

Evidence for Higher Soil Temperature and Potassium Promoting Invasion of the Common Dandelion, *Taraxacum officinale*, in Denali National Park and Preserve, Alaska

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Common Dandelion, *Taraxacum officinale* ssp. *officinale* (dandelion) is expanding its range in Alaska and is of particular concern in National Park Service units. This study investigated the influence of estimated soil temperature, available potassium (K), available phosphorous (P), and total nitrogen (N) on dandelion cover and density on a site near the elevational limit of dandelion. The study site in Denali National Park had been disturbed by construction and was revegetated with native plants 12 years before the study. Seed input to the study site was abundant. In a multiple regression analysis, higher levels of estimated soil temperature and available K accounted for 79% and 73% of the variation in dandelion cover and density, respectively. Practical control methods include not fertilizing disturbed areas with K, and countering continued expansion of dandelion by monitoring human use areas and undisturbed habitats where soil temperatures are likely to be relatively warm.

Key Words: Dandelion, *Taraxacum officinale*, invasive plants, Denali National Park, Alaska.