

Work Task F6: Monitoring MacNeill's Sootywing in Habitat Creation Sites

FY08 Estimates	FY08 Actual	Cumulative Accomplishment Through FY08	FY09 Approved Estimate	FY10 Proposed Estimate	FY11 Proposed Estimate	FY12 Proposed Estimate
\$0	\$0	\$0	\$10,000	\$50,000	\$50,000	\$50,000

Contact: Bill Wiesenborn, (702) 293-8229, wwiesenborn@usbr.gov

Start Date: FY09

Expected Duration: FY55

Long-term Goal: Post-development monitoring for MacNeill's sootywing.

Conservation Measures: MRM2 (MNSW), MNSW1

Location: Habitat-creation sites, initially Palo Verde Ecological Reserve and Cibola Valley Wildlife Conservation Area.

Purpose: The purpose of this Work Task is to monitor vegetation, plant-quality, and populations of MacNeill's sootywing in habitat created for the species.

Connections with Other Work Tasks (past and future): Habitat requirements are being determined in Work Task C7: Survey and Habitat Characterization for MacNeill's Sootywing. Work Task F6 will be phased-in as Work Task C7 is completed during FY09-10.

Project Description: Preliminary results from Work Task C7 have determined that sootywings require host plants (*Atriplex lentiformis*) that are larger than 1.6 m in height, greater than 64% in plant water content, and greater than 3.2% in leaf nitrogen content. Sootywings also require plants other than *A. lentiformis* for nectar (eg. *Heliotropium curassavicum* [Boraginaceae] and *Sesuvium verrucosum* [Aizoaceae]). These attributes will need to be monitored in created habitat. Monitoring host-plant water content is especially critical, as it will be driven by the timing and amounts of irrigation. Utilization of new habitat by sootywings also will need to be surveyed. This work task will need to allow for additional determinations (ie. adaptive management) of habitat-needs if created habitat fails to become colonized.

Previous Activities: None. This is a FY09 new-start.

FY08 Accomplishments: None. This is a FY09 new-start.

FY09 Activities: Habitat requirements described above (host-plant size and water content and nectar sources) will be monitored throughout the period when sootywings fly (April 1 - Oct 1). Leaf nitrogen content will be measured if apparently-suitable habitat fails to be colonized.

Utilization of created habitat by sootywings also will be monitored by surveying adults, eggs, and larvae. Other factors not previously examined (i.e. sootywing dispersal or transplantation) may need to be examined if created habitat fails to become colonized. One restoration site will be surveyed at PVER and 1 site will be surveyed at CVCA during 2009.

Proposed FY10 Activities: Same as in FY09 as restoration sites become established. Numbers of restoration sites will increase during FY10 to 2 sites at PVER and 2 sites at CVCA.

Pertinent Reports: 1) 2006-2008 Annual Reports for LCR MSCP Work Task C7: Survey and Habitat Characterization for MacNeill's Sootywing; 2) Wiesenborn, W. D., and G. F. Pratt. 2008. Selection of *Atriplex lentiformis* host plants by *Hesperopsis graciellae* (Lepidoptera: Hesperidae). Florida Entomologist 91:192-197.