

Curriculum Vitae

Peter Guild Cutter

Conservation Biology Graduate Program
187 McNeal Hall, 1985 Buford Avenue
St. Paul, MN 55108
phone: 651-329-6111 ❖ fax: 612-625-5299
email: peter@conservationasia.org
online profile: www.petercutter.info

Education

Ph.D. Conservation Biology, University of Minnesota, St. Paul, Minnesota

Dissertation: Identifying Effective Approaches for Landscape-scale Conservation Planning and Monitoring in Southeast Asia

Advisor: James L. David Smith

Expected completion: December 2008.

B.A. (*cum laude*) Environmental, Population, and Organismic Biology, University of Colorado, Boulder, Colorado, 1994

B.A. Philosophy, St. Lawrence University, Canton, New York, 1989

St. Lawrence University Kenya Semester Program

- Interdisciplinary immersion program focusing on environmental, historical, socioeconomic, and cultural studies throughout the country of Kenya, Fall 1989

Dissertation

My Ph.D. dissertation focuses on monitoring and conservation planning in two large landscapes: Thailand's Western Forest Complex (WEFCOM) and the country of Cambodia. WEFCOM (~17,000 km²) supports the world's second largest population of tigers and a current priority is the development of tiger survey and monitoring techniques that are both affordable and capable of delivering data relevant to management decisions. I first develop a monitoring strategy based on the detection of tracks within "ecologically-bounded survey units" that reflect patterns of tiger home range distribution over the landscape. I then develop predictive models of tiger and tiger prey distribution as a means of maximizing the value of limited survey resources.

Chapters on Cambodia relate to a national-level systematic conservation planning process that was initiated in 2004. I evaluate the selection of planning tools and techniques in light of Cambodia's unique conservation and socio-economic context and review the planning process as a means of developing an adaptive framework for ongoing conservation planning and implementation.

Research / Consulting / Professional Experience

Research Assistant, Conservation of Endangered Species of the Great Lakes Coastal Dunes Ecosystem, University of Minnesota Great Lakes Waterbird Research Program (March 2007-March 2008)

- Conducted a conservation prioritization exercise of the great lakes coastal dunes ecosystem in Michigan using principles of systematic conservation planning

Conservation Planning Consultant, Biodiversity and Protected Area Management Project, Ministry of Environment, Cambodia (August 2004-September 2006)

- World Bank funded project to enhance Cambodia's national protected area system
- Carried out all GIS, analysis, and reporting activities for a national level assessment of the representativeness and effectiveness of Cambodia's protected area system

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- Compiled national-level conservation planning database from multiple government, NGO, and private sources
 - Acquired and georeferenced aerial photo database (11,000+ images) covering all protected areas and many other sites for assessment and ongoing environmental monitoring
 - Applied systematic conservation planning and gap analysis methods to identify representation gaps in Cambodia's current protected area system. Translated results into a strategic plan for Cambodia's protected area management agencies. [<http://www.bpamp.org.kh>]
- Co-Investigator**, Thailand Tiger Project, Western Thailand (February 2004 to present)
- Worked with a team of Thai and western scientists to safely capture and collar wild Southeast Asian tigers for the first time. Collared subjects are now the basis of a long-term ecology and monitoring methods investigation
 - Recommended landscape-level survey and analysis strategy for monitoring tiger and tiger prey populations in this large landscape
 - Developed bilingual interactive website to facilitate international collaboration and to support project communication and outreach goals
- Wildlife Monitoring Consultant**, Dong Phrayayen – Khao Yai Carnivore Conservation Project (Fall 2003-Fall 2004)
- Provided leadership, training, and technical assistance for a landscape-scale carnivore conservation and monitoring project supported by the Smithsonian's National Zoological Park and implemented in collaboration with Thailand's Department of National Parks, Wildlife and Plant Conservation and WildAid Foundation, Thailand
- Project Manager**, Khao Yai Conservation Project (Fall 2003)
- Supervised all activities of an integrated biodiversity protection, ecological monitoring, and rural development project at Khao Yai National Park, Thailand
- Project Manager**, Tenasserim Conservation Partnership (Summer 2003)
- Coordinated all aspects of an international conference to initiate cooperative conservation in the Tenasserim ecoregion straddling Thailand and Myanmar. Developed and published website to publicize outcomes and build communication capacity of project.
- Co-founder / Program Director**, Wild Watch Thailand (2000-2001)
- Coordinated aspects of field operations for a sustainable wilderness-based eco-tourism company. Developed new offerings and trained staff in field techniques and nature interpretation. Maintained an integrated GIS database for all areas in which Wild Watch operates. [www.wildwatchthailand.com]
- Field Biologist**, Western Forest Complex Management Project, Thailand (1998-2002)
- Project: *Landscape-scale assessment of tiger and tiger prey in Thailand's Western Forest Complex*
 - Trained teams and conducted field surveys for tiger and tiger prey distribution and abundance
 - Conducted landscape-scale habitat assessment using satellite images, aerial photography and videography, and systematic groundtruthing
 - Constructed predictive distribution models for tiger and deer distribution using standard and logistic regression techniques
- Carnivore Survey Specialist**, Cardamom Mountains Biodiversity Survey, Cambodia (January-February 2000)
- Carried out surveys and trained field staff in carnivore survey strategies and methodologies.
- Field Ecologist**, Khao Yai Biodiversity Project, Khao Yai National Park, Thailand (May 1996-November 1996)
- Trained staff in field techniques, collected botanical specimens from forest canopy, and assisted in mapping tropical evergreen forest vegetation for the establishment of a 50 ha area tropical forest research plot

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Director, Chao Phraya Barge Program, Bangkok, Thailand (January 1995-September 1996)

- Directed all aspects of a dynamic, bilingual, experiential education program
- Developed active fundraising and corporate sponsorship program, led marketing and PR efforts
- Hired and led training of 12 person international staff
- Developed curriculum, taught multi-day residential experiential environmental learning experiences, emergency medical response system
- Directed budgeting, staffing, marketing, PR, newsletter production, facilities and equipment management

Field Zoological Assistant, Colorado Natural Heritage Program, Boulder, CO (May-September 1994)

- Conducted field surveys for a wide range aquatic and terrestrial vertebrates and invertebrates and associated communities for use in planning by the Natural Heritage Program Network, The Nature Conservancy and government agencies.

Research Interests

My broad research interests include systematic conservation planning, landscape-level conservation strategy, wildlife habitat modeling, and conservation area governance issues. I am particularly interested in the use and development of tools and techniques that assist decision-makers in evaluating options for landscape-level conservation action.

The complex dynamics of succession, climate change, site vulnerability, data availability, market forces, and socio-political change introduce uncertainty into planning and decision-making. My current work focuses on developing and evaluating tools and techniques to capture these dynamic patterns and minimize the uncertainty inherent in the conservation planning process.

Teaching Experience

Instructor, *Large Mammal Survey Design and Techniques Field Course*, University of Minnesota, Dept. of Fisheries, Wildlife, and Conservation Biology, (January 2008 and 2009 (upcoming))

- 3 week field course covering contemporary Thailand conservation issues and fieldwork at Khao Nang Rum Wildlife Research Station, Huai Kha Khaeng Wildlife Sanctuary, Thailand

Instructor, *An Introduction to Systematic Conservation Planning Decision Support Tools: Using MARXAN for Exploring Planning Scenarios in Oregon*, University of Minnesota, Conservation Biology Graduate Program, (February 2007, November 2007)

- 2 week guided planning experience taught as part of the Conservation Biology Graduate Program core course: *Economic and Social Aspects in Conservation Biology*

Instructor, *Ecology and Management of Wildlife Habitats and Introduction to Wildlife Law*, University of Minnesota, Dept. of Fisheries, Wildlife and Conservation Biology, (Instructor, Fall 2007; Teaching Assistant, Fall 2006)

- Intensive writing course with a focus on writing effective wildlife habitat management plans

Instructor, *Ecology, Conservation and Management of Large Mammals*, University of Minnesota, Dept. of Fisheries, Wildlife and Conservation Biology (Spring 2007)

Teaching Assistant, *Biological, Ecological, and Management Aspects of Conservation Biology*, University of Minnesota, Dept. of Fisheries, Wildlife and Conservation Biology, (Fall 2008)

Teaching Assistant, *Biometry*, University of Minnesota, Dept. of Fisheries, Wildlife, and Conservation Biology, (Fall 2000)

Teaching Assistant, *GIS for Natural Resource Managers*, University of Minnesota, Department of Forest Resources, (Fall 1999)

Journal Publications, Reports, and Other Original Work

- Cutter, P.G. and David Ashwell. In prep. Biodiversity and Protected Area Gap Analysis of Cambodia. Biodiversity and Protected Area Management Project, Ministry of Environment, Phnom Penh, Cambodia.
- Kroese, J., P.G. Cutter, and Sun Hean. In prep. Dynamic Aspects of Systematic Conservation Planning: Implications for conservation planners.
- Cuthbert, F. and P.G. Cutter, 2008. Conservation of Endangered Species of the Great Lakes Coastal Dunes Ecosystem. Final Report to the USFWS.
- Cutter, P. G., and S. Hean. 2008. Costs and Benefits of Sustaining Wild Tigers in Cambodia: A Strategic Economic Perspective *in* R. L. Tilson , and P. Nyhus, editors. *Tigers of the World: The Biology, Politics and Conservation of Panthera tigris*. William Andrew, Norwich, NY.
- Cutter, P.G. 2007. An Introduction to Systematic Conservation Planning Decision Support Tools: Using MARXAN to Exploring Conservation Planning Scenarios in Oregon. *Laboratory manual produced for introductory conservation planning experience, University of Minnesota*.
- Cutter, P. G., P. Boontua, and K. Sri-buarod. 2007. A recent record Storm's Stork *Ciconia stormi* in Thailand. *Forktail* 23:3.
- Cutter, P. G., A. Maxwell, Conservation International-Cambodia, H. Weiler, J. Heffernan, Ministry of Environment, WCS-Cambodia Program, WildAid-Cambodia Program, and WildAid-Thailand Program. 2006. Cambodia Tiger Conservation Status Assessment *in* E. Sanderson, J. Forrest, C. Loucks, J. Ginsberg, E. Dinerstein, J. Seidensticker, P. Leimgruber, M. Songer, A. Heydlauff, T. O'Brien, G. Bryja, S. Klenzendorf, and E. Wikramanayake, editors. *Setting Priorities for the Conservation and Recovery of Wild Tigers: 2005-2015. The Technical Assessment*. WCS, WWF, Smithsonian, and NFWF-STF, New York - Washington, D.C.
- Lacerda, L., K. Schmitt, P. G. Cutter, and S. Meas 2005. Management Effectiveness Assessment of the System of Protected Areas in Cambodia using WWF's RAPPAM Methodology. Biodiversity and Protected Area Management Project, Ministry of Environment, Phnom Penh, Cambodia.
- Cutter, P.G. 2005. Conducting and Documenting Aerial Surveys for Natural Resource Monitoring in Cambodia. Biodiversity and Protected Area Management Project Technical Series, Ministry of Environment, Phnom Penh.
- Tunhikorn, S., J. L. D. Smith, T. Prayurasiddhi, M. Graham, P. Jackson, and P. Cutter, editors. 2004. *Saving Thailand's tigers: An action plan*. Ministry of Natural Resources and Environment-- Department of National Parks, Wildlife, and Plant Conservation, Bangkok. Cutter, Peter G. In preparation. The use of track measurements in surveying and monitoring tigers in Southeast Asia.
- WildAid. 2003. Carnivore Monitoring Training Course, Khao Yai National Park, October 2003. Report to the Department of National Parks, Wildlife and Plant Conservation, Thailand.
- Cutter, P.G., Passanan Boontua, and J.L.D. Smith. 2000. *Tigers and Tiger Habitat: Indirect Survey Methods for Thailand*. University of Minnesota.
- Cutter, P. G. 2000. Very large mammal and habitat assessment of the Northern Cardamom Mountains, Pursat Province, Cambodia. Report to Flora and Fauna International.
- Cutter, P. G. 1995. The conservation status of the Wet Mountains Yellow-Bellied Marmot (*Marmota flaviventris notioros*). Species abstract and honors research paper, University of Colorado at Boulder.

Original Presentations and Websites

- Cutter, P.G. **Systematic Conservation Planning in Cambodia**, Conservation Biology Seminar Series,

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- University of Minnesota, 8 April 2007
- Cutter, P.G. **Initiating the Partnership for Asian Wildlife Studies**, Conservation Medicine Open House, The Raptor Center, University of Minnesota, 7 November 2007
- Cutter, P.G. **Thailand Fishing Cat Conservation Project**, website designed for interactive presentation and dynamic updates by project staff [www.fishingcatproject.info]
- Cutter, P.G. **Thailand Tiger Project**, bilingual website designed for online project team collaboration and interactive presentation of the project [www.thailandtiger.org]
- Cutter, P.G. **Introducing RAPPMap (Rapid Assessment of Protection Priorities through Interactive Mapping)**, National Protected Area Management Summit, Ministry of Environment and partner agencies, Cambodia, November 2004
- Cutter P, Challis N. **Applying best-practice ecotourism concepts to conservation in Thailand: A case study**. Poster presented at the Third International Hornbill Workshop, Phuket, Thailand, 9-12 May, 2001

Grants

- International Interdisciplinary Research Partnership Grant (\$25,000)**, University of Minnesota, Office of International Programs, Minneapolis, MN, May 2007 – May 2008
- Project:* Establishing the Partnership for Asian Wildlife Studies (PAWS), an international research and training partnership to initiate the development and enhancement of regional wildlife conservation centers: The Center for Large Asian Wildlife Studies (CLAWS), University of Minnesota, USA, The Regional Center for Conservation Medicine (CCM), Mahidol University, Thailand and The Biodiversity Conservation Center (BCC), National Trust for Nature Conservation, Nepal
- International Course Development Award**, University of Minnesota, International Programs Office of the College of Food, Agriculture, Natural Sciences, St. Paul, MN, Fall 2007
- Project:* Developing a new interdisciplinary field course in Thailand.
- United States Fish and Wildlife Service, Rhinoceros and Tiger Conservation Fund**, Fall 2002
- Project:* *Tennasserim Range Transboundary Project: An "Open" Conservation Model*
- Undergraduate Research Opportunities Program**, University of Colorado, Boulder, CO, Summer 1993
- Project:* The conservation status of the Wet Mountains Yellow-Bellied Marmot (*Marmota flaviventris notioros*)

Research / Professional Appointments

- Research Associate**, Conservation Ecology Center, Smithsonian Institution, 2004 – present
- Fellow**, United States/Asia Environmental Partnership Program, 1995
- fostering exchange of educational technologies between the U.S. and Thailand through the establishment of the Chao Phraya Barge Program

Professional Memberships

- Society for Conservation Biology**, Member 1998-present
- Society for Conservation GIS**, Member 2007-present

Institutional Service

Student Representative, 2007-8, Conservation Biology Graduate Program Steering Committee, University of Minnesota

Student Representative, 2008, Open Space for Learning Taskforce, University of Minnesota

Laboratory Manager, 2006-2008, Cooperative Laboratory for Asian Wildlife Studies (CLAWS), Dept. of Fisheries, Wildlife, and Conservation Biology, University of Minnesota

Other Skills, Certifications, and Personal Interests

Outdoors:

- Advanced Lifesaving (American Red Cross swimming certification)
- SCUBA (PADI) certified
- Experienced technical tree climber
- Wilderness craft and navigation.

Software:

- Proficient in all Microsoft Office applications
- GIS: ArcGIS 9.x and ArcView 3.x
- Conservation planning / decision support tools: MARXAN, CLUZ
- Photoshop
- Statistical analysis: SPSS and JMP (SAS)
- Relational database design and deployment (Microsoft Access, Integrated GIS)

Communicating Conservation

- Web site design and maintenance (primarily Joomla CMS)
- Web-delivered mapping solutions: Google Maps API
- Google Earth project authoring

Languages

- English (native)
- Thai (fluent spoken)
- Swahili (conversational)
- French (conversational)

Other Interests

- Nature photography and filming
- Wilderness exploration
- Mountaineering
- Technical tree-climbing
- Carpentry

References

James L. David Smith

Professor
University of Minnesota
Department of Fisheries, Wildlife, and Conservation Biology
1980 Folwell Avenue
St. Paul, Minnesota 55108
612-624-5369
smith017@umn.edu

Steven Polasky

Fesler Lampert Professor of Ecological/
Environmental Economics
Department of Applied Economics and Department
of Ecology, Evolution, and Behavior
University of Minnesota
337e Classroom Office Building
1994 Buford Avenue
St Paul, MN 55108
612-625-9213
polasky@umn.edu

Tim Redford

Tim Redford
Director of Field Operations
PeunPa Foundation Thailand
591 UBC II Bldg., 10 th Fl., Room 1001, Soi Sukhumvit
33, Sukhumvit Rd.,
North Klongton, Wattana, Bangkok 10110, Thailand
+662-204-2719
peunpa@csloxinfo.com

Sean Austin

Micronesia Terrestrial Conservation Coordinator
The Nature Conservancy
Carlos Salii Bldg., 2nd Floor
Toirois, Medalaih
Koror, Palau PW 96940
+680-488-2017
saustin@tnc.org