An Investigation into Salix fragilis and the Subsequent Environmental Impacts of Its Introduction to the Tasmanian Landscape

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In this investigation the environmental impacts of the introduced species, Salix fragilis, which is commonly called Crack Willow were researched and investigated. Crack willows are listed on Australia's "Weeds of national significance". This is a list of the 20 most invasive plant species in Australia and focuses on weeds that have degraded large portions of Australia's natural and productive landscape and require action at a national level to reduce their impacts. The experiment was conducted in 4 parts; we sought and utilized data from Tasmanian local councils, Landcare groups and other authorities to ascertain the environmental issues and what was being done in removal and remediation programs. The impact on Tasmanian native species, specifically, the platypus and the giant freshwater lobster were researched and considered. We then conducted an experiment to collect and analyze data on the asexual germination of crack willow fragments. Finally, we investigated the effect of willow leaves compared to native eucalyptus species on water quality specifically measuring dissolved oxygen levels, turbidity and pH changes, simulating the natural environment of rivers and aquatic habitats. The results demonstrated that the invasive species Salix fragilis reproduce vigorously by fragmentation, particularly in water, therefore posing a major threat to waterways and riparian ecology. The results on the effect of falling willow leaves on water quality were less definitive and further experimentation is suggested to investigate this.

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