

**Assateague Island National Seashore**  
**Exotic Species Management,**  
**1999-2000**

DRAFT

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April, 2001

Legislation specific to Assateague Island National Seashore (Public Law 94-578) directs the Secretary of Interior to plan for “measures for the full protection and management of the natural resources and natural ecosystems of the seashore.” Certain exotic species have extremely disruptive impacts on native ecosystems (National Park Service, 1991); therefore, management of such species, where feasible, will further fundamental purposes of the National Seashore.

**Ailanthus altissima (Tree-of-heaven):**

This rapidly growing tree is native to East Asia. It has escaped cultivation and is considered to be aggressively invasive, especially on disturbed sites. Two small populations of Tree-of-heaven have been discovered at Assateague Island National Seashore. A single stem, approximately 4 inches diameter on the stump, was located just above the bayside beach about 50 m. south of the Ocean City Inlet jetty. The second population, noted by Dr. Steven Hill in his 1984 survey, was located just west of the Valentine's cabin road, approximately 100 m south of the cabin. This population consisted of 25 saplings/pole sized stems and 40 seedlings/root sprouts.

Both populations were treated, with herbicide, during the period of this report. The North End population was treated on September 29th. This single stem was cut off at about 1 m above the ground and the stump was immediately treated with Brush-Be-Gone. The Valentine's Cabin population was treated on September 5th. Larger stems were girdled, by cutting through the cambium layer around the entire circumference of each stem. Saplings were broken off. In both cases the exposed xylem was immediately treated with Brush-Be-Gone. Seedlings or more probably root suckers were hand pulled. It is hoped that the shade cast by the residual canopy cover (consisting of other tree species and vine cover) will retard the regrowth of any stems not killed by the herbicide application. These sites will be monitored to document any regrowth, and determine what future actions may be necessary.

**Clematis terniflora (Yam-leaved Clematis):**

This climbing vine is native to Japan. It is commonly planted and often escapes. A single population of this plant was discovered in September 1998 just northwest of the Bayside Campground bay access parking lot. A specimen of this species was collected as a voucher and stored in the Assateague National Seashore Herbarium. This population covered roughly 100 square meters. This population does not appear to be expanding. This population will continue to be monitored. It will be treated with foliar herbicide as resources become available.

**Eragrostis curvula (Weeping Lovegrass):**

This grass is native to South Africa. It has become common in the region especially on disturbed sites such as roadside verges. On Assateague Island this bunch type grass, is commonly found, on either side of the road along Bayberry Drive, and the entrance road to the Assateague State Park. Other smaller sites include the western edge of Bayside campsite #48, on the periphery of the North Beach parking lot, in Ocean Side campground sites 1-41, and along the northern side of the Boat House parking lot.

This species is being monitored by park staff and future management options are being considered.

**Lythrum salicaria (Purple Loosetrife):**

Purple Loosestrife was reported for the first time at Assateague Island National Seashore at Oceanside Campground in August, 2000 by campground office volunteer Christian Diehm. The identification was confirmed by resource management staff later that same month. A specimen was collected as a voucher placed in the Assateague National Seashore Herbarium. The occurrence consisted of about 6 stems, some of which were in flower. This population was located in a wet depression under a *Baccharis halimifolia* bush just inside (east of) the wooden fence along the camper parking lot for the middle (of three) group camping (walk-in) areas. The plant was in flower, but mature fruit were not seen, as of August 2000.

**Phragmites australis (Common Reed):**

Assateague Island National Seashore has relatively few vascular plant species that are known to be invasive; it is likely that the barrier island environment, which requires specialized adaptations of vascular plants, tends to exclude most species that did not evolve there. There are notable exceptions, the most notable being the Common Reed, *Phragmites australis*, hereafter referred to as *Phragmites*. *Phragmites* (or, at least, Assateague populations) are debatably native; however, there is little doubt that the species is invasive, can alter ecosystem functions, and reduce biological diversity. While there are no data to draw firm conclusions, anecdotal observations suggest that *Phragmites* has been and still is increasing in abundance on Assateague.

Although *Phragmites* is likely the invasive vascular plant that presently has the greatest ecosystem impact, it is not currently a target for reduction. Its abundance and distribution throughout the island ensure that any general reduction and/or eradication efforts that would restore ecosystem function would require considerable effort, with little guarantee of sustained success. *Phragmites* is well-adapted to invade fresh to brackish wet areas. The *Myrica cerifera*/*Hydrocotyle* sp. community seems to be especially susceptible to *Phragmites* invasion on Assateague.

Cutting back of *Phragmites* is currently practiced by interpretive staff. Control of *Phragmites* on Assateague is not being contemplated with current staff resources because of the magnitude of its frequency and abundance and because patterns, causes, and rates of its establishment and growth are poorly known at present.

**Sporobolus indicus (Smut Grass):**

This grass, native to the neotropics, was first reported on Assateague National Seashore in October 1998. A specimen of this species is vouchered in the Assateague National Seashore Herbarium. This inconspicuous grass is found growing on the compacted soil of the roadside verges. It is not found in undisturbed areas. It will continue to be monitored but no treatment is planned at this time.

**Carex kobomugi (Asiatic Sand Sedge):** .

Asiatic sand sedge an invasive plant from Asia was introduced into the United States for its sand-building

capabilities. Chris Lea discovered it for the first time on Assateague Island National Seashore in 1999 at multiple locations on the island. This clonal plant forms dunes in the foredunes, in a niche naturally filled by native Beach Grass (*Ammophila breviligulata*). A specimen of this species is vouchered in the Assateague National Seashore Herbarium.

All 14 known populations of Asiatic sand sedge were treated during 2000, using either foliar herbicide (2% Roundup) to destroy large populations, or digging to remove small populations. If follow up monitoring during the 2001 growing season proves these treatment efforts successful we will have two effective methods for controlling this invasive plant. Effective future monitoring would be expected to reveal periodic establishment of small populations of this plant, since this plant has been reported in several areas along the mid-Atlantic coast. Since it takes several years for a population to grow large, annual monitoring should identify populations small enough to be removed using digging rather than foliar herbicide.

An experiment was set up to determine the most effective foliar herbicide application for this sedge. Three different herbicide treatment regimes will be tested for their effectiveness at reducing the number of ramets of *Carex kobomui*. Three of the larger sites were selected for this experiment. These sites are the populations of sand sedge at 1E, 2E, and 3E. Each site is divided into approximately three equal parts, each of which will receive a different treatment regime. Since each site is approximately east west in aspect, assigned treatment regimes will be alternated between sites to avoid microsite variations. The three treatment regimes include (1) summer herbicide treatment (2) fall herbicide treatment (3) summer and fall herbicide treatment. Ramets will be counted before and after herbicide application for each treatment group. The foliar herbicide used in all treatments was 2% Roundup.

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