

Work Task C52: Gilded Flicker Riparian Habitat Use and Seasonal Movement Research

FY15 Estimates	FY15 Actual Obligations	Cumulative Expenditures Through FY14	FY16 Approved Estimate	FY17 Proposed Estimate	FY18 Proposed Estimate	FY19 Proposed Estimate
\$160,000	\$107,103.99	\$513,269.60	\$300,000	\$300,000	\$0	\$0

Contact: Mary Ellen Chavez, (702) 293-8475, mchavez@usbr.gov

Start Date: FY12

Expected Duration: FY17

Long-Term Goal: Evaluate the current distribution and abundance of gilded flickers on the lower Colorado River (LCR) by conducting species-specific, non-random surveys

Conservation Measures: GIFL1 and MRM1

Location: The LCR MSCP planning area and other areas in Arizona where gilded flickers are located

Purpose: The purposes of this work task are to: (1) evaluate year-round habitat use, seasonal movements, and size of the breeding home range of the gilded flicker, (2) observe how often gilded flickers are using riparian habitat as nesting or roosting cavities, and (3) identify approximate dates of pair formation, incubation, nestling, and fledgling stages.

Connections with Other Work Tasks (Past and Future): Information obtained through this work task will be used during post-development monitoring of habitat conservation areas (F2) and system-wide surveys (D6).

Project Description: Surveys conducted under the LCR MSCP have not resulted in the detection of gilded flickers breeding in riparian habitats within the LCR MSCP planning area. However, there have been incidental observations of gilded flickers using the riparian habitat in this area as family groups during the fall and winter months and occasionally during the summer months.

Additional research and monitoring is needed to understand how and when the gilded flicker is most likely to use riparian habitats within its range. This study will: (1) estimate time periods of breeding and post-breeding stages and document breeding season behaviors to help interpret results of sightings, (2) document gilded flicker travel distances during and after nesting season to

document if it is possible that birds nesting in saguaro habitats may also use disconnected riparian habitats, and (3) help define habitat use by the gilded flicker during the breeding and non-breeding seasons.

Previous Activities: The species profile and annotated bibliography were updated; and historical and recent records were examined for detections within the LCR MSCP planning area and along the Bill Williams River. In FY12, preliminary surveys were conducted to locate breeding gilded flickers within the LCR MSCP planning area and adjacent areas. Areas where gilded flickers were observed include a family group in mesquite habitat along the Bill Williams River north of Mineral Wash Road, a pair of gilded flickers at McIntyre Park in Blythe, California; an incidental sighting of a gilded flicker at Yuma East Wetlands; and numerous gilded flickers readily detected in the saguaro habitat adjacent to the LCR MSCP planning area in Arizona.

In FY13 and FY14, a study was conducted to document the breeding chronology, seasonal movement and breeding home range size, and year-round habitat use of the gilded flicker and test existing methods to document species movements. Capture and radio telemetry tracking methods were tested, and information on the breeding chronology of the gilded flicker was collected at an upland ephemeral wash study area that was selected south of Quartzite, Arizona. Different year-round tracking techniques were employed to compare effectiveness and cost, including backpack and retrix-mounted radio telemetry and Global Positioning System (GPS) locators. Techniques and equipment were studied for effectiveness on adult males and females and juveniles. To document the timing of the different breeding stages, eight active nest cavities were monitored on a regular basis until nestlings fledged. The types of vocalizations made during different activities and time periods were also documented. Juvenile habitat use, average home range size, and behavior while in family group formation were also studied.

FY15 Accomplishments: In FY15, the study continued at the study site south of Quartzite. A seasonal chronology of behaviors and vocalizations during pair formation, nesting, and family group formations continued in order to refine and test protocols and methodologies developed in FY13 and FY14. The GPS locator tracking method was least successful; one male fitted with a GPS locator in FY14 was recaptured, but due to equipment malfunction, tracking data were not retrieved for analyses, and the other two males with GPS units were not located. Three adult gilded flickers with backpack transmitters were tracked until their equipment came off naturally. These birds, as well as other gilded flickers in the study area (both color banded and unbanded), were observed monthly to gain additional insights to site fidelity, movements, habitat use, and behaviors throughout the year. Solo and paired gilded flickers, as well as active nest cavities and family groups, were monitored, and vocalizations during different activities and time periods throughout the year were documented.

Reduced field efforts in FY15 required fewer funds than budgeted.

FY16 Activities: Surveys will be conducted in the Quartzsite study area in an attempt to locate the two males with GPS transmitters. The equipment will be removed, data retrieved, and followup surveys conducted on banded flickers from FY13 and FY14, as necessary, to complete the protocols. Exploratory surveys will be conducted along the LCR MSCP planning area and western Arizona where gilded flickers have been recently documented to locate gilded flickers in riparian areas, look for nest and roost cavities in riparian woodlands, and test survey methods.

Proposed FY17 Activities: Additional surveys for gilded flickers will be conducted to test the survey methods and detect nest and roost cavities in riparian woodlands. If gilded flickers are not easily detected using the double sampling survey method or sufficiently responsive using the call-playback method, up to 10 gilded flicker pairs utilizing riparian habitats will be captured and fitted with tracking equipment in order to determine how detectable they are in dense riparian vegetation and how intensively plots need to be surveyed to get an accurate measure of gilded flickers if they are present. Presence survey methods will be finalized, and the work task will be closed.

Pertinent Reports: The report titled *Development of Appropriate Radio Telemetry Techniques for Gilded Flickers (Colaptes chrysoides) in Western Arizona, 2013* is posted on the LCR MSCP Web site. The 2014 and 2015 annual reports will also be posted upon completion.