

Fish in the pit lakes – towards a functional ecosystem

Jiří Peterka, Jan Kubečka

Institute of Hydrobiology, Biology Centre of the AS CR, v.v.i., Czech Republic; j.peterka@yahoo.com

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Abstract After an opencast mining is finished, a question of reclamation of the abandoned mine site arises. As a perspective, sufficiently close to nature, the hydric way of reclamation is commonly used. In the Northern Bohemia region creation of ten pit lakes of the area of hundreds hectares and the volume of millions cubic meters is planned or has already started. For water ecosystems of such dimensions, fish community is their integral and essential component, which evolves either naturally or with the (advised or inadvertent) help of man. In the case of water quality, the fish can play crucial positive or negative role i.e. decelerating or accelerating the process of natural eutrophication, depending on their species composition and abundance or biomass. Therefore, to assure high quality potential of the pit lakes, expert evaluation of the lake ecosystem parameters, followed by complex surveys of the fish community development and controlled manipulation of the fish stock, leading to desirable fish community maximizing the pit lake potential not even from the biological, but also from the socio-economical point of view and minimalizing the eventual negatives connected to eutrophication, are highly recommended. In our contribution plans for controlled and biomanipulated development of fish populations in the relatively small and shallow Milada Lake (248 ha, 25 m max. depth), and larger and deeper Most Lake (311 ha, 75 m max. depth) and Medard Lake (493 ha, 50 m max. depth) are introduced and discussed.

References

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