

**Assessment of Five State Rare Plant Populations at Cove Point Marsh
After the Application by Aerial Spraying of the Herbicide RODEO
To Surrounding Populations of *Phragmites australis*
(Year 2003)
By Brent Steury**

Assessment of *Carex hyalinolepis* population

The population's size was measured on 12 July 2003. It was observed to be ovate in outline. The maximum length measured 15.1 meters and the minimum length was 11.7 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 0.2. A few young stems of *Phragmites australis* were observed within the *Carex hyalinolepis* population.

These measurements indicate that the aerial application of RODEO to the *Phragmites australis* population had no detrimental effect to the nearby population of *Carex hyalinolepis*. Although fewer fruiting stems were observed within the *Carex hyalinolepis* population in 2003 than in all other survey years, this year the population appeared to be well past peak fruiting and many culms had already reached senescence and thus were more difficult to detect. The amount of *Phragmites australis* within the population appeared to be less than in 2002. As in 2002, competition with the native *Typha angustifolia* is perhaps the greatest threat to the vitality of the *Carex hyalinolepis* population. The *Phragmites australis* is spreading into the dune system adjacent to the *Carex hyalinolepis* population and wick treatment in this area is recommended. At the same time it would be a good idea to treat the *Ailanthus altissima* (tree-of-heaven), an aggressive non-native species, which is also quickly colonizing the same area.

Assessment of *Scutellaria galericulata* population

This population was measured on 12 July 2003. It was observed to be generally rectangular in outline. The maximum length measured was 19.5 meters and the maximum width was 4.2 meters. The maximum number of flowering or fruiting stems observed within a square meter of the population was 12. The estimated average number of fruiting stems per square meter was 1.0. The nearest *Phragmites australis* was within one meter at the eastern end of the population and a larger stand of *Phragmites* was observed within 2.5 meters along 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 where in past years a few plants occurred. Also, because of the unseasonably wet year in 2003, there was standing water within the *Scutellaria galericulata* population which prohibited any plants from growing there.

However on slightly higher hummocks within the population the *Scutellaria galericulata* was thriving. The population of *Scutellaria galericulata* at Cove Point is stable and was not negatively impacted by the aerial application of RODEO. The application of RODEO to the nearby *Phragmites australis* population had no detrimental effect on this population.

Assessment of *Potamogeton foliosus* population

This population was first examined on 17 July 2003. No plants of *Potamogeton foliosus* were observed. Last year's drought conditions caused the absence of this aquatic species. In 2003, as in 2000, heavy sedimentation during these unusually wet years has stressed the *Potamogeton foliosus* population. Not until 6 September 2003 was this species found and then it was only observed over 9 meters in three small patches. The largest patch measured 0.8 meters x 0.3 meters.

Assessment of *Zizaniopsis miliacea* population

This population was measured on 17 July 2003. It was observed to be arced in outline. The maximum length measured 77.9 meters and the maximum width was 17.4 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 eastern edge.

These measurements are similar to those obtained during the past four years. Most of the plants within the population were fruiting on 17 July 2003. The population is stable and was not impacted by the aerial application of RODEO to surround populations of *Phragmites australis*. Wick treatment of the *Phragmites australis* along the eastern edge of the *Zizaniopsis miliacea* population is recommended.

Assessment of *Leptochloa fascicularis* population

This population was examined on 6 September 2003. 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 in 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 wet year of 2003 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.