

VITAE

Gordon M. Burghardt

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

Founding Field Chief Editor, *Frontiers in Ethology* (launched, November 2022), 2022-

Alumni Distinguished Service Professor Emeritus (Psychology & Neuroscience and Ecology & Evolutionary Biology), University of Tennessee, 2022-

Professor of Psychology, University of Tennessee, 1974-2022

Professor of Ecology and Evolutionary Biology, Univ. of Tennessee, 1995-2022

Alumni Distinguished Service Professor, University of Tennessee, 1992-2022

Visiting Fellow, Center for Theological Inquiry, Princeton, NJ, 2014

Visiting Professor, Kyoto University (Museum) – working in Zoology Department and Kyoto Primate Institute (Inuyama), 2008

Distinguished Scientist Lecturer, American Psychological Association, 2007

Editor, *Journal of Comparative Psychology* (APA) for term from 2006-2011.

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 Professorship Chair (2002-2005)

Director, UT Graduate Program in Ethology, 1981-91

Professor of Zoology, University of Tennessee, 1979-95

Research Associate, Smithsonian Tropical Research Institute, 1978-94

N.S.F. Faculty Science Fellow (STRI - Panama), 1978-1979

Visiting Professor, The Rockefeller University, 1976-1977 (as a J. S. Guggenheim Foundation Fellow)

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

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

SELECTED AWARDS, GRANTS, and CONTRACTS

2026 ASIH Henry S. Fitch Award for Excellence in Herpetology (American Society of Ichthyologists and Herpetologists)

2024 Biosemiotic Achievement Award from The International Society for Biosemiotics Studies (2025), described in *Biosemiotics* 18:201-202

Animal Behavior Society Distinguished Animal Behaviorist Award (June 2024)

Donald O. Hebb Award for Distinguished Career Research Contributions to Behavioral Neuroscience and Comparative Psychology (Society for Behavioral Neuroscience and Comparative Psychology (APA Division 6). (August 2020)

President Joseph E. Johnson, University of Tennessee Lifetime Achievement Award (2018)

Wildlife Research Institute (Ely, MN) Research on black bear behavioral development in natural dens, 2013; 2018

Center for Wildlife Health ORU grant (UT) Quantifying the threat of a novel fungal pathogen (*Batrachochytrium salamandrivorans*) to North American amphibians. Co-I with Matthew J. Gray and Debra L. Miller, 10/1/15-6/30/16 (responsible for behavior component)

NeuroNET Center Seed Grant (UT) Developing a Hamster Model to Investigate the Neural Substrates of Social Play and Vulnerability to Future Social Stress. Co-PI with Matthew Cooper and Brian O'Meara, 8/1/2013 – 6/30/2014

Fellow in Residence, Center of Theological Inquiry, Princeton University, Spring semester, 2104 (Salary award)

Inaugural University of Tennessee College of Arts and Sciences award for Distinguished Research Career at UT (Dec. 2013)

Clifford T. Morgan Distinguished Service Award for “sustained and exceptional contributions” to Division 6 of APA (Aug. 2012).

Christopher Clavius, S.J. Award for “inspirational work in comparative psychology” from the St. Joseph’s University Sigma Xi chapter (April 2012).

National Institute for Mathematical and Biological Synthesis – NSF (NIMBioS.org): Award supporting 2 year working group on Play, Evolution, & Sociality. Local host and PI along with Marc Mangel, Elisabetta Palagi, and Sergio Pellis (2011-13).

Haines Morris Endowment: Award supporting a Symposium on Animals, Ethics and Law. PI along with John Nolt, Joan Heminway, Iris Goodwin, and John Garthoff (2011-12)

Award from Division 6 of APA for “dedicated and energetic” service as President of Division 6 of APA for the year 2010-11 (Aug. 2011).

Museum of Manitoba: Molecular genetic studies of northern populations of common gartersnakes, *Thamnophis sirtalis* (2006-12)

National Park Service (Genetics and behavior of gartersnakes on Isle Royale, National Park (MI) with John Placyk and Gary Casper (2010-13)

Faculty Development and RFTW funding for research at the Kyoto University Primate Institute in Inuyama and on Japanese religions in conjunction with visiting professorship in Japan (2008)

Wisconsin Department of Natural Resources: Nuclear DNA analysis of an intergrade zone between *Thamnophis butleri* and *Thamnophis radix* in Wisconsin (2007-8)

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)

Strachan & Vivian Donnelley Fund: Comparative studies on behavioral development and conservation (2005-2008)

University of Tennessee Macebearer (2005-2006): highest academic award at the University of Tennessee

Faculty Development Leave, 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. Sayler), 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) at Rockefeller University, NYC
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

Advocates for Snake Preservation, Silver City, NM. a 501(c)(3) not-for-profit conservation/research organization (ASP). (Board of Trustees, 2019-)
American Association for the Advancement of Science (elected as Fellow, 1996). In sections Psychology, Biological Sciences, and Neuroscience
American Association of University Professors (membership award 1997, 2012). Life member, Local chapter officer and committee chair
American Psychological Association (elected as Fellow): 1983 – Division 6: Society for Behavioral Neuroscience and Comparative Psychology; 2004 – Division 3: Experimental Psychology; 2011 – Division 1: General Psychology)

Society for Behavioral Neuroscience and Comparative Psychology, Division 6 of the American Psychological Association. (President-elect, 2009-10; President, 2010-11; Past-President, 2011-12)
General Psychology, Division 1 of the American Psychological Association (Executive Committee, 2012-2014)
American Society of Ichthyologists and Herpetologists (Life member); Distinguished Scientist Presentation, 1985.
Animal Behavior Society (Delegate at Large, 1980-83; Presidential sequence, 1984-88, President 1986-87; Fellow, 1991; Research proposal evaluation committee, 2005)
Association for Psychological Science (formerly American Psychological Society), Charter member (elected as Fellow, 1990)
Herpetologist's League (Student research proposal committee, 2009-10)
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 of service on editorial board of Journal of Chemical Ecology)
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).
The Association for the Study of Play (TASP); invited featured speaker, 2012, 2024 (Executive Committee (2026-)
Wildlife Research Institute, Ely, MN. a 501(c)(3) not-for-profit conservation/research organization (WRI) (Board of Trustees, 2015-26).
Wolf Park, Battleground, IN. a 501(c)(3) not-for-profit conservation/education organization (NAWPF) (Board of Trustees, 2014-24).

REVIEWS, PANELS, AND EDITORIAL WORK

Review research proposals for National Science Foundation, National Institutes of Health, National Geographic Society, among others;

Regularly review manuscripts for a number of journals and over the years have reviewed for *Acta Herpetologica*; *Acta Psychologica*; *Adaptive Behavior*, *Aggressive Behavior*; *American Journal of Physical Anthropology*; *American Journal of Play*; *American Journal of Primatology*; *American Naturalist*; *American Psychologist*; *American Zoologist*; *Animals*; *Animal Behaviour*; *Animal Behaviour and Cognition*; *Animal Cognition*; *Animal Conservation*; *Animal Learning & Behavior*; *Animals*; *Animals & Society*; *Anthozoös*; *Applied Animal Behaviour Science*; *Behavioral Biology*; *Behavioral & Brain Sciences*; *Behavioral Ecology*; *Behavioral Ecology & Sociobiology*; *Behavioral Neuroscience*; *Behavioural Processes*; *Behavioral Sciences*; *BioEssays*; *Biological Invasions*, *Biological Reviews*; *Biology Letters*; *BioScience*; *Brazilian Journal of Biology*; *Canadian Journal of Zoology*; *Carnivore*, *Chemical Senses*, *Chemoecology*; *Child Development Research*; *Clinical Psychology Review*; *Comparative Cognition & Behavior Reviews*; *Communications in Behavioral Biology*; *Conservation Biology*; *Conservation Genetics*; *Copeia*; *Current Biology*; *Current Herpetology*; *Current Opinion in Behavioral Sciences*; *Current Zoology*; *Developmental Psychobiology*; *Digital Creativity*; *Ecology*; *Ecology and Evolution*; *Ethology*; *Ethology, Ecology, & Evolution*; *Evolution and Human Behavior*; *Evolutionary Behavioral Sciences*; *Evolutionary Psychological Science*; *Evolutionary Psychology*; *Florida Field Naturalist*; *Herpetologica*; *Herpetological Conservation and Biology*; *Herpetological Journal*; *Herpetological Monographs*, *Iguana*; *ILAR Journal*; *Interaction Studies*; *International Journal of Comparative Psychology*; *International Journal of Play*; *iScience*; *Journal of Applied Animal Welfare Science*; *Journal of Applied Behavior Analysis*; *Journal of Behavior*; *Journal of Chemical Ecology*; *Journal of Comparative and Physiological Psychology*; *Journal of Comparative Psychology*; *Journal of Ethology*; *Journal of the Experimental Analysis of Behavior*; *Journal of Herpetology*; *Journal of Physiology*; *Journal of Veterinary Behavior*; *Journal of Theoretical Biology*; *Journal of Tropical*

Ecology; Journal of Zoology; JoVE; Learning & Behavior; Learning & Motivation; Natural Areas Journal; Nature; Naturwissenschaften; Neuroscience and Biobehavioral Reviews; Open Evolution Journal; Pastoral Psychology; PeerJ; Pharmacology, Biochemistry & Behavior; Physics of Life Reviews; Physiology & Behavior; PLoS ONE; Primates; Proceedings of the National Academy of Sciences (PNAS); Proceedings of the Royal Society B: Biological Sciences; Paleobiology; Psychological Bulletin; Psychological Science; Psychopharmacology; Psychology of Religion & Spirituality; Psycology; Quarterly Review of Biology; Royal Society Open Science; Science; Scientific Reports; Society & Animals; Ursus; Veterinary Record; Zeitschrift für Tierpsychologie; Zoo Biology; and ZooNova. Also reviewed numerous book manuscripts (Cambridge, Chicago, Columbia, Harvard, Johns Hopkins, MIT, Oxford, Princeton, Springer; Wisconsin, Yale, etc.), textbooks, and chapters.

Currently Field Chief Founding Editor of *Frontiers in Ethology* and on the editorial boards of *Animal Sentience, Ethology, Evolutionary Psychology, Journal of Applied Animal Welfare Science, Society & Animals, American Journal of Play, Herpetologica, Herpetological Monographs; International Journal of Comparative Psychology, International Journal of Play, and Journal of Comparative Psychology*

Have served as Editor of the *Journal of Comparative Psychology* (2005-2011), American Editor of *Ethology* (formerly *Zeitschrift für Tierpsychologie*) (1981-87) and as Associate Editor of *Animal Learning & Behavior* (now *Learning & Behavior*) (1977-78). Have also served on the editorial boards of *Animals, Developmental Psychobiology, Journal of Chemical Ecology* (1975-1998), *Journal of Herpetology, Zoo Biology, and Carnivore*. Ethology editor for Garland Publishing Co. (1977-82). 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, 2004-2009, 2014, 2015, 2021)

OTHER PROFESSIONAL RESPONSIBILITIES

Member, IUCN Species Survival Commission (SSC) Snake Specialist Group (2011 -)
 Member, IUCN Species Survival Commission (SSC) Iguana Specialist Group (2001-)
 Member, AZA Komodo Dragon Species Survival Plan management group grant panel (2003 - 9)
 Workshop participant, NSF working group on behavioral metadata systems (Ethoinformatics) to develop Ethosource, a web- based data archive (2002, 2004, 2005).
 Science Advisor, Earth & Sky radio series, Bryd & Block Communications, Austin, TX, 1998-2008.
 Science consultant to numerous film productions on animal behavior, play, and reptiles (BBC, Nova, 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), Silver Springs, MD, 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, 2003-12)

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, Comparative Cognition Conference, International Behavioural and Neural Genetics Society (invited symposium speaker), International Conference on Environmental Enrichment (invited plenary speaker), International Bear Association, International Herpetological Symposium, International Society of Chemical Ecology, International Ethological Conferences, International Primatological Society Conference (Hanoi, Vietnam), Joint Meetings of Ichthyologists and Herpetologists, Midwestern Psychological Association, Southeastern Psychological Association, Southwestern Psychological Association, Western Psychological Association, STRI BCI Centennial celebration meeting (Panama), 46th Colloque de la Société Française pour l'Etude du Comportement Animal (invited plenary speaker, 2016), 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, The Association for the Study of Play (TASP) (Invited Keynote Speaker, 2012). Wolfgang Wickler Ecological Intelligence Hypothesis Symposium (Tützing, Germany), World Congress of Herpetology (Adelaide, Australia; Hangzhou, China; Dunedin, New Zealand), Croatian Biological Congress (invited plenary speaker), US Play Coalition, Winter Conference on Animal Learning and Behavior, World Play Congress (Salzburg, Austria). Invited participant to all Winter Animal Behavior Conferences. Invited participant in many symposia and organizer of several including Play and the Evolution of Creative Societies (International School of Ethology, Ettore Majorana Foundation and Centre for Scientific Culture, Erice, Italy, 2023).

Invited talks at Cambridge University, Indiana University, Oxford University, Washington University, Purdue University, Massachusetts Institute of Technology, Max Planck Institute of Evolutionary Anthropology (Leipzig), Edinburgh Zoological Park (Scotland), University of California at Davis, University of Chicago, Monell Chemical Senses Center, University of Kansas, University of Pennsylvania, University of Colorado, University of Akron, Universidad Complutense de Madrid, Bucknell University, Carleton College, Central Michigan University, City College of New York, Detroit Zoological Park, Downstate (NY) Medical Center, University of Minnesota, 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/University of Memphis, Maryville College, Middle Tennessee State University, Missouri Western State University, Northeastern University, Ohio University Eastern, SUNY (Binghamton), Vanderbilt University, Rollins College, Florida State University, University of Oklahoma, Cornell University, Peabody University, Princeton University, American Museum of Natural History, National Zoological Park (DC), 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, Kyoto Primate Institute, University of the Ryukyus (Okinawa, Japan), Max Planck Institut für Verhaltensphysiologie, Loma Linda University, University of St. Andrews, 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), St Joseph's University (PA), Texas A&M University (Commerce), Tlaxcala University (MX), UCLA; University of Texas (Tyler), University of Texas (Austin), University of Valencia (Spain), Zoo Atlanta, University of Zagreb (Croatia), University of Veracruz (Mexico), Western Carolina University, Rockefeller University, Danish Zoological Society, University of Wageningen (Neth), Skånes Djurpark (Sweden), Jacksonville Zoo (FL).

LOCAL PROFESSIONAL ACTIVITIES

Organizing committee, Animal Behavior Society meeting to be held in Knoxville in July/August 2020 (changed to a virtual meeting due to Covid-19), then to be held in 2023 and finally cancelled!
Host and PI, NSF supported Working Group on Play, Evolution, and Sociality, NIMBioS, UT (2011-14)
Host committee, Animal Ethics and Law symposium, Mar. 2012, Baker Center, UT (2011-12)
College of Arts and Sciences Dean's committee on AAAS Fellow nominations (2008-10)

University Studies Colloquy on Spirituality and Critical Inquiry (Co-chair, 2007-11)
College of Arts and Sciences Speakers Bureau (2002-09)
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, 2013-14), Nominating Committee (2005-7).
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.
Chair of Organizing committee when UT hosted the annual meeting of the Animal Behavior Society, June 1981.
Many talks to local schools, civic groups, senior centers, and several at the Oak Ridge Institute for Continued Learning

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. 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). Local UT AAAS Fellow Nominating Committee. Have served on the University Studies Executive Committee and organizer/convener of the Association of Alumni Distinguished Service Professors (UTK).

Publications of Gordon M. Burghardt

Books

- Burghardt, G. M. & Bekoff, M. (eds.). 1978. *The Development of Behavior: Comparative and Evolutionary Aspects*. Garland STPM press, New York.
- Burghardt, G. M. & Rand, A. S. (eds.). 1982. *Iguanas of the World: Their Behavior, Ecology, and Conservation*. Noyes Publications, New Jersey, (reprinted, 1995).
- Burghardt, G. M. (ed.). 1985. *Foundations of Comparative Ethology*. Benchmark papers in Behavior Series, Van Nostrand Reinhold, New York.
- Burghardt, G. M., Bielitski, J. T., Boyce, J. R., & Schaefer, D. O. (eds.). 1996. *The Well-being of Animals in Zoo and Aquarium Sponsored Research*. Scientists Center for Animal Welfare, Greenbelt, MD.
- Bekoff, M., Allen, C., & Burghardt, G. M. (eds.). 2002. *The Cognitive Animal: Empirical and Theoretical Perspectives on Animal Cognition*. MIT Press, Cambridge, MA.
- Burghardt, G. M. *The Genesis of Animal Play: Testing the Limits*. 2005. MIT Press, Cambridge, MA. Paperback (corrected) edition (2006).
- Call, J., Burghardt, G. M., Pepperberg, I. M., Snowdon, C. T., & Zentall, T. (eds.). 2017. *APA Handbook of Comparative Psychology*. 2 Volumes. American Psychological Association, Washington, DC.
- Doody, J. S., Dinets, V., & Burghardt, G. M. 2021. *The Secret Social Lives of Reptiles*. Johns Hopkins University Press, Baltimore, MD.
- Warwick, C., Arena, P., & Burghardt, G. M. (eds.). 2023. *Health and Welfare of Captive Reptiles* (sec. ed.). Springer Nature Switzerland AG, Cham, Switzerland.

Journal Special Issues

- Palagi E., & Burghardt, G. M. (eds.). 2023. *The Evolution and Ontogeny of play: Comparative Perspectives*. *International Journal of Play*. <https://www.tandfonline.com/toc/rijp20/12/1>
- Schank, J., Burghardt, G. M., Palagi, E., & Pellis, S. M. (eds.). 2025. *The Neurobiology of Play: Comparative and Evolutionary Perspectives*. *Neuroscience and Biobehavioral Reviews*. <https://www.sciencedirect.com/special-issue/10RLRDMMZH3>

Journal Articles

- Burghardt, G. M. 1964. Effects of prey size and movement on the feeding behavior of the lizards *Anolis carolinensis* and *Eumeces fasciatus*. *Copeia*, 1964, 576-578.
- Burghardt, G. M. 1966. Stimulus control of the prey attack response in naive garter snakes. *Psychonomic Science* 4, 37-38.
- Burghardt, G. M. & Hess, E. H. 1966. Food imprinting in the snapping turtle, *Chelydra serpentina*. *Science* 151, 108-109. [Reprinted in *The competent infant: Research and commentary*, edited by L. J. Stone, H. T. Smith & L. B. Murphy, Basic Books, New York, 1973; *Behavior of the newborn: Prenatal and perinatal influences*, edited by L. J. Stone, H. T. Smith, & L. B. Murphy, Basic Books, New York, 1978; *Imprinting*, edited by E. H. Hess & S. B. Petrovich, Benchmark Papers in Animal Behavior, Vol. 5, Dowden, Hutchinson & Ross, New York, 1977.]
- Burghardt, G. M. 1967. Chemical-cue preferences of inexperienced snakes: Comparative aspects. *Science* 157, 718-721. [Reprinted in *Readings in animal behavior*, T. A. McGill, ed. Holt, Rinehart, and Winston, New York, 2nd ed. 1973, 3rd ed., 1977.]

- Burghardt, G. M. 1967. The primacy effect of the first feeding experience in the snapping turtle. *Psychonomic Science* 7, 383-384. [Reprinted in *Current topics in experimental psychology*, edited by K. L. Beauchamp, R. L. Bruce & D. W. Matheson, Holt, Rinehart, and Winston, New York, 1970.]
- Burghardt, G. M. 1968. The reinforcement potential of the consummatory act in the modification of chemical-cue preferences. *American Zoologist* 8, 745.
- Burghardt, G. M. 1968. Chemical preference studies on newborn snakes of three sympatric species of *Natrix*. *Copeia* 1968, 732-737.
- Burghardt, G. M. & Hess, E. H. 1968. Factors influencing the chemical release of prey attack in newborn snakes. *Journal of Comparative and Physiological Psychology* 66, 289-295.
- Sheffield, L. P., Law, J. H. & Burghardt, G. M. 1968. On the nature of chemical food sign stimuli for newborn snakes. *Communications in Behavioral Biology Part A*, 2, 7-12.
- Burghardt, G. M. 1969. Comparative prey-attack studies in newborn snakes of the genus *Thamnophis*. *Behaviour* 33, 77-114.
- Burghardt, G. M. 1969. Effects of early experience on food preference in chicks. *Psychonomic Science* 14, 7-8.
- Burghardt, G. M. 1970. Intraspecific geographical variation in chemical food cue preferences of newborn garter snakes (*Thamnophis sirtalis*). *Behaviour* 36, 246-257.
- Burghardt, G. M. 1971. A supplementary note on the feeding behavior of the lizard *Anolis carolinensis*. *Psychonomic Science* 23 (1A), 49.
- Burghardt, G. M. 1971. Chemical-cue preferences of newborn snakes: Influence of prenatal maternal experience. *Science* 1971, 171, 921-923.
- Burghardt, G. M. & Abeshaheen, J. P. 1971. Responses to prey chemical stimuli in newly hatched snakes of the genus *Elaphe*. *Animal Behaviour* 19, 486-489.
- Fuchs, J. & Burghardt, G. M. 1971. Effects of early feeding experience on the responses of garter snakes to food chemicals. *Learning and Motivation* 1971, 2, 271-279.
- Burghardt, G. M. & Burghardt, L. S. 1972. Notes on the behavioral development of two female black bear cubs: the first eight months. *International Conference on Bear Research and Management* 2, 207-220. (now *Ursus*)
- Burghardt, G. M., Hietela, R. C. & Pelton, M. R. 1972. Knowledge and attitudes concerning black bears by users of the Great Smoky Mountains National Park. *International Conference on Bear Research and Management* 2, 255-273. (now *Ursus*)
- Burghardt, G. M. 1973. Chemical release of prey attack: Extension to naive newly hatched lizards, *Eumeces fasciatus*. *Copeia* 1973, 178-181.
- Burghardt, G. M., Wilcoxon, H. C. & Czaplicki, J. A. 1973. Conditioning in garter snakes: Aversion to palatable prey induced by delayed illness. *Animal Learning and Behavior* 1, 317-320.
- Froese, A. D. & Burghardt, G. M. 1974. Food competition in captive juvenile snapping turtles, *Chelydra serpentina*. *Animal Behaviour* 22, 734-739.
- Herzog, Jr., H. A. & Burghardt, G. M. 1974. Prey movement and predatory behavior of juvenile western yellow-bellied racers, *Coluber constrictor mormon*. *Herpetologica* 30, 285-289.
- Burghardt, G. M. 1975. Chemical prey preference polymorphism in newborn garter snakes, *Thamnophis sirtalis*. *Behaviour* 1975, 52, 202-225.

- Burghardt, G. M. & Pruitt, C. H. 1975. The role of the tongue and senses in feeding of newborn garter snakes. *Physiology and Behavior* 14, 185-194.
- Froese, A. D. & Burghardt, G. M. 1975. A dense natural population of snapping turtles (*Chelydra s. serpentina*). *Herpetologica* 31, 204-208.
- Gove, D. & Burghardt, G. M. 1975. Responses of ecologically dissimilar populations of the water snake, *Natrix s. sipedon*, to chemical cues from prey. *Journal of Chemical Ecology* 1, 25-40.
- Bacon, E. S. & Burghardt, G. M. 1976. Ingestive behaviors of the American black bear. *International Conference on Bear Research and Management* 3, 13-25. (now *Ursus*)
- Bacon, E. S. & Burghardt, G. M. 1976. Learning and color discrimination in the American black bear. *International Conference on Bear Research and Management* 3, 27-36. (now *Ursus*)
- Pelton, M. R., Scott, C. D. & Burghardt, G. M. 1976. Attitudes and opinions of persons experiencing property damage and/or injury by black bears in the Great Smoky Mountains National Park. *International Conference on Bear Research and Management* 3, 157-167. (now *Ursus*)
- Hill, J. O., Pavlik, E. J., Smith, G. L. III, Burghardt, G. M., & Coulson, P. B. 1976. Species characteristic responses to catnip by undomesticated felines. *Journal of Chemical Ecology* 2, 239-253.
- Hanaway, T. P. & Burghardt, G. M. 1976. The development of sexually dimorphic book-carrying behavior. *Bulletin of the Psychonomic Society* 7, 267-270.
- Spottswood, P. J. & Burghardt, G. M. 1976. The effects of sex, book weight, and grip strength on book-carrying styles. *Bulletin of the Psychonomic Society* 8(2), 150-152.
- Burghardt, G. M. 1977. Of iguanas and dinosaurs: Social behavior and communication in neonate reptiles. *American Zoologist* 17, 177-190.
- Burghardt, G. M., Greene, H. W. & Rand, A. S. 1977. Social behavior in hatchling green iguanas: Life at a reptile rookery. *Science* 195, 689-691.
- Herzog, H. A. Jr. & Burghardt, G. M. 1977. Vocal communication signals in juvenile crocodilians. *Zeitschrift für Tierpsychologie* 44, 294-304.
- Greene, H. W., Burghardt, G. M., Dugan, B. A. & Rand, A. S. 1978. Predation and the defensive behavior of green iguanas (Reptilia, Lacertilia, Iguanidae). *Journal of Herpetology* 12, 169-176.
- Greene, H. W. & Burghardt, G. M. 1978. Behavior and phylogeny: Constriction in ancient and modern snakes. *Science* 200, 74-77.
- Meredith, M. & Burghardt, G. M. 1978. Electrophysiological studies of the tongue and accessory olfactory bulb in garter snakes. *Physiology and Behavior* 21, 1001-1008.
- Burghardt, G. M. 1978. Closing the circle: The ethology of mind. *Behavioral and Brain Sciences* 1, 562-563.
- Weldon, P. J. & Burghardt, G. M. 1979. The ophiophage defensive response in crotaline snakes: Extension to new taxa. *Journal of Chemical Ecology* 5, 139-48.
- Burghardt, G. M. & Herzog, H. A., Jr. 1980. Beyond Conspecifics: Is Brer Rabbit our brother? *BioScience* 30, 763-768.
- Dugan, B. A., Rand, A. S., Burghardt, G. M., & Bock, B. C. 1981. Interactions between nesting crocodiles and iguanas. *Journal of Herpetology* 15, 409-14.
- Burghardt, G. M. 1981. Human ethology and animal ethics. *Human Ethology Newsletter* 3(3), 8-12.

- Burghardt, G. M. 1982. Comparison matters: Curiosity, bears, surplus energy and why reptiles don't play. *Behavioral and Brain Sciences* 5, 159-160.
- Drummond, H. & Burghardt, G. M. 1983. Geographic variation in the foraging behavior of the garter snake, *Thamnophis elegans*. *Behavioral Ecology and Sociobiology* 12, 43-48.
- Henderson, R. W., Binder, M. H., & Burghardt, G. M. 1983. Responses of Hispaniolan vine snakes (*Uromacer frenatus*) to prey extracts. *Herpetologica* 39, 75-77.
- Bacon, E. S. & Burghardt, G. M. 1983. Food preferences in the American black bear: An experimental approach. *International Conference on Bear Research and Management* 5, 102-105. (now *Ursus*).
- Burghardt, G. M. & Denny, D. 1983. Effects of prey movement and prey odor on feeding in garter snakes. *Zeitschrift für Tierpsychologie* 62, 329-347.
- Burghardt, G. M. 1983. Aggregation and species discrimination in newborn snakes. *Zeitschrift für Tierpsychologie* 61, 89-101.
- Gove, D. & Burghardt, G. M. 1983. Context-correlated parameters of snake and lizard tongue-flicking. *Animal Behaviour* 31, 718-723.
- Scudder, R. M. & Burghardt, G. M. 1983. A comparative study of defensive behavior in three sympatric species of water snakes. *Zeitschrift für Tierpsychologie* 63, 17-26.
- Drummond, H. & Burghardt, G. M. 1983. Nocturnal and diurnal nest emergence in green iguanas. *Journal of Herpetology* 17, 290-292.
- Weldon, P. J. & Burghardt, G. M. 1984. Deception divergence and sexual selection. *Zeitschrift für Tierpsychologie* 65, 89-102.
- Allen, B. A., Burghardt, G. M., & York, D. S. 1984. Species and sex differences in substrate preference and tongue flick rate in three sympatric species of water snakes (*Nerodia*). *Journal of Comparative Psychology* 98, 358-367.
- Burghardt, G. M. 1984. Ethology and operant conditioning. *Behavioral and Brain Sciences* 7, 683-684. [Reprinted in *The canonical papers of B. F. Skinner* (A. C. Catania, ed.). Cambridge University Press 1988, pp 413-416.]
- Scudder, R. & Burghardt, G. M. 1985. The role of feeding regimens on the growth of neonate broad-banded water snakes, *Nerodia fasciata confluens*, and possible effects on reproduction. *Developmental Psychobiology* 18, 203-214.
- Burghardt, G. M. 1985. Animal awareness: current perceptions and historical perspective. *American Psychologist* 40, 905-919.
- Hammock, M. W. & Burghardt, G. M. 1985. *Lampropeltis alterna* (gray-banded kingsnake). An unusual slough. *Herpetological Review* 16, 56.
- Rodda, G. H. & Burghardt, G. M. 1985. *Iguana iguana* (green iguana). Terrestriality. *Herpetological Review* 16, 112.
- Burghardt, G. M. & Rand, A. S. 1985. Group size and growth rate in hatchling green iguanas (*Iguana iguana*). *Behavioral Ecology and Sociobiology* 18, 101-104.
- Jordan, R. H. & Burghardt, G. M. 1986. Employing an ethogram to detect reactivity of black bears (*Ursus americanus*) to the presence of humans. *Ethology* 73, 89-115.

- Herzog, H. A. Jr. & Burghardt, G. M. 1986. The development of antipredator responses in snakes: I. Defensive and open-field behaviors in newborns and adults of three species of garter snakes (*Thamnophis melanogaster*, *T. sirtalis*, *T. butleri*). *Journal of Comparative Psychology* 100, 372-379.
- Herzog, H. A. Jr. & Burghardt, G. M. 1987. Are we ready for a theory of human-animal relations? *Anthrozoös* 1, 145-146.
- Scudder-Davis, R. M. & Burghardt, G. M. 1987. Diet and growth in juveniles of the garter snakes *Thamnophis sirtalis infernalis* and *Thamnophis radix radix*. *Growth* 51, 74-85.
- Rodda, G. H., Bock, B. C., Burghardt, G. M., & Rand, A. S. 1988. New techniques for identifying lizard individuals at a distance reveal influences of handling. *Copeia* 1988, 905-913.
- Burghardt, G. M., Goss, S. E. & Schell, F. M. 1988. Comparison of earthworm- and fish-derived chemicals eliciting prey attack by garter snakes (*Thamnophis*). *Journal of Chemical Ecology* 14, 855-881.
- Herzog, H. A. Jr. & Burghardt, G. M. 1988. Attitudes towards animals: Origins and diversity. *Anthrozoös* 1 (4), 214-222. (Reprinted in *Animals and people sharing the world*, edited by A. N. Rowan, University Press of New England, Hanover and London, 1988, pp. 75-94.)
- Herzog, H. A. Jr. & Burghardt, G. M. 1988. Development of antipredator responses in snakes. III: Stability of individual and litter differences over the first year of life. *Ethology* 77, 250-258.
- York, D. S. & Burghardt, G. M. 1988. Brooding in the Malayan pit viper, *Calloselasma rhodastoma*: Temperature, relative humidity, and defensive behavior. *Herpetological Journal* 1, 210-214.
- Burghardt, G. M. & Greene, H. W. 1988. Predator simulation and duration of death feigning in neonate hognose snakes. *Animal Behaviour* 36, 1842-1844.
- Burghardt, G. M. 1988. Anecdotes and critical anthropomorphism. *Behavioral and Brain Sciences* 11, 248-249.
- Burghardt, G. M. Developmental creationism. 1988. *Behavioral and Brain Sciences* 11, 632.
- Bock, B. C., Rand, A. S., & Burghardt, G. M. 1989. Nesting season movements of female green iguanas (*Iguana iguana*) in Panama. *Copeia* 1989, 214-216.
- Herzog, H. A. Jr., Bowers, B. B., & Burghardt, G. M. 1989 Development of antipredator responses in snakes: IV. Interspecific and intraspecific differences in habituation of defensive behavior. *Developmental Psychobiology* 22, 489-508.
- Herzog, H. A. Jr., Bowers, B. B., & Burghardt, G. M. 1989. Stimulus control of antipredator behavior in newborn and juvenile garter snakes (*Thamnophis*). *Journal of Comparative Psychology* 103, 233-242.
- Schwartz, J. M., McCracken, G. F. & Burghardt, G. M. 1989. Multiple paternity in wild populations of the garter snake, *Thamnophis sirtalis*. *Behavioral Ecology and Sociobiology* 25, 269-273.
- Cooper, W. E. Jr., & Burghardt, G. M. 1990. A comparative analysis of scoring methods for chemical discrimination of prey by squamate reptiles. *Journal of Chemical Ecology* 16, 45-65.
- Schell, F. M., Burghardt, G. M., Johnston, A., & Coholich, C. 1990. Analysis of chemicals from earthworms and fish that elicit prey attack by ingestively naive garter snakes (*Thamnophis*). *Journal of Chemical Ecology* 16, 67-77.
- Cooper, W. E. Jr. & Burghardt, G. M. 1990. Vomeronfaction and vomodor. *Journal of Chemical Ecology* 16, 103-105.

- Burghardt, G. M. 1990. Animal suffering, critical anthropomorphism, and reproductive rights. *Behavioral and Brain Sciences* 13, 14-15.
- Halloy, M. & Burghardt, G. M. 1990. Ontogeny of fish capture and ingestion in four species of garter snakes (*Thamnophis*). *Behaviour* 112, 299-318.
- Morton, D. B., Burghardt, G. M., & Smith, J. A. 1990. Critical anthropomorphism, animal suffering, and the ecological context. *Hastings Center Report*, 20 (3), special supplement on Animals, Science, and Ethics, 13-19.
- Yeager, C. & Burghardt, G. M. 1991. The effect of food competition on aggregation: Evidence for social recognition in the plains garter snake (*Thamnophis radix*). *Journal of Comparative Psychology* 105, 380-86.
- Herzog, H. A. Jr., Bowers, B. B., & Burghardt, G. M. 1992. Development of antipredator responses in snakes: V. Species differences in ontogenetic trajectories. *Developmental Psychobiology* 25, 199-211.
- Burghardt, G. M. 1992. Prior exposure to prey cues influences chemical prey preference and prey choice in neonatal garter snakes. *Animal Behaviour* 1992, 44, 787-789.
- Starin, E. D. & Burghardt, G. M. 1992. African rock pythons (*Python sebae*) in The Gambia: Observations on natural history and interactions with primates. *The Snake* 24, 50-62.
- Burghardt, G. M. 1993. The comparative imperative: Genetics and ontogeny of chemoreceptive prey responses in natricine snakes. *Brain, Behavior, and Evolution* 1993, 41, 138-146.
- Burghardt, G. M. & Chmura, P. J. 1993. Strike-induced chemosensory searching by ingestively naive garter snakes (*Thamnophis sirtalis*). *Journal of Comparative Psychology* 107, 116-121.
- Bowers, B. B., Bledsoe, A. E., & Burghardt, G. M. 1993. Responses to escalating predatory threat in garter and ribbon snakes (*Thamnophis*). *Journal of Comparative Psychology* 107, 25-33.
- Andreadis, P. T. & Burghardt, G. M. 1993. Feeding behavior and an oropharyngeal component of satiety in a two-headed snake. *Physiology and Behavior* 54, 649-658.
- MacLennan, B. J. & Burghardt, G. M. 1994. Synthetic ethology and the evolution of cooperative communication. *Adaptive Behavior* 2, 161-187.
- Doughty, P., Sinervo, B., & Burghardt, G. M. 1994. Sex-biased dispersal in a polygynous lizard, *Uta stansburiana*. *Animal Behaviour* 47, 227-229.
- Singleton, R. Jr., with Ellis, G. B., & Burghardt, G. M. 1994. Transgenic organisms, science and society. *Hastings Center Report*, 1994, 24 (1), special supplement on The Brave New World of Animal Biotechnology, S4-S14.
- Lyman-Henley, L. & Burghardt, G. M. 1994. Opposites attract: Effects of social and dietary experience on snake aggregation behaviour. *Animal Behaviour*, 47, 980-982.
- Waters, R. M. & Burghardt, G. M. 1994. Strike-induced chemosensory searching in the habu (*Trimeresurus flavoviridis*). *Reports of Ecological Researches to Diminish Bites of Habu (Trimeresurus flavoviridis) in Okinawa Prefecture* 17, 29-34.
- Kaufman, J. D., Burghardt, G. M., & Phillips, J. A. 1994. Density dependent foraging strategy of a large carnivorous lizard (*Varanus albigularis*). *Journal of Comparative Psychology*, 108, 381-384.
- Burghardt, G. M. 1994. Group selection and the group mind in science. *Behavioral and Brain Sciences* 17, 613.

- Terrick, T. D., Mumme, R. L., & Burghardt, G. M. 1995. Aposematic coloration enhances chemosensory recognition of noxious prey in the garter snake, *Thamnophis radix*. *Animal Behaviour* 49, 857-866.
- Lyman-Henley, L. P. & Burghardt, G. M. 1995. Diet, litter, and sex effects on chemical prey preference, growth, and site selection in two sympatric species of *Thamnophis*. *Herpetological Monographs* 9, 140-160.
- Burghardt, G. M. 1995. Brain imaging, ethology, and the nonhuman mind. *Behavioral and Brain Sciences* 18, 339-340.
- Waters, R. M., Chiszar, D., & Burghardt, G. M. 1996. Strike-induced chemosensory searching in the Asian pit viper, (*Trimeresurus flavoviridis*). *Journal of Herpetology*, 30, 147-151.
- Burghardt, G. M., Ward, B., & Rosscoe, R. 1996. Problem of reptile play: Environmental enrichment and play behavior in a captive Nile soft-shelled turtle, *Trionyx triunguis*. *Zoo Biology* 15, 223-238.
- Mori, A., Layne, D., & Burghardt, G. M. 1996. Description and preliminary analysis of antipredator behavior of *Rhabdophis tigrinus tigrinus*, a colubrid snake with nuchal glands. *Japanese Journal of Herpetology*, 16, 94-107.
- Kaufman, J. D., Burghardt, G. M., & Phillips, J. A. 1996. Sensory cues and foraging decisions in a large carnivorous lizard, *Varanus albigularis*. *Animal Behaviour* 52, 727-736.
- Scudder-Davis, R. M. & Burghardt, G. M. 1996. Ontogenetic changes in growth efficiency in laboratory-reared water snakes of the genus *Nerodia*. *The Snake*, 27, 75-84 (published Sept., 1997).
- Kramer, M. & Burghardt, G. M. 1998. Precocious courtship and play in emydid turtles. *Ethology* 104, 38-56.
- Halloy, M., Etheridge, R., & Burghardt, G. M. 1998. To bury in sand: Phylogenetic relationships among lizard species of the *boulengeri* group, *Liolaemus* (Reptilia: Squamata: Tropiduridae) based on behavioral characters. *Herpetological Monographs* 12, 1-37.
- Waters, R. M., Burghardt, G. M., & MacLean, Kenneth A. 1998. A comparative study of microhabitat use and activity patterns in captive *Trimeresurus elegans* and *Trimeresurus flavoviridis*: Preliminary observations. *Reports of Ecological Researches to Diminish Bites of Habu (Trimeresurus flavoviridis) in Okinawa Prefecture* 21, 131-137.
- Krause, M. A., Burghardt, G. M. & Lentini, A. 1999. Improving the lives of captive reptiles: Object provisioning in Nile soft-shelled turtles (*Trionyx triunguis*). *Lab Animal* 28(7), 38-41.
- Waters, R. M., Layne, D. G., & Burghardt, G. M. 1999. Cage design for "hard to handle" venomous snakes. *Herpetological Review* 1999, 30, 87-89. (U. S. patent 6,357,394 - 2002)
- Burghardt, G. M. & Krause, M. A. 1999. Plasticity of foraging behavior in garter snakes (*Thamnophis sirtalis*) reared on different diets. *Journal of Comparative Psychology* 113, 277-285.
- Burghardt, G. M. 1999. Deprivation and enrichment in laboratory animal environments. *Journal of Applied Animal Welfare Science* 2, 263-266.
- Cunningham, D. S. & Burghardt, G. M. 1999. A comparative study of facial grooming after prey ingestion in colubrid snakes. *Ethology* 105, 913-936
- Burghardt, G. M. 1999. Conceptions of play and the evolution of animal minds. *Evolution and Cognition* 5, 115-123.
- McCracken, G. F., Burghardt, G. M., & Houts, S. E. 1999. Microsatellite markers and multiple paternity in the garter snake *Thamnophis sirtalis*. *Molecular Ecology* 8, 1475-1479.

- Krause, M. A. & Burghardt, G. M. 1999. Access to another mind: naturalistic theories require naturalistic data. *Psyche* <https://journalpsyche.org/files/0xaa75.pdf>
- Anderson, C. L., Kabalka, G. K., Layne, D. G., Dyke, J. P., & Burghardt, G. M. 2000. Noninvasive high field MRI brain imaging of the garter snake (*Thamnophis sirtalis*). *Copeia* 2000, 265-269.
- Burghardt, G. M., Layne, D. G., & Konigsberg, L. 2000. The genetics of dietary experience in a restricted natural population. *Psychological Science* 11, 69-72.
- Cooper, W. E., Jr., Burghardt, G. M., & Brown, W. S. 2000. Chemical Stimuli from potential prey and predators: behavioural responses by hatchling racers (*Coluber constrictor*) from two geographically distinct populations. *Amphibia-Reptilia* 21, 103-115.
- Savitzky, B. A. & Burghardt, G. M. 2000. Ontogeny of predatory behavior in the aquatic specialist snake, *Nerodia rhombifer*, during the first year of life. *Herpetological Monographs* 14, 401-419.
- Mori, A. & Burghardt, G. M. 2000. Does prey matter? Geographic variation in antipredator responses of hatchlings of a Japanese natricine snake, *Rhabdophis tigrinus*. *Journal of Comparative Psychology*, 114, 408-413.
- King, R. B., Milstead, W. B., Gibbs, H. L., Prosser, M. R., Burghardt, G. M., & McCracken, G. F. 2001. Application of microsatellite DNA markers to discriminate maternal and genetic effects on scalation and behavior in multiply-sired garter snake litters. *Canadian Journal of Zoology*, 79, 121-128.
- Krause, M. A. & Burghardt, G. M. 2001. Neonatal plasticity and adult foraging behavior in garter snakes (*Thamnophis sirtalis*) from two nearby, but ecologically dissimilar, habitats. *Herpetological Monographs* 15, 100-123.
- Rivas, J. & Burghardt, G. M. 2001. Understanding sexual size dimorphism in snakes: wearing the snake's shoes. *Animal Behaviour* 62, F1-F6.
- Mori, A. & Burghardt, G. M. 2001. Thermal effects on antipredator behaviour of *Rhabdophis tigrinus tigrinus*, a snake with toxic nuchal glands. *Ethology* 107, 795-811.
- Garner, T. W. J., Gregory, P. T., McCracken, G. F., Burghardt, G. M., Koop, B. F., McLain, S. E., and Nelson, R. J. 2002. Geographic variation of multiple paternity in the common garter snake (*Thamnophis sirtalis*). *Copeia*, 2002, 15-23.
- Bealor, M. T. and Burghardt, G. M. 2002. *Coluber constrictor constrictor* (northern black racer). Ingestion of plant material. *Herpetological Review* 33, 210.
- Burghardt, G. M. 2003. William Samuel Verplanck, Jr. (1916-2002). *American Psychologist* 58, 491.
- Krause, M. A., Burghardt, G. M., & Gillingham, J. C. 2003. Body size plasticity and local variation of relative sexual size dimorphism in garter snakes (*Thamnophis sirtalis*). *Journal of Zoology* 261, 399-407.
- Burghardt, G. M. 2003. William S. Verplanck (1916-2002) "Happy Jack". *European Journal of Behavior Analysis*, 2003, 4, 123-126.
- Burghardt, G. M. 2004. Ground rules for dealing with anthropomorphism. *Nature* 430, 15.
- Mori, A. & Burghardt, G. M. 2004. Thermal effects on antipredator behaviour of snakes: A review and proposed terminology. *Herpetological Journal* 14, 79-87.
- Waters, R. M. & Burghardt, G. M. 2005. The interaction of food motivation and experience in the ontogeny of chemoreception in crayfish snakes. *Animal Behaviour* 69, 363-374.
- Placyk, J. S. & Burghardt, G. M. 2005. Geographic variation in the frequency of scarring and tail stubs in eastern gartersnakes (*Thamnophis s. sirtalis*) from Michigan, USA. *Amphibia-Reptilia* 26, 353-358.

- Andreadis, P. A. & Burghardt, G. M. 2005. Unlearned appetite controls: Snakes take smaller meals when they have the choice. *Journal of Comparative Psychology* 119, 304-310.
- Herzog, H. A. & Burghardt, G. M. 2005. The next frontier: Moral Heuristics and the treatment of animals. *Behavioral and Brain Sciences* 28, 554-555.
- Rivas, J. A. & Burghardt, G. M. 2005. Snake mating systems: The revisionary implications of recent findings. *Journal of Comparative Psychology* 119, 447-454.
- Burghardt, G. M. 2006. Money, play, and instincts. *Behavioral and Brain Sciences* 29, 182-183.
- Burghardt, G. M. 2006. Editorial. *Journal of Comparative Psychology* 120, 77-78.
- Aubret, F., Burghardt, G. M., Maumelet, S., Bonnet, X., & Bradshaw, D. 2006. Feeding preferences in two disjunct populations of tiger snakes, *Notechis scutatus* (Elapidae). *Behavioral Ecology*, 17, 716-725.
- Almli, L. & Burghardt, G. M. 2006. Environmental enrichment alters the behavioral profile of ratsnakes (*Elaphe*). *Journal of Applied Animal Welfare Science* 9, 85-109.
- Hutchinson, D. A., Mori, A., Savitzky, A. H., Burghardt, G. M., Wu, X., Meinwald, J., & Schroeder, F. C. 2007. Dietary sequestration of defensive steroids in nuchal glands of the Asian snake *Rhabdophis tigrinus*. *PNAS* 104, 2265-2270.
- Placyk, J. S., Burghardt, G. M. Small, R. L. King, R. B., Casper, G. S., Robinson, J. W. 2007. Post-glacial recolonization of the Great Lakes region by the common gartersnake (*Thamnophis sirtalis*) inferred from mtDNA sequences. *Molecular Phylogenetics and Evolution* 43, 452-467.
- Krause, M. A. & Burghardt, G. M. 2007. Sexual dimorphism of body and relative head sizes in neonatal common garter snakes (*Thamnophis sirtalis*). *Journal of Zoology* 272, 156-164.
- Davis, K. & Burghardt, G. M. 2007. Training and long-term memory of a novel food acquisition task in a turtle *Pseudemys nelsoni*. *Behavioural Processes* 75, 225-230.
- Burghardt, G. M. 2007. Critical anthropomorphism, uncritical anthropocentrism, and naïve nominalism. *Comparative Cognition and Behavior Reviews* 2, 136-138.
- Burghardt, G. M. 2008. The sun always rises: Scientists need semantics, too. *Behavioral and Brain Sciences* 31, 133-134.
- Burghardt, G. M. 2008. Evolutionary psychology and the origins of play. *The General Psychologist*, 43(2), 6-11.
- Burghardt, G. M. 2008. The origins of play and some implications. *iP-D!P* (For Professionals in Play), 5, i-iv.
- Fitzpatrick, B. M., Placyk, J. S., Niemiller, M. L., Casper, G. S., & Burghardt G. M. 2008. Distinctiveness in the face of gene flow: Hybridization between specialist and generalist gartersnakes. *Molecular Ecology* 17, 4107-4117.
- Burghardt, G. M. 2008. Updating von Uexküll: New directions in communication research. *Journal of Comparative Psychology* 122, 332-334.
- Burghardt, G. M. 2008. Evolution and paradigms in the study of literature. *Style* 42, 144-149.
- Mori, A. & Burghardt, G. M. 2008. Comparative experimental tests of natricine antipredator displays, with special reference to the apparently unique displays in the Asian genus, *Rhabdophis*. *Journal of Ethology* 26, 61-68.
- Mehta, R. & Burghardt, G. M. 2008. Contextual flexibility: Reassessing the effects of prey size and status on prey restraint behaviour of macrostomate snakes. *Ethology* 114, 133-145.

- Manrod, J. D., Hartdegen, R., & Burghardt, G. M. 2008. Rapid solving of a problem apparatus by juvenile black-throated monitor lizards (*Varanus albigularis albigularis*). *Animal Cognition* 11, 267-263.
- Burghardt, G. M. 2009. Darwin's legacy to comparative psychology and ethology. *American Psychologist* 64, 102-110.
- Burghardt, G. M. 2009. Ethics and animal consciousness: How rubber the ethical ruler? *Journal of Social Issues* 65, 491-521.
- Wusterbarth, T. R., King, R. B., Duvall, M. R., Grayburn, W. S., & Burghardt, G. M. 2010. Phylogenetically widespread multiple paternity in New World natricine snakes. *Herpetological Conservation and Biology* 5, 86-93.
- Kuba, M., Bryne, R., & Burghardt, G. M. 2010. Introducing a new method to study problem solving and tool use in fresh water stingrays, *Potamotrygon castexi*. *Animal Cognition* 13, 507-513.
- Hansknecht, K. A. & Burghardt, G. M. 2010. Stimulus control of lingual predatory luring and related foraging tactics of Mangrove Saltmarsh Snakes (*Nerodia clarkii compressicauda*). *Journal of Comparative Psychology* 124, 159-165.
- Burghardt, G. M. 2010. The comparative reach of play and brain: Perspective, evidence, and implications. *American Journal of Play* 2, 338-356.
- Graham, K. L. & Burghardt, G. M. 2010. Current perspectives on the biological study of play: Signs of progress. *Quarterly Review of Biology* 85, 393-418.
- Placyk, J. S. & Burghardt, G. M. 2011. Evolutionary persistence of chemically elicited ophiophagous antipredator responses in gartersnakes, *Thamnophis sirtalis*. *Journal of Comparative Psychology* 125, 134-142.
- Davis, K. M. & Burghardt, G. M. 2011. Turtles (*Pseudemys nelsoni*) learn about visual cues indicating food from experienced turtles. *Journal of Comparative Psychology* 125, 404-410.
- Booth, W., Million, L., Reynolds, R. G., Burghardt, G. M., Vargo, E. L., Schal, C., Tzika, T., & Schuett, G. W. Consecutive virgin births in the New World boid snake, the Columbian rainbow boa, *Epicrates maurus*. *Journal of Heredity* 102, 759-763.
- Pruitt, J. N., Burghardt, G. M., & Riechert, S. E. 2012. Nonconceptive sexual behavior in spiders: a form of play associated with body condition, personality type, and male intrasexual selection. *Ethology* 118, 33-40. (retracted due to first author not providing original data)
- Burghardt, G. M. 2012. A behavioral biology for the future. *Ethology* 118, 222-225.
- Burghardt, G. M., Bartmess-LeVasseur, J. N., Browning, S. A., Morrison, K. E., Stec, C. L., Zachau, C. E., & Freeberg, T. M. 2012. Perspectives - Minimizing observer bias in behavioral studies: a review and recommendations. *Ethology* 118, 511-517.
- Placyk, Jr. J. S., Fitzpatrick, B. M., Casper, G. S., Small, R. L., Reynolds, R. G., Noble, D. W. A., Brooks, R. J., & Burghardt, G. M. 2012. Hybridization between two gartersnake species (*Thamnophis*) of conservation concern: A threat or an important natural interaction? *Conservation Genetics* 13, 649-663.
- Burghardt, G. M. & Cooper, M. A. 2012. Seven missteps of desire. *Neuropsychanalysis* 14, 40-43.
- Hutchinson, D. A., Savitzky, A. H., Mori, A. Burghardt, G. M., Meinwald, J., & Schroeder, F. C. 2012. Chemical investigations of defensive steroid sequestration by the Asian snake *Rhabdophis tigrinus*. *Chemoecology* 22, 199-206.

- Mori, A., Burghardt, G. M., Savitzky, A. H., Roberts, K. A., Hutchinson, D. A., & Goris, R. C. 2012. Nuchal glands: a novel defensive system in snakes. *Chemoecology* 22, 187-198.
- Davis, K. M. & Burghardt, G. M. 2012. Long-term retention of visual tasks by two species of emydid turtles, *Pseudemys nelsoni* and *Trachemys scripta*. *Journal of Comparative Psychology* 126, 213-223.
- Savitzky, A. H., Mori, A., Hutchinson, D. A., Saporito, R. A., Burghardt, G. M., Lillywhite, H. B., & Meinwald, J. 2012. Sequestered defensive toxins in tetrapod vertebrates: principles, patterns, and prospects for future studies. *Chemoecology* 22, 141-158.
- Reynolds, R., Booth, W., Schuett, G., Fitzpatrick, B., & Burghardt, G. 2012. Successive virgin births of viable male progeny in the Checkered Garter Snake, *Thamnophis marcianus*. *Biological Journal of the Linnean Society* 107, 566-572.
- Doody, J. S., Burghardt, G. M., & Dinets, V. 2013. Breaking the social-nonsocial dichotomy: A role for reptiles in vertebrate social behaviour research? *Ethology* 119, 95-103.
- Waters, R. M. & Burghardt, G. M. 2013. Prey availability influences the ontogeny and timing of chemoreception-based prey shifting in the striped crayfish snake, *Regina alleni*. *Journal of Comparative Psychology* 127, 49-55.
- Hutchinson, D. A., Savitzky, A. H., Burghardt, G. M., Nguyen, C., Meinwald, J., Schroeder, F. C., & Mori, A. 2013. Chemical defense of an Asian snake reflects local availability of toxic prey and hatchling diet. *Journal of Zoology* 289, 270-279.
- Burghardt, G. M. 2013. The Janus faced nature of comparative psychology - strength or weakness? *Evolutionary Psychology* 11, 762-780.
- Burghardt, G. M. 2013. Beyond suffering: Reflections on "What (if anything) do we owe wild animals?" by Clare Palmer. *Between the Species* 16, 39-52.
- Burghardt, G. M. 2013. Environmental enrichment and cognitive complexity in reptiles and amphibians: Concepts, review and implications for captive populations. *Applied Animal Behaviour Science* 147, 286-298.
- Thonhauser, K. E., Gutnick, T., Byrne, R. A., Kral, K., Burghardt, G. M., & Kuba, M. J. 2013. Social learning in cartilaginous fish (stingrays *Potamotrygon falkneri*). *Animal Cognition* 16, 927-932.
- Burghardt, G. M. Play, animals, resources: The need for a rich (and challenging) comparative environment. 2013. *Behavioral and Brain Sciences* 36(5), 484-485.
- Rogers, L. L., Mansfield, S. A., Hornby, K., Hornby, S., Debruyn, T. D., Mize, M., Clark, R., & Burghardt, G. M. 2014. Black bear reactions to venomous and non-venomous snakes in Eastern North America. *Ethology* 120, 1-11.
- Burghardt, G. M. 2014. A brief glimpse at the long evolutionary history of play. *Animal Behavior and Cognition* 1, 90-98.
- Burghardt, G. M., Stuart, G. L., & Shorey, R. C. 2014. Why can't we all just get along: Integration needs more than stories. *Behavioral and Brain Sciences* 37, 420-421.
- Burghardt, G. M., Dinets, V., & Murphy, J. B. 2015. Highly repetitive object play in a cichlid fish (*Tropheus duboisi*). *Ethology* 121, 38-44.
- Burghardt, G. M. 2015. Play in fishes, frogs, and reptiles. *Current Biology* 25, R9-R10.
- Augustine, L., Miller, K., & Burghardt, G. M. 2015. *Crocodylus rhombifer* (Cuban Crocodile). Play behavior. *Herpetological Review* 46, 208-209.

- Weldon, P. J., & Burghardt, G. M. 2015. Evolving détente: The origin of warning signals via concurrent reciprocal selection. *Biological Journal of the Linnean Society*, 116, 239-246.
- Pellis, S. M., Burghardt, G. M., Palagi, E., & Mangel, M. 2015. Modeling play: Distinguishing between origins and current functions. *Adaptive Behavior* 23, 331-339.
- Auerbach, J. D., Kanarek, A., & Burghardt, G. M. 2015. To play or not to play? That's a resource abundance question. *Adaptive Behavior* 23, 354-361.
- O'Meara, B. C., Graham, K. L., Pellis, S. M., & Burghardt, G. M. 2015. Evolutionary models for the retention of adult-adult social play in primates: the roles of diet and other factors associated with resource acquisition. *Adaptive Behavior* 23, 381-391
- Burghardt, G. M. 2016. Mediating claims through critical anthropomorphism. *Animal Sentience* 3(17), 1-4, DOI: 10.51291/2377-7478.1063.
- Bock, B. C., Páez, V. P., Rand, A. S., & Burghardt, G. M. 2016. Life table and stochastic matrix projection analysis for a population of green iguanas (*Iguana iguana*): Implications for conservation and control. *Herpetological Conservation and Biology* 11(Monograph 6), 47-60.
- Palagi, E., Burghardt, G. M., Smuts, B., Cordon, G., Dall'Olio, S., Fouts, H. N., Reháková-Petrů, M., Siviý, S. M., & Pellis, S. M. 2016. Rough-and-tumble play as a window on animal communication. *Biological Reviews* 91, 111-127.
- Rivas, J. A., Molina, C. R., Corey, S. J., & Burghardt, G. M. 2016. Natural history of neonatal green anacondas (*Eunectes murinus*): A chip from the old block. *Copeia* 104, 402-410.
- Burghardt, G. M., Albright, J. D., & K. M. Davis, 2016. Motivation, development, and object play: Comparative perspectives with lessons from dogs, *Behaviour* 153, 767-793.
- Burleson, C. A., Pederson, R. W., Seddighi, S., DeBusk, L. E., Burghardt, G. M., & Cooper, M. A. 2016. Social play in juvenile hamsters alters dendritic morphology in the medial prefrontal cortex and attenuates effects of social stress in adulthood. *Behavioral Neuroscience* 130, 437-447.
- Krams, I., Inwood, S. E., Trakimas, G., Krams, R., Burghardt, G. M., Butler, D. M., Luoto, S., & Krama, T. 2016. Short-term exposure to predation affects body elemental composition, climbing speed and survival ability in *Drosophila melanogaster*. *Peer J*. 4:e2314; DOI 10.7717/peerj.2314
- Burghardt, G. M. 2016. What is the state of play? *International Journal of Play* 5(2), 212-214. DOI: 10.1080/21594937.2016.1203922
- Krams, I., Burghardt, G. M., Krams, R., Trakimas, G., Kaasik, A., Luoto, S., Rantala, M. J., & Krama, T. 2016. A dark cuticle allows higher investment in immunity, longevity and fecundity in a beetle upon a simulated parasite attack. *Oecologia* 182, 99-109. DOI 10.1007/s00442-016-3654-x
- Lillywhite, H. B. Shine, R., Jacobson, E., Denardo, D., Gordon, M., Navas, C. A., Wang, T., Seymour, R. S., Storey, K. B., Heatwole, H., Heard, D., Brattstrom, B., & Burghardt, G. M. 2017. Anesthesia and euthanasia of amphibians and reptiles used in scientific research: Should hypothermia and freezing be prohibited? *BioScience* 67, 53-61.
- Burghardt, G. M. 2017. Snakes, evolution, behavior systems, and autism spectrum disorder: Comment on: "Implications of the idea of neurodiversity for understanding the origins of developmental disorders" by Nobuo Masataka. *Physics of Life Reviews* 20, 112-114.
- Mori, A. & Burghardt, G. M. 2017. Do Tiger Keelback snakes (*Rhabdophis tigrinus*) recognize how toxic they are? *Journal of Comparative Psychology* 131, 257-265.
- Burghardt, G. M. 2017. Keeping reptiles and amphibians as pets: Challenges and rewards. *Veterinary Record* 181, 447-449. DOI:10.1136/vr.j4912

- Krams, I. A., Niemelä, P. T., Trakimas, G., Krams, R., Burghardt, G. M., Krama, T. Kuusik, A., Mänd, M., Rantala, M. J., Mänd, R., Kekäläinen, J., Sirkka, I., Luoto, S., & Kortet, R. 2017. Metabolic rate associates with, but does not generate, covariation between behaviours in western stutter-trilling crickets, *Gryllus integer*. *Proceedings of the Royal Society B* 284, 20162481. DOI: 10.1098/rspb.2016.2481 (10 pp.)
- Schank, J. C., Burghardt, G. M., & Pellis, S. M. 2018. Toward a theory of the evolution of fair play. *Frontiers in Psychology* 9, article 1167, pp. 1-15, DOI: 10.3389/psyg.2018.01167 (July 24, 2018). Reprinted in Lee, M. H., Shaw, P., Hirsh-Pasek, K., Adolph, K. E., Shen, Q., Oudeyer, P.-Y., Popp, J., eds. (2020). *Modeling Play in Early Infant Development*. Lausanne: Frontiers Media SA. doi: 10.3389/978-2-88966-045-2.
- Burghardt, G. M. & Burkhardt, Jr., R. W. 2018. Wallace Craig's *Appetites and Aversions as Constituents of Instinct*: A centennial appreciation. *Journal of Comparative Psychology* 132, 361-372.
- Burghardt, G. M. 2018. Merging multiple shades of play in multiple ways. 2018 (Jan. 18). Commentary on *Learning and Behavior* special issue on play. <https://featuredcontent.psychonomic.org/merging-multiple-shades-of-play-in-multiple-ways/> <https://featuredcontent.psychonomic.org/38-shades-of-play-commencing-a-digital-event-on-the-science-of-a-diverse-and-pervasive-behavior/>.
- Kyle, S. C., Cooper, M. A., & Burghardt, G. M. 2019. Development of social play in hamsters: Sex differences and their possible functions. *Brain Research* 1712, 217-223.
- Smaldino, P. E., Palagi, E., Burghardt, G. M., & Pellis, S. M. 2019. The evolution of two types of play. *Behavioral Ecology* 30, 1388-1397. doi:10.1093/beheco/arz090
- Burghardt, G. M. 2019. A place for emotions in behavior systems research. *Behavioural Processes* 166, 103881. DOI:10.1016/j.beproc.2019.06.004
- Burghardt, G. M. 2020. Insights found in century – old writings on animal behaviour and some cautions for today. *Animal Behaviour* 164, 241-249. <https://doi.org/10.1016/j.anbehav.2020.02.010>.
- Rogers, L. L., McColley, L., Dalton, J., Stroner, J., Hajicek, D., Partin, A., & Burghardt, G. M. 2020. Behavior in free-living American black bear cub dens: Parturition, maternal care, and cub behavior. *Animals* 10, 1123; doi:10.3390/ani10071123
- Burghardt, G. M. 2021. How comparative is (was) the *Journal of Comparative Psychology*? A reptilian perspective. *Journal of Comparative Psychology*, 135, 286-290.
- Burghardt, G. M., Partin, A. M., Pepper, H. E., Steele, J. M., Liske, S.M., Stokes, A. E., Lathan, A. N., Springer, C. M., & Jenkins, M. S. 2021. Chemically mediated self-recognition in sibling juvenile common gartersnakes (*Thamnophis sirtalis*) reared on same or different diets: evidence for a chemical mirror? *Behaviour*, 158, 1169-1191. DOI:10.1163/1568539X-bja10131.
- Burghardt, G. M. & Palagi, E. 2023. The evolution and ontogeny of play: Comparative perspectives, *International Journal of Play*, 12(1), 1-3. DOI: 10.1080/21594937.2022.2152183
- Davis, K. M., Partin, A. M., Springer, C. M. & Burghardt, G. M. 2023. The development of object play in wolf puppies (*Canis lupus*). *International Journal of Play*. 12(1), 20-39. DOI: 10.1080/21594937.2022.2152533
- Cooper, M. A., Grizzell, J. A., Whitten, C. J., & Burghardt, G. M. 2023. Comparing the ontogeny, neurobiology, and function of social play in hamsters and rats. *Neuroscience and Biobehavioral Reviews*, 147 (April) on-line). <https://doi.org/10.1016/j.neubiorev.2023.105102>
- Davis, K. M., Partin, A. M., Burghardt, G. M., Springer, C. M., & Albright, J. D. 2023. A descriptive methodology for studying the ontogeny of object play and breed differences in dogs (*Canis lupus familiaris*). *Animals*, 13, 1371; <https://doi.org/10.3390/ani13081371>

- Doody, J. S., Burghardt, G. M., & Dinets, V. 2023. The evolution of sociality and the polyvagal theory. *Biological Psychology* (on-line). 180, 108589; <https://doi.org/10.1016/j.biopsycho.2023.108569>
- Brooks, H. J. B. & Burghardt, G. M. 2023. A review of interspecific social play among nonhuman animals. *Neuroscience and Biobehavioral Reviews*, 151 (August) (on-line). <https://doi.org/10.1016/j.neubiorev.2023.105232>
- Freeberg, T. M., Benson, S. A., & Burghardt, G. M. 2024. Minimizing observer bias in animal behavior studies revisited: Improvement, but a long way to go. *Ethology*, 130, e13446. <https://doi.org/10.1111/eth.13446>
- Burghardt, G. M., Pellis, S. M., Schank, J. C., Smaldino, P. E., Vanderschuren, L.J.M.J., & Palagi, E. 2024. Animal play and evolution: Seven timely research issues about enigmatic phenomena. *Neuroscience and Biobehavioral Reviews*, 160 (May) (on-line) <https://www.sciencedirect.com/science/article/pii/S0149763424000861>
- Rivas, J., Quintana, P. de La, Mancuso, M., Pacheco, L. F., Rivas, G., Mariotto, S., Salazar, D., Baihua, T., Baihua, P., Burghardt, G. M., Vonk, F. J., Hernandez, E., García-Pérez, J. E., Fry, B. G., & Corey-Rivas, S. 2024. Disentangling the Anacondas: Revealing a new green species and rethinking yellows. *Diversity*, 16, 127 <https://doi.org/10.3390/d16020127>
- Rivas, J.A., Terra, J.S., Roosen, M., Champagne, P.S., Leite-Pitman, R., De La Quintana, P., Mancuso, M., Pacheco, L.F., Burghardt, G.M., Vonk, F.J., García-Pérez, J. E., Fry, B. G., & Corey-Rivas, S. 2024. Description of the Northern Green Anaconda (*Eunectes akayima* sp. nov. Serpentes; Boidae): What is in a name? *Diversity* 2024, 16, 418 <https://doi.org/10.3390/d16070418>
- Burghardt, G.M. 2024. Jakob von Uexküll, heterophenomenology, and behavior systems I: Core Ethology and Merleau-Ponty. *Biosemitotics*, 17, 387-406 <https://doi.org/10.1007/s12304-024-09575-w> (received best paper in Biosemitotics in 2024 award, *Biosemitotics*, 2025, 18, 201-202, <https://doi.org/10.1007/s12304-025-09619-9>)
- Burghardt, G. M. 2024. Memories of Brian, a fellow contrarian. *Play and Culture Studies*, 17, 15-17.
- Burghardt, G. M. 2024. Don Griffin and the early days of cognitive ethology. *Animal Sentience* 35(16) <https://doi.org/10.51291/2377-7478.1878> (published Feb. 2025).
- Whitten, C. J., Kelly, J., Gillespie, A. L., Brooks, H. J.B., Hooker, M. K., Temple, A. R., Hennon, L. M., Kilgore, B. J., Singamaneni, Y. B., Schulz, K. M., Burghardt, G. M., & Cooper, M. A. 2025. From play date to stress fate: Juvenile social play rescues stress-induced changes in adult social behavior. *Developmental Psychobiology* 67:e70020 <https://doi.org/10.1002/dev.70020>
- Burghardt, G. M. 2025. The enduring search for the nature of play. *International Journal of Play*, 14, 20-32. <https://doi.org/10.1080/21594937.2025.2464320>
- Schank, J. C., Burghardt, G. M., Palagi, E., & Pellis, S. M. 2025. Understanding play from neurobiological, evolutionary, and comparative perspectives. *Neuroscience and Biobehavioral Reviews*, 172 (March) (on-line) 106100 <https://doi.org/10.1016/j.neubiorev.2025.106100>
- Burghardt, G. M. 2025. Play in fowl and flies: The renaissance continues. *Learning & Behavior* (May 1) (on-line) <https://doi.org/10.3758/s13420-025-00675-2>
- Burghardt, G. M. 2025. Cephalopod consciousness: Asking the right questions. *Animal Sentience* 37(3) <https://doi.org/10.51291/2377-7478.1903>
- Palagi, E., Caruna, F., & Burghardt, G. M. 2025. Play and laughter: Overlooked pillars of social cohesion. *Behavioral and Brain Sciences*, 48, e178, <https://doi.org/10.1017/S0140525X25100393>
- Hanson, S. L., Whittaker, A., Cooper-Rogers, B., Burghardt, G. M., Fernandez, E. J. 2025. Putting the evidence into evidence-based husbandry: A scoping review of empirical approaches to improving

captive reptile welfare. *Applied Animal Behaviour Science*. 292, 106831,
<https://doi.org/10.1016/j.applanim.2025.106831>

- Grossman, P., Ackland, G. L., Allen, A. M., Berntson, G. G., Booth, L. C., Burghardt, G. M., Buron, J., V Dinets, V., Doody, J. S., Dutschmann, M., Farmer, D. G. S., Fisher, J. P., Gourine, A. V., Joyner, M. J., Karemaker, J., Khalsa, S. S., Lakatta, E. G., Leite, C. A. C., Macefield, V. G., Machhado, B. H., McAllen, R. M., Menuet, C., Mendelowitz, D., Moraes, D. J. A., Neuhuber, W., Paterson, D., Paton, J. F., Pellegrino, P. R., Ramchandra, R., Shanks, J., Schwabe, J. S., Shivkumar, K., Spyer, K. M., Taylor, E. W., Taylor, J. A., Wang, T., ST Yao, S. T., & Zucker, I. H. (2026). Why the polyvagal theory is untenable. An international expert evaluation of the polyvagal theory and commentary upon Porges, S.W. (2025). Polyvagal theory: Current status, clinical applications, and future directions. *Clinical Neuropsychiatry*, 22(3), 169-184. *Clinical Neuropsychiatry*, 23(1), 100-112. doi.org/10.36131/cnforitieditore20260110
- Burghardt, G. M. 2026. Don Griffin and the dawn of cognitive ethology: A personal reflection. *Comparative Cognition and Behavior Reviews*, 21(1), 9-14. <https://doi.org/10.3819/CCBR.2026.210004>
- Francesconi, M., Gamba, M., Burghardt, G. M., Pellis, S. M., & Palagi, E. 2026. Despotism trumps phylogeny in explaining suppression of play among adults in nonhuman primates. *Biology Letters* 22, 20250597. <https://doi.org/10.1098/rsbl.2025.0597>
- Jaroš, F., Burghardt, G. M., Mäekivi, M. 2026. Biosemiotics achievement award 2025. *Biosemiotics* (in press).

Technical Reports

- Burghardt, G. M.; Casper, G. S.; Good, D. A.; & Rossman, D. A. 1995, Genetic swamping as a threat to natural populations of garter snakes: Saukville, Wis., University of Wisconsin-Milwaukee Field Station Annual Report.
- Burghardt, G. M., Albright, J., & McCracken, G. F. 2001. Genetic distinctiveness of *Thamnophis radix* in Ohio. Contract report. ODNR, Division of Wildlife (Ohio).
- Burghardt, G. M., Placyk, J. S., Casper, G. S., Small, R. L., & Taylor, K. 2006. Genetic Structure of Great Lakes Region *Thamnophis butleri* and *Thamnophis radix* based on mtDNA Sequence Data: Conservation Implications for Wisconsin Butler's Gartersnake. Contract report, Wisconsin Department of Natural Resources.
- Fly, J. M., Burghardt, G. M., Hanahan, R. A., Kronick, R., Moustaid-Moussa, N., & Schumann, D. W. 2010. A place-based model for K-12 education in Tennessee (18 pp.). https://www.researchgate.net/publication/265117225_A_Place-Based_Model_for_K-12_Education_in_Tennessee
- Fitzpatrick, B. M. Casper, G. S., Placyk, J. S., Jr., Neimiller, M. L., Kirk, D., Burghardt, G. M. 2018. Analysis of the genetic status of populations in the zone of overlap between *Thamnophis butleri* and *Thamnophis radix* based on AFLP analysis. Contract report, Wisconsin Department of Natural Resources, 18 pp.
- Reichenbach, N., M. Barrie, K. Becka, G. Burghardt, S. Butterworth, C. Caldwell, F. Dierkes, P. Johantgen, K. Stanford and D. Wynn. 2010. Ohio Conservation Plan: Plains gartersnake, *Thamnophis radix*. Ohio Division of Wildlife, Columbus, Ohio, 27p.

Book Chapters

- Burghardt, G. M. 1970. Chemical perception in reptiles. In *Communication by chemical signals* (Johnston, Jr., J. W., Moulton, D. G. & Turk, A., eds.). Appleton-Century-Crofts, New York 241-308.
- Burghardt, G. M. 1970. Defining "communication." In *Communication by chemical signals* (Johnston, Jr., J. W., Moulton, D. G. & Turk, A., eds.). Appleton-Century-Crofts, New York 5-18.
- Burghardt, G. M. 1973. Instinct and innate behavior: toward an ethological psychology. In *The study of behavior: Learning, motivation, emotion, and instinct* (J. A. Nevin & G. S. Reynolds, eds.). Scott, Foresman, Glenview, Ill. 322-400.
- Burghardt, G. M. 1973. "Ethology," "Instinct," "Imprinting," "Reflex," "Taxis," "Kinesis," "Tropism," "Critical Period." Entries in *Psychology 73-74, Encyclopedia* (L. Batten, Ed.). Dushkin, Guilford, CT.
- Burghardt, G. M. 1974. Research on black bear behavior in the Great Smoky Mountains National Park. In: *Second eastern workshop on black bear management and research* (Pelton, M. R. & R. H. Conley, eds.) Gatlinburg, Tennessee 169-78.
- Burghardt, G. M. 1975. Behavioral research on common animals in small zoos. In *Research in zoos and aquariums* (Anon., ed.). National Academy of Sciences, Washington, DC, 103-133.
- Burghardt, G. M. 1975. Behavioral study in zoos and wildlife parks. In *Animal behavior in laboratory and field*, 2nd edition (Price, E. O. & A. W. Stokes, eds.) Freeman, San Francisco, 9-12.
- Burghardt, G. M. 1975. Sensory cues and feeding in snakes. In *Animal behavior in laboratory and field*, 2nd edition (Price, E. O. & A. W. Stokes, eds.) Freeman, San Francisco, 30-33.
- Burghardt, G. M. 1977. Predatory behavior. In *International encyclopedia of neurology, psychiatry, psychoanalysis, and psychology* (B. B. Wolman, ed.) Van Nostrand Reinhold and Aesculapius Publishers, New York Vol. 9, 29-31.
- Burghardt, G. M. 1977. Ontogeny of communication. In *How animals communicate*, (T. Sebeok, ed.). University of Indiana Press, Bloomington, 67-93.
- Pruitt, C. H. & Burghardt, G. M. 1977. Communication in terrestrial carnivores: Ursidae, Mustelidae, Procyonidae. In *How animals communicate*, (T. Sebeok, ed.). University of Indiana Press, Bloomington, IN, 767-793.
- Heinroth, K. & Burghardt, G. M. 1977. History of ethology. In *Grzimek's encyclopedia of ethology* (K. Immelmann, ed.) Van Nostrand Reinhold, New York, 1-22.
- Burghardt, G. M. 1977. Learning processes in reptiles. In *The biology of the Reptilia*. Vol. 7 (ecology and behavior) (C. Gans & D. Tinkle, eds.) Academic Press, New York, 555-681.
- Burghardt, G. M. 1977. The ontogeny, evolution, and stimulus control of feeding in humans and reptiles. In *The chemical senses and nutrition*. (M. R. Kare & O. Maller, eds.). Academic Press, New York, 1977, 253-275.
- Burghardt, G. M. Behavioral ontogeny in reptiles: whence, whither, and why. In *The development of behavior: Comparative and evolutionary aspects*. (G. M. Burghardt & M. Bekoff, eds.). Garland STPM press, New York, 149-174.
- Burghardt, G. M. 1978. Die Geschichte der Tierpsychologie mit besonderer Berücksichtigung von England und Amerika. In *Die Psychologie des 20. Jahrhunderts Vol. 6, Lorenz und Die Folgen* (R. A. Stamm & H. Zeier, eds.). Kindler Verlag, Zurich, 20-28.

- Burghardt, G. M. 1980. Behavioral and stimulus correlates of vomeronasal functioning in reptiles: Feeding, grouping, sex, and tongue use. In *Chemical signals in vertebrates and aquatic invertebrates*. (D. Müller-Schwarze & R. Silverstein, eds.). Plenum, New York, 275-301.
- Burghardt, G. M. 1980. Foreword. In *Animal tool behavior* (B. B. Beck). Garland STPM, New York, ix-x.
- Drummond, H. & Burghardt, G. M. 1982. Orientation in dispersing hatchling green iguanas (*Iguana iguana*). In *Iguanas of the world: Their behavior, ecology, and conservation* (G. M. Burghardt & A. S. Rand, eds.). Noyes Publications, Park Ridge, New Jersey, 271-291.
- Burghardt, G. M. & A. S. Rand. 1982. Preface, Introduction, six section introductions. In *Iguanas of the world: Their behavior, ecology, and conservation* (G. M. Burghardt & A. S. Rand, eds.). Noyes Publications, Park Ridge, New Jersey, vii-viii, 1-6, 47-48, 117-118, 213-214, 301-302, 391-396.
- Burghardt, G. M. 1982. Iguana as symbol. In *Iguanas of the world: Their behavior, ecology, and conservation* (G. M. Burghardt & A. S. Rand, eds.). Noyes Publications, Park Ridge, NJ, 442-444.
- Burghardt, G. M. 1984. On the origins of play. In *Play in animals and humans* (P. K. Smith, ed.). Basil Blackwell, London, 5-41.
- Bock, B. C., Rand, A. S., & Burghardt, G. M. 1985. Seasonal migration and nesting site fidelity in the green iguana. In *Migrations: Mechanisms and adaptive significance* (M. A. Rankin, ed.). *Contributions in Marine Science, Suppl. Vol. 27*, University of Texas Press, Austin, Texas, 435-443.
- Burghardt, G. M., Allen, B. A., & Frank, H. 1986. Exploratory tongue flicking by green Iguanas in laboratory and field. In *Chemical signals in vertebrates* Vol. 4 (D. Duvall, D. Müller-Schwarze, & R. M. Silverstein, eds.). Plenum, New York, 305-321.
- Burghardt, G. M. 1988. Ethology and operant psychology. In *The selection of behavior. The operant behaviorism of B. F. Skinner: Comments and consequences* ed. (A. Catania & S. Harnad, eds.). Cambridge University Press, 413-16.
- Burghardt, G. M. 1988. Precocity, play, and the ectotherm-endotherm transition: Profound reorganization or superficial adaptation. In *Handbook of behavioral neurobiology, Vol. 9, Developmental psychobiology and behavioral ecology* (E. M. Blass, ed.). Plenum, New York, 107-148.
- Burghardt, G. M. & Herzog, H. A. Jr. 1989. Animals, evolution, and ethics. In *Perceptions of animals in American culture* (R. J. Hoage, ed.). Smithsonian Institution, Wash. D.C., 129-151.
- Greenberg, N., Burghardt, G. M., Crews, D., Font, E., Jones, R., & Vaughan, G. 1989. Reptile models for biomedical research. In *Nonmammalian models for biomedical research*. (A. Woodhead, ed.). CRC press, Boca Raton, FL 290-308.
- Burghardt, G. M. & Gittleman, J. G. 1990. Comparative and phylogenetic analyzes: New wine, old bottles. In *Interpretation and explanation in the study of behavior: Vol. 2. Comparative perspectives* (M. Bekoff & D. Jamieson, eds.). Westview Press, Boulder, CO, 192-225.
- Burghardt, G. M. 1990. Chemically mediated predation in vertebrates: Diversity, ontogeny, and information. In *Chemical signals in vertebrates*, Vol. 5. (D. W. McDonald, D. Müller-Schwarze, & S. E. Natynczuk, eds.). Oxford University Press, Oxford, 475-499.
- Burghardt, G. M. 1991. Cognitive ethology and critical anthropomorphism: A snake with two heads and hognose snakes that play dead. In *Cognitive ethology: The minds of other animals* (C. A. Ristau, ed.). Erlbaum, Hillsdale, NJ, 53-90.
- Burghardt, G. M. 1992. Play and the comparative method. In *Biology of animal behavior*, 2nd ed. (J. W. Grier & T. Burk). Mosby Year Book, St. Louis, 706-07.

- Bowers, B. B. & Burghardt, G. M. 1992. The scientist and the snake: Relationships with reptiles. In *The inevitable bond* (H. Davis & D. Balfour, eds.). Cambridge University Press, Cambridge, 250-263.
- Burghardt, G. M. 1992. Human - bear bonding in research on black bear behavior. In *The inevitable bond* (H. Davis & D. Balfour, eds.). Cambridge University Press, Cambridge, 365-382.
- Burghardt, G. M. 1992. Field studies. In *Institutional animal care and use committee guidebook*. National Institutes of Health Publication 92-3415, 14-15.
- Ford, N. B. & Burghardt, G. M. 1993. Perceptual mechanisms and the behavioral ecology of snakes. In *Snakes: ecology and behavior* (R. A. Seigel & J. T. Collins, eds.). McGraw-Hill, New York, 117-164.
- Burghardt, G. M. & Layne, Donna G. 1995. Effects of ontogenetic processes and rearing conditions. In *Health and welfare of captive reptiles*. (C. Warwick, F. L. Frye, & J. B. Murphy, eds.). Chapman & Hall, London, 165-185.
- Burghardt, G. M. & Milostan, M. 1995. Ethological studies on reptiles and amphibians: Lessons for species survival. In *Captive conservation of endangered species: An interdisciplinary approach*. (J. Demarest, B. Durrant, & E. Gibbons, eds.). SUNY Press, New York, 187-203.
- Burghardt, G. M. & Cunningham, D. S. 1995. New directions in the study of animal behavior. In *Current issues and new frontiers in animal research* (K. A. L. Bayne, M. Greene & E. D. Prentice, eds.). Scientists Center for Animal Welfare, Greenbelt, MD, 71-81.
- Burghardt, G. M. 1996. Environmental enrichment or controlled deprivation? In *The well-being of animals in zoo and aquarium sponsored research* (G. M. Burghardt, J. T. Bielitzki, J. R. Boyce, & D. O. Schaefer, eds.). Scientists Center for Animal Welfare, Greenbelt, MD, 91-101
- Burghardt, G. M. 1996. Introduction: Research and welfare in animal exhibit facilities. In *The well-being of animals in zoo and aquarium sponsored research* (G. M. Burghardt, J. T. Bielitzki, J. R. Boyce, & D. O. Schaefer, eds.). Scientists Center for Animal Welfare, Greenbelt, MD, 1-3.
- Burghardt, G. M. 1997. Amending Tinbergen: A fifth aim for ethology. In *Anthropomorphism, anecdotes, and animals*. (R. W. Mitchell, N. S. Thompson, & H. L. Miles, eds.). SUNY Press, Albany, NY, 254-276.
- Burghardt, G. M. 1998. Play. In *Comparative psychology: A handbook* (G. Greenberg & M. Haraway, eds.). Garland Press, New York, 757-567.
- Burghardt, G. M. 1998. The evolutionary origins of play revisited: Lessons from turtles. In *Animal play: evolutionary, comparative, and ecological perspectives* (M. Bekoff & J. A. Byers, eds.). Cambridge University Press, New York, 1-26.
- Burghardt, G. M. 1998. Critical anthropomorphism. In *Encyclopedia of animal rights and animal welfare* (M. Bekoff with C. A. Meaney, eds.). Greenwood, Westport, CT, 71-73
- Burghardt, G. M. Reptiles. 1998. In *Encyclopedia of animal rights and animal welfare* (M. Bekoff with C. A. Meaney, eds.). Greenwood, Westport, CT, 302-303.
- Burghardt, G. M. 1998. Snake stories: From the additive model to ethology's fifth aim. In *Responsible conduct of research in animal behavior* (L. Hart, ed.). Oxford University Press, Oxford, 77-95.
- Burghardt, G. M. & Schwartz, J. M. 1999. Geographic variations on methodological themes in comparative ethology: A natricine snake perspective. In *Geographic variation in behavior: Perspectives on evolutionary mechanisms*. (S. A. Foster & J. A. Endler, eds.). Oxford University Press, Oxford, 69-94.

- Burghardt, G. M. 2001. Play: Attributes and neural substrates. In *Handbook of behavioral neurobiology, Vol. 13 (Developmental psychobiology, developmental neurobiology and behavioral ecology: Mechanisms and early principles)*, (E. M. Blass, ed.). Kluwer Academic/Plenum, New York, 317-356.
- McMillan, G. C. & Burghardt, G. M. 2001. Knoxville Zoological Gardens (Tennessee). In *Encyclopedia of the world's zoos* (C. Bell, ed.). Fitzroy Dearborn Publishers, Chicago, Vol. 2, 684-686.
- Burghardt, G. M. 2002. Genetics, plasticity, and the evolution of cognitive processes. In *The cognitive animal: Empirical and theoretical perspectives on animal cognition*. (Bekoff, M., Allen, C., & G. M. Burghardt, eds.). MIT Press, Cambridge, MA, 115-122.
- Rivas, J & Burghardt, G. M. 2002. Crotalomorphism: A metaphor for understanding anthropomorphism by omission. In *The cognitive animal: Empirical and theoretical perspectives on animal cognition*. (Bekoff, M., Allen, C., & G. M. Burghardt, eds.). MIT Press, Cambridge, MA, 9-17.
- Burghardt, G. M. 2002. Play in reptiles. In *New encyclopedia of reptiles and amphibians* (Halliday, T. R. & K. Adler, eds.). Oxford University Press, Oxford, 112-113 (also published as *The Firefly encyclopedia of reptiles and amphibians*, Firefly Books, Toronto.
- Burghardt, G. M., Chiszar, D., Murphy, J., Romano, J., Walsh, T., & Manrod, J. 2002. Behavioral diversity, complexity, and play in Komodo Dragons. In *Komodo Dragons: Biology and conservation* (Murphy, J., Ciofi, C., de La Panouse, C., & T. Walsh, eds.). Smithsonian Press, DC, 78-117.
- Burghardt, G. M. 2004. Play: How evolution can explain the most mysterious behavior of all. In *Evolution: From molecules to ecosystems* (Moya, A. & E. Font, eds.). Oxford University Press, Oxford, 231-246.
- Burghardt, G. M. 2004. Iguana research: Looking back and looking forward. In *Iguanas: Biology and Conservation* (Alberts, A. C., R. L. Carter, W. K. Hayes, & E. P. Martins, eds.) University of California Press, Berkeley, 1-12.
- Burghardt, G. M. & Zippel, K. 2004. Amphibian Behavior. In *Amphibian Biology and Management* (Odum, A. & K. Zippel, eds.). American Zoo and Aquarium Association, Silver Spring, MD, 1-20.
- Burghardt, G. M. 2004. Play and the brain in comparative perspective. In *The Child's Right to Play: A Global Approach* (R. Clements & L. Fiorentino, eds.). Greenwood Press, Westport CT, 293-308.
- Burghardt, G. M. 2004. Anthropomorphism. In *Encyclopedia of Animal Behavior (Vol. 1)* (M. Bekoff, ed.). Greenwood Press, Westport CT, 40-45.
- Burghardt, G. M. 2004. Nature and Nurture: Baldwin Effect. In *Encyclopedia of Animal Behavior (Vol. 2)*. (M. Bekoff, ed.). Greenwood Press, Westport CT, 776-780.
- Rivas, J. A., Muñoz, M. C., Thorbjarnarson, J. B., Burghardt, G. M., Holmstrom, W., & Calle, P. 2007. Natural history of the green anaconda in the Venezuelan llanos. In *Biology of the Boas and Pythons*. (R. W. Henderson & R. Powell, eds.), Eagle Mountain Publishing Company, Eagle Mountain, CO, 128-138.
- Rivas, J. A. Muñoz, M. C., Burghardt, G. M., & Thorbjarnarson, J. B. 2007. Sexual size dimorphism and the mating system of the Green Anaconda (*Eunectes murinus*). In *Biology of the Boas and Pythons* (R. W. Henderson & R. Powell, eds.), Eagle Mountain Publishing Company, Eagle Mountain, CO, 12-325.
- Burghardt, G. M. 2009. Cognitive ethology. In *Encyclopedia of Environmental Ethics and Philosophy* (J. B. Callicott & R. Frodeman, eds.). Gale (Macmillan Reference), Farmington, MI, Vol. 1, 156-159.

- Burghardt, G. M., Murphy, J. B., Chiszar, D., & Hutchins, 2009. M. Combating ophiophobia: Origins, treatment, education and conservation tools. In *Snakes: Ecology and Conservation* (S. Mullin and R. Seigel, eds.). Cornell University Press, Ithaca, NY, 262-280.
- Burghardt, G. M. & Bekoff, M. 2009. Animal consciousness. In *Oxford Companion to Consciousness* (T. Bayne, A. Cleeremans, & P. Wilkens, eds.). Oxford University Press, Oxford, UK, 39-43.
- Burghardt, G. M. 2009. Foreword. *The Playful Brain; Venturing to the limits of Neuroscience* (S. Pellis & V. Pellis). Oneworld Publications, Oxford, UK, ix-xi.
- Burghardt, G. M. 2009. Play and evolution. In *Encyclopedia of Play in Today's Society* (R. P. Carlisle & J. G. Golson, eds.). Sage Publications, Vol. 2, Thousand Oaks, CA, 489-491.
- Burghardt, G. M. 2009. Play as interspecies communication. In *Encyclopedia of Play in Today's Society* (R. P. Carlisle & J. G. Golson, eds.). Sage Publications, Thousand Oaks, CA, Vol. 2, 511-513.
- Burghardt, G. M. 2009. Surplus resource theory. In *Encyclopedia of Play in Today's Society* (R. P. Carlisle & J. G. Golson, eds.). Sage Publications, Thousand Oaks, CA, Vol. 2, 689-690.
- Burghardt, G. M. 2010. Consummatory acts. In *The Encyclopedia of Applied Animal Behaviour and Welfare* (D. S. Mills, J. N. Marchant-Forde, P. D. McGreevy, D. B. Morton, C. J. Nicol, C. J. C. Phillips, P. Sandøe, & R. R. Swaisgood (eds.) CABI, Wallingford, UK, 134-135.
- Burghardt, G. M. 2010. Reptiles. In *The Encyclopedia of Applied Animal Behaviour and Welfare* (D. S. Mills, J. N. Marchant-Forde, P. D. McGreevy, D. B. Morton, C. J. Nicol, C. J. C. Phillips, P. Sandøe, & R. R. Swaisgood (eds.) CABI, Wallingford, UK, 523-524.
- Burghardt, G. M. 2010. Critical anthropomorphism. In *Encyclopedia of Animal Rights and Animal Welfare* (M. Bekoff, ed.). 2nd Ed., Greenwood Press, Santa Barbara, CA, Vol. 1, 73-74.
- Burghardt, G. M. 2010. Reptiles. In *Encyclopedia of Animal Rights and Animal Welfare* (M. Bekoff, ed.). 2nd Ed., Greenwood Press, Santa Barbara, CA, Vol. 2, 485-487.
- Burghardt, G. M. 2010. Play. In *Encyclopedia of Animal Behavior* (M. D. Breed & J. Moore, eds.) Academic Press, Oxford, UK, Vol. 2, 740-744.
- Burghardt, G. M. 2010. Development of modern animal behavior: 1920-1973. In *Encyclopedia of Animal Behavior* (M. D. Breed & J. Moore, eds.) Academic Press, Oxford, UK, Vol. 1, 340-344.
- Burghardt, G. M. Play [Behavior]. 2010-2012. In *World Book Encyclopedia*. 2010, 2011, 2012 editions. World Book, Chicago. Vol. 15, 570 (2012).
- Burghardt, G. M. Defining and recognizing play. 2011. In *The Oxford Handbook of the Development of Play* (A. D. Pellegrini, ed.), Oxford University Press, New York, 9-18.
- Burghardt, G. M. 2011. Foreword. *Animal Tool Behavior* – revised edition (R. W. Shumaker, K. R. Walkup, & B. B. Beck). Johns Hopkins University Press, Baltimore, ix-x.
- Burghardt G.M. 2012. The origins, evolution, and interconnections of play and ritual: setting the stage. Pages 34-49 in *Play, Ritual and Belief in Animals and in Early Human Societies*. Edited by C. Renfrew, I. Morley, & M. Boyd. John Templeton Foundation: Cambridge (UK).
- Burghardt, G. M. Ethical considerations in working with reptiles. 2012. In *Reptile Biodiversity: Standard Methods for Inventory and Monitoring* (R. W. McDiarmid, M. S. Foster, C. Guyer, J. W. Gibbons, & N. Chernoff, eds.). University of California Press Institution Press, Washington, DC, 127-130.
- Burghardt, G. M. 2012. Play, exploration, and learning. In *Encyclopedia of the Sciences of Learning* (N. Seel, ed.). Springer Science, New York, 2650-2653.

- Kuba, M. J., Gutnick, T., & Burghardt, G. M. 2014. Learning from play in octopus. In *Cephalopod Cognition* (A.-S. Darmaillacq, L. Dickel, & J. Mather, eds.). Cambridge University Press, Cambridge, UK, 57-71.
- Burghardt, G. M. 2015. Integrative approaches to the biological study of play. In *Handbook of the Study of Play* (2 vol.) (J. E. Johnson, S. G. Eberle, T. S. Hendricks, & D. Kuschner, eds.). Rowman & Littlefield, Lanham, MD, Vol. 1, 21-39.
- Burghardt, G. M. 2015. Creativity, play, and the pace of evolution. In *Animal Creativity and Innovation* (A. B. Kaufman & J. C. Kaufman, eds.), Elsevier, Philadelphia, PA, 129-159.
- Burghardt, G. M. 2015. Foreword. *How Dogs Work* (R. Coppinger & M. Feinstein). University of Chicago Press, Chicago, IL, ix-xii.
- Call, J., Burghardt, G. M., Pepperberg, I. M., Snowdon, C. T., & Zentall, T. 2017. What is comparative psychology? In J. Call (Ed.), G. M. Burghardt, I. M. Pepperberg, C. T. Snowdon, & T. Zentall (Assoc. Eds.), *APA Handbook of Comparative Psychology: Vol 1. Basic Concepts, Methods, Neural Substrate, and Behavior*. American Psychological Association, Washington, DC, 3-17.
- Snowdon, C. T. & Burghardt, G. M. 2017. Studying animal behavior: Integration of field and laboratory approaches. In J. Call (Ed.), G. M. Burghardt, I. M. Pepperberg, C. T. Snowdon, & T. Zentall (Assoc. Eds.), *APA Handbook of Comparative Psychology: Vol 1. Basic Concepts, Methods, Neural Substrate, and Behavior*. American Psychological Association, Washington, DC, 39-63.
- Burghardt, G. M. & Bowers, R. I. 2017. From instinct to behavior systems: An integrated approach to ethological psychology. In J. Call (Ed.), G. M. Burghardt, I. M. Pepperberg, C. T. Snowdon, & T. Zentall (Assoc. Eds.), *APA Handbook of Comparative Psychology: Vol 1. Basic Concepts, Methods, Neural Substrate, and Behavior*. American Psychological Association, Washington, DC, 333-364.
- Pellis, S. M., & Burghardt, G. M. 2017. Play and exploration. In J. Call (Ed.), G. M. Burghardt, I. M. Pepperberg, C. T. Snowdon, & T. Zentall (Assoc. Eds.), *APA Handbook of Comparative Psychology: Vol 1. Basic Concepts, Methods, Neural Substrate, and Behavior*. American Psychological Association, Washington, DC, 699-722.
- Burghardt, G. M. 2017. Anthropomorphism. In J. Vonk & T. K. Shackelford (Eds.), *Encyclopedia of Animal Cognition and Behavior*. Springer International Publishing AG, DOI 10.1007/978-3-319-47829-6_1042-1,
- Waters, R. M., Bowers, B. B., & Burghardt, G. M. 2017. Personality and individuality in reptile behavior. In J. Vonk, A. Weiss, & S. Kuczaj, S. (Eds.). *Personality in Non-human Animals*. Springer publishers, New York, NY, 153-184.
- Burghardt, G. M. 2018. The origins, evolution, and interconnections of play and ritual: setting the stage. In *Ritual, Play, and Belief, in Evolution and in Early Human Societies*. (C. Renfrew, I. Morley, & M. Boyd, eds.) Cambridge University Press, Cambridge, UK, 23-39.
- Burghardt, G. M. 2018. Reptile cognition and model species. In *Field and Laboratory Methods in Animal Cognition*. (N. Bueno-Guerra & F. Amici, eds.) Cambridge University Press, Cambridge, UK, 407-410.
- Burghardt, G. M. 2018. Play behavior. In *Oxford Bibliographies in Psychology*. (D. S. Dunn, ed.) Oxford University Press, New York, NY, (on-line), pp.1-28.
<http://www.oxfordbibliographies.com/view/document/obo-9780199828340/obo-9780199828340-0222.xml?rskey=CyyJUT&result=1&q=play#firstMatch>
- Burghardt, Gordon M. Gordon M. Burghardt. 2018. In J. Vonk & T. K. Shackelford (Eds.), *Encyclopedia of Animal Cognition and Behavior*. Springer, Cham., DOI: https://doi.org/10.1007/978-3-319-47829-6_985-1.

- Burghardt, G. M. 2019. Comparative animal behavior - 1920-1973. In *Encyclopedia of Animal Behavior*, Sec. ed. (J. C. Chou, ed.) Elsevier, Academic Press, Oxford, UK, Vol. 1, 94-98.
- Brando, S. C. I. A. & Burghardt, G. M. 2019. Studying play in zoos and aquariums. In *Scientific Foundations of Zoos and Aquariums: Their Role in Conservation and Research*. (A. B. Kaufman, M. J. Bashaw & T. L. Maple, eds.) Cambridge University Press, Cambridge, UK, 558-585.
- Burghardt, G. M. & Pellis, S. M. 2019. New directions in studying the evolution of play. In *The Cambridge Handbook of Play: Developmental and Disciplinary Perspectives*. (P. K. Smith & J. L. Roopnarine, eds.) Cambridge University Press, Cambridge, UK, 11-29.
- Burghardt, G. M. 2019. Reptiles need enrichment too, and not just monitor lizards: A behavior systems approach. In *Wellness for Elephants*. (V. Segura, D. Forthman, & T. L. Maple, eds.), Redleaf Press, Fernadina Beach, FL, 327-344 (270-287 in recalled printing).
- Burghardt, G. M. 2020. Play: A neglected factor in ritual, religion, and human evolution. In *Handbook of Cognitive Archaeology: Psychology in Prehistory* (T. B. Henley, M. J. Rossano, & E. P. Kardas, eds.), Routledge, Taylor, & Francis, New York, 120-134.
- Burghardt, G. M. 2020. The learning repertoire of reptiles. In *Zoo Animal Learning and Training* (V. A. Melfi, N. R. Dorey, & S. J. Ward, eds.) John Wiley & Sons, Chichester, UK, 227-230.
- Burghardt, G. M. 2020. Foreword. In *Anaconda: The Secret Life of the World's Largest Snake* (J. A. Rivas) Oxford University Press, New York, ix-xiii.
- Warwick, C., Arena, P. C., & Burghardt, G. M. 2023. Introduction. In: *Health and Welfare of Captive Reptiles* (sec. ed.) (C. Warwick, P. Arena, & G. M. Burghardt, eds.), Springer. Nature Switzerland AG, Cham, Switzerland, 1-6.
- Font, E., Burghardt, G. M., & Leal, M. 2023. Reptile brains, behaviour, and cognition: multiple misconceptions. In *Health and Welfare of Captive Reptiles* (sec. ed.) (C. Warwick, P. Arena, & G. M. Burghardt, eds.), Springer. Nature Switzerland AG, Cham, Switzerland, 211-238.
- Burghardt, G. M. & Layne-Colon, D. G. 2023. Effects of ontogeny, rearing conditions, and individual differences on reptile behaviour: welfare, conservation, and invasive species implications. In: *Health and Welfare of Captive Reptiles* (sec. ed.) (C. Warwick, P. Arena, & G. M. Burghardt, eds.), Springer. Nature Switzerland AG, Cham, Switzerland, 285-319.
- Burghardt, G. M. & Drickamer, L. C. 2023. Historical perspectives on comparative psychology and related fields. In *Routledge International Handbook of Comparative Psychology* (T. M. Freeberg, A. R. Ridley, & P. d'Etorre, eds.) Routledge, Oxford, UK, 11-22).
- Mori, A., Savitzky, A. & Burghardt, G. M. 2023. Antipredator behavior in snakes. In *Snakes: Morphology, Function, and Ecology* (D. Penning, ed.) NOVA Press, NY, 151-177.
- Burghardt, G. M., Krause, M. A., Placyk Jr, J. S., & Gillingham, J. C. 2023. Gartersnakes of the Beaver Archipelago: A Story of Plasticity and Adaptation. In *Islands and Snakes, Vol. II: Diversity and Conservation* (H. Lillywhite & M. Martins, eds.) Oxford University Press, UK, 261-289.
- Burghardt, G. M. 2024. Memories of Brian, a fellow contrarian. In *Brian Sutton-Smith, Playful Scholar: A Centennial Celebration* (M. M. Patte, F. Brown, A. Beresin, eds.) Hamilton Books, Lanham, MD, 15-17.
- Burghardt, G. M. 2024. Foreword. *Animal Tool Behavior*, 3rd edition (R. W. Shumaker, K. R. Walkup, & B. B. Beck). Johns Hopkins University Press, Baltimore, ix-x.
- Rivas, J. A., del Munoz, M. C., Thorbjarnarson, J. B., & Burghardt, G. M. 2026. *Eunectes murinus* (Linnaeus 1758). In *Boas of the World* (Reynolds, R. G., & Henderson, R. W., eds.) Comstock Publishing Associates, Ithaca, NY, xxx-xxx.

Bock, B. C. & Burghardt, G. M. in press. Green iguana (*Iguana iguana*) research on Barro Colorado Island and beyond. In *The First 100 Years of Research on Barro Colorado Island: Animal Ecology, Evolution, and Behavior*, ed. R. A. Page, A. Aiello, and W. T. Wcislo, pp. xxx-xxx. Smithsonian Institution Scholarly Press, Washington, DC, xxx-xxx.

Burghardt, G. M. in press. Foreword. In *Enrichment für Reptilien - Praktische Tipps zur Umsetzung* (T. Machts). Edition Chimaira, Frankfurt, Germany, xx-xx. English translation version: *Enrichment for reptiles - practical tips for implementation*.

Selected Semi-Popular Articles/Chapters/Blogs/Interviews/Podcasts

Burghardt, G. M. 1967. Chemical perception in newborn snakes. *Psychology Today*, 1 (4), 50-59 (reprinted in *Readings in psychology today*, CRM, 1969 and *Readings in experimental psychology today*, CRM, 1970).

Burghardt, G. M. 1972. Feeding in snakes. *Brookfield Banderlog*, No. 39 (colubrid snakes), 4-6.

Hanaway, T. P. & Burghardt, G. M. 1976. Girls, boys and books. *Psychology Today*, 10 (3), 67. (abridged in *American Libraries* 1977, 8 (1), 48.)

Pelton, M. R. & Burghardt, G. M. 1976. Black bears of the Smokies. *Natural History*, 85 (1), 54-63.

Burghardt, G. M. 2000. Staying close. In *The Smile of a Dolphin: Remarkable Accounts of Animal Emotions* (M. Bekoff, ed.). Random House/Discovery Books, New York, 162-165.

Burghardt, G. M. 2000. Temperature and temperament. In *The Smile of a Dolphin: Remarkable Accounts of Animal Emotions* (M. Bekoff, ed.). Random House/Discovery Books, New York, 202-203.

Burghardt, G. M. 2002. Green iguanas: Adaptable giants from an ancient lineage. *BBC Wildlife*, May, 60-65.

Burghardt, G. M. 2004. Legosteine für Kraken. Interview with Phillip Bethge. *Der Spiegel*, 2004(1), 106-107).

Burghardt, G. M. 2009. The insidious snake. In *Courting the Wild: Love Affairs with Reptiles and Amphibians* (J. K. Reaser, ed.). Hiraeth Press, San Francisco, CA, 2009, 33-38.

Burghardt, G. M. 2010- We Question, Therefore We Live – Religion, Science, and Evolution. *Psychology Today Blog (Evolutionary Psychology)*. <http://www.psychologytoday.com/blog/we-question-therefore-we-live>, 2010 -

<https://www.psychologytoday.com/us/blog/we-question-therefore-we-live/201402/faith-play-and-the-death-jamie-coots>

Burghardt, G. M. 2013. Fear of snakes. *Year of the Snake News*, (12), 1, 5.

<http://www.parcplace.org/images/stories/YOS/YearoftheSnakeNewsDecember.pdf>

Burghardt, G. M. 2016. Prêts à jouer le jeu? (Ready to play the game?). *Sciences Psy*, 7(Sept.), 32-35.

Burghardt, G. M. Play interview on *The Dissenter* (Nov., 2020): https://youtu.be/9_yEhaD4DWk

Burghardt, G. M. *Animal Concepts* interview on reptiles, controlled deprivation, critical anthropomorphism, and play (April, 2021): <https://www.buzzsprout.com/1008463/8301944>

Burghardt, G. M. Psychology Today interview with Marc Bekoff on The Secret Social Lives of Reptiles (June, 2021): <https://www.psychologytoday.com/us/blog/animal-emotions/202106/the-secret-social-and-emotional-lives-reptiles>

Burghardt, G. M. Playful Play interview with Shane Mauss on *Here We Are* (Aug. 6, 2021): <https://www.herewearepodcast.com/episodes/episode-348-science-of-play-gordon-burghardt>

- Burghardt, G. M. Snakes are thoughtful animals. Snakes are Everything Episode 6, ASP (October, 2021): <https://www.youtube.com/watch?v=h6KdLL5cSrM>
- Burghardt, G. M. *Psychology Today* interview with Gay Bradshaw (12/19/21 = flagged as “essential reading”: <https://www.psychologytoday.com/us/blog/bear-in-mind/202112/why-reptilian-brains-are-comparable-our-own>.
- Snake self-recognition in *National Geographic* (March, 2022) <https://www.nationalgeographic.com/animals/article/can-snakes-recognize-themselves-a-study-says-yes?loggedin=true>
- Burghardt, G. M. The centrality and origins of play. IAI (Institute of Arts and Ideas) (April 6, 2022): https://iai.tv/articles/the-centrality-and-origins-of-play-auid-2095?_auid=2020
- Burghardt, G. M. Orianne Society interview with Chris Jenkins on snake behavior and fear of snakes (March 25, 2022) <https://www.oriannesociety.org/initiatives/snake-talk/?v=400b9db48e62>
- Burghardt, G. M. 2024. [An Evening with Gordon Burghardt on the Scopes Trial and Evolution in East Tennessee - YouTube](#) Invited talk for the Scopes Trial Centennial Celebration at the University of Tennessee and posted by the National Center for Science Education.
- Burghardt, G. M. 2025. [The primeval soil of play - Many Minds podcast](#). A project of the [Diverse Intelligences Summer Institute](#) (Indiana University). Hosted and produced by [Kensy Cooperrider](#)
- Burghardt, G. M. 2025. [The Scopes Trial Centennial: A Witness to Change—Reflecting on 50 Years of Science and Society - YouTube](#) Interview by the University of Tennessee Library connected with the display of materials connected with the Scopes Trial in Dayton, TN.
- Burghardt, G. M. 2025. The Scopes Trial at 100. https://app.newsomatic.net/2025/7/22/the-scopes-trial-at-100/?edition=3304&reading_level=E5&t=c7487595-73e4-4165-bdbc-9ae4d7e997a3 Produced by Diana Richard.

Society Newsletters

- Burghardt, G. 1961-62 Beyond China. *SPU Discussion Bulletin*, 2(1), 31-32.
- Burghardt, G. M. 1995. Competition and identical twins and a twin-headed snake. *ASCAP* (Society for Sociophysiological Integration). 8, 14.
- Burghardt, G. M. 2010. A message from Division 6 President Gordon Burghardt. *The Behavioral Neuroscientist and Comparative Psychologist*. 25(2), 1-5.
- Burghardt, G. M. 2011. A message from Division 6 President Gordon Burghardt. *The Behavioral Neuroscientist and Comparative Psychologist*. 26(1), 1-5.
- Burghardt, G. M. & Laland, K. 2017. Deconstructing niche construction: a conversation between Gordon Burghardt and Kevin Laland. <https://thisviewoflife.com/deconstructing-niche-construction/>
<https://www.prosocial.world/posts/deconstructing-niche-construction>
- Burghardt, G. M. 2020. Secret societies: the social lives of reptiles. *The Buzz* (Advocates for Snake Preservation, 2020 (summer), 2, <https://www.snakes.ngo/reptile-sociality/>
- Kramer, M. & Burghardt, G. M. (2023). In memoriam: Paul Weldon. Animal Behavior Society Newsletter 68(1), <https://www.animalbehaviorsociety.org/NEWSLETTERS/68-1/memorial.php>
- Burghardt, G.M. (2023). John C. Malone 1942-2121. Insight. Newsletter of the Department of Psychology (University of Tennessee): 7
https://alumni.tennessee.edu/controls/email_marketing/view_in_browser.aspx?sid=1341&gid=2&sendID=4278766

Kramer, M. & Burghardt, G. M. (2023). In memorium of Paul Weldon. Newsletter International Society of Chemical Ecology, 40(2), 5-6. https://www.chemecol.org/newsletters/vol_40_2.pdf

Films and Videos

Also appeared/interviewed in several TV documentaries on lizards, snake behavior, and play) such as *Lizard Kings* (Nova), and below. Also, have provided footage used in several documentaries.

Burghardt, G. M. Chemical cues in feeding behavior of newborn garter snakes. *American Zoologist*, 1966, 6, 536. 16 mm B&W film (6 min.).

Burghardt, G. M. & Rand, A. S. *Dragon of the Trees: The Green Iguana*. Photography and script for 28 min. color sound 16 mm film. Narrated by Edward P. Morgan (award winning broadcaster). Office of Telecommunications, Smithsonian Institution, 1980. (Third place award, 12th Int. Scientific Film Festival, Rio de Janeiro, Brazil, 1981).

Burghardt, G. M. *Evolution, Behavioral Variation, and Plasticity. Invited Preeminent Tutorial Lecture videotape*. Introduction by Bill Palya and William Timberlake. Society for the Quantitative Analysis of Behavior (SQAB), 2000, 47 min. + 7 min. discussion (<http://sqab.psychology.org/>)

Burghardt, G. M. & Bock, B. B. *Iguanas: Living Like Dinosaurs?* (advisor and script; based on our original research findings). BBC Wildlife on One video, 2002, 27 min. Narrated by Richard Attenborough. (Winner, Panda award in editor's category and nominated in the innovation category, Wildscreen International Wildlife Film 2002 Festival; Finalist (top 3) in 2002 Animal Behavior Society professional film competition; Grand Prix (Best of Festival Prize) and the Prize for Best Editing in 2003 Festival International du Film Animalier, Albert, France; 26th International Wildlife Film Festival - Missoula, MT (2003): Best of Festival, Best Photography, Best of Category - 1st Place - Television Program. Merit Award for Editing, Merit Award for Sound Design, Merit Award for Cinematography.

Burghardt, G. M. Research consultant, participant, and commentator, *The Power of Play*. Canadian Broadcasting Corporation. 57 min. (Winner, 1st place in Commercial category, Animal Behavior Society Film Festival – Chicago, IL (2019).

Burghardt, G. M. Participant and commentator, *Animals at Play*, two-episode BBC2 documentary, released in July 2019.

Burghardt, G. M. 2025. [The primeval soil of play - Many Minds podcast](#). A project of the [Diverse Intelligences Summer Institute](#) (Indiana University). Hosted and produced by [Kensy Cooperrider](#)

Burghardt, G. M. 2025. [The Scopes Trial Centennial: A Witness to Change—Reflecting on 50 Years of Science and Society - YouTube](#) Interview by the University of Tennessee Library connected with the display of materials connected with the Scopes Trial in Dayton, TN.

Burghardt, G. M. 2025. The Scopes Trial at 100. https://app.newsomatic.net/2025/7/22/the-scopes-trial-at-100/?edition=3304&reading_level=E5&t=c7487595-73e4-4165-bdbc-9ae4d7e997a3 Produced by Diana Richard.

Burghardt, G. M. 2025. [The Scopes Trial Centennial: A Witness to Change—Reflecting on 50 Years of Science and Society - YouTube](#) Interview by the University of Tennessee Library connected with the display of materials connected with the Scopes Trial in Dayton, TN.

Letters on Technical Issues

Burghardt, G. M. 1971. Snake eggs. (Reply to C. Grant). *Science*, 172, 792.

Burghardt, G. M. 1975. Promising chimpanzee. (Comment on D. Premack). *Science*, 189, 1046.

- Burghardt, G. M. 1989. Witmer on comparative psychology. *American Psychologist*, 44, 447.
- Burghardt, G. M. 1998. NIMH'S long view. (Comment on E. Fuller Torrey). *HMSBeagle*, <http://biomednet.com/hmsbeagle/39/people/letters.htm#NIMH>.
- Weldon, P. J. & Burghardt, G. M. 2001. Deception (mimicry): an essential component of sexual signals. *Trends in Ecology and Evolution*, 16, 228.
- Burghardt, G. M. 2004. Ground rules for dealing with anthropomorphism (Comment on C. Wynne). *Nature*, 430, 15.
- Jacquet, J., Franks, B., Godfrey-Smith, P., et al. 2024. Support US OCTOPUS Act to keep octopuses wild. *Science*, 365 (6710), 721-722 (author 19 of 100).

Book Reviews

- Burghardt, G. M. 1973. Review of *Handbook of Sensory Physiology, Vol. IV: Chemical Senses, part 1 (Olfaction) part 2 (Gustation)* (L. M. Beidler, ed.) in *Brain, Behavior, and Evolution*, 8, 472-473.
- Burghardt, G. M. 1979. Review of *Behavior and Neurology of Lizards: An Interdisciplinary Symposium* (N. Greenberg & P. D. MacLean, eds.) in *American Scientist*, 67, 476.
- Burghardt, G. M. 1980. The ethological trip: Heresy to acceptance. Review of *Comparative Animal Behavior* by D. A. Dewsbury in *Contemporary Psychology*, 25, 22-23.
- Burghardt, G. M. 1982. Ethology: A reiteration. Review of *The Foundations of Ethology* by K. Z. Lorenz in *Science*, 216, 170-171.
- Burghardt, G. M. 1982. Science, conservation, and politics. Review of *Conservation Biology: An Evolutionary - Ecological Perspective* (M. E. Soule and B. A. Wilcox, eds.) in *Zoo Biology*, 1, 385-390.
- Burghardt, G. M. 1985. Review of *Lizard Ecology: Studies of a Model Organism* (R. B. Huey, E. R. Pianka, and T. W. Schoener, eds.) in *Animal Behaviour*, 32, 637-638.
- Burghardt, G. M. 1985. Sea turtles: Heresy or wisdom. Review of *Conserving Sea Turtles* by N. Mrosovsky in *Zoo Biology*, 4, 309-310.
- Burghardt, G. M. 1986. Review of *Foundations of Comparative Psychology* (D. A. Dewsbury, ed.) in *Ethology*, 73, 78-84.
- Burghardt, G. M. 1988. Reviews of *Unravelling Animal Behaviour* by M. S. Dawkins and *Animal Behaviour* by M. Ridley in *Quarterly Review of Biology*, 63, 121.
- Burghardt, G. M. 1988. Lessons from the dead, confusion from the living. Review of *The Ecology and Biology of Mammal-Like Reptiles* (N. Hotton, III, P. D. MacLean, J. J. Roth, and E. C. Roth, eds.) in *Zoo Biology*, 7, 385-386.
- Burghardt, G. M. 1989. Review of *Biology of the Reptilia. Vol. 16, Ecology B, Defense and Life History* (C. Gans & R. B. Huey, eds.) in *Animal Behaviour*, 37, 344-345.
- Burghardt, G. M. 1989. Review of *The Behavioral Biology of Aggression* by J. Archer in *Ethology*, 82, 344-345.
- Burghardt, G. M. 1990. Review of *What is an Animal?* edited by T. Ingold in *Anthrozoös*, 3, 206-208.
- Burghardt, G. M. 1990. A realistic philosophy of science. Review of *Science as a Process* by David L. Hull in *American Journal of Primatology*, 20, 293-295.

- Burghardt, G. M. 1991. Heeding the cry. Reviews of *Animal Consciousness* (D. Radner and M. Radner) and *The Unheeded Cry: Animal Consciousness, Animal Pain, and Science* (B. E. Rollin) in *The Hastings Center Report*, 21, 48-50.
- Burghardt, G. M. 1991. Review of *Perspectives in Ethology*, Vol. 8 (P. P. G. Bateson and P. H. Klopfer, eds.) in *Ethology*, 88, 80-81.
- Burghardt, G. M. 1991. Review of *Behavioural Mechanisms of Food Selection* (R. N. Hughes, ed.) in *Ethology*, 88, 256-264.
- Burghardt, G. M. 1992. Review of *Charles Darwin's Notebooks, 1836-1844* (P. H. Bartlett, P. J. Gautrey, S. Herbert, D. Kohn, & S. Smith, eds.) in *Ethology*, 92, 168-171.
- Burghardt, G. M. 1992. Who's looking? Review of *Through the Looking Glass: Issues of Psychological Well-being in Nonhuman Primates* (M. A. Novak & A. J. Petto, eds.) in *Contemporary Psychology*, 37, 1333-1335.
- Burghardt, G. M. 1992. Looking inside monkey minds: Milestone or millstone. Review of *How Monkeys See the World* (D. L. Cheney & R. M. Seyfarth) in *Behavioral and Brain Sciences*, 15, 150-51.
- Burghardt, G. M. 1994. Evolution and the analysis of private experience. Review of *Metapsychology: Missing links in Behavior, Mind, and Science* (S. S. Rakover) in *PSYCOLOQUY* 5(73) Sunday 25 December 1994, [psyc.94.5.73.metapsychology.6.burghardt](#).
- Burghardt, G. M. 1995. Brain imaging, ethology, and the nonhuman mind. Review of *Images of Mind* (M. I. Posner & M. E. Raichle) in *Behavioral and Brain Sciences*, 18, 339-340.
- Burghardt, G. M. 1996. Review of *Homo Aestheticus: Where Art Comes From and Why* (E. Dissanayake) in *Human Ethology Bulletin*, 11(1), 12-14.
- Burghardt, G. M. 1997. Would Darwin weep? Review of *When Elephants Weep* (J. M. Masson & S. McCarthy) in *Contemporary Psychology*, 42, 21-23.
- Burghardt, G. M. 1997. Review of *The Great Ape Project: Equality Beyond Humanity* (P. Cavalieri & P. Singer, eds.) in *Society and Animals*, 5, 83-86.
- Burghardt, G. M. 1997. Review of *Perspectives in Ethology, Vol. 11* (N. S. Thompson, ed.) in *Ethology*, 103, 527-528.
- Burghardt, G. M. 1999. Review of *Sports in the Lives of Children and Adolescents: Success on the Field and in Life* (R. S. Griffin) in *TASP Newsletter* 24(1), 4.
- Burghardt, G. M. 2000. Review of *Problem Snake Management: The Habu and the Brown Treesnake* (G. H. Rodda, Y. Sawai, D. Chiszar, H. Tanaka, eds.) in *Quarterly Review of Biology*, 75, 192-193.
- Burghardt, G. M. 2002. Review of *Natural Conflict Resolution* (F. Aureli & F. B. M. de Waal, eds.) in *International Criminal Justice Review*, 12, 116-118.
- Burghardt, G. M. 2003. Review of *The Cane Toad. The History and Ecology of a Successful Colonist* (C. Lever, 2001) in *Ethology*, 109, 366-367.
- Burghardt, G. M. 2005. Review of *Love at Goon Park: Harry Harlow and the Science of Affection* (D. Blum, 2002) in *Ethology*, 111, 878-879.
- Burghardt, G. M. 2006. A rebellious revolution. Review of *The Robot's Rebellion: Finding Meaning in the Age of Darwin* (K. E. Stanovich, 2004) in *Trends in Ecology and Evolution (TREE)*, 21, 537-538.
- Burghardt, G. M. 2006. A pleasurable feast. Review of *Pleasurable Kingdom* (J. Balcombe, 2006) in *Journal of Animal Welfare Science*, 9, 257-258.

- Burghardt, G. M. 2008. Review of *Play for a Change – Play, Policy and Practice: A Review of Contemporary Perspectives* (S. Lester & W. Russell, 2008) in *Play Today*, 64(Nov.), 18.
- Burghardt, G. M. 2010. Review of *Wild Justice* (M. Bekoff & J. Pierce, 2009) in *American Journal of Play*, 2, 376-378.
- Burghardt, G. M. 2010. Don't cry at the cremation. Review of *On the Origin of Stories: Evolution, Cognition, and Fiction* (Brian Boyd, 2009) in *The Evolutionary Review*. Vol. 1, SUNY Press, 131-134.
- Burghardt, G. M. 2010. Updating genesis on the origins of human knowledge. Review of *The Fruit, The Tree, and the Serpent: Why We See So Well* (L. A. Isbell, 2009) in *PsycCRITIQUES (APA)* June 2, Vol. 55, Release 22, Article 2.
- Burghardt, G. M. 2010. Review of three books on evolution and religion. Reviews of *The Faith Instinct. How Religion Evolved and Why it Matters* (N. Wade, 2009), *The Evolution of Religion: Studies, Theories, and Critiques* (J. Bulbulia, R. Sosis, E. Harris, R. Genet, & K. Wyman, eds., 2008), and *The Biology of Religious Behavior. The Evolutionary Origins of Faith and Religion* (R. Feirerman, ed.) in *Politics and Culture*, (April 28). <http://www.politicsandculture.org/2010/04/28/contents-2/>.
- Burghardt, G. M. 2010. Review of two books on snakes. Reviews of *Them that Believe. The Power and Meaning of the Christian Serpent-Handling Tradition* (R. W. Hood, Jr. & W. P. Williamson, 2008) and *The Fruit, The Tree, and the Serpent: Why We See So Well* (L. A. Isbell, 2009) in *Politics and Culture*, (April 28). <http://www.politicsandculture.org/2010/04/28/contents-2/>
- Burghardt, G. M. 2010. Review of *The Anthropology of Childhood: Cherubs, Chattel, Changelings* (D. Lancy, 2008) in *Play Review*, 33, 7-8.
- Burghardt, G. M. 2010. Recapturing childhood by recasting Christianity. Review of *Becoming God's Children: Religion's Infantilizing Process* (M. D. Faber, 2010). *PsycCRITIQUES (APA)* November 24, Vol. 55, Release 47, Article 4.
- Burghardt, G. M. 2013. Paul Broca, language, and the brain. Review of *Paul Broca and the Origins of Language in the Brain* (L. L. LaPointe, 2013). *PsycCRITIQUES (APA)* May 8, Vol. 58, Release 19, Article 1.
- Burghardt, G. M. 2014. Animals wise and wise researchers. Review of *Animal Wise: The Thoughts and Emotions of Our Fellow Creatures* (V. Morell). *PsycCRITIQUES (APA)* January 6, Vol. 59, No. 1, Article 6.
- Burghardt, G. M. 2015. Locating madness in other animals. Review of *Animal Madness: How Anxious Dogs, Compulsive Parrots, and Elephants in Recovery Help Us Understand Ourselves* (L. Braitman). *PsycCRITIQUES (APA)* February 16, Vol. 60, No. 7, Article 3.
- Burghardt, G. M. 2016. Anatomical origins of neuroscience. Review of *Brain Renaissance: From Vesalius to Modern Neuroscience* (M. Catani & S. Sandrone). *PsycCRITIQUES (APA)* January 11, Vol. 61, No. 2, Article 6
- Burghardt, G. M. 2016. Review of *Play and the Human Condition* (T. Henricks). *International Journal of Play*, 5, 221-223, DOI:10.1080/21594937.2016.1203558
- Burghardt, G. M. 2018. Review of *The Illusion of God's Presence: The Biological Origins of Spiritual Longing* (J. C. Wathey). *The International Journal for the Psychology of Religion*, 28, 2, 141-144, DOI: 10.1080/10508619.2018.1450588.
- Burghardt, G. M. 2024. Review of *Nonhuman Primate Welfare: From History, Science, and Ethics to Practice* (L. M Robinson & A. Weiss, eds.). *Quarterly Review of Biology*, 90, 232-233.

Burghardt, G. M. 2026. Books for Buzz readers. Review of *Slither: How Nature's most Maligned Creatures Illuminate our World* (S. S. Hall), *Snakes: Morphology, Function, and Ecology* (D. Penning, Ed.) and *Islands and Snakes (Volume 2): Diversity and Function* (H. B. Lillywhite & M. Martins, Eds.). The Buzz (14) 10.

Student theses and dissertations chaired (plus served on hundreds of committees)

Albright, J. D. (2001). Microsatellite DNA markers, multiple paternity, and the inheritance of morphology and behavior in Butler's garter snake (*Thamnophis butleri*). Psychology. Knoxville, University of Tennessee. **M.A.:** 117.

Almli, L. M. (2004). An assessment of environmental enrichment on morphology and behavior of yearling rat snakes (*Elaphe obsoleta*). Ecology and Evolutionary Biology. Knoxville, University of Tennessee. **M.S.:** 76.

Andreadis, P. T. (1998). Control of food intake and expression of hunger in the northern water snake, *Nerodia sipedon* (L.). Ecology and Evolutionary Biology. Knoxville, University of Tennessee. **Ph.D.:** 186.

Armbruster, R. C. (1973). The role of vision in the recognition of olfactory cues. Psychology. Knoxville, University of Tennessee. **M.A.:** 34.

Bacon, E. S. (1973). Investigations on perception and behavior of the American black bear (*Ursus americanus*). Psychology. Knoxville, University of Tennessee. **Ph.D.:** 161.

Bock, B. C. (1984). Movement patterns relative to nesting site locations in a population of green iguanas (*Iguana iguana*) in Panama. Psychology. Knoxville, University of Tennessee. **Ph.D.:** 139.

Bowers, B. B. (1992). Habituation of antipredator behaviors and responses to chemical prey extracts in four species of garter snakes, *Thamnophis* (*Serpentes: Colubridae*). Life Sciences - Ethology. Knoxville, University of Tennessee. **Ph.D.**

Cunningham, D. S. (1996). A comparative study of grooming in colubrid snakes. Psychology. Knoxville, University of Tennessee. **M.S.:** 51.

Davis, K. M. (2009). Sociality, cognition and social learning in turtles (Emydidae). Psychology. Knoxville, University of Tennessee. **Ph.D.**

Davis, M. (1981). Aspects of the social and spatial experience of eastern box turtles *Terrapene carolina carolina*. Psychology. Knoxville, University of Tennessee. **Ph.D.:** 133.

Denny, D. (1979). The role of movement in orientation to and selection of prey in the garter snake. Psychology. Knoxville, University of Tennessee. **M.A.:** 54.

Doughty, P. E. (1991). The causes and consequences of natal dispersal in the side-blotched lizard (*Uta stansburiana*, *Phrynosomatidae*). Life Sciences - Ethology. Knoxville, University of Tennessee. **M.S.:** 57.

Drummond, H. M. (1980). Aquatic foraging in some new world natricine snakes: Generalists and specialists and their behavioral evolution. Psychology. Knoxville, University of Tennessee. **Ph.D.:** 191.

- Dugan, B. A. (1980). A field study of the social structure, mating system, and display behavior of the green iguana. Psychology. Knoxville, University of Tennessee. **Ph.D.:** 171.
- Froese, A. D. (1974). Aspects of space use in the common snapping turtle, *Chelydra s. serpentina*. Psychology. Knoxville, University of Tennessee. **Ph. D.:** 97.
- Gove, D. (1971). The responses of ecologically dissimilar populations of the water snake *Natrix sipedon sipedon* to surface extracts of prey species, with observations on feeding and defense behaviors. Psychology. Knoxville, University of Tennessee. **M.S.:** 72.
- Gove, D. (1978). The form, variation, and evolution of tongue-flicking in reptiles. Psychology. Knoxville, University of Tennessee. **Ph.D.:** 118.
- Greene, H. W. (1977). Phylogeny, convergence, and snake behavior. Zoology. Knoxville, University of Tennessee. **Ph.D.:** 112.
- Halloy, M. d. G. (1987). A comparative study of the ontogeny of prey ingestion in four species of *Thamnophis* (*Serpentes: Colubridae*). Life Sciences - Ethology. Knoxville, University of Tennessee. **M.S.:** 98.
- Halloy, M. d. G. (1995). Sand burying behavior in neotropical species of lizards, *Liolaemus*, *Tropiduridae*: a phylogeny of the *Boulengeri* group. Life Sciences - Ethology. Knoxville, University of Tennessee. **Ph.D.:** 239.
- Hanaway, T. P. (1975). The development of gendered book-carrying behavior. Psychology. Knoxville, University of Tennessee. **Ph.D.:** 123.
- Hansknecht, K. A. (2009). Foraging behavior of *Nerodia clarkii compressicauda*, with special reference to lingual luring. Ecology and Evolutionary Biology. Knoxville, University of Tennessee. **Ph.D.**
- Herzog, H. A. J. (1974). The vocal communication system and related behaviors of the American alligator (*Alligator mississippiensis*) and other crocodilians. Psychology. Knoxville, University of Tennessee. **M.A.:** 88.
- Herzog, H. A. J. (1979). Studies of the behavior of gamecocks. Psychology. Knoxville, University of Tennessee. **Ph.D.:** 129.
- Jones, J. R. (1974). Social behavior of the Mongolian gerbil. Psychology. Knoxville, University of Tennessee. **Ph. D.:** 143. (1944-2023)
- Jones, S. D. (1974). Investigations on the circadian nature of activity rhythms in newborn and older snakes. Psychology. Knoxville, University of Tennessee. **M.A.:** 45.
- Jordan, R. H. (1979). An observational study of the American black bear (*Ursus americanus*). Psychology. Knoxville, University of Tennessee. **Ph.D.:** 169.
- Judge, J. L. (1975). A comparison of time-sampling techniques used in the study of social behavior in pre-school children. Psychology. Knoxville, University of Tennessee. **Ph.D.:** 113.

- Kaufman, J. D. (1993). Feeding behavior and foraging strategy of a large carnivorous lizard. Psychology. Knoxville, University of Tennessee. **M.A.:** 77.
- Kirby, L. E. (2005). A comparative study of behavior in neonate gartersnakes, *Thamnophis butleri* and *T. radix* (Colubridae), in an area of potential hybridization. Psychology. Knoxville, University of Tennessee. **M.S.:** 110.
- Krause, M. A. (2000). Plasticity of morphology, chemoreception, and predatory behavior in garter snakes (*Thamnophis sirtalis*). Psychology. Knoxville, University of Tennessee. **Ph.D.:** 196.
- Ludlow, J. C. (1974). A preliminary analysis of the activities of captive black bears (*Ursus americanus*) -- Locomotion and breeding. Psychology. Knoxville, University of Tennessee. **M.A.:** 47.
- Lyman, L. P. (1990). The effects of dietary and social experience on the development of behavior in Butler's garter snake, *Thamnophis butleri*. Life Sciences - Ethology. Knoxville, University of Tennessee. **M.S.:** 178.
- Lyman-Henley, L. P. (1991). Effects of social and dietary experience on chemosensory responses, aggregation behavior, and kin recognition in the eastern garter snake *Thamnophis sirtalis*. Life Sciences - Ethology. Knoxville, University of Tennessee. **Ph.D.:** 212.
- Manrod, J. (2003). Object introduction, exploration, and play behavior in Black-throated monitor lizards (*Varanus albigularis albigularis*). Psychology. Knoxville, University of Tennessee. **M.S.:** 84.
- Mehta, R. S. (2005). Constriction behavior, a key innovation in snake evolution: The integration of ethology and physiology. Psychology. Knoxville, University of Tennessee. **Ph.D.**
- Oesch, N. T. (2000). The adaptive significance of human language. Psychology. Knoxville, University of Tennessee. **B.A.:** 102.
- Placyk, J. S. J. (2006). Historical processes, evolutionary change, and phenotypic plasticity: geographic variation in behavior, morphology, and life-history traits of common gartersnake, *Thamnophis sirtalis*, populations. Ecology and Evolutionary Biology. Knoxville, University of Tennessee. **Ph.D.**
- Porter, J. F. (2012). Litter, Color Variation, and Sex Effects on Feeding and Anti-Predator Behavior in Individual *Thamnophis sirtalis* Ecology and Evolutionary Biology. Knoxville, University of Tennessee. **B.S.**
- Pruitt, C. H. (1974). Social behavior of young captive black bears. Psychology. Knoxville, University of Tennessee. **Ph.D.:** 137.
- Richman, M. H. (1974). The effects of space and acquaintance on the social behaviors of pre-school children during free-play. Psychology. Knoxville, University of Tennessee. **Ph. D.:** 157.
- Rivas, J. A. (1999). The life history of the green anaconda (*Eunectes murinus*), with emphasis on its reproductive biology. Life Sciences - Ethology. Knoxville, University of Tennessee. **Ph.D.:** 287.
- Savitzky, B. C. (1989). Aquatic foraging in two independently derived species of snake: *Nerodia rhombifera* (Colubridae) and *Agkistrodon piscivorus* (Viperidae). Life Sciences - Ethology. Knoxville, University of Tennessee. **Ph.D.:** 290. (1958-2009)

- Schwartz, J. M. (1989). Multiple paternity and offspring variability in wild populations of the garter snake *Thamnophis sirtalis*. Life Sciences - Ethology. Knoxville, University of Tennessee. **Ph.D.:** 187.
- Scudder, L. M. (1983). Food consumption and growth in three species of water snakes of the genus *Nerodia* (Colubridae). Psychology. Knoxville, University of Tennessee. **Ph.D.:** 234.
- Tate, J. (1983). A profile of panhandling black bears in the Great Smoky Mountains National Park. Ecology. Knoxville, University of Tennessee. **Ph.D.:** 190. (Co-Chaired with M. R. Pelton)
- Tweedle, T. (1973). A study of the social behavior of the domestic horse. Psychology. Knoxville, University of Tennessee. **M.A.:** 31.
- Waters, M. (2000). Feeding behavior of crayfish snakes (*Regina*): allometry, ontogeny, and adaptations to an extremely specialized diet. Ecology and Evolutionary Biology. Knoxville, University of Tennessee. **Ph.D.:** 165.
- Weldon, P. J. (1984). The evolution of chemical signals and predator-prey interactions among snakes. Zoology. Knoxville, University of Tennessee. **Ph.D.:** 170.
- York, D. S. (1983). Agonistic and reproductive behaviors in the Malayan pit viper (*Calloselasma rhodostoma*). Life Sciences - Ethology. Knoxville, University of Tennessee. **M.S.:** 95.

Postdoctoral Students

- Carey P. Yeager. Studies on predatory and social behavior in gartersnakes.
- Gordon H. Rodda. Studies on social behavior of green iguanas in Venezuela.
- John L. Gittleman. Comparative methods in phylogenetic analysis and behavior.
- Vladimir Dinets. Studies on gartersnake variability, reptile sociality, and play in fishes.