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ŤREBOŇ BIOSPHERE RESERVE OTTER PROJECT

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Abstract: A project on the ecology of otters in the Třeboň Biosphere Reserve is proposed. Until recently, this network of man-made wetlands has been excellent otter habitat, with sustainable exploitation by both man and nature. In recent years, economic factors have led to this balance being distorted in man's favour, with habitat destruction, pollution and calls for compensation for otter damage to fish farms, and even the right to kill otters. Little is known of the current status of the otter population in the reserve, and this project aims to address this and to form a Třeboň Otter Protection Plan.

This article is a summary of a proposal for a long term research project into the ecology of the otter Lutra lutra in the Třeboň Biosphere Reserve. The project will be a cooperation between the Czech Institute for Nature Protection (ČUOP) and the Dutch Otterstation Foundation (SON), in close association with the Austrian Institute for Wildlife Biology and the British Institute of Terrestrial Ecology.

INTRODUCTION

The negative influences from man on the otter are all too familiar by now. Documentation of otter hunting for fur or pestilence control go back several centuries. From the 1950s onward, the indirect influence of man through pollution, habitat destruction and other methods began to play an even greater role in the decline of the otter populations. The resulting decimation or complete extermination of most European otter populations are well documented. The otter is now registered as an endangered species in many European countries, including the ČFSR.

The actions of man have not always been detrimental to the otter. The development of the man-made wetland ecosystem which comprises the Třeboň Biosphere Reserve (South Bohemia) may serve as an example where the otter, till recently, has profited largely from man's activities. At present there are over 22 000 artificial fish ponds in South Bohemia, covering over 400 km^2 of water.

A large part of it is concentrated along the Lužnice River in the Třeboň Basin. Here the construction of a network of small and large fishponds with connecting canals started as early as the 13th century, with most of the ponds dating from between the 14th and 17th century. During the following centuries of constant management an intricate network of ponds, supply and drainage canals, rivers, brooks, marshes, peat bogs and wetland meadows developed into a wetland of international importance. In between the water bodies are mixed forests, pine forests and agricultural lands. There are only a small number of little villages in the area. A nice balance was established between the natural wetland growth and incursions necessary for proper economical management of the ponds, forests and agricultural lands.

In this artificial ecosystem the otter has established a thriving population. The fish ponds and the other water bodies provide a year-round supply of food. Not only in the form of commercial harvested fish but also with numerous other fish and other prey species which profit from the eutrophication for fish production. Constant water management and mechanical whirling keep part of the water bodies open, even in the most severe winters. Vegetation in this wetland ecosystem developed into an ideal otter habitat. The hardly accessible read beds and marsh vegetation provide ample cover and quietness necessary for holts and suitable breeding places.

However, in spite of the nationally and internationally recognised importance of this man-made ecosystem it is severely endangered. During the second half of this century the activities in all economic sectors increased to meet the demands for bigger harvests and shorter harvest cycles. In the

last two decades the economical pressure rose to a level where interests of each sector conflict with those of the other sectors and that of nature conservation. A heavy burden has been put on the ecosystem through the abundant use of artificial fertilizer for both agricultural and piscicultural use, shortening of the fish harvest cycle, the use of heavy machinery for the cleaning of the ponds, streams and river banks, increase in industrial and agricultural waste, increase in recreational pressure, etc. The otter population can become an easy victim of these economic developments. Privatisation of the fish ponds and the resulting increasing economic pressure has already led to increasing complaints about the otters preying on the fish in ponds. As a result the requests for compensation and even legal killing of otters to protect the crop are rising. The risk of illegal killing to save expensive fencing will rise accordingly. The increase in recreational pressure and the use of heavy machinery increase the level of disturbance and can also become a threat to the presence of the otter and the conservation of suitable otter habitat. The levels of the different forms of water pollution are also increasing steadily. With the increasing levels of pollutants the long-term preservation of the otter population in this Biosphere Reserve will be, or is already, severely at risk.

WHY THE ŤREBOŇ BIOSPHERE RESERVE OTTER PROJECT?

The presence of any endangered species in a Protected Landscape or Nature Reserve warrants a study into the role and conservation needs of that species within that reserve. More specific, during several international otter symposia and workshops the need to study and protect existing otter populations is repeatedly stressed. Especially the good populations should receive extra-attention: "conduct the necessary research to identify regional conservation problems and to establish a sound scientific basis for maintaining viable populations" (Resolution of the Fifth international Otter Colloquium).

However, little is known about the actual status of the Ťreboň otter population. The proposed project is designed to fill this gap in knowledge. Another important aspect of this study will be the formulation of a regional otter conservation plan: The Ťreboň Otter Protection Plan. This plan should entail an evaluation of the specific values of this ecosystem as otter habitat. Recommendations will include, amongst others, maximum acceptable pollution levels, the preservation of specific core areas as breeding reserves, river management, water management and the improvement of the ecological infrastructure to enable safe migration. The study should be accompanied by a long term monitoring programme on the results and the full implementation of the Ťreboň Otter Protection Plan. The results of the study can also be used for the development or habitat management of other (new) wetlands.

As has been expressed in several international publications, conservation of the otter is more than just conservation of yet another endangered species. As an opportunistic predator the otter occupies a large distribution, both in area and in different habitat types. However, as top predator in an aquatic environment the otter is highly sensitive to every form of disturbance, pollution and habitat destruction. This sensitivity makes the otter a good indicator species for the status of its environment and especially of clean water and sound water management. Most people are not very familiar with the otter and its appearance owing to its nocturnal life style. Once people become familiar with the otter, however, they mostly become attracted to this playful animal. This attraction enhances its role as ambassador for a clean environment. In the Ťreboň Biosphere Reserve the otter can play just such a role. By accepting the otter as key species another step in the full implementation of the concept of the Man And Biosphere programme (the international UNESCO programme for Biosphere Reserves) will have been made. With the increasing threat to, and the ongoing destruction of, this unique ecosystem and its inhabitants, any extra attention and pressure may shift the balance back towards sound ecosystem management.

The above-mentioned arguments stress the need for a long term research and protection programme for the otter population in the Ťreboň Biosphere Reserve! The fact that the otter in this reserve has been neglected till now makes the need for this project even more pressing.