

TROND HALVOR LARSEN

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Born in Toronto, Canada, Oct. 15, 1975. Dual citizenship in U.S. and Canada

EDUCATION

Princeton University, Princeton, NJ, USA. 2001-2006. Ph.D in Ecology and Evolutionary Biology. Centennial Fellowship

Duke University, Durham, NC, USA. 1994-1998. B.Sc. in Biology

RESEARCH AND CONSERVATION EXPERIENCE

I am a tropical ecologist and conservation biologist, with particular interests in diversity patterns and understanding how community disassembly influences ecological processes. I also study strategies influencing species coexistence and rarity, mating systems, and general natural history and behavior. Although I have worked primarily with insects as a model group, I am broadly interested in the diversity and conservation of tropical systems.

Postdoctoral Fellow, 2008-present. Princeton University & World Wildlife Fund.

Using Beta-diversity patterns to design appropriate Amazonian protected areas; impacts of the developing Interoceanic Highway on biodiversity and landscape connectivity; effects of climate change on biodiversity along elevational gradients.

Research Collaborator, 1998-present. National Museum of Natural History, Smithsonian Institution.

Spatial patterns of Amazonian biodiversity; taxonomy and curation of Scarabaeine dung beetles.

Research Associate, 2001-present; *Biodiversity Scientist*, 1999-2001; Member of founding board of directors, 1999. Amazon Conservation Association.

Role of habitat type and disturbance regimes in structuring Amazonian biodiversity mosaics at various spatial scales.

Principle Investigator, 2008-present, 2003-2005, Peru and Ecuador.

Long-term ecological monitoring of fruit-feeding butterfly and dung beetle communities across space and time.

Science Director, 2006-2007. Friends of the Osa, Puerto Jimenez, Costa Rica and Washington, DC, USA.

Director of biodiversity research and conservation in Osa Peninsula, Costa Rica. Development of terrestrial, freshwater and marine conservation programs; development of new protected area management plans for Costa Rica; grant reviews and administration; establishing and teaching of field courses and training workshops; development of new research station; fund-raising; PI on various projects.

Ph.D, 2001-2006, Dept. of Ecology & Evolutionary Biology, Princeton University, Princeton, NJ, USA.

Linking patterns, causes and functional consequences of changing biodiversity. Focus on effects of forest fragmentation on neotropical dung beetle communities (subfamily Scarabaeinae) and consequences for secondary seed dispersal and plant regeneration.

Researcher, 2005, Conservation International, Washington, DC, USA.

Rapid Assessment Program (RAP) expedition to Nassau and Lely, Suriname. Published results from this biodiversity survey dissuaded mining companies from working in the area and established environmental guidelines ([Press Release](#)).

Researcher, 2004, The Field Museum, Chicago, IL, USA.

Rapid Biological Inventories (RBI) expedition to Megantoni, Peru. Presentations of our findings contributed to the establishment of a new protected area, Megantoni National Sanctuary.

Research Assistant, 1997-1998, Dept. of Zoology, Duke University, Durham, NC, USA.

Spatial distribution of epigeic arthropods along a successional gradient in Duke forest.

Resource Assistant, 1997, Student Conservation Association, Gatlinburg, TN, USA.

Butterfly monitoring; distributional analysis of scorpionflies (Order Mecoptera); aquatic invertebrate monitoring; orchid pollination ecology.

TEACHING EXPERIENCE

Visiting Professor, 2007, Organization for Tropical Studies, Peru.

Taught Amazonian Ecosystems and Global Change, a field course (in Spanish) for Latin American undergraduates and graduates in Peruvian Andes-Amazon. Lectures, discussions, and student research projects.

Visiting Lecturer, 2007, Princeton University, Princeton, NJ, USA.

Taught Tropical Ecology, a graduate field course in Costa Rica. Lectures, discussions, and student research projects.

Academic Instructor, 2006, Princeton University, Princeton, NJ, USA.

Teaching assistant for Tropical Vertebrate Ecology, an undergraduate field course held in Panama. Field projects and lecture.

Academic Instructor, 2002-2003, Princeton University, Princeton, NJ, USA.

Teaching assistant for Introduction to the Biology of Organisms.

Environmental Educator, 1997-1998, Wilderness & Outdoor Opportunities for Durham Students (WOODS), Durham, NC, USA.

Environmental education and outdoor expeditions with underprivileged Durham youth.

MANUSCRIPTS & PUBLICATIONS

ARTICLES (Refereed)

Larsen, T. H., A. Lopera, & A. Forsyth. 2008. Understanding trait-dependent community disassembly: dung beetles, density functions and forest fragmentation. *Conservation Biology*, in press (available online early)

Nichols, E., S. Spector, J. Louzada, **T. H. Larsen**, S. Amezcuita, M. E. Favila. 2008. Review: Ecological functions and ecosystem services provided by Scarabaeinae dung beetles. *Biological Conservation*, 141(6):1461-1474

Nichols, E., **T.H. Larsen**, S. Spector, A. Davis, K. Vulinec, & F. Escobar. 2008. Response to Radtke et al. "Forest fragment size effects on dung beetle communities?" *Biological Conservation*, 141(3): 615-616

- Nichols, E., **T.H. Larsen**, S. Spector, A. Davis, K. Vulinec, F. Escobar, & the Scarabaeinae Research Network. 2007. Global dung beetle response to tropical forest modification and fragmentation: A quantitative literature review and meta-analysis. *Biological Conservation*, 137(1): 1-19
- Larsen, T.H.**, A. Lopera, & A. Forsyth. 2006. Extreme trophic and habitat specialization by Peruvian dung beetles. *Coleopterist's Bulletin*, 60(4): 315-324
- Rao, M. & **T.H. Larsen**. 2006. Ecological consequences of extinction. Synthesis, Network for Conservation Educators and Practitioners, American Museum of Natural History. CD-ROM, available electronically at: <http://research.amnh.org/biodiversity/ncep>
- Larsen, T.H.**, N. Williams, & C. Kremen. 2005. Extinction order and altered community structure rapidly disrupt ecosystem functioning. *Ecology Letters*, 8: 538-547 [Top ten cited articles over past three years in *Ecology Letters*]
- Larsen, T.H.** & A. Forsyth. 2005. Trap spacing and transect design for dung beetle biodiversity studies. *Biotropica*, 37(2): 322-325 [Top five cited articles in *Biotropica* for 2007]

ARTICLES (Non-refereed)

- Larsen, T.H.** 2007. Dung Beetles. In: L. Alonso & J. Mol (eds.) A Rapid Biological Assessment of the Lely and Nassau Plateaus, Suriname. RAP Bulletin of Biological Assessment 43, pp. 99-101, 232-233. Arlington, Virginia: Conservation International [[online PDF](#)]
- Larsen, T.H.** 2005. Conserving biodiversity, plant-animal interactions, and ecosystem integrity in tropical Peru. *Al Día*, Fall 2005
- Larsen, T.H.** 2004. Dung Beetles/Escarabajos peloteros. In: C. Vriesendorp, L. Rivera Chavez, D. Moskovits and J. Shopland (eds.) Peru: Megantoni. Rapid Biological Inventories Report 15, pp. 77-84, 185-192. Chicago, Illinois: The Field Museum [[online report](#)]
- Larsen, T.H.** 2001. Searching for Scorpionflies. *ATBI Quarterly*. 2(3):8

MANUSCRIPTS SUBMITTED AND IN PREPARATION

- Larsen, T.H.** Testing local extinction mechanisms and explaining the high sensitivity of habitat specialists to disturbance: dung beetles rapidly lose and can't find forest fragments. In review
- Larsen, T.H.**, A. Lopera, A. Forsyth, & F. Genier. Rapid ecological transition from coprophagy to predation. In prep.
- Larsen, T.H.** Climate change and habitat modification disrupt species' elevational range distributions. In prep.

BOOKS IN PREPARATION

- Larsen, T.H.** & photos by R. Toft. Ecology and conservation of the Osa Peninsula, Costa Rica. Zona Tropical Press. San Jose, Costa Rica. In prep.
- Larsen, T.H.** & A. Forsyth. Scarabs of the upper Amazon: a model for ecology. Wust Ediciones. Lima, Peru. In prep.

NEWS COVERAGE

- Loss of dung beetles puts ecosystems in deep doo-doo. 2004. News focus on T.H. Larsen research. *Science* 305(5688): 1230a
- Suriname RAP expedition discovers 24 new species and dissuades harmful mining activity. 2007. Coverage by [Discovery](#), [Reuters](#), [ScienceDaily](#), CNN, [MSNBC](#), CBS, and many others

SELECTED ORAL PRESENTATIONS & LECTURES

- Larsen, T.H. 2007. How much Amazonian *terra firme* is enough? New lessons from Beta-diversity of invertebrate taxa. Association for Tropical Biology and Conservation Annual Meeting, Morelia, Mexico.
- Larsen, T.H. 2005. Diversity patterns and interactions between disturbance regimes, dung beetle communities and plant regeneration. DIVERSITAS Open Science Conference, Oaxaca, Mexico.
- Larsen, T.H. 2005. Session Chair, Animal Ecology and Forest Dynamics, Association for Tropical Biology and Conservation Annual Meeting, Uberlandia, Brazil.
- Larsen, T.H. 2005. Consequential Coprophages: Diversity patterns, species ranges, and interactions between disturbance regimes, dung beetle communities and plant regeneration. Society for Conservation Biology Annual Meeting, Brasilia, Brazil.
- Larsen, T.H. 2005. Explaining the commonness of rarity. Association for Tropical Biology and Conservation Annual Meeting, Uberlandia, Brazil.
- Larsen, T.H. 2004. Linking patterns, causes and functional consequences of changing biodiversity. Society for Conservation Biology Annual Meeting, New York, NY, USA.
- Larsen, T.H. 2004. Interactions between disturbance, dung beetles, and seeds: Does dung beetle diversity help maintain plant diversity? Invited symposium speaker, Association for Tropical Biology and Conservation Annual Meeting, Miami, FL, USA.
- Larsen, T.H. 2002. Structuring of a neotropical dung beetle guild and consequences for community function. Invited symposium speaker, Association for Tropical Biology Annual Meeting, Panama.
- Larsen, T.H. 2002. Trait-dependent extinction mechanisms and loss of functional diversity. Invited speaker, University of Pennsylvania, USA.

GRANTS

Recent Research

- Kathryn Fuller Postdoctoral Fellowship, World Wildlife Fund, 2008-present
- National Geographic Society (T. Larsen & P. DeVries, PIs), 2008-present
- US Fish & Wildlife Service (awarded to Friends of the Osa), 2007-2008 (\$15,200)
- Beneficia Foundation (awarded to Friends of the Osa), 2007-2008 (\$25,850)
- World Land Trust (awarded to Friends of the Osa), 2006-2007 (\$5,000)
- American Bird Conservancy (awarded to Friends of the Osa), 2006-2007 (\$5,000)
- Evergreen Foundation (awarded to Friends of the Osa), 2006-2007 (\$25,000)
- Wildlife Conservation Society (awarded to Friends of the Osa), 2006-2007 (\$35,000)
- Amazon Conservation Association (T. Larsen, PI), 2003-2005 (\$28,000)

Ph.D. Dissertation

- NSF Graduate Research Fellowship, 2003-2005
- Centennial Fellowship, Princeton University, 2001-2006
- Research Fellowship Program, Wildlife Conservation Society, 2003-2004
- APGA and Dean's Fund Travel Grants, 2005
- Program in Latin American Studies, Princeton University, 2002-2005
- Exploration Fund, Explorer's Club, 2002

AWARDS & HONORS

- Nominated by Princeton EEB Dept. for 2007 CGS/UMI Distinguished Dissertation Award (two awards nationally in Life and Biological Sciences)
- Authored several top cited articles (see Publications)
- NSF Graduate Research Fellow, WCS Research Fellow, Centennial Fellow, Fuller Postdoctoral Fellow
- Society for Conservation Biology Annual Meeting, Brazil, 2005, student award, best paper
- Society for Conservation Biology Annual Meeting, New York, 2004, student award, best paper
- Art of Science Photography Competition winner, Nature Air Photography Competition winner
- Species names: *Coprophanaeus larseni* Arnaud, *Athyreus larseni* Howden

SKILLS

- Excellent written and verbal Spanish
- GIS and related software including Arcview, ArcGIS
- Website design and development (e.g. [Friends of the Osa](#), [Brazil nut research](#) by Amazon Conservation Association, Kremen lab at Princeton University)
- Graphics and image processing software including Photoshop & Illustrator
- Macrophotography (www.princeton.edu/~tlarsen/photography.htm), photos published electronically and in print (e.g. [Art of Science](#), *Nature Landings* magazine, *OneLife* magazine, Capstone Press, [Ecology Letters Cover](#), [CI Press Release](#))

PROFESSIONAL AFFILIATIONS & SERVICE

- Member of Ecological Society of America, Society for Conservation Biology, Association for Tropical Biology and Conservation, Explorers Club
- Research Associate with Amazon Conservation Association and Smithsonian Institution
- Frequent reviewer for journals that include *Animal Conservation*, *Biological Conservation*, *Biotropica*, *Canadian Journal of Zoology*, *Conservation Biology*, *Diversity and Distributions*, *Ecography*, *Ecology Letters*, *Insect Conservation and Diversity*, *Journal of Tropical Ecology*, *Oikos*, *Annals of the Entomological Society of America*, *Coleopterists Bulletin*, *Journal of the New York Entomological Society*, *Journal of the Kansas Entomological Society*, *Systematic Entomology*
- Reviewed proposals for Evergreen Foundation, Center for Tropical Forest Studies