Natural Resource News

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Research Notes

An Assessment of Oklahoma's Urban Fishing Program

By Dr. Daniel Shoup and Dane M. Balsman

Oklahoma introduced the Close-to-Home-Fishing-Program (CTHFP) several years ago to provide opportunities for urban anglers to enjoy fishing near their homes. City ponds are stocked every fall with channel catfish to supplement existing populations of sunfish and largemouth bass. Little is known about the anglers that use these ponds and their levels of satisfaction with them. Additionally, harvest rates, growth rates, and channel catfish population sizes in these ponds are unknown.

With funding from the Oklahoma Department of Wildlife Conservation through the Sport Fish Restoration Program, we are assessing the CTHFP to recommend improvements for managing the program. Channel catfish population structure is being evaluated with a mark-recapture study. Pectoral spines and otoliths (sensory organs) from fish are being aged to determine if fish are being harvested immediately upon stocking or are having the opportunity to grow before being caught by anglers.

Continued on Page 3

Shorebirds in the Mixed-grass Prairie Region of Oklahoma

By Dr. Craig Davis and Gene Albanese

Since the early 1970's, several populations of North American shorebird species have cumulatively declined by more than 70%. These declines have resulted in an increased awareness by state, federal, and international organizations to develop conservation strategies for these declining birds.

In the Mixed-grass Prairie Region of Oklahoma, shorebirds rely on a variety of wetlands and other habitats as stopover sites where the birds can rest and feed. These stopover sites are important to shorebirds because they act as "stepping stones" for the birds to continue and complete their migration. Without these "stepping stones", shorebirds may not be able to survive their long migrations.

Semipalmated Plover, Photo courtesy of USFWS

Recently, the Oklahoma Department of Wildlife Conservation (ODWC) awarded a grant through the State Wildlife Grants program to the Department of Natural Resource Ecology and Management and Oklahoma Cooperative Fish and Wildlife Research Unit.

This grant will enable OSU to obtain information on the distribution and ecological needs of shorebirds during their migration through the Mixed-grass Prairie Region of Oklahoma, and to describe how landscape patterns and land use influence shorebird distribution, abundance, and habitat-use within this region. The goal of this project will be to provide conservation and management recommendations to ODWC and other conservation...

Continued on Page 2

NREM Welcomes New Faculty Member

The Department of Natural Resource Ecology and Management (NREM) was fortunate to welcome Dr. Gail Wilson as a new faculty recently. Her research interests include: plant ecology, plant-soil microbe interactions, and plant-animal interactions. As a new faculty in the Department she anticipates a portion of her research to focus on mycorrhizal ecology.

"Mycorrhizal fungi are beneficial soil fungi that form a symbiotic association with almost all land plants" Wilson noted. Her previous research has shown that the warm-season grasses that dominate the tallgrass prairie are unable to survive without their associated fungi. Additionally, Dr. Wilson is currently involved in research that includes the role of belowground populations of meristems in plant populations. Because most rangeland ecosystems are dominated by vegetatively reproducing perennial grasses, the belowground population of vegetative buds (the bud bank), rather than the seed bank, is important for regulating

Dr. Gail Wilson

their growth, productivity, and responses to stress and disturbance. Her research will assess the role of these belowground bud banks in regulating rangeland plant population stability, recovery from drought and grazing, and resistance to invasion by exotic species.

Dr. Wilson brings a wealth of new expertise that will benefit all aspects of teaching, research, and extension.

Shorebirds Continued from Page 1

…organizations, so that we can better provide and manage habitat for these species of great conservation need.

During spring and fall migration, shorebird surveys will be conducted at sites throughout Alfalfa, Blaine, Canadian, Garfield, Grant, Kingfisher, Logan, Major, Oklahoma, and Woods counties. While at each site, a variety of habitat characteristics will be recorded to characterize the habitats used by these birds.

We will then use a Geographic Information System to determine how landscape and local factors affect shorebird distribution, abundances, and species compositions within this region. This study was initiated in July of this year and will continue for 2 years.

Dr. Craig Davis is an Associate Professor of Wildlife and Gene Albanese is a PhD Candidate at Oklahoma State University.

Contents

Natural Resource News

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Oklahoma State University

Urban Fishing Continued from Page 1

A creel survey is also being conducted to determine angler demographics, satisfaction, interests, and fish harvest rates to determine if the program is meeting the needs of local anglers and to assess fishing pressure relative to fish population size.

After one year, we have found channel catfish growth rates are slow. Harvest rates are variable and depend on catfish size structure in the pond. Changing the fishery from a put, grow, and take fishery to a put and take fishery by increasing the size of stocked fish would likely improve the fish size structure, number of fish harvested, and overall angler satisfaction.

Our research will provide fisheries professionals with a better understanding of urban anglers and how their needs differ from traditional anglers. With a continued increase in urbanization and recent declines in fishing license sales, retaining and recruiting anglers by providing opportunities in the urban setting is more important than ever.

Dr. Daniel Shoup is an Assistant Professor of Fisheries and Dane M. Balsma is an M.S. Candidate at Oklahoma State University.

Dane Balsman setting a modified fyke net to collect mark-recapture data.

Management Notes

Ageing Northern Bobwhites

By Dr. Fred Guthery

Hunters can increase the enjoyment of bobwhite hunts by learning how to age birds in the bag. Bobwhites may be aged to young of the year (birds hatched in the latest breeding season) and older birds. The older birds are more than a year old but you cannot tell how much more.

Young of the year have one or more white tips on feathers called the primary coverts. The primaries are the large flight feathers on the outer part of the wing. The primary coverts are a group of feathers that overlap the primaries towards the front of the wing. The wings of older birds have solid-colored brown to grey-brown primary coverts (no white tipping).

Ageing bobwhites gives a notion of productivity in the last breeding season. In Oklahoma, a ratio of two to three young per adult indicates low production. A ratio of four indicates average production and a ratio of five indicates high production.

Dr. Fred Guthery is a Professor of Wildlife and the Bollenbach Chair at Oklahoma State University.

The arrow points to a white-tipped primary covert on a quail hatched during the preceding summer. The wing on the left is a quail more than one year old (no white tipping on primary coverts).
Photo by Dale Rollins, Texas Agricultural Extension Service.

OSU Forestry Alumni Association Reunion

By Dr. Craig McKinley

The OSU Forestry Alumni Association held a reunion at the Forest Heritage Center in Broken Bow on October 13. There were 73 attendees from across the country that gathered for fellowship and competition during the all day event.

The association was started in the 1950's shortly after the first class graduated from the newly formed Forestry Department, which began in 1946 at what was then the Oklahoma Agriculture & Mechanical College. The original purpose of the association was to develop a mechanism to keep in touch with the graduates of the Forestry program. Since 1946 there have been over 1450 graduates of the program.

This was the third reunion of the forestry alumni at the Heritage Center since 1996. The forestry alumni had wood and tree identification contests, match splitting contests, a business meeting, enjoyed a catered lunch, and shared stories and experiences of long ago summer camps and attending OSU. There were graduates in attendance from the first class of 1950 up to 1975.

The Forestry Department at OSU that is under the College of Agriculture just underwent a transition in 2006 to a new Department of Natural Resource Ecology Management that contains Forestry, Wildlife & Fisheries, and Range Management. Dr. Keith Owens, the new department head, was in attendance at the reunion and had an opportunity to speak to the forestry alumni. The new department and the forestry alumni association pledged to work together in the future to benefit both groups. The next Forestry Alumni Association reunion is planned for 2009 at a site yet to be selected.

Dr. Craig McKinley is a Professor of Forestry at Oklahoma State University.

OSU Forestry Alumni Association Officers,
Keith Judkins, President; Winton Ross, Vice Presiden; Dr. Craig McKinley, Treasurer.

The Oklahoma Master Naturalist Program

By Dr. Marley Beem

The desire to reconnect or deepen one's connection with nature is the foundation of the Oklahoma Master Naturalist Program. Participants start off by attending four training sessions which introduce them to the basics of ecology and what it means to be a naturalist as well as some selected aspects of aquatic systems, urban forestry, urban wildlife, and teaching skills. Scientific, research-based facts are stressed as being essential to understanding nature. The program operates under the direction of the NREM department and the supervision of local Oklahoma Cooperative Extension offices.

The typical participant is in their 50's or 60's, had significant outdoor childhood experiences, but now lives in an urban or suburban setting. Generally they are newly retired. They are also characterized by above average education and have lived in various parts of the country. Interests and opinions vary widely – some participants tend towards the preservationist side while others are rural landowners with a strong conservationist philosophy. All seem to benefit from being exposed to differing perspectives. In the four years since the program began, approximately 230 individuals have participated.

Chapters meet monthly in Oklahoma City and Tulsa for educational presentations and to conduct club business. Volunteer service projects include: the establishment of bird viewing blinds, educational programs for youth groups, and docent work at nature centers. Master Naturalist volunteers are also working with the US Fish and Wildlife Service's Partners for Fish and Wildlife Program to monitor restored wetland and grassland habitats. In 2006, the program was recognized for its accomplishments by the Keep Oklahoma Beautiful organization.

For more information on the program, go to: www.okmasternaturalist.org. We gratefully acknowledge presentations and other assistance from the Oklahoma Department of Wildlife Conservation, the Noble Foundation, the University of Oklahoma, and the University of Central Oklahoma

Dr. Marley Beem is an Assistant Extension Specialist at Oklahoma State University.

Master Naturalist participants attending a forest tree identification workshop.

New Materials

New Fire Ecology Web Site

There is a new web site available for fire ecology information. The NREM fire ecology web site can be accessed at: http://fireecology.okstate.edu. This site provides users with information about fire effects, along with site descriptions and photographs of the six Fire Effects Research and Demonstration Areas the Department maintains throughout the state. There is also information about patch burning, including: its use, implementation, recent publications, and a list of sites where it is being studied and applied.

New Patch Burning Fact Sheet

Patch Burning: Integrating Fire and Grazing to Promote Heterogeneity E-998, is the newest publication available from NREM Cooperative Extension.

This document discusses the importance of the fire-grazing interaction across the landscape. It focuses on the benefits of patch burning to native plant communities, wildlife, domestic livestock, and prescribed fire programs. The publication also details how to implement a patch burning program and answers many of the frequently asked questions land managers have about fire and grazing.

Patch Burning: Integrating Fire and Grazing to Promote Heterogeneity E-998 is available online at: http://nrem.okstate.edu/Extension

Giving to NREM

Support training and research in natural resource conservation and management. Send a tax-deductible contribution made payable to:

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Kudos

Texas A&M Press will publish *A Primer on Natural Resource Science* this spring. "Fred Guthery has written a tour de force in depth that will shape the field of wildlife science for many years." - Steven W. Buskirk, Department of Zoology and Physiology, University of Wyoming, Laramie.

The following NREM faculty and staff received were recognized for their achievements by the Oklahoma Division during the Ouachita Society of American Foresters:

Bob Heinemann for Outstanding Achievement in Forestry Research

Dr. David Lewis for Outstanding Performance in Forestry Education

Dr. Chuck Tauer for Excellence in Technology Transfer

Dr. Craig McKinley for Journalism

Dennis Wilson received the Ted Silker Award

Dr. Tom Kuzmic received the Nat Walker Award

Dr. Tom Kuzmic was elected as a Fellow in the Society of American Foresters. This is the highest honor that an individual member can receive from SAF.