Bird Community Monitoring
in the Southern Plains Network

Male Bullock's Oriole

Importance / Issues

Songbird communities are good indicators of the health of ecosystems because they respond quickly to changes in resource conditions and there are comparable regional and national datasets. Grassland birds, in particular, respond to management practices such as grazing and fire, as well as landscape level changes. In addition there are more species of birds at SOPN parks then any other vertebrate. If a park has a wide range of bird species, then it is likely that this indicates the health of a wide variety of habitats and the other plant and animal species that depend on them. Long-term trends in the community composition and abundance of breeding bird populations will provide a measure for assessing the ecological integrity and sustainability of prairie, riparian, and pinion-juniper systems.

Potential Measures

Species richness, abundance, distribution, change in functional groups, indices.

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Preliminary Monitoring Objectives

1. Population Trends of Songbird Species. Determine trends in abundance of songbirds with the ability to detect a given change (e.g. 30%) in the population size (abundance) of songbirds over a given time period (e.g. 10, 20 years), with a given (e.g. 80%) probability of detecting change if it occurs.

2. Community Composition and Distribution. Detect long-term changes in the distribution and composition of breeding songbird communities in each network park in relation to changes in their habitats (biotic integrity indices or ecological guilds).

Protocol Development & Status

Dusty Perkins, Network Coordinator for the Southern Plains, is the lead for the grassland community vital sign protocol. SOPN's protocol will benefit from and build on bird protocols already established in the Heartlands, Northern Colorado Plateau, Central Alaskan, and Greater Yellowstone Networks. Pilot field seasons will likely begin at a small park (Washita Battlefield or Lyndon B. Johnson NHP) and a large park (Chickasaw NRA or Lake Meredith NRA) in 2007. The planned completion date for the protocol is November 2007.

Blue Grosbeak nest with Cowbird eggs