Common Native and Exotic Aquatic Plants in Texas

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Ecological Impacts of Aquatic Plants

- light transmission
- water temperature, flow, and chemistry
- substrate changes
- oxygen production and consumption
- carbon flux (both organic and inorganic)
- nutrient flow & decomposition

– Barko 1993, Carpenter and Lodge 1986
Habitat

• may represent the major limiting factor to any species
  – Morrison et al. 1998

• “submersed aquatic plants provide the structure of greatest value to freshwater fisheries because of their physical characteristics and the excellent cover they provide”
  – Engel 1985
Exotic or Nuisance Aquatic Plant Species

- Reproduce rapidly
- Propagate vegetatively
- Opportunistic nature for obtaining nutrients
- Life histories that favor cool weather
- Mechanisms which benefit photosynthetic efficiency
- Multiple dispersal mechanisms
  - Nichols and Shaw 1986
In order to manage and conserve our natural resources, Texas Parks and Wildlife Department must protect our state waters against the introduction of non-native aquatic species. Fish, shellfish, and aquatic plants that are not native to Texas may compete with native animals and plants for food and space. The organisms listed on this page are legally classified as exotic, harmful, or potentially harmful. No person may import, possess, sell, or place them into water of this state except as authorized by rule or permit issued by the department. For more information, contact Ron Smith, (512) 389-8037.
• Primitive plants, no vascular system
• Planktonic (microscopic) green water
• Filamentous
• Macroalgae – resemble higher plants

Filamentous Algae, P. 9
Native
Lyngbya native
Muskgrass
a.k.a. Chara, Nitella, P. 13
Native

- macroalgae
- “musky” or “onion” smell
Higher Plant Growth Forms

Emergent

Floating

Submersed
Floating plants

• Higher plants
• Not attached to bottom
• Capable of entirely covering surface
• Not limited by water clarity
• Move with wind action
• Limit sunlight & dissolved oxygen
Salvinia (giant & common) prohibited
- hairs on leaf in "eggbeater" cluster
- green to brown
- book page growth form
- sporocarps on root hairs

Giant Salvinia, P. 26
prohibited
- never over fingernail size
- open hairs on leaf
- green to brown

Common Salvinia, P. 24 prohibited
Mosquito Fern, P. 22
native

- rust red color
- very small
- irregular shape
- multiple leaves per stem
- presents in fall
Water Hyacinth, P. 28
prohibited

- glossy round leaf
- gas-filled bladders
- purple flower
Water Lettuce, P. 30 prohibited
Water Lettuce, P. 30
prohibited

- velvety leaf surface
- daughter plants
- root hairs
Giant Duckweed, P. 20
a.k.a. Dotted Duckweed

- 3-5 rootlets
- elongated shape
- red dot on leaf

prohibited
Common Duckweed, P. 18 native

- one rootlet per leaf
- round shape
- no red dot
- smallest vascular plant
- yellow flower in floating whorl
- net like roots with bladders below the surface

Bladderwort, P. 16
native
Submersed plants

- Higher plants
- Grow under water
- May form mats on the surface
- Attached to the bottom
Hydrilla, P. 46 prohibited
Hydrilla, P. 46

prohibited

- 5 or more leaves in whorl
- teeth on mid-rib, rough feel
- fragments, tubers, turions
- dioecious – female only
Elodea, P. 42
native

- 4 or less leaves in whorl
- slick feel

Egeria, P. 40
exotic
• brittle feel
• multiple leaves around stem
• forked ends & “horns”

Coontail
a.k.a Hornwort, P. 36
native
Eurasian Watermilfoil, P. 64

prohibited
• feather shaped leaf
• 4-leaves in whorl
• emergent & submersed leaves
• broadleaf species, 2,4-D

Eurasian Watermilfoil, P. 64
prohibited
• feather shaped leaf
• mainly emergent leaves, blue-green
• 5-leaves in whorl
• cool weather dominant

Parrotfeather, P. 52

exotic
- emergent & submersed leaves
- "foxtail shape"
- 5-6 leaves in whorl

Variable-leaf Watermilfoil, P. 62
native
Fanwort

a.k.a. Cabomba, P. 44

native

- fan shaped leaves
- 2-leaves in whorl
- showy flower
- purple stems & leaves
American Pondweed, P. 54

- willow shaped leaf
- mostly floating
- stringy stem
- long petiole
- seed head

native
- willow shaped leaf
  - mostly submersed
  - wrinkled
- short petiole
- stringy stem
- seed head

**Illinois Pondweed, P. 58**

native
Southern Naiad a.k.a. Bushy Pondweed, P. 50

- thread-like leaf
- may form mats on surface
- prolific seed producer

native
Wild celery a.k.a.
Eelgrass, P. 38
native

- ribbon shaped leaf
- basal root crown, stolons
- corkscrew flower stem
Waterstargrass, P. 68

native

- narrow leaf
- small yellow flower
- may form mats on surface
- can grow on shore
Emergent plants

- Higher plants
- Rooted in substrate
- Grow above water line
Water Spinach prohibited

- alternate simple leaf
- vine-like growth form
- hollow stem, milky sap
- "morning glory" flower
- Houston-area markets
- Asian communities
Pickerelweed, P.98

native

- rooted, not floating
- no bladder
- spear-shaped leaf
Lizard’s-tail, P. 94
native

- arrow leaf
- erect growth form
- distinctive flower
- hairy stem
Torpedograss, P. 110

prohibited

• clasping leaf, alternate
• sharp leaf edge
• hairy leaf sheath & surface
• torpedo-shaped rhizome
• broad long leaf
• leaf does not encircle stem
• no hairs on leaf surface
• edge not as sharp

Maidencane, P. 96
native
Purple loosestrife

- leaves opposite
- square stem, rough
- purple flowers

Prohibited
Smartweed, P. 106

- round stem
- leaves alternate
- roots at node

native
- rooted to the bank
- can grow as terrestrial
- hollow stem, roots at nodes
- hairs at leaf insertion
- white "clover" flower
- waxy-surface elliptical leaf
- smooth margins

Alligatorweed, P. 72
prohibited
- yellow 4-petal flower
- red stem, solid core
- variable leaf shape

Water primrose, P. 124 native
- narrow fleshy leaf
- hotdog flower head
- may grow in terrestrial area

Cattail, P. 84
native
American Water-willow

- variable “orchid” flower
- erect stem, solid core
- opposite leaf distribution
- may grow in terrestrial areas
Water Pennywort, P. 122
native

- scalloped leaf edges
- smooth leaf surface
- forms surface mats but rooted to shore
- spear-shape leaf
- white flower
- rooted to shore

Bull Tongue, P. 76
native
• arrow-shape leaf
• points up
• white flower
• rooted to shore

Arrowhead, P. 76
native
- cylindrical stem, 4-8’
- leaves wrap around
- small flower head
- shallow water

Giant Bulrush, P. 80
native
• flattened stem, 1-2’
• no obvious leaves
• small flower head
• shallow water

Flat-stem Spikerush, P. 102
native
Spatterdock
a.k.a., Cow Lily, P. 116
native

- yellow flower
- erect stem, solid core
- heart-shaped leaf
- rhizome
White Water-Lily
a.k.a., Fragrant W-L, P. 118

- White flower, smells nice
- Erect stem, solid core
- PacMan leaf
- Rhizome

Native
Water shield. P. 126

- small pad
- slimy stem

native
B-6095: Aquatic Vegetation Identification Cards

Our Price: $12.00

Qty: 1

ADD TO CART

Description
Correct identification of aquatic vegetation is critical to its management. This palm-sized flip deck features photographs and line drawings of 61 aquatic plants commonly found in Texas. Nonnative plants, which can cause extensive ecological and economic damage, are identified. (132 pp., 61 color photos, 61 drawings) By: Michael P. Masser
AQUAPLANT

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A POND MANAGER DIAGNOSTICS TOOL

This web site was designed to help pond owners and their advisors in the identification and management of aquatic vegetation. Aquatic vegetation management can be a perplexing problem. The first part of that problem is proper identification. Management of most aquatic plant species depends on properly identifying the desirable or nuisance plant. If you need assistance with identification then proceed to Plant Identification.

If you already know the aquatic plant that needs management, then you want to proceed to Management Options.

For additional assistance with aquatic vegetation management contact your County Extension Office.
Since 1979. On the web since 1995. Welcome to the University of Florida Center for Aquatic and Invasive Plants and to the Aquatic, Wetland and Invasive Plant Information Retrieval System (APIRS), the world’s largest information resource of its kind. We provide a variety of services and products. Make this home page look better on your screen.

K-12 Teachers
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The Great Air Potato Roundup!

APIRS DATABASE Online
- Database for Aquatic, Wetland and Invasive Plants
- More Than 53,000 References!

AQUAPHYTE Newsletter
- Aquaphyte Online--Winter 2000

Meetings and Books
- Be There, Do That
- New Books and Reports

Mixed Messages Department
- Followed the signs...

Native Freshwater Plants - This photo-mural available in June 2001.
It's up to us

Thanks!!