

CAROL D. SAUNDERS

Dept. of Environmental Studies
Antioch University New England
40 Avon Street
Keene, NH 03431-3552
Carol_Saunders@antiochne.edu

- Career Goal** To use my background in environmental education, evaluation, field biology and conservation psychology to promote conservation of biodiversity and sustainable use of resources through research, teaching and informed practice.
- Employment** Core Faculty, Department of Environmental Studies
Antioch University New England, Keene, NH (2008)
- Director of Communications Research and Conservation Psychology,
Chicago Zoological Society, Brookfield, IL (1992 - 2007)
- Acting Chair of Conservation Biology, Chicago Zoological Society,
Brookfield, IL (1993-1994)
- Manager of Conservation Behavior and Research,
Chicago Zoological Society, Brookfield, IL (1991-1992)
- Primate Education Specialist
Chicago Zoological Society, Brookfield, IL (1987-1992)
- Instructor of Animal Behavior, Cornell University, Ithaca, NY (1987)
- Education** Ph.D. Behavioral Biology, Cornell University 1988
M.A. Psychology, University of Virginia 1978
B.A. Biology/Psychology, Gettysburg College 1975
- Research Interests** The language and measurement of connection to nature
How caring relationships with nature develop
The relationship between nature experiences and conservation behavior
The impact of observing animals on conservation knowledge, attitudes, and behavior
- Visitor studies, Brookfield Zoo
Baboon ecology and social behavior, Amboseli National Park, Kenya
Computer simulations of animal mating systems, Cornell University
Lepidopteran pollination systems, Archibald Field Station, Florida
- Grants** Ittleson Foundation, PI \$70,000 (2008-2010)
Elizabeth Morse Genius Charitable Trust, PI, \$178,000 (1999-2004)
National Science Foundation, Co-PI, \$931,161 (1993-1995)
Environmental Protection Agency, Region V, Co-PI \$143,000 (1994-1995)
MacArthur Fund for Cultural Innovation, Co-author, \$350,000 (1993-1994)
The Joyce Foundation, Co-PI, \$175,000 (1991-1993)

Honors & Awards

President's Award to Communications Research Department, Brookfield Zoo, 2007
Society for Human Ecology Award for Distinguished Leadership, 2004
Distinguished Alumni Award from Gettysburg College, 2004
Director's Special Recognition Award, Brookfield Zoo, 2004
Director's Award, Brookfield Zoo, 1999
Sigma Xi National Honor Society, Cornell University, 1985
Graduate Women in Science Award for Excellence, Cornell University, 1979
Phi Beta Kappa, Gettysburg College, 1975
Magna cum laude, Gettysburg College, 1975
Departmental Honors in Biology and Psychology, Gettysburg College, 1975
Psi Chi Award (psychology), Gettysburg College, 1975
Beta Beta Beta Award (biology), Gettysburg College, 1974
Psi Chi Junior Award (psychology), Gettysburg College, 1973

Graduate Student Committees

Simons, T. (in prep) An exploration of identity and commitment to issues of sustainability. Doctoral thesis. Northwestern University, Evanston, IL.

Pennisi, L. (2007). Connection to nature: Developing a measurement scale. University of Florida at Gainesville.

Price, E. A. (2007) Conservation behavior: The role of a non-formal environmental education program and intergenerational influences on caring for the environment. Masters thesis. Dept. of Natural Resources and Environmental Sciences, University of Illinois at Urbana-Champaign.

Dotzour, A., Houston, C., Manubay, G., Schultz, K. & Smith, J.C. (2002). Crossing the Bog of Habits: An evaluation of an exhibit's effectiveness in promoting environmentally responsible behaviors. Masters thesis. University of Michigan.

Ward, N.F.R. (2001). Beliefs and attitudes of Caribbean girls about whales: An approach to understanding cultural identity with implications for conservation education. Ph.D. thesis. Antioch New England Graduate School.

Administrative, Programmatic & Planning Experience

1992 - 2007. Director of a Communications Research and Conservation Psychology. Duties include staff supervision, budget development and control, and overseeing data interpretation. Manage an annual budget of \$ 300,000 plus project-specific grants that have ranged from \$2,000 to \$ 1 million. Responsible for setting priorities and implementing, monitoring and evaluating audience research studies. Provide advice, consultation, and services to departments, teams, and committees. Recruit a diverse group of undergraduates each summer as part of a research assistant program. Supervise 3 FTE plus 8-20 seasonal employees, interns and graduate students every year. Also supervise the Director of Communications for Chicago Wilderness, the Coordinator of the Chicagoland Environmental Network, and oversee a network of over 100 conservation psychology professionals.

Director of Communications Research (Continued). Assist in long-term planning and conceptualizing institutional strategies. Write the evaluation plans and measures of success for most audience-oriented grant proposals. Represent the zoo, promote its interests, and communicate the vision through written articles and presentations.

1988-2002. Served as content and audience specialist for a variety of exhibit design teams at Brookfield Zoo: Project leader for the interpretation of *Tropic World*, a rainforest exhibit that highlight primates; Team leader for *Quest to Save the Earth*, an outdoor conservation behavior exhibit; Member of the interpretive team for *Butterflies!*, a seasonal outdoor exhibit featuring North American species; Advisor to the *Hamill Family Play Zoo*, an award-winning exhibit about fostering caring attitudes toward nature among young children and their families.

1993-1994. Acting Chair of Conservation Biology. Facilitated the smooth operation of this department consisting of 12 researchers and support staff during a period of transition. Responsible for leading departmental meetings, representing the department internally and externally, and coordinating the annual budget preparation. Supervised the Coordinator of the Chicagoland Environmental Network.

1991-1992. Manager of Conservation Behavior and Research. Planned and developed action-oriented programs and mechanisms that provided opportunities for zoo audiences to engage in conservation behaviors. Developed conservation education programs for external and internal audiences that desired more in-depth knowledge. Taught visitor psychology and conservation behavior for the docent training course. Planned and managed the interpretation of the primate exhibits. Attracted funding related to conservation center issues. Served as a member of the zoo-wide Change Initiative, a staff development program designed to inspire staff to be conservation change agents. Created a Communications Research Department to provide evaluation services to a wide range of departments.

1987-1991. Primate Education Specialist. Developed, coordinated, evaluated, and participated in education activities relating to primates and tropical forests for a large and diverse audience of zoo visitors. Identified and developed interpretive approaches including interactions with visitors by volunteer interpreters (docents), printed guides, interactive exhibits, demonstrations, signage, and classes. Worked closely with a large volunteer corps to implement programs, providing up-to-date information and direction. Taught animal behavior, primate behavior, and workshops on natural selection and communications for the docent training course. Provided personal contact with the public and high school/college students through presentations and demonstrations. Attracted federal funding to support the modification of *Tropic World*, a large exhibit about rainforests and primates.

1987. Instructor of Animal Behavior. Taught summer field course for undergraduates at Cornell University, using a variety of perspective-taking and attention-focusing techniques, as well as observational sampling methods.

Other

Co-founder of the field of Conservation Psychology, a network of researchers and practitioners who work together to understand human-nature relationships for the purpose of encouraging conservation

Responsible for over 160 evaluation reports for Brookfield Zoo, 15 photographic publications in textbooks and magazines, and over 70 conference presentations

Tour-leading experience in Uganda, Costa Rica, and Peru

Professional Affiliations

American Educational Research Association, Ecological and Environmental Education Special Interest Group

American Evaluation Association, Environmental Program Evaluation

American Psychological Association, Division 34: Population and Environmental Psychology

American Zoo and Aquarium Association, Multi-Institution Visitor Research Project, Advisory Board

Animal Behavior Society, Chair of Education Committee (1991-1993)

American Society of Primatologists, Conservation Committee (1991-1994)

Biodiversity Project, Board member (2004-2006)

Chicago Wilderness, Social Science team

Coalition for Education in the Life Sciences, Executive Committee (1991-1992)

New England Psychological Association

North American Association of Environmental Education

North American Butterfly Association

Society for Conservation Biology, Social Science Working Group Board member (psychology representative)

Visitor Studies Association

Publications

- Hausfater, G., Saunders, C.D. & Chapman, M. (1981). Computer models of primate life histories. In R.D. Alexander, R.D. & Tinkle, D. (Eds.) *Natural selection and social behavior: Recent research and new theory* (pp. 345-360). New York, NY: Chiron Press.
- Irvine, K. N., Saunders, C. D., & Foster, J. S. (2000). Using evaluation to guide the development of behavior change programs. *Visitor Studies: Theory, Research and Practice* 8(2), 47-55.
- Kimmel, A., Saunders, C.D. & Hutcherson, L. (2006). Chicago Wilderness audience research project. *CW Journal* 4(1): 8-11.
- Klenosky, D.B. & Saunders, C.D. (2008). Put me in the zoo! A laddering study of zoo visitors. Special issue: Zoos, aquaria and other captive wildlife. *Tourism Review International*, 11(3): 317-327.
- McPhee, M.E., Foster, J. S., Sevenich, M. & Saunders, C. D. (1998). Public perceptions of behavioral enrichment: Assumptions gone awry. *Zoo Biology* 17: 525-534.
- Myers, Jr. O. E. & Saunders, C.D. (2002). Animals as links to developing caring relationships with the natural world. In P. H. Kahn Jr. & S.R. Kellert (Eds.), *Children and nature: Theoretical and scientific foundations* (pp. 153-178). Cambridge, MA: MIT Press.
- Myers, Jr. O. E., Saunders, C. D. & Birjulin, A. (2004). Emotional dimensions of watching zoo animals: An experience sampling study building on insights from psychology. *Curator* 47(3): 299-321.
- Myers, Jr. O. E., Saunders, C. D. & Garrett, E. (2003). What do children think animals need? Aesthetic and psycho-social conceptions. *Environmental Education Research* 9(3):305-325.
- Myers, Jr. O. E., Saunders, C. D. & Garrett, E. (2004). What do children think animals need? Developmental trends. *Environmental Education Research* 10(4): 545-562.
- Perry, H.E.S. & Saunders, C.D. (1997). Integrating evaluation into a technology education program. *Visitor Studies: Theory, Research and Practice* 9: 247-255.
- Rabb, G.B. & Saunders, C.D. (1999). God, unicorns, and toilets: Mission-inspired evaluation. *American Zoo and Aquarium Association Annual Conference Proceedings*. Minnesota Zoo, Minneapolis, MN, pp. 354-359.
- Rabb, G. B. & Saunders, C. D. (2005). The future of zoos and aquariums: Conservation and caring. *International Zoo Yearbook* 39: 1-26.

- Saunders, C.D. (1978). A simulation model of sexual selection: social and demographic influences on differential reproduction among males. M.A. thesis, University of Virginia.
- Saunders, C.D. (1988). Ecological, social, and evolutionary aspects of baboon grooming behavior. Ph.D. thesis, Cornell University.
- Saunders, C.D. (2003). The emerging field of conservation psychology. *Human Ecology Review* 10(2): 137-149.
- Saunders, C.D. (2007). Conservation psychology. In M. Bekoff (Ed.). *Encyclopedia of human-animal relationships*. Phoenix, AZ: Greenwood Publishing Group (in press).
- Saunders, C.D. & Hausfater, G. (1978). Sexual selection in baboons (*Papio cynocephalus*): A computer simulation of differential reproduction with respect to dominance rank in males. In D.J. Chivers & J. Herbert (Eds.), *Recent Advances in Primatology, Vol. 1: Behaviour* (pp. 567-570). New York, NY: Academic Press.
- Saunders, C.D. & Hausfater, G. (1988). The functional significance of baboon grooming behavior. Pages In D.L. Colbern & W.H. Gispen (Eds.). *Neural mechanisms and biological significance of grooming behavior* (pp. 430-432). New York, NY: Academic Science.
- Saunders, C.D., Myers, O.E. Jr. (2001). Using conservation biology as a model for thinking about conservation psychology. *Population and Environmental Psychology Bulletin* 27(2): 7-8.
- Saunders, C.D. & H.E.S. Perry. (1997). Summative evaluation of The Swamp: A conservation exhibit with a Big Idea. *Visitor Behavior* 12(1 & 2): 4-5.
- Saunders, C.D., Brook, A.T. Brook & Myers, Jr. O. E. (2006). Using psychology to save biodiversity and human well-being. *Conservation Biology* 20(3): 702-705.
- Vining, J. & Saunders, C. D. (2004). Conservation psychology. In M.J. Manfredo, J.J. Vaske, D.R. Field, P.J. Brown & B.L. Bruyere (Eds.), *Society and natural resources: A summary of knowledge* (pp. 47-58). Jefferson City, MO: Modern Litho.

Edited Volumes

- Dierking, L. D. & Saunders, C. D. (Eds.) (2004). Special issue: Conservation in zoos and aquariums. *Curator* 47(3).
- Saunders, C. D. & Myers, Jr. O. E. (Eds.) (2003). Special issue: Conservation psychology. *Human Ecology Review* 10(2).
<http://www.humanecologyreview.org/102.htm>

Papers in Progress

Clayton, S., Fraser, J. & Saunders, C.D. (in press) Zoo experiences: Conversations, connections and concern for animals. *Zoo Biology*.

Kahn, P., Saunders, C.D., Severson, R., Myers, Jr. O. E. & Gill, B. (accepted) Children's conceptions of bats: Toward a biophilic account of fear and caring. *Anthrozoos*.

Koger, S. & Saunders, C.D. (in prep) Conservation psychology: Psychology as a sustainability science. Being submitted to *Psychological Science*.

Meyers, R.B., Fraser, J.R. & Saunders, C.D. (in prep) Applying a psychometric instrument to explore the range of environmental ethical beliefs held by zoo visitors.

Myers, Jr. O.E., Saunders, C.D. & Bexell, S. (under review) Fostering empathy with wildlife: Factors affecting free-choice learning for conservation concern and behavior. Draft manuscript for review and inclusion in J. Falk, J. Heimlich & S. Foutz (Eds.), *Emerging studies in free-choice learning and the environment*. Lanham, MD: AltaMira Press.

Price, E.A., Vining, J. & Saunders, C.D. (in press) Intrinsic and extrinsic rewards as motivators in a non-formal environmental education program. *Zoo Biology*.

Saunders, C.D. & Vernon, C.L. (in prep) Promoting sustainable relationships with nature by applying ideas from conservation psychology. *International Zoo Yearbook*.