

Brian D. Gerber

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Career Goals Advance the understanding of population and community ecology, natural and human induced cascading ecological affects, and management principles.

Education **M.S.**, Fisheries and Wildlife Sciences, Virginia Polytechnic Institute and State University, 2010. Thesis: *Comparing Density Analyses and Carnivore Ecology of Madagascar's Southeastern Rainforest*. Advised by Dr. Sarah Karpanty. GPA: 4.00/4.00

B.S. Cum Laude, Wildlife and Fisheries Conservation, University of Massachusetts, Amherst, Massachusetts, 2003. GPA: 3.82/4.00.

Fellowships and Grants

- Gerber, B. (Fellowship). 2008 - 2011. *Unifying landscape ecology and metapopulation theory to determine if habitat corridors effectively reduce the impacts of habitat fragmentation on animal species*. National Science Foundation Graduate Research Fellowship (NSF-GRFP).

- Karpanty, S.M., Gerber, B. (CO-PI). 2008-2010. *Using camera-traps and surveys of traditional knowledge to estimate population abundance, density, and occupancy of carnivores in southeastern Madagascar to best design landscape level conservation strategies*. National Geographic Committee for Research and Exploration Grant. \$19,366.

- Gerber, B. 2009. Wildlife Society 16th Annual Conference Student Travel Grant. \$500.

- Gerber, B. 2009. Sigma-Xi Award for Master's Degree Candidate. \$1500.

- Gerber, B. 2009. Burd Sheldon McGinnes Graduate Fellowship. \$2000.

- Gerber, B. 2008. Sigma-Xi Grants-in-Aid Research Program. \$600.

- Gerber, B. 2008. Virginia Tech Graduate Research Development Program Award. \$200.

Certificates of Achievements and Awards

- Outstanding Master's Student Award in the College of Natural Resources. April 2010.
- The John Neal Memorial M.S. Research Award. April 2009.
- Certificate of Appreciation awarded by the USFS Department of Agriculture. Oct 2004.
- Outstanding Undergraduate Senior Award in Wildlife. Fall 2003.
- Hokkaido Scholarship. Spring 2003.
- Outstanding Undergraduate Junior Award. Fall 2002.
- Charles Mason Powell Scholarship/Wildlife. Spring 2002.
- Deans Honor Roll recipient at UMass for Fall & Spring semesters from 2000 to 2003.

Publications Gerber, B., Karpanty, S.M., Crawford, C., Kotschwar, M., Randrianantenaina, J. (2010). *An assessment of carnivore relative abundance and density in the eastern rainforests of Madagascar using remotely-triggered camera traps*. *Oryx* **44**, 219-222.

Gerber, B., Karpanty, S.M., Kelly, M. In Review. *Empirical evaluation of closure violations, effects of lure, and abundance and density estimation for mesocarnivores using photographic-sampling data of the Malagasy Civet*. *Journal of Applied Ecology*.

Gerber, B., Karpanty, SM., Randrianantenaina, J. In Prep. *The impact of forest logging and fragmentation on carnivore species composition, density, and occupancy in Madagascar's southeastern rainforests*. Biological Conservation.

Gerber, B., Karpanty, SM., Randrianantenaina, J. In Prep. *Temporal activity patterns of Malagasy rainforest carnivores*. Animal Conservation.

**Research
Experience**

Virginia Barrier Islands Shorebird Technician

May – June (2007, 2009, 2010) - Virginia Tech - Wachapreague, VA

- Collected diurnal and nocturnal behavioral/habitat data to understand red knot stop-over ecology.
- Trapped migratory shorebirds with canon nets and drop nets.
- Processed birds: banded, measured, and fitted with transmitters.
- Mapped locations of radio-tagged birds through fixed winged aerial telemetry.

Snowshoe Hare Field Crew Leader

January 2007 – March 2007 - Colorado Division of Wildlife - Gunnison, CO
July 2006 – September 2006 (Field Technician)

- Assisted lead investigator with mark-recapture telemetry study to estimate density, demography, and seasonal movements of snowshoe hares in Colorado.
- Coordinated a crew of 5 and adjusted field activities as circumstance dictated.
- Trapped, handled, and marked hares: fixed radio collar, PIT tagged, sexed, and weighed.
- Relocated (triangulation & homing) hares daily to determine daytime and nighttime locations.
- Worked off-trail in steep mountain terrain, navigating by GPS, compass and map.

Wildlife Researcher: Khlong Kru Wai Wildlife Sanctuary

December 2005 – February, 2006 - Thai Society for the Conservation of Wild Animals - Thailand

- Designed and implemented presence/absence study with an emphasis on carnivores.
- Used baited track stations and infrared remote cameras to detect species.
- Conducted opportunistic searches for animal sign while mapping sanctuary area.

Wind Power Avian/Bat Migration Technician

April 2005 - October 2005 - Woodlot Alternatives, Inc. - Topsham, ME

- Collected data to discern the effects of proposed wind power projects on avian & bat migrations.
- Implemented advanced radar technologies to understand local avian and bat migration patterns.
- Setup and maintained anabat systems for recording and analyzing bat echolocations.
- Independently operated and maintained field equipment: computer, marine radar, and generator.
- Worked long nocturnal hours (up to 100 hours/week).

Canid Ecology Research Technician

Nov 2004 – March 2005 - Yellowstone Ecological Research Center - Cooke City, MT

- Conducted research for a long-term canid ecology study (wolf, coyote, and fox).
- Characterized the demographics of coyotes in the northern range of Yellowstone NP.
- Relocated canids through radiotelemetry and direct observations to delineate territories.
- Box trapped rocky mountain red fox: set and checked traps, plus processed foxes.
- Handled non-sedated foxes: took measurements and DNA sample, and attached radiocollar.

USFS Biological Technician (Wildlife)

June – Oct 2004 - USDA Forest Service's - Shaver Lake, CA

- Crew member for the Forest Carnivore Monitoring Program (Sierra Nevada Framework) aimed to detect the presence of fisher and marten through track collection and photographs.
- Setup and serviced track boxes and Trailmaster infrared remote camera stations.
- Conducted preliminary hair snare sampling to test the viability for future genetic research.

- Worked extensively off-trail navigating mountainous terrain using a map, compass and GPS.

Bald Eagle Nestwatch Contractor

February – May 2004 - Arizona Bald Eagle Nestwatch Program - Phoenix, AZ

- Contracted to observe and record nesting bald eagles behavior.
- Collected extensive data on behavior, activities, habitat use, and human disturbances.
- Minimized human disturbances by enforcing closed area restrictions.
- Conducted public outreach: educated the public about endangered species protection.

Timbavati Bateleur Wilderness Safari Internship

June – September 2003 - Timbavati Nature Reserve - South Africa

- Rehabilitated deteriorating wetlands (seep-line).
- Built gabian structures and brush packed to mitigate erosion sites.
- Conducted invasive species control and bush encroachment.
- Presented wildlife conservation lectures to tourists (field id, management issues).

Quissama National Park Internship

June – September 2002 - Quissama National Park - Angola

- Assisted researcher on vegetation impacts by translocated elephants.
- Radiotracked grey-striped francolin (endemic bird to Angola).
- Collected demographic data on black monkey and vervet monkey populations.
- Interviewed villagers on the use of natural resources for future management.

Skills

Computer Skills: Programs DENSITY, MARK, CAPTURE, PRESENCE, ArcGIS 9.x, Microsoft Office. Technical Support: network, hardware, and software troubleshooting and upgrading (3yrs job experience).

Wildlife Skills: First Aid and CPR Trained, GPS, Camera-Trapping, Radio-telemetry, Bird / Mammal / Plant Identification, Small mammal trapping, Box trapping, Animal behavior monitoring, Scientific writing, Orienteering , 4x4 driving, and Backcountry hiking/camping (Leave No Trace).

Teaching Experience

Population Dynamics and Estimation, Graduate Teaching Assistant (2008). Department of Fisheries and Wildlife Sciences, Virginia Tech, Blacksburg, VA. Tutored students in population concepts and statistical applications, and graded assignments. Supervisor: Dr. Marcella Kelly. Student perception of instruction rating = 3.4/4.0.

Principles of Fisheries and Wildlife Management, Graduate Teaching Assistant (2007). Department of Fisheries and Wildlife Sciences, Virginia Tech, Blacksburg, VA. Facilitated open dialogue for in-class discussions and graded tests, quizzes, and homework. Supervisor: Dr. Sarah Karpanty. Student perception of instruction rating = 3.6/4.0.

Forest Botany, Teaching Assistant (2004). Department of Wildlife and Fisheries Conservation, University of Massachusetts, Amherst, MA. Taught plant identification, plant sampling methods, and compass use and map interpretation. Graded tests, quizzes, assignments, and organized bookkeeping. Supervisor: Dr. Jim Fownes.

Undergraduate Student Mentoring

Philosophy: To support undergraduate students in their professional development and to offer leadership and support in their scientific research projects.

- Mentored 7 undergraduate assistants in organizing and analyzing camera-trap data and 1 undergraduate research field technician in Madagascar.

**Presentations
/ Workshops**

- 2010-Talk Conservation Biology Guest lecturer (Virginia Tech). Gerber, B. International Conservation and Carnivore Ecology. Blacksburg, VA; September.
- 2010- Talk The Ecological Society of America 95th Annual Conference. Gerber, B., Karpanty S., Randrianantenaina, J., The impact of forest logging and fragmentation on the species richness and density of Malagasy rainforest carnivores; Pittsburgh, PA; August.
- 2009- Talk Centre Valbio. Gerber, B., Karpanty S., Randrianantenaina, J. Malagasy carnivore density across a gradient of disturbed rainforest sites. Ranomafana, Madagascar; December.
- 2009-Talk The Wildlife Society 16th Annual Conference. Gerber, B., Karpanty S., Crawford C., Kotschwar, M., Randrianantenaina, J. An assessment of carnivore relative abundance and density in the eastern rainforests of Madagascar using remotely-triggered camera traps.; Monterey, CA; September.
- 2009-Poster The Wildlife Society 16th Annual Conference. Poster presentation: Kotschwar, M., Karpanty, S., Gerber, B., Latimer, C. Assessing variation in anti-predator behavior of Milne-Edwards' sifakas at fragmented and continuous rainforest sites in Madagascar; Monterey, CA; September.
- 2009-Poster American Association of Physical Anthropology. Poster presentation: D.H. Morriss, S.J. Arrigo-Nelson, S.M. Karpanty, B.D. Gerber & P.C. Wright Ranging Behavior Flexibility in Response to Habitat Disturbance by Milne-Edwards' Sifakas in Ranomafana National Park, Madagascar; Chicago, IL; April.
- 2009-Talk The 25th Annual Virginia Tech Graduate Student Research Symposium. Gerber, B. Carnivore relative abundance and density in the eastern rainforests of Madagascar using remotely-triggered camera traps., Blacksburg, VA; March.
- 2008- Talk ICTE Annual Consortium Meeting. Gerber, B. Malagasy carnivore camera trapping throughout southeastern Madagascar. Ranomafana, Madagascar; November.
- 2008-Talk National Geographic Expedition (led by Dr. Patricia Wright). Gerber, B. Introduction to Malagasy carnivores, camera trapping, and preliminary research results. Ranomafana, Madagascar; June.
- 2008-Talk Earthwatch Institute Expedition. Gerber, B. Introduction to Malagasy carnivores, camera trapping, and preliminary research results (led by Dr. Summer-Arrigo-Nelson), Ranomafana, Madagascar; July.
- 2008-Talk Earthwatch Institute Expedition (led by Dr. Summer-Arrigo-Nelson). Gerber, B. Introduction to Malagasy carnivores, camera trapping, and preliminary research results. Ranomafana, Madagascar; July.

- 2008-Workshop A training workshop: Camera Trapping: Theory and Practical Workshop Applications. Gerber, B. Organized and led a week long workshop, involving Classroom lectures and discussions, and field training. Participants included Wildlife Conservation Society (WCS) researchers, Madagascar National Park officials, and Centrel Valbio staff members. Ranomafana, Madagascar; June.
- 2008-Talk Duke Primate Research Center Tour (led by Dr. Charlie Welch), B. Gerber. Introduction to Malagasy carnivores, camera trapping, and preliminary research results. Ranomafana, Madagascar; August.
- 2008-Talk Stony Brook Study Abroad (led by Eileen Larney). Gerber, B. Camera trapping Malagasy rainforest carnivores. Ranomafana, Madagascar; September.
- 2008-Panelist Virginia Tech Wildlife Society Chapter. Invited Discussion Panelist: How to search and secure Wildlife/Fisheries research technician employment; VA, April.
- 2008-Poster American Association of Physical Anthropology. Poster presentation: S.M. Karpanty, B. Gerber C. Crawford, M. Kotschwar. Dept. of Fisheries and Wildlife Sciences, Virginia Polytechnic Institute and State University. Using camera-traps and traditional knowledge to estimate population parameters and movements of carnivores in southeastern Madagascar: tools towards better understanding lemur predation risk from a predator's perspective; Columbus, OH; April.

Interests and activities

Hiking/Camping, Biking, Ice Hockey, Judo, Snowshoeing, Backcountry Skiing, Traveling, Nature & Wildlife Photography.

References

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