The Use of Life Cycle Traits in the Management of the Invasive Species *Lagarosiphon major* in Lough Corrib, Ireland

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Lagarosiphon major is a highly aggressive, submerged macrophyte that is currently colonising large areas of Lough Corrib, one of Ireland's Great Western Lakes. The plant was introduced to Ireland by the horticulture industry and has a relatively widespread national distribution in artificial watercourses. Lough Corrib is the only natural waterbody in the country to support expansive populations of this species. The rapid spread of the weed within the lake is resulting in significant changes to the natural lake habitat and its overall ecology.

Efforts to eradicate or control *Lagarosiphon* in the lake are ongoing but are meeting with limited success thus far. Recent studies have focused on an examination of the life cycle of the species, under Irish conditions, in order to identify potential weak links that may be specifically targeted for control. One prominent feature that has emerged from the investigations is the presence of two distinct morphological states within the lake populations. One state is represented by tall, erect and often canopy-forming plants that can grow to heights of 5 metres in the water column. The other is represented by collapsed, often leafless stems, commonly with large numbers of adventitious roots along their length. Both states can be recorded growing alongside each other in the lake.

The study explores the defining characteristics of these vegetative states and the impact that a range of environmental features within the lake might have on their expression and status. The succession of the two vegetative states through the seasons is also being monitored. The impact of various weed control measures as applied to 'collapsed' and 'erect' *Lagarosiphon* stands will be discussed.