

# CONTRIBUTED PAPERS

THURSDAY, OCTOBER 9 ♦ 3:25 PM - 5:00 PM

## General

### MEETING ROOM: RAPPAHANNOCK

3:25 PM

#### **Forest Conservation in Central American Coffee Producing Regions: The “Yoro Model”**

*David King, USFS Northern Research Station; Richard Trubey, Mesoamerican Development Institute; Raul Raudales, Mesoamerican Development Institute; Richard Chandler, Warnell School of Forest Resources, University of Georgia; Tom Will, USFWS Division of Migratory Birds*

Trends in deforestation in Latin America offer gloomy prospects for the future of Golden-winged Warblers and other species that require forest habitat during the winter period in the short term. Nevertheless, recent innovations in agroforestry practices offer market-based tools for restoring and maintaining forest associated with these species. One example is hybrid solar-biomass coffee driers that eliminate the use of fuelwood for drying coffee, and lower the cost of coffee drying by over 80%. Currently the equivalent of 6,500 ha of forest is harvested annually in Latin America to fuel coffee driers. Another example is Integrated Open Canopy (IOC) Coffee, in which coffee is grown with sparse or no shade adjacent to forest patches of equivalent or greater size. In addition to promoting the conservation of forest habitat required by Golden-winged Warblers and other species, IOC increases income to farmers by increasing yields. Increased income to farmers is important because these systems provide a market-based incentive for forest conservation. Future work will be directed at implementing these market-based forest conservation strategies over large areas using co-management agreements as a framework for enhancing communication, cooperation, and policy to decrease rural poverty and the pressure on forest resources for the benefit of both humans and birds alike.

3:45 PM

#### **Creating Full Life Cycle Bird-Friendly Landscapes**

*Tom Will, U.S. Fish & Wildlife Service; David King, U.S. Forest Service*

Long-distance migratory birds spend only a few months of their annual cycle on the breeding grounds. During the remainder of the year, they fly often thousands of miles to and from the tropical habitats where they spend most of their lives. Recent advances in tracking technology and innovative studies in wintering ecology make it very clear that these annual phases - breeding, migration, and non-breeding residency - are not isolated segments in a bird's life. Events occurring in different locales are inextricably linked in determining lifetime avian reproductive success. If we allow the birds themselves to deliver insight, it also becomes clear that there are many kinds of cycles and loops that need to be closed in order for our conservation actions to be significant - cycles in research, monitoring, sustainable landscape design, sustainable economies, and human capacity-building that cross and bind together habitats, nations, market systems, and human generations. For example, an integrated full life cycle conservation strategy might include international partner teams implementing internationally-developed survey protocols and research projects. Single commodity certification systems (e.g., shade-grown coffee) can include native forest reserves (integrated open canopy coffee) and other crops grown in a sustainable bird-compatible manner to extend certification from the crop to the farm scale. Innovations like solar-powered driers that substantially reduce forest cutting for fuel wood expand the bird-friendly concept to the community level. The brilliant, imaginative outreach and education expertise of our Latin American partners leverages the power of birds and bird art to transfer environmentally empowering knowledge across generations. Engaged scientists and enlightened journalists complete the cycle of story maker and story teller to empower informed citizens. To complete the economic and educational full life conservation cycle, however, requires comparable and compatible linked organic and bird-friendly North American and Neotropical landscapes and a creative vision that includes markets that offer a full and varied suite of bird-friendly commodities to a widening arena of value-conscious conservation citizens.

<p>4:05 PM</p>	<p><b>Conservation Planning for Birds: Landscape Conservation Design Piloted in the Connecticut River Watershed</b></p> <p><i>Scott Schwenk, North Atlantic Landscape Conservation Cooperative; Andrew Milliken, Randy Dettmers, Jeff Horan, Nancy McGarigal — U.S. Fish &amp; Wildlife Service; Kevin McGarigal, Bill DeLuca, Brad Compton, Joanna Grand, Ethan Plunkett — UMass Amherst</i></p> <p>The North Atlantic Landscape Conservation Cooperative (LCC) and the U.S. Fish and Wildlife Service, working with UMass Amherst and others, are leading a collaborative effort to develop a landscape conservation design for the Connecticut River Watershed. Habitat needs for migratory birds are an important component of this multi-species, multi-ecosystem planning effort. The pilot effort, launched in January 2014, is designed to serve as a demonstration for applying large-scale conservation design tools and processes supported by the North Atlantic LCC and other regional partners. Steps in the design process have included 1) selecting focal bird species; 2) developing population objectives for the species; 3) translating the population objectives into habitat objectives using species habitat models developed for the full Northeast region, and 4) incorporating habitat objectives into the integrated conservation design. Scenarios of future climate change and development are being considered in the design. The design is intended to reflect the common priorities of governmental and nongovernmental partners working within the 7.2 million acre watershed and, ultimately, to guide shared conservation actions to protect, restore, and manage lands and waters to sustain the species and ecosystems of the watershed.</p>
<p>4:25 PM– 4:45 PM</p>	<p><b>Reproductive Success of Grassland Birds in Response to Grassland Management on Military Airfields</b></p> <p><i>Nellie Tsipoura, Mike Allen, Kim Peters, David Mizrahi — New Jersey Audubon</i></p> <p>The primary management objective on airfield grasslands is to reduce the risk of bird/wildlife aircraft strikes, which can be both costly and catastrophic. At the same time, in the Northeastern U.S., the large grasslands associated with airports have become increasingly important for the conservation of declining grassland birds as alternative habitats (such as agricultural grasslands) have been lost or degraded. Management practices on most military airfields are based largely on the assumption that vegetation between 7 to 14 inches high is least attractive to hazardous birds, and airfields are maintained at this height through regular mowing.</p> <p>Little information is available in the scientific literature regarding the effects of this approach on the reproductive success of grassland birds. In 2009–2012, we located and monitored 194 Grasshopper Sparrow nests and 131 Eastern Meadowlark nests in grassland habitats at three eastern U.S. military installations: Westover Air Reserve Base (Massachusetts), Joint Base McGuire–Dix–Lakehurst (Lakehurst section; New Jersey), and Naval Air Station Patuxent River (Maryland). Direct mower-caused nest mortality affected 8–19% of nests in mowed areas. Grasshopper Sparrow and Eastern Meadowlark had lower nest survival and fledged fewer young per successful nest in mowed versus non-mowed areas of Westover, the only partially-mowed site; nest survival at Patuxent, the entirely-mowed site was lower in areas of shorter vegetation.</p> <p>Overall, nest survival rates at all three airfields were comparable to or higher than those reported at non-airfield grasslands, suggesting that airfields may not be population sinks for grassland birds. Results suggest that maintaining vegetation between 7 to 14 inches may have negative effects on density and nest survival of grassland-obligate birds. More research is needed in both of these areas to determine if these results are applicable to other airfields and in other regions.</p>