

THE PEAT BOGS FROM ARPAȘU DE SUS

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Abstract. The peat bogs from Arpașu de Sus are some of most conserved bogs from Romania. In this area are sheltered very rare and threatened species and habitats.

Key words: bogs, liverworts, rare species, habitats

The bogs from Arpașu de Sus was found it by Schur (1853, 1866) and Simonkai (1886). The research in this area was made by Pop (1935, 1937, 1960), Șerbănescu (1964) and Ștefănuț (2001, 2002), but the data of fauna, flora and vegetation is still very few. North to Arpașu de Sus were described other peat bogs, but after our research made in 2001, we saw that these were dried.

The previous research, made in the Arpașu de Sus peat bogs area, lead to found in 2001, the liverworts *Pallavicinia lyellii* (Hook.) Carruth., new species for Romania (Ștefănuț 2002), and in 2002 the species *Hyla arborea* and *Emys orbicularis* (last two species are protected by Low no 462/2001).

The peat bogs named by local people "Lacul Tătarilor" (Photos 1-4), placed in Făgăraș Depression, coordinate 45°42'57" N and 24°39'07" E, 2 km south to Arpașu de Sus, in Sibiu county, has about 3 ha area and to south-east is another one with about 3 ha area (Fig. 1). The two peat bogs are connected by a canal, from through the water excess is drained. At 500 m north from central peat bogs is another one ("Mlaca mică de la Arpașu de Sus"), with 2 ha area (Fig. 1).

The depth of peat in Lacul Tătarilor, in middle, is 9 m and peat reserve is over 180.000 m². The sedimentation began in pin period. On bottom of peat reserve is a water purse, under it is sandy mud.

The peat bogs are feeding by appropriate springs. Despite that is very depth, it is easy to drainage through a canal that make it connection with the Arpașu Mare river. Also, the birch species from the middle of bogs, show that peatland is in a drying process, too.

The flora, fauna and habitats are still insufficient know. In the peat bogs we found the species: *Menyanthes trifoliata* L., *Betula alba* L. subsp. *glutinosa* (Berher) Holub, *Populus tremula* L., *Frangula alnus* Miller, *Eriophorum vaginatum* L., *E. gracile* Koch ex Roth, *E. angustifolium* Honck., *Bruckenthalia spiculifolia* (Salisb.) Reichenb., *Carex lasiocarpa* Ehrh.,

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Scirpus sylvaticus L., *Peucedanum palustre* (L.) Moench, *Epilobium palustre* L., *Myosotis scorpioides* L., *Caltha palustris* L., *Ranunculus flammula* L., *Thelypteris palustris* Schott, *Alisma plantago-aquatica* L., *Scutellaria galericulata* L., *Vaccinium vitis-idaea* L., *V. myrtillus* L., *Rhynchospora alba* (L.) Vahl, the moss *Sphagnum magellanicum* Brid and the liverworts: *Riccardia chamaedryfolia* (With.) Grolle, *R. multifida* (L.) Gray, *R. palmata* (Hedw.) Carruth., *Cephalozia connivens* (Dicks.) Lindb., *Calypogeia sphagnicola* (Arnell et J. Perss.) Müll. Frib., *Lophocolea bidentata* (L.) Dumort. We did not find the orchid *Liparis loeselii*.

It is possible that at border of peat bogs, in flooded forest area, to find the liverwort *Pallavicinia lyellii* (Hook.) Carruth.; this is the only place in Romania where it grow (Ștefănuț 2002).

The vegetation is typical for peat bogs. The dominant association is *Sphagnetum magellanicum* (Malcuit 1929) Kästner et Flösner 1933, with dominate species *Sphagnum magellanicum* and *Eriophorum vaginatum*.

The three peat bogs are very important for Romania and Europe because has threatened habitat (active peat bogs, 51.112 cod in Palearctic classification), threatened species (as *Emys orbicularis*, *Hyla arborea* and *Liparis loeselii* - protected by Low no. 462/2001) and threatened liverwort *Pallavicinia lyellii*, vulnerable in Europe. This area has the premise of the EMERALD site "Lacul Tătarilor" future constitution.

The mainly human activities in the area are the grazing, the tourism, the transport, the draining and the setting on fire, any of these can modify irreversible the habitats.

The central peat bog it was proposed as natural reservation "Lacul Tătarilor"; the process is in curs.

In 2003 we started new researches in this area for ecological study and whole inventory of high plant species, mosses, liverworts, reptiles, amphibians and habitats.

We hope that our efforts will lead to a good protection and conservation of the threatened habitats and species from this area, and will be included in the National Network of Protected Areas.



Photo 1. The bog "Lacul Tătarilor"



Photo 2. The bog "Lacul Tătarilor"



Photo 3. The bog "Lacul Tătarilor"



Photo 4. The bog "Lacul Tătarilor"

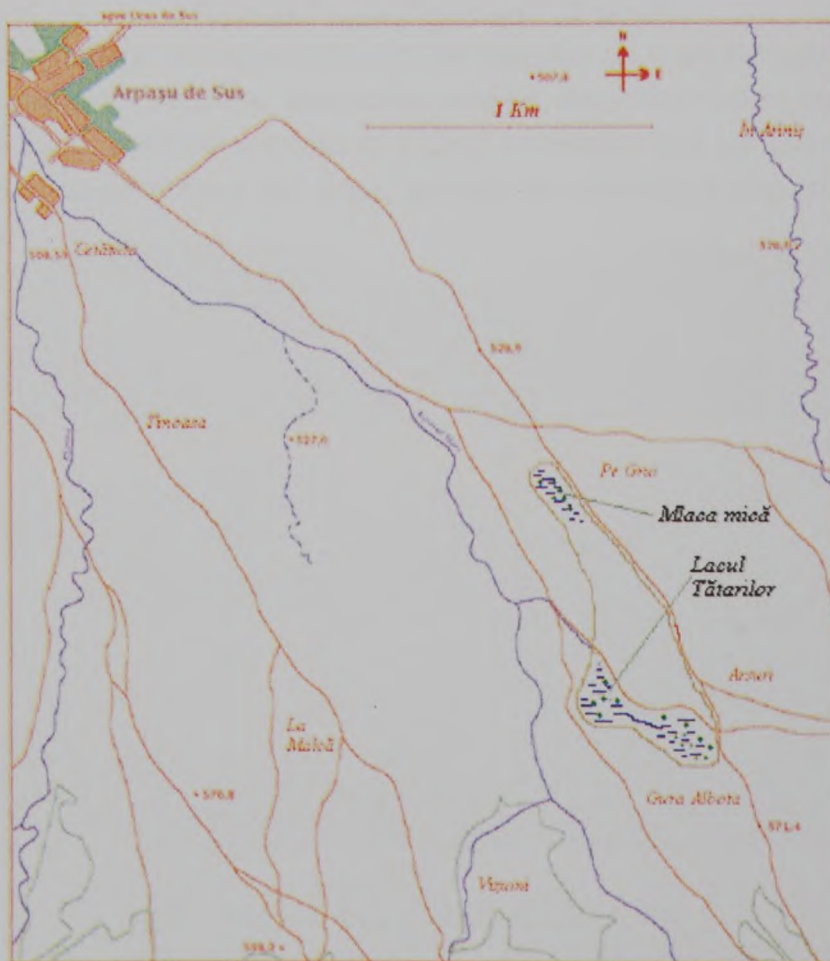


Fig. 1 The map of the future natural reservation "Lacul Tătarilor"

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TURBĂRIILE DE LA ARPAȘU DE SUS

Rezumat: Mlaștinile de la Arpașu de Sus sunt unele dintre cele mai bine conservate turbării din România. Cercetările lor au dus la identificarea unor specii periclitare de plante și animale, precum și a speciei *Pallavicinia Iyellii*, nouă pentru România. Turbăriile de la sud de Arpașu de Sus au fost propuse pentru a fi protejate la nivel local și național, prin declararea zonei ca rezervație naturală.

Cuvinte cheie: turbării, hepatică, specii rare, habitate, România