

Restoration Ecology of *Cirsium Pitcheri* Along Lake Huron Sand Dunes

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Cirsium pitcheri is a threatened plant species endemic to the shoreline sand dunes of the Great Lakes. Commonly called Pitcher's thistle, *Cirsium pitcheri*, has become threatened due to habitat loss, shoreline development, and habitat destruction. There are currently 52 naturally occurring Pitcher's thistle plants at Pinery Provincial Park. The successful conservation of rare plant species depends on an understanding of the interactions of many factors within the species environment. In this study we attempted to identify some of the environmental factors that may limit the growth, survival and reproduction of its populations. At Pinery Provincial Park we determined the current population size, causes of plant mortality, and survivorship of plants under natural and artificial conditions of sand burial, fertilizer applications, and herbivory. We also determined the effects of simulated shade on seedling emergence, survivorship and growth of plants. Finally, sand cores were taken to examine the existence of a seed bank, followed by experiments to determine the potential for a Pitcher's thistle seed bank.