

## SGSII-17 - Lilyleaf Ladybells



Ministerstvo životního prostředí

*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: Action Plan for the Lilyleaf Ladybells (*Adenophora liliifolia*)**

**Project Nr.:** MGSII - 17

**Project location:** Central Bohemia Region, Ustecky Region and Kralovehradecky Region

**Financial support:** EEA Grants, Small Grants Scheme (SGSII) entitled "Action Plans for Endangered Species II", support area 2: "Revision and Preparation of New Action Plans and Management Plans for Endangered Plant and Animal Species"

**Total Resources:** 676,666 CZK incl. VAT

**Financing:** Financial resources from EEA Grants are assigned in the amount of 575,166 CZK, which is 85% of the anticipated total project expenditure. The state budget grants financial resources in the amount of 101,500 CZK, which is 15% of the anticipated total project expenditure.

**Project duration:** 1.2.2015 – 30.4.2017

#### **Project partners:**

- University of Hradec Králové
- Palacký University Olomouc
- Forestry and Game Management Research Institute

#### **Project guarantee:**

- Mgr. Barbora Čepelová, AOPK ČR, Division of species protection, E: [barbora.cepelova@nature.cz](mailto:barbora.cepelova@nature.cz)
- 

### **Overall Project Summary and Effect of the Project on the Relevant Species**

The project fulfilled the anticipated objectives and outputs and was officially closed as of 30.4.2017.

The main benefits of the project lie in the prepared text for the action plan, representing a high-quality underlying document for the implementation of measures to support the occurrence of the Lilyleaf Ladybells (*Adenophora liliifolia*) in the Czech Republic. The action plan summarises the current knowledge of the species and proposes comprehensive care for the species and its sites so that the implementation of this action plan secures its survival in the Czech Republic. Three

long-term objectives were defined in the action plan, together with more detailed medium-term objectives for the first ten years of implementation. To maintain the occurrence of the Lilyleaf Ladybells (*Adenophora liliifolia*) in the Czech Republic, not only must the density of all current populations be increased, but suitable conditions for its growth on larger areas must be provided.

Besides this, several studies were provided as part of the action plan which substantially improved our knowledge of the species. Current information on all the populations was obtained as the necessary underlying facts for any subsequent consideration concerning conservation of the species. The most numerous population can be seen at the Vrazba site, with 93 clusters. Besides population density, damage to the plants, most often in the form of nibbling by animals, was also monitored. Germination capacity tests were carried out in several variants and proved that the seeds may germinate at least under laboratory conditions, with the success ranging from 3% to 94% depending on the conditions. The genetic variability tests gave an important finding that the populations can be seen as viable, with a sufficient level of genetic variability. The *in vitro* cultivation methodology which was tested and described in detail may significantly contribute to the rescue of populations or the whole species in the future if its occurrence in the original locations is endangered. Following this methodology, plants can be stored for the long term in laboratory conditions, and a higher number of new plants can be obtained quickly.

---

### **Project Objective and Scope:**

The Lilyleaf Ladybells (*Adenophora liliifolia*) is a specially protected plant species listed in Decree 395/1992 Coll. as a critically endangered species. In the Red List of Vascular Plants of the Czech Republic (Grulich 2012) it is classified in the C1b category. With respect to the decline in historical sites, the low number of recent sites and the decrease in populations of this species at recent sites, an action plan was proposed in order to preserve the species in the Czech Republic.

The preparation of a new action plan for *Adenophora liliifolia* included research activities necessary to obtain the underlying documents and for subsequent preparation of the action plan itself. Detailed monitoring of populations and habitat conditions was carried out at all the recent sites where this species occurs. The germination capacity tests and growth experiments with germinated plants provided information about the possibilities of generative reproduction of this species. A genetic variability study was also carried out, enabling the assessment of the current condition of the genetic variability and relation between the populations which occur in the Czech Republic and those which occur in the neighbouring countries. The project also included preparation of the methodology of *in vitro* rescue cultivation for the species. *In vitro* procedures for micro-propagation, i.e., reproductive cloning in explantate cultures, are a suitable conservation method for endangered genotypes and an effective reproduction method.

The text of the action plan has been prepared in accordance with the Guidelines for the Preparation of Action Plans for Specially Protected Plant Species given in Annex VI to the Concept of Action Plans and Management Plans for Endangered Animal and Plant Species in the Czech Republic. The first part is a summary of knowledge of the biology and ecology of the species obtained from research done as part of the project, and professional resources. Objectives of the action plan are then defined, together with individual measures. The text was reviewed by two professionals.

Two information seminars were held as part of the project. A project website was created and promotion leaflets were issued. The brochure on the Lilyleaf Ladybells can be downloaded here (CZE).

---

### **Photos:**



---

**Partner logos:**

Univerzita Palackého  
v Olomouci



Univerzita Hradec Králové  
Přírodovědecká fakulta