

**Sarah M. Karpanty**  
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**Education**

2003 Ph.D., Ecology and Evolutionary Biology, SUNY Stony Brook, Stony Brook, New York.  
1998 B.S., Zoology, Miami University, Oxford, Ohio.

**Experience**

2006-Pres. Assistant Professor, Department of Fisheries and Wildlife Sciences, Virginia Polytechnic Institute and State University.  
2004-2006 Postdoctoral Associate, Department of Fisheries and Wildlife Sciences, Virginia Polytechnic Institute and State University.

**Awards**

1999-2002 Environmental Protection Agency STAR Fellow  
1998-2003 National Science Foundation Predoctoral Fellow  
1997-1998 Barry M. Goldwater Scholarship for Excellence in Science  
1997-1998 Astronaut Scholarship Foundation Mercury Seven Scholar

**Extramural Funding (Grand Total: \$2,853,902; Total as Lead PI: \$686,925)**

Karpanty, S.M. 07/07-12/07. Preliminary Mapping of Offshore Areas Suitable for Offshore Wind Development, with Identification of Excluded Areas to Avoid Potential Conflicts, and Mapping of Offshore Benthic, Pelagic and Avian Habitats, Virginia Coastal Energy Research Consortium, \$30,000.

Karpanty, S.M. and J.D. Fraser. 07/07-07/11. Defense Coastal Estuarine Research Program: Understanding the Top-down and Bottom-up Influences on Shorebird Productivity, Survival, Habitat Use, Foraging Dynamics and Demography in Relation to Beach Management Practices on MCBCL. RTI International, \$209,543.

Hallerman, E., J. Fraser, D. Hata, and S.M. Karpanty. 07/06-08/09. Horseshoe Crab Research and Monitoring Program for FY 2007. Subaward: Migratory Shorebirds and Horseshoe Crabs: Linking foraging and habitat ecology in the Delaware Bay to population dynamics of birds and crabs throughout their range, U.S. Congress via the National Marine Fisheries Service, \$521,845. (note: total funding for shorebird award is \$148,773)

Karpanty, S.M. 05/07-07/07. Assessing and implementing ecological restoration of the Eastern Rainforest Corridor of Madagascar: Developing an Action Plan for Forest Restoration at Ambohiero. U.S. Agency for International Development Sustainable Agriculture and Natural Resource Management Program, \$34,520.

Hallerman, E., J. Fraser, D. Hata, and S.M. Karpanty. 07/05-08/08. Horseshoe Crab Research and Monitoring Program for FY 2006. Subaward: Migratory Shorebirds and Horseshoe Crabs: Linking foraging and habitat ecology in the Delaware Bay to population dynamics of birds and crabs throughout their range,

- U.S. Congress via the National Marine Fisheries Service, \$624,240. (note: total funding for shorebird award is \$156,552).
- Fraser, J.D., J. Cohen, and S.M. Karpanty. 10/05-9/06. Shorebird Use of Barrier Island Inlets, U.S. Army Corps of Engineers, \$75,200.
- Karpanty, S.M., Fraser, J.D. Wright, P.C., Craig, C., Welch, C., and Hammett, A.L. 05/05-08/05. Restoration of biodiversity and economic values to degraded rainforest and agricultural landscapes in southeastern Madagascar. USAID SANREM CRSP Planning Award, \$45,994.
- Hallerman, E., J. Fraser, D. Hata, M. Kelly, and S.M. Karpanty. 07/04-01/07. Horseshoe Crab Research and Monitoring Program for FY 2005. Subaward: Migratory Shorebirds and Horseshoe Crabs: Linking foraging and habitat ecology in the Delaware Bay to population dynamics of birds and crabs throughout their range, U.S. Congress via the National Marine Fisheries Service, \$614,900. (note: total funding for shorebird award is \$121,325).
- Hallerman, E., J. Fraser, D. Hata, and S.M. Karpanty. 07/03-08/06. Horseshoe Crab Research and Monitoring Program for FY 2004. Subaward: Migratory Shorebirds and Horseshoe Crabs: Linking foraging and habitat ecology in the Delaware Bay to population dynamics of birds and crabs throughout their range, U.S. Congress via the National Marine Fisheries Service, \$633,100. (note: total funding for shorebird award is \$143,563).
- Karpanty, S.M. 07/05-08/05. Rapid assessment of regeneration potential of Didy Forest and the establishment of long-term botanical research plots. USAID Madagascar Mission, \$6,100.
- Karpanty, S.M. 08/02-12/03. Predator-prey interactions of raptors and lemurs in southeastern Madagascar. National Geographic Society, Committee for Research and Exploration, \$10,500.
- Karpanty, S.M. and Janson, C.H. 08/02-12/03. Behavioral and ecological interactions of lemurs and raptors in Ranomafana National Park, Madagascar. NSF Dissertation Improvement Grant, \$12,000.
- Karpanty, S.M. 01/02-12/03. Community-Based Reforestation in Southeastern Madagascar. Association of Zoological Horticulture's Conservation Grant, \$4,000.
- Karpanty, S.M. 08/00-12/02. Behavioral and ecological interactions of lemurs and raptors in Ranomafana National Park, Madagascar. Wildlife Conservation Society Research Fellow, \$20,460.
- Karpanty, S.M. 08/00-12/00. Community-Based Reforestation in Southeastern Madagascar. The Allstate Foundation, \$2,500.
- Karpanty, S.M. 05/99-08/99. A survey of the diurnal raptor communities of four reserves in Madagascar. The International Osprey Foundation, \$1,000.

Karpanty, S.M. 05/99-08/99. A survey of the diurnal raptor communities of four reserves in Madagascar. Conservation International's Margot Marsh Biodiversity Fund, \$2,500.

Karpanty, S.M. 08/97-12/97. Raptor Predation of Lemurs at Berenty Reserve, Madagascar. Explorer's Club Youth Activity Fund, \$1,000.

Tramer, E. and Karpanty, S.M. 04/96-09/96. The effect of water level management on avian community structure in a Lake Erie marsh. Ohio Department of Natural Resources Wildlife Diversity Grant, \$4,500.

**Publications** (\* student coauthor)

Cohen, J.\*, Karpanty, S.M., Catlin, D.\*, Fraser, J., Fischer, R.A. In Press. Winter ecology of piping plovers at Oregon Inlet, North Carolina. *Waterbirds*.

Karpanty, S.M. and Wright, P.C. 2007. Predation on lemurs in the rainforest of Madagascar by multiple predator species: Observations and Experiments. Pp. 77-99. In: Gursky, S.L. and Nekaris, K.A.I. (eds.) *Primates and their Predators*, Springer, New York.

Karpanty, S.M., Fraser J.D., Berkson, J., Niles, L.J., Dey, A., and Smith, E.P. 2006. Horseshoe crab eggs determine red knot distribution in Delaware Bay habitats. *Journal of Wildlife Management*. 70(6): 1704-1710.

Karpanty, S.M. 2006. Direct and indirect impacts of raptor predation on lemurs in Southeastern Madagascar. *International Journal of Primatology*, 27(1): 239-261.

Karpanty, S.M. and Grella, R.A.\* 2001. Lemur responses to diurnal raptor vocalizations in the eastern rainforests of Madagascar. *Folia primatologica* 72: 100-103.

Karpanty, S.M., and Goodman, S.M. 1999. Prey profile of the Madagascar Harrier-Hawk, *Polyboroides radiatus*, in southeastern Madagascar. *J. Raptor Research* 33(4): 313-316.

**Reports, Manuals, Popular Press**

Karpanty, S.M., Dillaha, T., and Welch, C. 2007. Development of an action plan for restoration in Didy Forest, Ambohilero Region exploited by Latitude Timber Company. Prepared for USAID Madagascar, 42pp.

Karpanty, S.M., Fraser, J.D., Welch, C. 2005. Rapid assessment of damage and regeneration potential in Didy Forest exploited by Latitude Timber Company. Prepared for USAID Madagascar, 35pp.

Karpanty, S.M. 2003. Osprey Productivity on Long Island (1989-2000) and Connecticut (1985-1999): Trends for Concern on Long Island. Theodore Roosevelt Audubon Sanctuary, 26pp.

\*Grella, R. and Karpanty, S.M. 2001. The Future of Our World's Primates: What is Your Vision? *Odysey Magazine*, October.

\*Grella R. and Karpanty S.M. 2001. *Reforestation Laboratory Manual* (English, Malagasy, Spanish translations) Copyright Aiza Biby®

### **Manuscripts In Review**

Karpanty, S.M., Fraser J.D., Berkson, Cohen, J. In revision. Patterns of horseshoe crab egg depletion by foraging shorebirds on the Delaware Bay. *Journal of Applied Ecology*.

Karpanty, S.M., Fraser J.D., Berkson, J., Niles, L.J., Dey, A., and Smith, E.P. In revision. Are radio locations of birds captured in the same flock independent observations? *Waterbirds*.

Karpanty, S.M. and Janson, C.H. In revision. Lemur responses to a multiple predator community: Evidence of behavioral trade-offs and risky mobbing behavior by males against predators. *Behavioral Ecology and Sociobiology*

### **Teaching**

Principles of Fisheries and Wildlife Management, Instructor (FiW 2114, Fall 2006, Fall 2007), Department of Fisheries and Wildlife Sciences, Virginia Tech, 160 students/semester.

Foundations of Fisheries and Wildlife Population Ecology and Management (FiW 5984, Fall 2007), Department of Fisheries and Wildlife Sciences, Virginia Tech, 15 students/semester.

Behavioral Ecology, Co-Instructor (Spring 2003) and Teaching Assistant (Spring 2002), Department of Ecology and Evolution, SUNY Stony Brook, Stony Brook, New York.

Biodiversity Field Research in a Tropical Rainforest in Madagascar, Assistant-Instructor (Fall 2000, 2002, 2003), SUNY Stony Brook Study Abroad, Stony Brook, New York.

Introductory Biology Laboratory, Teaching Assistant (Spring 2000), Department of Ecology and Evolution, SUNY Stony Brook, Stony Brook, New York.

Ornithology, Co-Instructor (Spring and Summer 1998) and Teaching Assistant (Spring 1997), Department of Zoology, Miami University, Oxford, Ohio.

Guest Lectures at Virginia Tech: Human Dimensions of Fish and Wildlife (FiW 4464, Fall 2006), Pedagogical Practices in Contemporary Contexts (GRAD 5114, Fall 2006, Spring 2007), Introduction to Renewable Natural Resources (NR 1114, Fall 2006), Earth Sustainability (UCCS 2984, Spring 2007)

### **Academic Presentations and Seminars**

#### Regional Meetings

2007-Talk Karpanty, S.M., Fraser, J.D. Foraging shorebirds deplete horseshoe crab eggs from wrack line, but not beach-wide, in Delaware Bay. Southeastern Association of Fish and Wildlife Agencies. To be presented October 2007.

- 2007-Poster Karpanty, S.M., Fraser, J., Cohen, J., Berkson, J. Smith, E. Causes of the red knot decline. Virginia Tech Dean's Forum on the Environment, Blacksburg, Virginia.
- 2007-Poster Hallerman, E., Fraser, J., Hata, D., Karpanty, S.M. Horseshoe crab research at Virginia Tech. Virginia Tech Dean's Forum on the Environment, Blacksburg, Virginia.
- 2007-Poster Fraser, J., Karpanty, S.M. Biodiversity conservation research at Virginia Tech. Virginia Tech Dean's Forum on the Environment, Blacksburg, Virginia.
- 2006-Poster Karpanty, S.M., Stauffer, D., Fraser, J.D., Cohen, J. Impacts of terrestrial and coastal wind turbine generators on migratory and resident bird species. Virginia Tech Dean's Forum on Energy Research, Blacksburg, Virginia.
- 2005-Talk Karpanty, S.M. and Fraser, J.D. Are red knot populations limited by the availability of horseshoe crab eggs in Delaware Bay? American Bird Conservancy-U.S. Army Corps of Engineers Joint Northeastern Meeting, Islip, New York.

#### National Meetings

- 2007-Talk Karpanty, S.M. Behavioral responses of *Propithecus edwardsi* to an experimental multiple-predator community in Ranomafana National Park, Madagascar. American Association of Physical Anthropologists. Philadelphia, Pennsylvania.
- 2005-Talk Karpanty, S.M. and Fraser, J.D. Horseshoe crab eggs determine red knot distribution in Delaware Bay habitats. AOU 2005 Annual Meeting, Santa Barbara, California.
- 2004-Talk Karpanty, S.M. Behavioral responses of lemurs to a multiple predator community. ESA 2004 Annual Meeting, Portland, Oregon.
- 2003-Talk Karpanty, S.M. Ecological interactions of diurnal raptors and the lemur community of Ranomafana National Park, Madagascar. ESA 2003 Annual Meetings, Savannah, Georgia.
- 2003-Talk Karpanty, S.M. Rates of predation by diurnal raptors on the lemur community of Ranomafana National Park, Madagascar. American Association of Physical Anthropologists 72<sup>nd</sup> Annual Meeting, Tempe, Arizona.
- 2002-Poster Karpanty, S.M. GIS Analyses of Breeding Density, Nest Site Preferences, and Population Size of Three Diurnal Raptors in Southeastern Madagascar. 3<sup>rd</sup> North American Ornithological Conference, New Orleans, Louisiana.
- 2001-Poster Karpanty, S.M. Behavioral and Ecological Interactions of Raptors and Lemurs in the Eastern Rainforest of Madagascar: A Multiple Predator

Approach. Environmental Protection Agency, STAR Fellow Conference, Washington, D.C.

### Invited Presentations

- 2007-Talk Karpanty, S.M. Restoring Forests in Madagascar: Defining the Approach and the Ambohilero Case Study. Madagascar National Restoration Strategy Workshop, Antananarivo, Madagascar.
- 2004-Talk Karpanty, S.M. Direct and indirect impacts of raptor predation on the lemur community of southeastern Madagascar. Virginia Tech Ecology, Evolution, and Behavior Seminar Series, Blacksburg, Virginia.
- 2002-Talk Karpanty, S.M., and Vogel, E. Aiza Biby's Planting for the Future Project in Madagascar and Costa Rica. Association of Zoological Horticulture and American Zoological Association Joint Annual Conference, Invited Speakers, Kansas City, Missouri.
- 2003-Talk Karpanty, S.M. Ecological and behavioral interactions of raptors and lemurs in the rainforest of Eastern Madagascar. University of New Mexico Biology Department Seminar, Albuquerque, New Mexico.
- 2003-Talk Karpanty, S.M. Ecological and behavioral interactions of raptors and lemurs in the rainforests of Eastern Madagascar. Miami University Zoology Department Seminar, Oxford, Ohio.

### **Professional Activities**

Peer Reviewer: Folia Primatologica, Behavioral Ecology and Sociobiology, National Geographic Society Committee for Research and Exploration

### Professional Societies

- 2002-Present member of the American Ornithologist's Union  
2002-Present member of the Raptor Research Foundation  
2003-Present member of the Ecological Society of America  
2006-Present member of the Wildlife Society

### **Languages**

	<u>Speaking</u>	<u>Reading</u>	<u>Writing</u>
English	Excellent	Excellent	Excellent
French	Good	Good	Good
Spanish	Good	Good	Good
Malagasy	Basic	Basic	Basic