

## Work Task C20: Southwestern Willow Flycatcher Prey Base Study

FY05 Estimate	FY05 Actual	Cumulative Accomplishment Through FY05	FY06 Approved Estimate	FY07 Proposed Estimate	FY08 Proposed Estimate	FY09 Proposed Estimate
\$65,000	\$63,949	\$104,981	\$0	\$0	\$0	\$0

**Contact:** Bill Wiesenborn, (702) 293-8699

**Start Date:** FY04 **Expected Duration:** FY06

**Long-Term Goal:** Species research

**Conservation Measures:** WIFL1 and WIFL2

**Location:** SWFL life history study sites at: (1) Pahrnagat NWR in east-central Nevada; (2) along the Virgin River at Mesquite, Nevada; and (3) Reach 3, Topock Marsh, Havasu National Wildlife Refuge, Arizona, three miles east of River Mile 243.

**Purpose:** The purpose of this study is to determine diets of the SWFL at three geographically separate localities. Creating and maintaining habitat for the SWFL will require providing an adequate supply of insects for food. This is especially difficult at the LCR MSCP habitat creation sites being developed, because riparian vegetation is being planted in non-riparian farmland (i.e. where water tables are lowered, soil salinities are elevated, and spring flood flows are absent). Growing plants will not by itself guarantee insect abundances large enough to feed and support bird and bat populations.

**Connections with Other Work Tasks (past and future):** This work task was previously included in the FY04 as SWFL-Prey Base Study (B2) and Draft FY05 Work Tasks as Southwestern Willow Flycatcher Prey Base Study (C5). Information obtained during this study will be used, in conjunction with data gathered in Work Task C6 and Work Task C5, to develop methods of monitoring and potentially increasing populations of insects eaten by LCR MSCP covered riparian birds, including the SWFL. Knowledge gained during these studies will help guide future habitat creation projects detailed in Section E.

**Project Description:** Life history studies have shown that abiotic conditions within SWFL habitat may influence habitat selection, especially the presence of standing water or saturated soils. Other biotic components, such as insect distribution and abundance, may also influence habitat quality. This study will investigate SWFL diet by acquiring fecal samples from mist-netted birds and sampling insects within prey occupied SWFL breeding habitat. Insect parts in fecal samples will be identified and compared with insects collected at the same localities using Malaise traps and sweep nets. Bird diets are being compared among localities and with field-collected insects.

**FY05 Accomplishments:** Fecal samples were collected from birds during banding at the three localities listed above. Insects at the same localities were collected using sweep nets and Malaise traps. University of California – Davis UCD scientists began identifying insect parts from fecal samples and insects that were concurrently collected. Reclamation and UCD began data analysis. Preliminary results show that flycatchers are generalist feeders, consuming a range of insects including dragonflies, cockroaches, beetles, wasps, and midges. Study was extended because of the larger than expected number of field-collected insects and difficulty in identifying insect parts in fecal samples. Project will be completed during 2006.

**FY06 Activities:** Identifications of insect parts in fecal samples and insects collected in the field are being completed. Data analysis will be completed and a final report will be posted on the LCR MSCP website.