SPECIES INFORMATION SHEET *Crassula aquatica*

English name: **Water pygmyweed**	Scientific name: ***Crassula aquatica***	
Taxonomical group: Class: Magnoliopsida Order: Saxifragales Family: Crassulaceae	Species authority: (L.) Schönland	
Subspecies, Variations, Synonyms: *Tillaea aquatica L.*	Generation length: 1 year	
Past and current threats (Habitats Directive article 17 codes): Overgrowth of open areas (shores and shallow waters) (A04.03, K04.01), Eutrophication (H01.05), Construction (D01, D03, J02.02.02)	Future threats (Habitats Directive article 17 codes): Overgrowth of open areas (shores and shallow waters) (A04.03, K04.01), Eutrophication (H01.05), Construction (D01, D03, J02.02.02)	
IUCN Criteria: **B2ab(ii,iii,iv,v)c(iv)**	**HELCOM Red List Category:**	**NT Near Threatened**
Global / European IUCN Red List Category NE / DD	Habitats Directive: –	
Protection and Red List status in HELCOM countries: Denmark –/–, Estonia –/RE, Finland –/VU, Germany –/–(in freshwaters: EX (0)), Latvia –/–, Lithuania –/–, Poland –/–, Russia –/VU, Sweden –/NT		

Distribution and status in the Baltic Sea region

This species occurs scattered over Eurasia and North America. According to the Atlas Florae Europaeae (Jalas et al. 1999), the European distribution area of *Crassula aquatica* is clearly concentrated in Finland, Sweden and Russia. Within the Baltic Sea region the species occurs frequently in coastal waters. In Finland *Crassula aquatica* occurs in most of the country (Ryttäri et al. 2012), both in slightly brackish and freshwaters. In Sweden the species can be found along the western coast, Lake Vänern, River Dalälven and on the coast of Norrland in northern Sweden (Swedish Species Information Center 2010).

Crassula aquatica. Photo by Galina Konechnaya.

In Russia, in the Leningrad Region, the species is known mainly from the northern and north-western parts (in slightly brackish and freshwaters): Vyborg, Priozersk, Vsevolozhsk, Kingisepp and Lomonosov districts on the coast of the Gulf of Finland (RU7; RU4) and some islands (Zapadnyi Berezovyi Island, Lisiy, Kotlin) (RU3; Glazkova & Tzvelev 2006; Glazkova & Tzvelev 2007; Glazkova 2012). It also occurs along the shores of Lake Ladoga and other large lakes, in the St. Petersburg area between Lakhta and Sestroretsk, and the banks of Neva River (Noskov 2004). In the Baltic Countries *C. aquatica* seems to be extinct – it has not been reported since 1909 from Latvia and 1934 from Estonia (Flora of the Baltic Countries, 1996; Atlas of the Estonian Flora, 2005). *C. aquatica* does not occur in Lithuania and is extinct and categorized as purely freshwater species in Germany.

In the Red List assessments the species has been considered Vulnerable both in Finland and the Leningrad Region, Near Threatened in Sweden, and Extinct in Germany, Latvia, and Estonia.

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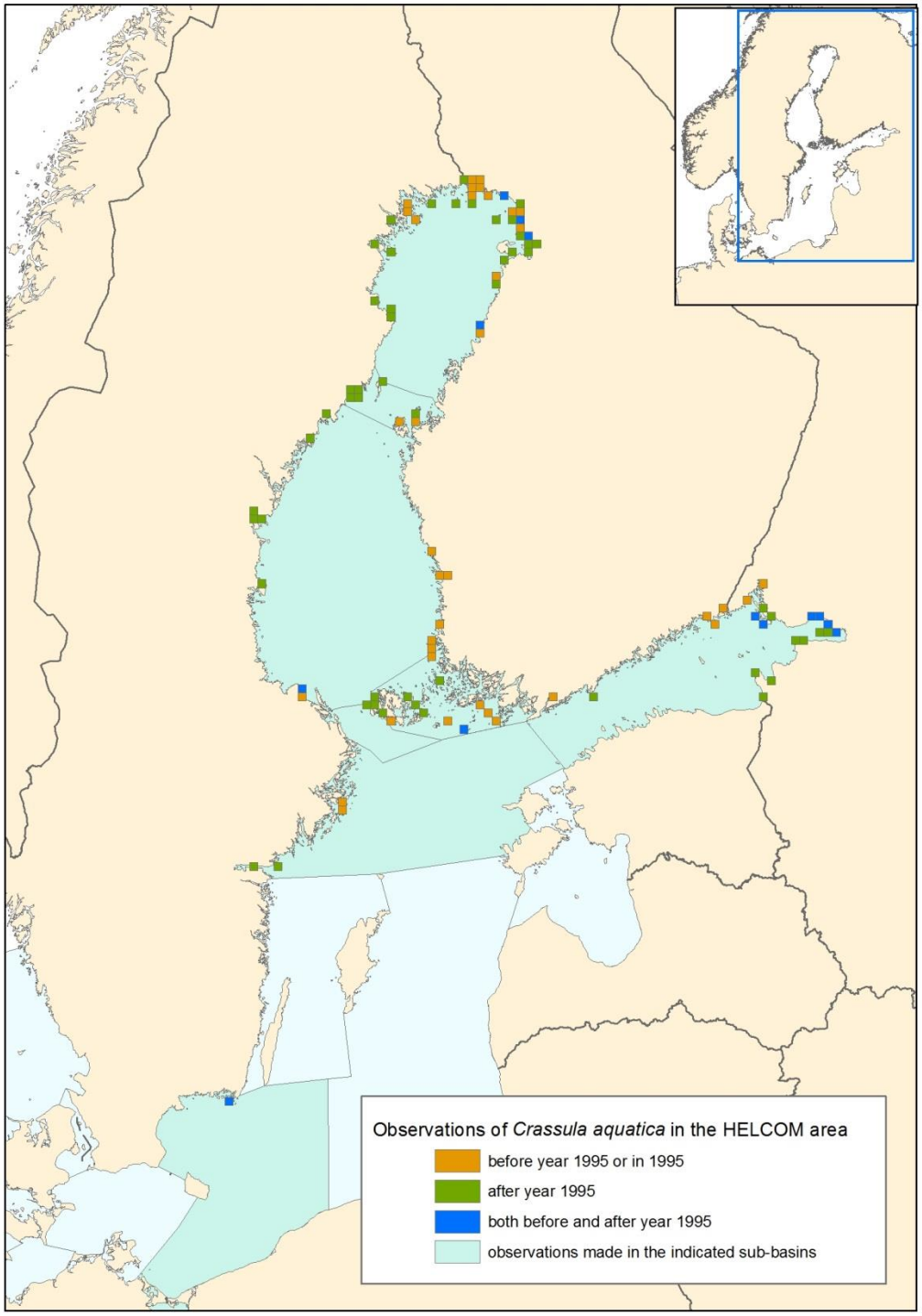
Distribution Map

The records of the species have been compiled from the Finnish Museum of Natural History (Botanical Museum), Finnish database of threatened species (Hertta), Swedish Species Gateway (www.artportalen.se), and Russian monitoring data and literature. It should be noted that this species also occurs in inland waters at least in Finland and Sweden (occurrences not shown). Many of the previously recorded populations in southern and south-western Finland are currently regarded extinct (Ryttäri et al. 2012).



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Habitat and ecology

Crassula aquatica occurs both in slightly brackish and freshwaters, usually on sandy or less often on sandy-silty and pebbly shores and in shallow waters to a depth of 0.5 m. It can flower and fruit both underwater and on wet sandy and silty banks. Seeds are mainly dispersed by water. Usually it forms rather large patches. The size of populations varies from year to year, depending on predominating winds during the summer. In the eastern Gulf of Finland the species is more abundant when eastern and northern winds dominate and the level of water in this part of the Gulf is lower.

Description of major threats

Crassula aquatica is very sensitive to eutrophication and human activities on the coasts (coastal construction, beach tourism etc.). In Finland and Sweden the plant has been favoured by cattle-grazing of the coastal meadows, which keeps the suitable habitats for *C. aquatica* open. In recent decades the practice of grazing has strongly declined, and the former sites have overgrown both in inland waters and along the coasts of the Baltic Sea. Eutrophication of the sea also enhances overgrowth, as it favours strong competitors such as reeds. In the eastern Gulf of Finland, on the coast between Lakhta and Sestroretsk, the species has almost disappeared due to the draining of the Lakhta bog. The species has also suffered badly from a dam construction in the Neva Bay.

Assessment justification

Within the Baltic Sea area the geographic range of the species is considered restricted and continuingly declining, mainly due to eutrophication and coastal construction. The species has clearly declined or even disappeared in many former locations, both on the coast and in freshwaters. Recent records are restricted to Sweden, Finland and Russia, e.g. northern part of the Leningrad Region, where the species is declining rapidly. In Finland most of the recent records are from the Bothnian Bay. In Germany, Latvia and Estonia the species is extinct. The area of occupancy (AOO) is estimated to be less than 4000 km². The extent of occurrences (EOO), the number of locations and also most probably the number of mature individuals exceed the thresholds in Red List criteria. The population is fragmented and the locations are scattered. The continuing decline of the population is assumed to concern AOO, the quality of the habitat, number of locations and number of mature individuals. The species meets the criteria for Near Threatened (B2ab (ii,iii,iv, v)c (iv)).

Recommendations for actions to conserve the species

The main conservation measures would be decreasing eutrophication, restriction of coastal construction and beach tourism and restoration of coastal meadows (by cattle grazing). Monitoring of populations and creation of new protected areas are also required.

Common names

Denmark: korsarve, Estonia: vesikas, Finland: paunikko, Germany: Wasser-Dickblatt, Latvia: –, Lithuania: –, Poland: grubosz wodny, uwroć wodna, Russia: Тиллея водная, Sweden: fyrling

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