



March 2006

BARC is part of the USDA's Agricultural Research Service and encompasses programs at the Beltsville Agricultural Research Center; the U.S. National Arboretum in Washington, D.C.; and worksites in Chatsworth, New Jersey; Presque Isle, Maine; and McMinnville, Tennessee. BARC is the largest and most diversified agricultural research complex in the world. BARC's record of accomplishments and its ongoing programs have made it a world leader in agricultural research.

Blowing Our Own Horn!



NEW HUMAN NUTRITION RESEARCH DIRECTOR



BARC is pleased to welcome **Allison A. Yates**, PhD, RD, as the new Director of the Beltsville Human Nutrition Research Center (BHNRC). Dr. Yates received a BS in Dietetics and an MS in Public Health from UCLA, and she is a Registered Dietitian. She received her PhD in Nutrition from the University of California, Berkeley. Her professional experience is quite broad, beginning with work as a dietitian and public health nutritionist. Most recently, she served as the Director of Nutritional Sciences at ENVIRON Health Sciences

Institute in Arlington, Virginia. From 1994 to 2004, Dr. Yates served as Director of the Food and Nutrition Board of the Institute of Medicine, National Academy of Sciences. While at the Food and Nutrition Board, Dr. Yates led the expanded approach to establishing human requirements and recommendations for nutrients (RDAs) that now includes other reference values and is thus termed *Dietary Reference Intakes*. She also served as study director for a Congressionally mandated study on how to improve the food safety system in the US, and at the request of FDA, she directed a study to design a framework for evaluating the safety of dietary supplements.

Community Interest...

THE NEWEST AMERICAN ELM

In 2005, the newest American elm -- named 'Jefferson' -- was released jointly by ARS and the National Park Service (NPS) after collaborative screening tests by US National Arboretum geneticist, **Denny Townsend**, and NPS plant pathologist, James L. Sherald, showed it to have an outstanding level of Dutch elm disease (DED) tolerance. It was cloned in 1993 from the original tree, a survivor of about 600 elms planted on the National Mall in Southwest Washington in the 1930's. DNA tests performed at the Arboretum showed 'Jefferson' to be an American elm. This sturdy elm grows in the typical vase shape up to 21 meters tall. Its leaves turn dark-green earlier in the spring, and stay dark later in the fall, than most other elms. 'Jefferson' can withstand pollution from city traffic and has wide adaptability. Rooted cuttings are being distributed to nursery cooperators for stock increase. 'Jefferson' joins previous National Arboretum DED-tolerant American elm releases 'New Harmony' and 'Valley Forge' to increase the choices for the public to plant American elms that are highly DED tolerant.



Arboretum and National Park Service horticulturists taking cuttings from 'Jefferson' elm on the National Mall in 2004.

JOIN HOWARD COUNTY GROWERS AT BARC FOR 2006 SEASON!

Community-supported agriculture (CSA) provides an opportunity for farmers and consumers to get closer. Purchase "subscriptions" from a local farmer, and then reap the benefits of the harvest each week all season. For more information about the growing CSA movement, visit www.sare.org/csa/index.htm.



Join the farm in 2006!

The BARC CSA runs for 16 weeks between June and September. Pick up a cooler of fresh produce each week from behind Building 046, BARC-West, which is on Third Street behind the greenhouses. The BARC CSA **starts Wednesday, June 7th**. Coolers include fine vegetables, fruit, and value-added products like hummus and fresh bread (depending on the week), and pick-up is from 3 PM to 4 PM. The cost is \$500. Make out checks to Howard County Growers, and mail to: Howard County Growers c/o Triadelphia Lake View Farm, 15155 Triadelphia Mill Road, Glenelg, MD 21737. Please put BARC CSA in the Memo section of your check. Questions? Contact Dave Shaw at songert@juno.com.

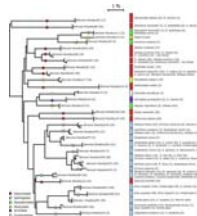
BARC SCIENTISTS PARTICIPATE IN QUEEN ANNE'S COUNTY AGRONOMY DAY

Hydrology and Remote Sensing Laboratory scientists working on the Choptank River Conservation Effectiveness Assessment Project (CEAP) presented an overview of their project to 200 farmers at the Queen Anne's County Agronomy Day on March 3rd. This multi-disciplinary project, funded by Natural Resources Conservation Service (NRCS), utilizes field-based measurements, satellite imagery, GIS and watershed water quality modeling to evaluate the effectiveness of conservation practices at protecting water quality within the Choptank River watershed. This same group has made presentations at the Choptank River Tributary Team, Caroline Co. Farm Bureau, Delmarva Poultry Industry, and Queen Anne's Co. Agriculture Experiment Station in order to inform local producers of its activities and to enlist volunteers for on-farm research activities required to complete the project. The Choptank CEAP Research Team also includes scientists from NRCS, Univ. of Maryland, National Oceanic and Atmospheric Administration, Wye Research & Education Ctr., Smithsonian Environmental Research Ctr., MD Dept. of Agriculture and USEPA. Results from this project will be used to provide improved strategies for conservation practice implementation, such as cover crops and riparian



buffer programs, on a watershed scale within the Choptank and other Chesapeake Bay Watersheds. For more info. on this project, contact **Greg McCarty** at mccartyg@ba.ars.usda.gov or **Laura McConnell** at mconnel@ba.ars.usda.gov.

DNA BARCODING



Insects are the most species-rich organisms on earth. Correct species identification is of paramount importance in agricultural research, including insect parasitoids used in biocontrol and integrated pest management programs. A team of researchers, including BARC scientist **Norman E. Woodley** of the Systematic Entomology Laboratory, used DNA barcoding (a type of DNA sequence analysis) technology to study species of *Belvosia*, a genus of tachinid flies that parasitize large moths. They found that some species that appeared to be generalist feeders are actually complexes of cryptic species that are individually highly host-specific. Some of these species actually feed on the same species of moth caterpillars but segregate by habitat. You can view information about this study on the Proceedings of the National Academy of Sciences website: www.pnas.org/cgi/content/full/103/10/3657. Implications of this study are that overall insect diversity, especially of parasitoids, is greater than documented, and great precision is needed when exploring for potential biocontrol agents for use against agricultural pests.

Mark Your Calendar!



UPCOMING INSTRUMENTATION AND SENSING LABORATORY REVIEW – April 12 & 13

The Instrumentation and Sensing Laboratory will be undergoing an in-depth review on April 12-13, 2006. The review is open to the public on the first day, April 12, from 9:30 – 11:30 AM. For more information, contact **Irene Bedard** at 301.504.8450.



DISTINGUISHED LECTURE SERIES

*Next Lecture is Thursday, April 20th
Lecture Series is Open to the Public*

Speaker: Dr. Wendell Roelofs, Professor and Chair, Department of Entomology, Cornell University, Geneva, New York
Title: "Decoding Chemical Signals from Insects to Elephants"
Time/Location: April 20, 10:30 AM, Building 003 Auditorium
For more information, please call 301.504.6078.

BHNRC WINTER/SPRING SEMINAR SERIES CONTINUES



Tuesday, April 18, 1:30 pm
Keith Harris, BHNRC, Diet & Human Performance Laboratory
"A Comparison of the Effects of Green and Black Tea on Iron Uptake, Storage, and Availability for Free Radical Reaction"
Building 307C, Room 122, BARC-East
For information contact: Keith Harris, 301.504.8721

RIVER HERRING TRANSPLANTATION EVENT to be held on

**April
8th**

On Saturday, April 8 from 10 AM to 1 PM, the Metropolitan Washington Council of Governments in partnership with BARC, the National Oceanic and Atmospheric Administration, and the Beaverdam Creek Watershed Watch Group is co-sponsoring an Anacostia watershed river herring fish transplantation event. The purpose of this event is to reintroduce anadromous fish species back into the Beaverdam Creek subwatershed. Once formerly abundant in Coastal Plain streams in the Anacostia, these fish have experienced major population declines related to water pollution, over-harvesting, and the presence of anthropogenic-related fish blockages. In 2002, a major Indian Creek fish blockage, located at Greenbelt Road, was removed as a part of the Woodrow Wilson Bridge Replacement Mitigation Project. Removal of this blockage has resulted in the opening of 5+/- miles of potential anadromous fish spawning habitat in both the Indian Creek and Beaverdam Creek stream systems. As part of a larger Anacostia restoration effort, the goal of this event is to move approximately 100 mature river herring into Beaverdam Creek. The event is open to the public. More details can be found at www.anacostia.net or by contacting Phong Trieu at 202-962-3291 or ptrieu@mwcog.org.



USDA Non-Discrimination Statement

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotope, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). USDA is an equal opportunity provider and employer.

