148,433) 2008 - 2012
- US Fish & Wildlife Service / New York State Department of Environmental Conservation State Wildlife Grants Program “Distribution of Wetland- Dependent Amphibians and Reptiles of Greatest Conservation Need in Northern New York - An Application of the New York State Herp Atlas”** (co-PI, PI: G. Johnson (SUNY Potsdam), other co-PIs: A.R. Breisch (NYSDEC), M.B. Kolosvary (NYS Biodiversity Institute); \$118,494) 2008 – 2012
- N.S.F. U.B.M. Program, “ITiMBReaC: Interdisciplinary Training in Mathematical & Biological Research”** (co-PI, PI: J Schulte; other co-PIs: S. Mondal, J. Skufca; Award number DBI-0926568, \$228,892) 2009 - 2013
- New York State Dept. of Transportation “Route 30 Turtle Barrier Monitoring”** (PI,\$9,800) 2010-2011
- St Lawrence River Research & Education Fund “Breeding Golden-winged Warbler Use of Electrical Transmission Line Corridors in the St. Lawrence Valley”** (PI, \$5,175) 2010-2011
- Associated Colleges Faculty Seminar “Seminar Road Ecology in the St. Lawrence Valley: Collaborative Opportunities in Teaching & Research”** (PI, \$1,000) 2009-2010
- St. Lawrence County STEM Partnership Grant** (co-PI, PI: P. Turner, other co-PIs: S. Powers, D. Wick, K. Fowler, J. Carroll; \$311, 126) 2007-2009
- Northern New York Audubon Cullman Grant “Golden-winged Warbler Use of Electrical Transmission Line Corridors in the St. Lawrence Valley”** (PI, \$2,020) 2009
- St Lawrence River Research & Education Fund “Proposed Wildlife Barrier for Reptiles & Amphibians along New York State Highway 68 at Upper and Lower Lakes Wildlife Management Area”** (PI, co-PIs: K. Janoyan, G. Johnson (SUNY Potsdam), Partners: St. Lawrence County (New York) Board of Legislatures, New York Department of Transportation, New York Department of Environmental Conservation; \$10,020) 2008-2009
- US Environmental Protection Agency / National Fish & Wildlife Foundation 5 Star Partnership Program, “Proposed Wildlife Barrier for Reptiles & Amphibians along New York State Highway 68 at Upper and Lower Lakes Wildlife Management Area”** (PI, co-PIs: K. Janoyan, G. Johnson (SUNY Potsdam), Partners: St. Lawrence County (New York) Board of Legislatures, New York Department of Transportation, New York Department of Environmental Conservation; \$11,701) 2008-2009
- New York State Department of Education Math and Science Partnership Program** (co-PI, PI: P. Turner, other co-PIs: S. Powers, D. Wick, K. Fowler, S. Minor, R. Partch, J. Carroll; \$328,476) 2007-2009
- Fulbright Scholar Program, “Impacts of Public Roads on Costa Rican National Parks; Animal Behavior with Applications to Conservation Biology”** (PI, Full semester salary & expenses to teach & conduct research at the *International Institute of Wildlife Conservation & Management, National Autonomous University of Costa Rica*). 2007-2008
- National Geographic Society Committee for Research & Exploration, “Impact of public roads on Costa Rican National Parks”** (PI, co-PI: J. Saenz (National University of Costa Rica), G. Johnson (SUNY Potsdam); \$12,100) 2007-2008
- Center for Regional Research & Community Education Walker Fellowship, “Evaluation of the Environmental & Social Values of Government Wetland Reconstruction & Preservation Programs on Private Landholdings in the St. Lawrence Valley of New York State”** (PI, co-PI: R. Welsh ; \$3145) 2007-2008
- N.S.F. FSML Program, “FSML: Planning Grant for the Great Rivers Center Field Station”** (co-PI, PI: M. Twiss; Award number DBI-0628054, \$13,264) 2007-2008
- Clarkson University Center for the Environmental Seed Grant “Values of Federal Government Wetland Reconstruction & Preservation Programs on Private Landholdings in the St. Lawrence Valley of New York State”** (PI, co-PI: R. Welsh ; \$1900) 2007
- New York State Biodiversity Research Institute “Predicting Hotspots of Herpetofauna Mortality on New York Highways: Validation of a GIS Model”** (PI, co-PI: G. Johnson (SUNY Potsdam); \$12,901) 2006-2007
- N.S.F. R.E.U. Site Program, Environmental Science & Engineering at Clarkson University “Solving complex**

- environmental problems through research in environmental science and engineering** (co-PI, PI: S. Grimberg; Award number EEC-042789, \$280,000) 2005 - 2007
- US Fish & Wildlife Service / New York State Department of Environmental Conservation State Wildlife Grants Program “Design and testing of prototype barriers and tunnels to reduce the impact of roads on turtle survival and reproductive success.”** (PI, co-PI: A.R. Breisch (NYSDEC), G. Johnson (SUNY Potsdam); MOU AM05405, \$43,539) 2004 - 2007
- New York State Department of Transportation “Winter impacts along Cascade Lakes in the Adirondacks”** (PI, co-PIs: M.R. Twiss, T.C. Young, K. Janoyan, J.C. Stager (Paul Smiths College); C-02-06, \$148,622) 2003 – 2006
- Clarkson University Center for the Environmental Seed Grant “LOLIPOP – Lake Ontario Limnology Practicum Opportunity: Lake Ontario Great Lakes Science Practicum 2003”** (co-PI, PI: M.R. Twiss ; \$1500) 2004
- U.S. Environmental Protection Agency, Great lakes National Program Office “Lake Ontario Great Lakes Science Practicum 2003 on board the R/V Lake Guardian”** (co-PI, PI: M.R. Twiss; other co-PIs G.S. Bullerjahn (Bowling Green State U.), S.W. Wilhelm (U. Tennessee); eight day research cruise ship-time expenses) 2003
- N.S.F. R.E.U. Site Program, Environmental Science & Engineering at Clarkson University “Sustainable management through environmental engineering and science”** (co-PI, PI: S. Grimberg, EEC-0138970. \$275,000) 2002 - 2004
- Clarkson University Center for Environmental Management Seed Grant “Inventory & Remediation Plan for Amphibian & Turtle Mortality on St. Lawrence Valley Roads”** (\$6045) 2001 - 2002
- N.I.H. National Research Service Award** (mentor: RM Gibson, \$46,000) 1994-1996
- N.S.F. Research Grant “Social learning in a cooperatively breeding bird”** (co-PI, PI: S.L. Vehrencamp; IBN 9120789, \$85,600) 1992-1994
- N.I.H. Genetics Training Grant**, full graduate support 1990-1993
- American Ornithological Union Student Research Award** (\$1000) 1991
- T.C. Schneirla Comparative Psychology Award** (\$500) 1990
- Sigma Xi Society Grant** (\$550) 1990
- Tinker Foundation Grant** (\$700) 1989

## PEER-REVIEWED PUBLICATIONS

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- McCluskey E.M., V. Lulla, W.E. Peterman, K.M. Stryszowska, R.D. Denton, A.C. Fries, **T.A. Langen**, G. Johnson, S.W. Mockford, R.A. Gonser. Linking genetic structure, species distribution modeling, and landscape genetics for regional conservation of a threatened freshwater turtle. *Landscape Ecology in review*.
- Monge-Velázquez, M., **T.A. Langen**, J. Sáenz. Seasonal high road mortality of *Incilius luetkenii* (Anura: Bufonidae) along the Pan-American highway bisecting the Guanacaste Conservation Area, Costa Rica. *Herpetological Conservation & Biology* *accepted*.
- Carberry, B., **T.A. Langen**, M.R. Twiss. 2021. Surface water quality differs between functionally similar restored and natural wetlands of the Saint Lawrence River Valley in New York. *Land* 10(7): 676. <https://doi.org/10.3390/land10070676>
- Abeyrathna, W.A.N.U., **T.A. Langen**. 2021. Effect of daylight savings time clock shifts on deer- vehicle collision rates. *Journal of Environmental Management* 292: 112774. <https://doi.org/10.1016/j.jenvman.2021.112774>
- Langen, T.A.**, C.H. Cannon., D.C. Blackburn, E.L. Morgan, P.E. Mera. 2021. Defining and applying the urban rules of life to design sustainable and healthy cities. *Journal of Integrative and Comparative Biology* icab065. <https://doi.org/10.1093/icb/icab065>
- Ellwood, E.R., J.A. Sessa, J.K. Abraham, A.E. Budden, N. Douglas, R. Guralnick, E. Krimmel, **T. Langen**, D. Linton, M. Phillips, P.S. Soltis, M. Studer, L.D. White, J. Williams, and A.K. Monfils (2020) Biodiversity science and the twenty-first century workforce. *Bioscience* 70:119-121. <https://doi.org/10.1093/biosci/biz147>
- Benson C., B. Carberry, and **T.A. Langen**. (2019) Public-private partnership wetland restorations provide good waterfowl vegetative forage quality. *Journal of Fish & Wildlife Management*, 10(2): 323-335.
- Stryszowska-Hill, K.M., M.R. Twiss, C. Benson, B. Carberry, and **T.A. Langen**. (2019) Performance of wetland environmental quality assessment indicators at evaluating palustrine wetlands in northeastern New York State. *Ecological Indicators* 98: 743-752. <https://doi.org/10.1016/j.ecolind.2018.11.051>
- Wilke, A., J. Lydick, V. Bedell, T. Dawley, J. Treat, S. Pedersen, and **T.A. Langen**. (2018) Spatial dependency of local resource distributions. *Evolutionary Behavioral Sciences* 12 (3), 163-172. <http://dx.doi.org/10.1037/eb0000134>
- Willmert, H.M., J.D. Osso Jr., M.R. Twiss, and **T.A. Langen**. (2018) Impacts of winter road management on roadside soil and vegetation along a mountain pass in the Adirondack Park, New York, USA. *Journal of Environmental Management* 225: 215-223. <https://doi.org/10.1016/j.jenvman.2018.07.085>
- Welsh, R., M.E. Webb, and **T.A. Langen**. (2018) Factors affecting landowner enrollment in wetland restoration in Northeastern New York State. *Land Use Policy* 76: 679-685. <https://doi.org/10.1016/j.landusepol.2018.02.051>
- Rogers, S.W., C.E. Shaffer, **T.A. Langen**, M. Jahne, and J.R. Welsh. (2018) Prevalence of zoonotic disease agents shed by free-ranging white-tailed deer is spatially associated with land-applied livestock manure and human waste biosolids. *EcoHealth* 1-17. <https://doi.org/10.1007/s10393-018-1316-7>
- Colino-Rabanal, V.J., **T.A. Langen**, S.J. Peris, and M. Lizana. Ungulate – vehicle collision rates are strongly associated with the phase of the moon. 2018. *Biodiversity & Conservation* 27: 681–694. <https://doi.org/10.1007/s10531-017-1458-x>
- Benson, C., B. Carberry, and **T.A. Langen**. 2018. Public-private wetland restoration programs benefit Species of Greatest Conservation Need in agricultural landscapes. *Wetlands Conservation and Management* 26: 195-211. <https://doi.org/10.1007/s11273-017-9565-8>
- Marsh, D.M., B.J. Cosentino, K.S. Jones, J.J. Apodaca, K.H. Beard, .M. Bell, C. Bozarth, D. Carper, J.F. Charbonnier, A. Dantas, E.A. Forsys, M. Foster, J. General, K.S. Genet, M. Hanneken, K.R. Hess, S.A. Hill, F. Iqbal, N.E. Karraker, E.S. Kilpatrick, **T.A. Langen**, J. Langford, K. Lauer, A.J. McCarthy, J. Neale, S. Patel, A. Patton, C. Southwick, N. Stearrett, N. Steijn, M. Tasleem, J.M. Taylor, and J.R. Vonesh. 2016. Effects of roads and land use on frog distributions across spatial scales and regions in the Eastern and Central United States. *Diversity and Distributions* 23: 158–170. doi:10.1111/ddi.12516.
- Stryszowska, K.M., G. Johnson, L. Rivera Mendoza, and **T.A. Langen**. 2016. Species distribution modeling of the threatened Blanding's turtle's (*Emydoidea blandingii*) range edge as a tool for conservation planning. *Journal of Herpetology* 50:366-373.
- Stryszowska, K.M., M.R. Twiss, and **T.A. Langen**. 2016. Biodiversity and water quality indicators of Beneficial

- Use Impairments in wetlands of the Massena (New York) Area of Concern. *Journal of Great Lakes Research* 42:708-716.
- Sterling, E., A. Bravo, A. Porzecanski, N. Bynum, R. Burks, J. Linder, **T.A. Langen**, D.S. Fernandez, and D. Ruby. 2016. Think before (and after) you speak: Practice and self-reflection build student confidence and bolster performance in oral communication skills in ecology and conservation biology classes. *Journal of College Science Teaching* 45:87-99.
- Langen, T.A.** and Berg E.C. 2016. What determines the timing and length of the breeding season for a tropical dry forest bird, the white-throated magpie-jay *Calocitta formosa*? *Wilson Journal of Ornithology* 128:32-42.
- Wilke, A., S. Minich, M. Panis, **T.A. Langen**, J.D. Skufca, and P.M. Todd. 2015. A game of hide and seek: Expectations of clumpy resources influence hiding and searching patterns. *PLoS One* 10(7) : e0130976. DOI: 10.1371/journal.pone.0130976
- Sherman, A.K., S.H. Minich, **T.A. Langen**, J.D. Skufca, and A. Wilke. 2015. The influence of past and present living environments: Are current risk assessments shaped by the dangers of our childhood environment? *Journal of Interpersonal Violence*. DOI: 10.1177/0886260515572473
- Cosentino, B.J., D.M. Marsh, K.S. Jones, J.J. Apodaca, C. Bates, J. Beach, K.H. Beard, K. Becklin, J.M. Bell, C. Crocket, G. Fawson, J. Fjelsted, E.A. Forsys, K.S. Genet, M. Grover, J. Holmes, K. Indeck, N.E. Karraker, E. Kilpatrick, **T.A. Langen**, S.G. Mugel, A. Molina, J.R. Vonesh, R. Weaver, and A. Willey. 2014. Citizen science reveals widespread negative effects of roads on amphibian distributions. *Biological Conservation* 180:31-38.
- Langen, T.A.**, T. Mourad, B.W. Grant, W.K. Gram, B.J. Abraham, D.S. Fernandez, M. Carroll, A. Nuding, and S.E. Hampton. 2014. Opportunities & challenges in using large public data sets in the undergraduate ecology classroom. *Frontiers in Ecology & the Environment* 12:362-363.
- Halamkova, L., J. Schulte, and **T.A. Langen**. 2013. Patterns of sexual size dimorphism in *Chelonia*. *Biological Journal of the Linnaean Society* 108:396-413.
- Langen T.A.**, K. Gunson, C. Scheiner, and J. Boulerville. 2012. Road mortality in freshwater turtles: identifying causes of spatial patterns to optimize road planning and mitigation. *Biodiversity and Conservation* 21:3017-3034.
- Langen T.A.** 26 April 2012, posting date. Drivers of avian local species richness: continental-scale gradients, regional landscape, or local land cover? *Teaching Issues and Experiments in Ecology*, Vol. 8: Experiment #2 [online]. <http://tiee.esa.org/vol/v8/experiments/langen/abstract.html>
- Steen, D.A., J.P. Gibbs, K.A. Buhlmann, J.C. Carr, B.W. Compton, J. Congdon, S. Doody, J.C. Godwin, K.L. Holcomb, D. Jackson, F. Janzen, G. Johnson, M. Jones, G. Lamer, **T.A. Langen**, M. Plummer, J. Rowe, R.A. Saumure, J.K. Tucker, and D.S. Wilson. 2012. Distances from wetlands to freshwater turtle nests with guidelines for core terrestrial habitat conservation. *Biological Conservation* 150:121-128.
- Berg, E.C., J.M. Eadie, **T.A. Langen**, and A.F. Russell. 2009. Reverse sex-biased philopatry in a cooperative bird: genetic consequences and a social cause. *Molecular Ecology* 18:3486-3499.
- Ellis, J.M.S., **T.A. Langen**, and E.C. Berg. 2009. Signaling for food and sex? Begging by reproductive female white-throated magpie-jays. *Animal Behaviour* 78:615-623.
- Langen, T.A.**, K. Ogden, and L. Schwarting. 2009. Predicting hotspots of herpetofauna road mortality along highway networks. *Journal of Wildlife Management* 73:104-114.
- Grimberg, S.J., **T.A. Langen**, S.E. Powers, L.D. Compeau. 2008. A theme-based seminar on environmental sustainability improves participant satisfaction in an undergraduate summer research program. *Journal of Engineering Education*. 97:95-103.
- Langen T.A.**, A. Machniak, E. Crowe, C. Mangan, D. Marker, N. Liddle, and B. Roden. 2007. Methodologies for surveying herpetofauna mortality on rural highways. *Journal of Wildlife Management* 71:1361-1368.
- Gouvêa S.P., C. Melendez, M.J. Carberry, G.S. Bullerjahn, S.W. Wilhelm, **T.A. Langen**, and M.R. Twiss. 2006. Assessment of phosphorus-microbe interactions in Lake Ontario by multiple techniques. *Journal of Great Lakes Research* 32:455-470.
- Steen D.A., M.J. Aresco, S.G. Beilke, B.W. Compton, C.K. Dodd Jr., H. Forrester, J.W. Gibbons, J. Greene-McLeod, G. Johnson, **T.A. Langen**, M.J. Oldham, D.N. Oxier, R.A. Saumure, F.W. Schueler, J. Sleeman, L.L. Smith, J.K. Tucker, and J.P. Gibbs. 2006. Relative vulnerability of female turtles to road mortality. *Animal Conservation* 9:269-273.
- Langen T.A.**, and R. Welsh. 2006. Effects of a problem-based learning approach on attitude change and science and

- policy content knowledge. *Conservation Biology* 20:600-608.
- Twiss M.R., **T.A. Langen**, M.G. Giroux, S.M. Johns, N.E. Liddle, A.R. Snyder, D.P. Zeleznock, and J. Wojcik. 2006. Land use influence on water quality in the Saint Regis River, a north-flowing tributary of the St. Lawrence. *Adirondack Journal of Environmental Studies* 13:26-32.
- Langen T.A.**, M.R. Twiss, G.S. Bullerjahn, and S.W. Wilhelm. 2005. Pelagic bird survey on Lake Ontario following Hurricane Isabel, September 2003: Observations and remarks on methodology. *Journal of Great Lakes Research* 31:219-226.
- Twiss M.R., **T.A. Langen**, G.S. Bullerjahn, S.W. Wilhelm, and D.C. Rockwell. 2005. The Lake Ontario Great Lakes Science Practicum: A model for training limnology students on how to conduct shipboard research in the Great Lakes. *Journal of Great Lakes Research* 31:236-242.
- Luttbeg B., and **T.A. Langen**. 2004. Comparing alternative models to empirical data: cognitive models of Western Scrub-Jay foraging behavior. *American Naturalist* 163:263-276. <sup>1</sup>
- Langen T.A.** 2004. What is right with ‘teaching the controversy’? *Trends in Ecology and Evolution* 19:114-115.
- Curry R.L., A.T. Peterson and **T.A. Langen**. 2002. Western Scrub-Jay (*Aphelocoma californica*). In *The Birds of North America*, No. 712 (A. Poole and F. Gill, Eds.). The Birds of North America, Inc., Philadelphia, PA.
- Langen T.A.** 2000. Prolonged offspring dependence and cooperative breeding in birds. *Behavioral Ecology* 11:367-377.
- Langen T.A.**, F. Tripet and P.N. Nonacs. 2000. The red and the black: Habituation and the dear enemy phenomenon in two Mojave Desert *Pheidole* ants. *Behavioral Ecology and Sociobiology* 48:285-292.
- Langen T.A.** 1999. How western scrub-jays (*Aphelocoma californica*) select a nut: effects of the number of options, variation in nut size, and social competition among foragers. *Animal Cognition* 2:223-233.
- Langen T.A.** and S.L. Vehrencamp. 1999. How white-throated magpie-jay helpers contribute during breeding. *Auk* 116:131-140.
- Langen T.A.** and S.L. Vehrencamp. 1998. Ecological factors affecting group and territory size in the white-throated magpie-jay. *Auk* 115:327-339.
- Langen T.A.** and R.M. Gibson. 1998. Sampling and information acquisition by western scrub-jays, *Aphelocoma californica*. *Animal Behaviour* 55:1245-1254.
- Gibson R.M., and **T.A. Langen**. 1996. How do animals choose their mates? *Trends in Ecology and Evolution* 11:468-470.
- Langen T.A.** 1996. The mating system of the white-throated magpie-jay *Calocitta formosa* and Greenwood’s hypothesis for sex-biased dispersal. *Ibis* 138:506-513.
- Langen T.A.** 1996. Social learning of a novel foraging skill by white-throated magpie-jays (*Calocitta formosa*, Corvidae): a field experiment. *Ethology* 102:157-166.
- Langen T.A.** 1996. Skill acquisition and the timing of natal dispersal in the white-throated magpie-jay *Calocitta formosa*. *Animal Behaviour* 51:575-588.
- Upton S.J., **T.A. Langen** and T.F. Wright. 1995. A new species of *Isospora* Schneider, 1881 (Apicomplexa: Eimeriidae) from the white-throated magpie-jay, *Calocitta formosa* (Passeriformes: Corvidae) from Costa Rica. *Systematic Parasitology* 31:195-199.
- Langen T.A.** and K.N. Rabenold. 1994. Dominance and diet selection in juncos. *Behavioral Ecology* 5: 334-338.
- Price, T., and **T. Langen**. 1992. Evolution of correlated characters. *Trends in Ecology and Evolution* 7: 307-310.
- Langen T.A.**, D.T. Bolger and T.J. Case. 1991. Predation on artificial bird nests in chaparral fragments. *Oecologia* 86:395-401.
- <sup>1</sup> Presidential Award winner, Society of American Naturalists for the best paper of 2004 in the journal *American Naturalist*, as judged by the Society’s President.

## BOOK CHAPTERS

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- Langen T.A., Colino-Rabanal, V.J. (2022) Reptiles and Roads: What We Know and What We Need to Learn. In (M. D’Amico, R. Barrientos, F. Ascensao, eds.) *Road Ecology: Synthesis and Perspectives*. Springer-Verlag
- Curry, R.L., A.T. Peterson, **T.A. Langen**, P. Pyle, and M.A. Patten (2020). Woodhouse’s Scrub-Jay (*Aphelocoma woodhouseii*), version 1.0. In *Birds of the World* (P. G. Rodewald, Editor). Cornell Lab of Ornithology, Ithaca,

- NY, USA. <https://doi.org/10.2173/bow.wooscj2.01>
- Curry, R.L., A. T. Peterson, **T.A. Langen**, P. Pyle, and M.A. Patten (2020). California Scrub-Jay (*Aphelocoma californica*), version 1.0. In *Birds of the World* (P. G. Rodewald, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. <https://doi.org/10.2173/bow.cowscj1.01>
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- Langen, T.A.**, K.M. Andrews, S.P. Brady, N.E. Karraker, and D.J. Smith. 2015. Chapter 4: Road effects on habitat quality for small animals. In (K.M Andrews, P. Nanjappa, S. P.D. Riley eds.) *Roads and Ecological Infrastructure: Concepts and Applications for Small Animals*. Johns Hopkins Press, pp. 57-93.
- Kintsch, J., K.E. Gunson, and **T.A. Langen**. 2015. Chapter 5: Engaging the public in the transportation planning process. In (K.M Andrews, P. Nanjappa, S. P.D. Riley eds.) *Roads and Ecological Infrastructure: Concepts and Applications for Small Animals*. Johns Hopkins Press, pp. 94-109.
- Langen, T.A.**, K.E. Gunson, K., S.D Jackson, D.J. Smith, and W. Ruediger. 2015. Chapter 8: Planning to mitigate road effects on small animals. In (K.M Andrews, P. Nanjappa, S. P.D. Riley eds.) *Roads and Ecological Infrastructure: Concepts and Applications for Small Animals*. Johns Hopkins Press, pp. 146-176.
- Andrews, K.M., **T.A. Langen**, and R.P.J.H. Struijk. 2015. Chapter 26: Reptiles: Overlooked but often at risk from roads. In (R. van der Ree, D.J. Smith, and C. Grilo eds.). *Handbook of Road Ecology*. John Wiley & Sons, pp. 271-280.
- Langen T.A.** 2004. Cognition: Food Storing. In *Encyclopedia of Animal Behavior, Volume 1* (M. Bekoff, ed.), pp. 290-293. Greenwood Press, Westport CT.<sup>1</sup>

<sup>1</sup> *Library Journal Best Reference Source 2004*

## PUBLISHED DATA SETS

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Halámková L., T.A. Langen TA, and J.A. Schulte II. 2012. Data from: Patterns of sexual size dimorphism in Chelonia. Dryad Digital Repository. doi:10.5061/dryad.989k5

## PUBLISHED CONFERENCE PAPERS

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- Langen, T.A.** 2011. Design considerations and effectiveness of fencing for turtles: three case studies along northeastern New York state highways. Proceedings of the 2011 International Conference on Ecology and Transportation 545-556. [http://www.icoet.net/ICOET\\_2011/proceedings.asp](http://www.icoet.net/ICOET_2011/proceedings.asp)
- Langen, T.A.** 2009. Predictive models of herpetofauna road mortality hotspots in extensive road networks: three approaches and a general procedure for creating hotspot models that are useful for environmental managers. Proceedings of the 2009 International Conference on Ecology and Transportation: Wildlife-Vehicle Collisions – Data Collection, Monitoring and Modeling, pp 475-486. [http://www.icoet.net/ICOET\\_2009/09proceedings.asp](http://www.icoet.net/ICOET_2009/09proceedings.asp)
- Langen T.A.**, and S. Grimberg. 2006. Balanced activities increase student satisfaction in a mentored summer research program. American Society for Engineering Education, Proceedings of the 2006 Annual Conference and Exposition 2006-846. <http://www.osti.gov/eprints/topicpages/documents/record/643/2967198.html>

## PUBLISHED EDUCATIONAL RESOURCES

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- Sterling, E.J., R.L. Burks, J. Linder, **T. Langen**, D.S. Fernandez, D. Ruby, and N. Bynum. 2018. Why is Biodiversity Important? An Oral Communication Exercise. *Lessons in Conservation*, Vol. 8, Issue 1, pp. 11–13.
- Sterling, E.J., R.L. Burks, J. Linder, **T. Langen**, D.S. Fernandez, D. Ruby, and N. Bynum. 2018. Selecting Areas for Conservation: An Oral Communication Exercise. *Lessons in Conservation*, Vol. 8, Issue 1, pp. 14–17.
- Sterling, E.J., R.L. Burks, J. Linder, **T. Langen**, D.S. Fernandez, D. Ruby, N. Bynum, A. Bravo, and A.L.



- Porzecanski, 2018. Sharpen Your Oral Communication Skills! Lessons in Conservation, Vol. 8, Issue 1, pp. 18–21. <https://www.amnh.org/our-research/center-for-biodiversity-conservation/resources-and-publications/lessons-in-conservation/lessons-in-conservation-volume-viii>
- Langen, T.A.** 2013. Geographic Gradients in Community Patterns of Forest Trees. ESA EcoEd Digital Library <http://ecoed.esa.org/index.php?P=FullRecord&ID=511>
- Petzinger, S., **T.A. Langen**, J.E. Kubel, A. Roth. 2013. Best Management Practices for Golden-winged Warbler Habitat on Utility Rights-of-way in the Great Lakes Region. Golden-winged Warbler Working Group, [www.gwwa.org](http://www.gwwa.org)
- Petzinger, S., **T.A. Langen**, J.E. Kubel, A. Roth. 2013. Best Management Practices for Golden-winged Warbler Habitat on Utility Rights-of-way in the Appalachian Region. Golden-winged Warbler Working Group, [www.gwwa.org](http://www.gwwa.org)
- Langen, T.A.** 2012. Community and Population Structure—USDA Forest Inventory. Cornell Lab of Ornithology, ESA EcoEd Digital Library. <http://info.sciencepipes.org/help/2012/08/forest-population-structure.html>
- Langen, T.A.**, B Wee. 2012. Education using a continental-scale data conceptual framework. Ecological Society of America. <http://esa.org/fed/resources/conceptual-framework/>
- Langen, T.A.** 2011. Overview of the pedagogy of large-scale data & data sources. Ecological Society of America. <http://esa.org/fed/pastprojects/pastwebinar/2011-webinar/>
- Langen, T.A.** 2011. Educational 3-panel kiosk “Mitigating Turtle Road Mortality on Route 68 at Upper & Lower Lakes Wildlife Management Area”. *Installed by the New York Dept. of Transportation at the Grasse River public access area, Upper & Lower Lakes State Wildlife Management Area.*
- Welsh, R., **T.A. Langen**, S. Kemerer. 2008. Conserving Wetlands on Privately Owned Land in the North Country [www.privatewetlands.org](http://www.privatewetlands.org)
- Langen, T.A.** 2003. Career and Educational Opportunities in Ecology, Conservation & other Environmental Sciences, <http://people.clarkson.edu/~tlangen/joblinks.htm>
- Textbook Supplementary Educational Materials:** C. Borden & V. Belk (2003) *Biology - Science for Life* (Prentice Hall) Chapter 14: *Is Earth Experiencing a Biodiversity Crisis?* Materials developed include an interactive animation (*Predicting Biodiversity Loss from Habitat Destruction in Tropical Forests*), lecture activities, and test-bank questions. Contributing author to *Student Study Guide: Biology – Science for Life* (ISBN 0-13-141505-0), contributed material includes web-based activities, and challenge and review questions related to conservation biology.

## UNPUBLISHED MANUSCRIPTS / WORKING PAPERS

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- Ross, A., **T.A. Langen**, G. Johnson. Evaluating spruce grouse recovery strategies in New York using population viability analysis.
- Ross, A., **T.A. Langen**, G. Johnson. Effectiveness of long-distance translocation for population supplementation of an endangered spruce grouse population in New York
- Ross, A., **T.A. Langen**, G. Johnson. Experimental lowland boreal forest management for spruce grouse in New York.
- Halamkova, L., J. Schulte, and **T.A. Langen**. Drivers of sexual size dimorphism in turtles.
- Benson C., and **T.A. Langen**. Predictors of wetland-associated bird diversity at restored wetlands.

## TECHNICAL REPORTS

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- Stryszowska, K.M., **T.A. Langen**, and G. Johnson. 2015. Species distribution modeling of the threatened Blanding’s turtle’s (*Emydoidea blandingii*) range edge as a tool for conservation planning. Final Report, Prepared for St. Lawrence River Research and Education Fund and Massena Remedial Action Committee.
- Langen, T.A.**, C. Benson 2014. Value of Wetland Restoration Incentive Programs on Privately Owned Land for Species of Greatest Conservation Need. Final Report, prepared for the New York State Department of Environmental Conservation and the US Fish and Wildlife Service. 76 pages.
- Stryszowska, K.M., **T.A. Langen**, and M. R. Twiss. 2013. Biodiversity and Water Quality Indicators of Putative

Beneficial Use Impairments in Wetlands of the Massena (New York) Area of Concern. Final Report, Prepared for St. Lawrence River Research and Education Fund and Massena Remedial Action Committee.

- Langen, T.A.** 2012. Report No. C-10-06: Monitoring Functionality and Durability of the New York State Highway 30 Turtle Barrier and Adjacent Nesting Substrate. Final report, prepared for the New York State Department of Transportation, Albany NY. 40 pp. [https://www.dot.ny.gov/divisions/engineering/technical-services/trans-r-and-d-repository/C-10-06Final%20Report\\_Tupper%20Fence%20Monitoring%20Project\\_Revised16Apr2013.pdf](https://www.dot.ny.gov/divisions/engineering/technical-services/trans-r-and-d-repository/C-10-06Final%20Report_Tupper%20Fence%20Monitoring%20Project_Revised16Apr2013.pdf)
- Roth, A.M., R.W. Rohrbaugh, T. Will, and D.A. Buehler, editors. 2012. Golden-winged Warbler status and conservation plan. [www.gwwa.org](http://www.gwwa.org) (acknowledged as conservation plan contributor)
- Langen, T.A.** 2009. Design and testing of prototype barriers and tunnels to reduce the impact of roads on turtle survival and reproductive success. Final Report, prepared for the New York State Department of Environmental Conservation and the US Fish and Wildlife Service. 96 pages.
- Langen, T.A.** 2008. Predicting Hotspots of Herpetofauna Mortality on New York Highways: Validation of a GIS Model. Final Report, prepared for the New York State Biodiversity Research Institute and The Nature Conservancy. 37 pages.
- Riveredge Associates (report authors: **T.A. Langen**, G. Johnson, L. Harper, A. Johnson). 2007. Habitat assessment and field surveys of the Fort Drum Connector Northern Alternative (nc4). Report prepared for Lochner Engineering and NYSDOT. 38 pp. <https://www.dot.ny.gov/regional-offices/region7/projects/fort-drum-connector/fort-drum-repository/5FE6007C53EB409EE0430A3DFC05409E>
- Langen, T.A.** M.R Twiss, T.C. Young, K.J. Janoyan, J.C. Stager, J.D. Osso Jr., H. Prutzman, and B.T. Green. 2006. Environmental impacts of winter road management at the Cascade Lakes and Chapel Pond. Final report, prepared for the New York State Department of Transportation, Albany NY. Clarkson Center for the Environment Report Number 1. 335 pp. [https://www.dot.ny.gov/divisions/engineering/environmental-analysis/repository/cascade\\_lakes\\_final\\_report.pdf](https://www.dot.ny.gov/divisions/engineering/environmental-analysis/repository/cascade_lakes_final_report.pdf)
- Green, B. T., K.J. Janoyan, **T. Langen**, M.R Twiss, T.C. Young, J.D. Osso Jr., and H. Prutzman. 2005. Winter event management. Civil & Environmental Engineering Department Report Number 05-08, Clarkson University, Potsdam, NY.
- Johnson, G., T. Crockett and **T. Langen**. 2004. 2004 Blanding's turtle surveys at Cole's Creek, St. Lawrence County, New York. Final Report, prepared for New York Power Authority, White Plains, NY. 62 pp.

## PUBLISHED BOOK REVIEWS

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- Langen, T.A.** 2005. A review of W.J. Carmen's *Noncooperative Breeding in the California Scrub-Jay*. *Studies in Avian Biology No. 28*. Journal of Field Ornithology 76:419-420.
- Langen, T.A.** 2004. A review of F.J. Broswimmer's *Ecocide: A Short History of Mass Extinction of Species*. *Renewable Agriculture and Food Systems* 19: 66.
- Langen, T.A.** 2002. Comparative studies are for the birds - A review of P.M. Bennett & I.P.F. Owens' *Evolutionary Ecology of Birds: Life Histories, Mating Systems, and Extinction*. *Ecology* 83:3523-3524.
- Langen, T.A.** 2001. Latitude does matter - A review of B.J.M. Stutchbury & E.S. Morton's *Behavioral Ecology of Tropical Birds*. *Ecology* 82:3271-3272.

## POPULAR PUBLICATIONS

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- Langen, T.A.** 2020. Curious Kids: How do geese know how to fly south for the winter? The Conversation <https://theconversation.com/how-do-geese-know-how-to-fly-south-for-the-winter-149225#>
- Langen, T.A.** and S.L. Vehrencamp. 2000. Los conflictos de la familia alrededor del nido. *Rothschildia* 7:17-22.
- Langen, T.A.** 1993. *Birds of the Guanacaste Conservation Area*. Distributed by the Research Program, Guanacaste Conservation Area, Costa Rica.

## TEACHING & EXPERIENTIAL LEARNING

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**Asst. Professor** (1999-2006), **Assoc. Professor** (2006-2014), **Professor** (2014-Present) **Clarkson University**

**Undergraduate:** (1) Behavioral Ecology & Sociobiology BY/PY340, (2) Animal Learning & Cognition BY/PY358, (3) General Ecology BY222 & Lab BY224, (4) Biology for Non-majors SC112, (5) Honors Program Junior Science Course *The Adirondack to Algonquin Biological Corridor – Desirable and Feasible*, (6) University Study Abroad Course: *Costa Rica – Melding an Export-Based Economy with Environmental Conservation & Social Welfare* UNIV399, (7) Interdisciplinary Research in BioMath, (8) Math Biology Seminar. (9) River University *Ecology of American Rivers* BY/EV240. (10) Clarkson Adirondack Semester: *Adirondack Natural History* BY/EV310, *Adirondack Integrated Research Project* EV314. (11) Biology Seminar BY300, (12) Honors Program Problem Class HP200 *Digital Exhibits for the Adirondack Museum, Development Options for the Massena Dam Site on the Grasse River*, (12) Current Readings in Animal Behavior BY319/ PY319, (13) Sustainability Project Experience *Sustainable Natural Resource Management at Devil's Thumb Ranch, Colorado* EV390, (14) Directed Research in Environmental Science EV 494: *Informational Resources on Clarkson Natural Areas: A Next Step for Greater Appreciation, Use and Stewardship of Clarkson Trails and Undeveloped Landscape*.

**Dual Undergraduate / Graduate:** (1) Biological Systems & Global Environmental Change BY435/525, (2) Conservation Biology BY328/528, (3) Lake Ontario Great Lakes Science Practicum

**Graduate only:** Ecological Statistics BY610

**New Clarkson Education Programs:** (1) *Adirondack Semester Program*; (2) *River University Summer Program at the Beacon Institute of Rivers & Estuaries*; (3) *Biology, Behavior & Society (BiBS) Minor*. Member of the steering committees that designed, proposed, and implemented these programs.

**Co-Director ITiMBReaC Interdisciplinary Training in Mathematical & Biological Research at Clarkson University** 2010-2012

NSF-funded program to foster interdisciplinary team-based research in integrated science and math; included two semesters of seminar and research mentoring activities, and ten weeks of mentored summer research.

**Visiting Professor, International Institute of Wildlife Conservation & Management, National Autonomous University of Costa Rica.** 2007-2008

(1) Animal Behavior for Conservation & Wildlife Management (M.S. level course, in Spanish). (2) Workshop on the Environmental Impact of Infrastructure (one week professional development program for Costa Rica civil servants, environmental consultants, and environmental scientists, in Spanish). (3) Faculty resource person and field problem leader, Organization of Tropical Studies graduate and undergraduate courses in tropical ecology.

**Co-Director (2002-2007), Acting Director (2003), Research Undergraduate Experience Site Program in Environmental Science and Engineering, Clarkson University** 2002-2007

The theme of the program was research to improve environmental sustainability. The ten -week program supported ten undergraduates per summer session.

**Course Instructor, Lake Ontario Great Lakes Science Practicum.** 2003 One week teaching - cruise on R/V Lake Guardian, the US Environmental Protection Agency's Great Lakes Program Office research ship, on Lake Ontario. My module focused on monitoring pelagic bird populations as indicators of environmental change.

**Lecturer, University of California San Diego.** 1997, 1998

(1) Behavioral Ecology and (2) Methods in Behavioral Ecology.

**Lecturer, University of California Los Angeles.** 1997, 1998

Animal Behavior.

**Course Instructor, University of California's Education Abroad Program in Tropical Agroecology & Biology at Las Cruces, Costa Rica.** 1997

(1) Tropical Diversity and Conservation and (2) Independent Field Projects in Tropical Ecology and Agriculture.

**Course Co-Coordinator, Organization of Tropical Studies.** 1995

Tropical Biology: an Ecological Approach (graduate-level, in Costa Rica).

## PROFESSIONAL DEVELOPMENT & CONTINUING EDUCATION LEADERSHIP

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- Latin American workshops on the Environmental Impact of Infrastructure.** One week professional development program for graduate students, civil servants, environmental consultants, and environmental scientists, in Spanish. Costa Rica: 2007, 2008, 2010, 2017. Chile: 2018. Mexico: 2011. Panama: 2012
- Professional Development Training Sessions / Webinars on the Environmental Impact of Roads.** Single meeting/webinar professional trainings which provide professional development hours. Minnesota Dept. of Transportation/Freshwater Research Institute (2006), Biodiversity Research Institute (2008), New York State Association of Transportation Engineers (2013, 2016), Environmental and Landscape Architecture Training Series (2013), Quebec Department of Transportation (2016).
- Engaging HBCUs and MSIs in Education Using Large Scale Datasets, Organized by Ecological Society of America in partnership with Science and Engineering Alliance.** See <http://esa.org/fed/pastprojects/pastwebinar/2011-webinar/>. 2013
- K-12 Professional Development Summer Institute Leader, Clarkson University.** 2008, 2009, 2013  
One week program, theme: *Integrating Conservation Science & Math*.
- Scaling Science to the Continent Webinar Series: Using Web-Accessible Large Ecological Data Sets for Student-Active Learning: Models, Opportunities & Challenges.** Webinar for educators on how to use web-accessible environmental data for undergraduate or K-12 teaching. See <http://esa.org/fed/pastprojects/pastwebinar/2011-webinar/>. 2011
- SOAR North Country Course – Environmental Impact of Roads** 2009  
**Course Coordinator & Lecturer, Woodrow Wilson National Fellowship Foundation & the Organization of Tropical Studies.** 1999-2001  
Leadership Program for Teachers: Environmental Science Institute on Global Environmental Change, Costa Rica (55 science teachers per year, grades 5-12, summer). I developed curriculum, coordinated the program in the field, supervised up to ten faculty per session.
- University Content Expert / Mini-institute Instructor, U.C.L.A. Graduate School of Education and Information.** 1996, 1997  
Professional development for primary and middle-school science teachers.

## STUDENT ADVISING & MENTORING

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### *Thesis/Dissertation/Project Graduate Advisor*

- Alicia Lamb** (Ph.D. IBB, in progress) *Effects of Ecological and Social Stress on the Gut Microbiome of Ring-tailed Lemurs.*
- Nimanthi Abeyrathna** (MS. IBB, 2021) *Effects of Daylight Savings on Deer-Vehicle Collisions.*
- Alexandra Burrows** (MS. ESE, 2021) *Predicting Road Mortality in Blanding's Turtle.*
- Samantha Clarey** (MS., ESE 2019) *Risk Analysis of Nuclear Power Generation.*
- Angela Ross** (Ph.D. IBB, 2018) *Habitat Management and Population Supplementation to Preserve Spruce Grouse in New York.*
- Michael Bicknell** (MS. Not completed) *eDNA Detection of Blanding's Turtle as a Tool for Conservation.*
- Kinga Stryzowska** (Ph.D. ESE, 2016) *Incorporating Geographic Information Systems and Surveys to Assess Wetland Quality.*
- Joshua Lavelle** (MS. MBS, 2016) *Metabarcoding Identification of Trichoptera for Water Quality Indicators.*
- Brendan Carberry** (M.S. MBS, 2015) *Ecological and Social Value of Wetland Restoration.*
- Catherine Benson** (M.S. Environmental Science & Policy (ESE) 2010, Ph.D. Integrated Bioscience & Biotechnology (IBB) 2013) *Ecological Value of Wetland Restorations.*
- Hanna Prutzman** (M.S. ESE 2005) *Impacts of Winter Road Management on Soils and Vegetation at the Cascade Lakes, New York.*

**Post-doc Mentor: Lenka Halamkova** (2011-2013) *Evolution of Sexual Size Dimorphism in Turtles, Impacts of Elevated Nutrient Levels on Vernal Pool Amphibian Larva Development.*

**Committee Member Ph.D.:** ESE: 5, Math: 4. **M.S.:** ESE: 5, Environmental Policy & Governance: 1

**External Committee Member Ph.D.:** Cornell U.; **M.S.:** SUNY Albany, SUNY ESF, National University of Costa Rica (5)

**External Examiner Ph.D.:** Carleton U., Canada, U. Victoria, Canada, U. Melbourne, Australia; **M.S.:** Concordia U., Canada.

**Foreign Graduate Visiting Trainee: Victor Colino** (University of Salamanca, 2010) *Impact of Deicing Road Salt Contamination on Vernal Pool Amphibian Breeding, Influences of Moonlight on Wildlife-Vehicle Accidents.*

**Undergraduate Research Mentor/Supervisor** over 100 students since 2001, including 3 Honors Theses, 5 Biology Senior Theses, 17 Environmental Science & Policy Capstones

**Undergraduate Academic Advisor:** around 30 students (freshman – senior), meet with at least once each semester.

## EDUCATIONAL RESOURCE DEVELOPMENT & WORKING GROUPS

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<b>RISE – Reframing Instruction for Success Everywhere</b>	2021
<b>Quality Matters</b>	2018

### **Reintegrating Biology** (2019-2020)

*NSF BIO Directorate considers integrative approaches to understanding life's key innovations as essential for understanding the full diversity of mechanisms regulating fundamental biological processes. The Reintegrating Biology series of workshops included a combination of virtual and in-person events and provided a venue for the broader biological community to discuss the opportunities and challenges for integrating across the biological sub-disciplines. Working paper: Defining the Urban Rules of Life to Design Sustainable and Healthy Cities*  
<https://reintegratingbiology.org/wp-content/uploads/2019/12/Defining-the-Urban-Rules-of-Life-Tom-Langen.pdf>

### **Quantitative Biology Education Summit (QUBES)** (2018)

*QUBES is an NSF-funded project to develop mentoring programs and resource sharing for teaching quantitative biology.*

**Data Observation Network for Earth (DataONE) Community Education and Engagement Working Group** (2016-2017). *DataONE is developing the cyber infrastructure for archiving and accessing environmental data online. This working group is focused on how to develop resources, curricula, training, and best practices for using big environmental data, including for nonscientists, educators, and students.*  
[http://www.dataone.org/working\\_groups/community-education-and-engagement](http://www.dataone.org/working_groups/community-education-and-engagement)

### **NCEAS Project 12658: Toads, roads, and nodes: Collaborative course-based research on the landscape ecology of amphibian populations**

2012 – 2016

*This is an NSF funded coordinated undergraduate research project centered at the National Center for Ecological Assessment & Synthesis. The goals of the project include developing best practices at using collaborative networks of undergraduate classes to do authentic research using large publically-available data, and additionally accomplish some research on how habitat fragmentation and land use change affects amphibian populations. See*  
<https://groups.nceas.ucsb.edu/trn>.

- Data for the Ecology Classroom Advisory (DECA) – Science Pipes** 2012 – 2013  
*Member of an Ecological Society of America working group developing online data visualization and analysis modules for undergraduate teaching using US Forest Service forest inventory data. This is one component of the NSF-supported multi-organizational initiative the Digital Discovery Research Project, <http://sciencepipes.org/beta/home>.*
- Network of Conservation Educators and Practitioners (NCEP) CCLI** 2011 – 2013  
*Member of an American Museum of Natural History working group developing and testing curricula to teach public speaking skills for conservation biology. This is one component of the NSF-supported initiative to develop curricula for conservation biology, see <http://ncep.amnh.org/>.*
- EcoEd Digital Library Contributing Editor** 2011 – 2013  
*Develop and edit contributions to the Ecological Society of America’s EcoEd Digital Library, an online educational resource for K-12 and college educators. This is one component of the NSF-supported multi-organizational initiative the Digital Discovery Research Project, see <http://ecoed.esa.org/>.*
- National Center for Ecological Assessment & Synthesis (NCEAS) **Distributed Seminar: Engaging Undergraduate Students In Ecological Investigations Using Large, Public Datasets** (2009-2011). *The objective of the multi-institutional working group in this seminar was to develop student-active exercises for undergraduate or K-12 teaching that use web-accessible environmental data.*
- Ecological Society of America & National Ecological Observatory Network: Adapting continental scale data for undergraduate teaching and research.** 2008
- Adirondack Communities & Conservation Program of the Wildlife Conservation Society: Ecological questions and research priorities for the Adirondack Park.** 2004
- National Endowment of the Humanities Interdisciplinary Workshop on Values and the Environment,** organized by Dr. Greg Cooper, Washington & Lee University. 2001

## ENVIRONMENTAL CONSULTING AND OTHER SCIENTIFIC WORK EXPERIENCE

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- U.S.D.A National Resources Conservation Service New York State Advisory Board.** *Provide technical assessment and recommendations on USDA NRCS conservation programs related wetland restoration and habitat management of threatened species.* 2017 – Present
- New York Audubon / USDA National Resource Conservation Service - Golden-winged warbler Habitat Restoration:** *Provided project assessment, led field trips, gave presentations on habitat needs for golden-winged warblers.* 2003 – 2018
- Riveredge Associates:** *Habitat assessment of the Fort Drum proposed interstate spur.* 2007
- Cornell Lab of Ornithology - Golden-winged warbler Atlas Project:** *Trained and supervised student biological technicians, surveyed for birds in five counties of northeast New York State* 2003 – 2009
- Northern Ecological Associates, Inc.:** *Pre-construction Blanding’s Turtle surveys and habitat improvement recommendations, New York Power Authority St. Lawrence – FDR Power Project* 2003 – 2004
- Scientific Consultant:** *Education, Ecotourism and Research Programs, Guanacaste Conservation Area, Costa Rica.* 1991 – 1993
- Microbiology Laboratory Technician:** *Bristol Myers Corporation.* 1987 – 1988
- Rural Extension Agent (Forestry program):** *Peace Corps in Burkina Faso, West Africa.* 1984 – 1986

## FIELD RESEARCH SITES / NATURAL HISTORY EXPERTISE

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Sahelo-Sudanian savannah (Burkina Faso, Kenya); Tropical dry, lowland tropical wet, and tropical montane forest (Costa Rica); Chaparral and coastal sage scrub (California); Desert (California); Temperate and boreal forests (New York); Cold temperate wetlands, lakes & rivers (Lake Ontario – St. Lawrence River region, Adirondack Mountains)

## PROFESSIONAL ORGANIZATIONS

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Adirondack Research Consortium, American Ornithological Union, Animal Behavior Society, Ecological Society of America, International Association for Great Lakes Research, International Society for Behavioral Ecology, Society for Conservation Biology

## LANGUAGES

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Spanish, French, Moré.

## SERVICE (selected)

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### UNIVERSITY

<b>Clarkson Promotion Committee</b>	2021 -
<b>Faculty Senate ad hoc committee on AAUP Membership (Chair)</b>	2021 -
<b>Committee on a Bioethics Minor</b>	2021 -
<b>Co-Chair, Clarkson Advocates and Allies Programs</b>	2020
<i>Part of an Advance Grant, men working to become knowledgeable and effective advocates and peer-to-peer allies of women faculty and staff at Clarkson University.</i>	
<b>External program evaluator, Plattsburgh State University Department of Biology</b>	2019
<b>Institute for a Sustainable Environment Executive Board</b>	2019 - 2020
<b>Middle States Self-Study Sub-Committee Co-Chair, Standard IV: Support of the Student Experience.</b>	2017 - 2019.
<b>Clarkson Institutional Animal Care &amp; Use Committee (Chair: 2012-2017)</b>	2006 - 2018
<b>Clarkson Health Advising Committee</b>	2006 – present
<b>Environmental Science &amp; Engineering Peace Corps M.S. Degree Program Committee</b>	2014 - 2016
<b>Academic Success Program to Improve Retention and Education (ASPIRE) Mentoring Program Committee</b>	2013 - 2016
<b>Clarkson Strategic Planning Committee, Co-Chair ‘Doubling Research’ Working Group</b>	2012 - 2013
<b>Clarkson Tenure Committee (Chair: 2010, 2011, 2013)</b>	2009 - 2014
<b>ASPIRE grants review panel</b>	2012
<b>Clarkson Adirondack Semester Planning &amp; Curriculum</b>	2011 - present
<i>Part of the initial working group that conceived, proposed, and implemented the ADK semester program</i>	
<b>(Clarkson) River University Planning &amp; Curriculum</b>	2011 - 2013
<i>Part of the initial working group that conceived, proposed, and implemented the River University program</i>	
<b>Biology, Behavior &amp; Society (BiBS) Minor Steering Committee</b>	2011 - present
<i>Part of the initial working group that conceived, proposed, and implemented the Minor program</i>	
<b>Honors Program Research Committee</b>	2008 - 2013
<b>Adirondack Regional Science Olympiad (Ornithology, Forestry)</b>	2010 - 2013
<b>Convocation Readings Committee</b>	2008 - 2009
<b>REU SITE Program co-director, Environmental Science &amp; Engineering</b>	2002 - 2007
<b>Academic Integrity Committee (Chair)</b>	2002 - 2007
<b>Clarkson University Faculty Senate</b>	2001 - 2007
Faculty Senate Secretary	2004 – 2006

<b>Faculty Host, Clarkson Honorary Degree Recipient Kathryn Fuller (WWF, Ford Foundation</b>	2005
<b>Campus Curriculum Assessment Committee</b>	2003 - 2006
<i>Part of the initial committee to propose methods of assessment of campus curricular objectives</i>	
<b>Clarkson Common Experience (Foundation Curriculum) Committee</b>	2001 - 2004
<i>Part of the initial committee that conceived of the current Clarkson Common Experience</i>	
<b>Ad hoc Committee to Revise the Bylaws of the Faculty Senate</b>	2003 - 2004
<b>Center for Environmental Management Task Force for an Interdisciplinary Masters Program</b>	2002
<b>Campus Sustainability Taskforce on the Ecosystem</b>	2001 - 2002
<b>Project Challenge (High-school Bridge Program) Instructor</b>	2001
<b>Clarkson University Student Disciplinary Committee</b>	2001 - 2002

## SCHOOL of ARTS & SCIENCES

<b>School of Arts &amp; Sciences Faculty Mentoring Committee (Chair: 2011-2014)</b>	2011 - 2014
<i>Part of initial working-group that proposed and created the committee</i>	
<b>School of Arts &amp; Sciences Seminar Committee</b>	2010 – 2011
<i>Part of initial working-group that created the committee, integrated Alumni Association participation</i>	
<b>Health Professions Advising Committee</b>	2001 – 2002, 2006 - 2007

## DEPARTMENTAL

<b>Department Chair</b>	2014 - 2020
<b>Biology Department Pretenure Faculty Review Committee (Chair)</b>	2014
<b>Interdisciplinary Bioscience &amp; Biotechnology (IBB) Ph.D. Graduate Program Acting Director</b>	2013
<b>Faculty job search review committee (Biology: 15 searches, Psychology: 7 searches)</b>	
<b>Open House (3 times per year)</b>	

## COMMUNITY

<b>Grasse River Heritage Board (Treasurer, President: 2020- present)</b>	2018- present
<b>Northern New York Audubon Board (Vice-President: 2019-present)</b>	2015- present
<b>Town of Canton Waterfront Advisory Council</b>	2015- present
<b>Adirondack to Algonquin Collaborative Board, Science Advisory Council</b>	2012- present
<b>St. Lawrence Land Trust Board (Vice-President, President: 2010 - 2019)</b>	2008 - present
<b>Canton Free Library Board of Trustees (President: 2011-2014)</b>	2008 - 2014
<b>Indian Creek Nature Center Board (Vice-President: 2003-2004)</b>	2001 - 2004

## REVIEWER

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**Editorial Board** (2014-Present): *Environmental Management* (Springer-Verlag)

(<http://www.springer.com/environment/environmental+management/journal/267> ).

**Senior Editorial Board** (2016-Present): *Scientific Reports* (Nature)

(<http://www.nature.com/srep/> ).

**Editorial Board** (2016-Present): Social Evolution, in *Frontiers in Ecology and Evolution*

(<http://journal.frontiersin.org/journal/ecology-and-evolution#> ).

**Contributing Editor**: EcoEd Digital Library (2014-Present) (<http://ecoed.esa.org/> ).

**Associate Editor** (2016-2017): *Journal of Environmental Management* (Elsevier)

(<http://www.journals.elsevier.com/journal-of-environmental-management/> ).



**Papers:** Acta Herpetologica, Agriculture & Human Values, American Midland Naturalist, American Naturalist, Animal Behaviour, Animal Cognition, Aquatic Invasions, Auk: Ornithological Advances, Austral Ecology, Behavioral Ecology, Behavioral Ecology & Sociobiology, Biological Conservation, Biodiversity & Conservation, Biology Letters, Biometrics, Bird Behavior, Canadian Journal of Zoology, Condor: Ornithological Applications, Conservation Biology, Conservation Physiology, Copeia, CourseSource, Current Biology, EcoEdNet, EcoHealth, Ecology & Evolution, Ecology & Society, Ecosphere, Energy Ecology & Environment, Environmental Management, Environmental Practice, Environmental Science and Pollution Research, Environmental Science & Technology, Ethology, European Journal of Wildlife Research, Evolutionary Applications, Frontiers in Ecology & Evolution, Frontiers in Physics, Functional Ecology, Global Ecology & Biogeography, Global Ecology & Conservation, Herpetological Conservation & Biology, Herpetological Journal, Human Dimensions of Wildlife, Human–Wildlife Interactions, Hydrobiologia, Ibis, International Review of Tropical Biology (Revista Biología Tropical), Journal of Agricultural & Environmental Ethics, Journal of Animal Ecology, Journal of Applied Ecology, Journal of Environmental Management, Journal of Environmental Quality, Journal of Field Ornithology, Journal of Great Lakes Research, Journal of Herpetology, Journal of Ornithology, Journal of Theoretical Biology, Journal of Wildlife Management, Land, Landscape Ecology, Landscape & Urban Planning, Nature Conservation, Natureza & Conservação, Oecologia Australis, Ornitologia Neotropical, PeerJ, Perspectives on Science, PLoS ONE, Proceedings of the Royal Society - Series B, Renewable Agriculture & Food Systems, Science of the Total Environment, Scientific Reports, Southeastern Naturalist, Sustainability, Teaching Issues and Experiments in Ecology (TIEE), Transportation Research Part D: Transport and Environment, Western Birds, Wetlands, Wetlands Ecology & Management, Western Wildlife, Wildlife Research, Wilson Journal of Ornithology.

**Textbooks & Educational Materials:** Routledge - Psychology Press, MacMillan Publishers, McGraw-Hill, Prentice Hall, John Wiley & Sons, Benjamin Cummings – Pearson Education, Sinauer Associates, Oxford University Press, Roberts & Company, Cambridge University Press. *Reviewed materials include portions of five non-majors introductory biology texts, eleven ecology texts, eight animal behavior texts, two environmental science texts, two conservation biology texts and three web-based research platforms.*

**Conference Program Abstracts:** International Conference on Ecology & Transportation (ICOET) 2010, 2012, 2015, 2017; Student Conference on Conservation Science New York (SCCS-NY) 2012, 2013, 2015.

**Grants – Panels** Council on International Exchange of Scholars: Fulbright Scholar Grant Program, Life Science A - Animal Review Committee (*two three-year terms*); (USA) National Science Foundation (NSF) Directorate for Biological Sciences: Environmental Biology, Directorate of Undergraduate Education, Education and Human Resources Directorate (*multiple years and programs*); Animal Behavior Society: Student Grants Program (*multiple years*), Developing Nations Grants Program; Great Lakes Research Consortium: New York Great Lakes Protection Fund (*multiple years*); United Negro College Fund – Merck Undergraduate Science Research Scholarship Awards, Graduate Science Research Dissertation Fellowships; DoD SMART Scholarship-for-Service Program.

**Grants – ad hoc** (Austria) Fonds zur Förderung der wissenschaftlichen Forschung (FWF); (USA) National Science Foundation (NSF), Directorate for Biological Sciences: Environmental Biology – Population Biology, Integrative Biology & Neurosciences – Animal Behavior, Behavioral and Cognitive Sciences - Geography and Spatial Sciences, Integrative Organismal Systems – Animal Behavior, Office of International Science and Engineering (NSF OISE) - International Research Fellowship Program; Netherlands Organization for Scientific Research (NWO) Council for Earth and Life Sciences; Sigma Delta Epsilon - Graduate Women in Science; National Fish & Wildlife Foundation; Mitacs.

## INVITED SCIENTIFIC TALKS

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**Institutions/Agencies:** California State Universities - Los Angeles, Long Beach, San Diego; Clarkson University; College of William & Mary; Concordia University; Hobart & William Smith College; Institute in Wildlife Conservation & Management, National University of Costa Rica; Juarez Autonomous University Tabasco; Lewis and Clark College; USDA National Resources Conservation Service – New York; New York State Department of Transportation; Princeton University; St. Lawrence University; State Universities of New York – Albany, Binghamton, Brockport, Oswego, Plattsburgh, Potsdam; United States National Zoological Park; Universities of California - Davis, Los Angeles, San Diego; University of Missouri -Columbia; University of Pennsylvania.

**Invited Conference Panels or Talks:** Northeast Association of Fish & Wildlife Agencies (2007), Northeast Partners for Amphibian & Reptile Conservation (2009), Society for the Study of Herpetology (2010), Socio-Environmental Synthesis Center (SESYNC) (2012), Society for the Study of Evolution (2012), Mesoamerican Conference on Biology and Conservation (2015).

**Conferences** (submitted presentations, selected): Adirondack Research Consortium (*multiple*), American Ornithological Union (*multiple*), American Society for Engineering Education, Animal Behavior Society (*multiple*), Ecological Society of America (*multiple*), International Association for Great Lakes Research (*multiple*), International Conference on Ecology & Transportation (*multiple*), International Society for Behavioral Ecology (*multiple*), New York Wetlands Forum (*multiple*), Northeastern Transportation and Wildlife Conference (*multiple*), Society of Human Evolution, Society of Rural Sociologists, Society of Wetlands Scientists.

**General Audience Talks** (selected): Adirondack Park Agency, Beacon Institute for Rivers & Estuaries, Natural History Museum of the Adirondacks, National Museum of Costa Rica, North Country Conservation-Education Associates/ Indian Creek Nature Center, St. Lawrence County Environmental Management Council, St. Lawrence River Institute of Environmental Sciences, Traditional Arts of Upstate New York.

## TELEVISION / RADIO BROADCAST SCIENTIFIC EXPERT

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**Iridescent grackles saunter around your backyard like dinosaurs** (North Country Public Radio, posted 7/10/2020, <https://www.youtube.com/watch?v=luahauFEH54> ).

**Looking for your keys? Think like a chickadee** (North Country Public Radio, posted 7/2/2020, <https://www.youtube.com/watch?v=tjxoiAtbac> ).

**Blue jays, the exotic bird in your neighborhood** (North Country Public Radio, posted 6/24/2020, <https://youtu.be/MIUxe-5S9aE> ).

**The cardinal hovers but it takes some work** (North Country Public Radio, posted 6/17/2020, [https://www.youtube.com/watch?v=bKCWO4\\_dGcA](https://www.youtube.com/watch?v=bKCWO4_dGcA) ).

**The brightly colored goldfinch is not a wild canary** (North Country Public Radio, posted 6/11/2020, <https://www.youtube.com/watch?v=McevDWGAGks> ).

**It's all about sex and parenting for the male house finch** (North Country Public Radio, posted 6/5/2020, [https://www.youtube.com/watch?v=AV0TVg\\_L69M&t=2s](https://www.youtube.com/watch?v=AV0TVg_L69M&t=2s) ).

**Tom Langen/CU Biologist on Orioles** (B99.3 Community Connection, 5/27/20, <https://soundcloud.com/newsb99-3/community-connection-5-27-20?fbclid=IwAR3q39-k-IHd-3-XkZz11y7PJftk4LUnjNWFliC8UTT-vuhKZvjk70ZTBZA> )

**Blood Rain & Star Jelly.** 2010. Storybook Productions, first broadcast 7 June 2010 on the National Geographic Channel's program *Paranatural*.

**The Hazards of Road Salt** (The EnvironMinute, podcast 1/31/08, Finger Lakes Productions <http://www.environmentminute.com/webtext/080131.htm>).

## PRESS FEATURES ABOUT RESEARCH, TEACHING & COMMENTARY (selected)

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**Pre-Health Students Put Clarkson University Experience to Use as Volunteers in Vietnam** (Clarkson University Press Release 7/25/19, <https://www.clarkson.edu/news/pre-health-students-put-clarkson-university-experience-use-volunteers-vietnam> ).

**Vehicle Accidents With Deer Occur More Often During Full Moon, According To Clarkson University Professor** (Clarkson University Press Release 7/19/18, <https://www.clarkson.edu/news/vehicle-accidents-deer-occur-more-often-during-full-moon-according-clarkson-university> ).

**Moonstruck: New study proves more wildlife-vehicle collisions occur during full moon** (Santa Cruz (CA) Sentinel, 12/1/2017)  
<http://www.santacruzsentinel.com/article/NE/20171201/NEWS/171209961>

**Landowner Benefits of Wetland Restoration** (Graham Sustainability Institute, 8/9/2016)  
[https://www.youtube.com/watch?v=tI7KB\\_xMGSU&list=PLkpBjHvzRryrXo2uj3j3BH0TFtgpJvjz](https://www.youtube.com/watch?v=tI7KB_xMGSU&list=PLkpBjHvzRryrXo2uj3j3BH0TFtgpJvjz)

**Massena Great Lakes Area of Concern moving towards environmental recovery** (IAGLR, 3/20/2016)  
<http://www.iaglr.org/journal/releases/massena-great-lakes-area-of-concern-moving-towards-environmental-recovery/>

**Conservation Easements** (Yale Climate Connections, 12/4/2016)  
<http://www.yaleclimateconnections.org/2015/12/adapting-conservation-easements/>

**The Dirt: The Dirt: Private wetlands best way** (Terry Platz, Poughkeepsie Journal 1/18/14,  
<http://www.poughkeepsiejournal.com/article/20140119/NEWS04/301190009/The-Dirt-Private-wetlands-best-way>).

**Studying nature from behind a desk** (J. Grant, Michigan Radio 7/30/13,  
<http://www.michiganradio.org/post/studying-nature-behind-desk>).

**Roadside fences and signs help reduce mortality rate of turtles** (K. Anderson, Watertown Daily Times 7/10/13,  
<http://www.watertowndailytimes.com/article/20130710/OGD/707109806>).

**Clarkson University research team analyzes relationship between frogs and roads** (Clarkson University Press Release 7/3/13, [http://www.clarkson.edu/news/2013/news-release\\_2013-07-03-1.html](http://www.clarkson.edu/news/2013/news-release_2013-07-03-1.html)).

**Expanding Costa Rican highway could be harmful to 'green tunnels'** (Terry Platz, Poughkeepsie Journal 2/16/13, <http://www.poughkeepsiejournal.com/apps/pbcs.dll/article?AID=2013302170008>).

**The Dirt: Mapping shows turtle danger zones** (Terry Platz, Poughkeepsie Journal 2/9/13,  
<http://www.poughkeepsiejournal.com/apps/pbcs.dll/article?AID=2013302100019>).

**Jays show surprising intellect** (Terry Platz, Poughkeepsie Journal 5/6/12,  
<http://www.poughkeepsiejournal.com/article/20120506/NEWS04/305060004/Jays-show-surprising-intellect?odyssey=mod|newswell|text|PoughkeepsieJournal.com|s> ).

**NYPA awards two grants for St. Lawrence River studies** (Daily Courier-Observer 5/2/12,  
<http://www.watertowndailytimes.com/article/20120502/DCO01/705039995/0/search> ).

**NCEP Professor of the Month – October 2011** <http://ncep.amnh.org/news/?p=1002>

**Avian models of search and choice under uncertainty** (EVOS Seminar – Talk & Podcast Interview, Dec. 2010).  
<http://evolution.binghamton.edu/evos/seminars/fall-2010/langen/>

**Turtle crossing fences built** (L. Shull, Watertown Daily Times 7/23/10,  
<http://www.watertowndailytimes.com/article/20100723/OGD01/307239917>).

**Students put up fence to protect turtles** (A. Jacobs, Watertown Daily Times 11/2/09,  
<http://www.watertowndailytimes.com/article/20091102/NEWS05/311029980>).

**Clarkson University receives \$239k biomathematics research grant** (Clarkson University Press Release 9/4/09, <http://www.clarkson.edu/news/view.php?id=2306>).

**Clarkson university professor helps promote ecology in the digital age** (Clarkson University Press Release 8/7/09, <http://www.clarkson.edu/news/view.php?id=2283>).

**Road kill leads to study of highway impact on environment** (Clarkson University Press Release 9/25/08, <http://www.clarkson.edu/news/view.php?id=2149=1804>).

**From Upstate New York to Costa Rica, Biology Professor Tom Langen looks at the impact of roads on**

- surrounding environments and finds solutions to mitigate damage** (Clarkson University Magazine Fall 2008, [http://www.clarkson.edu/alumni\\_magazine/fall2008/road\\_ecology.html](http://www.clarkson.edu/alumni_magazine/fall2008/road_ecology.html)).
- Clarkson biology professor will travel to Costa Rica as Fulbright Scholar** (Clarkson University Press Release 6/14/07, <http://www.clarkson.edu/news/view.php?id=1804>).
- Clarkson Research Group Publishes Paper on Land Use Influence on Water Quality in the St. Regis River** (Clarkson University Press Release 4/11/06, <http://www.clarkson.edu/news/view.php?id=1467>).
- Profs troll for botulism cause** (D. Sommerstein, North Country Public Radio 9/6/05, <http://www.northcountrypublicradio.org/news/newsttopics.php?tid=28>).
- Road salt affecting Adirondack lakes** (B. Mann, North Country Public Radio 8/29/05, <http://www.northcountrypublicradio.org/news/newsttopics.php?tid=28&nophotos=&limit=10&start=10>).
- Clarkson University is conducting survey of botulism in the St. Lawrence River** (Clarkson University Press Release 8/25/05, <http://www.clarkson.edu/news/view.php?id=1330>).
- Clarkson Professor awarded for research on bird decision making “rules” by American Society of Naturalists** (Clarkson University Press Release 7/8/05, <http://www.clarkson.edu/news/view.php?id=1308>).
- World’s pickiest animal identified** (Jennifer Viegas, Discovery News 7/29/05, <http://dsc.discovery.com/news/briefs/20050725/pickyanimal.html>).
- Understanding the distribution and feeding patterns of Lake Ontario waterbirds** (Lake Ontario Management Plan (LaMP) Update 2005: page 3, USEPA and Environment Canada, <http://www.epa.gov/glnpo/lakeont/2005/louupdate2005.pdf> )
- Road runoff and spray affecting wetlands** (Daniel E. Goren, Standard-Times of New Bedford MA 3/24/05, <http://www.esf.edu/newspubs/news/2005/03.28.salt.htm>).
- Salt’s impact on mountain lakes studied** (Mary Esch, Associated Press 1/10/05, <http://enn.com/today.html?id=6895>). Nationally syndicated in the print and web media. Listed on *Yahoo News Science Headlines*.
- Clarkson scientists tackle complex problem: how to reduce harmful effects of road deicing on environment and still maintain safe winter travel** (Clarkson University Press Release 10/19/04, <http://www.clarkson.edu/news/view.php?id=1160>)
- Clarkson researchers studying why turtles cross road** (C. Fram, Watertown Daily Times 7/26/04).
- Biologists study turtle trips in St. Lawrence County** (WWNY TV, Channel 7 Watertown NY, 6/30/04, <http://www.wwnytv.net/72k/full-story.asp?uid=6063&area=home+page&ss=Langen>)
- Clarkson students experience fresh water ecological research and high seas on Lake Ontario** (Clarkson University Press Release 11/12/03, [http://www.clarkson.edu/news/releases/rel.cgi?great\\_lakes\\_practicum\\_068-03.rel](http://www.clarkson.edu/news/releases/rel.cgi?great_lakes_practicum_068-03.rel))
- Clarkson University Professor’s research into roadkill focuses on impact of highways on native turtle population** (Clarkson University Press Release 9/9/03, [http://www.clarkson.edu/news/releases/rel.cgi?langen\\_research\\_042-03.rel](http://www.clarkson.edu/news/releases/rel.cgi?langen_research_042-03.rel))
- Saving turtles from traffic** (D. Sommerstein, North Country Public Radio 8/11/03, <http://www.northcountrypublicradio.org/news/archives/03/08/0/10>), syndicated nationally through the Great Lakes Radio Consortium ([http://glrc.org/story.php3?story\\_id=2022](http://glrc.org/story.php3?story_id=2022)).
- Wildlife without borders – A2A initiative seeks to link two parks** (E. Kanze, Adirondack Explorer, Nov./Dec. 2002 Issue).
- Wildlife corridor would strengthen parks - Study says locals would fight project** (B. Mann, North Country Public Radio 3/14/02, <http://www.northcountrypublicradio.org/news/archive0203.php>).
- Students’ study supports idea of wildlife corridor** (M. Lang, Watertown Daily Times 3/6/02).
- Clarkson University students decide proposed wildlife corridor desirable, but difficult to implement** (Clarkson University Press Release 2/28/02, [http://www.clarkson.edu/news/releases/rel.cgi?a2a\\_corridor\\_127-01.rel](http://www.clarkson.edu/news/releases/rel.cgi?a2a_corridor_127-01.rel) )