

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

FY13 Estimates	FY13 Actual Obligations	Cumulative Expenditures Through FY13	FY14 Approved Estimate	FY15 Proposed Estimate	FY16 Proposed Estimate	FY17 Proposed Estimate
\$150,000	\$149,568.98	\$95,376.14	\$300,000	\$160,000	\$400,000	\$400,000

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**Start Date:** FY12

**Expected Duration:** FY17

**Long-term Goal:** Evaluate current distribution and abundance of gilded flicker on the LCR by conducting species specific, non-random surveys.

Conservation Measures: GIFL 1, MRM1.

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

**Purpose:** Evaluate year-round habitat use, seasonal movements, and size of the breeding home range of the gilded flicker. To determine how often gilded flickers are using riparian habitat as nesting or roosting cavities. To determine 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 in conjunction with data collected during post-development monitoring of habitat conservation areas (F2) and system-wide surveys conducted under D6 and D13. Information obtained through this work task will also be used in association with C24 to help define requirements for riparian obligate bird species.

**Project Description:** General bird surveys conducted under D6 have not detected gilded flickers breeding in riparian habitat within the LCR MSCP planning area or the western portion of the Bill Williams River. 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 summer months. The degree to which gilded flickers move with family groups and during the non-breeding season has not been studied. Additional, research and monitoring is needed to understand how and when the gilded flicker is most likely to use riparian habitat within its range. This study will:  
 1) help define habitat use (Anderson and Ohmart structural types) of the gilded flicker during the breeding and non-breeding season, 2) determine the distances gilded flickers will travel to riparian habitat from nest cavities in saguaros at different times of the year, and 3) determine estimated time periods of breeding and post-breeding stages to help

interpret results of incidental sightings and determine whether gilded flickers are using cavities within riparian areas.

**Previous Activities:** The existing species profile and annotated bibliography were updated and historical and recent reports and accounts were examined for detections within the LCR MSCP planning area and along the Bill Williams River.

Preliminary surveys to locate breeding gilded flickers within the MSCP planning area and adjacent areas were conducted. One family group was detected in mesquite habitat along the Bill Williams River north of Mineral Wash Road in August. They were observed feeding on the mistletoe that was in the mesquite trees. A pair of gilded flickers was also detected at McIntyre Park in Blythe, California from May through June. The nest cavity was never found so breeding could not be confirmed; however, these birds were probable breeders. There was an incidental sighting of a gilded flicker at the Yuma East Wetlands restoration site in May. Gilded flickers were readily detected in the saguaro habitat adjacent to the LCR MSCP planning area in Arizona in FY12

**FY13 Accomplishments:** In FY13, a study was initiated to research the seasonal movement, year round habitat use (Ohmart and Anderson Structural Types), breeding home range size, and breeding chronology of the gilded flicker. Various methods were tested for the study. The study area chosen was south of Quartzite, in saguaro habitat; the study area was chosen due to its close proximity to the LCR, presence of gilded flickers, and ease of access. Techniques tested were standard target mist netting, physical removal from known roosting cavities, and hoop nets that were placed directly over known roosting cavities. The best technique to capture birds was determined to be hoop nets.

Four male gilded flickers in the study area were captured, fitted with backpack radio transmitters and banded. Two male reference gilded flickers were captured and banded. Reference and radio transmitter outfitted birds were captured periodically in FY13 and weighed. Weight gain or loss of reference birds was compared to radio transmitter outfitted birds. Radio transmitter outfitted birds were monitored immediately after release and throughout FY13 for any changes in health or behavior. The four birds did not show any significant change in health or behavior after being outfitted with radio transmitters. Three of the four radio transmitter outfitted birds showed a gain in weight between initial capture and recapture in April.

Nest cavities of five pairs of gilded flickers were monitored from April to June using a mini camcorder with infrared lights. A short video was recorded and later reviewed to document contents of each cavity. This technique worked well, was unobtrusive, and will be used in future years.

Radio tracking of the four tagged males was performed periodically from February through June. The tracking equipment and technique used obtained precise data points. Tagged birds were able to be detected up to a kilometer away under ideal conditions. Under extreme heat, the signal strengths of tags fluctuated and occasionally stopped. In future years, radio tags that advertise a maximum operating temperature of 50 C will be used so they operate efficiently under the highest air temperatures reached within the

study area. Gilded flickers were found to be somewhat responsive to hand-held electronic calls during pair formation.

**FY14 Activities:** In FY14, method testing will continue. The same study area as in FY13 will be used. Three males and three females will be captured and outfitted with backpack mounted radio transmitters and banded. Reference females will be captured and banded only. Different year round tracking techniques will be employed and compared to determine which is the most cost effective; tracking by vehicle and foot, plane, and the use of GPS locators will all be tested. The feasibility and best techniques to capture juveniles will be determined. If juvenile capture is feasible, up to three juveniles will be outfitted with small radio transmitters. Reference juveniles will also be captured to compare weight gain or loss with radio transmitter outfitted birds. Juveniles will be tracked through the life of the transmitters which are approximately three months. Habitat use and average home range size will be determined. Nest cavities of six pairs will be monitored weekly until nestling fledge using the same methods as described in FY13 to determine timing of the different breeding stages. Types of vocalizations made during different activities and time periods will be documented.

**Proposed FY15 Activities:** Fieldwork for the pilot study and method testing will wrap up early in FY15. The pilot study will be evaluated and a study design will be developed to collect robust data on average size of home range per ecologically distinct season, riparian habitat use (Anderson and Ohmart structural use), and breeding chronology, if needed. The reduced field effort will require fewer funds in FY15. Study implementation will resume in FY16.

**Pertinent Reports:** The report *Literature Search and Exploratory Surveys for the Gilded Flicker along the Lower Colorado River, 2012* is posted on the LCR MSCP website.