English name: Many-branched Stonewort

Scientific name: *Nitella hyalina*

**Taxonomical group:**
- Class: Charophyceae
- Order: Charales
- Family: Characeae

**Species authority:** (D.C. in Lam. & DC.) C. Agardh 1824

**Subspecies, Variations, Synonyms:** –

**Generation length:** –

**Past and current threats (Habitats Directive article 17 codes):**
- Overgrowth of open areas (A04.03, K04.01)
- Eutrophication (H01.05)
- Water traffic (G01.01.01)
- Construction (D03, J02.01.02, J02.02.02)

**Future threats (Habitats Directive article 17 codes):**
- Overgrowth of open areas (A04.03, K04.01)
- Eutrophication (H01.05)
- Water traffic (G01.01.01)
- Construction (D03, J02.01.02, J02.02.02)

**IUCN Criteria:**
- B2ab(iii)

**HELCOM Red List Category:**
- VU
  - Vulnerable

**Global / European IUCN Red List Category:**
- NE / NE

**Protection and Red List status in HELCOM countries:**
- Denmark –/–
- Estonia –/–
- Finland Threatened status in the Nature Conservation Decree Annex 4/VU
- Germany –/– (1, Critically endangered in freshwaters)
- Latvia –/–
- Lithuania –/–
- Poland –/–
- Russia –/–
- Sweden –/–

**Distribution and status in the Baltic Sea region**

In the Baltic Sea, the only records of *Nitella hyalina* are from Finnish and Russian waters. Although mainly a fresh water species, in Finland it has been found almost exclusively in slightly brackish water along the south coast. On of the former sites of occurrence (Saltfjärden in Kirkkonummi) is known to have been totally changed as the bay has been drained to gain arable land (Langangen et al. 2002). According to Koistinen (2003) the species has been found at four different sites at two locations in the eastern part of the Finnish south coast since the year 2000. In 2007 it was found at two sites in one of

*Nitella hyalina*. Source: www.biolib.de
the earlier locations at Vilkkiläntähti. In the Finnish Red List *Nitella hyalina* has been classified as VU. Of the Russian location no recent information is available and the species is not included in the Red Data Book of the Leningrad Region (Koistinen 2003).

**Distribution map**

The records of species compiled from the Finnish Museum of Natural History (Botanical Museum) and from the Finnish database for threatened species (Hertta). There has been an occurrence also on the Russian side of the Gulf of Finland but there is no recent information on that location.

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**Observations of *Nitella hyalina* in the HELCOM area**

- Orange: before year 1995 or in 1995
- Blue: both before and after year 1995
- Light blue: observations made in the indicated sub-basins
**Habitat and ecology**

*Nitella hyalina* is a freshwater species that can also be found in brackish water (Langangen et al. 2002). The species grows along the shore line, preferably on bare bottoms between reed stands and in sheltered openings inside them. It can also be found in moderately exposed areas in shallow water. In Finland the species has been growing in salinities ranging from freshwater to 2.8 psu.

**Description of major threats**

All major threats to the species are related to either decline of habitat quality or destruction of suitable habitat. *Nitella hyalina* grows in shallow, sheltered waters that are susceptible to be overgrown by reeds (*Phragmites australis*). The reeds propagate effectively through their root system and block other aquatic plants. The expansion of reed belts has been accelerated by anthropogenic eutrophication, post-glacial land up-heaval and a lack of grazing of coastal meadows and adjacent shallow water areas. The effects of eutrophication also include increased turbidity. This disturbs the growth of submerged aquatic plants such as charophytes, both by decreasing the amount of available light and by increasing silting and sedimentation. Other human induced threats, such as construction of shipping lanes and ports and estuarine and coastal dredging cause direct habitat destruction. In addition, increased boat traffic in shallow areas causes resuspension of sediments increasing turbidity and further accelerating eutrophication.

**Assessment justification**

*Nitella hyalina* has restricted geographic distribution and its population is regarded continuingly declining. The number of locations is estimated to 6–10. The continuing decline is assumed to concern at least the area, extent or quality of the habitat which are negatively affected by eutrophication and reed belt expansion. The species is categorized as Vulnerable according to the criteria B2a,b(iii).

**Recommendations for actions to conserve the species**

As with most charophytes, not much of the habitat of this species is protected. Possible actions for conservation should include protection of habitats from anthropogenic effects ranging from eutrophication to marine traffic related issues such as effects of boating and dredging for boat lanes. Also restoration of coastal meadows by cattle grazing might benefit the species.

**Common names**

Denmark: –, Estonia: –, Finland: kalvassiloparta, Germany: –, Latvia: –, Lithuania: žalsvasis menturdumlis, Poland: (krynicznik), Russia: нителла гиалиновая, Sweden: blekslinke

**References**

Hertta, the database of threatened species in Finland. Finnish Environment Institute.

