Abstract

TE133257

Distribution of toxic algae and water quality in Kwan Phayao, Phayao province were carried out for 18 month during April 1999 – September 2000. Seven species of cyanophyceae e.g. *Microcystis aeruginosa* Kütz., *Microcystis wesenbergii* Kom., *Cylindrospermopsis raciborskii* (Wolosz) Seenayya & Subba, *Anabaena catenula* (Kg.) Born. et Flah., *Anabaena aphanizomenoides* Forti., *Anabaena* sp. And *Oscillatoria perornata* Skuja were found. *M. aeruginosa* and *M. wesenbergii* were dominant species and showed the highest number 44,368 and 26,111 cell/ml or 25.3% and 41.6% of total biovolume respectively in April 1999, after that the number of cells decreased throughout the investigation. *C.raciborskii* was the dominant species and showed the hightest biovolume 92.6% of total biovolume in September 2000 and still continually increased after the study period. The another toxic algae were found in small amount. Three microcystins were found and microcystin-RR was dominant, the amount was between 0.56-59.3 ng/l but microcystin-YR and microcystin-LR were minute. The factors which positively correlated with the blooming of two species of *Microcystis* spp. were the amount of total iron and water temperature. *C. raciborskii* showed positive correlation with pH of the water. *Aulacoseira granulata* showed the positive correlation with turbidity and present throughout the investigation.

The water quality in Kwan Phayao classified by trophic level was found to be oligotrophic – mesotrophic and mesotrophic status. However, by using the standard surface fresh water quality of Thailand, Kwan Phayao was classified in the 2-3 category as relativety clean for household consumption after properly treated.