

# CONTRIBUTED PAPERS

THURSDAY, OCTOBER 9 ♦ 1:15 PM - 3:00 PM

## Status/Trends

### MEETING ROOM: RAPPAHANNOCK

1:15 PM	<b>Status of Henslow's Sparrow Breeding Populations in North Carolina</b> <i>John P. Carpenter, John S. Wright – North Carolina Wildlife Resources Commission</i> Henslow's sparrows are known to reliably breed at only two locations in North Carolina, and these also happen to represent the largest concentrations of this species breeding in the southeastern United States. The grassland habitat these populations are found in, both of which occur at Voice of America (VOA) Transmitting Stations A and B east of Greenville, NC, has been maintained for over fifty years primarily through the use of mechanical mowing. From 1994–2000, traveling surveys with periodic stops along roads yielded an average of 75 singing males from both sites. From 2011–2014, traveling surveys were replaced with 45 point count stations where an average of 28 singing males was recorded at site A alone. Density estimates from recent surveys and current vegetative characteristics will also be presented, as well as the outlook for long-term habitat management at site A, which has recently been decommissioned and surplussed by the federal government.
1:35 PM	<b>Ten Years of Mountain Birdwatch: Abundance and Trends of Bicknell's Thrush and Other High-Elevation Birds</b> <i>Judith Scarl, Vermont Center for Ecostudies; Daniel Lambert, High Branch Conservation Services; Julie Hart, University of Wyoming; Randy Dettmers, U.S. Fish &amp; Wildlife Service</i> Bicknell's Thrush ( <i>Catharus bicknelli</i> ) is a range-restricted migratory passerine that has been petitioned for listing under the U.S. Endangered Species Act. Mountain Birdwatch, a four-state citizen science initiative founded in 2000 in VT, monitors Bicknell's Thrush and other high-elevation breeding birds in NY, VT, NH, and ME. We use the first decade of Mountain Birdwatch data collection to assess how broad-scale climatic, competition, and environmental variables influence Bicknell's Thrush abundance; these are the first long-term, broad-scale results relating to population status from this 15-year effort. We apply correction offsets based on singing rate and detection distance models for each species to the Mountain Birdwatch point count data within a general linear model framework to estimate the strength of the relationships between climate, species competition, environmental variable and the abundance of Bicknell's Thrush and other high-elevation birds. We also use this analysis framework to estimate population trends of these species over the first 10 years of Mountain Birdwatch. These analyses will inform the status review for Bicknell's Thrush listing, identify ecological and environmental factors influencing abundance of high-elevation birds, and assist land managers with resource management decisions in relation to a vulnerable species.
1:55 PM	<b>Declines of Aerial Insectivorous Birds in the Northeast: A Call to Action</b> <i>Pamela Hunt, NH Audubon</i> Aerial insectivores are those birds which capture insect prey on the wing, and in the Northeast include nightjars, swifts, flycatchers, and swallows. Over the last decade, it has become increasingly recognized that many birds in this foraging guild are declining at alarming rates – often higher than those of other species identified as conservation priorities. Canada has already listed five species (Common Nighthawk, Chimney Swift, Olive-sided Flycatcher, Bank Swallow, and Barn Swallow) as threatened or endangered, and a recent revision of priority species lists for the northeastern United States proposed that several still common species (e.g., Chimney Swift; Bank, Cliff, and Barn Swallows) be considered “Species of Greatest Conservation Need” as states revise their Wildlife Action Plans. Declines seem strongest in northern portions of species' ranges, and in species that winter in South America, but very little is known about the causes of these declines. In this presentation I will provide an overview of the declines and potential threats, a brief summary of work going on

	<p>in the Northeast, and issue a call to action for collaborative and coordinated monitoring, research, and outreach to agencies and organizations working in this region.</p>
2:15 PM	<p><b>Trends in Abundance of Spruce-fir Forest Birds in Upper Midwestern and Northeastern United States</b></p> <p><i>Joel Ralston, University of Massachusetts; David I. King, US Forest Service, University of Massachusetts</i></p> <p>Spruce-fir forest birds in the Northeast and Great Lakes regions of the United States represent the southernmost breeding populations of these species, and may be effected in recent history by land use changes, environmental toxins, insect pest outbreaks, and global climate change. However, these inaccessible habitats are often underrepresented in avian monitoring programs. Long term population trends in spruce-fir birds are therefore poorly understood and, for many species, are yet to be examined on a broad geographic scale.</p> <p>Here we combine point count data from 16 survey programs in the eastern United States to analyze long term population trends in 14 spruce-fir species. We control for the effects of survey protocol in the estimation of detection probabilities and abundance, and use non-linear regression to estimate trends for each species and survey. Regional trends are calculated as weighted means of survey-level trends.</p> <p>Six species showed overall significant declines, while five significantly increased, and three showed no significant changes. Evening Grosbeak, Olive-sided Flycatcher, Yellow-bellied Flycatcher, and Bicknell's Thrush each showed significant overall declines, and did not significantly increase at any individual survey. Five species showed significant differences in trends between Northeast and Great Lakes Regions. Spruce-fir obligate species, defined as those that prefer and utilize only spruce-fir habitat, were more likely to significantly decline than species that use spruce-fir in addition to other habitat types.</p>
2:35 PM - 2:55 PM	<p><b>Vital Rates of North American Landbirds: Identifying the Proximate Demographic Correlates of Population Change</b></p> <p><i>Steve Albert, Dave DeSante, Danielle Kaschube, Jim Saracco —The Institute for Bird Populations</i></p> <p>Identifying the proximate demographic correlates of avian population change is a crucial step in the development of conservation strategies and management actions based on full life cycle population modeling and monitoring. In order to address this need, The Institute for Bird Populations (IBP) created the Monitoring Avian Productivity and Survivorship (MAPS) program in 1989, and is now creating a dedicated website, Vital Rates of North American Landbirds, that is based on analyses of 15 years (1992–2006) of MAPS data and that will become live early in 2015. This website presents results of temporal (annual) and spatial (BCR-scale) analyses of annual population change (<math>\lambda</math>), adult apparent survival, recruitment, residency, productivity (reproductive index), post-breeding effects, and an index of population density for over 150 landbird species, along with pairwise correlations among all of these vital rates for each species.</p> <p>These results can provide critical information on the stage(s) of the life cycles of these species at which population change is being driven and the extent to which it is being driven by density-dependent processes. As an example, we present results and evidence from this website for Wood Thrush (<i>Hylocichla mustelina</i>), a species with an overall significantly decreasing population trend, that suggest that annual population changes and spatial variation in population trend are driven primarily by annual and spatial variation in both adult apparent survival and first-year survival of young, and that these demographic drivers act during the non-breeding season in a largely density-independent manner. We also show how multi-species patterns of correlations among these critical vital rates vary as a function of migration strategy (Neotropical-wintering migrants, temperate-wintering migrants, permanent residents) and overall population trend (decreasing species, stable species, increasing species), and assess what this might mean for large-scale conservation efforts for these various species groups.</p>