

# When Does Your Beachgrass Bloom? Champlain Beachgrass: a Rare Variant of American Beachgrass from NY, VT and Quebec

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## Introduction

Champlain beachgrass (*Ammophila breviligulata* ssp. *champlainensis*) is a local variant of the widespread American beachgrass (*A. breviligulata*), presently known only from shores of Lake Champlain and Lake Ontario and the St. Lawrence River in NY, VT and Quebec. First described by Seymour (1966), Champlain beachgrass features a more compact growth form and earlier bloom date than the widespread parent species. On Great Lakes shores, Cape variety is widely planted for dune restoration. A recent common garden experiment on the eastern shore of Lake Ontario in NY (Racette 2001) provided evidence that Cape variety is a superior competitor to Champlain both above and especially below ground. While Champlain beachgrass appears to thrive adjacent to such restoration plantings, Cape is also naturalized where plantings have not occurred. Whether Cape comprises a threat to the continued viability of the native Champlain along eastern Lake Ontario shores remains an open question.

## Pertinent Sources

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## Racette Target - Neighbor Experiment:

Planted locally harvested Cape and Champlain to determine competitive relationships. Questions:

- 1) Effect of Competition**  
Does the target plant respond differently when neighbors are present as compared to when it grows alone?
- 2) Relative Competitive Ability**  
Does the target species respond differently when its neighbors are conspecific as compared to when its neighbors are of another species?

## Results:

### Cape the stronger competitor

- Cape produced much less biomass under all conditions
- Both strains produced less biomass under competition
- Aboveground growth of Cape beachgrass was greatly reduced when neighbors were conspecifics as compared to when neighbors were of the other strain
- Trend for Champlain beachgrass is to produce less aboveground biomass with Cape neighbors than with conspecific neighbors

## Message to NY Restoration Partners

### Differences

- Champlain: native, compact, spikes early July
- *American (Cape)*: introduced, larger, spikes early Sept

### Why Care?

- Champlain is very rare
- Cape was isolated because it is a very vigorous strain
- Cape may be able to overwhelm Champlain

### So How Do We Do Restoration?

- We thin vigorous stands of native beachgrass
- The thinned stands respond with vigorous regrowth
- We plant spring and fall
- Volunteer Friends of Sandy Pond beach also cultivate off site, provide stock and coaching to landowners

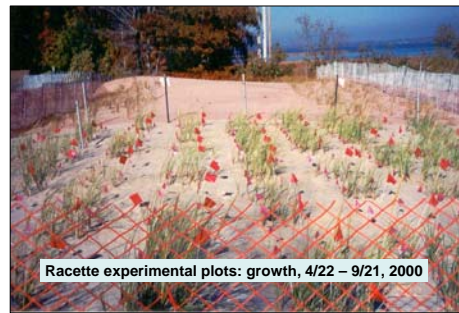


Fresh spikes, NY July

R. Beltran, NY 7/18/04



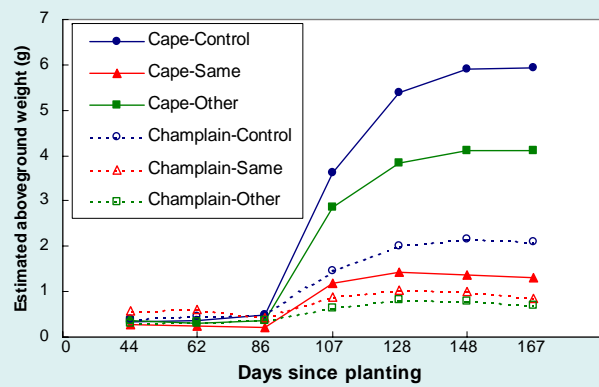
S. Bonanno, Pictured Rocks 8/27/99



Racette experimental plots: growth, 4/22 - 9/21, 2000



Initial planting, October 10, 1999



Same view September 2004