

THE GENUS *PINNULARIA* IN IOWA WETLAND MITIGATION SITES

Stephen P. Main

Biology Department, Wartburg College, Waverly, Iowa 50677 USA

Pinnularia is a diverse genus found in many different habitats world-wide, often as a numerical dominant. During a survey of 12 constructed wetlands and three natural wetlands in Iowa, *Pinnularia* taxa were numerous but not abundant in these nutrient-rich, alkaline, hardwater habitats. Counts of over 500 valves from 78 samples found the relative abundance of a *Pinnularia* taxon just over 2% once. Taxa of the genus *Nitzschia* were most numerous, followed by *Navicula*, *Gomphonema*, and then *Pinnularia*. But, in contrast to *Pinnularia*, the other three genera also include numerous taxa with relative abundance over 20% in at least one sample. Although their populations are small, many *Pinnularia* taxa occur in Iowa wetlands. Of 88 *Pinnularia* taxa reported historically from Iowa waters, 41 have been found in this survey. In addition 22 unidentified *Pinnularia* have been observed. The number of identifiably distinct *Pinnularia* taxa ranged from 13 (1 sample) to none (16 samples) with a mean of 2.2 taxa per sample (the mean number of all taxa observed was 49). Too few specimens of most unidentified taxa have been observed to permit describing new species. Environmental factors in Iowa wetlands possibly reduce *Pinnularia* population sizes.

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