

# JOHN L. HOOGLAND

## Present position

Professor of biology, The University of Maryland

## Mailing address

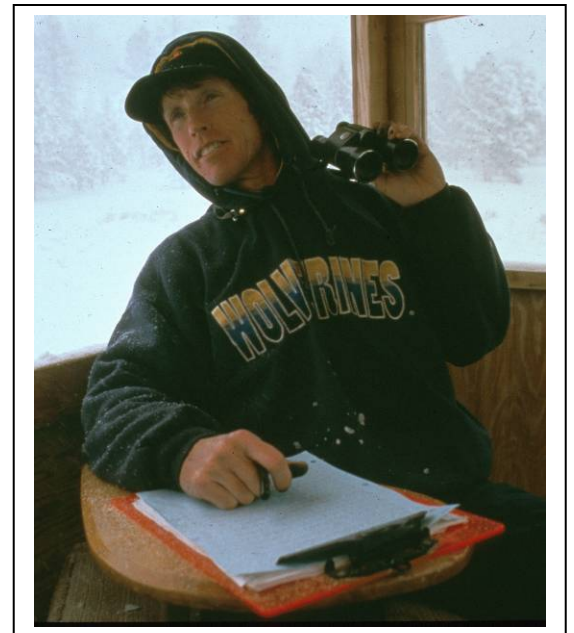
The University of Maryland, Appalachian Laboratory, Frostburg, Maryland, 21532.  
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## Academic degrees

B.S. in zoology, The University of Michigan, 1971  
Ph.D. in zoology, The University of Michigan, 1977

## Academic positions

1997-present, Professor, The University of Maryland  
1987-1997, Associate professor, The University of Maryland  
1985-1986, Assistant professor, The University of Maryland  
1979-1985, Assistant professor, Princeton University  
1977-1979, National Science Foundation postdoctoral fellow, The University of Minnesota



## Publications—Books

- 3) Hoogland, J. L. 2011. Prairie dogs with white-tails: Behavioral ecology and conservation of Gunnison's, Utah, and white-tailed prairie dogs. (in preparation).
- 2) Hoogland, J. L., editor. 2006. Conservation of the black-tailed prairie dog: Saving North America's western grasslands. Island Press, Washington, District of Columbia.
- 1) Hoogland, J. L. 1995. The black-tailed prairie dog: Social life of a burrowing mammal. University of Chicago Press, Chicago, Illinois.

## Publications—Journal articles and book chapters

- 65) Hoogland, J. L. 2009. Nursing of own and alien offspring by Utah prairie dogs (*Cynomys parvidens*). Behavioral Ecology and Sociobiology 63:1621-1634.
- 64) Winterrowd, M. F., F. S. Dobson, J. L. Hoogland, and D. W. Foltz. 2009. Social subdivision influences effective population size in the colonial-breeding black-tailed prairie dog. Journal of Mammalogy 90:380-387.
- 63) Hoogland, J. L., D. A. James, and L. Watson. 2009. Prairie dogs in captivity. Pages 255-266 in L. Hess and N. Antinoff, editors. Nutrition and Diseases of Unusual Exotic Pets. W. B. Saunders, Elsevier, Philadelphia, Pennsylvania.
- 62) Miller, B. J., R. P. Reading, D. E. Biggins, J. K. Detling, S. C. Forrest, J. L. Hoogland, J. Javersak, S. D. Miller, J. Proctor, J. Truett, and D. W. Uresk. 2007. Prairie dogs: An

- ecological review and current biopolitics. *Journal of Wildlife Management* 71:2801-2810.
- 61) Hoogland, J. L. 2007a. Alarm calling, multiple mating, and infanticide among black-tailed Gunnison's, and Utah prairie dogs. Pages 438-449 in: J. O. Wolff and P.W. Sherman, editors. *Rodent Societies*. University of Chicago Press. Chicago, Illinois.
  - 60) Hoogland, J. L. 2007b. Conservation of prairie dogs. Pages 472-477 in: J. O. Wolff and P.W. Sherman, editors. *Rodent Societies*. University of Chicago Press. Chicago, Illinois.
  - 59) Hoogland, J. L. 2007c. Ecology and social behavior of white-tailed prairie dogs. Annual report to Colorado Division of Wildlife. 19 pages.
  - 58) Manno, T. G., F. S. Dobson, J. L. Hoogland, and D. W. Foltz. 2007. Social group fission and gene dynamics among black-tailed prairie dogs (*Cynomys ludovicianus*). *Journal of Mammalogy* 88:448-456.
  - 57) Hoogland, J. L., K. E. Cannon, L. M. DeBarbieri, and T. G. Manno. 2006. Selective predation on Utah prairie dogs. *The American Naturalist* 168:546-552.
  - 56) Hoogland, J. L. 2006. Why care about prairie dogs? Pages 1-4 in J. L. Hoogland, editor. *Conservation of the Black-tailed Prairie Dog*. Island Press, Washington, District of Columbia.
  - 55) Hoogland, J. L. 2006. Natural history of prairie dogs. Pages 5-6 in J. L. Hoogland, editor. *Conservation of the Black-tailed Prairie Dog*. Island Press, Washington, District of Columbia.
  - 54) Hoogland, J. L. 2006. Social behavior of prairie dogs. Pages 7-26 in J. L. Hoogland, editor. *Conservation of the Black-tailed Prairie Dog*. Island Press, Washington, District of Columbia.
  - 53) Hoogland, J. L. 2006. Demography and population dynamics of prairie dogs. Pages 27-52 in J. L. Hoogland, editor. *Conservation of the Black-tailed Prairie Dog*. Island Press, Washington, District of Columbia.
  - 52) Hoogland, J. L. 2006. Why have so many prairie dogs disappeared? Pages 89-93 in J. L. Hoogland, editor. *Conservation of the Black-tailed Prairie Dog*. Island Press, Washington, District of Columbia.
  - 51) Hoogland, J. L. 2006. Saving prairie dogs: Can we? Should we? Pages 261-266 in J. L. Hoogland, editor. *Conservation of the Black-tailed Prairie Dog*. Island Press, Washington, District of Columbia.
  - 50) Hoogland, J. L. 2006. Glossary of prairie dog terms. Pages 279-288 in J. L. Hoogland, editor. *Conservation of the Black-tailed Prairie Dog*. Island Press, Washington, District of Columbia.
  - 49) Hoogland, J. L., S. Davis, S. Benson-Amram, D. LaBruna, B. Goossens, and M. A. Hoogland. 2004. Pyraferm halts plague among Utah prairie dogs. *Southwestern Naturalist* 49:376-383.
  - 48) Dobson, F. S., R. K. Chesser, J. L. Hoogland, D. W. Sugg, and D. W. Foltz. 2004. The influence of social breeding groups on effective population size. *The Journal of Mammalogy* 85:58-66.
  - 47) Hoogland, J. L. 2004. Infanticide. In: M. Bekoff and J. Goodall, editors. *Encyclopedia of Animal Behavior*.
  - 46) Hoogland, J. L. 2004. The prairie dog. *World Book Encyclopedia*, Volume P, pages 732-733.

- 45) Hoogland, J. L. 2003. Black-tailed prairie dog. *Cynomys ludovicianus* and allies. Pages 232-247 in G. A. Feldhamer, B. C. Thompson, and J. A. Chapman, editors. *Wild Mammals of North America*. Johns Hopkins University Press, Baltimore, Maryland.
- 44) Hoogland, J. L. 2003. Sexual dimorphism in five species of prairie dogs. *Journal of Mammalogy* 84:1254-1266.
- 43) Haynie, M. L., R. A. van den Bussche, J. L. Hoogland, and D. A. Gilbert. 2003. Parentage, multiple paternity, and breeding success in Gunnison's and Utah prairie dogs. *Journal of Mammalogy* 84:1244-1253.
- 42) Hoogland, J. L. 2001. Black-tailed, Gunnison's, and Utah prairie dogs all reproduce slowly. *Journal of Mammalogy* 82:917-927.
- 41) Miller, B., R. Reading, J. Hoogland, T. Clark, G. Ceballos, R. List, S. Forrest, L. Hanebury, P. Manzano, J. Pacheco, and D. Uresk. 2000. The role of prairie dogs as keystone species: A response to Stapp. *Conservation Biology* 14:318-321.
- 40) Hoogland, J. L. 1999. Philopatry, dispersal, and social organization of Gunnison's prairie dogs. *Journal of Mammalogy* 80:243-251.
- 39) Dobson, F. S., R. K. Chesser, J. L. Hoogland, D. W. Sugg, and D. W. Foltz. 1998. Breeding groups and gene dynamics in a socially structured population of prairie dogs. *Journal of Mammalogy* 79:671-680.
- 38) Hoogland, J. L. 1998. Estrus and copulation among Gunnison's prairie dogs. *Journal of Mammalogy* 79:887-897.
- 37) Hoogland, J. L. 1998. Why do female Gunnison's prairie dogs copulate with more than one male? *Animal Behaviour* 55:351-359.
- 36) Hoogland, J. L. 1997. Duration of gestation and lactation for Gunnison's prairie dogs. *Journal of Mammalogy* 78:173-180.
- 35) Dobson, F. S., R. K. Chesser, J. L. Hoogland, D. W. Sugg, and D. W. Foltz. 1997. Do black-tailed prairie dogs minimize inbreeding? *Evolution* 51:970-978.
- 34) Sugg, D. W., R. K. Chesser, F. S. Dobson, and J. L. Hoogland. 1996. Behavioral ecology meets population genetics. *Trends in Ecology and Evolution* 11:338-342.
- 33) Hoogland, J. L. 1996. The black-tailed prairie dog. *Mammalian Species* 535:1-10.
- 32) Hoogland, J. L. 1996. Why do Gunnison's prairie dogs give antipredator calls? *Animal Behaviour* 51:871-880.
- 31) Hoogland, J. L. 1995. *The Black-tailed Prairie Dog: Social Life of a Burrowing Mammal*. The University of Chicago Press. Chicago, Illinois. (17 chapters, 557 pages, 66 tables, 204 figures, 102 photographs, and 2,100 references).
- 30) Grossmann, J., and J. L. Hoogland. 1994. Home on the range. *BBC Wildlife* 12:28-36.
- 29) Hoogland, J. L. 1994. Amicable and hostile treatment of juvenile prairie dogs by older conspecifics. Pages 321-337 in S. Parmigiani and F. S. vom Saal, editors. *Infanticide and Parental Care*. Harwood Academic Publishers. New York, New York.
- 28) Hoogland, J. L. 1992. Levels of inbreeding among prairie dogs. *American Naturalist* 139:591-602.
- 27) Fiorello, C. V., and J. L. Hoogland. 1991. Why are some prairie dogs especially good mothers? *American Zoologist* 31:A94.
- 26) Hoogland, J. L., R. H. Tamarin, and C. K. Levy. 1989. Communal nursing in prairie dogs. *Behavioral Ecology and Sociobiology* 24:91-95.
- 25) Hoogland, J. L., D. K. Angell, J. G. Daley, and M. C. Radcliffe. 1988. Demography and population dynamics of prairie dogs. Pages 18-22 in D. W. Uresk, G. L. Schenbeck, and

- R. Cefkin, editors. Proceedings of the Eighth Great Plains Wildlife Damage Control Workshop. U.S.D.A. Forest Service, Technical Report RM-154. Fort Collins, Colorado.
- 24) Foltz, D. W., J. L. Hoogland, and G. M. Koscielny. 1988. Effects of sex, litter size, and heterozygosity on juvenile weight in black-tailed prairie dogs (*Cynomys ludovicianus*). *Journal of Mammalogy* 69:611-614.
  - 23) Hoogland, J. L., and J. M. Hutter. 1987. Aging live prairie dogs from molar attrition. *Journal of Wildlife Management* 51:393-394.
  - 22) Brown, C. R., and J. L. Hoogland. 1987. Risk in mobbing for solitary and colonial swallows. *Animal Behaviour* 34:1319-1323.
  - 21) Hoogland, J. L. 1986. The Prairie Dog. *World Book Encyclopedia*, volume P.
  - 20) Hoogland, J. L. 1986. Nepotism in prairie dogs varies with competition but not with kinship. *Animal Behaviour* 34:263-270.
  - 19) Grady, R. M., and J. L. Hoogland. 1986. Why do male prairie dogs (*Cynomys ludovicianus*) give a mating call? *Animal Behaviour* 34:108-112.
  - 18) Hoogland, J. L. 1985. Infanticide in prairie dogs: Lactating females kill offspring of close kin. *Science* 230:1037-1040.
  - 17) Hoogland, J. L. 1985. Sociobiology of the black-tailed prairie dog (Sciuridae: *Cynomys ludovicianus*). *National Geographic Society Research Reports* 1978:353-363.
  - 16) Hoogland, J. L. 1983. Nepotism and alarm calling in the black-tailed prairie dog (*Cynomys ludovicianus*). *Animal Behaviour* 31:472-479.
  - 15) Hoogland, J. L. 1983. Black-tailed prairie dog coterries are cooperatively breeding units. *The American Naturalist* 121:275-280.
  - 14) Foltz, D. W., and J. L. Hoogland. 1983. Genetic evidence of outbreeding in the black-tailed prairie dog (*Cynomys ludovicianus*). *Evolution* 37:273-281.
  - 13) Hoogland, J. L. 1982. Prairie dog lore. *Wall Street Journal*, 22 September.
  - 12) Garrett, M. G., J. L. Hoogland, and W. L. Franklin. 1982. Demographic differences between an old and a new colony of black-tailed prairie dogs (*Cynomys ludovicianus*). *American Midland Naturalist* 108:51-59.
  - 11) Hoogland, J. L., and D. W. Foltz. 1982. Variance in male and female reproductive success in a harem-polygynous mammal, the black-tailed prairie dog (Sciuridae: *Cynomys ludovicianus*). *Behavioral Ecology and Sociobiology* 11:155-163.
  - 10) Hoogland, J. L. 1982. The black-footed ferret and the evolution of prairie dog coloniality: Reply to a comment by Powell. *Ecology* 63:1968-1969.
  - 9) Hoogland, J. L. 1982. Prairie dogs avoid extreme inbreeding. *Science* 215:1639-1641.
  - 8) Foltz, D. W., and J. L. Hoogland. 1981. Analysis of the mating system of the black-tailed prairie dog (*Cynomys ludovicianus*) by likelihood of paternity. *Journal of Mammalogy* 62:706-712.
  - 7) Hoogland, J. L. 1981. Sex ratio and local resource competition. *The American Naturalist* 117:796-797.
  - 6) Hoogland, J. L. 1981. The evolution of coloniality in white-tailed and black-tailed prairie dogs (Sciuridae: *Cynomys leucurus* and *C. ludovicianus*). *Ecology* 62:252-272.
  - 5) Hoogland, J. L. 1981. Nepotism and cooperative breeding in the black-tailed prairie dog (Sciuridae: *Cynomys ludovicianus*). Pages 283-310 in: R. D. Alexander and D. W. Tinkle, editors. *Natural Selection and Social Behavior*. Chiron Press. New York, New York.
  - 4) Hoogland, J. L. 1979. Aggression, ectoparasitism, and other possible costs of prairie dog (Sciuridae: *Cynomys* spp.) coloniality. *Behaviour* 69:1-35.

- 3) Hoogland, J. L. 1979. The effect of colony size on individual alertness of prairie dogs (Sciuridae: *Cynomys* spp.). *Animal Behaviour* 27:394-407.
- 2) Alexander, R. D., J. L. Hoogland, R. D. Howard, K. M. Noonan, and P. W. Sherman. 1979. Sexual dimorphisms and breeding systems in pinnipeds, ungulates, primates, and humans. Pages 402-435 in: N. A. Chagnon and W. Irons, editors. *Evolutionary Biology and Human Social Behavior*. Duxbury Press.
- 1) Hoogland, J. L., and P. W. Sherman. 1976. Advantages and disadvantages of Bank Swallow (*Riparia riparia*) coloniality. *Ecological Monographs* 46:33-58.

### **Grants** (for which I am/have been the sole principal investigator)

Denver Zoological Foundation, 2009, 2007, 2006, 2005, 2002, 2001, 1999, 1998  
National Science Foundation (NSF), 2007, 2002, 1996, 1992, 1987, 1983, 1981, 1979, 1977, 1975  
NSF, Research Experiences for Undergraduates (REU), 2008, 2004, 2003, 2002, 1998, 1997, 1994  
National Fish and Wildlife Foundation, 2005  
Environmental Defense, 2002  
Ted Turner Foundation, 1999  
National Geographic Society, 1999, 1996, 1990, 1984, 1979, 1978  
American Philosophical Society, 1990  
Earthwatch, 1986, 1985, 1983, 1977, 1976  
Max McGraw Wildlife Foundation, 1985  
Eppley Foundation, 1985  
National Institutes of Health, 1983  
American Philosophical Society, 1983  
Theodore Roosevelt Memorial Fund, 1977  
Horace H. Rackham Graduate School, 1976, 1973  
NSF Doctoral Dissertation Grant, 1975  
Sigma-Xi, 1975

### **Awards**

Capstone Lecture, 2010 Annual Meeting of The American Society of Mammalogists  
Harry Frank Guggenheim Career Development Award, 1986  
American Society of Mammalogists Alma Shadle Award, 1976  
Distinguished Teaching Fellow Award, 1975  
Phi Beta Kappa, 1971  
Peter Okkelberg Award for outstanding achievement in biology, 1971

### **Citations to my publications by other scientists**

Through November 2009, my publications have generated 2,180 citations in 106 different journals. Fourteen have generated >50 citations, and five have generated >100 citations (Source: Science Citation Index).

## **Popular articles and videos that feature my research**

### **Popular journals**

*New Scientist*, 2006; *ScienceNow*, 2006; *Current Science*, 2004; *Terre Sauvage*, 1998 (French); *Smithsonian*, 1998; *National Geographic*, 1998; *Ripley's Believe It or Not*, 1996; *Marquis Who's Who in America*, 1996; *German Wildlife*, 1995; *National Geographic Magazine*, 1998; *Natural History*, 1995; *New Scientist*, 1995; *Discover*, 1988; *Geo*, 1988 (German); *Maryland Today*, 1988; *Ranger Rick*, 1988, 1992, 1996; *The Scientist*, 1988; *Maryland Today*, 1988; *Ranger Rick*, 1988, 1992, 1996; *The Scientist*, 1988; *BBC Wildlife*, 1986, 1994; *Audubon*, 1987; *Omni*, 1986; *Earthwatch*, 1985; *National Wildlife*, 1985, 1996; *Discover*, 1982; *Science 82*, 1982; *Science News*, 1981, 1985; *Chemical and Electrical News*, 1977; *Popular Mechanics*, 1977; *U.S. News and World Report*, 1976, 1995

### **Textbooks**

Freeman's *Biological Science* (2005); Freeman and Herron's *Evolutionary Analysis* (2004); Birkhead's *Promiscuity* (2000); Alcock's *Animal Behavior* (2001); Krebs and Davies's *Introduction to Behavioral Ecology* (1993); numerous others

### **Newspapers**

*Austrian Times* (Austria), *Chicago Sun-Times*, *Cleveland Plain Dealer*, *Detroit Free Press*, *Le Generaliste* (France), *New York Times*, *Saint Paul Pioneer Press*, *USA Today*, *Wall Street Journal*, *Washington Post*, and numerous others

### **Radio**

*Quirks and Quarks*, 2006  
*ScienceUpdate*, 2006  
Flagstaff Public Radio, interview about communication among prairie dogs, 2003  
Denver Public Radio, interview about conservation of prairie dogs, 2002  
*Earth and Sky*, 1994

### **Movies and videos**

*Population Biology of Prairie Dogs* (Japanese Television, 2003)  
*Prairie Dog Squad* (National Geographic Society, 2002)  
*Celebrity Crusaders* (Animal Planet Network, 1999)  
*Underdogs: Prairie Dogs Under Attack* (Turner Television, 1998)  
*Maryland's Prairie Dog Companion* (Maryland Public Television, 1997)  
*Catching the Last Prairie Dog* (Australian Wildlife, 1996)  
*Plague in Prairie Dog Colonies* (Utah Television Network, 1995)  
*The Badlands* (National Geographic Society, 1994)

## **Recent invited lectures**

Bryce Canyon National Park	Doane College
Guadalupe Mountains National Park	National Zoological Park
University of Kansas	University of Nebraska
Washington University in Saint Louis	University of Michigan
Denver Zoological Foundation	University of Florida

## Teaching experience

Animal behavior	Introductory biology
Conservation biology	Introduction to Entomology
Evolutionary ecology	Population biology
Field ecology	Wildlife management

## Undergraduates who have worked under my direction

I have supervised the research of 150+ undergraduates, many of whom have applied the research to either academic credit (e.g., Brown, Michigan, Michigan State, Princeton, and Yale) or a senior thesis (e.g., Brown, Davidson, Minnesota, Minot State, Pennsylvania, Princeton, and Yale).

Working with me in the field has helped students gain acceptance into the following graduate schools: Auburn, Boston University, Brown, Central Florida, Cincinnati, Cornell, Massachusetts, McMasters, Michigan, Oklahoma, Oklahoma State, Penn State, Princeton, Texas A&M, Texas Tech, UC-Davis, UC-San Diego, Washington, Woods Hole, and Yale.

Ten of my recent students have been recipients of NSF-REU Fellowships, eight have co-authored publications with me over the last several years, and three are currently preparing manuscripts with me for submission.

## Websites

Summary of research and teaching: <http://www.al.umces.edu/research/interests/johnresearch.pdf>  
101 Questions and Answers about Prairie Dogs: <http://www.prairiedog101.org/>

## Journals and agencies for which I have been a reviewer/consultant

<i>American Naturalist</i>	<i>London Zoo</i>
<i>Animal Behaviour</i>	Mike Birkhead Filmmakers
<i>Auk</i>	National Academy of Sciences
Australian Wildlife Filmmakers	National Geographic Society
<i>BBC Wildlife</i>	National Park Service
<i>Behavioral Ecology and Sociobiology</i>	National Science Foundation
Boston Zoo	<i>National Wildlife</i>
British Foundation for Scientific Research	National Zoological Park
<i>Canadian Journal of Zoology</i>	<i>Natural History</i>
Center for Field Research	<i>Nature</i>
Earthwatch	People for the Ethical Treatment of Animals
Environmental Protection Agency	<i>Ranger Rick</i>
<i>Ethology</i>	Royal Society of England
<i>Ethology, Ecology, and Evolution</i>	<i>Science</i>
<i>Ethology and Sociobiology</i>	U.S. Department of Agriculture
Harry Frank Guggenheim Foundation	<i>World Book Encyclopedia</i>
<i>Journal of Mammalogy</i>	World Wildlife Foundation

## **Hobbies**

My hobbies include tennis, soccer, ultimate Frisbee, mountain-biking, ping-pong, chess, and Lionel trains.