

Perennial Glasswort

by Annette Doukas

I like unusual, strange, weird, and — yes — even ugly plants (beauty is in the eye of the beholder). To paraphrase Will Rogers, I never met a plant I didn't like. Each has something to offer — a medicinal product, a food source, aesthetics, or a significant ecological role.

One of the field trips in a summer field botany course took us to Tampa Bay's salt marshes where one of these strange plants, perennial glasswort, stood erect.

Perennial glasswort, *Salicornia virginica*, is a perennial growing from rhizomes. Succulent stems are prostrate or nearly so. Stems form green mats that change color to gray or light brown as flowering branches develop. Leaves occur as opposite scales on the closely jointed stems. Red fruits ripen on spikes; seeds are tiny — 1 mm long. Glasswort is a member of the family Chenopodiaceae. Flowers are without petals,

and these plants inhabit xeric or halophytic (salty) environments.

Glasswort is a halophyte, or salt-tolerant plant, enabling it to thrive on beaches or in salt marshes. One study closely examined the salt tolerance of *Salicornia virginica* using a range of salt concentrations. Glasswort responded to increasing salinity by decreasing the root uptake of solution per minute. Placing roots in distilled water reversed the response of the plant to high salinity. Glasswort absorbed distilled water faster when transferred from high salinity solutions. The highest absorption rates were made by plants in moderately salty solutions.

Thus, this plant that might be considered insignificant possesses physiological mechanisms to adjust to fluctuating salinities. Plants such as glasswort provide the potential to



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understand how crops adapt to a less than perfect soil.

Perennial glasswort flowers all year, continuously producing its red fruits, so consider a trip to Tampa Bay's salt marshes to see them.

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References

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