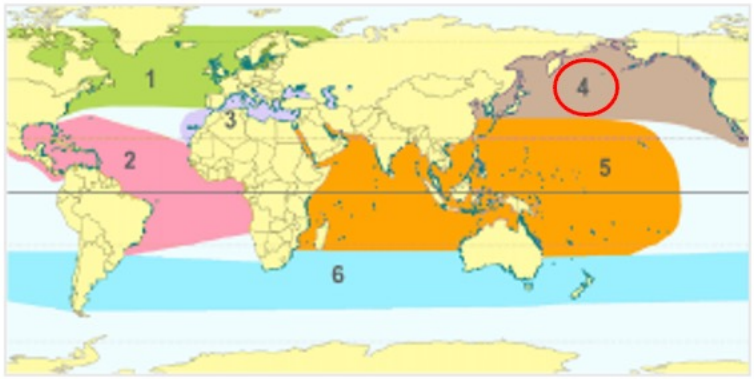
SeagrassNet

Global Bioregion Key



Seagrass Bioregional Species Key:

4 Temperate North Pacific Bioregion

Species identification key including photo guide, global range maps, drawings, and flowers.

From:

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University of New Hampshire
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fredtshort@gmail.com
www.SeagrassNet.org

With ratings from:

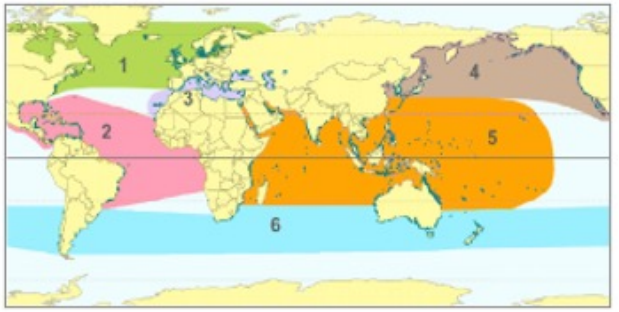
IUCN Red List of Threatened Species

Seagrass Red List

Bioregional Guide to the Seagrass Species of the World. 2025. F.T. Short. Available on-line www.SeagrassNet.org.

Zm *Zostera marina*

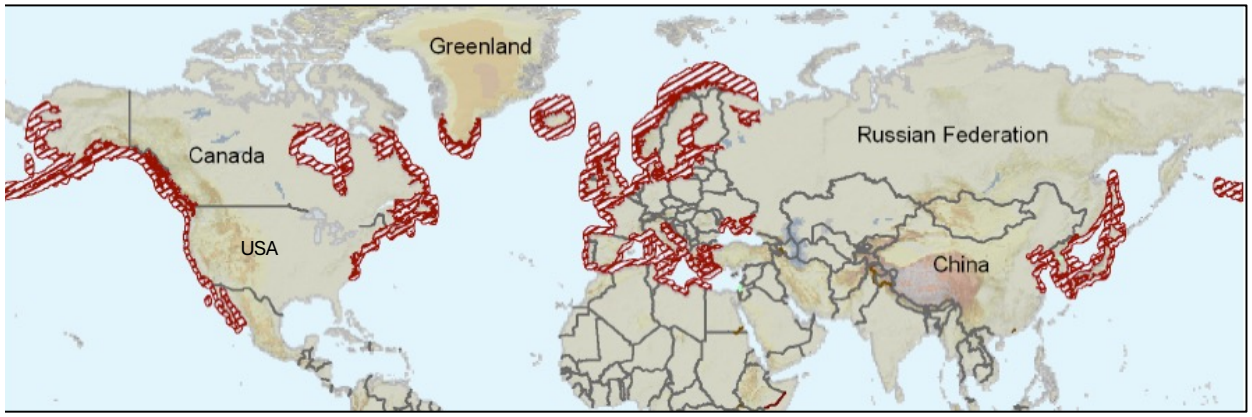
Bioregion 4



Key

- Flat leaves to 3 m with closed sheath
- Leaf tip smoothly rounded
- Rhizome robust with terminal shoots
- 2 bundles of roots per node
- Monoecious

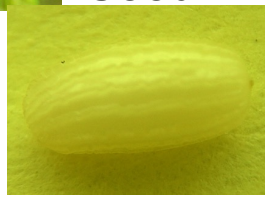
Extinction Risk: Least Concern



Flowering Parts

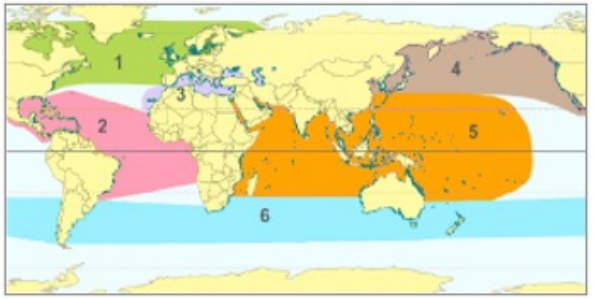
Seedling

Seed



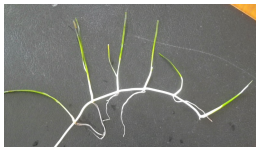
Zj *Nanozostera japonica*

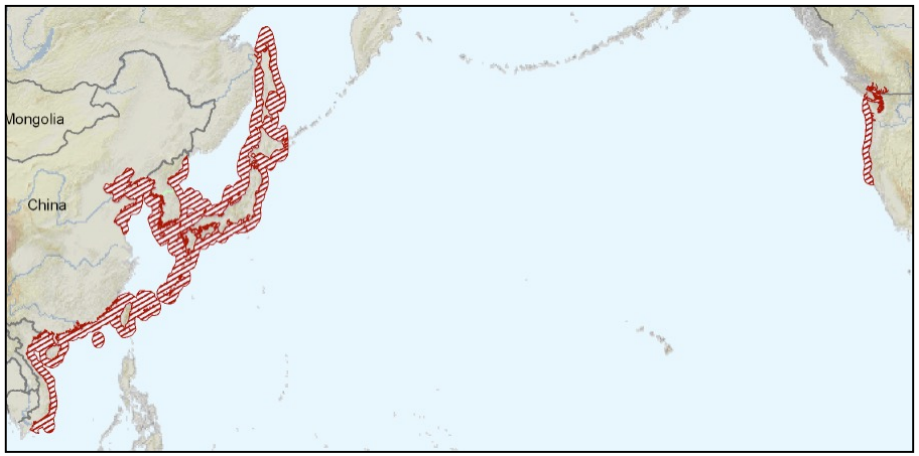
Bioregion 4

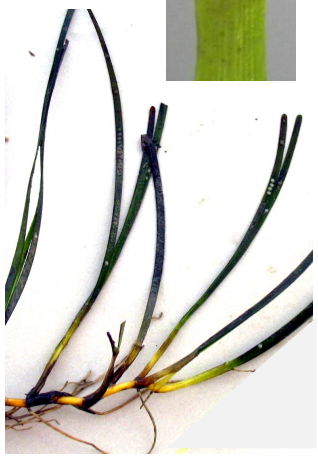


Key
- Notched rounded leaf tip
- Narrow leaf blades (2-5 mm)
- Leaves 7-30 cm long
- Monoecious
- Intertidal - shallow subtidal

Extinction Risk: Least Concern



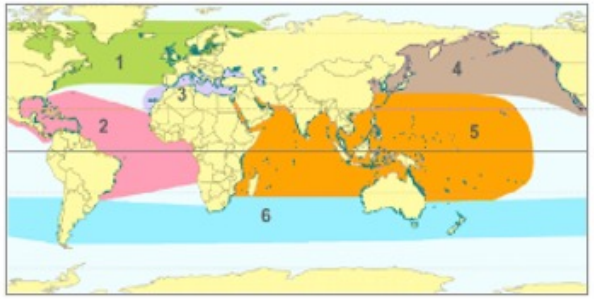




Flowering Parts

Pr *Phyllospadix serrulatus*

Bioregion 4

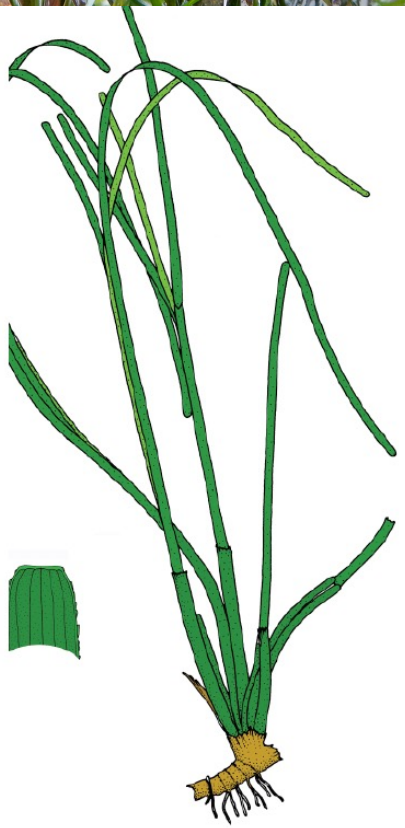


Attached to rocks

Key

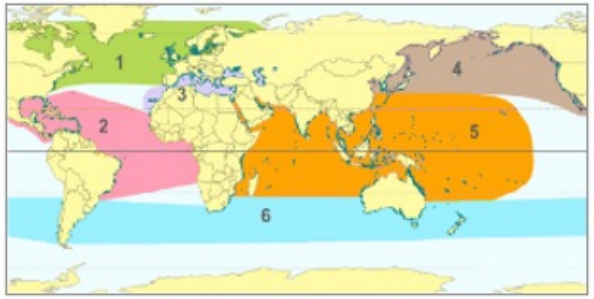
- Flat leaves to 130 cm
- Rounded/flattened tip
- Serrated leaf edges
- 5-7 leaf veins
- Dioecious

Extinction Risk: Least Concern

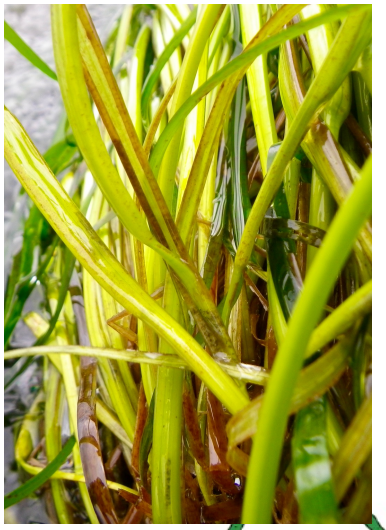


Ps *Phyllospadix scouleri*

Bioregion 4



Attached to rocks



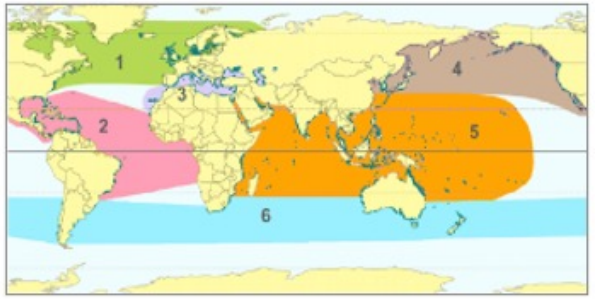
Key

- Leaves, bi-convex cross-section, to 200cm
- Rounded/flattened/notched tip
- Rhizome internodes with yellow/gray fibers
- 3 leaf veins
- Dioecious

Extinction Risk: Least Concern

Pt *Phyllospadix torreyi*

Bioregion 4

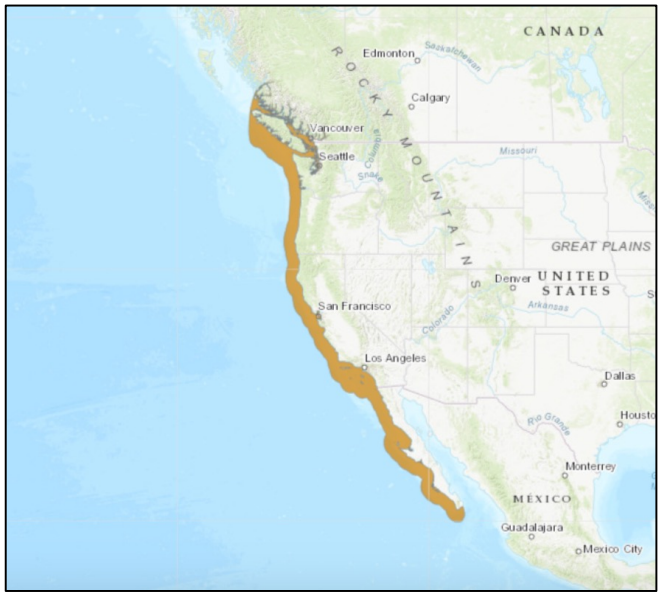


Attached to rocks

Key

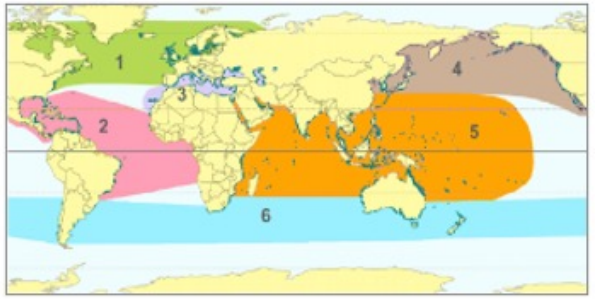
- Rolled leaves to 200cm
- Rounded slightly notched tip
- 3 leaf veins
- Dioecious

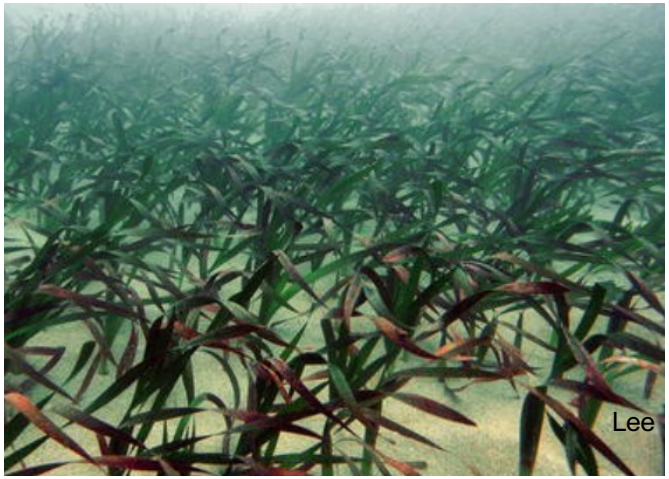
Extinction Risk: Least Concern



Za *Zostera asiatica*

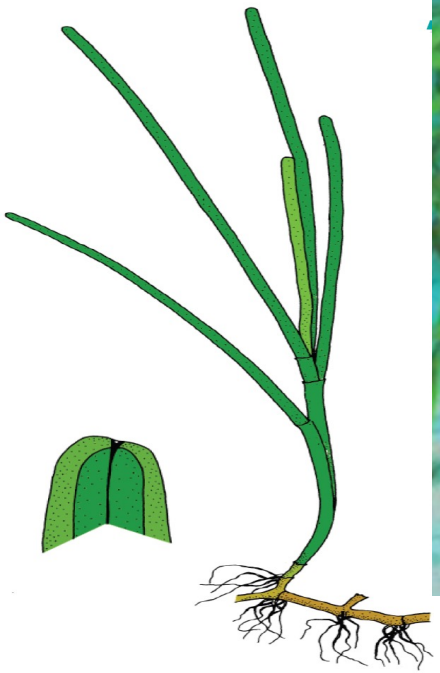
Bioregion 4





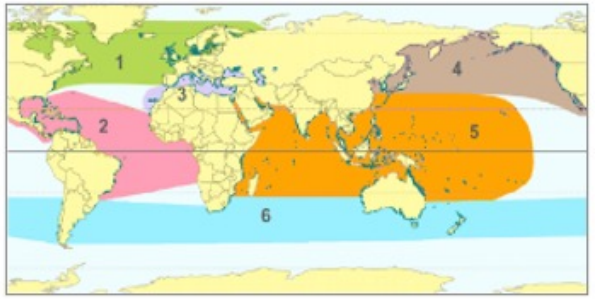
Key
- Flat leaves to 150 cm
- Flattened notched tip
- Thick rhizome
- Seeds 3-5mm brown and smooth
- Monoecious

Extinction Risk: Near Threatened



Zs *Zostera caespitosa*

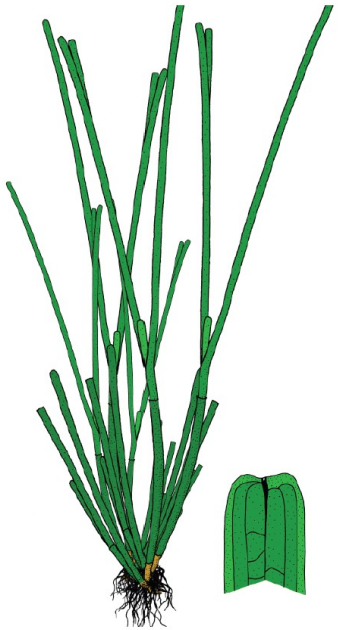
Bioregion 4



Key

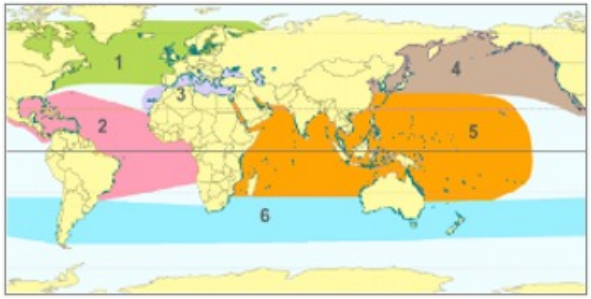
- Flat leaves to 70 cm with rounded notched tip
- Flowering shoot to 60 cm with many branches
- Rhizome robust with short internodes
- Persistent sheath giving a tufted appearance
- Monoecious

Extinction Risk: Vulnerable



Zl *Zostera caulescens*

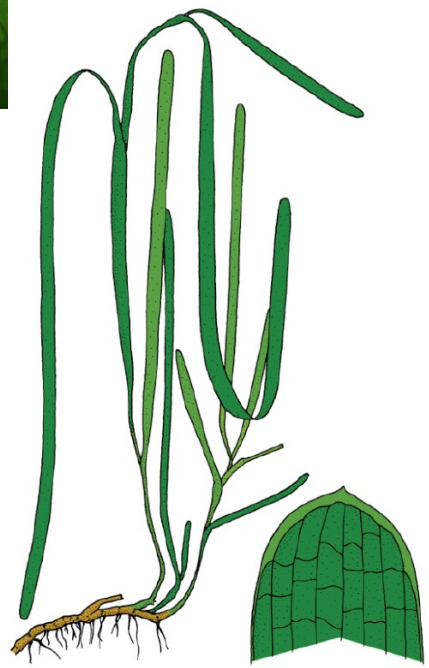
Bioregion 4



Key

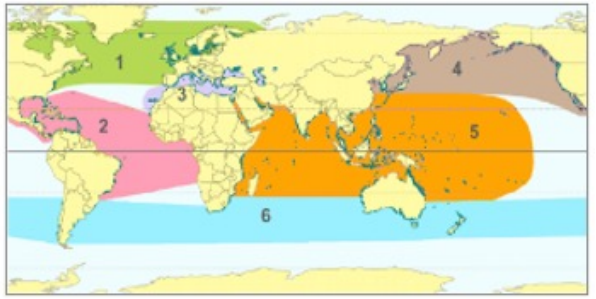
- Flat leaves 10-100cm with a short sharp tip
- Flowering shoot to 7m with many branches
- Leaf tip smoothly rounded with central point
- Rhizome robust with terminal shoots
- Monoecious

Extinction Risk: Near Threatened



Zf *Zostera pacifica*

Bioregion 4



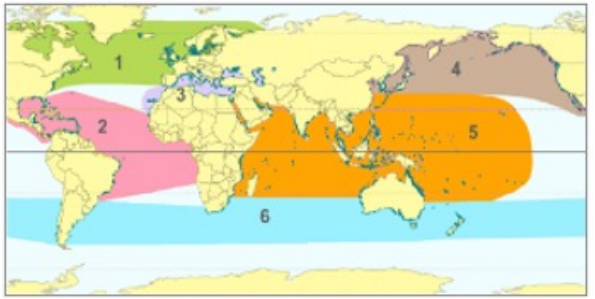
Key

- Flat leaves to 3 m with closed sheath
- Leaf tip smoothly rounded
- Rhizome robust with terminal shoots
- 2 bundles of roots per node
- Monoecious
- Confused with Za and Zm in N America

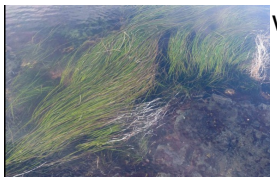
Extinction Risk: **Vulnerable**

Pi *Phyllospadix iwatensis*

Bioregion 4



Attached to rocks

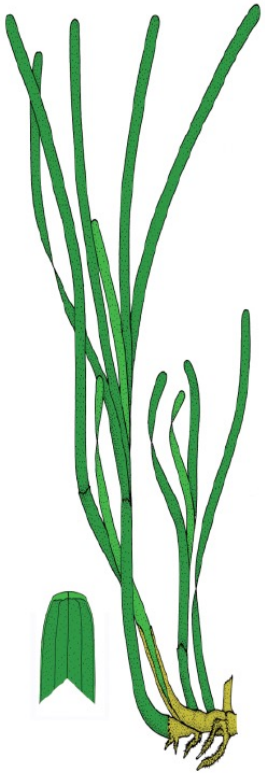


www.inaturalist.org/taxa

Key

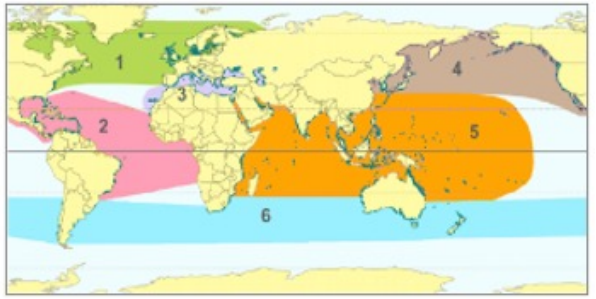
- Flat leaves to 150cm with rounded tip
- Yellowish/brown rhizome
- 5 leaf veins
- Dioecious

Extinction Risk: **Vulnerable**

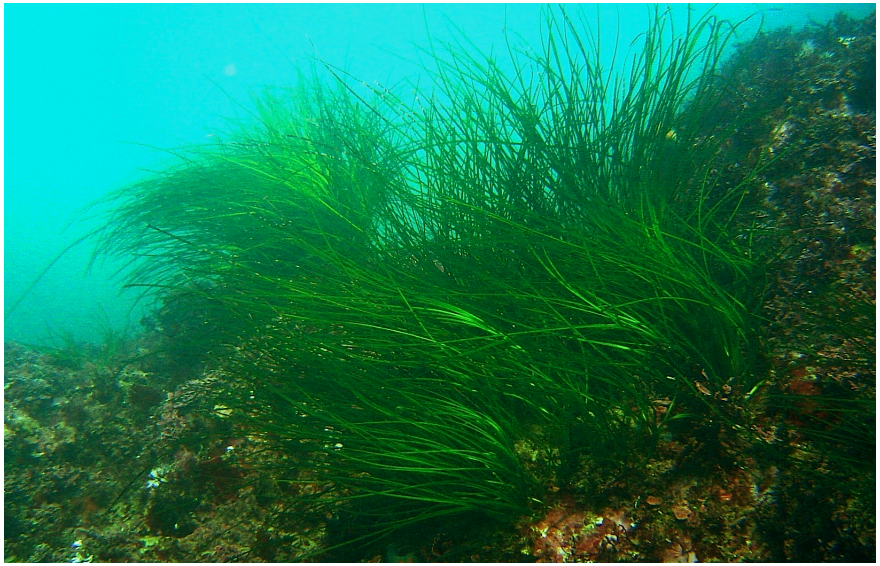


Pj *Phyllospadix japonicus*

Bioregion 4



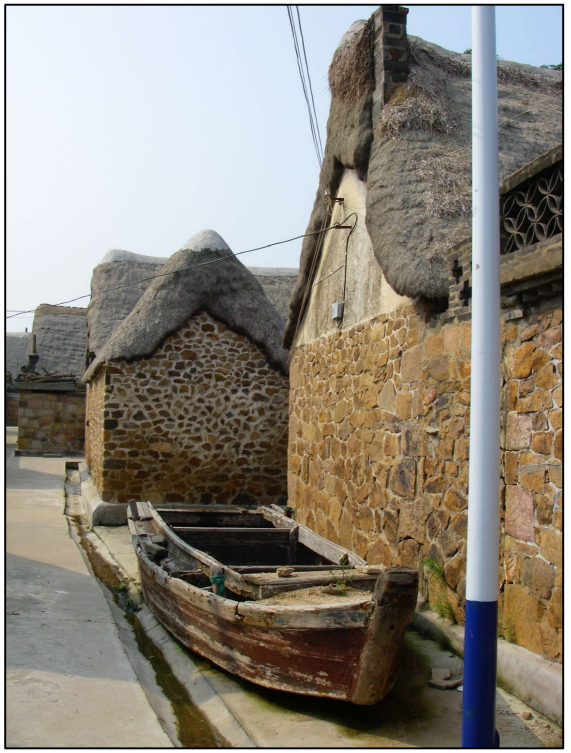
Attached to rocks



Key

- Flat leaves to 100cm with rounded tip
- Black rhizome internode fibers
- 3 leaf veins
- Dioecious

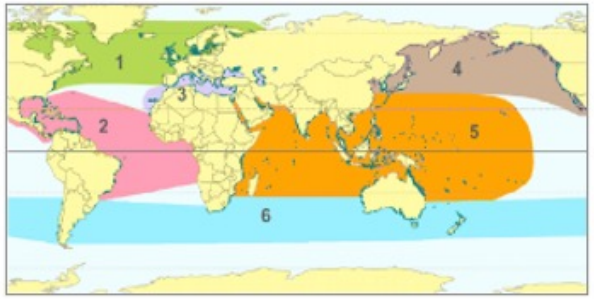
Extinction Risk: Endangered



Roofs in Chinese village

Hw *Halodule wrightii*

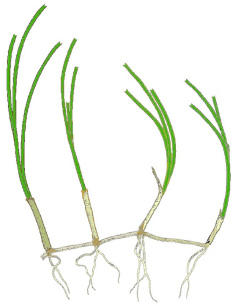
Bioregion 4

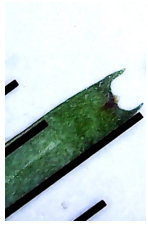


Key

- Leaves flat and thin
- Leaf tip usually 2 points
- Leaves 2-22 cm long
- Rhizome whitish
- Dioecious
- Depth -1 to 20 m
- Sometimes leaves appear red or black

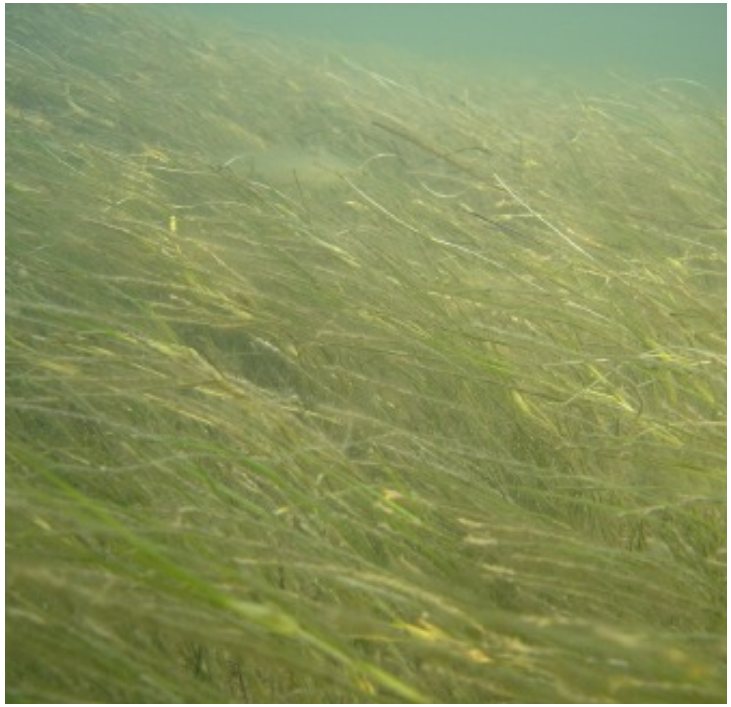
Extinction Risk: Least Concern



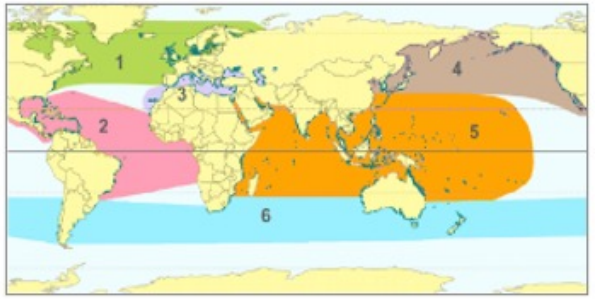


Flowering Parts

Rm *Ruppia maritima*



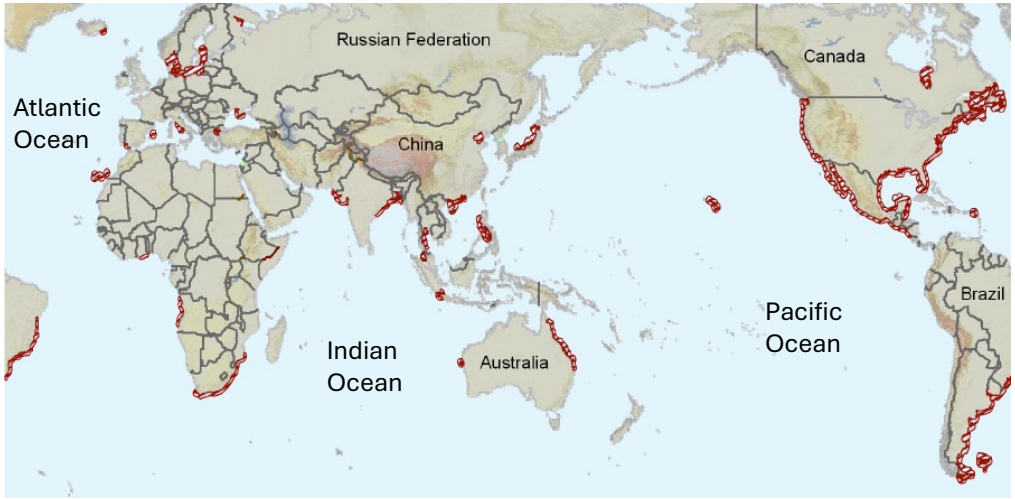
Bioregion 4



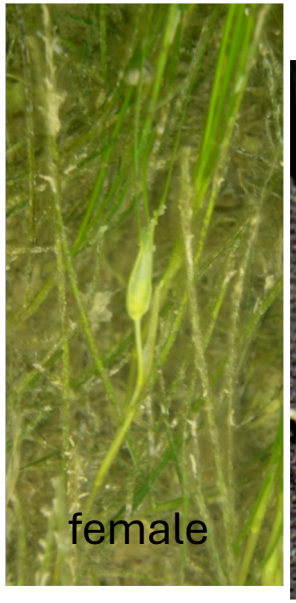
Key

- Leaves flat and thin
- Leaf tapers to tip
- Leaves 4-22 cm long
- Depth -1 to 20 m

Extinction Risk: Least Concern



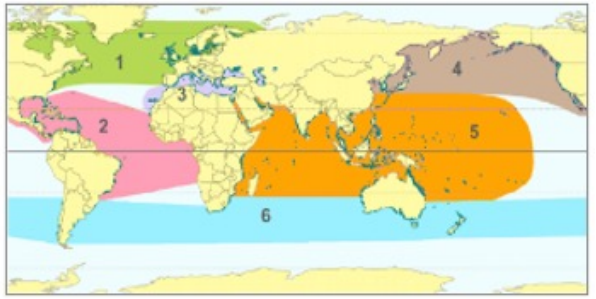
Flowering Parts



fruit

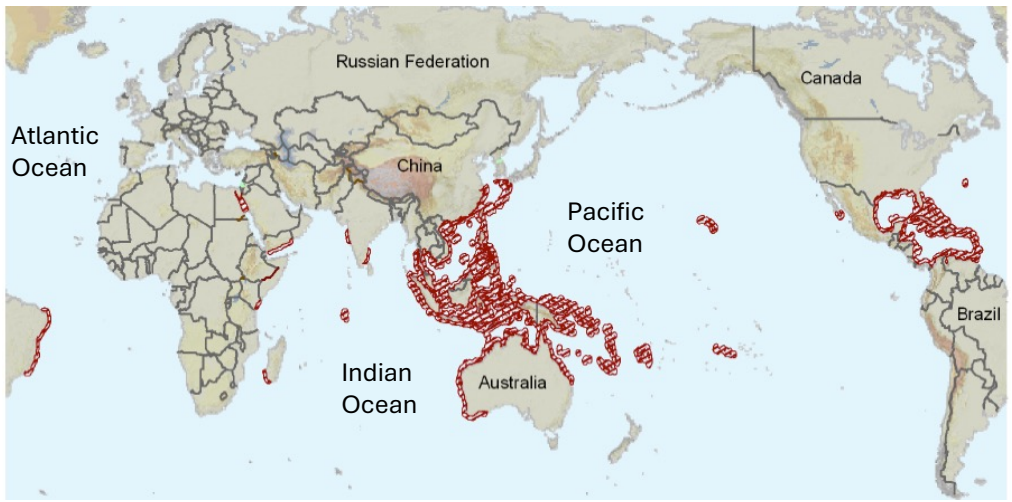
Hd *Halophila decipiens*

Bioregion 4

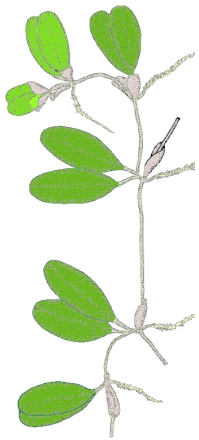


Key

- Paddle-shaped leave
- Leaf hairs on both side
- Leaf margins serrated
- Leaves 1-4 cm long
- Monoecious
- Depth 0-30 m



Flowering Parts



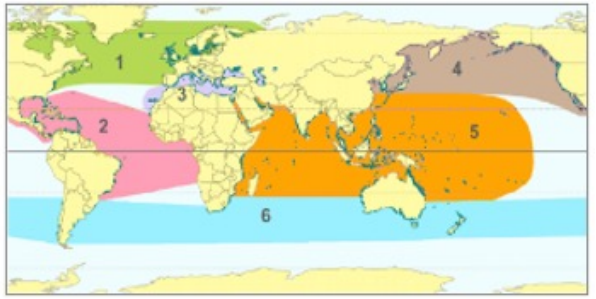
male & female

fruit

Extinction Risk: Least Concern

Hk *Halophila nipponica*

Bioregion 4



Key

- Paddle-shaped leaves, no hairs
- Leaf margins smooth
- Leaves 1-5cm long
- Depth 0-30 m

Asia only

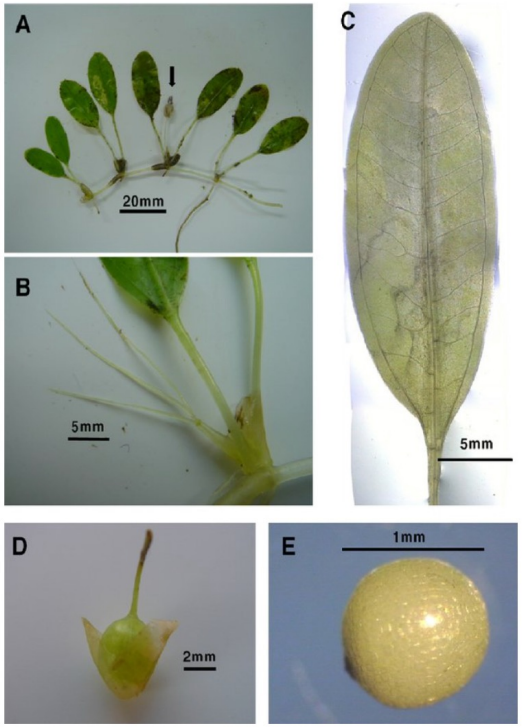


Fig. 2. Morphology of Halophila nipponica off the southern coast of Korea. (A) Male flower (arrow) with three purple stamens. (B) Female flower with ovoid ovary and three styles. (C) Leaf blade with 12 pairs of cross-veins. (D) An ovoid fruit. (E) Seed. (For interpretation of the references to color in this figure legend, the reader is referred to the web version of the article.)

From Jeong Bae Kim et al 2009

Extinction Risk: Data Deficient

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Short, F.T., Carruthers, T.J.B., Dennison, W.C., Waycott, M. 2007. **Global seagrass distribution and diversity: a bioregional model.** Journal of Experimental Marine Biology and Ecology 350: 3–20.

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