**THE IMPACTS OF SALT FLOODING ON JUVENILE MARITIME TREE SPECIES**

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Abstract

Maritime forests are coastal wooded habitats representing the apex of dune succession found within range of salt spray. Their proximity to the ocean makes them more vulnerable to climate change induced impacts such as sea level rise and increased storm events which would lead to prolonged periods of flooding. In order to determine the potential impacts of flooding on Mid- Atlantic maritime tree species, we conducted two greenhouse experiments where we treated juveniles of eight tree species with different levels of salinity, as well as different frequencies of salt flooding in two randomized block designs. It was hypothesized that the conifer species would be more salt tolerant than the broad-leaved species as needles and scales have a lower rate of water loss, making them less vulnerable to salt stress. In addition, we predicted that the salt impacts would become more detrimental as the salinity level and frequency of flooding is increased, given the harmful effects salt has on plant physiology. A health index was created to assess the overall health, and a score was given to each individual biweekly over the duration of the growing season. Chlorophyll content and final biomass at harvest were also evaluated.