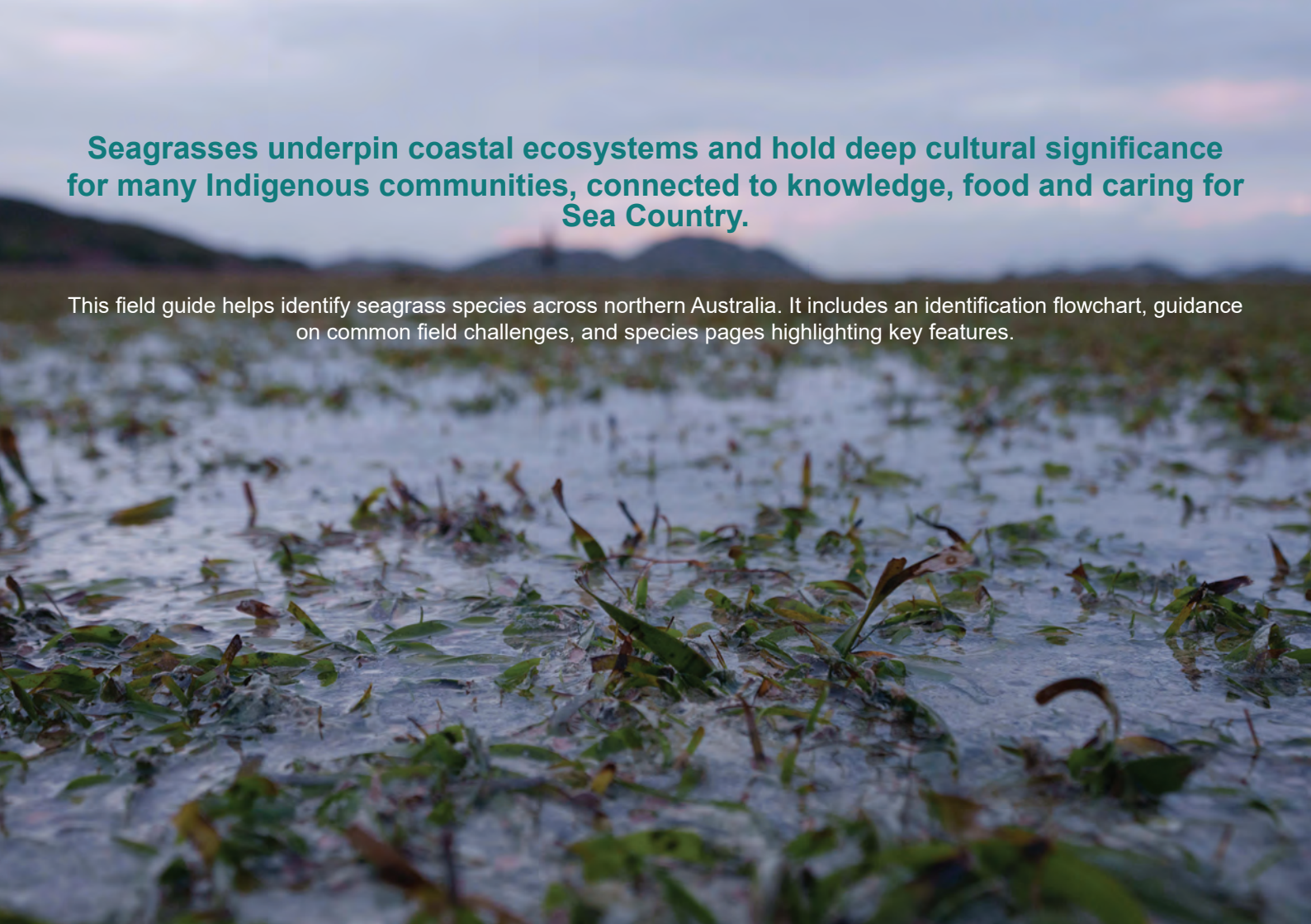
# Seagrass Identification Guide for Northern Australia





**Seagrasses underpin coastal ecosystems and hold deep cultural significance for many Indigenous communities, connected to knowledge, food and caring for Sea Country.**

This field guide helps identify seagrass species across northern Australia. It includes an identification flowchart, guidance on common field challenges, and species pages highlighting key features.

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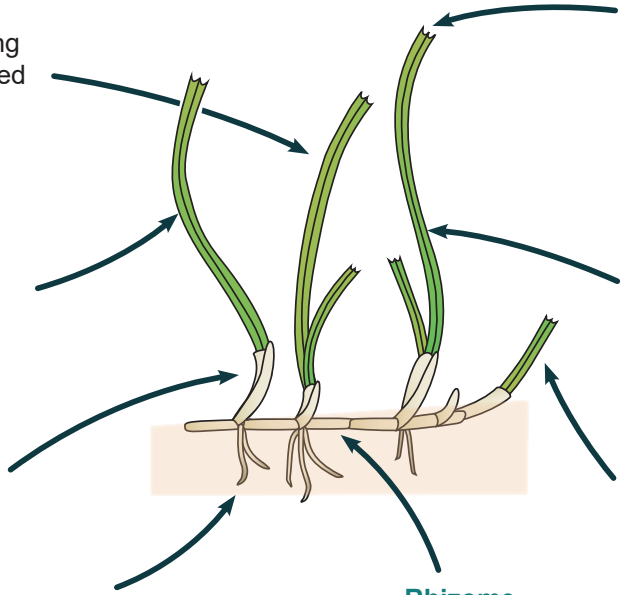
# Key Seagrass Features

## Different parts of the plant are used to identify species

**Shoot**
A single bunch of leaves growing up from the sea floor, all attached in the same leaf sheath.

**Leaf**
Leaves are the most visible part of the plant. Leaves vary in width, length, shape, size, and colour between species.

**Leaf sheath**
The sleeve that grows from the rhizome and bundles the leaves together at the base of each shoot.



**Leaf tip**
The shape of the leaf tip varies between species. A microscope may be needed to see the shape clearly. Tips can be round, pointy, or serrated.

**Leaf vein**
These lines run along the length and/or width of the leaf. The number and arrangement of veins is an identification feature.

**Growing tip**
Found at the end of the rhizome. This is where the plant spreads out horizontally across the sea floor.

**Root**
Below ground part of the plant. Roots are attached to the rhizome, anchor the plant into the sediment, and absorb nutrients and water.

**Rhizome**
Horizontal runner (rhizome) connecting the shoots, leaf sheaths and roots. Usually buried in the sediment.

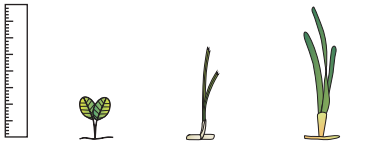
# How to Use this Guide

General features are described for each seagrass species



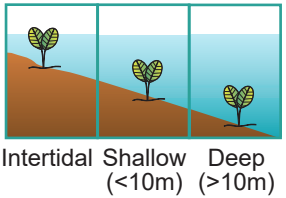
This icon indicates a distinguishing feature to help identify the species

## Leaf Size




Approximate size of seagrass leaves

## Depth



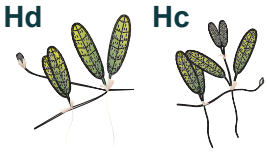

Depth where species is commonly found

## Recorded Sightings




Confirmed species sightings shown in green

## Similar Species




Species that are easy to confuse with each other

# Seagrass Identification Tips and Tricks

## Location

- ⚠ Size, colour and shape can change with location
- ✓ Use multiple features to identify a species




## Features

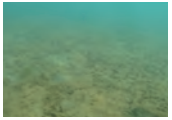
- ⚠ Some distinguishing features are not always present
- ✓ Use multiple features to identify species


Red spots


Dark bands

## Turbidity

- ⚠ Turbidity and sediment can hide key features
- ✓ Collect samples for closer inspection

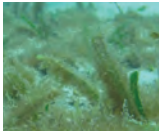
## Grazing

- ⚠ Turtles, dugongs and fish can graze leaf tips
- ✓ Use leaf sheath, rhizome, and roots to aid identification




## Epiphytes and Epifauna

- ⚠ Small plants and animals can hide leaf features
- ✓ Gently clean leaf before identification

## Sun Exposure

- ⚠ Exposure to sun can turn a leaf reddish or burn it
- ✓ Focus on shape and structure over colour for identification




# Identification Key

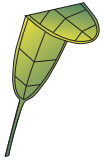
## For seagrass with oval or fern-like leaves



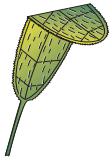
Oval or round leaves



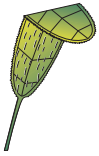
Fern-like leaves



No hairs on leaf surface



Hairs on both sides of leaf



Hairs on one side of leaf



Pairs of leaves along stem



Leaves in groups of three

**Ho**



*Halophila ovalis*

p.16

**Hd**



*Halophila decipiens*

p.15

**Hc**



*Halophila capricorni*

p.14

**Hs**



*Halophila spinulosa*

p.17

**Ht**



*Halophila tricostata*

p.18

# Identification Key

## For seagrass with straight strap-like leaves



Straight strap-like leaves



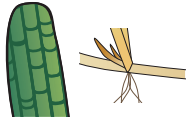
One, two or three points on leaf tip
Light rhizome

**Hu**



*Halodule uninervis*

p.13



Brick-shaped veins
Smooth rhizome

**Zm**



*Zostera muelleri*

p.22



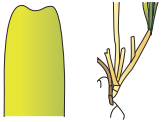
Long leaves with rolled edge
Leaf sheath with bristles

**Ea**



*Enhalus acoroides*

p.12



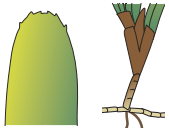
Smooth heart-shaped leaf tip
Messy leaf sheath

**Cr**



*Cymodocea rotundata*

p.10



Leaves with jagged tip
Triangular leaf sheath

**Cs**

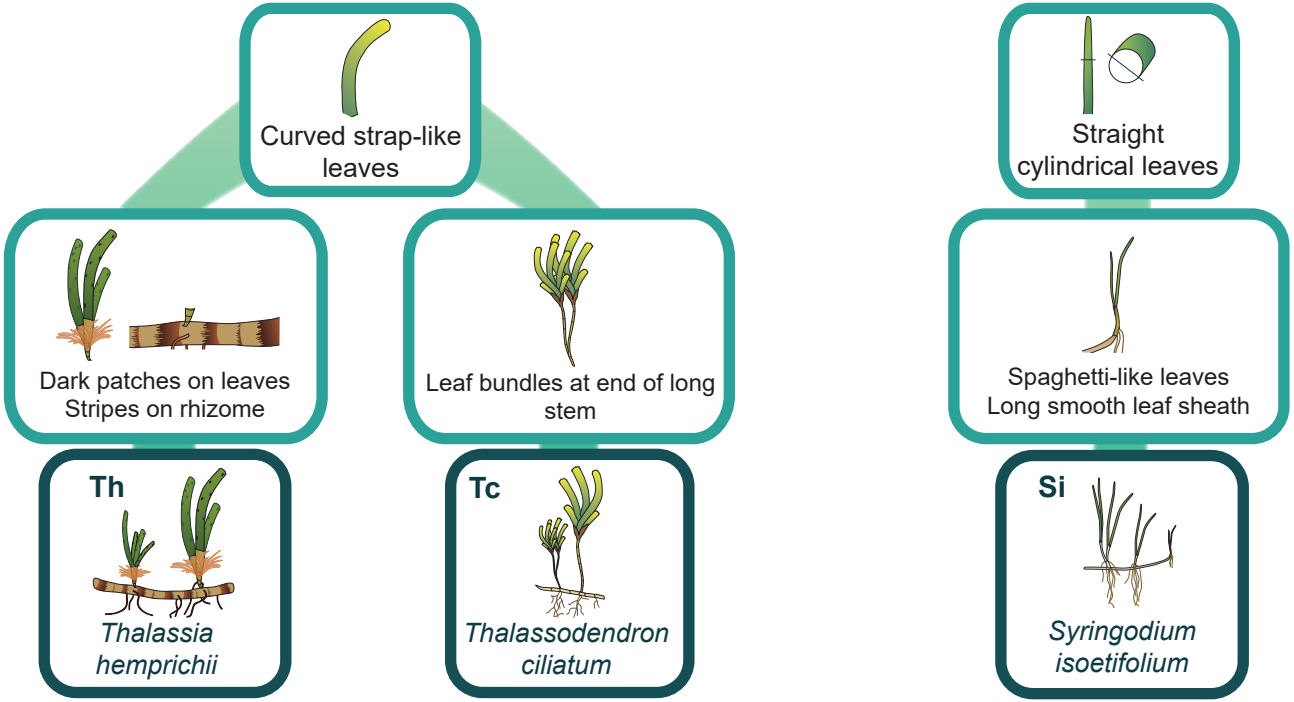


*Cymodocea serrulata*

p.11

# Identification Key

## For seagrass with curved strap-like or cylindrical leaves

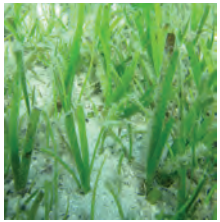



p.20 p.21 p.19

# Cr *Cymodocea rotundata*



**Leaf tip heart-shaped or square**



Leaf strap-like with smooth edge



Leaf sheath messy and long



**Leaf scars form complete circles around short stem**



Rhizome pale to orange or brown colour

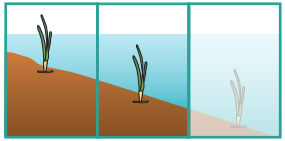
Branched roots from rhizome nodes



| Leaf Size | Depth | Recorded Sightings | Similar Species |
|---|---|---|---|



Medium (5-25cm)



Intertidal Shallow (<10m)




Cs



# Cs

# *Cymodocea serrulata*

(also called *Oceana serrulata*)



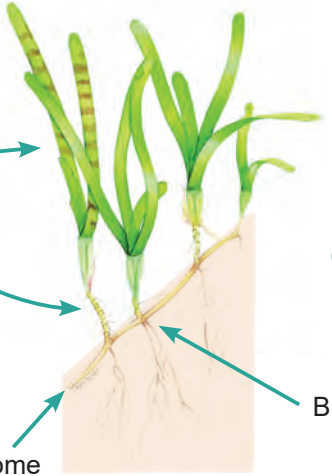
**Leaf tip round with serrated edges**

Leaf shape strap-like

Leaf stems can be long



Leaf colour sometimes green with dark red stripes



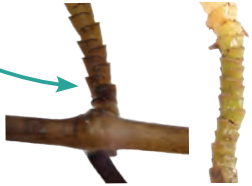
Smooth rhizome

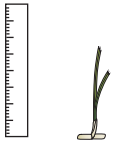
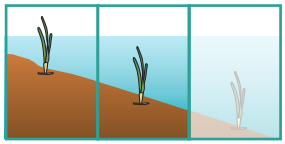
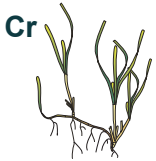
Branched roots from rhizome nodes

Leaf sheath neat, flattened triangle shape



**Leaf scars form incomplete circles around stem**



| Leaf Size | Depth | Recorded Sightings | Similar Species |
|---|---|---|---|
|  Medium (5-25cm) |  Intertidal Shallow (<10m) |   |   |

# Ea *Enhalus acoroides*



**Leaf edge stiff and curled inwards**



**Leaf sheath messy with dark bristles**

Rhizome thick with dark bristles

Roots light-coloured and unbranched



Leaf tip round

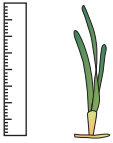
**Leaf very long and strap-like**



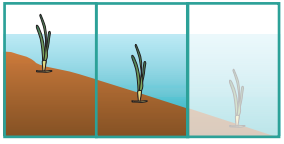
Often found in isolated patches



| Leaf Size | Depth | Recorded Sightings | Similar Species |
|---|---|---|---|



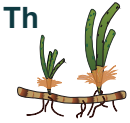
Large (>25cm)



Intertidal Shallow (<10m)



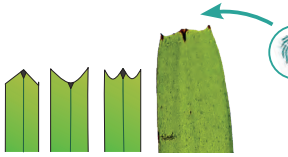

Th



# Hu

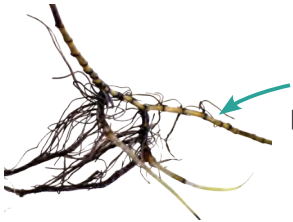
# *Halodule uninervis*

(includes *Halodule pinifolia*)

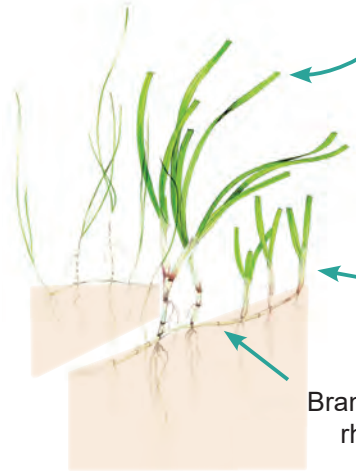


**Leaf tip has 1-3 points with black marks**

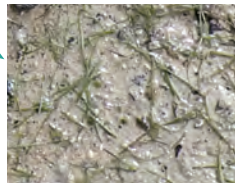
Central leaf vein



Rhizome thin and pale with dark rings around nodes



Thin to wide leaf morphology



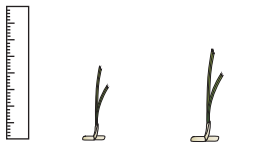
Leaf shape strap-like



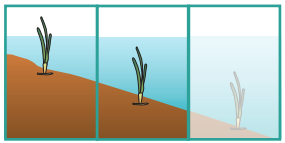
Leaf sheath encircles shoot

Branched roots from rhizome nodes

## Leaf Size




## Depth




## Recorded Sightings

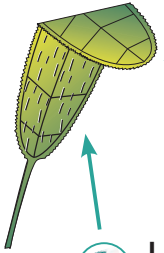



## Similar Species

Zm



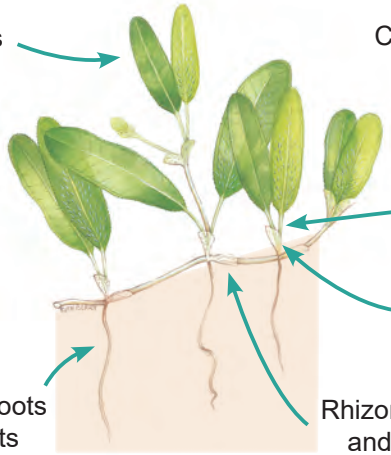
# Hc *Halophila capricorni*



Leaf has serrated edge

**Leaf surface fuzzy on one side from small hairs**

Oval leaves arranged in pairs



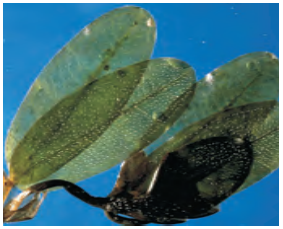
Unbranched roots below shoots

Rhizome thin and pale

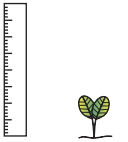
Thin stem

Small leaf sheath at stem base

Central leaf vein with cross veins towards leaf edge

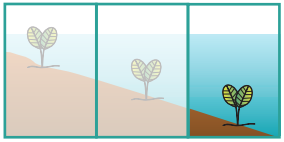


## Leaf Size



Small (<5cm)

## Depth

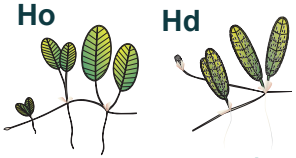


Deep (>10m)

## Recorded Sightings




## Similar Species



# Hd *Halophila decipiens*

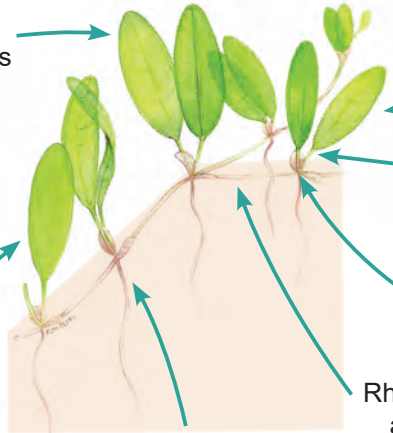


Leaf hairs

**Leaf surface fuzzy on both sides from small hairs**

Oval leaves arranged in pairs

Leaf has serrated edge



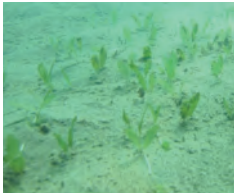
Unbranched roots below shoots

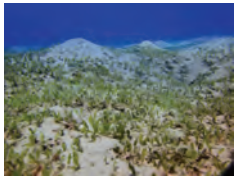
Central leaf vein with cross veins towards leaf edge

Thin stem

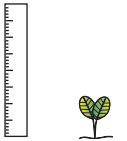
Small leaf sheath at stem base

Rhizome thin and pale



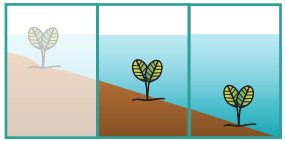


## Leaf Size



Small (<5cm)

## Depth

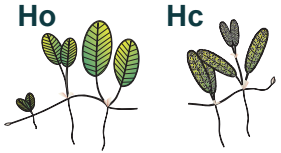


Shallow (<10m) Deep (>10m)

## Recorded Sightings




## Similar Species



# Ho

# *Halophila ovalis* complex

(includes *Halophila minor, Halophila ovata*)



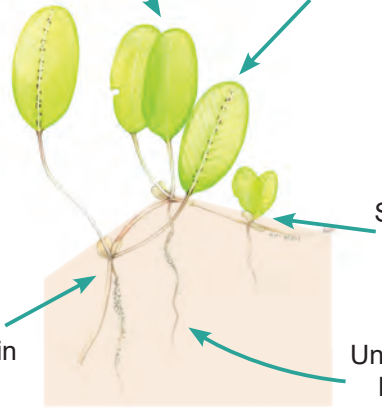
Oval leaves arranged in pairs

Central leaf vein with cross veins towards leaf edge



Leaf has smooth, shiny surface

Spots sometimes present on leaves



**No hairs on leaf**



Small leaf sheath at stem base

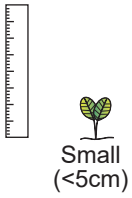


Thin stem

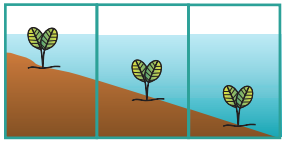
Rhizome thin and pale

Unbranched roots below shoots

## Leaf Size



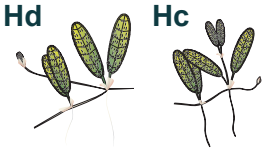

## Depth




## Recorded Sightings




## Similar Species



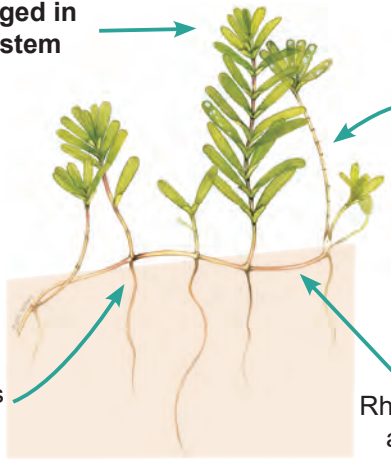
# Hs *Halophila spinulosa*



Fruits

Leaf shape elongated oval with serrated edge

**Leaves arranged in pairs along stem**



Unbranched roots below shoots

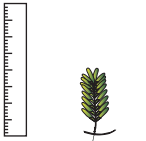
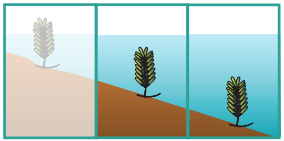
Rhizome thin and pale

Upright stem with ridges where leaves attach



Small fold at leaf base



| Leaf Size | Depth | Recorded Sightings | Similar Species |
|---|---|---|---|
|  Medium (5-25cm) |  Shallow (<10m) Deep (>10m) |  WA NT QLD | Ht  |

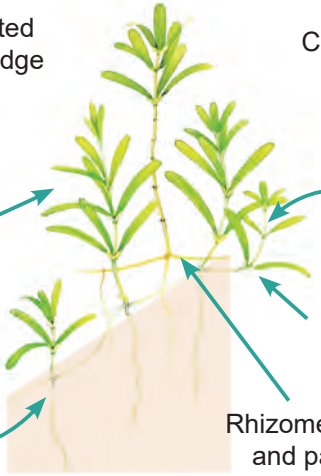
# Ht *Halophila tricostata*





Leaf shape elongated oval with serrated edge

**Leaves arranged in clusters of three along stem**



Unbranched roots below shoots

Rhizome thin and pale

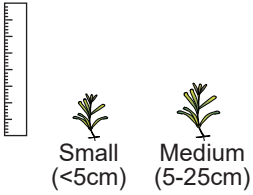
Smooth upright stem

Small leaf sheath at stem base

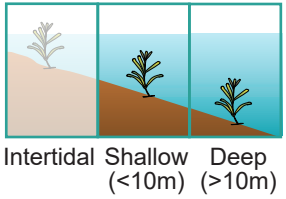
Central leaf vein



## Leaf Size




## Depth




## Recorded Sightings

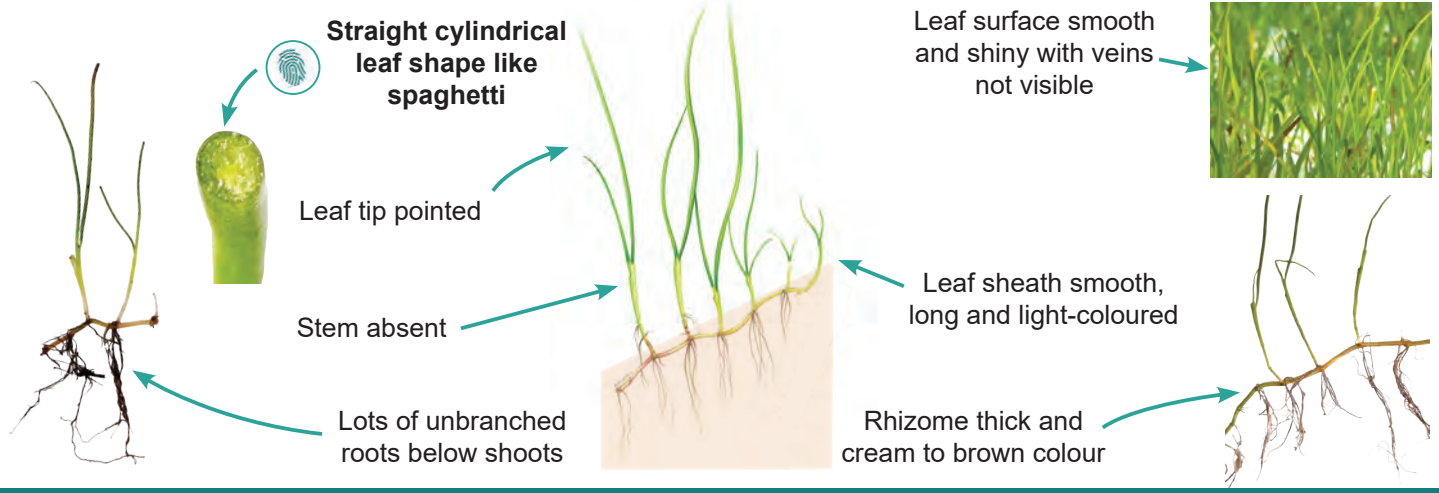



## Similar Species

Hs



# Si *Syringodium isoetifolium*

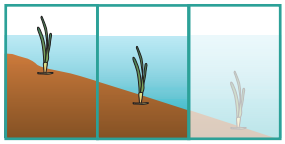



## Leaf Size



Medium (5-25cm)

## Depth



Intertidal Shallow (<10m)

## Recorded Sightings




## Similar Species

Hu

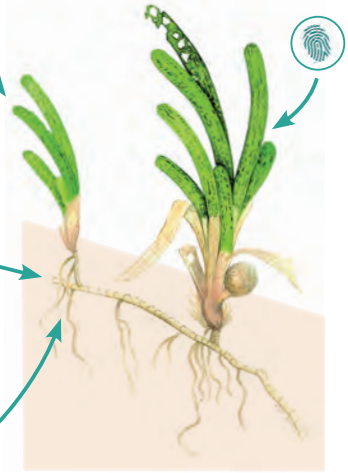


# Th *Thalassia hemprichii*



**Leaves often have dark-coloured spots**

Leaf tip round



**Leaf shape curved and strap-like**



Leaves arranged in clusters of more than two leaves

Leaf veins fine and parallel

Leaf sheath large and messy

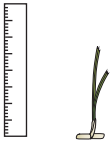
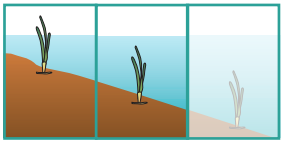
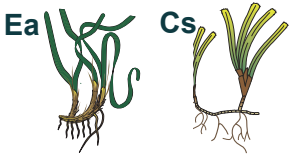




Rhizome thick, light colour with dark triangular scars

Branched roots from rhizome nodes

Stem short with leaf scars

| Leaf Size | Depth | Recorded Sightings | Similar Species |
|---|---|---|---|
|  Medium (5-25cm) |  Intertidal Shallow (<10m) |   |   |

# Tc *Thalassodendron ciliatum*

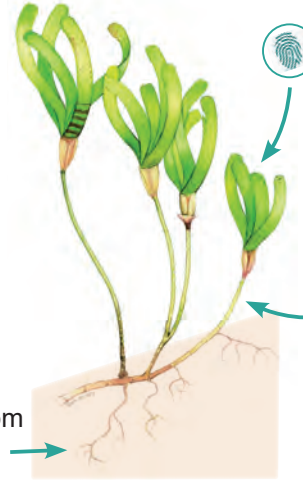


Leaf shape curved and strap-like

Leaf tip round with serrated edges



Leaf veins fine and parallel



Branched roots from rhizome nodes

**Leaves arranged in fan-like cluster at end of stem**



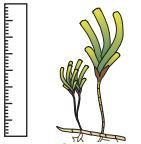
**Leaf sheath neat, flattened triangle shape**

**Stem long and upright with distinct ridges**

Rhizome thick and red colour

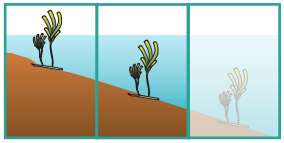


## Leaf Size



Large (>25cm)

## Depth



Intertidal Shallow (<10m)

## Recorded Sightings

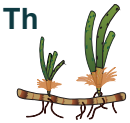



## Similar Species

Ea



Th



# Zm

# *Zostera muelleri*

(also called *Zostera capricorni*)



Leaf tip round

Leaf edge smooth



**Leaf veins form brick-like pattern**



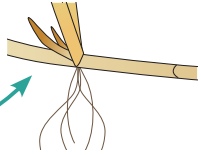
Leaf shape strap-like

Thin to wide leaf morphology



Stem short or absent

Messy leaf sheath at shoot base



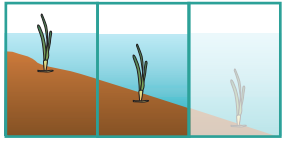
Rhizome thin and yellow to brown colour

Unbranched roots from rhizome nodes

| Leaf Size | Depth | Recorded Sightings | Similar Species |
|---|---|---|---|



Medium (5-25cm)



Intertidal Shallow (<10m)




**Hu**





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