SGSII-2 the Freshwater Pearl Mussel, Aš Region

Supported by grants from Iceland, Liechtenstein and Norway.

This website was created with the financial support of the EEA Grants 2009–2014 and the Ministry of the Environment of the Czech Republic. Responsibility for its contents fully lies with the Nature Conservation Agency of the Czech Republic (NCA CR) and the website may in no circumstances be considered to be the opinion of the donor or of the Ministry of the Environment of the Czech Republic.

NEWS

Project name: Monitoring and Seminatural Breeding of the Freshwater Pearl Mussel *(Margaritifera margaritifera)* in the Aš Region

Project Nr.: MGSII - 2

Project location: The Aš region, the catchment areas of the Lužní potok, Rokytnice and Bystřina, Karlovy Vary, Plzeň

Financial support: EEA Grants, Small Grants Scheme (SGSII) entitled “Action Plans for Endangered Species II’, support area 1: “Realisation of Approved Action Plans and Management Plans for Endangered Plant and Animal Species”

Total Resources: 570,486 CZK incl. VAT

Financing: Financial resources from EEA Grants are assigned in the amount of 484,913 CZK, which is 85% of the anticipated total project expenditure. The state budget grants financial resources in the amount of 85,573 CZK, which is 15% of the anticipated total project expenditure.

Project duration: 1.3.2015 – 30.6.2016

Project partners:

- Ametyst (NGO), pobočka Karlovy Vary

Project guarantee:

- Mgr. Tomáč Birčák, AOPK ČR, Division of species protection, E: tomas.bircak@nature.cz

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Project Objective and Scope:

This project contains specific practical measures which are either crucial to survival of the species or contribute to proper management and development of the action plan. The project is carried out by the Nature conservation agency of the Czech Republic (NCA CR) in cooperation with the NGO Ametyst – pobočka Karlovy Vary. The project includes monitoring of permanent monitoring plots, which allows year-to-year comparisons of population changes in one specific location. It also facilitates the screening of juvenile Freshwater Pearl Mussel (FWPM) from semi-natural breeding cycles, as they are easy to overlook in the diverse watercourse bed due to their size (less than 1 cm).

Another measure features semi-natural breeding which helps to directly strengthen the FWPM populations and improve the unsatisfactory age structure of the population. As a subsequent measure, bioindications are used for long-term assessment of changes in the catchment areas. The survival rate and growth of juvenile FWPM from semi-natural breeding is monitored as part of these bioindications.

Project Activities:

Screening of permanent monitoring plots

The monitoring plots on the brook Luzni potok have been screened since 2006, in particular areas each covering 6 sq.m. The counting (census) is made at the beginning and end of the growing season (May to November). Long-term monitoring of specific areas allows the identification of juvenile FWPMs and a year-to-year comparison of population changes in a specific location.

Bioindication and Assessment

Bio-indications are tests on the biotope quality, carried out by placing the most sensitive developmental stages of juvenile FWPM in a standard plate into the watercourse. The length of exposure depends on the test purpose; the standard time is three months. The bioindicator plates are located in three localities: Luzni potok, Rokytnice and Bystrina. This activity also involves t care of the plates, especially their regular cleaning.

Semi-natural breeding of the FWPM

During the first of the three steps of the rearing cycle, the brown trout are infected with the FWPM glochidia. After infection, the trout are transferred to the mill race above the Doliska fishpond where they are kept over wintertime. Next step is done in a closed cycle at the field station in South Bohemia. The fish are placed individually in boxes where the temperature regime is treated. The released FWPMs from the fish gills are collected on a daily basis and placed in separate boxes. They are fed on detritus obtained from suitable and checked spring areas. Third step is an introduction into resting period and after completing it, young mussels are moved back to original locality, placed in rearing chambers/plates. Regular checks and cleaning of the rearing plates must be done. This care will be carried out for all recently bred individuals of FWPM.

Project Publicity

As part of the project publicity, an introductory and closing informational seminar will be held and its website will be established and updated on a running basis.

About the FWPM

The FWPM *(Margaritifera margaritifera)* is an umbrella species for the conservation of oligotrophic watercourses. It is highly sensitive to disturbed natural processes in the whole catchment area. This makes it an organism whose effective preservation requires the wide participation of the public and stakeholders, especially farmers, forest management staff, fishermen, local governments, etc.) along the entire catchment area where this species occurs.

In the past, the FWPM was threatened mostly by pearl pickers. The adverse impacts today are eutrophication and chemical pollution of waters, inconvenient temperature regime as a result of overgrown forest over spring areas and watercourses, erosion and sedimentation in watercourses caused by intense agricultural and forest management, unbalanced hydrological regime, calcium metabolism disorder and a lack of fish or genetically unsuitable host fish species. To mitigate these effects, broad cooperation is necessary of the many entities in the whole catchment area where the FWPM occurs. This can be assisted by the demand raised by public awareness and thus help to to preserve this interesting animal species.

Photos:



Partner logo:

Ametyst