

Fish and Wildlife Reference Service Newsletter

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Book Documents Decades of Whitetail Deer Research at Sandhill Wildlife Area

A 9-foot high wire fence surrounding the 9,150-acre **Sandhill Wildlife Area** has provided state wildlife biologists a near "test tube" environment for the study of deer management in Wisconsin. Since the early 1960s, **Wisconsin Department of Natural Resources (DNR)** wildlife biologists have been manipulating deer populations at Sandhill through a variety of hunting mechanisms.

The biologists have studied the outcomes and applied those theories to the management of deer herds across the state. In fact, deer management practices born from Sandhill research have been applied to herds across the nation.

The sum of that 1962-1989 research is now available in a newly published book. The 282-page manual is titled ***Sandhill Whitetails: Providing New Perspective for Deer Management.***

Retired DNR biologists John Kubisiak, Keith McCaffery, and William Creed authored the book along with their University of Wisconsin colleagues Tom Heberlein and Richard Bishop, and Robert Rolley of the DNR wildlife and forestry research section.

"Whether you're a college professor, student, hunter, or just a fan of Wisconsin's white-tailed deer, you'll find something interesting in this book," said co-author John Kubisiak. "Especially today's hunters, who are more educated and have access to much more information. I think they'll have more appreciation for the science that goes into managing the state's herd after reading this book."

Sandhill Whitetails summarizes research conducted at the **Sandhill Wildlife Area** begun in the 1960s by the **Wisconsin Conservation Department** and continued by the **DNR** through the early 1990s. A cornerstone of Wisconsin's deer management program, the ecological and sociological research completed at Sandhill has influenced deer management throughout North America. Now, this research has been pulled together, synthesized, and summarized in a single reference.

"I'm confident that this book will become a standard deer management reference for Wisconsin and many other states," said co-author Keith McCaffery.

The **DNR Bureau of Integrated Science Services** published the book with federal **Pittman-Robertson Wildlife Restoration Act** funding and additional support from two conservation partners, the **R.K. Mellon Foundation** and **Whitetails Unlimited, Inc.**

Facts regarding the Sandhill Wildlife Area and some of the research conducted there:

- The 9,150-acre research area is one of the largest fenced tracts with an enclosed deer herd in the United States.
- Wallace Grange, the state's first superintendent of game management, and his wife bought the land in 1937 for approximately \$.75 per acre.

(continued on page 2)

****NOTE** - THIS MAY BE YOUR LAST NEWSLETTER (See "IMPORTANT NOTICE" on page 6)**

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- In 1962, the Granges sold the site to the State of Wisconsin for nearly \$300,000.
- In the fall of that year, the first research project began. Scientists set out to determine just how many deer could be harvested while maintaining a healthy herd. This set the stage for Wisconsin's deer hunting season framework that allows for the taking of both antlered and antlerless through hunter's choice and bonus antlerless deer permits.
- In 1970, scientists tested the effectiveness of a handgun season. While success was quite high (38 percent for handguns versus 67 percent for rifles and shotguns), the percentage of the deer harvest that was unretrieved was far greater than with shotguns or rifles (26 percent for handguns versus six percent for long guns).
- Scientists also measured hunters' attitudes toward hunting. They found that while seeing and "bagging" deer were major factors in whether they had an enjoyable hunt, many felt that not being crowded by other hunters was also important. Researchers concluded that hunter densities of 23 or fewer per square mile is acceptable for most hunters, many of whom came from areas with higher hunting pressure.

For information on ordering this book, see the *Bulletin Board* in this newsletter.

NEW REPORTS

MAMMALS



1. Evaluation of Antemortem Sampling to Estimate Chronic Wasting Disease Prevalence in Free-ranging Mule Deer. Wolfe, L.L., et al. *J. of Wildl. Manage.* 2002. pp. 564-573 (10 pp.). Vol. 66, No. 3. /1 mf/. MIN 050220271
2. The Inherent Aggravation of Aggregation: An Example with Elk Aerial Survey Data. Svancara, L.K., et al. *J. Wildl. Manage.* 2002. pp. 776-787 (12 pp.). Vol. 66, No. 3. /1 mf/. MIN 110220272
3. Can Low-precision Population and Survival Estimates of Deer be Accurate? Mayer, M.S., et al. *Wildl. Soc. Bull.* 2002. pp. 440-448 (9 pp.). Vol. 30, No. 2. /1 mf/. MIN 200220273
4. Long-term Population Trends of Raccoons in Illinois. Gehrt, S.D.; Hubert, G.F.; Ellis, J.A. *Wildl. Soc. Bull.* 2002. pp. 457-463 (7 pp.). Vol. 30, No. 2. /1 mf/. MIN 120220274
5. Estimating Mule Deer Harvest in Southwestern Idaho. Unsworth, J.W., et al. *Wildl. Soc. Bull.* 2002. pp. 487-491 (5 pp.). Vol. 30, No. 2. /1 mf/. MIN 110220275
6. Comparison of Helicopter and Ground Counts for Waterfowl in Iowa. Cordts, S.D., et al. *Wildl. Soc. Bull.* 2002. pp. 317-326 (10 pp.). Vol. 30, No. 2. /1 mf/. MIN 140220276
7. A Shotgun-Archery Deer Hunt in a Residential Community: Evaluation of Hunt Strategies and Effectiveness. Kilpatrick, H.J., et al. *Wildl. Soc. Bull.* 2002. pp. 478-486 (9 pp.). Vol. 30, No. 2. /1 mf/. MIN 060220277
8. Moose Mortality in Eastern Interior Alaska. Bertram, M.R.; Vivion, M.T. *J. of Wildl. Manage.* 2002. pp. 747-756 (10 pp.). Vol. 66, No. 3. /1 mf/. MIN 500220278
9. Survival of Unexploited Bobcats in Southern Illinois. Nielsen, C.K.; Woolf, A. *J. of Wildl. Manage.* 2002. pp. 833-838 (6 pp.). Vol. 66, No. 3. /1 mf/. MIN 120220279

10. Microhabitat Use by Bobcats in Southern Illinois. Kolowski, J.M.; Woolf, A. *J. Wildl. Manage.* 2002. pp. 822-832 (11 pp.). Vol. 66, No. 3. /1 mf/. MIN 120220280

11. Chronic Wasting Disease of Deer and Elk: A Review with Recommendations for Management. Williams, E.S., et al. *J. of Wildl. Manage.* 2002. pp. 551-563 (13 pp.). Vol. 66, No. 3. /1 mf/. MIN 800220281

12. Does Predation on Neonates Inherently Select for Earlier Births? Testa, J.W. *J. of Mammal.* 2002. pp. 699-706 (8 pp.). Vol. 83, No. 3. /1 mf/. MIN 500220282

13. Multiple Paternity in White-tailed Deer (*Odocoileus virginianus*) Revealed by DNA Microsatellites. DeYoung, R.W., et al.; *J. of Mammal.* 2002. pp. 884-892 (9 pp.). Vol. 83, No. 3. /1 mf/. MIN 230220283

14. Influence of Trophy Hunting and Horn Size on Mating Behavior and Survivorship of Mountain Sheep. Singer, F.J.; Zeigenfuss, L.C. *J. of Mammal.* 2002. pp. 682-698 (17 pp.). Vol. 83, No. 3. /1 mf/. MIN 800220284

15. Americans' Attitudes Toward Wolves and Wolf Reintroduction: An Annotated Bibliography. Browne-Nunez, C.; Taylor, J.G. USGS. Inform. Tech. Report USGS/BRD/ITR—2002-0002. 2002. 24 pp. /1 mf/. MIN 800280115

BIRDS



16. Survival of Mallard Broods and Ducklings Departing Overwater Nesting Structures in Eastern South Dakota. Stafford, J.D., et al. *Wildl. Soc. Bull.* 2002. pp. 327-336 (10 pp.). Vol. 30, No. 2. /1 mf/. MIN 400220264

17. Invertebrate Biomass: Associations with Lesser Prairie-chicken Habitat Use and Sand Sagebrush Density in Southwestern Kansas. Jamison, B.E., et al. *Wildl. Soc. Bull.* 2002. pp. 517-526 (10 pp.). Vol. 30, No. 2. /1 mf/. MIN 150220265

18. Vegetation Management Practices on Conservation Reserve Program Fields to Improve Northern Bobwhite Habitat Quality. Greenfield, K.C., et al. *Wildl. Soc. Bull.* 2002. pp. 527-538 (12 pp.). Vol. 30, No. 2. /1 mf/. MIN 240220266

19. September-March Survival of Female Northern Pintails Radiotagged in San Joaquin Valley, California. Fleskes, J.P., et al. *J. of Wildl. Manage.* 2002. pp. 901- 911 (11 pp.). Vol. 66, No. 3. /1 mf/. MIN 040220267

20. Sensitivity Analyses of the Life Cycle of Midcontinent Mallards. Hoekman, S.T., et al. *J. of Wildl. Manage.* 2002. pp. 883-900 (18 pp.). Vol. 66, No. 3. /1 mf/. MIN 800220268

21. Scaup Migration Patterns in North Dakota Relative to Temperatures and Water Conditions. Austin, J.E., et al. *J. of Wildl. Manage.* 2002. pp. 874-882 (9 pp.). Vol. 66, No. 3. /1 mf/. MIN 330220269

22. Effects of Colony Relocation on Diet and Productivity of Caspian Terns. Roby, D.D., et al.; *J. of Wildl. Manage.* 2002. pp. 662-673 (12 pp.). Vol. 66, No. 3. /1 mf/. MIN 800220270

23. Comparative Fecundity and Survival of Bald Eagles Fledged from Suburban and Rural Natal Areas. Millsap, B., et al. *FL F&W Conserv. Comm. Final Perf. Report.* 2001. 62 pp. /1 mf/. MIN 090280113

24. Prevalence and Effects of Lead Poisoning Resulting from Ingestion of Lead Fishing Sinkers and Other Fishing Tackle on Selected Avian Species. USFWS. 1999. 120 pp. /2 mf/. MIN 800280114

FISHES

25. Effects of Watershed Best Management Practices on Habitat and Fish in Wisconsin Streams. Wang, L., et al. *J. of the Amer. Water Res. Assoc.* 2002. pp. 663-680 (18 pp.). Vol. 38, No. 3. /1 mf/. MIN 480210140

26. Reduction in Recruitment of White Bass in Lake Erie after Invasion of White Perch. Madenjian, C.P., et al. *Trans. Amer. Fisher. Soc.* 2000. pp. 1340-1353 (14 pp.). Vol. 129. /1 mf/. MIN 800210138

27. Habitat Use and Recruitment: A Comparison of Long-term Recruitment Patterns among Fish Species in a Shallow Eutrophic Lake, Oneida Lake, NY, U.S.A. Hall, S.R.; Rudstam, L.G. *Hydrobiologia.* 1999. pp. 101-113 (13 pp.). Vol. 408/409. /1 mf/. MIN 310210141

28. Response of Yellow Perch (*Perca flavescens*) in Oneida Lake, New York, to the Establishment of Zebra Mussels (*Dreissena polymorpha*). Mayer, C.M., et al. *Can. J. Fish. Aquat. Sci.* 2000. pp. 742-754 (13 pp.). Vol. 57. /1 mf/. MIN 310210142

29. Spawning of American Shad (*Alosa sapidissima*) and Striped Bass (*Morone saxatilis*) in the Mattaponi and Pamunkey Rivers, Virginia. Bilkovic, D.M., et al. *Fishery Bull.* 2002. pp. 632-640 (9 pp.). Vol. 100. /1 mf/. MIN 450210143

30. A Comparison of Calcified Structures for Aging Bluefish in the Chesapeake Bay Region. Sipe, A.M.; Chittenden, M.E.

Trans. Amer. Fish. Soc. 2002. pp. 783-790 (8 pp.). Vol. 131. /1 mf/. MIN 800210144

31. Comparison of Calcified Structures for Aging Spotted Seatrout. Ihde, T.F.; Chittenden, M.E. *Trans. Amer. Fish. Soc.* 2002. pp. 634-642 (9 pp.). Vol. 131. /1 mf/. MIN 800210145

32. Use of Fish Index to Assess Habitat Quality in Narragansett Bay, Rhode Island. Meng, L.; Orphanides, C.D.; Powell, J.C. *Trans. Amer. Fish. Soc.* 2002. pp. 731-742 (12 pp.). Vol. 131. /1 mf/. MIN 380210146

33. Innate Migratory Behavior and Spawning Habitat Use by Landlocked Atlantic Salmon: Implications for Population Restoration in New York. Nemeth, M.J. M.S. Thesis. Cornell Univ. 2001. 100 pp. /2 mf/. MIN 310250031

34. A Comparison of Diurnal and Nocturnal Brood Care Behaviors in Bluegill Sunfish (*Lepomis macrochirus*) Jorgensen, K.M. M.S. Thesis. Univ. of WI-Steven Point. 2001. 76 pp. /1 mf/. MIN 480250032

35. Acute and Chronic Toxicity of Nitrate to Brook Trout (*Salvelinus fontinalis*) Embryos and Larvae. Johnson, T. M.S. Thesis. Univ. of WI-Steven Point. 2002. 96 pp. /1 mf/. MIN 480250033

36. Effects of Electrofishing Configuration on Catch Efficiency and Injury Rates of Warmwater Fishes. Grizzle, J.; Miranda, E.L. USFWS. Final Report. 2002. 202 pp. /3 mf/. MIN 230250034

37. Technical Publications of the U.S. Fish and Wildlife Service Fish Technology Centers, 1966-2001. USFWS. Publications list may be accessed at <http://fisheries.fws.gov/FTC/FTCPub.htm>. 2001. 38 pp. /1 mf/. MIN 800240076

38. Fish as Indicators of Lake Habitat Quality and a Proposed Application. Schneider, J.C. MI DNR. Fish. Res. Report 2061. 2002. 40 pp. /1 mf/. MIN 210240077

39. Biomonitoring of Environmental Status and Trends (BEST) Program: Environmental Contaminants and Their Effects on Fish in the Mississippi River Basin. USGS. Biol. Sci. Report USGS/BRD/BSR—2002-0004. Electronic version available at http://www.cerc.usgs.gov/pubs/center/pdfDocs/BEST_1995.pdf. 2002. 260 pp. /3 mf/. MIN 800240078

RECOVERY PLANS

40. Recovery Plan for the Howell's Spectacular Thelypody (*Thelypodium howellii* ssp. *spectabilis*) USFWS. 2002. 56 pp. /1 mf/. MIN 800180050

41. Recovery Plan for the California Red-legged Frog (*Rana aurora draytonii*) USFWS. 2002. 184 pp. /2 mf/. MIN 800080038

HUMAN DIMENSIONS

42. Digit Preference in Reported Harvest Among Illinois Waterfowl Hunters. Miller, C.A.; Anderson, W.L. *Human Dimen. of Wildl.* 2002. pp. 55-65 (11 pp.). Vol. 7. /1 mf/. MIN 120220260

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BULLETIN BOARD


Sandhill Whitetails: Providing New Perspective for Deer Management. For more information about this book, contact: John Kubisiak, Wildlife Biologist (retired) at (715) 423-4876 or Dreux Watermolen, Science Information Services Chief at (608) 266-8931. Book is available for \$25.00 through Wisconsin's Department of Administration's Documents Sales Office: www.doa.state.wi.us/dsas/docserv/docsales/order.asp. To order via phone using credit card (Visa or MasterCard), call order desk at (800) 362-7253 or (608) 264-9419. To order via fax using credit card: complete a fax order form available online at: www.doa.state.wi.us/dsas/docserv/docsales/pdf_files/doa3330.pdf; fax order to (608) 261-8150.

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"From Boys to Men of Heart: The Special Role of Hunting in the Development of Compassion," a lecture by Dr. Randall Eaton. For fee and schedule information, contact Dr. Eaton at (541) 426-2047; P.O. Box 280, Enterprise, OR 97828.

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Managing American Wildlife: A History of the International Association of Fish and Wildlife Agencies (IAFWA). One hundred years of conservation in America is captured in this book, detailing the history of the IAFWA. Cost: \$24.75 (includes shipping/handling). For more information, contact IAFWA, 444 North Capitol St. NW, Suite 544, Washington, DC 20001; (202) 624-7890. Orders may be placed at www.IAFWA.org.

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3rd International Wildlife Management Congress Incorporating the 16th Australasian Wildlife Management Society Conference, to be held 1-5 December 2003 in Christchurch, New Zealand. For information, contact: The Conference Office, University of Canterbury, Private Bag 4800, Christchurch, New Zealand; Phone: +64 3 364 2915; Fax: +64 3 364 2057; E-mail: wildlife@cont.canterbury.ac.nz; Website: www.conference.canterbury.ac.nz/wildlife2003.

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43. Educating Citizens about Controversial Issues: The Case of Suburban Goose Management. Lauber, T.B., et al. Society and Natural Resources. 2002. pp. 581-597 (17 pp.). Vol. 15. /1 mf/. MIN 310220261

44. Educational Background and Professional Participation by Federal Wildlife Biologists: Implications for Science, Management, and The Wildlife Society. Schmutz, J.A. Wildl. Soc. Bull. 2002. pp. 594-598 (5 pp.). Vol. 30, No. 2. /1 mf/. MIN 800220262

45. Incorporating Economic Impacts into Wildlife Management Decisions. Cooper, A.B., et al. Wildl. Soc. Bull. 2002. pp. 565-574 (10 pp.). Vol. 30, No. 2. /1 mf/. MIN 110220263

46. Recommendations for Development of an Integrated Knowledge-enabled Constituent Relationship Management System for the Indiana Department of Natural Resources. Marshall, J. 2002. 12 pp. /1 mf/. MIN 130280112

47. Hunter Access to Private Lands in Illinois: Results of Studies of Illinois Hunters, Landowners, and Participants in Access Illinois Outdoors. Miller, C.A., et al. IL Nat. History Survey. Human Dimen. Program Reports SR-02-01. 2002. 100 pp. /2 mf/. MIN 120280111

48. 2001 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation. USFWS. 2002. 168 pp. /2 mf/. MIN 800280118

GENERAL



49. Reducing Predation by Common Ravens on Desert Tortoises in the Mojave and Colorado Deserts. Boarman, W.I. USGS. 2002. 40 pp. /1 mf/. MIN 800280116

50. Automated Wildlife Data Systems: License Automation Development Guide. Singel, L. IAFWA. 2002. 54 pp. /1 mf/. MIN 800280117

*** IMPORTANT NOTICE ***

At this printing (late October), we **DO NOT** have confirmation of a Multi-state Conservation Grant to operate the Fish & Wildlife Reference Service in 2003. We apologize in advance for any delays in providing services and hope a positive decision will be forthcoming. If not, it has been a pleasure and honor to provide fish and wildlife information to state and federal biologists since 1965.

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The publication herein of material selected from sources outside the Fish and Wildlife Service is not to be construed as an endorsement thereof, and does not necessarily reflect the views of the USFWS.

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