LIVING UNDER A RAIN OF FAECES: MAMMALS IN THE COLONY OF CORMORANTS

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In Lithuania, after 100 years of eradication, great cormorants (*Phalacrocorax carbo sinensis*) started to breed again in 1985. In 2015 the number of breeding pairs in the largest colony in Lithuania (located on the Curonian Spit near the Juodkrantė village) was estimated at about 3800 breeding pairs. Great cormorants are able extremely to change the ecosystem in territory of the breeding colony. A single bird consumes 400 g fish per day and depositing 20-50 g faeces. Great cormorants spent about 20 h daily in breeding colonies and about 80% of faeces are depositing there [1]. Deposited faeces overload the ecosystem with N and P by 10^4 to 10^5 times [2]. Exchanged chemical properties of soil affecting plants [3], lichens [4], insects and lizards [5]. There have been no investigations on how the cormorant colony influences mammals.

The aim of our study was to investigate small mammals biodiversity and abundance in the Juodkrantė great cormorant colony and estimate other mammals activities in the colony. Snap trap line method was used for small mammal research. The activities of other mammals was evaluated using camera traps (system with a trigger or a sensor that activates a camera to take a photograph when an animal is present) and snow transect counts (density of the footprints in the snow) methods.

Seven small mammal species were trapped in the different zones of the great cormorant colony and in the control zone. The dominant species was yellow necked mouse (*Apodemus flavicollis*), accounting for 70.5% of all trapped individuals, with bank vole (*Myodes glareolus*) subdominant (25.0%). The proportion of other species is very low. Reduction in biodiversity and abundance of small mammals was found in the most active parts of the colony. Snow transect count method shown in winter the area influenced by cormorants are attractive for the wild boar (*Sus scrofa*), roe deer (*Capreolus capreolus*), red fox (*Vulpes vulpes*). But there are no differences of use the territory of control and impacted zones for moose (*Alces alces*), European hare (*Lepus europaeus*), red squirrel (*Sciurus vulgaris*) and marten (*Martes* sp.). Using camera traps nine mammal species were registered in Juodkrantė cormorants colony. Most often colony was visited by roe deer, wild boar and moose. Two invasive species were also registered: common raccoon (*Procyon lotor*) and sika deer (*Cervus nippon*).

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