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[\[PDF \(743K\)\]](#) [\[References\]](#)**Seasonal changes and horizontal distribution of phytoplankton in Lake Takkobu, Kushiro Wetland**[Megumi NAKAGAWA](#)¹⁾, [Noriko TAKAMURA](#)¹⁾, [Baik-Ho KIM](#)²⁾, [Nemu TSUJI](#)³⁾, [Seiki IGARASHI](#)¹⁾ and [Isamu WAKANA](#)³⁾

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Abstract

We investigated the seasonal changes and horizontal distribution of phytoplankton taxa in Lake Takkobu, Hokkaido. A clear seasonal succession appeared in this lake, with the unicellular alga of Chrysophyceae dominant in April, *Anabaena smithii* in early summer, *Pandorina morum* in late August, and *Cyclotella* spp. in autumn. Such a species transition seemed to be caused by changes in the amounts of soluble reactive nitrogen or in water perturbation due to heavy rain. Several species of cyanobacteria were distributed in the northern area, while some flagellates of Chrysophyceae and Chlorophyceae were distributed in the south. Canonical correspondence analysis (CCA) showed that pH and the abundance of chlorophyll *a*, alkalinity, and dissolved iron and Mg²⁺ accounted for a statistically significant amount of the variation in the assemblage composition of phytoplankton. It was suggested that the species-specific availability of HCO₃⁻ would correspond to the occurrence of phytoplankton species in Lake Takkobu.

Key Words: [phytoplankton](#), [eutrophication](#), [CCA](#), [HCO₃⁻](#), [water quality](#)



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