



Temperate North Pacific Region

Supplement to the SeagrassNet Worldwide Manual

Submit all data, samples, photographs, data sheets, etc. to SeagrassNet at UNH and to the website, as directed in the manual.

Inquiries should be directed to:

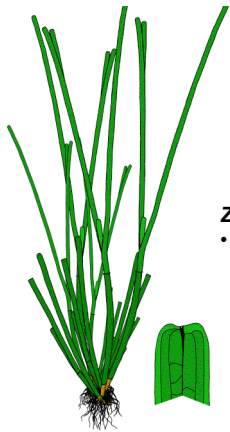
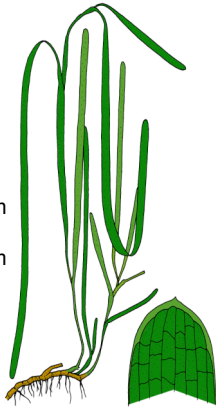
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Asia

Zl

Zostera caulescens

- Flat leaves 10-100cm with a short sharp tip
- Flowering shoot to 5m with many leaves



Zs

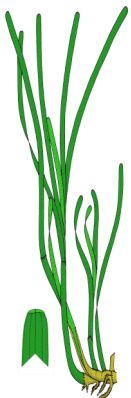
Zostera caespitosa

- Flat leaves to 70cm with rounded notched tip and short rhizome internodes with persistent sheath

Pj

Phyllospadix japonicus

- Flat leaves to 100cm with rounded tip and black rhizome internodes fibers
- 3 leaf veins



Pi

Phyllospadix iwatensis

- Flat leaves to 150cm with rounded tip and yellowish/brown rhizome
- 5 leaf veins

Asia/America

Zm

Zostera marina

- Flat leaves to 3m with a rounded leaf tip and creeping rhizome
- Seeds 3-4mm brown and ridged



Zj

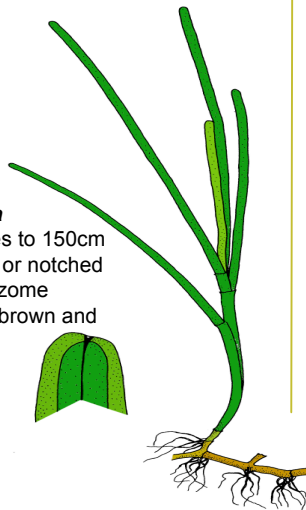
Zostera japonica

- Flat leaves to 30cm with notched uneven leaf tip and thin rhizome
- No erect stems

Za

Zostera asiatica

- Flat wide leaves to 150cm with a flattened or notched tip and thick rhizome
- Seeds 3-5mm brown and smooth



America

Pr

Phyllospadix serrulatus

- Flat leaves to 40cm with rounded/flattened tip with serrated leaf edges
- 5-7 leaf veins



Ps

Phyllospadix scouleri

- Flat leaves to 200cm with rounded/flattened/notched tip and rhizome internodes with yellow/gray fibers
- 3 leaf veins

Pt

Phyllospadix torreyi

- Rolled leaves to 200cm with rounded to slightly notched tip
- 3 leaf veins



Additional Species sometimes found in the Temperate North Pacific Region

- Rm *Ruppia maritima* -- Global
- Thin strap-like leaves to 25 cm long
 - Blades gradually taper to a point
 - Flowers and fruits on erect branching stem (50 cm)
- Hw *Halodule wrightii* – Tropical Mexico
- Leaves flat and thin
 - Leaf tip with 2-3 points
 - Rhizome whitish
 - Leaves 2 – 22 cm long
- Hd *Halophila decipiens* -- Tropical Mexico
- Paddle-shaped leaves
 - Leaf hairs on both sides
 - Leaf margins serrated
 - Leaf length 1 – 4 cm
- Hk *Halophila nipponica* -- Temperate Asia
- Oval leaves
 - Leaf cross-veins ~11 branching pairs
 - Leaf width 16 mm
 - Leaf length 32 mm
- Ho *Halophila ovalis* -- Tropical Asia
- Oval leaves
 - Leaf cross-veins 10 or more
 - Leaf width 2 –4 mm
 - Leaf length 8 – 13 mm

SeagrassNet Field Sampling Form (one sheet per station) SeagrassNet = Seagrass Monitoring Network Temperate North Pacific Region

Location: Transect code & no.: _____ Researchers: _____ Sampling date and time: e.g., 2 Jul 2008 1500 hrs.

State/Country: _____ Station (circle one):
 A. Nearshore, B. Middle, C. Offshore

Comments: _____

PARAMETERS	Cross-transect 0-25 m					Cross-transect 26-50 m						
	1	2	3	4	5	6	7	8	9	10	11	12
Quadrat Measures at pre-selected random distances	Quadrat 1	Quadrat 2	Quadrat 3	Quadrat 4	Quadrat 5	Quadrat 6	Quadrat 7	Quadrat 8	Quadrat 9	Quadrat 10	Quadrat 11	Quadrat 12
Photograph (1 per quadrat)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
Voucher Specimen (1 of each species/Station)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
All Species Cover	Total % 60											
Species =Zj	% Cover 40											
Species =	% Cover											
Species =	% Cover											
Species =	% Cover											
Species =Zm <small>Zm density per 25x25 cm quadrat</small>	% Cover Density 20 32											
Canopy Height (cm) Grazing Evidence? (y/n)	20 y											
Flower/Fruit Count by species	4 J1 6 Sf											
Leaf Biomass Core	Size (m ²) √ 0.0035											

Pre-selected Random Distances for 0-25m					Pre-selected Random Distances for 26-50m							
Left (0m)	Center (25m)	Right (50m)			Left (0m)	Center (25m)	Right (50m)					
A. Nearshore	2	7	8	16	18	25	26	33	38	40	44	46
B. Middle	9	10	15	17	22	25	28	31	35	37	39	45
C. Offshore	5	7	10	18	19	22	26	34	35	38	43	44

Cross-transect Measures	
GPS: Latitude	Dist. to edge (m) 8.6
Longitude	Dist. to last (m) 11.2
Water Depth (m) at time (hrs)	at
Surface sediment observation / sample	2.35 @ 1524 fine-sand / yes

Station Measures				Region I species							
Light -- Hobo (day in - day out)	6Jan - 30Jan	Hd - <i>Halophila decipiens</i>	Pi - <i>Phyllospadix iwatensis</i>	Pt - <i>Phyllospadix torreyi</i>	Zi - <i>Zostera caulescens</i>	Water temp. logger (day out)	30Jan	Hk - <i>Halophila niponica</i>	Pj - <i>Phyllospadix japonicus</i>	Rm - <i>Ruppia maritima</i>	Zm - <i>Zostera marina</i>
Salinity (ppt)	25.8	Ho - <i>Halophila ovalis</i>	Pr - <i>Phyllospadix serrulatus</i>	Za - <i>Zostera asiatica</i>	Zs - <i>Zostera caespitosa</i>	Tidal Stage (high or low / spring or neap)	low spring	Hw - <i>Halodule wrightii</i>	Ps - <i>Phyllospadix scouleri</i>	Zj - <i>Zostera japonica</i>	Un - Unknown