

VITAE

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PROFESSIONAL ADDRESS

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HOME ADDRESS

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EDUCATION

S.B. - University of Chicago, 1959-1963; major: Biopsychology

Ph.D. - University of Chicago, 1963-1966; Biopsychology

POSITIONS

Distinguished Scientist Lecturer, American Psychological Association, 2007

Editor, Journal of Comparative Psychology (APA) for term from 2005-2011.

Visiting Senior Scientist, National Amphibian Conservation Center, Detroit. Zool. Inst., 2004

Instructor, Amphibian Professional Development Program course (American Zoo and Aquarium Association), National Amphibian Conservation Center, April, 2004

James R. Cox Professorial Chair (2002-2005)

Alumni Distinguished Service Professor, University of Tennessee, 1992-

Director, UT Graduate Program in Ethology, 1981-91

Professor of Ecology and Evolutionary Biology, Univ. of Tennessee, 1995-

Professor of Zoology, University of Tennessee, 1979-95

Professor of Psychology, University of Tennessee, 1974-

Associate Professor of Psychology, University of Tennessee, 1970-1974

Assistant Professor of Psychology, University of Tennessee, 1968-1970

Instructor of Biology, University of Chicago, 1966-67

Research Associate, Smithsonian Tropical Research Institute, 1978-94

Visiting Professor, The Rockefeller University, 1976-1977

Visiting Scientist, Peabody, J.F. Kennedy Center for Research, summer, 1972

AWARDS AND GRANTS

Ohio Wildlife Survey: Development and competitive ability of a declining isolated population of the plains gartersnake, *Thamnophis radix* and the common gartersnake, *Thamnophis sirtalis* (2006)

Museum of Manitoba: Molecular genetic studies of northern populations of common gartersnakes, *Thamnophis sirtalis* (2006-7)

Strachan & Vivian Donnelley Fund: Comparative studies on behavioral development and conservation (2005-2006)

- University of Tennessee Macebearer (2005-2006): highest academic award at the University of Tennessee
- Detroit Zoological Institute: Assessing play behavior and environmental enrichment in amphibians (2004)
- Japan Society for the Promotion of Science Research Grant: From toad skin glands to snake nuchal glands: Examination of sequestered chemical compounds and analysis of physiological function and behavioral cost (Co-PI with Akira Mori, Kyoto University) (2004-6)
- Wisconsin Department of Natural Resources: Genetic distinctiveness of *Thamnophis butleri* in Wisconsin (2004-6)
- N.S.F. Research Grant: The influence of selection and gene flow on geographic variation in antipredator behavior (DDIG with John Placyk) 2003-2005, (IBN 0309339)
- UTK University Studies Faculty Award for Interdisciplinary Contributions (2002)
- UTK Faculty First 2002 Award (for multimedia/website development of research presentations)
- UT Science Alliance Research Excellence Award (2001)
- Cleveland Zoological Society: Assessing Genetic and Management Issues in a Threatened Species of Garter Snake in Ohio (2001-02)
- Dallas Zoological Society: Neurological effects of an enriched environment in varanid lizards. (with Ruston Hartdegen, Dallas Zoo) (2000-02)
- Chicago Zoological Society: Assessing hybridization and management issues in a threatened species of garter snake (*Thamnophis butleri*) in southeastern Wisconsin (2000-02)
- College of Arts and Sciences (UTK) Faculty Public Service Award (1999)
- Ohio Wildlife Survey: Genetic distinctiveness of *Thamnophis radix* in Ohio (1999-2001)
- UTK Travel Award to Bangalore, India to the International Ethological Conference (1999).
- UTK/Science Alliance Research funding award (1997-2000)
- N.S.F./Japan Program Research Grant: Function and Ontogeny of a Remarkable Venomous Vertebrate Neck Gland (with Akira Mori, Kyoto Univ.), 1996-99, (INT95-13100)
- University of Vienna Konrad Lorenz lecturer (1995)
- UTK Travel Award to Austria and Germany to attend the World Play Congress and visit ethological research institutes (1995)
- Okinawa Pref. Institute of Public Health, Habu Study Section, Research Grant: Behavior of juvenile habu (*Trimeresurus flavoviridis*) (1993-98)
- N.S.F. Research Grant: Genetic Diversity and Behavioral Ontogeny (with G. F. McCracken), 1994-1998 (IBN94-11140)
- N.S.F. Research Grants: Ontogeny and Behavioral Diversity, 1987-1991 (BNS87-09629), 1991-1993 (BNS91-11387)
- N.I.C.H.D. Training Grant (Director): Communication: Development, Genetics, and Physiology, 1986-1992 (T32-HD07303)
- Science Alliance, UTK Center of Excellence, 1984-2000 (annual competitive salary stipend) - now permanent
- N.S.F. Equipment Grant: Controlled Environmental Chambers - A Group Request (with S. Riechert, G. McCracken, S. Pimm, and G. Saylor), 1988-1989 (BSR87-11826)
- N.S.F. Research Grants: Early Experience and Sensory Processes, 1975-1978 (BNS75-03444), 1978-1983 (BNS78-14196), 1983-1987 (BNS82-17569)
- Chancellor's Research Scholar award, University of Tennessee: 1983
- Smithsonian Institution: Scholarly Studies and I.E.S.P. awards to study behavior and ecology of green iguanas in Panama and Venezuela, (with A.S. Rand), 1979-84

N.S.F. Faculty Science Fellowship: 1978-1979. (primarily in Panama - STRI; with A. S. Rand)
John Simon Guggenheim Foundation Fellow: 1976-1977. (worked in laboratories of Carl Pfaffmann and Donald Griffin)
N.S.F. Equipment Grant: Animal Behavior & Ecology (with S. Riechert), 1975-77 (HES75-11082)
N.I.M.H. Research Grant: Investigations on Perception and Behavior, 1967-75 (MH-15707)
N.I.M.H. Research Grant: Behavior and Ontogeny (black bear) 1971-73 (MH-20565)
U.S.P.H.S. Traineeship in Experimental-Biological Psychology (1963-1966)

SELECTED CURRENT MEMBERSHIPS AND OFFICES HELD

American Association for the Advancement of Science (elected as Fellow, 1996)
American Association of University Professors (membership award 1997). Local chapter officer
American Psychological Association (elected as Fellow, 1983)
Association for Psychological Science (formerly American Psychological Society), Charter member (elected as Fellow, 1990)
American Society of Ichthyologists and Herpetologists (Life member, Distinguished Herpetologist Lecturer in 1985)
Animal Behavior Society (Delegate at Large, 1980-83; Presidential sequence, 1984-88; Fellow, 1991; Research proposal evaluation committee, 2005)
Center for Applied and Professional Ethics (UTK) Fellow
Herpetologist's League
Human Behavior and Evolution Society
International Ethological Conference Comm. (U.S., elected for term 1984-90)
International Iguana Society (Advisory Board 1991-2004)
International Society of Chemical Ecology (charter & life member; award for 24 years service on editorial board)
International Society for Human Ethology (Executive Committee, 1981-83)
Scientists Center for Animal Welfare (Board of Trustees, 1993-99)
Sigma XI (UTK chapter - Admissions Comm., 1981-1983)
Society for the Study of Amphibians and Reptiles (Symposium Coordinator. 1981-82).
Society for the Study of Evolution
The Association for the Study of Play

REVIEWS, PANELS, AND EDITORIAL WORK

Review research proposals for National Science Foundation, National Institutes of Health, National Geographic Society, among others; **regularly review mss** for a number of journals and over the years have reviewed for *Aggressive Behavior*, *American Naturalist*, *American Psychologist*, *American Zoologist*, *Animal Behaviour*, *Animal Conservation*, *Animal Learning & Behavior*, *Animals & Society*, *Anthrozoös*, *Behavioral Biology*, *Behavioral & Brain Sciences*, *Behavioral Ecology*, *Behavioral Ecology & Sociobiology*, *Behavioural Processes*, *Biology Letters*, *Canadian Journal of Zoology*, *Carnivore*, *Conservation Biology*, *Comparative Cognition & Behavior Review*, *Copeia*, *Developmental Psychobiology*, *Ecology*, *Ethology*, *Evolution*, *Herpetologica*, *Iguana*, *ILAR Journal*, *Journal of Applied Animal Welfare Science*, *Journal of Applied Behavior Analysis*, *Journal of Chemical Ecology*, *Journal of Comparative and Physiological Psychology*, *Journal of Comparative Psychology*, *Journal of Herpetology*, *Journal of Zoology*, *Journal of Theoretical Biology*, *Learning & Motivation*, *Nature*, *Naturwissenschaften*, *Neuroscience and Biobehavioral Reviews*, *Pharmacology*, *Biochemistry &*

Behavior, Physiology & Behavior, Proceedings of the National Academy of Sciences, Paleobiology, Psychological Science, Psycholology, Quarterly Review of Biology, Science, Society & Animals, Ursus, Zeitschrift für Tierpsychologie, and Zoo Biology. Also numerous book manuscripts (Cambridge, Chicago, Harvard, Johns Hopkins, Wisconsin, etc.), textbooks, and chapters.

Currently on editorial boards of *Ethology, Evolutionary Psychology, Journal of Applied Animal Welfare Science, and Society & Animals.* Editor of *Journal of Comparative Psychology*

Have served on editorial boards of *Developmental Psychobiology, Journal of Chemical Ecology (1975-1998), Journal of Herpetology, Herpetologica, Zoo Biology, and Carnivore.* Associate Editor of *Animal Learning & Behavior (1977-78).* Ethology editor for Garland Publishing Co. (1977-82). American Editor of *Ethology (formerly Zeitschrift für Tierpsychologie) (1981-87).* Advisory board of the Encyclopedia of the World's Zoos (3 vols., Fitzroy Dearborn, 2001)

National Science Foundation Psychobiology Grant Proposal Review Panel: 1978-1981. National Science Foundation Dissertation Improvement Grant Program Review Panel (Animal Behavior): 2002. National Science Foundation Graduate Student Fellowship Program Review Panel (Psychology): 2003. (declined serving in 2002, 2004-2007)

OTHER PROFESSIONAL RESPONSIBILITIES

Member, AZA Komodo Dragon Species Survival Plan management group grant panel (2003- . Workshop participant, ongoing NSF working group on behavioral metadata systems

(Ethoinformatics) to develop Ethosource, a web- based data archive (2002, 2004, 2005).

Member, IUCN Species Survival Commission (SSC) Iguana Specialist Group, 2001-2008.

Science Advisor, Earth & Sky radio series, Bryd & Block Communications, Austin, TX, 1998- .

Science consultant to numerous film productions on animal behavior, play, and reptiles (BBC, National Geographic, Green Umbrella, Zebra, and others).

Member, ASIH Comm to revise animal care guidelines for amphibians and reptiles (1996-97)

Member Smithsonian Institution Site Visit Team for Scientific Staff Evaluations (Smithsonian Tropical Research Institute and the National Zoo) various years between 1980 - 1992.

Member, Site Visit Team to Laboratory of Comparative Ethology (NICHD), 1988.

Member, IUCN Ethics Working Group

Core member of Hastings Center working groups on Ethics of Animal Experimentation (1988-90), Biotechnology & the Environment (1990-4), Legacies of Darwin & Leopold (1996-99),

Human Nature Project: Genes, Ecosystems, and Evolution (2000-02).

Center for Humans and Nature (NYC) (Consultant and core workshop participant, 2003-)

SELECTED PRESENTATIONS

Over the years I have given **papers or invited addresses** at a variety of meetings including: Animal Behavior Society, American Association for the Advancement of Science, American Association of Zoological Parks & Aquariums, American Psychological Association, American Society of Ichthyologists and Herpetologists, International Herpetological Symposium, International Society of Chemical Ecology, International Ethological Conferences, Midwestern Psychological Association, Southeastern Psychological Association, Southwestern Psychological Association, Southern Comparative Psychology Association, American Chemoreception Society, Psychonomic Society, Society for the Quantitative Analysis of Behavior, Society for the Study of Amphibians & Reptiles, Scientists Center for Animal Welfare, Snake Ecology Group,

Southern Society of Philosophy and Psychology, Tennessee Herpetological Society, Wolfgang Wickler Ecological Intelligence Hypothesis Symposium (Tützing, Germany), World Congress of Herpetology (Adelaide, Australia), Croatian Biological Congress (invited plenary speaker) Winter Conference on Animal Learning and Behavior, and World Play Congress (Salzburg, Austria). Invited participant to all Winter Animal Behavior Conferences. Invited participant in many symposia and organizer of several.

Invited talks at Indiana University, Washington University, Purdue University, Massachusetts Institute of Technology, University of California at Davis, University of Chicago, Monell Chemical Senses Center, University of Kansas, University of Pennsylvania, University of Colorado, Universidad Complutense de Madrid, Bucknell University, Central Michigan University, City College of New York, Downstate (NY) Medical Center, University of Waterloo (Canada), University of Tennessee Medical Units (Memphis), Institut für Hirnforschung (University of Bremen, Germany), University of Lethbridge, Louisiana State University, Memphis State University, Maryville College, Middle Tennessee State University, Northeastern University, Ohio University Eastern, SUNY (Binghamton), Vanderbilt University, Rollins College, Florida State University, University of Oklahoma, Cornell University, Peabody, Princeton University, American Museum of Natural History, National Zoological Park, Chicago Zoological Society (Brookfield), Detroit Zoological Institute, North Carolina Center for the Advancement of Teaching, Department of Habu (Okinawa Pref. Institute of Public Health), Kyoto University, University of the Ryukyus (Okinawa, Japan), Max Planck Institut für Verhaltensphysiologie, University of Valencia, University of Vienna, Austrian Academy of Sciences (Konrad Lorenz Institut für Verhaltensforschung), Konrad Lorenz Institute for Evolution and Cognition, Smithsonian Tropical Research Institute, Smithsonian Institution, Southern College (TN), University of Texas (Tyler), University of Valencia (Spain), Zoo Atlanta, University of Zagreb (Croatia), and Rockefeller University.

LOCAL PROFESSIONAL ACTIVITIES

Local Committee, UT Environmental Semester (2003-5).
Local Committee, National meeting of the Society for the Study of Evolution, Society of Systematic Biologists, and the American Society of Naturalists. Knoxville, 2001.
Vice-President, UT Chapter of the AAUP (2000-01), Executive Committee (2001-03).
Local Committee, meeting of the International Bear Association, Gatlinburg, TN, 1997-98.
Founding member of the Appalachian Zoological Society. Board member 1972-1976.
Knoxville Zoo (Acting Curator of Research, 1974-76; Medical Advisory Board, 1981-86, and Research Board, 1990-
Board member of the Appalachian Black Bear Rehabilitation and Research Center (1991-99),
Vice-President for Operations (1996-99).
Local and International Science Fair Judging.
Hosted national meeting of the Animal Behavior Society, June 1981.

UNIVERSITY SERVICE

Served on numerous Psychology and Zoology department committees and others including Department and Division Head Search Committees, Undergraduate Curriculum Revision Committee, University Senate (elected), Campus Environment Committee, Triad Committee (Humanities), Equal Opportunity Panel, Commencement Speaker Advisory Committee, WLS Animal Care Committee, Biology Consortium Faculty Advisory Committee, Liberal Arts

College Advisory Committee, Science Alliance Selection Committee, Biology Consortium Review Committee, Counseling Psychology Program Review Committee (1995), Institutional Animal Care and Use Committee (1993-97), University Graduate Council (1993-96, alternate 1996-99), and College of Arts and Sciences Speakers Bureau. Active member of the University Senate Leadership Retreat (September, 2001, 2002). American Association of University Professors: Executive Committee Univ. Tennessee Chapter (2002-3); Vice President (2001-2); Nominating Committee (2005). Currently on the University Studies Executive Committee and organizer/convener of the Association of Distinguished Professors (UTK).