Potamogeton perfoliatus 简体中文 正體中文 **System:** Terrestrial

Kingdom	Phylum	Class	Order	Family
Plantae	Magnoliophyta	Liliopsida	Najadales	Potamogetonaceae

Common name perfoliate pondweed (English), redhead grass (English), claspingleaf pondweed (English)

Synonym *Potamogeton amplexicaulis* , Kar.
Potamogeton bupleuroides , Fern.
Potamogeton perfoliatus , var. *bupleuroides* (Fern.) Farw.
Potamogeton perfoliatus , ssp. *bupleuroides* (Fern.) Hult

Similar species *Potamogeton crispus, Potamogeton praelongus, Potamogeton richardsonii*

Summary Potamogeton perfoliatus is a submerged aquatic plant that occurs in still and flowing freshwaters in temperate climates. It is known as clasped pondweed as the leaf bases perfoliate (are wrapped around the stem). This is one of the commonest pondweeds. All the leaves are under water; there are no floating leaves as in some other common Potamogeton species. It is common in lakes, ditches and slow rivers and streams, and is tolerant of quite a wide range of nutrient status.

view this species on IUCN Red List

Species Description
Potamogeton perfoliatus is one of the common pondweeds, rather robust, with the leaf bases wrapped around the stem. All the leaves grow under water and there are no floating leaves. Leaves are flat, oval-shaped, 2-6cm long, narrow (due to lack of light and calcium) but margins are slightly crisped (Farmer, 2003; MDNR, 2005). Plants have thicker, darker green foliage than do plants growing in deeper water (MDNR, 2005). Ailstock and Shafer (2004) state “reedgrass typically survives in winter by persistence of sparsely branched pale rhizomes embedded in the sediments. Inflorescences are variable but mostly consisting of 5-12 flowers with each consisting of 4 carpels which in turn contain a single ovule. Seed formation ranges from 20-48 seeds per inflorescence\". Redhead grass has an extensive root and rhizome system that securely anchors the plant (MDNR, 2005).

Uses
Potamogeton perfoliatus is considered an excellent food source for waterfowl (MDNR, 2005). Seeds, stems, and rootstock are valuable source of food for redhead ducks, canvasbacks, mallards, black ducks, Canada geese and tundra swans. Provides habitat for many aquatic organisms.

Habitat Description
Potamogeton perfoliatus grows best on firm, muddy soils and in quiet water with slow-moving currrent (MDNR, 2003). The pond weed is indicative of a wide range of nutrient conditions and pH tolerance. However some are only found in moderately acid to moderately alkaline conditions. Habitat types: Fresh to brackish water; high pH; muddy, fine sediment; slow moving water; shallow water; and provides habitat for marine mammals.

Reproduction
Reproduction is through a combination of vegetative or clonal offspring and those resulting from seeds (Ailstock and Shafer, 2004). Seeds are the most significant contributor to the reproductive potential of perennial species (Ailstock and Shafer, 2004). MDNR (2005) reports that \"asexual reproduction occurs by formation of over-wintering, resting buds at the ends of rhizomes. Sexual reproduction regularly occurs in early to mid-summer. Spikes of tiny flowers emerge from leaf axils on ends of plant stems. Flower spikes extend above the water surface and the pollen is carried by wind. As fruits mature they sink below the surface where they release seeds\".

Management Info
Champion and Clayton (2001) Aquatic Plant Weed Risk Assessment Model classifies *P. perfoliatus* as a high risk species in New Zealand.

Pathway
Potamogeton perfoliatus is reported present in New Zealand as being sold as an ornamental plant (Champion and Clayton, 2000).Stem fragments of the plant can be dispersed to other waterways by boats, trailers, nets and machinery (RNZIH, 2005).*Potamogeton perfoliatus* is reported present in New Zealand as being sold as an ornamental plant (Champion and Clayton, 2000).

Principal source:

Compiler: IUCN/SSC Invasive Species Specialist Group (ISSG) with support from the Terrestrial and Freshwater Biodiversity Information System (TFBIS) Programme (Copyright statement)

Review: Expert review underway: Susanne Wolfer Germany

Pubblication date: 2006-04-11

ALIEN RANGE

[1] AUSTRALIA

[3] NEW ZEALAND

BIBLIOGRAPHY
15 references found for **Potamogeton perfoliatus**

Managment information
Ailstock. S., Shafer, D. 2004. Restoration Potential of *Ruppia maritime* and *Potamogeton perfoliatus* by seed in the mid-Chesapeake Bay, US Army Corps of Engineers, July.
Summary: Available from: http://erdc.usace.army.mil/elpubs/pdf/eltn04_2.pdf [Accessed 10 September 2005].
Champion, P. Clayton, J. and Rowe, D. 2002. Alien Invaders Lake Managers Handbook. Ministry for the Environment.
Summary: Available from: http://www.mfe.govt.nz/publications/water/lm-alien-invaders-jun02.pdf [Accessed 3 February 2005]
Champion, P.D.; Clayton, J.S. 2000. Border control for potential aquatic weeds. Stage 1. Weed risk model. Science for Conservation 141. .
Summary: This report is the first stage in a three-stage development of a Border Control Programme for aquatic plants that have the potential to become ecological weeds in New Zealand.
Available from: http://www.doc.govt.nz/upload/documents/science-and-technical/sfc141.pdf [Accessed 13 June 2007]
Champion, P.D.; Clayton, J.S. 2001. Border control for potential aquatic weeds. Stage 2. Weed risk assessment. Science for Conservation 185. 30 p.
Summary: This report is the second stage in the development of a Border Control Programme for aquatic plants that have the potential to become ecological weeds in New Zealand. Importers and traders in aquatic plants were surveyed to identify the plant species known or likely to be present in New Zealand. The Aquatic Plant Weed Risk Assessment Model was used to help assess the level of risk posed by these species. The report presents evidence of the various entry pathways and considers the impact that new invasive aquatic weed species may have on vulnerable native aquatic species and communities.
Available from: http://www.doc.govt.nz/upload/documents/science-and-technical/SFC185.pdf [Accessed 13 June 2007]
Maryland Department of Natural Resources (MDNR). 2005. Redhead grass *Potamogeton perfoliatus*.
Summary: Available from: http://www.dnr.state.md.us/bay/sav/key/redhead_grass.asp [Accessed 10 September 2005].

National Pest Plant Accord, 2001. Biosecurity New Zealand.
Summary: The National Pest Plant Accord is a cooperative agreement between regional councils and government departments with biosecurity responsibilities. Under the accord, regional councils will undertake surveillance to prevent the commercial sale and/or distribution of an agreed list of pest plants.
Available from: http://www.biosecurity.govt.nz/pests-diseases/plants/accord.htm [Accessed 11 August 2005]

General information

Cusick, Allison W. 1985. *Potamogeton perfoliatus* L. var. *bupleuroides* (Fern.) Farwell. Red-headed Pondweed. Ohio Department of Natural Resources Division of Natural Areas and Preserves
Summary: Available from: http://www.dnr.state.oh.us/dnap/Abstracts/P/potaperf.htm [Accessed 10 September 2005]
Farmer, C. 2003. Skye Flora: Perfoliate Pondweed- *Potamogeton perfoliatus*. 30 September 2003.
Summary: Available from: http://www.plantidentification.co.uk/skye/potamogetonaceae/potamogeton-perfoliatus.htm [Accessed 10 September 2005].
Flora of Northern Ireland, Undated. National Museums and Galleries of Northern Ireland and Environment and Heritage Service, 2000-2004
Summary: http://www.habitas.org.uk/flora/species.asp?Item=2134
Freshwater Biodata Information System New Zealand (FBIS), 2005
Summary: The Freshwater Biodata Information System (FBIS) contains fish, algae, aquatic plant and invertebrate data and metadata gathered from New Zealand s freshwater streams, rivers and lakes. FBIS provides different ways to search for biodata: choose a predefined search from a list of common searches; use the map view to draw a box on a map and search for biodata; or create your own search for maximum search flexibility. FBIS is offered as a nationally available resource for the New Zealand public, institutions and companies who need access to a well-maintained long-term data repository.
Available from: https://secure.niwa.co.nz/fbis/validate.do?search=common [Accessed 5 August 2005]
Global Biodiversity Information Facility (GBIF), 2010. Species: *Potamogeton perfoliatus* L.
Summary: Available from: http://www.gbif.net/species/13751077/ [Accessed 15 June 2010]
Have you seen theseaquatic plants? Department of Conservation, Wellington, New Zealand January 2002.
Summary: The aquatic weeds described in this fact sheet pose the most serious threats to wetlands and waterways and have not been recorded from DOC Wellington Conservancy. DOC seeks public help to spot them and stop them before they get established.
ITIS (Integrated Taxonomic Information System), 2005. Online Database *Potamogeton perfoliatus*
Summary: An online database that provides taxonomic information, common names, synonyms and geographical jurisdiction of a species. In addition links are provided to retrieve biological records and collection information from the Global Biodiversity Information Facility (GBIF) Data Portal and bioscience articles from BioOne journals. Available from: http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=39011 [Accessed March 2005]
Royal New Zealand Institute of Horticulture (RNZIH), 2005. Clasped pondweed (*Potamogeton perfoliatus*)
Summary: Available from: http://www.rnzih.org.nz/pages/nppa_028.pdf [Accessed 10 September 2005]
UK Species Checklist for Potamogetonaceae, Undated. From www.mapmate.co.uk/checklist Online Resource
Summary: Available from: http://www.mapmate.co.uk/checklist/potamogetonaceae.htm [Accessed 10 September 2005]