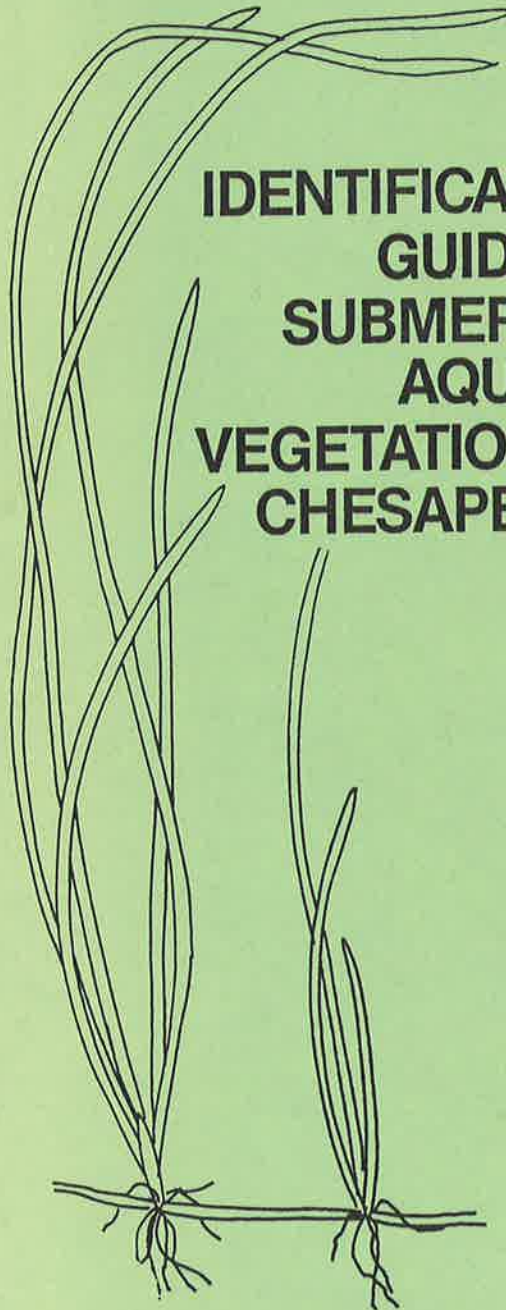




**US Army Corps
of Engineers**
Baltimore District



**IDENTIFICATION
GUIDE TO
SUBMERGED
AQUATIC
VEGETATION OF
CHESAPEAKE
BAY**



Submerged Aquatic Vegetation

One of the Chesapeake Bay's most significant natural resources is its bay grasses, or submerged aquatic vegetation (SAV). SAV provides food and habitat for fish, numerous other aquatic organisms, and waterfowl. In addition, the presence of SAV indicates good water quality and general ecological health in any section of the Bay and its tributaries.

By comparing maps of current SAV beds to those of earlier years, it will be possible to document the decline of SAV in the Bay over the last several years and to identify those areas that have shown the greatest losses. Similarly, maps of current SAV beds will enable the close monitoring of SAV increase as water quality in the Bay improves. Maps are based on aerial photography for which "ground truthing" by scientists and interested citizens can supply valuable confirmatory information.

How to Use This Guide

Collect a small sample from the plant you wish to identify. One or two stems should be plenty. Compare your sample with the illustrations in this guide. Prominent identification features have been indicated on each illustration.

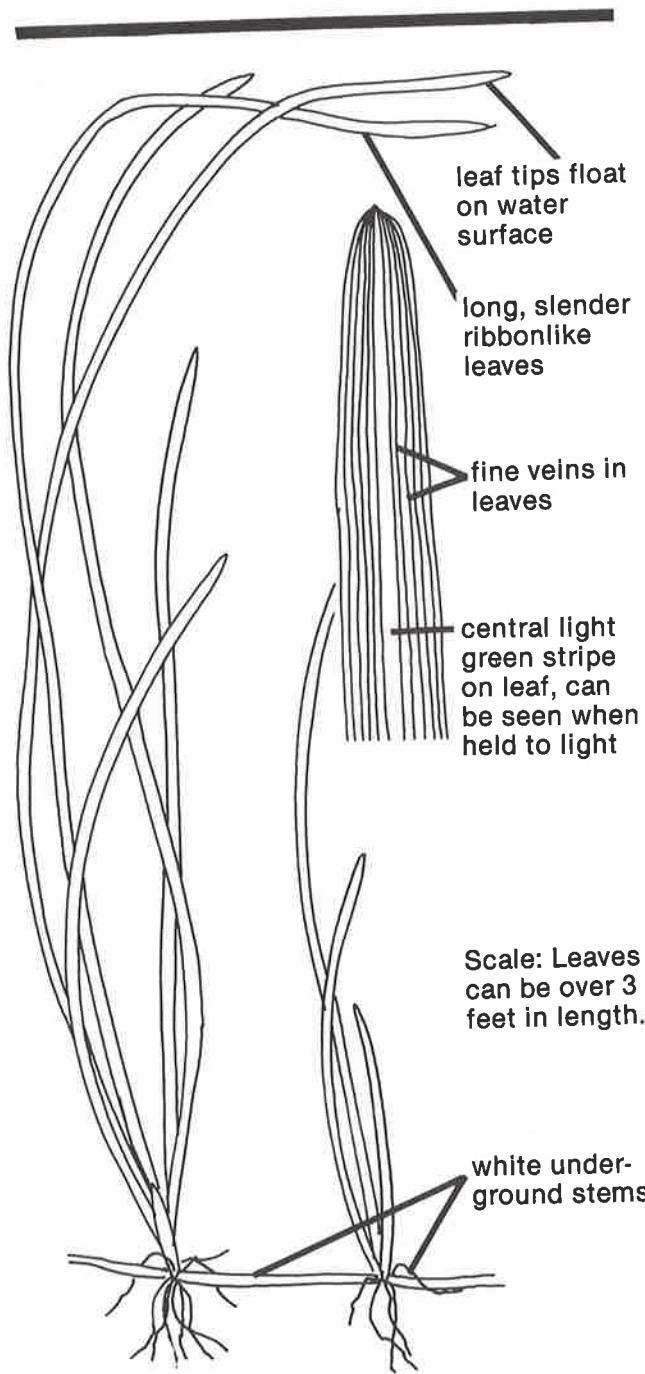
Plants are arranged in order from those found in fresh or nearly fresh water to those found in highly brackish to marine water. Plants that are similar in appearance have been placed next to each other for ease of comparison, and distinguishing characteristics have been noted.

Each of the plants included in this guide will vary in size depending on its location and various water conditions, so scale measurements are only approximate. Actual plants may be smaller or much larger than indicated.

Prepared by U.S. Fish and Wildlife Service, Annapolis, MD. Design and production by the U.S. Army Corps of Engineers, Baltimore, MD. Illustrations by Karen Teramura.



WATER STARGRASS
Heteranthera dubia
Occurs in fresh water.

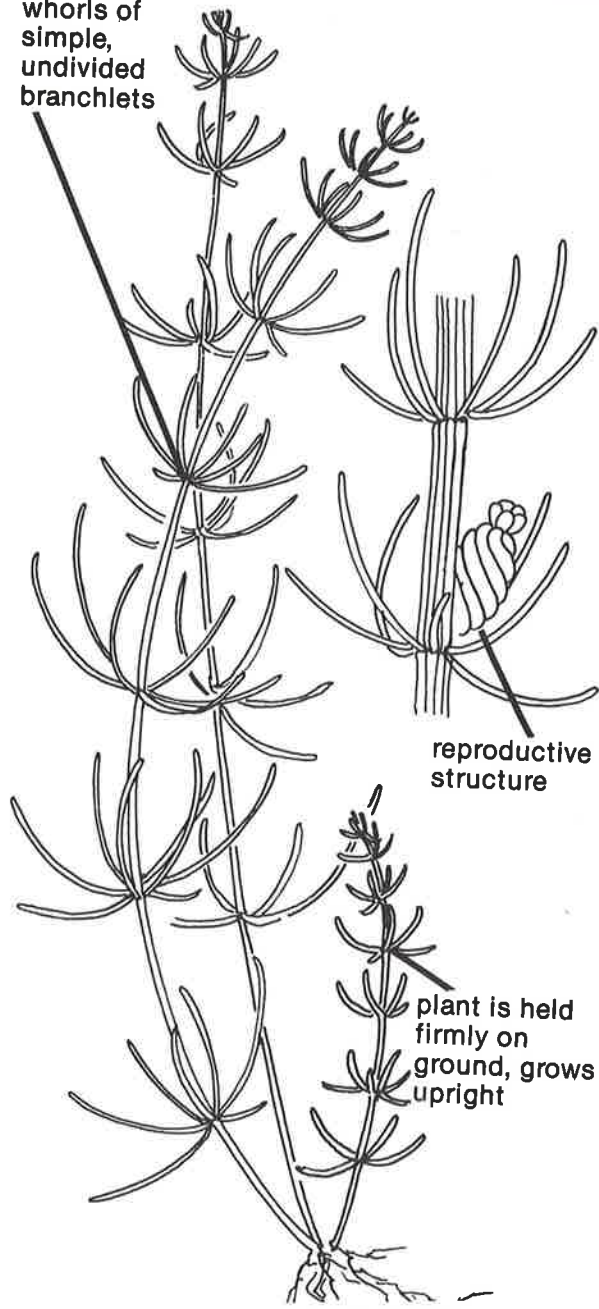


WILD CELERY
Vallisneria americana
Occurs only in fresh to slightly
brackish waters.



SOUTHERN NAIAD
Najas guadalupensis
Occurs in fresh to slightly brack

whorls of
simple,
undivided
branchlets



reproductive
structure

plant is held
firmly on
ground, grows
upright

MUSKGRASS
Chara sp.

Occurs in fresh to slightly brackish water. Not a true grass, but a type of algae, or seaweed. Muskgrass is often rough to the touch and has a skunk-like odor when crushed.

whorls of 9-10
leaves at each
node on stem
(compare with
watermilfoil)

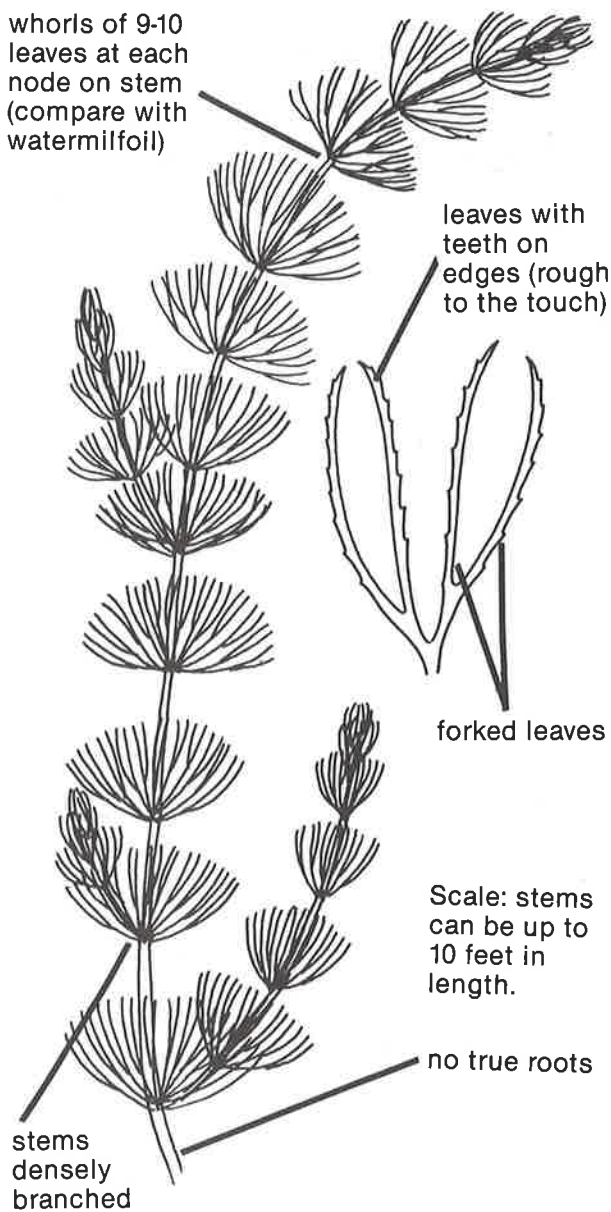
leaves with
teeth on
edges (rough
to the touch)

forked leaves

Scale: stems
can be up to
10 feet in
length.

no true roots

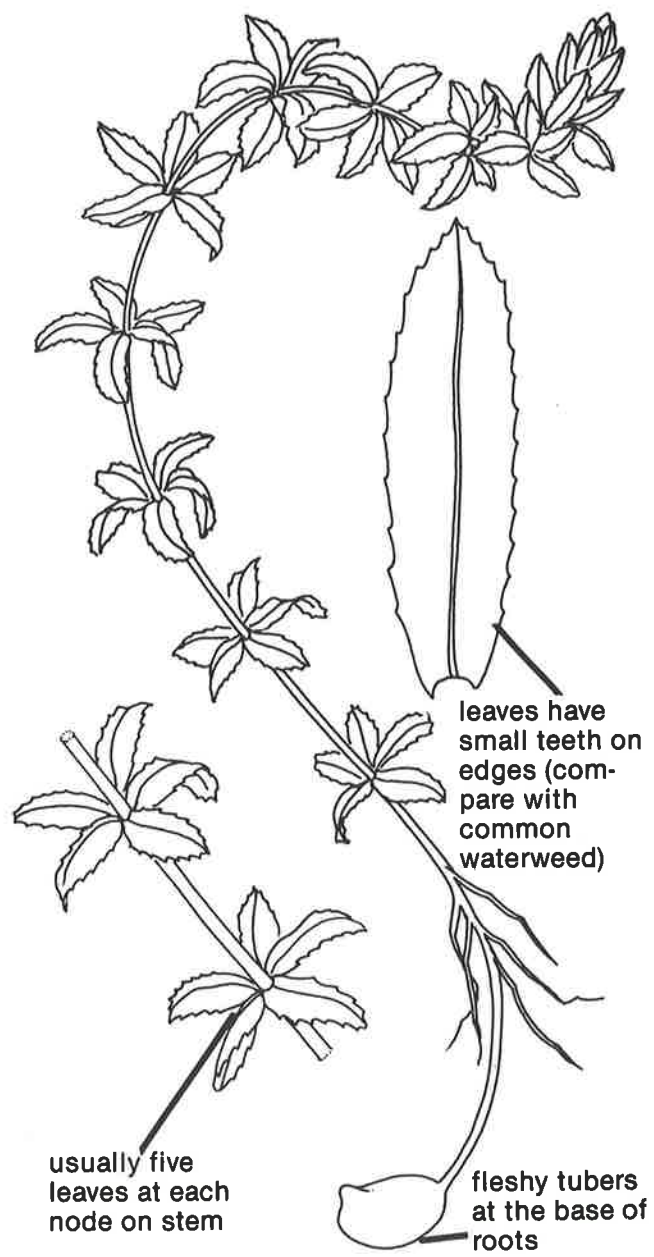
stems
densely
branched



COONTAIL

Ceratophyllum demersum

Occurs in fresh or slightly brackish water. Found in still or slow moving waters of streams. May

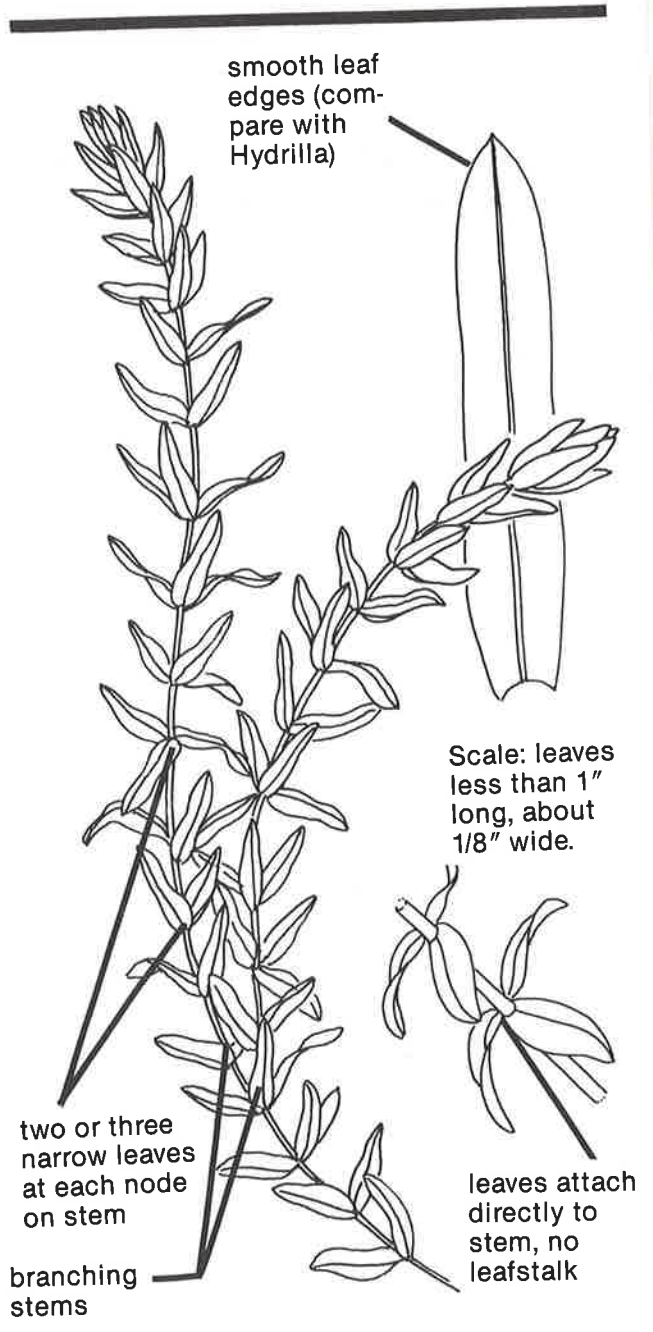


usually five
leaves at each
node on stem

leaves have
small teeth on
edges (com-
pare with
common
waterweed)

fleshy tubers
at the base of
roots

HYDRILLA
Hydrilla verticillata
Occurs mostly in fresh to
moderately brackish water. Re-
quires little light, so can be
found in murky water.



smooth leaf edges (compare with Hydrilla)

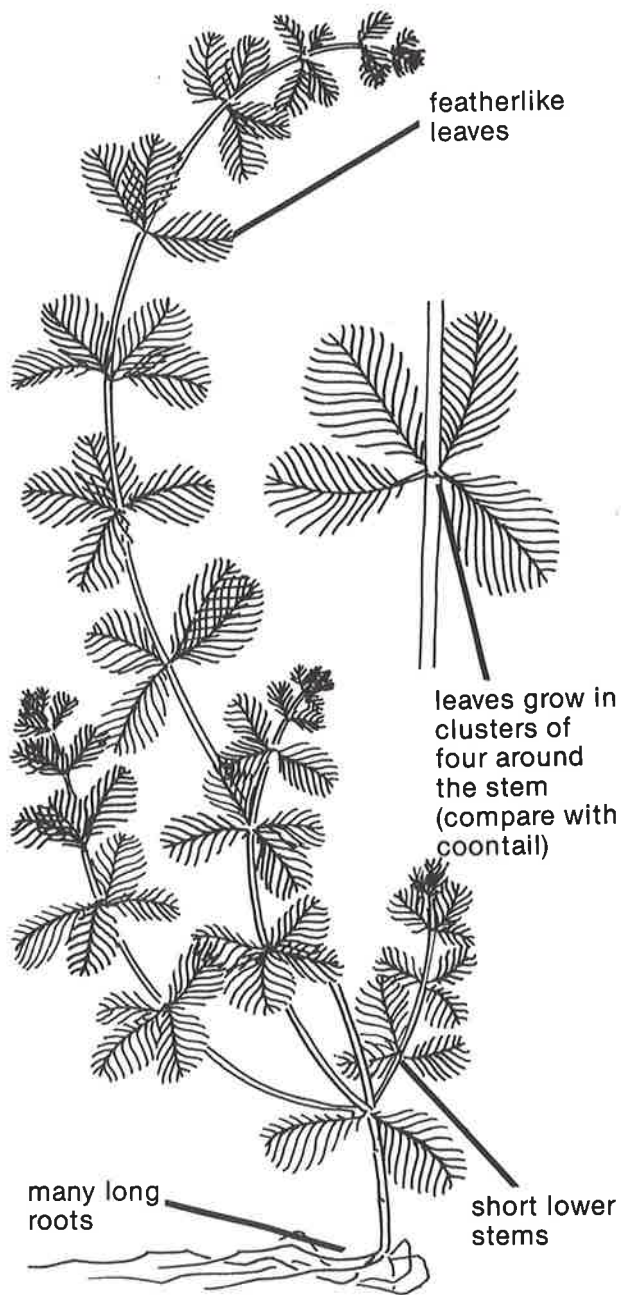
Scale: leaves less than 1" long, about 1/8" wide.

two or three narrow leaves at each node on stem

branching stems

leaves attach directly to stem, no leafstalk

COMMON WATERWEED
Elodea canadensis
Occurs in fresh to brackish water.



EURASIAN WATERMILFOIL
Myriophyllum spicatum
Occurs in fresh to moderately brackish waters. Requires high light intensity.

white or red-
dish stem

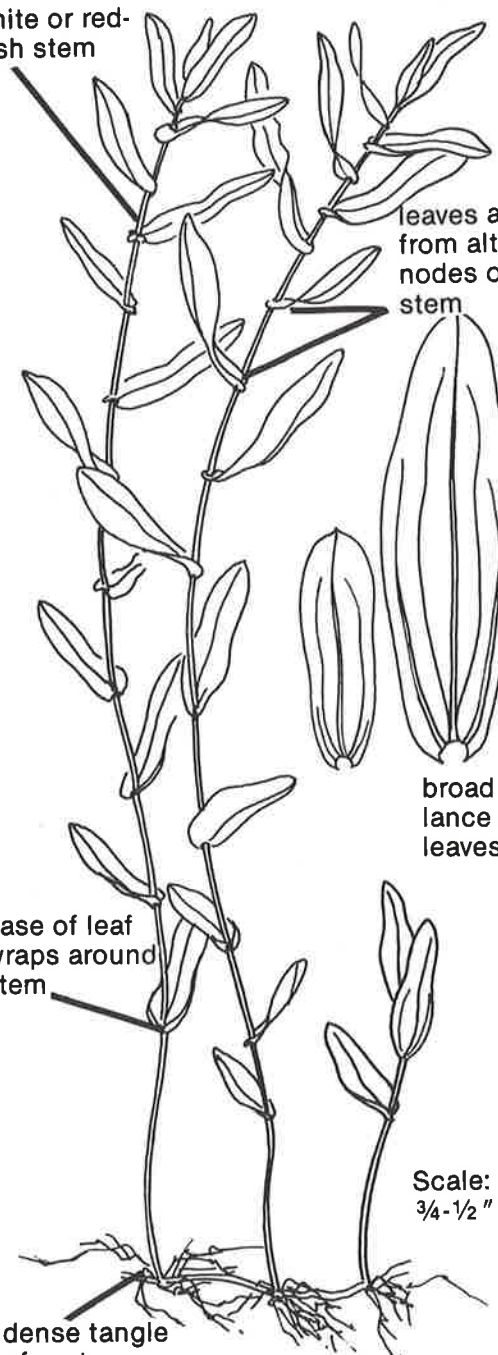
leaves arise
from alternate
nodes on
stem

broad oval to
lance shaped
leaves

base of leaf
wraps around
stem

Scale: leaves
 $\frac{3}{4}$ - $\frac{1}{2}$ " wide

dense tangle
of roots



many long,
threadlike
leaves (com-
pare with
horned
pondweed)

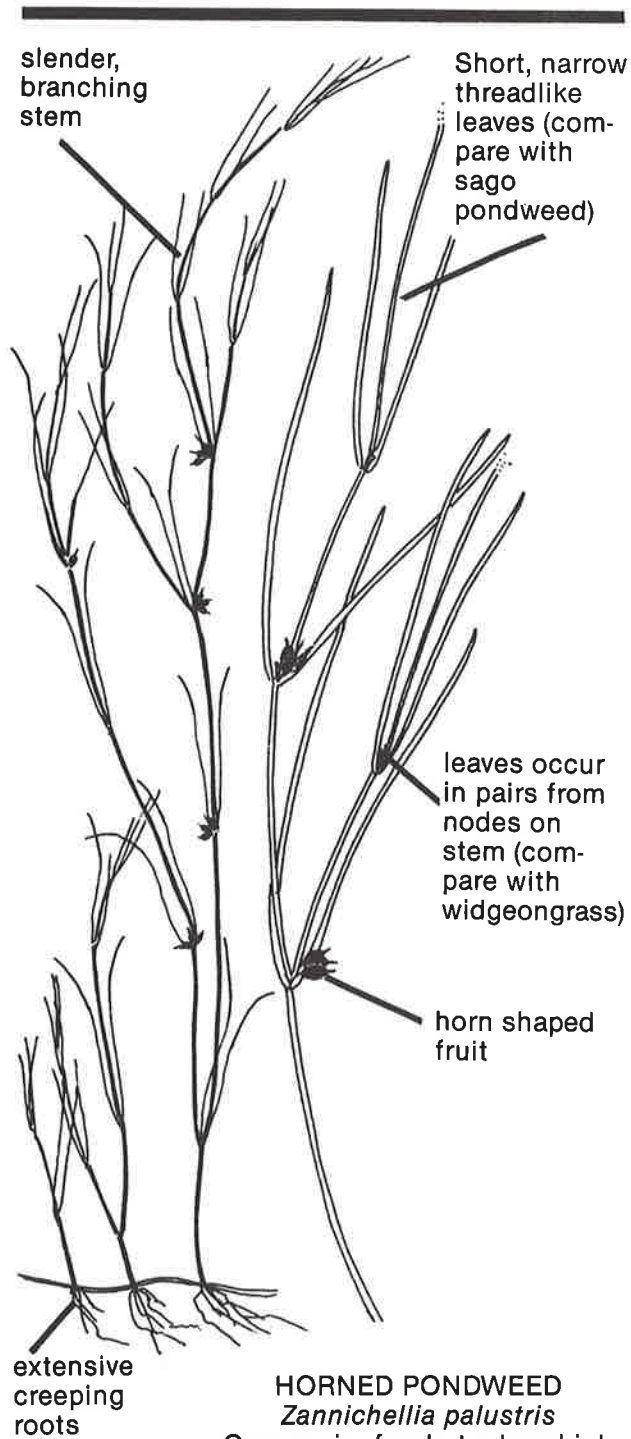
leaves spread
like a fan at
the water's
surface

leaves have
long tapering
points

bushy clumps
of leaves
(compare with
widgeongrass)



SAGO PONDWEED
Potamogeton pectinatus
Occurs in fresh to brackish
water.



HORNED PONDWEED

Zannichellia palustris

Occurs in fresh to brackish water. Grows in late spring and often disappears by mid-summer. May show second growth period in fall.



sheath at base of leaves has firm, rounded tip

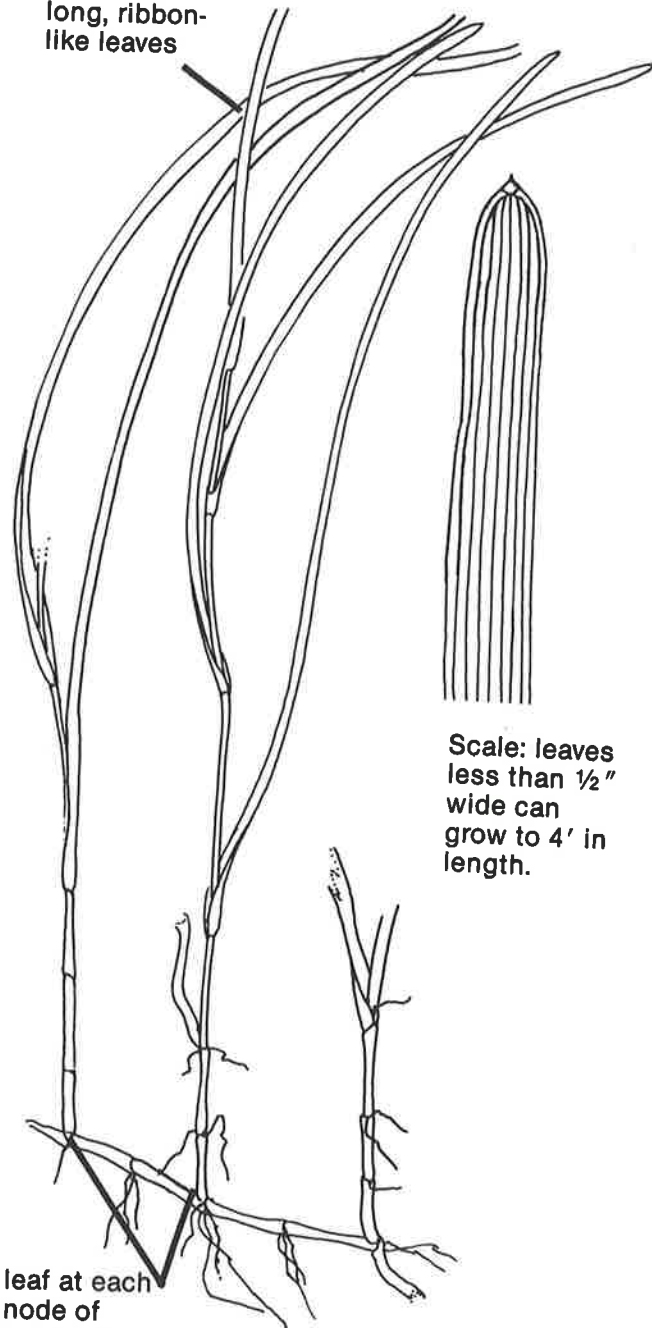
leaves arise from alternate nodes on stem (compare with horned pondweed)

Scale: leaves 1-8" long, less than 1/8" wide.

narrow, threadlike branching leaves (compare with sago pondweed)

WIDGEONGRASS
Ruppia maritima
Occurs in slightly to moderately brackish waters. Also found in high salinities with eelgrass.

long, ribbon-like leaves



Scale: leaves less than 1/2" wide can grow to 4' in length.

leaf at each node of creeping horizontal root

EELGRASS

Zostera marina

Eelgrass is a marine plant, so it is found in the saltiest areas of

