

To whom it may concern

**Open letter about protection of Musk Orchid, *Herminium monorchis*,
in the Rospuda Valley**

The following opinion has been prepared in concern with the current debate on establishing protection zone of the musk orchid, *Herminium monorchis*, in the Rospuda Valley. The undersigned are scientists for many years engaged in the conservation and restoration of wetland ecosystems and their vulnerable flora at several European Universities and research institutes. All of us have visited the mires of the Rospuda Valley and some of us have carried out ecological research there. We have a common appreciation of this site as one of the last European virgin mires, protecting unique habitats, vegetation types and a set of endangered plant species. Being informed about the ongoing debate on establishment of the protection zone of one of such species, *Herminium monorchis*, and about the controversies around it, we decided to prepare our joint opinion in hope to add relevant points to the discussion.

Herminium monorchis is an orchid species with a Euro-Syberian range of occurrence. In Europe, it is declining, and although not mentioned in the Annex 1 of the Habitat Directive, it is noted in Red Data Books of Flora of several European countries. It has become extinct in the Czech Republic and Finland. An example of its fast extinction rate is Poland, where only one, out of 18 historically noted stands, remained till now. This stand is located in the Rospuda Valley, where *Herminium monorchis* occurs on soligenic fen, with a population of circa 500-700 individuals. It is notable that in Western Europe *H. monorchis* is mainly connected with dry calcareous grasslands, which is in contrast with the behaviour of this species in Rospuda. This can be caused by differences in climate but may also indicate a genotypic distinctness of isolated populations; the verification of this would require specially directed research. What is however important for the conservation status of *Herminium monorchis* in the Rospuda Valley is the complete naturalness of this stand. The definite majority, if not all, of the other European stands are seminatural habitats, whose persistence is conditioned by regular nature management carried out by man, such as mowing, removal of shrubs and low intensity grazing. In the Rospuda Valley such measures are not needed and moreover would be undesirable due to the virgin character of the mire. Both from the perspective of effectiveness of conservation and the scientific-cognitive viewpoint, conservation of the last natural stands should be of utmost importance.

In Poland, *H. monorchis* is noted as critically vulnerable and is covered by legal protection. The Polish law require establishment of a protection zone for this species and specify the size of this zone as “the whole peatland” on which the species occurs. We are very positively impressed by this regulation, which follows the base principles of mire conservation. Experiences gathered in many countries proved that peatlands, and especially soligenic fens, can not be preserved in fragments. Fens belong to the most fragile ecosystems and their functioning fully relies on the hydrological circumstances within the whole peatland, as well as in its surroundings. Any change of the groundwater flow within such system may have detrimental effects on the hydrological and trophic conditions in other parts of the system. Even short-term drainage leads to mineralization

of the peat and release on nitrogen and phosphorus, causing internal eutrophication of the mire. This process can very quickly lead to extinction of competitively weak rare plants, of which *H. monorchis* is a classical representative. It is clear that the protection of this species without preservation of the whole mire system can not be effective. Such mistakes have been made too many times to agree for repeating them again in this precious site.

We are aware that the requirement of extending the protection zone over the whole section of the valley is not easy to meet, given the complicated ownership situation and plans of building the bypass road of Augustow. We however stand in the strong position that any major human interference to the mires of Rospuda should be avoided. This site is one of the last untouched fens on our continent and should be protected with all its unique nature, the musk orchid being one of its elements. Therefore, we encourage the Voivode of Podlaskie Voivodship and other decision makers responsible for nature protection in the region, to do their utmost for covering the site with an appropriate conservation status. The effective conservation zone for musk orchid extended over the whole mire may be one step towards establishment of a nature reserve in this site. The costs of regulating the ownership situation and overcoming other administrative obstacles may not be too high, when it comes to the preservation of sites of highest conservation importance for the European Community.

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