

Assessment of Five State Rare Plant Populations at Cove Point Marsh (Year 2004)

Assessment of *Carex hyalinolepis* population

The population's size was measured on 26 June, 2004. It was observed to be ovate in outline. The maximum length measured 9.3 meters and the minimum length was 5.9 meters. GPS measurement rendered a maximum length of 6.2 meters and a minimum length of 2.2 meters. Both measurements indicate a reduction in size of this population from all previous measurements. As indicated in 2002 and 2003, this population is probably succumbing to the encroachment of the native cat-tail (*Typha angustifolia*) which appears to be out-competing the *Carex hyalinolepis*. There were no fruiting stems observed within the population. *Phragmites australis* was also observed to be increasing within the *Carex hyalinolepis* population. It is recommended that wick treatments with the herbicide RODEO be conducted on *Typha angustifolia* and *Phragmites australis* occurring within the *Carex hyalinolepis* to facilitate its return to historic levels. As indicated in 2003, it would also be helpful to treat the *Ailanthus altissima* (tree-of-heaven), an aggressive non-native species, which is also quickly colonizing the dune area adjacent to the *Carex hyalinolepis* population.

Assessment of *Scutellaria galericulata* population

This population was measured on 26 June, 2004. It was observed to be generally rectangular in outline. The maximum length measured 11.7 meters and the maximum width was 2.9 meters. GPS measurement rendered a maximum length of 7.5 meters and a minimum length of 0.7 meters. The maximum number of flowering or fruiting stems observed within a square meter of the population was 3. The estimated average number of flowering or fruiting stems per square meter was 0.1. *Phragmites australis* was observed along the eastern half of the northern edge of the *Scutellaria galericulata* population.

This is the smallest the *Scutellaria galericulata* population has measured since this study began. The population's length decreased because of the absence of plants at the western end of the population (as indicated in 2003) and large mats of peat that were deposited on top of the eastern end of the population during hurricane Isabelle. It is recommended that wick treatments with the herbicide RODEO be conducted on the *Phragmites australis* occurring along the northern edge of the *Scutellaria galericulata* population.

Assessment of *Potamogeton foliosus* population

No plants of *Potamogeton foliosus* were observed during site visits on 26, June or 6, September, 2004. The drought conditions of 2002 and the heavy sedimentation

resulting from the unusually wet years of 2003 and 2004 have stressed the *Potamogeton foliosus* population. The status of this population is tenuous and extirpation is possible.

Assessment of *Zizaniopsis miliacea* population

This population was measured on 26 June, 2004. It was observed to be arced in outline. The maximum length measured 74.2 meters and the maximum width was 14.1 meters. GPS rendered measurements of 29.4 meters and 3.9 meters. The maximum number of fruiting stems observed within a square meter of the population was three. The estimated average number of fruiting stems per square meter was 1.0. *Phragmites australis* most closely approached this population along its northeastern corner and near its northern edge.

These measurements are similar to those obtained during the past four years. However, the GPS measurements in 2004 are inexplicably low compared to measurements obtained by tape. Wick treatment of the *Phragmites australis* along the northeastern edge of the *Zizaniopsis miliacea* population is recommended.

Assessment of *Leptochloa fascicularis* population

This population was examined on 6 September, 2004. No plants of *Leptochloa fascicularis* were observed. As expected, this annual has proven to be extremely variable in population size, being rare or absent in wet years and abundant in drought years. The reduction of size in this population from 2 hectares in the dry years of 1999 and 2002 to the small populations observed during the wet years of 2000 and 2001, to being apparently absent during the very wet years of 2003 and 2004 is to be expected. Large stands of *Phragmites australis* occurred on the barrier berm near where a portion of the *Leptochloa* population has been observed in past years.