

Armadillo Control

By Dwayne Elmore

One of the most common wildlife damage complaints during the summer months concerns armadillos. Armadillos usually cause problems during the late hours of the night as they dig for insects and larvae in lawns.

Armadillos may be active year around, but they are most active during the warmer months of the year. During the heat of the summer, homeowners begin irrigating their lawns. This makes lawns especially attractive to the armadillo. The lawns are usually mowed and thus there is little vegetation to impede foraging. Additionally, the irrigation results in the soil being loose and easy to dig. Finally, the irrigation often keeps larval insects close to the soil surface.

Once armadillos find a suitable foraging spot, they normally will return repeatedly. Many times the damage is only superficial as the holes are seldom more than a few inches in depth. In the case of sod forming turf such as Bermuda, the damage is typically repaired by the turf rather quickly. In the case of cool season grasses such as fescue, the damage is more long-term.

Continued on page 5

Volume 3, Issue 3, Summer 2009

A quarterly publication of the Department of Natural Resource Ecology and Management at Oklahoma State University



Kiamichi Research Station

By Bob Heinemann

The Kiamichi Forestry Research Station (KFRS) is one of the twenty-one research facilities managed by the OSU Field & Research Service Unit. The KFRS's staff supports all aspects of natural resources research, extension, and education for OSU in Southeast Oklahoma.

The main facility is located east of Idabel, Oklahoma and offers users a conference/classroom that seats 70, a wet laboratory, a GPS/GIS work station, a dormitory that sleeps 12, an efficiency apartment for extended stays, a research greenhouse, shade house, and two fabrication shops. There is also a fleet of vehicles, tractors and ATVs

Editors Note: In this issue, we highlight a few of the facilities that have active NREM research, teaching, and extension activities. These research stations form an integral part of OSU's land grant mission to serve the people of Oklahoma.

available for research purposes. The station staff is composed of degreed professionals with expertise in the areas of plant physiology, eco-physiology, soils, fish and wildlife biology, hydrology, GPS & GIS, forestry, and traditional agriculture.

Continued on page 5



Staff from the Kiamichi Station work on a cedar water use project.

Range Research Station

By Adam Gourley

The Oklahoma State University Range Research Station is a part of the statewide Oklahoma Agricultural Experiment Station system and is administered by the Field and Research Service Unit. The Range Research Station focuses its research efforts on natural resources and ecological management emphasizing the effects of prescribed fire on vegetation, wildlife, and cattle grazing in the Cross Timbers region.

In addition to hosting numerous research trials, the Range Research Station also serves as a natural resources management demonstration and educational facility used by many professors, extension personnel, and tour groups each year.

Some of the current projects under way on the area include: using motion-activated camera surveys to monitor white-tailed deer populations, patch-burn grazing research, eastern red cedar impacts to hydrology, and control of seresia lespedeza.

The location and size of the Range Research Station provides a unique opportunity for faculty to conduct research and showcase results to the public. Located just eight miles west of Stillwater on Highway 51 and two miles south on Coyle Road, access is convenient to both research technicians and tour groups. The Range Research Station manages approximately 5000 acres. Properties are organized in various sizes to accommodate projects designed at different scales and to provide relevance

to large and small landowners. Field tours at the Range Research Station occur at various times throughout the year. Visit the OSU Range Research Station section at <http://frsu.okstate.edu> for upcoming tours and events. For further information contact Station Superintendent Chris Stansberry at 405-743-4714 or stansbj@okstate.edu.

Adam Gourley is the Assistant Station Superintendent for the Range Research Station



Motion-activated cameras help monitor population dynamics of white-tailed deer on the Range Station.

Contents

Kiamichi Station	1
Armadillo Control.....	1
Range Station	2
Mac Lindley Farm.....	3
Forestry Camp	4
Accolades.....	6
Upcoming Events	6

Natural Resource News

EDITORS: Dwayne Elmore and Kevin Allen

E-mail: dwayne.elmore@okstate.edu and kevin.allen@okstate.edu

Website: nrem.okstate.edu

Phone: (405) 744-5437

Oklahoma
State
University



Mac Lindley Research and Demonstration Farm

By Curtis Cowell

The Mac Lindley Research and Demonstration Farm (MLRDF) is the most southern and recent addition to the Oklahoma Agricultural Experiment Station (OAES) system of research and demonstration facilities across the state. A little over a year ago, the OSU Foundation turned over management of the farm just south of Valliant, Oklahoma on the Red River to the OAES-Field and Research Service Unit (FRSU).

The MLRDF is a 2,500 acre facility with approximately 1,500 acres in pasture and row crop land and 1,000 acres of combined mixed upland hardwoods and mixed pine hardwood timber types. The farm also has approximately 250 producing pecan trees, a quarter of which are improved cultivars. A herd of 124 Black Angus heifers was added to the farm's resources as of September 2008. The herd grew in size by 97% with this spring's calf crop. The herd's main function is to provide replacement heifers for the OAES research and production herds and secondly to provide revenue from sales to run the farm.

The MLRDF is a unique facility within the OAES system in that it is solely funded through revenue from farm sales and interest earned on an endowment established by Mac Lindley upon his death. Over the last year, the efforts of the farm's staff have been focused in rehabilitating portions of the property, putting them back into production, and



Curtis Cowell inspects a portion of the Red River for a cooperative river bank stabilization project.

identifying unique areas on the farm suitable for future natural resource, range, and agriculture research and/or demonstration projects. These efforts in combination with caring for the cattle herd, and building over 12 miles of fence, have kept the farm staff busy this past year.

The MLRDF is staffed with two professionals, Curtis Lynn Cowell, Farm Superintendent, and a recent new hire, Assistant Superintendent, Dooley Parsons. Both Cowell and Parsons are natives of McCurtain County, have degrees from OSU, and have extensive backgrounds in cattle and traditional agriculture operations. The staff of the Kiamichi Forestry Research Station acts in support of activities on the farm and is taking the lead in developing the natural resources component of the farm.

Members of the NREM faculty, Cooperative Extension, and the FRSU have initiated discussion on future research and demonstration opportunities for the farm. There are currently two NREM biomass research projects being established on the farm. The area also served as an educational resource for the NREM Forestry Summer Camp. Additionally, Cooperative Extension, in conjunction with Langston University, are implementing a cooperative multispecies grazing and pasture reclamation demonstration.

For more information on the Mac Lindley Research and Demonstration Farm, contact Curtis Lynn Cowell, at (580) 286-0964 or via email at curtis.cowell@okstate.edu.

Curtis Cowell is the Farm Superintendent for the Mac Lindley property.

NREM Forestry Camp Restructured

By Tom Kuzmic

With enrollments in Forestry programs around the country dropping, and budgets not getting any better, we have done some serious thinking about how best to continue to provide a great summer camp experience for our Natural Resource Ecology and Management (NREM) students, and yet deal with enrollment and fiscal realities. Beginning this year, our traditional 7-week camp program has been split into two 3-week components, one at the end of the sophomore year, and a second one at the end of the junior year. Both are to be offered for 3 weeks in May, beginning after finals, and they will run simultaneously. Additionally, one credit-hour of experience was added to our campus-based silviculture course to expand field lab experiences in that area.

The sophomore camp is based at OSU's Kiamichi Forestry Research Station in Idabel, Oklahoma, while the junior camp will take place at an out-of-state location to give our students an opportunity to experience forests, forestry, and natural resource management practices in a different region, and hence, have a broader resume of field learning experience as we have always espoused. The economic advantage is due to the fact that the sophomore camp is close to home, and that will save both the department and our students some travel expense. Further, the students stand to gain immensely since both camps will conclude in May, and therefore, they will have the months of June, July and some of August available for meaningful summer

jobs and internships. Up to now, Forestry students have had to forgo a summer of work opportunity since our camps went well into mid to late July. That made it tough for students to earn money to pay camp bills and to put some aside for anticipated fall semester bills. Our revised format has been well-received by our current students. We do give up some of the in-depth experience that comes with a longer camp, but our two 3-weekers will still provide a rich hands-on experience.

One other factor involved in our decision to restructure camp is the learning message that we intend to deliver. The sophomore camp will still focus on traditional forestry field skills, primarily, field ecology, silvics, and timber cruising. Dr. Rod Will and Dr. Tom Lynch serve as the lead instructors. The junior camp, however, will be broadened in scope and theme to serve not just forestry students, but also the wildlife, range, and fisheries students in our department.

We have always taken an integrative, multi-resource perspective in our forestry curriculum, and we plan to expand and enhance that approach in our junior camp. It will be required of forestry majors and available as a practical, hands-on, field studies elective for other majors. Dr. Tom Kuzmic will serve as lead instructor, with collaboration by other NREM faculty. By attracting a broader group of students, we hope to provide a more dynamic learning experience, and also capitalize

on better economies of scale from a budgetary standpoint.

In May of this year, we held our first sophomore camp at Idabel. As noted above, Dr. Rod Will taught the forestry field studies component, with some faculty support from Dr. Tom Kuzmic, Dr. Tim O'Connell, Dr. Don Turton of the NREM faculty, and from Dennis Wilson of the Kiamichi Research Station. Dr. Will led the class on an ecological transect to discern forest community uniqueness and differences from the Red River floodplain to the Ouachita highlands. Interactions between the climatic, edaphic, biotic and topographic factors were explored at each stop along the transect. Concepts such as site index, site productivity, tree spacing and biomass distribution were taught on the Ouachita National Forest and at Pushmataha Wildlife Management Area.

Dr. Tom Lynch taught the forest measurements course, and had our students cruising the big loblolly pines on Weyerhaeuser ground near Haworth. He also ran hand-compass and GPS orienteering courses on OSU's Mac Lindley Farm property down by the Red River. OSU summer campers this year were once again recipients of generous scholarship support from Carolyn Jacob Foutch and from the Floyd and Allene Brown Foundation.

Dr. Tom Kuzmic is a Professor of Forestry in NREM.

Armadillo continued from page 1...

While exclusion fences or other barriers may provide relief for small garden beds, lawns are normally too extensive for this to be a viable option. Modification of the habitat, such as removal of ground vegetation can work. But this is usually not a good solution for most residences as the vegetation is likely ornamental. If possible, the homeowner might consider decreasing irrigation of their lawn to attempt to interrupt the foraging cycle of the armadillo. This will sometimes provide relief and may work for drought tolerant lawns.

There are no known repellants that are effective for armadillos. Soil insecticides are promoted to reduce the food source for the armadillo. However, this is a poor practice as you will be eliminating many beneficial insects in the process. Shooting is very effective, but limited by local ordinances within city limits. Thus, trapping is the primary method of control.



Live catch trap with funnel set to catch an armadillo.

Fortunately, armadillos are quite easy to trap. The first step is to identify what areas of the lawn are being most visited by the animal(s). A live catch trap measuring 10" x 12" x 32" should be set in that area. No bait is needed, but funnels can be used to direct the animal into the trap. You might also use natural barriers such as fences or landscape materials as a funnel. Close the traps during the day and check the traps early in the morning.

In Oklahoma, armadillos may be controlled all year without a special permit. Do not handle the armadillo once caught as they can become infected with the bacteria that causes leprosy. Be sure to humanly euthanize the animal rather than releasing it into another area. For further information, visit icwdm.org/wildlife/armadillo.asp

Dr. Dwayne Elmore is an Extension Wildlife Specialist in NREM.

Kiamichi continued from page 1...

A skilled labor pool is also available to aid the professional staff in the implementation of field research efforts. In addition to the 160 acre main facility, there is ongoing research on approximately 1000 acres of cooperative lands owned by state, federal, private industry, and private small landowners. In addition to supporting the efforts of the OSU Department of Natural Resource Ecology & Management, the facility also supports a wide range of educational and research based activities for other Oklahoma institutions of higher education.

Over the years, the research unit has developed and implemented numerous educational programs involving individuals from China, India, Turkey, South Africa, Thailand, Belgium, France, Finland, major U.S. corporations, the U. S. Forest Service, the Oklahoma Forestry Services, and other professional organizations. The facility and staff also provide educational opportunities for undergraduate students, graduate students, public school students, natural resources youth camp attendees, natural resource judging teams, and small private landowners.

For additional information of what KFRS has to offer with regards to research or educational opportunities or if you are interested in reserving the facility for an event, please contact Bob Heinemann at (580) 286-5175 or bob.heinemann@okstate.edu.

Bob Heinemann is the Superintendent of the KFRS.

Accolades

The Annual Ouachita Society of American Foresters (OSAF) meeting was held on December 4-5 in Ft. Smith, Arkansas. OSU Faculty member **Dr. Tom Lynch** received the Ouachita Society award for Outstanding Achievement in Forestry Research. The Nat Walker Award was presented to **Dr. Craig McKinley** and the Ted Silker Award for exemplary service to SAF and the forestry community was presented to **Dr. Rodney Will**. Also recognized during the meeting were **Dr. Tom Hennessey** and **Bob Heinemann** as newly-elected Fellows in the SAF.

NREM student, **Cameron Standing** earned the first of an annual summer internship to be offered by the OSU Kiamichi Forestry Research Station (KFRS). This annual internship will be offered to NREM students completing the first and/or second year component of the NREM summer camp program. For more information on the KFRS Internship contact Dr. Tom Kuzmic at 405-744-5463.



Events

Summer Fire Field Day

On July 28th NREM will conduct training on the use of growing season fires. This training will cover impacts of summer fires, safety considerations, and methodology. Participants will have an opportunity to compare plots burned at various seasons of the year and evaluate woody plant control, grass production, and sericea control. If conditions allow, a prescribed fire will be carried out. Meet at the Range Research Station west of Stillwater at 8:00 am or contact John Weir at 405-744-5442 for more information.

Nickel Preserve Field Day

On October 13 at 1:00 pm, a field tour will be held at The Nature Conservancy's Nickel Preserve near Tahlequah. This tour will examine the history of management of this property with emphasis on fire to meet land objectives such as cattle production, timber production, and wildlife management. For more information contact Dr. Terry Bidwell at 405-744-9618.

Pushmataha WMA Field Day

On September 29 at 1:00 pm, a field tour will be held at Pushmataha WMA near Clayton. Participants will have the opportunity to examine fire and timber harvest plots that have been ongoing for over 20 years. For more information contact Dr. Terry Bidwell at 405-744-9618.

Giving to NREM

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

"OSUF – NREM Programs"
Oklahoma State University
Natural Resource Ecology & Management
008 C Ag Hall,
Stillwater, OK 74078.

Visit our website:

<http://www.nrem.okstate.edu>
for more details on gift ideas.

SUBSCRIBING: If you are not already subscribed to NREM news you can do so by sending an email to the address: LISTSERV@LISTSERV.OKSTATE.EDU with the following command in the body of the email:
SUBSCRIBE NREMNEWS-L

