

Marsh and Prairie rehabilitation project status report

Over the past year Audubon staff and volunteers have begun laying the foundation for an expansion of our Marsh and Prairie restoration efforts. The success demonstrated over the past four years has positioned Audubon as leaders in the fight to restore our diverse native marshes and wet prairies in a sustainable and cost effective manner. As we restore, we also measure, analyze, plan, revise and share. This brief report outlines our goals for the 2017 project year, and our accomplishments in the 2016 project year.

Thanks to the strong support we've received from the Rathmann Family Foundation, Freed Foundation, Robinson Foundation, Steve and Merilee Nellis and an anonymous donor we've seen a remarkable transformation of our valued marsh and wet prairie areas within Corkscrew. Wood storks and spoonbills nested successfully this year atop our famed old-growth bald cypress trees. The benefited from this restoration, and as our success grows, so shall the size of our wading bird colony.



Blue flag iris bloom in the rehabilitated marsh.



By late July portions of the newly rehabilitated wet prairie west of Little Corkscrew Island was filling in with lush native plants.

The Corkscrew mission: To protect the natural resources of Corkscrew Swamp Sanctuary, its surrounding watershed and the Western Everglades and influence Everglades restoration; for the benefit of birds, other wildlife and people; through land management, science, education, restoration and public policy advocacy.

Audubon's Corkscrew Swamp Sanctuary (Sanctuary) is a 13,000 acre wetland of international importance located in the Western Everglades. The challenges facing Audubon in stewarding this tremendous natural resource at the Sanctuary are similar to the challenges faced across the State of Florida. These challenges are opportunities to refine land management methods to reduce costs and improve ecological benefits. Our struggles and our successes are shared with conservation partners throughout the Western Everglades to advance the cause of conservation. *It is a privilege to shoulder the responsibility of caring for Corkscrew, and an honor to work with our philanthropic conservation partners in stewarding this special place entrusted to Audubon for the benefit of people and wildlife.*

Project Description

Audubon's marsh and prairie rehabilitation project at the Corkscrew serves to restore the native wetland habitat functions lost and degraded due to invasion of woody species. Approximately 1,600 acres of the Sanctuary has been converted from rich diverse herbaceous marsh and wet prairie to dense woody shrubs and trees; primarily willow, button bush, and wax myrtle. Lack of fire and altered hydrology led to this degrading transition. Loss of our wet prairies and marsh habitat has impacted a diverse array of wildlife which depend on productive healthy wetlands. Restoring these communities benefits a host of species, most notably wading birds such as wood storks, roseate spoonbills, and little blue herons.



Gyro-track removing willow near the Corkscrew boardwalk May 2017

Reduction of woody vegetation involves a combination of methods; application of prescribed fire, aerial and ground herbicide application, and mechanical removal using a forestry cutter. Audubon contracted with reputable land management professionals to accomplish the heavy equipment elements of the rehabilitation plan. Prescribed fire and ground application of herbicide was done in-house.

The first two years of the project served as a pilot. Working at a relatively small scale we tested and refined our approach. The next two years we expanded our efforts, recruiting additional funding to increase our acreage while continuing to monitor the results of our conservation action. With our methodology firmly established, Audubon is planning more aggressive restoration goals in the future.

Funding

Audubon received targeted gifts from four philanthropic partners totaling \$50,000 for the 2016 project year. These funds were used in mechanical removal of vegetation, follow-up herbicide treatment on undesirable species and in the application of prescribed fire.

Audubon established an initial fundraising goal of \$70,000 for the 2017 project year. Due to dry increased opportunities afforded by the dry conditions at Corkscrew and thanks to a generous lead gift by the Rathmann Family Foundation, Audubon has doubled its conservation target to \$140,000 for the 2017 project year. As of May 1st Audubon has raised \$100,000 towards this goal.



Little Corkscrew Island West; wet prairie in May 2015 and March 2016

Project outcomes summary; Project year 2016

Mechanical rehabilitation. Marsh and prairie restoration work began mid-May of 2016 expanding on the areas opened the prior year east and south of Little Corkscrew Island, as well as a strip wetland savanna on the west side of section 15. Approximately 35 acres of woody shrubs were cleared marking the largest mechanical rehabilitation effort to date. By late July much of the treatment area had been colonized by native sedges, grasses and flowering plants from the existing seed bank.



Left to right; 1 year after mechanical removal, 1 day after mechanical removal, untreated willow.

Retreatment with ground crews. Following mechanical removal of woody shrubs, some undesirable vegetation will return. The two most common species requiring herbicide treatment are willow, which can resprout from the roots, and cattail which can emerge from the seedbank. Audubon staff and volunteers scout areas rehabbed in prior years to identify and treat any patches of problem plants. In the 2016 project year retreatment occurred on approximately 30 acres of wet prairie and marsh that had undergone mechanical removal in prior years. Treatment was done by airboat, buggy, ATV and with backpack sprayers on foot.

Prescribed Fire. January 2016 was the wettest on record at Corkscrew. More than 13 inches of rain fell in the month. This unusual event impacted the prescribed fire season, essentially foreclosing on our ability to burn our marsh habitats. Resource staff conducted three prairie burns over the 12 month period, and one of these included a rehabilitated unit in the north end of section 15.

Outlook; Project year 2017

Audubon projects between 70 and 90 acres of mechanical removal of woody plants in project year 2017. Deeper wetlands not accessible in normal dry season conditions will be targeted. Audubon projects 40 acres of prescribed fire and a pilot aerial ignition burn in a 400 acre marsh. The invasive species retreatment goal is 75 acres in plots that underwent mechanical removal in previous years.

Sharing our knowledge. Our neighbors with the South Florida Water Management District are dealing with an even greater expanse of willow invaded marsh and prairie than Corkscrew. Parks, preserves, and refuges across South Florida at the County, State and Federal levels all deal with this issue. Thanks to the support of our philanthropic conservation partners, Audubon is in a good position to help these conservation allies improve their land management practices adding to the ecological health of the Greater Everglades system. Audubon is planning a willow forum this Fall for land managers across the state. The purpose of the forum is to exchange knowledge with others facing the willow epidemic, increasing the effectiveness of stewardship efforts throughout Florida.

Addressing a root cause. With help from conservation partners, Audubon worked to have the “CREW Headwaters Project” adopted by Florida Forever, a State of Florida land acquisition program. A key element of the project is a staged restoration plan that would serve as a pilot for fixing the underlying hydrologic problem occurring throughout surrounding wetlands which has led to thousands of acres of woody degradation of marshes and wet prairies.

Thank you for your financial support.