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### Education

Ph.D., Biology, University of Michigan. 1996. "The behavioral ecology of the glossy black-cockatoo *Calyptorhynchus lathami halmaturinus*" Advisor: Dr. Richard D. Alexander.

B.A., Biology, University of California at Santa Cruz. 1985. Highest Honors in Biology, College Honors, Honors on Senior Comprehensive Requirement.

A.A., Computer Science, Montgomery College, Maryland. 1983. Chancellor's Honor Award.

### Academic Employment

Assistant Professor, University of Arizona,  
Department of Ecology and Evolutionary Biology. 2002 - current

External Professor, Santa Fe Institute, 2005-current

Co-director, Budapest Complex Systems Summer School. 2002.

(Administered by the Central European University and the Santa Fe Institute)

Post-doctoral Fellow, Santa Fe Institute. 1999 - 2002.

### Research Grants (as P.I.)

Recovery Plan for the South Australian Glossy Black Cockatoo. Australian National Conservation Agency. 1995.

Dolphins of Shark Bay Research Foundation, 1994

Explorers Club Exploration Fund, 1993

Sigma Xi Grant-in-Aid of Research, 1991, 1993

Chicago Zoological Society, 1992

Rackham Discretionary Fund, University of Michigan, 1992

Reunion of Zoology Graduate Students of the University of Michigan, 1992

Wildlife Conservation Fund, South Australian National Parks and Wildlife Service, 1992

## Publications

- Mitteldorf, J.M., & **Pepper**, J.W. 2007. How can evolutionary theory accommodate recent empirical results on organismal senescence? *Theory in Biosciences* (in press)
- Mitteldorf, J.M., & **Pepper**, J.W. 2007. Senescence as an adaptation to limit the spread of disease. *Theoretical Population Biology* (in press)
- Pepper**, J.W. 2007. Simple Models of Assortment through environmental feedback. *Artificial Life*, **13**(1): 1-9.
- Merlo, L.M.F., **Pepper**, J.W., Reid, B.J., and Maley, C.C. 2006. Cancer as an evolutionary and ecological process. *Nature Reviews Cancer*. **6**: 924-935.
- G. A. Hoelzer, E. Smith, J. W. **Pepper**. 2006. On the logical relationship between natural selection and self-organization. *Journal of Evolutionary Biology*. **19**(6):1785-1994
- Pepper**, J.W. 2006. Considering cooperation: Empiricism as a foundation for unifying the behavioral sciences. *Behavioral and Brain Sciences* (in press).  
Preprint online at:  
<http://www.bbsonline.org/Preprints/Gintis-12052005/Commentators/.Pepper.html>
- Pepper**, J.W. 2003. The evolution of evolvability in genetic linkage patterns. *BioSystems*.69:115-126.
- Jun, J., **Pepper**, J.W., Savage, V., Gillooly, J., & Brown, J.H. 2003. Allometric scaling of ant foraging trail networks. *Evolutionary Ecology Research*, 5: 297-303.
- Pepper**, J.W. & Smuts, B. B.B 2002. A Mechanism for the Evolution of Altruism among Non-Kin: Positive assortment through environmental feedback. *American Naturalist* 160: 205-213.
- Mitani, J.C., Watts, D.P., **Pepper**, J.W., & Merriwether, D.A. 2002. Demographic and social constraints on male chimpanzee behavior. *Animal Behaviour* 64: 727-737
- Pepper**, J.W. and Knudsen, T. 2001. Selection without multiple replicators? *Behavioral and Brain Sciences* 24(3):550-551.
- Pepper**, J.W. and Smuts, B.B. 2001. Agent-based modeling of multilevel selection: the evolution of feeding restraint as a case study. Pp 57-68 in: W. C. Pitt, ed. *Proceedings of the 4th Annual Swarm User Group Conference. Natural Resources and Environmental Issues, Volume XIII*, S. J. and Jessie E. Quinney Natural Resources Research Library, Logan, UT.
- Pepper**, J.W. 2000. Relatedness in group-structured models of social evolution. *Journal of Theoretical Biology* 206(3):355-368.
- Pepper**, J.W. & Smuts, B.B. 2000. The evolution of cooperation in an ecological context: an agent-based model. In: *Dynamics in Human and Primate Societies: Agent-Based Modeling of Social and Spatial Processes*. T. A. Kohler and G. J. Gumerman, eds. Pp. 45-76. Oxford University Press: Oxford.
- Pepper**, J.W., Male, T. and Roberts, G. 2000. The foraging ecology of the South Australian glossy black-cockatoo, *Calyptorhynchus lathami halmaturinus*. *Austral Ecology* 25:16-24.
- Pepper**, J.W., Mitani, J.C., and Watts, D.P. 1999. General gregariousness and specific social preferences among wild chimpanzees. *International Journal of Primatology* 20:613-632.
- Smolker, R.A. and **Pepper**, J.W. 1999. Whistle convergence among allied male bottlenose dolphins (*Delphinidae*, *Tursiops* sp.). *Ethology* 105:595-617.
- Heinrich, B. & **Pepper**, J.W. 1998. Influence of competitors on caching behavior in the common raven, *Corvus corvax*. *Animal Behaviour* 56:1083-1090.

- Pepper, J.W.** 1997. A survey of the South Australian glossy black-cockatoo (*Calyptorhynchus lathami halmaturinus*) and its habitat. *Wildlife Research* 24:209-223.
- Arnett, A.E. and **Pepper, J.W.** 1997. Evidence of mate guarding in the Glossy Black-Cockatoo *Calyptorhynchus lathami*. *Emu* 97:177-180.
- Smolker, R.A., Richards, A.F., Connor, R.C., and **Pepper, J.W.** 1992. Sex differences in patterns of association among Indian Ocean bottlenose dolphins. *Behaviour* 123(1-2):38-69.
- Pepper, J.W.** 1993. A new food source for the Glossy Black Cockatoo. *South Australian Ornithologist* 31(6):144-145.
- Pepper, J.W., Braude, S.H., Lacey, E.A., and Sherman, P.W. 1990. Vocalizations of the naked mole-rat. In: *The Biology of the Naked Mole-rat*. P.W. Sherman, J.U.M. Jarvis, and R.D. Alexander, eds. Pp. 243-274. Princeton University Press: Princeton.
- Chamberlain, S.C., **Pepper, J.W.**, Battelle, B.-A., Wyse, G.A. and Lewandowski, T.J. 1986. Immunoreactivity in *Limulus*. II. Studies of serotonin-like immunoreactivity, endogenous serotonin, and serotonin synthesis in the brain and lateral eye. *Journal of Comparative Neurology* 251:363-375.
- Battelle, B.A., Truckenmiller, M.E. and **Pepper, J.W.** 1983. Development of rat retinal neurons in monolayer culture: effect of elevating the concentration of  $K^+$  in the growth medium. *Society for Neuroscience Abstracts*, Vol. 9, Part 2, p. 1099.

### **Invited Symposia and Seminars**

Institute for Advanced Study, Berlin, May 2001. Workshop on “Principles of Social Evolution”.

Max Planck Institute for Mathematics in the Sciences, Leipzig, Germany, May 2001. Workshop on “Complexity - Unifying Themes for the Sciences and New Frontiers for Mathematics”.

Theoretical and Physics Divisions, Los Alamos National Laboratory, November 2000. “The evolution of cooperation: an old question and a new answer”.

Department of Biology, University of New Mexico, November 2000. “Environmental feedback: a novel mechanism for the evolution of cooperation among non-kin.”

Center for the Study of Complex Systems, University of Michigan, Oct. 2000. “Positive assortment among cooperators through environmental feedback.”

Department of Biology, Binghamton University. Oct. 2000. “The evolution of highly evolvable genomes”, and “Evolution of cooperation through environmental feedback”.

Center for the Study of Evolution and the Origin of Life, UCLA. Dec. 1999. “An agent-based model of multilevel selection.”

Program for the Study of Complex Systems, University of Michigan, Dec. 1998. “An agent-based model of multilevel selection.”

Symposium on Coevolution, Santa Fe Institute and the University of Michigan Program for the Study of Complex Systems. Nov. 1998.

Third Annual Interdisciplinary Symposium on Complex Systems. The University of Michigan Program for the Study of Complex Systems, March, 1997.

Department of Biology, University of Western Australia, August 1992. “The ecology and conservation of the Kangaroo Island Glossy Black-Cockatoo.”

Department of Anthropology, University of California at Davis. March 1990. “A method for the analysis of association preferences using group composition data.”

### **Professional Societies**

Society for the Study of Evolution

Animal Behavior Society

International Society for Behavioral Ecology

### **Service**

Editorial Board, *Theory in Biosciences*

Associate, *Behavioral and Brain Sciences*

Reviewer for: *Acta Biotheoretica*, *American Naturalist*, *Animal Behaviour*, *Artificial Life*, *Austral Ecology*, *Complexity*, *Austral Ornithology*, *Ethology*, *Handbook of Australian, New Zealand and Antarctic Birds*, *Journal of Theoretical Biology*, *Molecular Ecology*, *Proc. Royal Soc. Lond. B*, *Physical Review E*