CONTRIBUTED PAPERS

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

Assessment

MEETING ROOM: YORK

3:25 PM	**Prioritization of Parcels on the Eastern Shore of Virginia for Habitat Protection** *Jessica Rhodes, U.S. Fish & Wildlife Service* My analysis identifies and prioritizes parcels on the Eastern Shore of Virginia that, if protection activities are completed, will provide the greatest habitat benefit to migratory bird species. I developed ten response guilds based on habitat requirements NOAA's Coastal Change Analysis Program (C-CAP) regional land cover as the basis for the habitat needs of the response guilds. All parcels which are not currently protected were identified and included in further analysis. Areas which were within a designated guild, adjacent to conservation corridors as identified by the Virginia Conservation lands Needs Assessment, or adjacent to existing conservation lands were considered a higher priority and assigned a corresponding numerical score. I also used habitat patch size recommendations for the guilds in which this information was available. Contiguous habitat patch sizes were calculated and assigned weights based on the requirements of the birds within each guild. For guilds where this information was unavailable, the amount of guild habitat within a parcel and total parcel size were used. These layers were combined to determine the importance of a specific area. Areas were assigned a priority category (high, medium, low, and non-priority) based upon the numerical score determined by combining the various input layers. For implementation purposes, this information needed to be associated with parcel information. To do so, the area of each category within the parcel was calculated. This total was weighted based upon importance and the weighted values were combined to determine a total score for each parcel. The total score was used to determine the final ranking of each parcel based upon the relationship of the parcel score to the standard deviations (Far Above Average, Above Average, Average, and Below Average). This project will be instrumental in the implementation of habitat protection activities on the Eastern Shore of Virginia to benefit migratory birds. This analysis not only identified parcels in need of protection, it also prioritized them based on ecological factors. A prioritization strategy is critical to ensure limited conservation funds are used effectively and facilitates the planning process for conservation organizations to be as efficient as possible.
3:45 PM	**The Importance of Year Round Surveys to Classify Grassland Bird Use: An Investigation on Fort Pickett, Blackstone, Virginia** *Michael St. Germain, Rebecca Schneider ─ Conservation Management Institute, Virginia Tech* Military installations conduct planning level surveys to determine the potential impact of training and management activities on biological communities. Knowledge of baseline natural resource conditions can assist managers in making informed decisions to avoid conflicts between conservation and the military training mission. Bird species are of particular interest to installation managers. The purpose of this project was to establish baseline species diversity, abundance, density, and population estimations for avifauna in selected parcels of existing and recently converted grassland areas on Fort Pickett in Blackstone, Virginia. We surveyed bird species utilizing grassland habitats at Fort Pickett in all four season.Surveys included 100 m variable-width distance estimating transects located within grassland habitats. We made 3,359 total observations (95 spp.)with seasonal detections of: fall=17.09% (52 spp.); winter=20.13% (39 spp.); spring=31.32% (78 spp.); and summer=31.47% (66 spp.).Detection probabilities were constant in the fall, spring, and summer (0.48-0.50) but lower in the winter (0.28). Bird densities were statistically lower in the fall (1.5±0.3 birds/ha)as compared to the other seasons(4.0±1.5 to 5.8±0.4 birds/ha)with winter having the greatest variance. We detected nine early successional species listed as "species of greatest conservation need" in Virginia's State Wildlife Action Plan. We calculated overlap for each season, noting that 35% of the species observed were absent during the traditional breeding season survey period and would have gone undetected otherwise. Multi-seasonal studies are important to capture the full species assemblage utilizing these important habitats. This approach allows for year round examinations which takes into account various detection probabilities and flocking behavior. We suggest that greater survey effort is needed during winter surveys compared to other seasons for those reasons.

4:05 PM	**Accounting for Uncertainty in Using Current Salt Marsh Bird Distributions to Project Vulnerability to Sea Level Rise**
	Elizabeth A. Hunter, Nathan P. Nibbelink, Robert J. Cooper — Warnell School of Forestry and Natural Resources, University of Georgia; Clinton T. Moore, U.S. Geological Survey, Georgia Cooperative Fish and Wildlife Research Unit, Warnell School of Forestry and Natural Resources, University of Georgia
	Sea level rise (SLR) will affect salt marsh bird species through changes to landcover distribution and structure. If current species occupancy and abundance relationships with landscape gradients remain constant over time, then those relationships can be projected using SLR models to predict future species distributions. We sampled the abundance of two salt marsh obligate bird species (Clapper Rail, Rallus longirostris, and Seaside Sparrow, Ammodramus maritimus) across coastal Georgia. Given Clapper Rails' apparent ubiquity in Georgia salt marshes, we predicted that the current Clapper Rail distribution would be more weakly related to landscape variables and less uncertain than the Seaside Sparrow distribution. We stratified sampling across seven landscape gradients to maximize the power of detecting landscape relationships. We conducted point counts at 214 sampling points during March-June 2013 with three visits made to each point using a double-observer protocol, which allowed for robust estimation of occupancy and abundance using Bayesian hierarchical models. Making spatial predictions of habitat quality from effect size probability distributions allowed us to assess the uncertainty in our predictions and how this uncertainty is propagated through time with SLR models. Seaside Sparrow occupancy was positively related to distance to forested and urban areas, and elevation and salinity were positively related to abundance. Landscape variables explained 85% of occupancy variation and 30% of the abundance variation, indicating that Seaside Sparrow distribution is largely determined by our landscape metrics. However, effect size uncertainty is large. Clapper Rails were so widespread in Georgia salt marshes that we were not able to model an occupancy process, but abundance was negatively related to distance to forested areas and salinity. Landscape variables only explained 6% of the variability in Clapper Rail abundance, but with small uncertainty around effect sizes. Comparison of the distributions of these two species show that Seaside Sparrows may be more negatively affected by SLR as preferred sparrow marshes are more vulnerable to SLR than marsh types used by Clapper Rails. Large uncertainty around the current Seaside Sparrow distribution will make predictions about future distributions with SLR more difficult. We recommend structuring monitoring around this uncertainty to improve future predictions.
4:25 PM– 4:45 PM	**A National Approach to Bird Species Prioritization at the Bird Conservation Region (BCR) Scale**
	Mitch Hartley, Atlantic Coast Joint Venture; Randy Dettmers, USFWS; Tim Jones, Craig Watson, Caleb Spiegel — Atlantic Coast Joint Venture
	In an effort to develop "all-bird" conservation plans for each Bird Conservation Region (BCR) in the Atlantic Coast Joint Venture (ACJV), U.S. Fish & Wildlife Service (FWS) and ACJV staff and partners established an objective set of decision rules to prioritize birds at the BCR scale. Their approach was to integrate the information in each of the continental (or national) and regional "step down" plans developed by the bird initiatives for waterfowl, shorebirds, waterbirds, and landbirds. A species conservation status in each BCR was a function of three parameters, which were cross-walked to scores/values in each initiative's plans: continental concern, BCR responsibility, and BCR concern. BCR responsibility is the degree to which a species is endemic to a region, or how important that region is to its continental population. These lists were developed by teams of species experts representing each bird initiative, and vetted by the larger conservation community at one or more regional workshops. Partners were discouraged from proposing that any given species be added to the list of priority species (or elevated in status); rather, they were encouraged to identify where one or more of the default values/scores in the decision tree were inaccurate for some reason, or did not reflect the current realities in that BCR. If that position was supported by the majority of the partners, the default value would be changed and noted as to how and why a default score was not used. We think this is a robust process for determining regional priorities, which should be considered for adoption by the broader bird conservation community. Currently, there are various- and varying- priority species lists in circulation, and it confuses and frustrates practitioners and funders when these lists reflect different sets of species. Given that ongoing assessments of bird conservation status are expected periodically (e.g., FWS Birds of Conservation Concern list, State Wildlife Action Plans, etc.) we urge the bird conservation community to adopt a unified approach to prioritization as soon as possible.