PHYTOPLANKTON DEVELOPMENT OF SELECTED PONDS INHERED IN SOUTHERN MORAVIA IN DEPENDENCE ON POND MANAGEMENT INTENSITY

ROZVOJ FYTOPLANKTONU VYBRANÝCH RYBNÍKŮ JIŽNÍ MORAVY V ZÁVISLOSTI NA INTENZITĚ HOSPODAŘENÍ

Ziková A., Kopp R., Mareš J.

Ústav zoologie, rybářství, hydrobiologie a včelařství, Agronomická fakulta, Mendelova zemědělská a lesnická univerzita v Brně, Zemědělská 1, 613 00 Brno, Česká republika.

E-mail: xzikova1@node.mendelu.cz, xkopp@mendelu.cz

ABSTRACT

During the vegetative period of the year 2006 we carried out hydrochemical and hydrobiological monitoring of selected ponds inhered in southern Moravia in dependence on pond management intensity. Water temperature, dissolved oxygen content, pH, conductivity and water transparency were monitored directly at taking place, $N-NH_4^+$, $N-NO_2^-$, $N-NO_3^-$, $P-O_4^{3-}$ content and chlorophyll-a concentration were measured in our hydrochemical laboratory. At the same time, water samples for taxonomical analyses of phytoplankton and toxins content assessment of cyanobacteria were taken.

All ponds were characterized by low water transparency and heavy water blooms during the whole monitored period, regardless of pond management intensity. Values of basic physicochemical parameters were markedly unstable due to high biomass of primary producers but still ranged in the interval suitable for fish farming.

Dominant group of primary producers was cyanobacteria. Diatoms and green algae were never occurred as a dominant group. Species composition of each taxonomical group was relatively plentiful. 191 species of cyanobacteria and algae were found during the monitored period.

Key words: phytoplankton diversity, hydrochemical parameters, ponds, southern Moravia