

BRIAN A. MILLSAP

3 Geoffrey Court, Sandia Park, NM 87047

Telephone: (505) 818-9219

email: bmillsap@nmsu.edu

EDUCATION

COLORADO STATE UNIVERSITY

B.S., Wildlife Biology, 1978

GEORGE MASON UNIVERSITY

M.S., Biology (Evolutionary and Systematic Biology), 1986

Thesis: Geographic Size Variation and Biosystematics of the Gray Hawk, *Buteo nitidus* (Latham)

NEW MEXICO STATE UNIVERSITY

Ph.D Biology, 2018

Dissertation: Female Recruitment in an Urban Subpopulation of Cooper's Hawks (*Accipiter cooperii*) in Central New Mexico

EMPLOYMENT HISTORY

U.S. Fish and Wildlife Service

2002 – present

National Raptor Coordinator (GS-486-14), Division of Migratory Bird Management,

Washington, D.C. (based in Albuquerque, NM): 2010 – present

Deputy Regional Director (GS-480-15), Albuquerque, NM: 2008 – 2010

Assistant Regional Director (GS-480-15), Ecological Services, Albuquerque, NM: 2007 – 2008

New Mexico State Administrator (GS-480-15), Albuquerque, NM: 2006 – 2007

Chief, Division of Migratory Bird Management (GS-480-15), Washington, D.C.: 2002 – 2006.

Florida Fish and Wildlife Conservation Commission

1986 – 2002

Chief, Bureau of Wildlife Diversity Conservation, Tallahassee, FL: 1989 – 2002

Regional Nongame Wildlife Biologist, Lakeland, FL: 1986 – 1989

National Wildlife Federation

1982 – 1986

Raptor Biologist, Institute for Wildlife Research

Institute for Raptor Studies

1982

Field Biologist, Patagonia, Argentina

U.S. Bureau of Land Management

1979 – 1982

Wildlife Biologist, Phoenix District

PROFESSIONAL AFFILIATIONS

Offices Held

Florida Chapter of the Wildlife Society: President, 1993 - 1995
Nongame Wildlife Association of North America: President, 1991-1996
North American Falconer's Association: Vice President 1997 – 1999, President 2000 - 2002
Raptor Research Foundation: Eastern Director 1994 – 2001, President Elect 2000 – 2001,
President 2002 – 2005, Early Career Raptor Biologist Instructor 2010 - present

Memberships and Contributions

American Ornithological Society: member and peer-reviewer for *The Auk*, *Condor*, *Journal of Field Ornithology*
Association of Field Ornithologists: peer-reviewer for *Journal of Field Ornithology*
British Ornithological Society: peer-reviewer, *Ibis*
British Ecological Society: peer reviewer for *Biological Conservation*, *Ecology and Evolution*
Ecology and Evolution: peer-reviewer
Ecological Society of North America: peer reviewer for *Ecology and Ecological Applications*
Raptor Research Foundation: member and peer-reviewer, *Journal of Raptor Research*
Southeastern Naturalist: Associate Editor 2002 - 2006
Society for Conservation Biology: peer-reviewer for *Conservation Biology*
The Wildlife Society: member and peer reviewer for *The Journal of Wildlife Management* and *The Wildlife Society Bulletin*
Wilson Ornithological Society: peer-reviewer for *Wilson Journal of Ornithology*

SELECTED PUBLICATIONS

- Millsap, B. A. 2020. Book Review. *The Cooper's Hawk: Breeding Ecology and Natural History of a Winged Huntsman*. *Journal of Raptor Research* 54:86.
- Millsap, B. A., K. Madden, R. K. Murphy, M. Brennan, J. E. Pagel, D. Campbell, and G. W. Roemer. 2019. Demographic consequences of sexual differences in age at first breeding in Cooper's Hawks (*Accipiter cooperii*). *The Auk* 136:1–20.
<https://academic.oup.com/auk/article/136/3/ukz032/5490621>
- Murphy, R. K., K. L. Kruse, D. W. Stahlecker, B. A. Millsap, K. V. Jacobson, A. Johnson, C. S. Smith, and K. J. Tator. 2019. Natal dispersal distance of golden eagles in the Southwestern United States. *Journal of Fish and Wildlife Management* 10:213–218.
- Zimmerman, G. S., B. A. Millsap, M. L. Avery, J. R. Sauer, M. C. Runge, and K. D. Richkus. 2019. Allowable take of black vultures in the eastern United States. *The Journal of Wildlife Management* 83:272–282.
- Millsap, B. A. 2018. Demography and metapopulation dynamics of an urban Cooper's Hawk subpopulation. *Condor* 120:63–80. <http://www.bioone.org/doi/abs/10.1650/CONDOR-17-124.1>
- Sur, M., J. R. Belthoff, E. R. Bjerre, B. A. Millsap, and T. Katzner. 2018. The utility of point count surveys to predict wildlife interactions with wind energy facilities: An example focused on Golden Eagles. *Ecological Indicators* 88:126–133.
- Murphy, R. K., J. R. Dunk, B. Woodbridge, D. W. Stahlecker, D. W. LaPlante, B. A. Millsap, and K. V. Jacobson. 2017. First-year dispersal of Golden Eagles from natal areas in the

- southwestern United States and implications for second-year settling. *Journal of Raptor Research* 51:216–233.
- Katzner, T. E., M. J. Stuber, V. A. Slabe, J. T. Anderson, J. L. Cooper, L. L. Rhea, and B. A. Millsap. 2017. Origins of lead in populations of raptors. *Animal Conservation*. doi:10.1111/acv.12379
- Nielson, R. M., R. K. Murphy, B. A. Millsap, W. H. Howe, and G. Gardner. 2016. Modeling late-summer distribution of Golden Eagles (*Aquila chrysaetos*) in the western United States. *PLOS ONE* 11:e0159271. <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0159271>
- Doyle, J. M., T. E. Katzner, G. W. Roemer, J. W. Cain, B. A. Millsap, C. L. McIntyre, S. A. Sonsthagen, N. B. Fernandez, M. Wheeler, Z. Bulut, P. H. Bloom, and J. Andrew DeWoody. 2016. Genetic structure and viability selection in the Golden Eagle (*Aquila chrysaetos*), a vagile raptor with a Holarctic distribution. *Conservation Genetics* 17:1307–1322.
- Millsap, B. A., E. R. Bjerre, M. C. Otto, G. S. Zimmerman, N. L. Zimpfer. 2016. Bald and Golden Eagles: Population Demographics and Sustainable Take Rate in the United States, 2016 Update. U.S. Fish and Wildlife Service, Division of Migratory bird Management, Washington, D. C. USA. <https://www.fws.gov/migratorybirds/pdf/management/EagleRuleRevisions-StatusReport.pdf>
- Millsap, B. A., T. G. Grubb, R. K. Murphy, T. Swem. 2015. Conservation significance of alternative nests of golden eagles. *Global Ecology and Conservation* 3:234-241. <https://www.sciencedirect.com/science/article/pii/S2351989414000870>
- Lien, L. A., B. A. Millsap, K. Madden, G. W. Roemer. 2015. Brood provisioning rates provide evidence for intrasexual competition for mates in female Cooper's hawks (*Accipiter cooperii*). *Ibis* 157(4):860 - 870.
- New, L., E. Bjerre, B. A. Millsap, M. C. Otto, M. C. Runge. 2015. A collision risk model to predict avian fatalities at wind facilities: an example using golden eagles, *Aquila chrysaetos*. *PLoS One* 10(7):1-12. <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0130978>
- Millsap, B. A., A. R. Harmata, D. W. Stahlecker, D. G. Mikesic. 2014. Natal dispersal distance of bald and golden eagles originating in the coterminous United States as inferred from band encounters. *Journal of Raptor Research* 48(1): 13 – 23.
- Millsap, B. A., G. S. Zimmerman, J. R. Sauer, R. M. Neilson, M. Otto, E. Bjerre, R. Murphy. 2013. Golden eagle population trends in the western United States: 1968 – 2010. *Journal of Wildlife Management* 77(7):1436–1448.
- Millsap, B. A., T. F. Breen, and L. Philips. 2013. Ecology of the Cooper's hawk in north Florida. *North American Fauna* 78. <http://www.fwspubs.org/doi/pdf/10.3996/nafa.78.0001>
- Pagel, J. E. K. Kritz, B. A. Millsap, R. K. Murphy, E. Kershner, S. Covington. 2013. Bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*) mortalities caused by wind turbine strikes in the contiguous United States. *Journal of Raptor Research* 47(3):311-315.
- Millsap, B.A., S. S. Seipke, and W.S. Clark. 2011. The gray hawk (*Buteo nitidus*) is two species. *Condor* 113:326-339.
- Poulin, R., L. D. Todd, E. A. Haug, B. A. Millsap and M. S. Martell. 2011. Burrowing Owl (*Athene cunicularia*), *The Birds of North America Online* (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; *Birds of North America Online*:<http://bna.birds.cornell.edu/bna/species/061>

- Ellis, D.H., T. Craig, E. Craig, S. Postupalsky, C.T. LaRue, R.W. Nelson, D.W. Anderson, C.J. Henny, J. Watson, B.A. Millsap, J.W. Dawson, K.L. Cole, E.M. Martin, A. Margalida, and P. Kung. 2009. Unusual raptor nests around the world. *Journal of Raptor Research* 43:175-198.
- Mojica, E.K., J.M. Meyers, B. A. Millsap, and K.L. Haley. 2008. Migration of Florida sub-adult bald eagles. *Wilson Journal of Ornithology* 120:304-310.
- Millsap, B.A., M.E. Cooper, and G. Holroyd. 2007. Legal considerations. Pages 437- 449 in D.M. Bird et al. (editors). *Raptor Research and Management Techniques*. Hancock House, Surry, British Columbia, Canada.
- Millsap, B. A., and G. T. Allen. 2006. Effects of falconry harvest on wild raptor populations in the United States: theoretical considerations and management recommendations. *Wildlife Society Bulletin* 34(5): 1392-1400.
- Millsap, B. A., T. Breen, E. McConnell, T. Steffer, L. Phillips, N. Douglass, S. Taylor. 2004. Comparative fecundity and survival of bald eagles fledged from suburban and rural natal areas in Florida. *Journal of Wildlife Management* 68:1018 – 1031.
- Ellis, D. H., B. A. Sabo, J. K. Fackler, and B. A. Millsap. 2002. Prey of the peregrine falcon (*Falco peregrinus cassini*) in southern Argentina and Chile. *Journal of Raptor Research* 36:315-319.
- Millsap, B.A. 2002. Survival of burrowing owls along an urban-development gradient. *Journal of Raptor Research* 36: 3–11.
- Millsap, B. A., and C. Bear. 2000. Density and reproduction of burrowing owls along an urban development gradient. *Journal of Wildlife Management* 63: 33-41.
- Millsap, B.A., P. L. Kennedy, M. A. Byrd, G. Court, J. H. Enderson, and R. N. Rosenfield. 1999. Review of the proposal to de-list the American peregrine falcon. *Wildlife Society Bulletin* 26: 522-538.
- Millsap, B. A. 1998. Barn owl. Pages 136 – 139 in Glinski, R (editor). *Raptors of Arizona*. University of Arizona Press, Tucson, Arizona.
- Millsap, B. A. 1998. Long-eared owl. Pages 175 – 177 in Glinski, R (editor). *Raptors of Arizona*. University of Arizona Press, Tucson, Arizona.
- Millsap, B. A. and C. Bear. 1997. Territory fidelity, mate fidelity, and dispersal in an urban-nesting population of Florida burrowing owls. *Raptor Research Report* 9: 91-98.
- Millsap, B. A., M. I. Bellocq, and M. Mullenix. 1997. Overview of literature on the burrowing owl. *Raptor Research Report* 9: 6-10.
- Millsap, B. A. 1996. Florida burrowing owl. Pages 579-587 in Rodgers, J. A., Jr., H. W. Kale II, and H. T. Smith (editors). *Rare and endangered biota of Florida*. Vol. V. Birds. University Presses of Florida, Gainesville, Florida.
- Millsap, B. A., M. R. Robson, and B. R. Toland. 1996. Short-tailed hawk. Pages 315-322 in Rodgers, J. A., Jr., H. W. Kale II, and H. T. Smith (editors). *Rare and endangered biota of Florida*. Vol. V. Birds. University Presses of Florida, Gainesville, Florida.
- Toland, B. R., and B. A. Millsap. 1996. Cooper's hawk. Pages 475-484 in Rodgers, J. A., Jr., H. W. Kale II, and H. T. Smith (editors). *Rare and endangered biota of Florida*. Vol. V. Birds. University Presses of Florida, Gainesville, Florida.
- Millsap, B. A. 1995. Wildlife conservation priorities for Florida: the state's perspective. *Transactions of the 60th North American Wildlife and Natural Resources Conference*: 466-472.
- Haug, E. A., B. A. Millsap, and M. S. Martell. 1993. Burrowing owl (*Speotyto cunicularia*). In *The birds of North America*, No. 61 (A. Poole and F. Gill, editors). Philadelphia: The Academy of Natural Sciences; Washington, D.C.: The American Ornithologists' Union.
- Wood, D. A., B. A. Millsap, and P. M. Rose. 1992. Florida's Nongame and Endangered Species

- programs. *Endangered Species Update* 9(9&10): 8-12.
- Millsap, B.A., and C. Bear. 1990. Double-brooding by Florida burrowing owls. *Wilson Bulletin* 102: 313-317.
- Millsap, B.A., J.A. Gore, D.E. Runde, and S.I. Cerulean. 1990. Setting priorities for the conservation of fish and wildlife species in Florida. *Wildlife Monograph* No. 111. 57pp.
- Mitchell, L., and B.A. Millsap. 1990. Status of buteos and the golden eagle. Pages 50-62 in Pendleton, B.G., M.B. Moss, M.N. LeFranc Jr., and B.A. Millsap (editors). *Proceedings of the Southeast Raptor Management Symposium and Workshop*, National Wildlife Federation, Scientific and Technical Series Number 14, Washington D.C.
- Pendleton, B.G., M.B. Moss, M.N. LeFranc Jr., and B.A. Millsap (editors). 1990. *Proceedings of the Southeast Raptor Management Symposium and Workshop*. National Wildlife Federation, Scientific and Technical Series Number 14, Washington, D.C.
- Smith, D.G., D.H. Ellis, and B.A. Millsap. 1990. Status of owls in the Southeastern U.S. Pages 89-117 in Pendleton, B.G., M.B. Moss, M.N. LeFranc Jr., and B.A. Millsap (editors). *Proceedings of the Southeast Raptor Management Symposium and Workshop*, National Wildlife Federation, Scientific and Technical Series Number 14, Washington D.C.
- Glinski, R.L., B.G. Pendleton, M.B. Moss, M.N. LeFranc Jr., B.A. Millsap, and S.W. Hoffman (editors). 1988. *Proceedings of the Southwest Raptor Management Symposium and Workshop*. National Wildlife Federation, Scientific and Technical Series Number 11, Washington, D.C.
- Kochert, M.N., B.A. Millsap, K Steenhof. 1988. Effects of livestock grazing on raptors, with emphasis on the southwestern U.S. Pages 325-334 in R.L. Glinski, B.G. Pendleton, M.B. Moss, M.N. LeFranc Jr., B.A. Millsap, and S.W. Hoffman (editors). *Proceedings of the Southwest Raptor Management Symposium and Workshop*. National Wildlife Federation, Scientific and Technical Series Number 11, Washington, D.C.
- Millsap, B.A., and R.R. Johnson. 1988. Ferruginous pygmy-owl status report. *Eyas* 11:24-25.
- Millsap, B.A. 1988. Elf owl. Pages 140-144 in R.L. Glinski, B.G. Pendleton, M.B. Moss, M.N. LeFranc Jr., B.A. Millsap, and S.W. Hoffman (editors). *Proceedings of the Southwest Raptor Management Symposium and Workshop*. National Wildlife Federation, Scientific and Technical Series Number 11, Washington, D.C.
- Millsap, B.A., and M.N. LeFranc, Jr. 1988. Road transect counts for raptors: how reliable are they? *Journal of Raptor Research* 22: 8-16.
- Millsap, B.A., and R.R. Johnson. 1988. Ferruginous pygmy-owl. Pages 137-139 in R.L. Glinski, B.G. Pendleton, M.B. Moss, M.N. LeFranc Jr., B.A. Millsap, and S.W. Hoffman (editors). *Proceedings of the Southwest Raptor Management Symposium and Workshop*. National Wildlife Federation, Scientific and Technical Series Number 11, Washington, D.C.
- Palmer, R.S., B.A. Millsap, and H. Snyder. 1988. Zone-tailed hawk, *Buteo albonotatus* Kaup. Pages 85-95 in Palmer, R.S. (editor). *Handbook of North American birds*. Vol. 5. Diurnal raptors (part 2). Yale University Press, New Haven, Conn.
- Millsap, B.A. 1987. Summer concentration of American swallow-tailed kites at Lake Okeechobee, Florida, with comments on post-breeding movements. *Florida Field Naturalist* 15: 85-92.
- Millsap, B.A. 1987. Introduction to federal laws and raptor management. Pages 23-32 in Pendleton, B.G., B.A. Millsap, K.W. Cline, and D.M. Bird (editors). *Raptor Management Techniques Manual*. Scientific and Technical Series Number 10, National Wildlife Federation, Washington, D.C.
- Millsap, B.A., and P.A. Millsap. 1987. Burrow nesting by common barn-owls in north central Colorado. *Condor* 89:668-670.

- Millsap, B.A., K.W. Cline, and B.G. Pendleton. 1987. Habitat management. Pages 215-232 in Pendleton, B.G., B.A. Millsap, K.W. Cline, and D.M. Bird (editors). Raptor Management Techniques Manual. Scientific and Technical Series Number 10, National Wildlife Federation, Washington, D.C.
- Pendleton, B.G., B.A. Millsap, K.W. Cline, and D.M. Bird (editors). 1987. Raptor management techniques manual. National Wildlife Federation, Scientific and Technical Series Number 10, Washington, D.C.
- Millsap, B.A. 1986. Status of wintering bald eagles in the coterminous United States. Wildlife Society Bulletin 14: 433-440.
- LeFranc, M.N. Jr., and B.A. Millsap. 1984. A summary of state and federal agency raptor management programs. Wildlife Society Bulletin 12: 274-282.
- Millsap, B.A., and S.L. Vana. 1984. Distribution of wintering golden eagles in the eastern United States. Wilson Bulletin 96: 692-701.
- Millsap, B.A., and J.R. Zook. 1983. Effects of weather on *Accipiter* migration in southern Nevada. Raptor Research 17: 43-56.
- Millsap, B.A. 1981. Distributional status of Falconiformes in west-central Arizona, with notes on ecology, reproductive success, and management. U.S. Department of the Interior, Bureau of Land Management, Technical Note 355, Denver, Colorado, USA. 102 pp.
- Kahn, R., and B.A. Millsap. 1979. An inexpensive method for capturing Short-eared owls (*Asio flammeus*). North American Bird Bander 3: 54.
- Millsap, B.A. 1977. Breeding barn-owl populations in north central Colorado. Ptarmigan 14: 2-4.

SELECTED RECENT SCIENTIFIC PRESENTATIONS

- Cruz-Romo, L J., R. K. Murphy, M. Sánchez-Vilchis, B. A. Millsap, J. J. Vargas-Velasco, I. Cruz-Molina, and V. M. Sánchez-Cordero Dávila 2019. First satellite telemetry study of dispersal, home range size, and habitat use by juvenile Golden Eagles from Mexico. Scientific presentation at the 2019 Raptor Research Foundation Annual Conference, Ft. Collins, CO.
- Millsap, B.A., K. Madden, R. Murphy, J. Pagel, M. Brennan. 2019. Relative importance of sources of mortality in female Cooper's Hawks in Northcentral New Mexico, U.S.A. Poster presentation at the 2019 Raptor Research Foundation Annual Conference, Ft. Collins, CO.
- Millsap, B.A., B. Peterjohn, K. Kritz, K. Madden, M. Stuber. 2019. All about raptor permits and permitting. Workshop at the 2019 Raptor Research Foundation Annual Conference, Ft. Collins, CO.
- Murphy, R. K., B. A. Millsap, D. W. Stahlecker, K. V. Jacobson, A. Johnson, C. S. Smith, K. J. Tator. 2018. Natal dispersal distances of golden eagles in the southwestern United States based on satellite telemetry. Scientific presentation at the New Mexico Ornithological Society Annual Conference, Silver City, New Mexico.
- Millsap, B. A. 2017. Golden eagle conservation: science, law, and policy. Scientific presentation for the NMSU Biology Department Seminar Series, Las Cruces, New Mexico.
- Katzner, T.E., M. I. Stuber, V. A. Slabe, J. T. Anderson, J. L. Cooper, L. L. Rea, B. A. Millsap. 2017. Origins of lead in populations of wild raptors. Scientific presentation at the Raptor Research Foundation Annual Conference, Salt Lake City, Utah.
- Kritz, K., B. A. Millsap, and E. H. Savage. 2017. Update from the U.S. Fish and Wildlife Service on the Eagle Rule and take permits. Scientific presentation at the Raptor Research

- Foundation Annual Conference, Salt Lake City, Utah.
- Sur, M, J.D. Belthoff, E. J. Bjerre, B. A. Millsap, T. Katzner. 2017. Evaluating survey designs to predict wind-wildlife interactions using simulations: an example focused on golden eagles. Raptor Research Foundation Annual Conference, Salt Lake City, Utah.
- Murphy, R. K., B. A. Millsap, D. W. Stahlecker, K. V. Jacobson, A. Johnson, C. S. Smith, K. J. Tator. 2017. Natal dispersal distances of golden eagles in the southwestern United States based on satellite telemetry. Raptor Research Foundation Annual Conference, Salt Lake City, Utah.
- Madden, K. K., and B. A. Millsap. 2017. Factors influencing nest site defense towards humans by Cooper's hawks (*Accipiter cooperii*) in the Albuquerque area. Poster presentation at the Raptor Research Foundation Annual Conference, Salt Lake City, Utah.
- Millsap, B. A. 2017. Metapopulation dynamics of an urban Cooper's hawk subpopulation. Poster presentation at the Raptor Research Foundation Annual Conference, Salt Lake City, Utah.
- Millsap, B. A. 2017. Golden eagle status and management. Scientific presentation at the 2017 North American Falconers Association Eagle Workshop, Rock Springs, Wyoming.
- Murphy, R. K., B. A. Millsap, D. W. Stahlecker, K. V. Jacobson, A. Johnson, C. S. Smith, K. J. Tator. 2017. Natal dispersal distances of golden eagles in the southwestern United States based on satellite telemetry. The Wildlife Society Annual Conference, Albuquerque, New Mexico.
- Millsap, B. A. 2017. Golden eagles: status, trends, and estimation of sustainable take rates in the United States. Scientific presentation at the Third Meeting of Mexico's Golden Eagle Expert Committee, Coahuila, Mexico.
- Millsap, B. A., W. R. Mannan, and R. Rosenfield. 2016. Insights into Cooper's hawk (*Accipiter cooperii*) ecology from studies in urban environments. Scientific presentation at the Raptor Research Foundation Annual Conference, Cape May, New Jersey.
- Millsap, B. A. 2016. Golden eagles: a complex conservation challenge. Invited talk, Raptor Research Foundation Annual Conference, Cape May, New Jersey.
- Bjerre, E. J., M. C. Otto, J. Sauer, and B. A. Millsap. 2016 Estimating bald eagle population size in the United States with monitoring data: the post-delisting survey, population estimates, and planning for future surveys. Scientific presentation at the Raptor Research Foundation Annual Conference, Cape May, New Jersey.
- Millsap, B. A. 2016. Cooper's Hawk population biology in Albuquerque, New Mexico. Keynote Address, New Mexico Ornithological Society, Albuquerque, New Mexico.

SPECIAL SKILLS AND AUTHORIZATIONS

Licensed Bird Bander, 1972 – present. Authorized to band and mark all raptors, including radio- and satellite-tagging burrowing owls, Cooper's hawks, gray hawks, bald eagles, golden eagles, and whooping cranes. I have successfully radio- or satellite-tagged over 5000 individuals of these species since 1995.

Licensed Master-class Falconer, 1968 – present.

Licensed Raptor Propagator, 2008 – present.

Skilled in frequentist and Bayesian data analysis and modeling using Program R, WinBUGS, OpenBUGS, and JAGs. Experience in basic analyses, as well as Bayesian occupancy and multi-state models for estimating survival and movement.

Trained in structured decision making, and in application of that process to adaptive resource management.