



Forestry, Wildlife & Fisheries Update Newsletter

Department of Forestry, Wildlife and Fisheries
George Hopper - Professor and Head

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In This Issue:

Master Wildlifer Short Course - Last Call	Page 2
Schedule for Master Wildlife Short Course	Page 3
Liming Fish and Prawn Ponds	Page 4
The "T" in Tennessee Could Stand for Timber	Page 4
Best Management Practices in Log Landings	Page 5
Epicormic Branching	Page 6

Calendar of Events - 2002

Nov. 19 - 20	Third Annual Prawn Conference Springfield Center, Springfield
Jan. 23 - 25	KY-TN Society of American Foresters Winter Meeting Fall Creek Falls State Park Pikeville
Feb. 4 - Mar. 18	Master Wildlifer Short Course - via Satellite
Feb. 18	Aquaculture America 2003 Louisville, KY
Feb. 23 - 26	Southeastern Deer Study Group Meeting Chattanooga

Faculty:

Wayne Clatterbuck, Forest Management
Craig Harper, Wildlife Management
Thomas Hill, Fisheries Management
Sam Jackson, Web Coordinator

George Hopper, Natural Resources
David Mercker, Forest Management
Larry Tankersley, Forest Management

Master Wildlife Short Course - Last Call

*Craig Harper, Assistant Professor, Wildlife Management and
Larry Tankersley, Extension Assistant, Forest Management*

The Master Wildlifer Short Course will be broadcast live over satellite and delivered to downlink sites across the South in seven 3-hour sessions between February 4 and March 18, 2003. Wildlife and natural resource experts from across the South will present the short course sessions listed below.

February 4: Introduction to Wildlife Management

February 11: Biology & Management of Bobwhite Quail, Cottontail Rabbit & Mourning Dove

February 18: Biology & Management of Eastern Wild Turkey

February 25: Biology & Management of Waterfowl and Wetlands

March 4: Biology & Management of White-tailed Deer

March 11: Non-Game & Threatened & Endangered Species Management

March 18: Leases, Liability, Laws & Economics

A reference manual will be provided to those viewing the short course, which will cover each session in depth. Speaker's presentation notes for each session will be provided to participants.

Craig and Larry will serve as the state coordinators for Tennessee and will work to market the program and coordinate activities, including locating sites, advertising availability, working with site coordinators to answer nontechnical (satellite programming) questions about the course, directing interested partners, etc.

A notebook will be printed in bulk to ensure a low-cost alternative (\$35 or less).

Additional costs are up to each site. There is a \$10 per person fee to pay for satellite and studio time at Clemson. Past costs have ranged from \$40 per person to \$100 per person and have included meals, etc.

In the past, a set of tapes have been available for \$85.00. See the website at www.mastertreefarmer.net for information on ordering MTF1 and MTF2 tapes.

The following table lists topics and speakers.

For more information contact: *Craig Harper at (865) 974-7346*
caharper@utk.edu

Larry Tankersley at 865-974-7346
latankersley@utk.edu

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<p>February 4</p>	<p>Introduction to Wildlife Management - Includes concepts and developing and implementing a wildlife management plan. Speakers are:</p> <p>Greg Yarrow - Wildlife Management Concepts. Phone: 864-656-7370 E-mail: gyarrow@clermson.edu</p> <p>Rhett Johnson - Developing and Implementing a Wildlife Management Plan. Phone: 334-222-7779 E-mail: johnson@forestry.auburn.edu</p>
<p>February 11</p>	<p>Biology and Management of Bobwhite Quail, Cottontail Rabbit & Mourning Dove. Speakers are:</p> <p>Ted Devos - BWQ/CTR Biology and Management. Phone: 334-230-6117, cell-phone: 334-850-4955 E-mail: tdevos@aol.com</p> <p>Marion Barnes - MD Biology and Management. Phone: 843-549-2595 E-mail: jbrns@clermson.edu</p>
<p>February 18</p>	<p>Biology and Management of Eastern Wild Turkey. Speakers are:</p> <p>James Earl Kennamer. Phone: 803-637-3106</p> <p>Jim Miller. Phone: 662-325-2619 E-mail: jmiller@ext.msstate.edu</p>
<p>February 25</p>	<p>Managing Waterfowl, Wetlands and Other Aquatic Resources - Includes waterfowl, wetland wildlife, and farm pond management. Speakers are:</p> <p>Leigh Fredrickson. Phone: 573-222-3531 E-mail: gaylord1@sheltonbbs.com</p> <p>Mike Masser. Phone: Office 979-845-7473, Cell phone 979-220-2828 E-mail: mmasser@wfscgate.tamu.edu</p>
<p>March 4</p>	<p>Biology and Management of White-tailed Deer. Speakers are:</p> <p>Joe Hamilton. Phone: 843-844-8616, 843-889-2427, Cell phone: 843-709-1700</p> <p>Brian Murphy. Phone: 800-209-DEER E-mail: qdma@charter.net</p>
<p>March 11</p>	<p>Managing Wildlife Diversity. Focus on managing for non-game and threatened and endangered species management. Speakers are:</p> <p>Chris Moorman. Phone: 919-515-5578 E-mail: chrismoorman@ncsu.edu</p> <p>Jim Ozier. Phone: 478-994-1438 E-mail: jimozier@dnr.state.ga.us</p>
<p>March 18</p>	<p>Developing Wildlife Recreational Opportunities on Your Property. Includes fee access, leases, liability, laws and economics. Speakers are:</p> <p>Neal Wilkins. Phone: 979-845-7726 E-mail: nwilkins@tamu.edu</p> <p>Don Steinbach. Phone: 719-658-3056 E-mail: d-steinbach@TAMU.edu</p>

Liming Fish and Prawn Ponds

Tom Hill, Professor, Fisheries Management

Many Tennessee ponds have relatively soft, slightly acid water that does not respond favorably to fertilization. Those pond owners who fertilized last summer but still had difficulty establishing and maintaining good plankton blooms may need to add lime to their ponds.

Availability of phosphorus added as pond fertilizer is increased after the pH of the bottom mud and the total hardness of the waters are raised by liming. Another benefit will be increased alkalinity so the water will not experience such wide ranges in pH. This is especially helpful for prawn because they are sensitive to pH changes.

A quick way to determine if a pond needs to be limed or not is with a simple water testing kit that measures total alkalinity. Ponds with water less than 20 ppm total alkalinity usually need lime and the farther below 20 ppm the water is, the more lime will be needed. However, even though the alkalinity test indicates lime is needed, it does not tell how much. A chemical test of the bottom solid done by the University of Tennessee Soil Test Lab in Nashville can provide that information.

New ponds should have the recommended amount of agriculture lime spread evenly over the bottom before being filled with water. Ponds already full will need the lime spread over the entire surface. For most watershed fish ponds, a single application of lime may last for several years. Watershed ponds with large amounts of overflow and prawn ponds that are drained to harvest every year may need to be limed more often.

The best time to lime ponds is during late fall and winter when fertilization is not being done. Do not lime during the spring and summer while the pond is being fertilized. The lime will cause the phosphate to settle out and be unavailable to the phytoplankton.

For more information contact: *Thomas K. Hill at (865) 974-7346*
tkhill@utk.edu

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The "T" in Tennessee Could Stand for Timber

David Mercker, Extension Associate, Forest Management

Once again, Tennessee is shown to be a timber state. Figures for 2001, published by the Tennessee Department of Agriculture, indicate that income derived from the sale of timber in Tennessee topped \$381 million. Cash receipts from timber income exceeded all other agricultural crops (corn, cotton, soybeans, tobacco, nursery, etc.), representing nearly 37% of the total \$1,033 million receipts. This strong and lasting trend has continued for six-years, with an average for cash timber receipts at 35% of the total crop receipts.

Only cattle and calves topped timber in 2001. Although, three of the last six years, timber receipts exceeded any livestock receipts, making timber the largest agricultural product in 1996, 1998, and 2000.

Within Tennessee, 55% of our land base is forested, covering 14.4 million acres. We have enjoyed a remarkable 58% increase in forest land since the early 1900's, gaining 5.3 million acres. This is due in great part to conservation measures, aggressive reforestation efforts, row crop and pastureland reversions and educational efforts.

We are reminded of the adage that counsels "Find something you are good at, and stick to it." Growing and processing trees is something Tennessee has proven to be good at. Our land, with its rolling hills and mountains, is well suited for this renewable crop. Tennesseans should acknowledge the importance of timber to our commerce, should realize that timber - like corn to Iowa - gives us identity, and should institute incentives for the development of this significant industry.

Announcing:

The Tennessee Champion Tree list is now available on the internet.
<http://www.state.tn.us/agriculture/forestry/champions/index.html>

For more information contact: *David Mercker at (731) 425-4717*
dcmercker@ext1.ag.utk.edu

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Best Management Practices in Log Landings

David Mercker, Extension Associate, Forest Management

The area within a logging operation that receives the greatest impact to the soil is the log landing. Log landings are areas to which trees are skidded, processed into logs and loaded onto trucks for transport to the mill. Prior to use, landings must be cleared of vegetation. During use, heavy logging and transport equipment converge at the landing - compacting, churning, and “ponding” the soil. Because landings are often located near the edge of the property and adjacent to public roads, they can invite unfavorable attention.

Water quality problems arise in landings that are improperly planned, located, finished off and maintained. If properly created and maintained, landings can be a benefit to wildlife and can be re-used in future logging operations.

Action Steps for Log Landings:

1. Choose sites with soils that are capable of holding up under heavy use - sandy or gravelly soils are best.
2. Minimize the number of landings and re-use old landings when possible.
3. Locate landings on higher ground, well away from water bodies.
4. The landing should have a slight slope and face south if possible (to aid in drying the soil). Don't exceed a 5 percent slope.
5. Grade and revegetate landings with a wildlife seed mix as soon after the logging as possible to stabilize the soil and provide cover (Refer to: Harper, Craig. *Planting Chart For Wildlife Food Plots in Tennessee*, SP 550A.).
6. Consider access safety and aesthetics near public roads. A screen of uncut trees between the landing and the road can sometimes be left.

For more information contact: *David Mercker at (731) 425-4717*
dcmercker@ext1.ag.utk.edu

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Epicormic Branching

Wayne K. Clatterbuck, Associate Professor, Forest Management and Silviculture Specialist

Thin or cut too much and you are likely to get a surge of epicormic sprouts on hardwood trees. These small branches cause serious degrade because they produce knots that greatly reduce the grade of lumber. They tend to develop profusely in pole and small sawtimber after the first partial cut or thinning.

A tree of nearly any size can break out heavily in epicormic sprouts. Epicormics originate from “dormant buds” that form annually in normal bud scales and at the base of branches. Unlike vegetative and flower buds, they are very small, embedded in the bark, and have a connection through a strand or bud trace to the pith of the tree. As the tree increases in diameter, the strands increase in length allowing the bud to survive and sprout whenever conditions are right.

What keeps the bud in check are “growth regulators” made by the growing terminal buds in a healthy and vigorous crown. Small-crowned, crowded trees such as suppressed and intermediate trees in the subcanopy, do not produce enough growth regulators. The buds in these trees break dormancy and sprout, especially if the tree is stressed or injured. The sprouts receiving the most light often grow rapidly into larger branches that reduce the bole quality of the tree. Healthy trees with larger crowns, usually do not have the propensity to sprout as much.

Some species produce more epicormic branches than others. White and red oaks tend to be most susceptible to epicormic branching. Basswood, black cherry and chestnut oak are less so. Few epicormics form on beech, hickory, yellow-poplar, maples, ash and birch.

To minimize epicormic sprouts, trees crowns should be released gradually with several partial cuts or light thinnings rather than one heavy cut that abruptly releases the crown and allows too much light through the overstory.

Epicormic branching may appear more damaging than it actually is for the following reasons. First, most sprouting occurs in the upper stem, but the greatest volume and value of the tree is in the lower log. Second, intermediate and overtopped trees sprout the most, but the more valuable trees are the dominant and codominant trees. Lastly, many small epicormic branches are short-lived and do not cause significant degrade. These small knots are often on the outer edges of the log and are slabbed off during milling.

Epicormic branching should be a concern to forest landowners and managers because of the potential degrade and value decrease of logs. However, through proper and judicious management, epicormic branching can be minimized. Heavy cutting in unmanaged stands tends to increase the chances of epicormic sprouting.

For more information contact: *Wayne Clatterbuck at (865) 974-7346*
wclatterbuck@utk.edu

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