

# **Supplement to FY2001 FLMP Monitoring Report Black Mesa Ranger District Management Indicator Songbird Species**

April 24, 2002

During the summer of 2001, members of the Wildlife Program staff on the Black Mesa Ranger District conducted FLMP monitoring for songbirds along three road routes across the district. Work began on the project with the arrival of two very experienced birding volunteers on June 22, 2001 and was completed on July 20, 2001.

## **Objectives**

The objectives were to document songbird species occurrence along each of the routes, record the type of habitat species were using, and gather baseline population data for management indicator songbird species. The long-term objectives of this effort are to annually survey songbirds along the established routes to determine population trends and the responses of songbird populations to habitat manipulations.

## **Methods**

The establishment of the three birding routes began immediately. The routes and bird detection techniques were based on methods recommended by Ralph et al. (1993) for on-road point counts. We set up three 15-mile long routes with 50 point-count stations on each route for a total of 150 point-count stations. Ralph et al. recommend putting in point-counting stations in multiples of 250 to monitor overall population changes and responses to habitats, so it is our intent to establish two additional routes in 2002. Routes were established along FR86 in Black Canyon south of Heber, between Chevelon and West Chevelon Canyons along FR169, and along FR504 from approximately 1.4 miles west of State Highway 260 to Chevelon Crossing. Count stations were located 0.3 miles apart on each route. Each route required two days to complete, with 25 count stations surveyed each day. All birds seen or heard were recorded. The Black Canyon route was surveyed on 6/28 and 6/29/2001, the Nagel route was surveyed on 7/2 and 7/3/2001, and the 504 route was surveyed on 7/5 and 7/6/2001.

## **Results**

A total of 93 bird species were recorded during 2001 surveys of the three routes. Fifty-one species were confirmed breeding in 2001. Fifty-one species were recorded at point-count stations on the Black Canyon and 504 routes, with 39 species documented at point-count stations on the Nagel route (see attached summary sheet). Five other species were

seen between point-count stations along the established routes and nine additional species were seen at locations other than along the routes on the Sitgreaves National Forest.

Six management indicator bird species were recorded on the routes. These included one goshawk (seen between count stations), five yellow-breasted chats, 48 juniper (plains) titmice, 43 pygmy nuthatches, two wild turkeys, and seven hairy woodpeckers. The yellow-breasted chats were all detected near or at Chevelon Crossing on the 504 road route. Juniper titmice were all seen at count stations where pinyon-juniper was present. The wild turkeys were seen in pine stands where oak was present. Hairy woodpeckers were found in ponderosa pine stands, with aspen present at some of the sites. Pygmy nuthatches appeared to use the widest variety of habitats. They were observed in ponderosa pine, riparian, pine with oak, and open areas (i.e. old burns, powerline corridors, and small forest openings).

Five management indicator bird species were not detected on the routes. The Mexican spotted owl, Lucy's warbler, Lincoln's sparrow, Red-naped sapsucker, and cinnamon teal were all absent from the survey species list. In the case of the MSO, the species is active at night and is typically surveyed after dark using tapes or voice calls. It is not a species that will be detected with any regularity during daytime on-road point count surveys. Cinnamon teal inhabit lakes, ponds, and wetlands. The only area within sight of dependable water along any of the routes is Chevelon Crossing on the 504 route; even this goes dry in drought years. I have never observed cinnamon teal or other waterfowl species at this site and it is unlikely that the site is suitable for cinnamon teal. Both the Lucy's warbler and Lincoln's sparrow are unlikely to occur on the Black Mesa District (Troy Corman, AGFD, pers. comm.). Greater than 90% of Lucy's warblers are found below 6500 feet (Latta et al. 1999) and documented occurrences of this species above the Mogollon Rim are few. Lincoln's sparrows are considered high elevation riparian species and inhabit dense stands of willow surrounded by spruce-fir forests (Troy Corman, pers. comm.). This type of habitat is absent from the Black Mesa District. Both the Lucy's warbler and Lincoln's sparrow are most likely to be found on the Apache National Forest. We expected red-naped sapsuckers to be detected, especially in the cottonwood riparian area along Black Canyon. This species has been documented on the District and we hope to pick it up in future surveys.

Eight habitat types were surveyed. These included ponderosa pine, pinyon-juniper, pine with oak (not necessarily meeting the MSO definition of pine/oak), forest openings, old burns, powerline corridors, riparian, and aspen. The habitat type was recorded at each point-count station. The data includes a summary of species occurrence in each habitat type.

### **Conclusions**

The 2001 surveys reinforced our knowledge of bird species and habitat use on the Black Mesa Ranger District. Management indicator species detected on the routes were found in habitats that have documented use in other studies. It is hoped that species absent from some areas (e.g. red-naped sapsucker and yellow-breasted chat absent from the Black

Canyon route) will be detected in the future. Population trends will not be possible to calculate until several years of surveys have been completed.

These surveys are not intended to monitor or provide population estimates for some management indicator species. The methods described will not adequately census Mexican spotted owls or northern goshawks, both of which are surveyed in Region 3 using more precise methods. Likewise, the determination of cinnamon teal population trends should not be attempted using these methods because lakes and wetlands where they frequent are better surveyed using other methods. Finally, reliable long-term wild turkey survey data is available from the Arizona Game and Fish Department and may provide a larger sample size than data from surveys described here.

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#### Literature Cited:

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Ralph, C.J., Geupel, G.R., Pyle, P., Martin, T.E., DeSante, D.F. 1993. Handbook of field methods for monitoring landbirds. Gen. Tech. Rep. PSW-GTR-144. Albany, CA: Pacific Southwest Research Station, USDA Forest Service. 41pp.