

## THE EASTERN IOWA ROCHESTER CEMETERY SAVANNA: A REQUIEM

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**Abstract:** Rochester Cemetery is a small pioneer cemetery perched above the Cedar River floodplain on stabilized sand dunes in east-central Iowa. Its diverse prairie flora and profusion of spring flowers, most notably a spectacular display of Shooting Stars (*Dodecatheon meadia*), combined with the occurrence of exceptionally large, open-grown White Oaks (*Quercus alba*) has led to it being widely regarded as a remnant savanna. Data from the 1837-1838 General Land Office surveys of the four townships that surround the cemetery site reveal that one-third of the uplands were treeless prairie; two-thirds, including the cemetery site, had scattered trees; and the floodplain was wooded. Tree species diversity and density were highest in the floodplain and significantly lower in the uplands. White, Burr (*Q. macrocarpa*) and Black Oaks (*Q. velutina*), respectively, were the most frequent upland tree species; density of all upland trees was low; and White Oaks were the only species that attained a girth of 30-50". The prevalence of White Oaks in the cemetery today is representative of the time-of-European-settlement landscape; however, their size presumably is an artifact reflecting elimination of fire since the time of settlement. Since 1974, more than 400 species have been documented, including 300+ native vascular plants and 35 bryophytes. This extraordinary species diversity reflects habitat diversity, including open and shaded sites, one tiny ephemeral pond, gopher mounds, and massive oak branches. However, species diversity is dwindling as invasive alien and native species spread and ever-expanding areas associated with some recent graves are aggressively mowed.