

CURRICULUM VITAE
Robert William Mannan

Education

- Ph.D. Wildlife Ecology, Oregon State University, 1982
- M.S. Wildlife Ecology, Oregon State University, 1977
- B.A. Biology, Hanover College, Hanover, Indiana, 1974

Employment

2006-present: Chair, Wildlife and Fisheries Resources Program, School of Natural Resources and the Environment (SNRE), University of Arizona, Tucson
1993-present: Professor, SNR, University of Arizona, Tucson
1988-1993: Associate Professor, SNR, University of Arizona, Tucson
1982-1987: Assistant Professor, SNR, University of Arizona, Tucson
1982: Research Associate, Dep. Fisheries and Wildlife, Oregon State University, Corvallis
1981: Instructor, Dep. Fisheries and Wildlife, Oregon State University
1978-1982: Graduate Res. Assist., Dep. Fisheries and Wildlife, Oregon State University

Research Area

Relationships between animals and their habitats, particularly in forest and urban environments, and animal behavior as it relates to habitat use.

Teaching

Undergraduate Courses: RNR 160D1, Wildlife, Conservation, and American Culture; RNR 195A, Challenges to Conserving Wild Things and Places, RNR 384, Natural Resource Management Practices
Graduate Courses: WFSC 595C, Wildlife Habitat Analysis; RNR 546, Principles of Research

Undergraduate and Graduate Advising

Advised between 25-45 undergraduate students/year since 1982
Co-advisor to student Chapter of The Wildlife Society, 1982-present
Internship Coordinator for Wildlife and Fisheries Resources Program, 1990-present
Advisor to Undergraduate Biology Intern, 2001-2002
Advisor to Professional High School Intern, 1998, 2002
Currently advising 1 graduate student

Honors

- Teaching Award of Merit, National Association of Colleges and Teachers of Agriculture, and the College of Agriculture, 1990-1991.
- Outstanding Scholarly Achievement Award, 1991, School of Natural Resources, with W. Matter for "More on gaining reliable knowledge: a comment" (J. Wildl. Manage. 53:1172_1176).
- Outstanding Faculty Member, School of Natural Resources, 1994-95.
- Outstanding Scholarly Achievement Award, 1994-95, with Michael Morrison for "Wildlife Habitat Analysis," Wisconsin Press.
- Outstanding Course Award, 1998, 2001, 2003, 2005, School of Natural Resources.
- Wildlife-Habitat Relationships Award, Arizona Chapter of The Wildlife Society in 2001.
- George Miksch Suttom Award in Conservation Research, 2003,
- Scrapping Bear Award, Arizona Chapter of the Wildlife Society, 2005.

Selected Publications

Books

- Morrison, M. L., B. G. Marcot, and R. W. Mannan. 1992. Wildlife-habitat relationships: concepts and applications. Univ. Wisconsin Press. 343pp.
- Morrison, M. L., B. G. Marcot, and R. W. Mannan. 1998. Wildlife-habitat relationships: concepts and applications. Univ. Wisconsin Press. 2nd Edition, 435pp.
- Morrison, M. L., B. G. Marcot, and R. W. Mannan. 2006. Wildlife-habitat relationships: concepts and applications. Island Press. 3rd Edition. 493pp.

Chapters in Books

- Neitro, W. A., R. W. Mannan, D. Taylor, V. W. Binkley, B. G. Marcot, F. F. Wagner, and S. P. Cline. 1985. Snags (wildlife trees). Pages 129-169 in E. R. Brown, ed. Management of wildlife and fish habitats in forests of western Oregon and Washington. U. S. Dep. Agric. For. Serv. PNW-Pub. R6-F&WL-192-1985.
- Krausman, P. R., and R. W. Mannan. 1985. Animals and soil in Arizona. Pages 55-62 in D. M. Hendricks, Arizona Soils. College of Agriculture, Univ. Arizona.
- Mannan, R. W., R. N. Conner, B. Marcot, and J. M. Peek. 1993. Managing forestlands for wildlife. Pages 689-721 in T. Bookhout, ed. Wildlife management techniques manual. 5th ed. The Wildlife Society.
- Mannan, R. W., and C. W. Boal. 2004. Birds of prey in urban landscapes. Pages 105-117 in N. Fascione, A. Delach, and M. E. Smiths, Eds. People and predators. Defenders of Wildlife,

Island Press, Washington, D. C.

Tapia, L., P. L. Kennedy, and R. W. Mannan. 2007. Habitat sampling. Pages 153-169 in D. M. Bird and K L. Bildstein, Eds. Raptor research and management techniques. Raptor Research Foundation.

Mannan, R. W. 2009. Exurban land development and breeding birds. Pages 103-115 in A. Espoanza and G. McPherson, editors. The planners guide to natural resource Conservation. Springer Press.

Mannan, R. W., and R. J. Steidl. 2013. Habitat. Pages XXX-XXX in P. R. Krausman and J. W. Cain III, Editors. Wildlife management: contemporary principles and practices. The Wildlife Society and John Hopkins University Press. *In press*.

Selected Refereed Journal Articles

Mannan, R. W. 1979. American redstart assists at yellow warbler nest. *Bird-Banding* 50:263.

Mannan, R. W., E. C. Meslow, and H. M. Wight. 1980. Use of snags by birds in Douglas-fir forests, western Oregon. *J. Wildl. Manage.* 44:787-797.

Morrison, M. L., R. W. Mannan, and G. L. Dorsey. 1981. Effects of number of circular plots on estimates of avian density and species richness. Pages 405-408 in C. J. Ralph and J. M. Scott, eds. Estimating numbers of terrestrial birds. *Stud. Avian Biol.* 6.

Mannan, R. W., B. H. Hale, and M. L. Morrison. 1983. Observations of nesting Townsend's warblers in the Wallowa Mountains, northeastern Oregon. *Murrelet* 64:23-25.

Mannan, R. W., and E. C. Meslow. 1984. Bird populations and vegetation characteristics in managed and old-growth forests, northeastern Oregon. *J. Wildl. Manage.* 48:1219-1238.

Mannan, R. W. 1984. Summer area requirements of pileated woodpeckers in western Oregon. *Wildl. Soc. Bull.* 12:265-268.

Mannan, R. W., M. L. Morrison, and E. C. Meslow. 1984. Comment: the use of guilds in forest bird management. *Wildl. Soc. Bull.* 12:426-430.

Mannan, R. W. 1984. Habitat use by Hammond's flycatchers in old-growth forests, northeastern Oregon. *Murrelet* 65:84-86.

Goad, M. S., and R. W. Mannan. 1987. Nest site selection by elf owls in Saguaro National Monument, Arizona. *The Condor* 89:659-662.

Horton, S. P., and R. W. Mannan. 1988. Effects of understory prescribed fire on snags and

- cavity-nesting birds in southeastern Arizona pine forests. *Wildl. Soc. Bull.* 16:37-44.
- Thomas, J. W., R. A. Lancia, R. W. Mannan, L. F. Ruggiero, and J. W. Schoen. 1988. Management and conservation of old-growth forests in the United States. *Wildl. Soc. Bull.* 15:252-262.
- Eakle, W. L., R. W. Mannan, and T. G. Grubb. 1989. Identification of individual breeding bald eagles by voice analysis. *J. Wildl. Manage.* 53:450-455.
- Matter, W. J., and R. W. Mannan. 1989. More on gaining reliable knowledge: a comment. *J. Wildl. Manage.* 53:1172-1176.
- Dawson, J. W., and R. W. Mannan. 1989. A comparison of two methods of estimating breeding group size in Harris' Hawks. *Auk* 106:480-483.
- Matter, W. J., R. W. Mannan, E. W. Bianchi, T. E. McMahon, J. H. Menke, and J. C. Tash. 1989. A laboratory approach for studying emigration. *Ecology* 70:1543-1546.
- Dawson, J. W., and R. W. Mannan. 1991. The role of territoriality in the social organization of Harris' hawks. *Auk* 108:661-672.
- Dawson, J. W., and R. W. Mannan. 1991. Dominance hierarchies and helper contributions in Harris' hawks. *Auk* 108:649-660.
- Mellen, T. K., E. C. Meslow, and R. W. Mannan. 1992. Summertime home range and habitat use of pileated woodpeckers, western Oregon. *J. Wildl. Manage.* 56:96-103.
- Smith, A. A., and R. W. Mannan. 1994. Distinguishing characteristics of Mount Graham red squirrel midden sites. *J. Wildl. Manage.* 58:437-445.
- Bright-Smith, D. J., and R. W. Mannan. 1994. Habitat use by male northern goshawks in Northern Arizona. *Studies in Avian Biology* 16:58-65
- Boal, C. W., and R. W. Mannan. 1994. Northern goshawks diets in ponderosa pine forests on the Kaibab Plateau. *Studies in Avian Biology* 16:97-102.
- Boal, C. W., and R. W. Mannan. 1996. Prey sizes of male and female northern goshawks. *Southwest Naturalist* 41:355-358.
- Boal, C. W., B. D. Bibles, and R. W. Mannan. 1997. Mobbing behavior by elf owls. *Raptor Research* 31:286-287.
- Boal, C. W., and R. W. Mannan. 1998. Nest-site selection by Cooper's hawks in an urban environment. *J. Wildl. Manage.* 62:864-871.
- Boal, C. W., R. W. Mannan, and K. S. Hudelson. 1998. Trichomoniasis in Cooper's hawks from

- Arizona. *J. Wildl. Diseases* 34:590-593.
- Boal, C. W., K. S. Hudelson, R. W. Mannan, and T. S. Estabrook. 1998. Hematology and hematozoa of adult and nestling Cooper's hawks in Arizona. *Raptor Research* 32: 281-285.
- Lloyd, J., R. W. Mannan, and S. DeStefano. 1998. The effects of mesquite invasion on a southeastern Arizona grassland bird community. *Wilson Bull.* 110:403-408.
- Boal, C. W., and R. W. Mannan. 1999. Comparative breeding ecology of Cooper's hawks in urban and exurban areas of southeastern Arizona. *J. Wildl. Manage.* 63:77-84.
- Hall, L. S., and R. W. Mannan. 1999. Multi-scaled habitat selection by elegant trogons in southeastern Arizona. *J. Wildl. Manage.* 63:451-461.
- Meretsky, V. J., and R. W. Mannan. 1999. Supplemental feeding regimes for Egyptian vultures in the Negev desert, Israel. *J. Wildl. Manage.* 63:107-115.
- Mannan, R. W., and C. W. Boal. 2000. Home range characteristics of male Cooper's hawks in an urban environment. *Wilson Bulletin* 112:21-27.
- Boal, C. W., and R. W. Mannan. 2000. Cooper's hawks in urban and exurban areas: a reply. *Journal of Wildlife Management* 64:601-604.
- Mannan, R. W., C. W. Boal, W. J. Burroughs, J. W. Dawson, T. S. Estabrook, and W. S. Richardson. 2000. Nest sites of five raptor species along an urban gradient. Pages 447-453 *in* *Raptors at risk*, R. D. Chancellor and B.-U. Meyburg, eds. Hancock House.
- Mannan, R. W., and C. W. Boal. 2000. Home range characteristics of male Cooper's hawks in an urban environment. *Wilson Bulletin* 112:21-27.
- Kirkpatrick, C. S., C. S. DeStefano, R. W. Mannan, and J. Lloyd. 2002. Effects of fire on grassland birds in southeastern Arizona. *Southwestern Naturalist* 47:282-292.
- Nelson, A. R., C. L. Johnson, W. J. Matter, and R. W. Mannan. 2002. Tests of emigration in small mammals under experimental conditions. *Can. J. Zool.* 80: 2056-2060.
- Estes, W. A. and R. W. Mannan. 2003. Feeding behavior of Cooper's hawks at urban and rural nests in southeastern Arizona. *Condor* 105:107-116.
- Mannan, R. W., W. A. Estes, and W. J. Matter. 2004. Movements and survival of fledgling Cooper's hawks in an urban environment. *Journal of Raptor Research* 38:26-34
- Bibles, B. D., and R. W. Mannan. 2004. Productivity and nest-site characteristics of gray hawks in southern Arizona. *Journal of Raptor Research* 38:238-242.

- La Sorte, F. A., R. W. Mannan, R. T. Reynolds, and T. G. Grubb. 2004. Habitat associations of sympatric red-tailed hawks and northern goshawks on the Kaibab plateau. *Journal of Wildlife Management* 68:307-317.
- Reynolds, R. T., G. C. White, S. M. Joy, and R. W. Mannan. 2004. Effects of tail- and backpack mounted transmitters on survival of northern goshawks. *Journal of Wildlife Management* 68:25-32.
- Matter, W. J., and R. W. Mannan. 2005. How do prey persist? *Journal of Wildlife Management* 69:1315-1320.
- Mannan, R. W., R. N. Mannan, C. A. Schmidt, W. A. Estes, and C. W. Boal. 2007. Influence of natal experience on nest-site selection by urban-nesting Cooper's hawks. *Journal of Wildlife Management* 71:64-68.
- Dwyer, J. F., and R. W. Mannan. 2007. Preventing raptor electrocutions in an urban environment. *Journal of Raptor Research* 41: 259-267.
- Mannan, R. W., R. J. Steidl, and C. W. Boal. 2008. Identifying habitat sinks: a case study of Cooper's hawks in an urban environment. *Urban Ecosystems* 11:141-148.
- Gerhold, R. W., M. J. Yabsley, A. J. Smith, E. Ostergaard, W. Mannan, J. D. Cann, and J. R. Fischer. 2008. Molecular characterization the *Trichomonas gallinae* complex in the United States. *Journal of Parasitology* 94:1334-1341.
- Dwyer, J. F., and R. W. Mannan. 2009. Return rates of aluminum versus plastic leg bands from Electrocutated Harris's hawks (*Parabuteo unicinctus*). *Journal of raptor Research* 43:152-154.
- Mannan, R. W. 2010. Relationship between temporary settling areas to first nest sites in Cooper's hawks. *Journal of Raptor Research* 44:143-145.
- Ward, M. S., and R. W. Mannan. 2011. Habitat model of urban-nesting Cooper's hawks in Southern Arizona. *The Southwestern Naturalist* 56:17-23.
- McCaffrey, R. E., and R. W. Mannan. 2012. How scale influences birds' responses to habitat Features in urban residential areas. *Landscape and Urban Planning* 105:274-280.