

THE INFLUENCE OF STOCKING WITH SALMONIDS ON THE BEHAVIOUR OF RECREATIONAL ANGLERS

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We compared logbook data of individual salmon permits with data of stocked rivers for brown trout, rainbow trout and brook trout catches. Salmonid fisheries management was evaluated based on the individual logbook data as records of the fishing effort and catches. This study was performed as model example of salmonid fisheries management carried on the Opava river. Opava river is managed by three local organizations which stock it. As we found out, recreational anglers increased fishing effort immediately in the first week after stocking the river. The fishing pressure increased to 1 – 3 fishing effort/ha and catches to 0,5 – 3 pcs/ha. The increased fishing pressure was not dependent on the species of stocking fish. In general, fishing effort was bigger on weekends (2 – 4 fishing effort/ha) than in working days (1 – 2 fishing effort/ha). This conference paper was supported by project OPVK CZ.1.07/2.2.00/28.0302.

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POSSIBILITY OF REPLACING SOYBEAN MEAL BY NATIONAL SOURCES OF PLANT PROTEIN IN NEW ZEALAND WHITE RABBIT FEEDING

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The aim of this research was to replace the soybean extracted meal by national plant protein sources in pellets and evaluation the impact of this supplementation on productivity of broiler rabbits. In the experiment was used breed New Zealand White rabbits. In the control group diet was 15% of soybean extracted meal. In the experimental, completely replaced soybean by composition of pea, lupine and rapeseed meal. The experimental feed was balanced with regard to chemical and amino acids composition to resemble a feed containing soybean meal. Based on the results the experimental factor had no effect on production performance and nutrient digestibility. Therefore, in the rabbits feeding soybean extracted meal may be replaced by national sources of plant protein.

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PANAGROLAIMIDAE (NEMATODE: RHABDITIDA) INVASION OF EXOTIC SPIDERS

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Panagrolaimidae is a family of soil nematodes which can be a facultative parasites of many groups of animals including captive-bred and wild Theraphosidae (Arthropoda: Araneae) spiders. During the presented research Panagrolaimus sp. has been found in spiders bred in Poland and originated from the

(2-3 day), mid luteal (8-12 day), late luteal (15-17 day) and CL regression (19-21 day). The results show different profile expression of PPAR isoform: PPAR α and PPAR γ in the bovine CL ($P < 0.05$) which suggest its different engagement during estrous cycle.

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THE COMPARISON OF INITIAL DEVELOPMENT OF ZOOPLANKTON COMMUNITY STRUCTURE IN THE NEWLY CREATED FARMED FISHPONDS AND NATURAL PONDS

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Important role in food webs of standing waters plays zooplankton. Especially in farmed fishponds it is irreplaceable part of the food for fish. Many studies deal with the taxonomic composition and abundance of zooplankton, but those describing the initial colonization of new fishponds are lacking. Zooplankton of two new fishponds (F1, F2) with different fishstock and two newly created ponds without fish was sampled during the first growing season. Sampling was realized monthly, zooplankton identification and enumeration was carried out. In the F1 prevailed very fine zooplankton. The most abundant were rotifers, the less cladocerans. In F2 all zooplankton groups were balanced in both size and taxonomic composition. In ponds without fish first colonists were rotifers, copepods came last. Frequently predominated big species of cladocerans in both ponds. This conference paper was supported by project OPVK CZ.1.07/2.2.00/28.0302.

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THE POSSIBILITY OF USING CURCUMIN IN BEEKEEPING

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Curcumin is a commonly used food dye and a popular ingredient in Indian cuisine. Using it as an additive in bee nutrition is aimed to improve the condition of the organism. Two groups were created: -control: 100 cages with 40 bees in each treated with sugar syrup (1:1) -curcumin: 100 cages with 40 bees in each treated with sugar syrup (1:1) with curcumin at the concentration of 3 $\mu\text{g/ml}$. Curcumin supplementation resulted in increased activities of: enzymatic antioxidants, biochemical markers, neutral proteases and protease inhibitors; increased concentrations of triglycerides, cholesterol and glucose, but decreased activities of acidic and alkaline proteases. Honey bees treated with curcumin had lower global methylation levels than honey bees fed only with sugar syrup, which was also confirmed in their longer lifespans. It seems that curcumin has a positive effect on the organisms of honey bees, but the study needs to be repeated in the apiary.

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WATER QUALITY AND COMPOSITION OF THE PLANKTONIC COMMUNITY WATER RESERVOIR OPATOVICE

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Problems of drinking water are currently globally researched topic. With the increasing intensification of agricultural production and growth of the industry it is more complicated to meet the requirements on water quality in reservoirs. The aim of this research was to confirm if the Opatovice reservoir is suitable for water supply purposes and if meets the valid legislation of the Czech Republic on water quality. Water samples were taken monthly during the growing season, physicochemical parameters of water and planktonic communities were monitored. The results were compared with the selected tanks of similar type. Water quality in Opatovice reservoir showed no significant differences in recent years. From the phytoplankton point of view, reservoir has oligotrophic character. In zooplankton community dominated small cladocerans (<0.5 mm). The tank meets the valid legislation of CZ, and is suitable for the treatment of raw water.

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THE INFLUENCE OF PH ON WATER RETENTION OF SELECTED SUPERABSORBENTS

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Superabsorbents, also referred to as hydrogels or SAPs (superabsorbent polymers), are synthetic substances composed of loosely cross-linked water-insoluble polymers. Due to their ability to swell and store liquids, contribute to the limitation of water losses from soil and increase the maximum water capacity of soils. Their absorption properties have meant that they have found applications in numerous branches of the pharmaceutical and chemical industries; however, they are most frequently used in agriculture, gardening, post-industrial site reclamation and in anti-erosion protection. Some factors, such as pH, ions contained in soil solutions, UV radiation, etc. lower the swelling ability of superabsorbents. The aim of this study was to determine the effect of solution's pH on retention properties of selected superabsorbents.

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ANALYSIS OF THE POSSIBILITIES OF APPLYING TENNANT METHOD TO DETERMINING ENVIRONMENTAL FLOW IN MOUNTAIN CATCHMENT

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The paper describes way of determining environmental flow, based on Tennant Method and instream flow, using the methods of Kostrzewa and fish – fishing. Calculations were conducted for the catchment Grajcarek River which is located in the basin of Upper Dunajec – right-side inflow of

individuals in the study population. Based on mathematical analysis it was found that the variability of the trophism of the upper layers of the soil affects the variations of the characteristics of *Pulsatilla patens* (L.) Mill. population in the Knyszyńska Forest.

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THE SMALL HYDRAULIC STRUCTURES INFLUENCE ON BEDLOAD TRANSPORT CONDITIONS IN LOWLAND RIVERS – INTRODUCTORY RESEARCH

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The river channel and valley forming process is the result of mutual influence of the water flow and bedload movement. The course of this process is described by causal link - Lane's relevance (1955). Research presents the river bed forming process in laboratory conditions and also evaluation of Lane's relevance validity in formerly established parameters. The research feedback is an output assumption for introduction the weir with a wide head on crest to artificial channel. The far-reaching aim of experiment is evaluation of influence small weirs in channel on water flow and bedload transport conditions, including blurs forming initiation. Rising the water is predicated on stream parameters change and intensity change of erosion phenomena. The lower weir part blurring is the one of many dangers, connected with hydrotechnical objects presence, wherefore research of lower part deformation is usable in praxis.

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THE COLONISATION OF NEWLY BUILT POND BY MACROZOOBENTHOS

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The colonisation of standing waters by macrozoobenthos is constantly unheeded topic because the present studies deal with the colonisation of running or periodic waters. Monitored locality is a newly created fishpond within the system of six fishponds situated in Northern Moravia. Sampling was realized monthly in the first growing season after flooding from April to October 2012. The aim of this study was to determine the speed of colonisation by macrozoobenthos, evaluate the abundance and changes in composition of the communities as a result of fish stock influence. Consequently, hydrochemical parameters (temperature, dissolved oxygen, conductivity, pH, total nitrogen and phosphorus) of fishpond water were monitored. There were 14 representatives of temporal and 1 representative of permanent fauna recorded in the locality. Total abundance of macrozoobenthos during the monitoring period included 3601 individuals in 7 taxonomic groups.

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