



An overview of some *Potamogeton* species from Banat areas

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Abstract:

The genus *Potamogeton* L. includes submerged or floating perennial hydrophytes. Globally, botanists discuss up to 120 species. In flora R.S.R., volume XI (eds. Săvulescu & Nyárády, 1966) there are described 15 species from our country. Ciocârlan (2009) and Sârbu et al. (2013) present 15 confirmed species and 2 unconfirmed for Romania. Over time, in Banat (with reference especially from Timiș and Caraș-Severin counties), we found reports about several species of *Potamogeton*. The studies belong mainly to Soran, 1956, Boșcaiu, 1966, Grigore, 1971, Vicol, 1974, Oprea et al., 1974, Arsene et al., 2005, Neacșu, 2008 etc. Some of these species, as *Potamogeton compressus*, *Potamogeton obtusifolius* are no longer reconfirmed in the field, due to the reduction or disappearance of some wet zones. The weight of the common species of *Potamogeton* (like *Potamogeton crispus*, *Potamogeton natans*) in the structure of the aquatic vegetation is significant and it indicates, from an ecological point of view, the eutrophication, an obvious phenomenon in Lake Sânandrei (Timiș county), which we studied. Sîrbu & Oprea (2011) do not mention any species of *Potamogeton* as invasive for our country. On the other hand, Ciocârlan (2009) and Sârbu et al. (2013) maintain in their list a rare species, *Potamogeton coloratus* (cited from Mehedinți county), even if the distribution of this species is considered uncertain in the old flora of our country (1952-1976).

• Introduction

The first publication of the genus *Potamogeton* was made by Carolus Linnaeus (Carl von Linné) in 1753, in his famous work *Species Plantarum*. According to Plants of the World Online (POWO) there is 90 accepted species. In some references it is discussed even 120 species, but Wiegleb & Kaplan (1998) consider that it is unjustified to consider a larger number of species or, that if such a thing is accepted, then these assessments are based on a narrower concept than that of the species. They also confirm that there are still uncertainties in the taxonomy of the genus, related to certain limits.

• Material and method

This study is based on our own data, collected from 2005 until now and from specialized literature (R.P.R. flora, scientific articles, databases). We followed the *Potamogeton* species from the Romania's flora, we discussed those reported in the Banat, indicating the occupied habitats, their relevance and status and added our observations. The most frequently used characters to distinguish *Potamogeton* species are leaves and seeds morphology which we also presented.

• Results and discussions

In the Romania's flora, are described and confirmed the following species of *Potamogeton*: *Potamogeton compressus*, *P. crispus*, *P. fluitans*, *P. lucens*, *P. natans*, *P. obtusifolius*, *P. pectinatus*, *P. perfoliatus*, *P. berchtoldii*, *P. trichoides*, *P. nodosus*, *P. gramineus*, *P. coloratus*, *P. alpinus*, *P. acutifolius*. Other two species, *P. friesii* and *P. rutilus* are not confirmed.

In Banat areas, are reported the following species: *Potamogeton compressus*, *P. crispus*, *P. fluitans*, *P. lucens*, *P. natans*, *P. obtusifolius*, *P. pectinatus*, *P. perfoliatus*, *P. berchtoldii*, *P. trichoides* but *Potamogeton compressus* and *Potamogeton obtusifolius* are no longer reconfirmed.



Potamogeton crispus, *P. pectinatus* and *P. natans* (details and general view) at Liebling, Pișchia, Sânandrei and Satchinez (original foto)

• Conclusions

For the aquatic environment, the *Potamogeton* genus is one of the most important, because its species are habitats and food for aquatic fauna. This genus is well represented, botanists discussing about 100 species spread across the globe. In the Romania's flora, 15 species are confirmed and in Banat we found references for 10 of them. We frequently encountered *P. crispus*, *P. natans* and *P. pectinatus*. The taxonomy of the genus is still debated, but the molecular analysis is helping to clarify some aspects.