

## **Quarterly Report: Monitoring Potential Cadmium Levels in Avian Tissues Associated with the Savannah Harbor Expansion Project – September 2014 (3rd Quarter)**

O.E. Rhodes<sup>a</sup>, S.B. Wilde<sup>b</sup>, & A.L. Bryan<sup>a</sup>. <sup>a</sup>University of Georgia-Savannah River Ecology Laboratory (SREL), Aiken, SC, <sup>b</sup>University of Georgia-Warnell School of Forestry, Athens, GA.

In mid-August we concluded our initial Spring/Summer sampling period in the Savannah DMCAs. Our Spring/Summer collection dates were 10-14 April, 15-19 May and 13-17 August. Our potential collection sites were affected by work activities on the DCMAs: DCMA 14B is unavailable this year due to construction activities and DCMA 13B, which was utilized in the first two collections, was receiving dredge material during the August collections and our previous 13B sampling sites were under water. We utilized sampling locations in DCMAs 14A and 12A for the August collections. Overall, eleven species were banded and/or had blood collected from them during the entire sampling season (Table 1). Our August collections included stilts (2), northern mockingbirds (9), eastern towhees (2), mourning dove (1), common ground dove (1) and northern cardinals (5). One of the cardinals captured in August had been previously captured, banded and sampled in April in the DCMAs. Additional species captured in the mist nets, but not banded or sampled, included painted buntings, prairie warblers, northern waterthrushes, and a yellow warbler. Mottled ducks were present in very low numbers (< 15 observed) throughout the sampling season and we were not successful at capturing them.



**Net launcher firing over two black-necked stilts in DMCA 12A in August 2014 (photo by Brigette Haram)**

**Table 1. Birds Captured and Sampled in the Savannah Dredge Material Containment Areas (DMCA) in the Spring/Summer of 2014.**

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<u>Sentinel Species</u>	<u>No. Banded/Sampled**</u>
Black-necked Stilt	10
Brown Thrasher	6
Eastern Towhee	6
Mourning Dove	10
Northern Mockingbird	13
Red-winged Blackbird	13
Savannah Sparrow*	7
House Wren*	1
<u>Additional Species</u>	
Common Ground Dove	5
Northern Cardinal	8
Swamp Sparrow	7

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\*Winter sentinel species.

\*\*Overall Spring/Summer goals were to sample ~ 10 individuals per species.

Prey base collections were continued at avian sampling locations in sites 14A and 12A. Terrestrial and aquatic invertebrates were sampled using sweep nets, dip nets, or by hand. Specimens identified as possible target avian prey resources were preserved and stored for cadmium testing. Samples for the Spring/Summer period include specimens from the Orders: Orthoptera, Hemiptera, Coleoptera, Araneae, Hymenoptera, Lepidoptera, Diptera and Pulmonata. Specimens include grasshoppers, katydids, rice bugs, terrestrial and aquatic beetles, bees, spiders, flies, moths and snails. Pokeberries (*Phytolacca americana*) were being consumed by many of the captured birds and samples of them were collected for eventual analysis as were Sesbania (*Sesbania herbacea*) seed pods.

This fall, we will discuss our sampling results with USACE and USFWS, and discuss any potential shifts in methodology and/or sentinel species we might recommend based on our initial sampling.