

> Red list Characeae

Threatened species in Switzerland, standing 2010

Summary of the publication «Rote Liste Armleuchteralgen»
www.bafu.admin.ch/uv-1213-d

> Summary

The green algae of Characeae colonise in Switzerland different aquatic environments: large lakes, stretches of water on alluvial plains, fens, vernal pools and, sometimes, slow-flowing streams. While certain species display a preference for shallow waters, others are more likely to colonise deep lakes, currently up to around 12 m in depth. The species, which are found in habitats ranging from the colline to Alpine zones, display maximum diversity in low-altitude habitats with a low to average nutrient content.

The Liste Rouge des Characées de Suisse (Red List of Swiss Characeae) was compiled using the criteria and categories proposed by the International Union for Conservation of Nature (2001, 2003). The evaluation of the scale of the threat to the species was carried out on the basis of all of the data available from the 18th century to 2005 and new data collected specifically with a view to the creation of the red list (2006–2009).

Of the 25 species likely to be found in the country, 23 could be evaluated. The assessment shows that the majority (87 %) of 20 species is currently included in the red list, are, four of them have not been seen in the country for 70 years at least (category «regionally extinct» (RE)). Among the four species classified as «critically endangered» (CR), three were recently observed in a single site; the last sighting of *Nitella tenuissima* dates from 1992. Among the other species on the list, six are classified as «endangered» (EN) and six as «vulnerable» (VU). One species is «near threatened» (NT) and two others are considered as «least concern» (LC). Finally, it was not possible to evaluate two of the species due to a lack of sufficient information; these are classified, therefore, as «data deficient» (DD).

The factors that threaten the survival of the Characeae are eutrophication, habitat loss and degradation and low dynamics in watercourses (damming, modification of the hydrological regime etc.) and water bodies (regulation of the water level which reduces the eulittoral zone). The results of the survey show that the risk of the decline in populations is greater in specialist species. The most threatened species of Characeae in Switzerland belong to the genus *Nitella*, several of which are annual plants that reproduce in shallow temporary freshwater habitats which are weakly calcareous or neutral to slightly acidic. Very little data are available on these species.