



COMMON VASCULAR PLANTS
OF THE
LOUISIANA MARSH

R.H. CHABRECK R.E. CONDREY

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Introduction

The occasional visitor to the Louisiana coast encounters an unfamiliar flora and, wishing to learn more about the plants in the area, consults local residents for identification. However, most natives of an area can name only the more abundant species. Also, students and even scientists working on coastal marsh projects are constantly confronted with plants and desire more information about them. The purpose of this publication is to provide a simple field guide to the more common plants one would likely encounter in the Louisiana coastal marshes.

Information on more than 100 plants is included, and in most cases descriptions are taken down to the species level. However, in several genera, descriptions are only presented at the generic level (Example: *Carex* spp.). For each plant the nomenclature, known occurrences, general characteristics, habitat requirements, and value are described on a separate page. Also, as an aid to identification, a line drawing of each plant and its range of known occurrence appears with the description. An appendix of plants by family, genus, and species and a glossary follow the plant descriptions, illustrations, and range maps.

Taxonomic nomenclature follows Correll and Correll (1972) and Radford et al. (1968). In cases where the scientific name has been changed in recent years, the name previously assigned to the plant is included in parentheses.

Range maps provided with each plant indicate areas of known occurrence as determined by a coastal vegetation survey in August 1968. During that survey, sampling stations were established at 0.25 mile intervals along lines 7.5 miles apart along the Louisiana coast from the Gulf of Mexico to the northern boundary of marsh, and a listing was made of plants at each station.

The sampling information was processed by computer to produce the range maps, which show distributional patterns rather than the single occurrence of a plant. The resolution of the computer plotter was not sufficient to differentiate between a single siting and adjacent ones along a transect. Thus the maps indicate the *area* of observed occurrence along the 39 transects. A plant's range is denoted by stars on the map except for plants that occur so frequently that their range can be better shown by bars. A broken line marks the northern extent of the marsh, while the approximate locations of the transects are indicated by 39 short perpendicular lines below the Louisiana coastline. Most genera and species occur at many locations in addition to those indicated; nevertheless, the maps do provide information on distributional patterns.

The Louisiana coastal region covered by the survey encompasses an area of almost 8 million acres. Approximately one-half of this area is made up of water bodies, including ponds, lakes, bay, sounds, bayous, rivers, and canals and ditches. Natural marshes make up about one-third of the coastal region and extend inland from the Gulf of Mexico for distances ranging from 15 to 50 miles. The remainder of the coastal area is made up of various types of non-wetland areas such as beaches, cheniers, spoil deposits, bayou and lake banks, and de-watered marshes.

The Louisiana coastal marshes are a product of the Mississippi River, which deposited sediments over a period of 8,000 years to form a broad flat plain. The coastal region has been divided into two segments on a basis of origin and physiography. The area east of Vermilion Bay and occupying two-thirds of the coastal region has been designated as the Deltaic Plain. The Deltaic Plain is composed of several distinct delta systems. The area west of Vermilion Bay has been named the Chenier Plain and was formed from river sediment swept westward by longshore currents in the Gulf of Mexico (Coleman 1966).

Over a period of some 8,000 years the Mississippi River has altered its course periodically, forming new deltas with each move. When viewed at the present time, older deltas show lower rates of change than the younger deposits. The older deltas, having had more time for compaction, subsidence, and wave modification, show greater stability (Morgan and Larimore 1957).

This region is one of the most productive for fish and wildlife in the entire North American continent and perhaps the world. Statistics compiled by the National Marine Fisheries Service show that Louisiana is a leader in the harvest of marine fisheries. In 1977 Louisiana led the gulf states in shrimp production with a commercial catch of 104 million pounds, and the catch by sport fishermen probably rivals that of commercial fishermen. Louisiana was also a leading producer of oysters with a harvest of 10 million pounds valued at \$10 million. The state was a top producer of menhaden, and 757 million pounds were harvested in the state with a value of \$29 million. Tremendous numbers of fin fishes and crabs were harvested by commercial and sport fishermen as well.

In addition to marine fisheries, the productivity of its coastal area has made Louisiana a number one producer of furbearing animals. The Louisiana Department of Wildlife and Fisheries has listed the total value of the fur catch in the state during

the 1976-77 season at \$25 million. Statistics compiled by the U.S. Department of Interior show that 5.5 million muskrats were taken in the U.S. during the 1968-69 season (approximately one-fourth were taken from the Louisiana coastal area).

The figures cited are harvest figures and do not show the complete picture of wildlife resources of the Louisiana coastal area. In fact, the harvest is probably less than 20 percent of the fish and wildlife produced in the area annually.

Louisiana's coastal region is one of the leading sections of the nation for migratory waterfowl, and each year some 5 to 6 million birds winter in this particular environment. Shorebirds and wading birds occur in large numbers, and the area supports the largest concentration of American alligators in existence today. In addition to commercial wildlife, the coastal marshes and estuaries house millions of other wild animals and birds.

The production of fish and wildlife in this area is directly related to the photosynthetic plants produced within the area. These plants are the basic source of energy for dependent animal populations, and conditions enhancing plant growth serve to benefit fish and wildlife within the area. The greatest volume of plant material is produced on the natural marshes of the coastal region. The following factors operate within the natural coastal marshes of Louisiana to enhance the growth of plants:

1. *Long growing season.* The growing season is generally considered as the time between the last frost in the spring and the first frost of the following winter. In the Louisiana coastal area this period averages 317 days.
2. *Abundant rainfall.* The rainfall within this area averages 50-60 inches annually, enough for vigorous plant growth.
3. *Soil factors.* Soil over most of the area is favorable for plant growth and the sediments deposited by the Mississippi River are rich in essential plant nutrients. Also, the abundance of fresh water brought down the Mississippi River helps keep the soil and water salinity within a favorable range for the growth and development of plants within the coastal area.
4. *Low tide differential.* The daily tide along the Louisiana coast fluctuates only about 1 foot. The small range between high and low tide results in a low rate of water exchange within the marshes and provides for stabilization and zonation of water levels and salinity. Individual plant species require a definite

range of salinity and water levels for growth, and stabilized conditions permit the establishment of characteristic plant communities within these zones of the marshes.

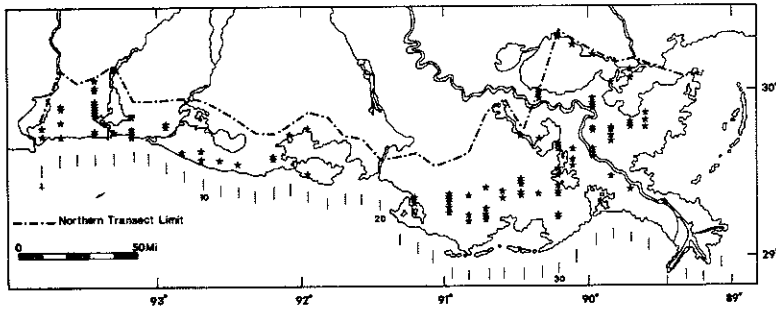
5. *Width of marshes.* Marshes extend inland from the Gulf of Mexico for distances ranging from 15 to 50 miles, creating widely varying conditions for plant growth. This situation produces wide diversity and minimizes the effects of catastrophic events, such as drought, floods, and hurricanes, which can be quite damaging to vegetation locally.

Vegetation types occur along the Louisiana coast in bands that roughly parallel the shoreline, with their abundance regulated mostly by conditions within the area. Salinity is the principal factor regulating plant distribution; consequently, the plants that occupy a particular area can be used as indicators of prevailing salinity regimes. Marsh plants along the northern boundary of the coastal region have a very low salt tolerance, whereas those adjacent to the Gulf of Mexico are able to grow under conditions of salinity approaching seawater. Between these zones, plants occur that have moderate tolerances to salinity.

Penfound and Hathaway (1938) subdivided the marshes of southeastern Louisiana into four zones or types: saline, brackish, slightly brackish (intermediate), and fresh; they described the plant associations of each type.

Louisiana's wetlands are being lost at an alarming rate. Much of the loss is associated with man-made alterations such as the dredging of channels. Unlike the natural marsh with its sinuous bayous, the man-made channels provide a direct avenue for saltwater intrusion. The increase in salinity may result in a decline in the growth of the dominant vegetation in an area. If succession to more saltwater tolerant forms does not occur, the area normally "opens up" into water bottoms. The conversion of marsh to water bottoms represents a major threat to the continued abundance of the fish and wildlife resources dependent on the marsh ecosystem.

The vegetational types in marshes along the entire Louisiana coast were mapped by Chabreck et al. (1968) on a basis of the plant associations defined by Penfound and Hathaway (1938). Chabreck (1972) then described the plant species composition and soil and water characteristics of each vegetational type. This publication provides additional information on individual plant species within the coastal marshes.



Acnida cuspidata
Spreng.

(*Acnida alabamensis*)

Amaranthaceae

Gulfcoast waterhemp
Belle-dame

Acnida cuspidata is a robust, erect, branched herb that grows 3 to 10 feet tall. It occurs in a variety of salinities, reaching greatest abundance in the intermediate marsh type. It ranges all across the Louisiana coast, although seldom in dense stands. The plant is an annual and exposed soil is necessary for seed germination. Abundant quantities of very small seeds are feed for ducks, particularly teal.

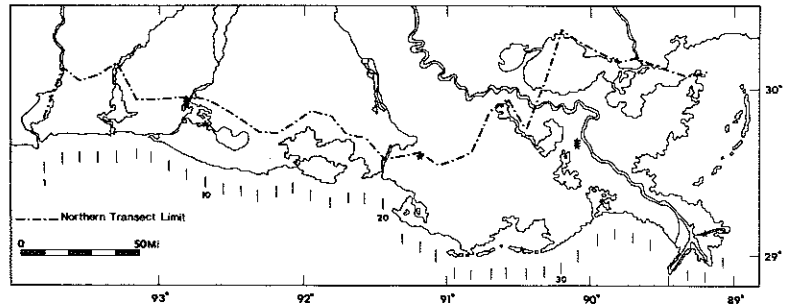


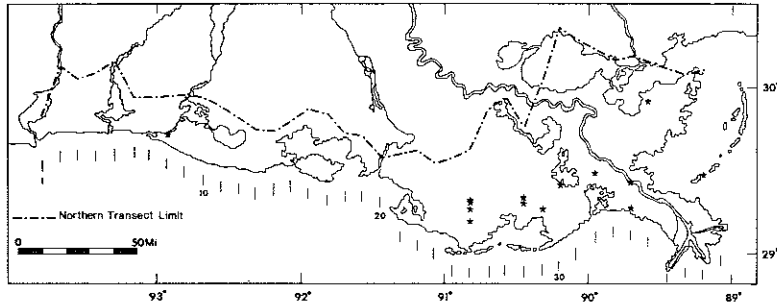
Aeschynomene indica L.
(*Aeschynomene virginica*)

Leguminosae

Sensitive jointvetch

Aeschynomene indica is a leguminous herb that grows 2 to 3 feet tall. Restricted to fresh marshes, it occurs mostly as scattered individual plants. It produces an abundance of seeds that develop in corky seed pods. The pods break into individual segments when mature and fall into the water for dissemination. The buoyant pods float about with the enclosed seeds but are seldom eaten by ducks or other birds. Exposed substrate is necessary for seed germination.



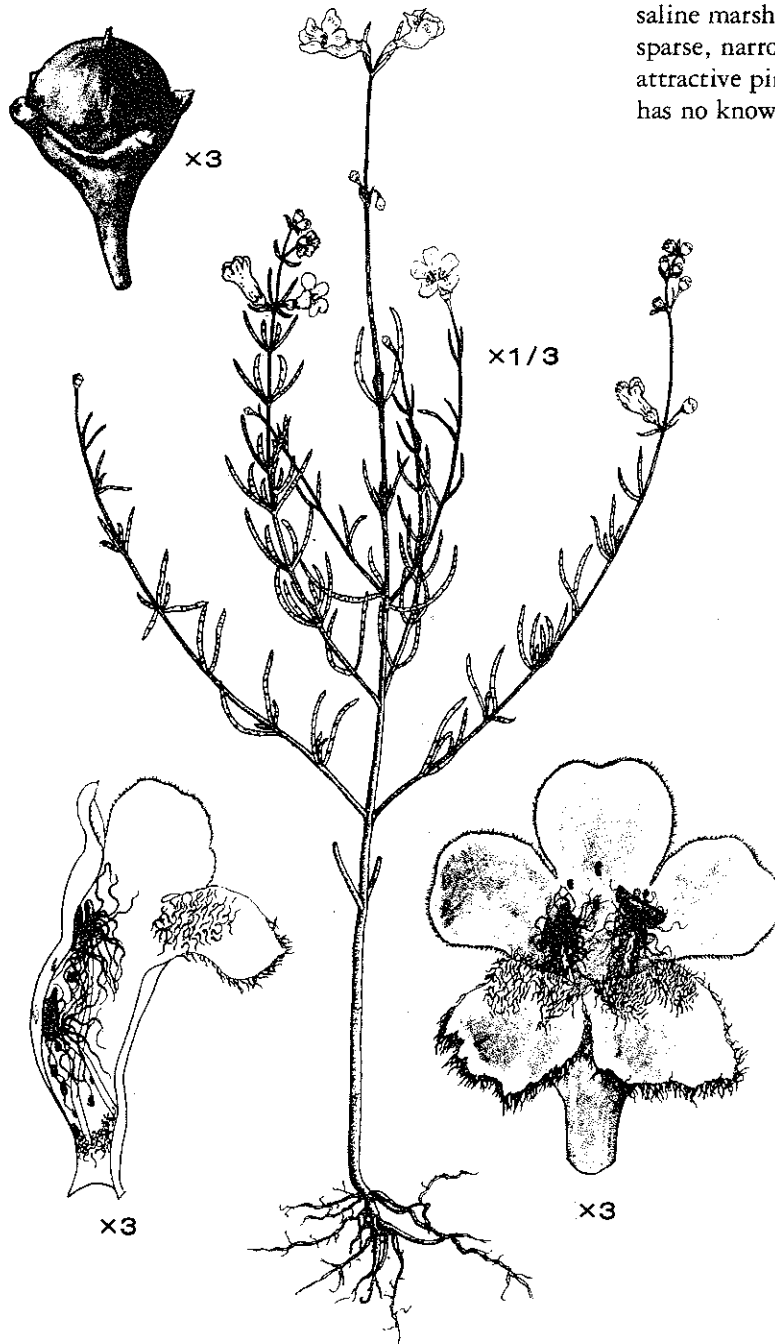


Agalinis maritima
 (Raf.) Raf.
 (*Gerardia maritima*)

Scrophulariaceae

Marsh pink
 Seaside gerardia

Agalinis maritima is a widely scattered herb of brackish and saline marshes and beaches with sparse, narrow leaves and attractive pink flowers. The plant has no known value to wildlife.

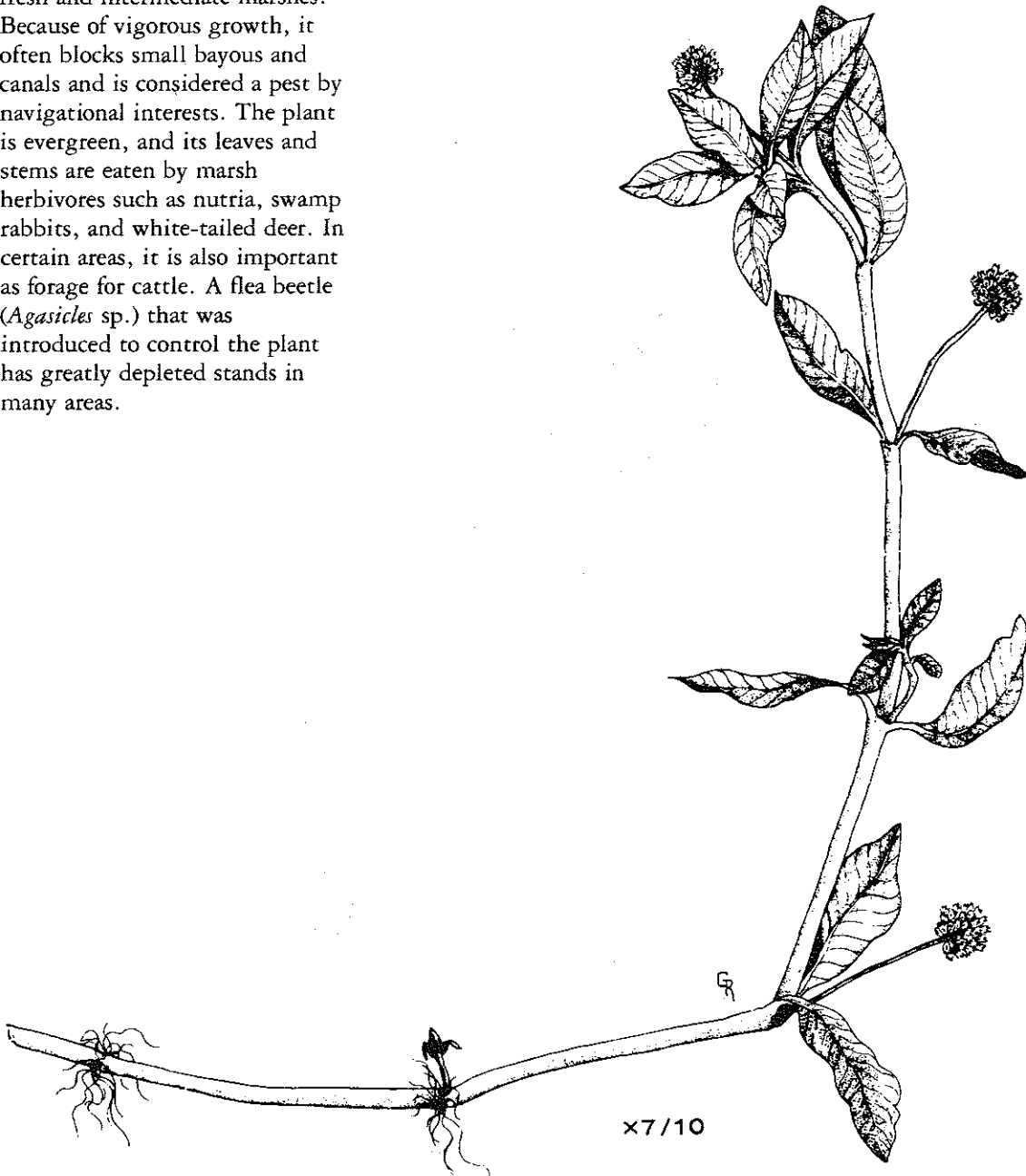
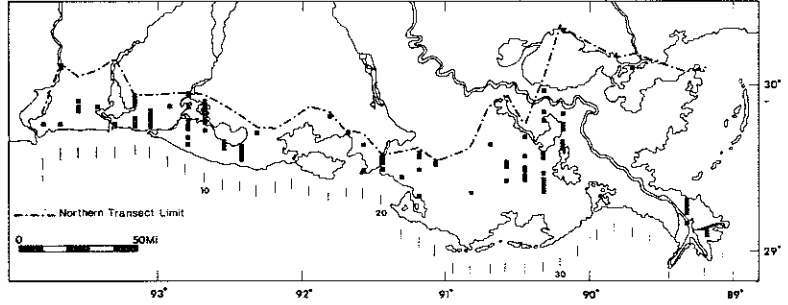


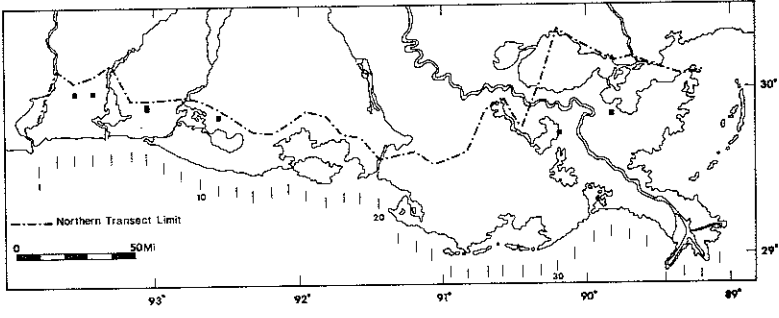
Alternanthera philoxeroides
(Mart.) Griseb.

Amaranthaceae

Alligatorweed

Alternanthera philoxeroides is a trailing exotic plant introduced a century ago, abundant across the Louisiana coast, but restricted to fresh and intermediate marshes. Because of vigorous growth, it often blocks small bayous and canals and is considered a pest by navigational interests. The plant is evergreen, and its leaves and stems are eaten by marsh herbivores such as nutria, swamp rabbits, and white-tailed deer. In certain areas, it is also important as forage for cattle. A flea beetle (*Agasicles* sp.) that was introduced to control the plant has greatly depleted stands in many areas.



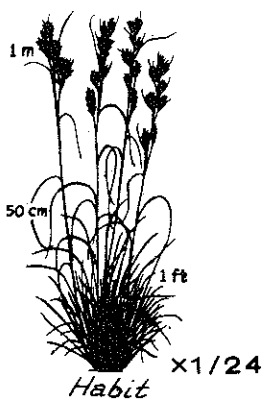
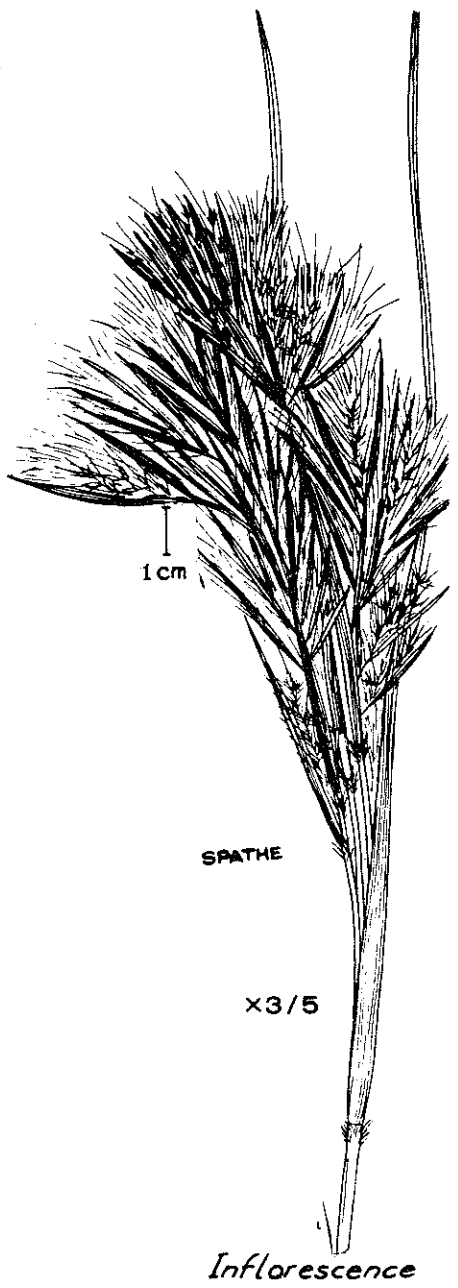


Andropogon glomeratus
(Walt.) B. S. P

Gramineae

Bushy beardgrass
Bushy bluestem

Andropogon glomeratus is an erect, perennial grass that grows 2 to 4 feet tall. The inflorescence is a large, dense cluster of silky racemes interspersed with leafy spathes. It is seldom very abundant; typical habitat consists of marsh ridges, elevated bayou or lake banks, and flotant. Its stems remain upright during winter and provide cover for swamp rabbits, white-tailed deer, and other wildlife.

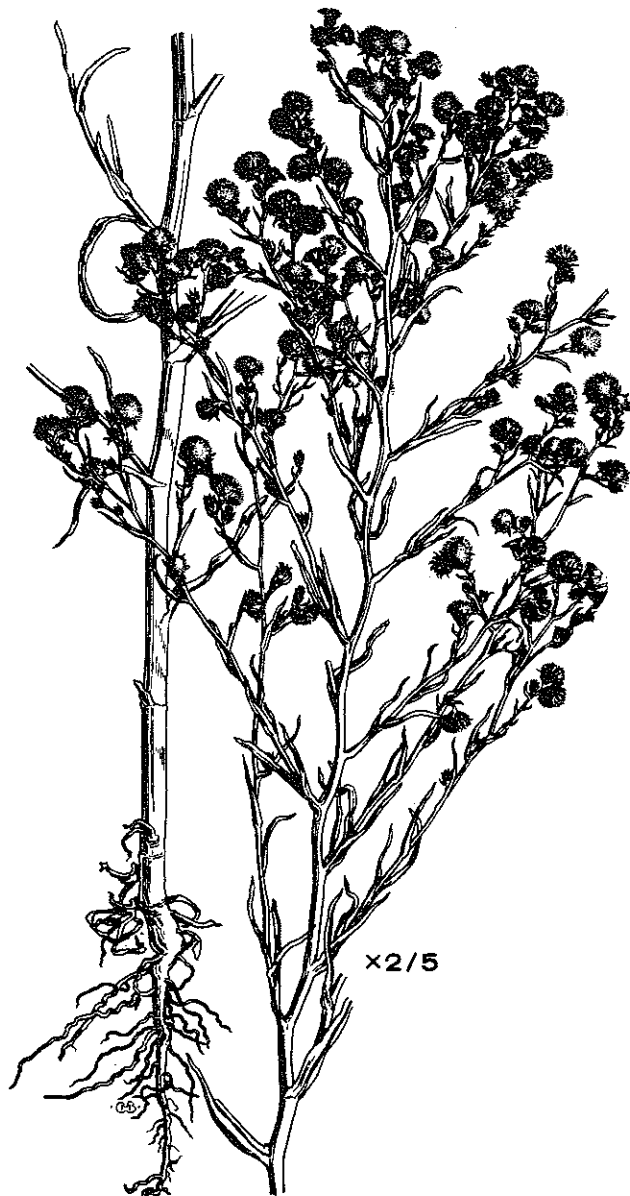
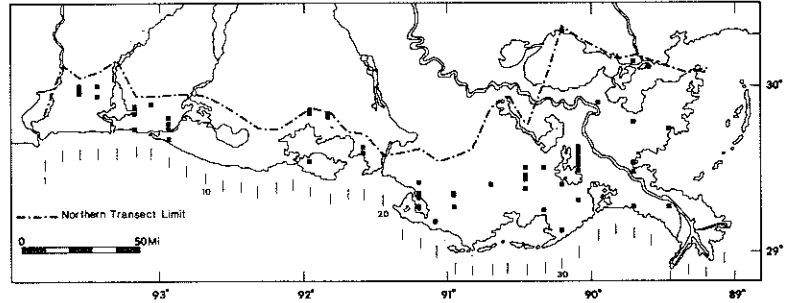


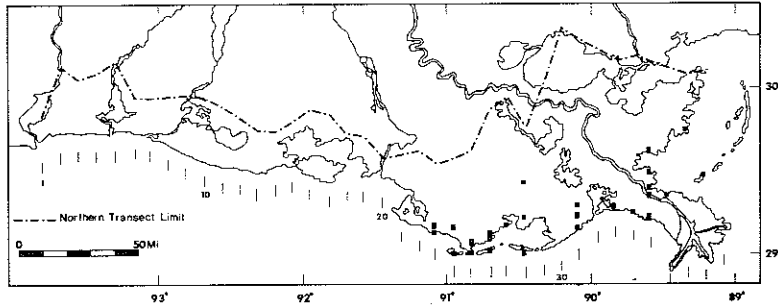
Aster subulatus Michx.

Compositae

Saltmarsh aster

Aster subulatus is an annual plant with many branches, small narrow leaves, and small white flowers. It quickly invades marshes where there is little competition from other plants. It is only abundant locally and stands usually occupy sites for only a short period of time. The species grows in marshes ranging from fresh to brackish and usually occurs as scattered individual plants. Its primary value is a soil stabilizer. A similar species, perennial saltmarsh aster (*Aster tenuifolius*) is also found in Louisiana coastal marshes.





Avicennia germinans
(L.) L.

(*Avicennia nitida*)

Avicenniaceae

Black mangrove

Avicennia germinans is a woody shrub restricted to brackish and saline soils east of Atchafalaya Bay. The plant is sensitive to cold weather, and severe freezes appear to limit extensions of its range. It grows in areas flooded by high tides and is important to the detrital cycle. Dense stands of black mangrove on marshy islands provide valuable nesting sites for various species of wading birds.

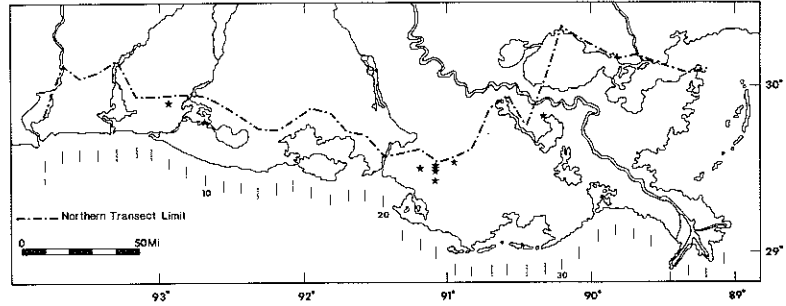


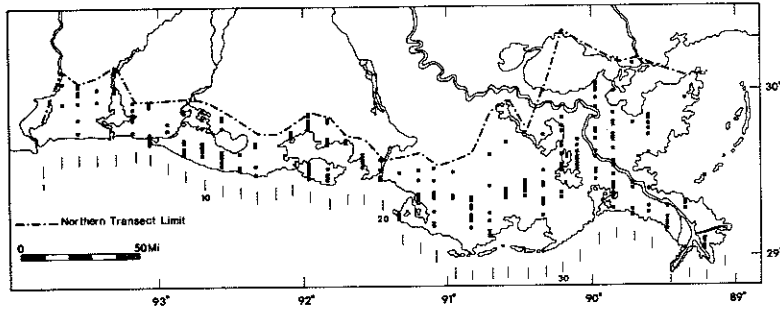
Azolla caroliniana Willd.

Salviniaceae

Mosquito fern

Azolla caroliniana is a minute, free-floating plant of fresh marsh, resembling the duckweeds. It forms floating mats that are often reddish colored. The plants are eaten by ducks and other birds and harbor many small invertebrates.





Baccharis halimifolia L.

Compositae

Groundselbush
Eastern baccharis

Baccharis halimifolia is an evergreen shrub of fresh to brackish soils that is normally considered an upland species. However, it is a typical plant of spoil deposits in the Louisiana coastal marshes and is found occasionally in marsh subjected to frequent drying. The plant provides both food and cover for white-tailed deer and important resting and breeding cover for birds.



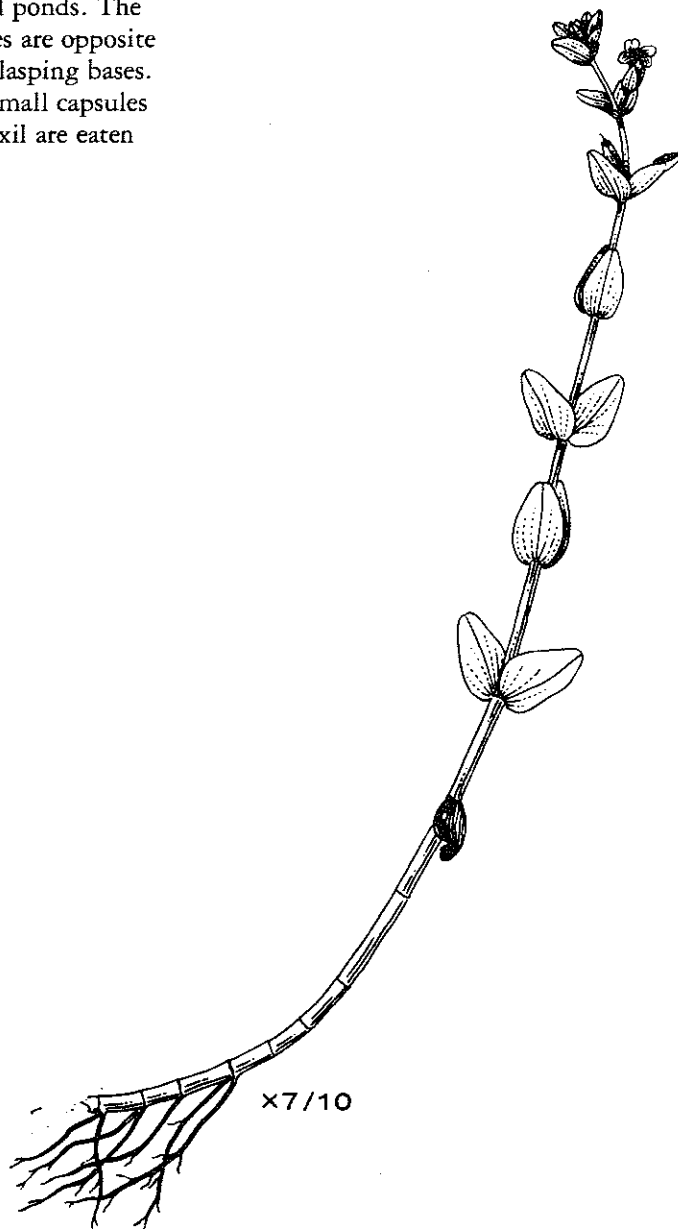
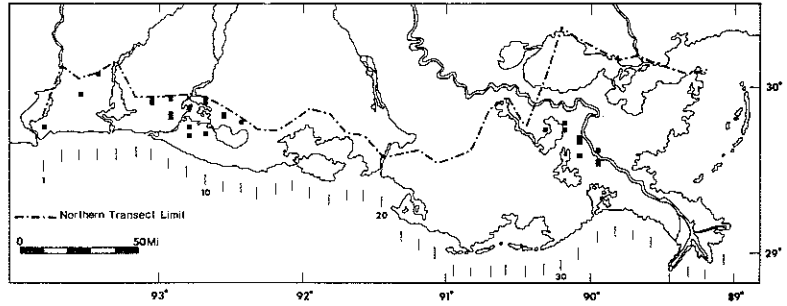
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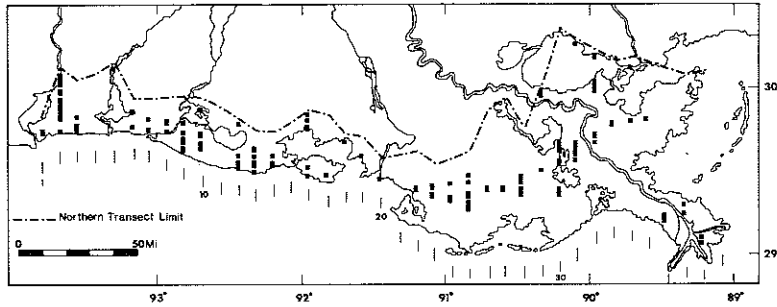
Bacopa caroliniana
(Walt.) Robins.

Scrophulariaceae

Carolina waterhyssop

Bacopa caroliniana is a trailing, succulent plant with a low salinity tolerance that is restricted to fresh and intermediate marshes. It is seldom very abundant and occurs mostly along the shoreline and banks of bayous and ponds. The lemon-scented leaves are opposite and rounded with clasping bases. Seeds produced in small capsules formed in the leaf axil are eaten by ducks.



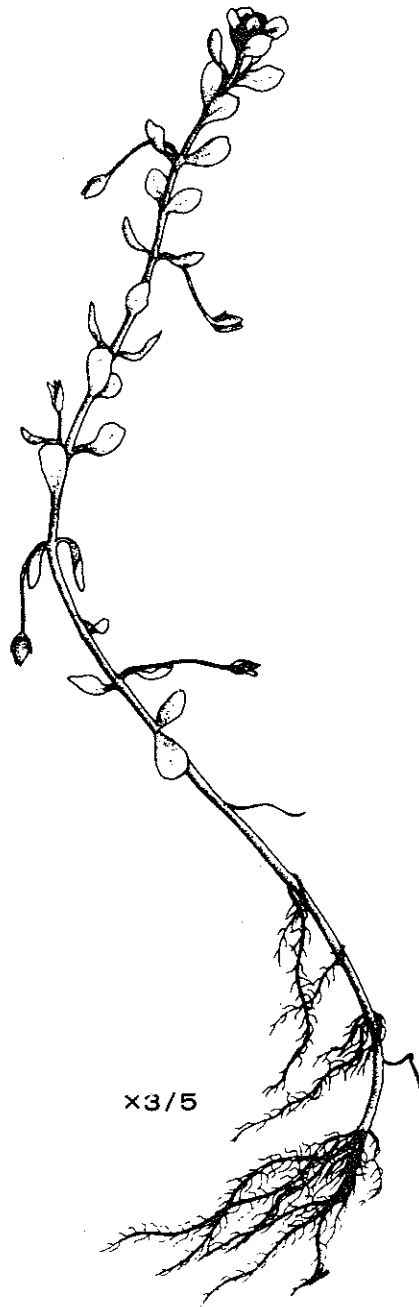


Bacopa monnieri
(L.) Wettst.

Scrophulariaceae

Coastal waterhyssop

Bacopa monnieri is a fairly common plant found in intermediate marshes and, in certain localities, in brackish marsh. It occupies mud flats and forms dense, trailing mats usually less than a tenth of an acre in size. The leaves are evergreen, small, and rounded with tapering bases. Seeds are formed along the stem in tiny capsules with long pedicels. Seeds and leaves are an important source of food for ducks and coots. Leaves and stems are eaten by nutria, swamp rabbits, and white-tailed deer.

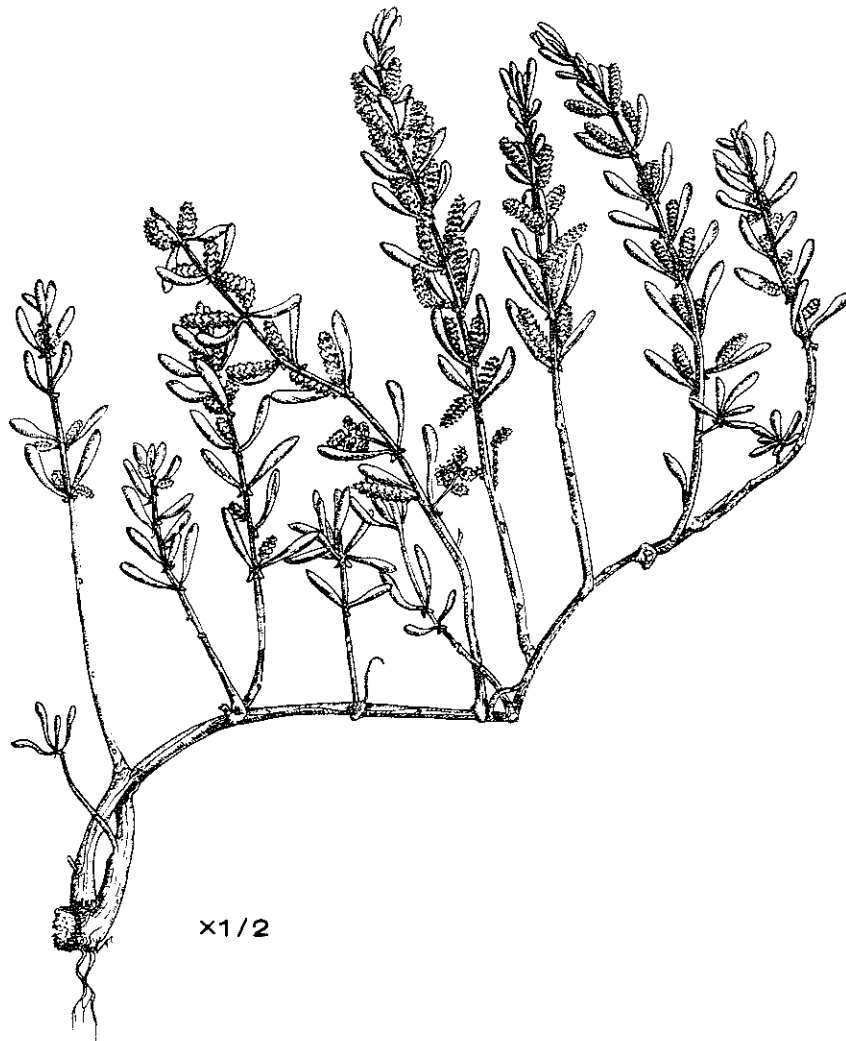
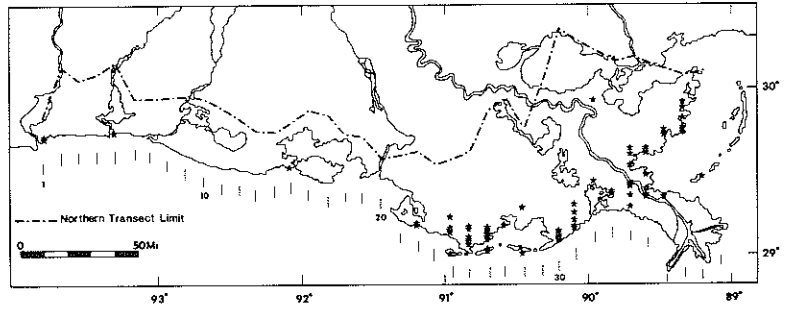


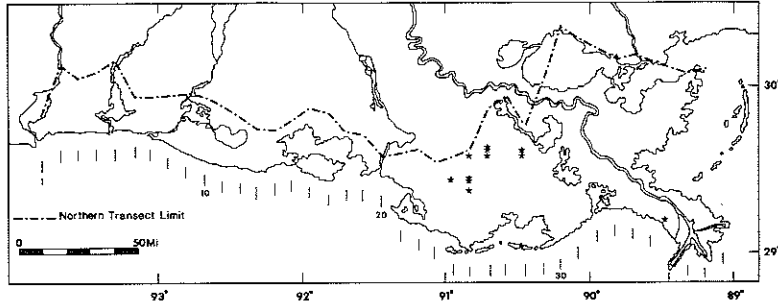
Batis maritima L.

Batidaceae

Saltwort

Batis maritima is a shrublike plant with creeping stems and small, fleshy, aromatic leaves. It occurs in saline environments and grows on salt flats, beaches, and banks of tidal channels and ponds, often forming dense stands. The plant provides detritus to aquatic food chains.





Bidens laevis
(L.) B. S. P.

Compositae

Bur-marigold
Smoothbeggertick
Fourchette

Bidens laevis is an herbaceous plant, locally abundant in fresh marsh, often forming dense stands. As the plant grows, the main stem may become prostrate, rooting at the nodes, and lateral branches become dominant. Numerous bright yellow flowers appear during the fall and produce achenes (seeds) with rigid, barbed awns. The awns pierce the skin of nutria that come in contact with the plant in winter, causing a chronic dermatitis that damages the pelt.

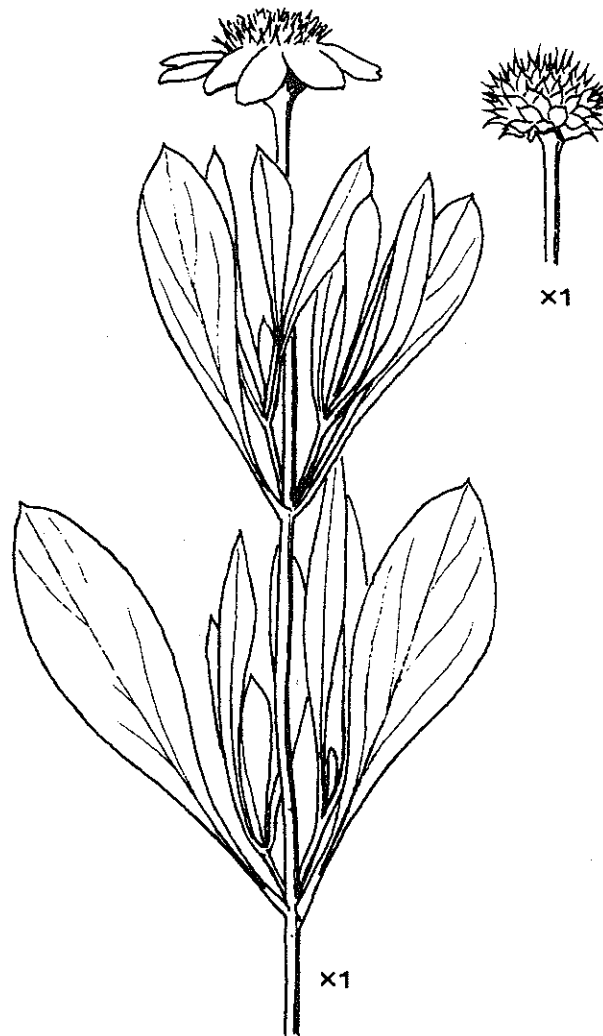
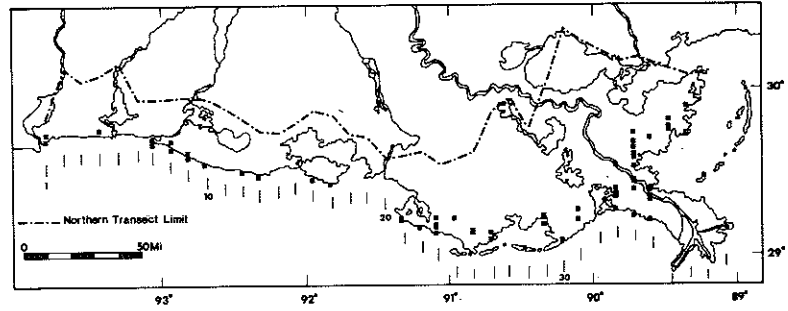


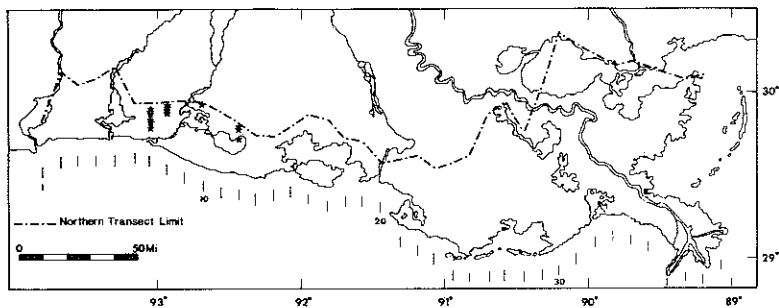
Borrichia frutescens
(L.) DC.

Compositae

Sea ox-eye

Borrichia frutescens is a low-growing shrub of saline and brackish marshes that produces a yellow and brown daisy-like inflorescence. It occupies higher, less frequently flooded sites such as bayou and lake banks and marsh adjacent to beaches. The leaves are eaten by rabbits; dead plants provide some detritus to aquatic systems.



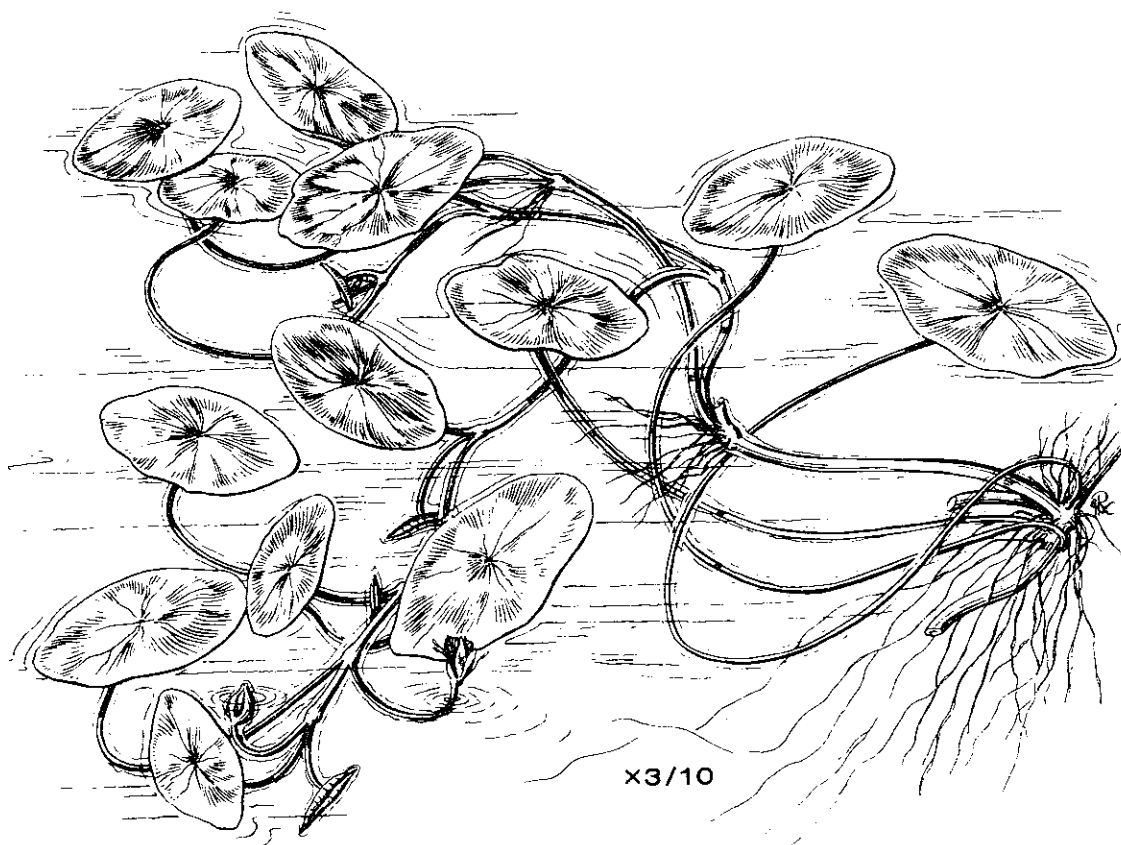


Brasenia schreberi
J. F. Gmel.

Nymphaeaceae

Watershield

Brasenia schreberi is a floating-leaved aquatic plant with a small purplish flower. The leaf is oval, 2 to 4 inches in diameter, without a cleft, and it contains a gelatinous layer on the lower surface. The plant is restricted to shallow freshwater areas and is rooted into the bottom. Its seeds are a preferred duck food and its roots, stems, and leaves are fed upon by muskrats and nutria. The plant attracts many small invertebrates that are themselves consumed by young ducks and other birds.

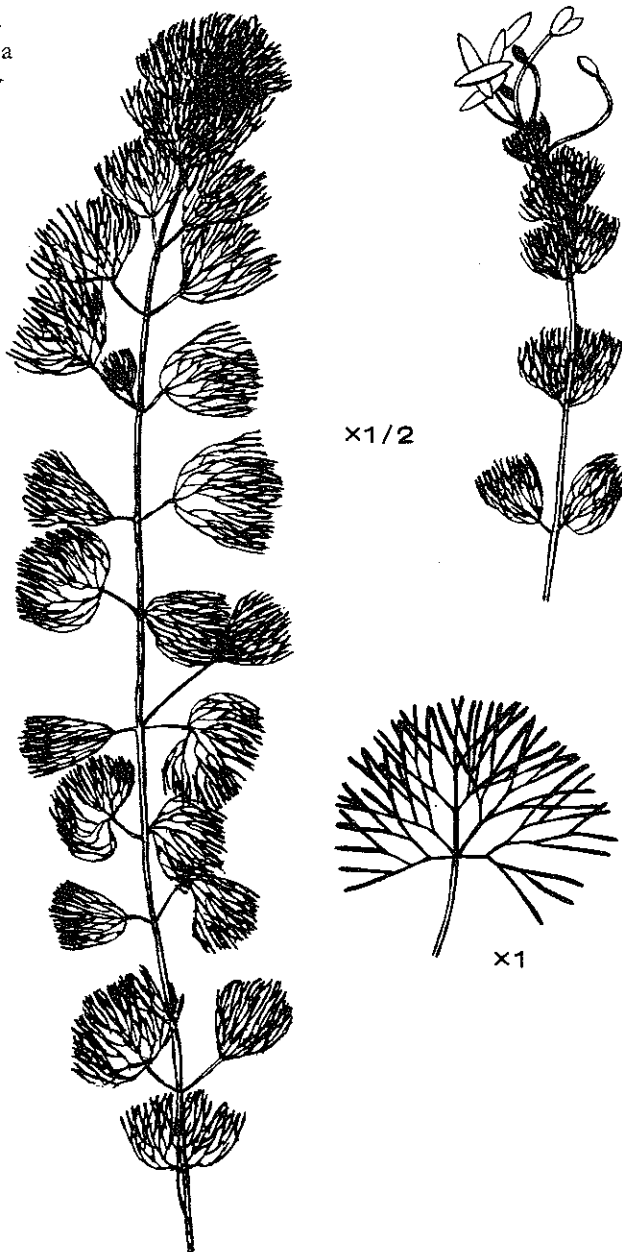
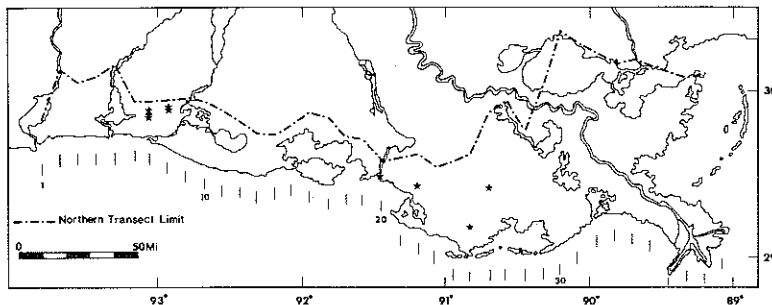


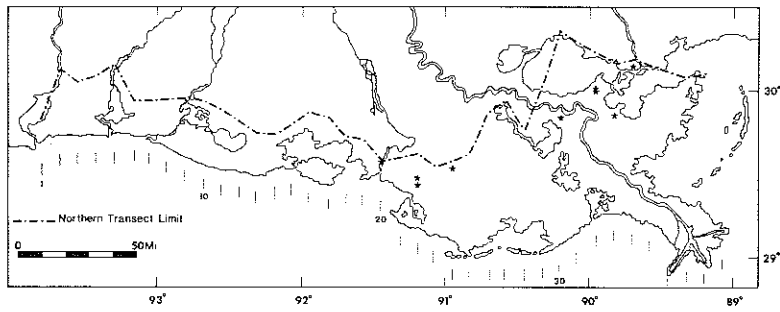
Cabomba caroliniana Gray.

Nymphaeaceae

Fanwort

Cabomba caroliniana is an aquatic plant of freshwater ponds. It has branched, fan-shaped, submersed leaves and occasionally small, elliptical peltate floating leaves. The plant produces white or cream-colored flowers slightly above the water surface on long apillary stalks. The plant is not important as a wildlife food but is commonly used in aquaria.





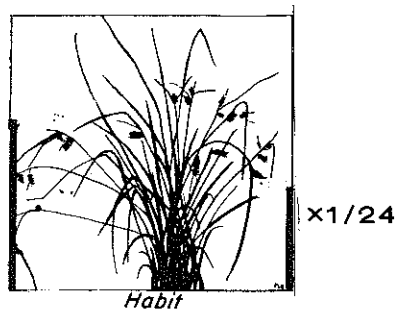
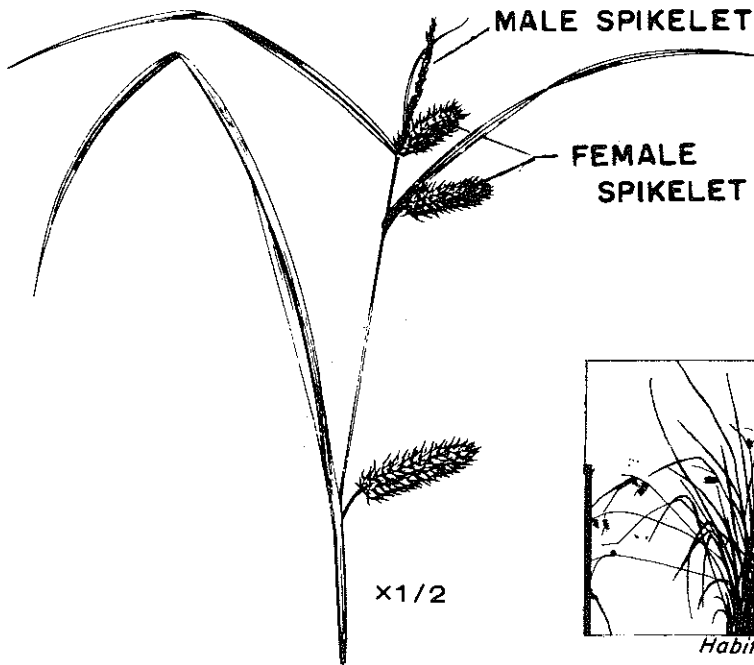
Carex spp. L.

Cyperaceae

Sedge

Carex are perennial grasslike plants with long and usually narrow leaves. The inflorescence varies from short, headlike to long, slender spikes occurring singularly or in groups in the upper portion of a triangular culm and emerging from the axil of leaflike bracts.

Triangular-shaped achenes (seeds) are densely clustered around the axis of the spike. This is one of the largest genera in the Louisiana coastal marshes; practically all species of *Carex* are restricted to fresh marshes subject to occasional drying. The plants provide forage for cattle, rabbits, and nutria and the seeds are eaten by ducks and other birds.

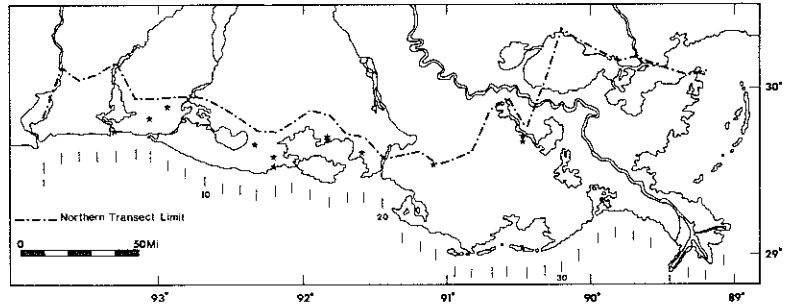


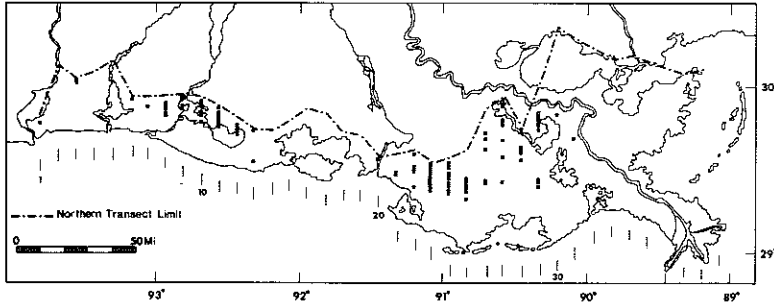
Centella asiatica
(L.) Urban.
(*Centella erecta*)

Umbelliferae

Centella

Centella erecta is a creeping perennial plant that roots at the nodes. It produces small clusters of erect leaves that are 4 to 6 inches long with cordate, toothed blades. Fruiting bodies develop in tight clusters on short peduncles. The plant grows in sparse stands in fresh and intermediate marshes where competition from other plants is minimal. Leaves and rhizomes are eaten by marsh herbivores.



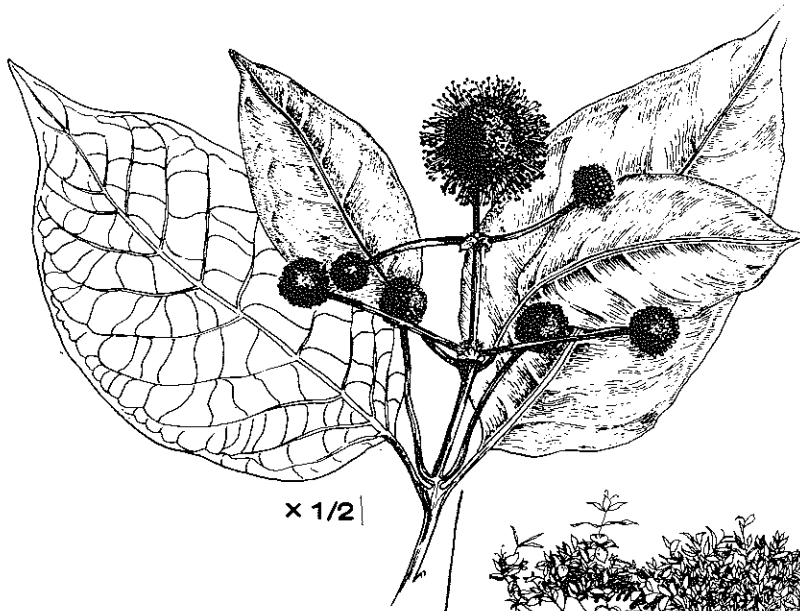


Cephalanthus occidentalis L.

Rubiaceae

Buttonbush
Buttonwillow

Cephalanthus occidentalis is a shrub or small tree of fresh marshes, often growing in water several feet deep. The flowers are white, in globose heads about one inch in diameter and they produce seeds eaten by ducks. Thickets are often formed along the shoreline and in coves of lakes to provide choice wood duck roosting sites. Herons, egrets, and various water birds use the plant for nesting.

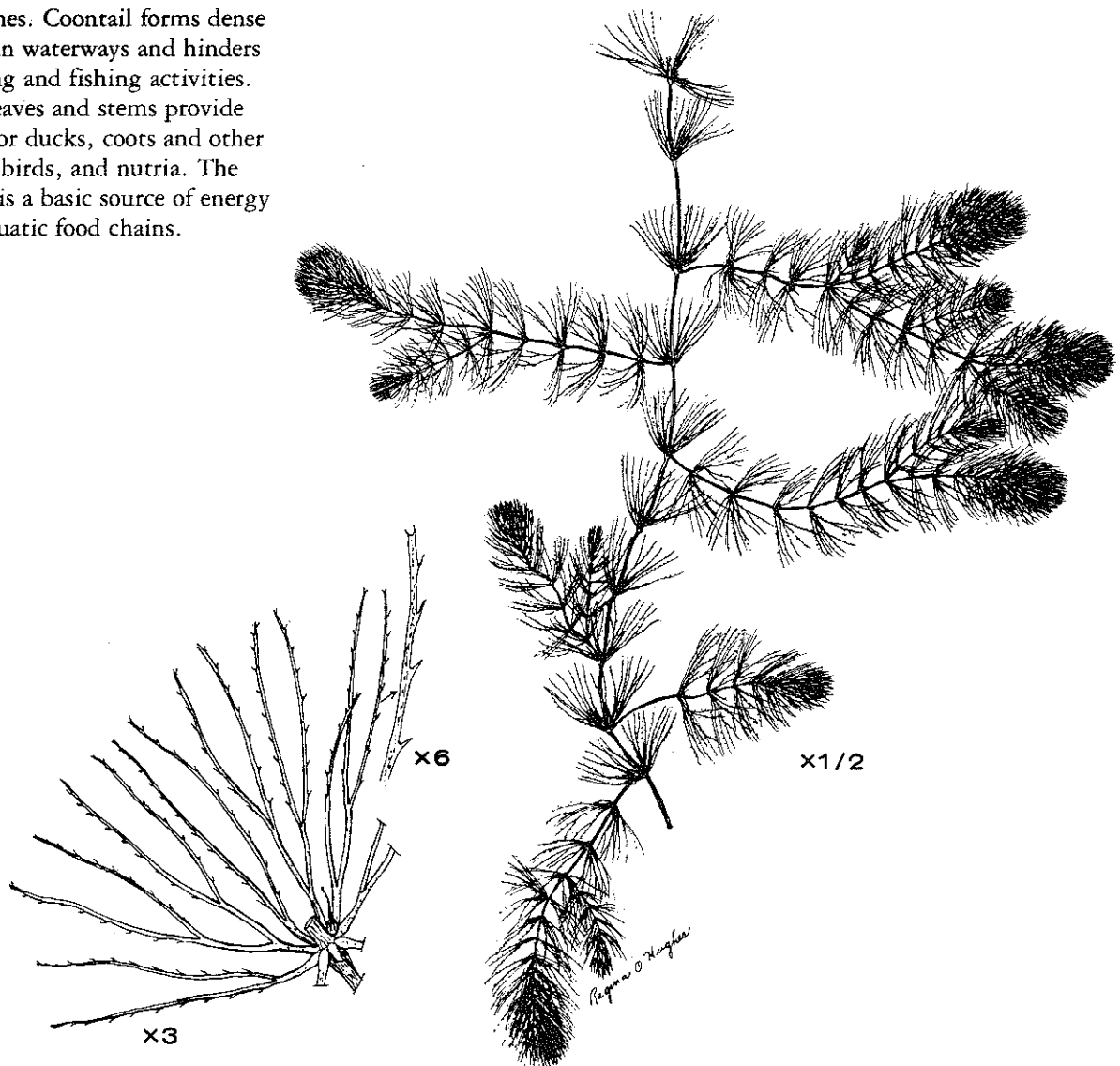
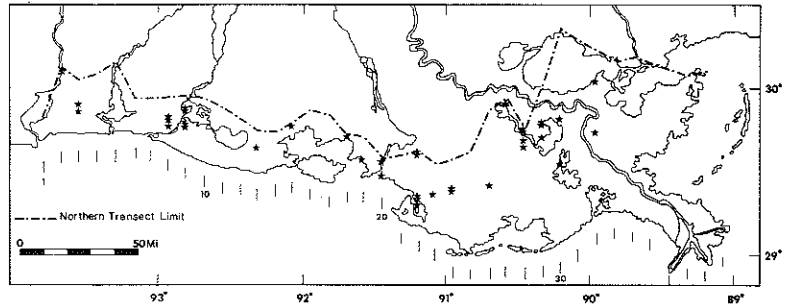


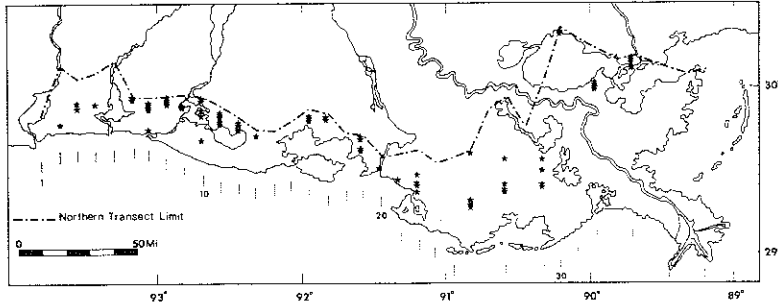
Ceratophyllum demersum L.

Ceratophyllaceae

Coontail
Hornwort

Ceratophyllum demersum is a submersed aquatic plant of fresh marshes. It grows rooted into the bottoms of bayous, canals, and lakes of various depths. The leaves are cordlike and forked, and they appear in whorls around a central stem and lateral branches. Coontail forms dense mats in waterways and hinders boating and fishing activities. The leaves and stems provide food for ducks, coots and other water birds, and nutria. The plant is a basic source of energy for aquatic food chains.



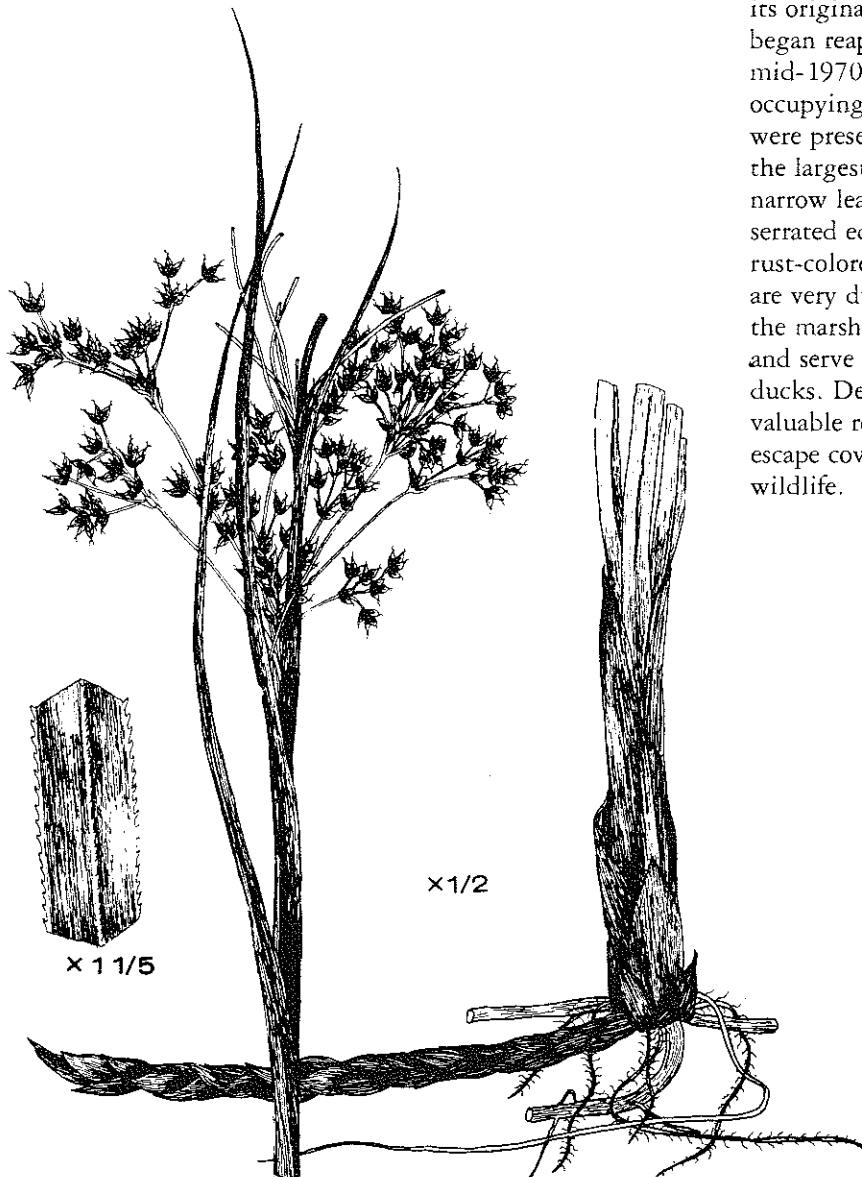


Cladium jamaicense
Crantz

Cyperaceae

Sawgrass

Cladium jamaicense is a sedge of fresh and intermediate marshes, abundant only in isolated areas along the coast. It was the dominant species over vast areas of marsh as late as the mid-1950s; however, saltwater intrusion and nutria feeding eliminated the plant over most of its original range. Isolated stands began reappearing in the mid-1970s and by 1978 stands occupying several thousand acres were present. The plant is among the largest of the sedges and has narrow leaves with a sharply serrated edge and a large rust-colored seed head. Its seeds are very durable: they persist on the marsh floor for many years and serve as food and grit for ducks. Dense stands provide valuable resting, breeding, and escape cover for various forms of wildlife.



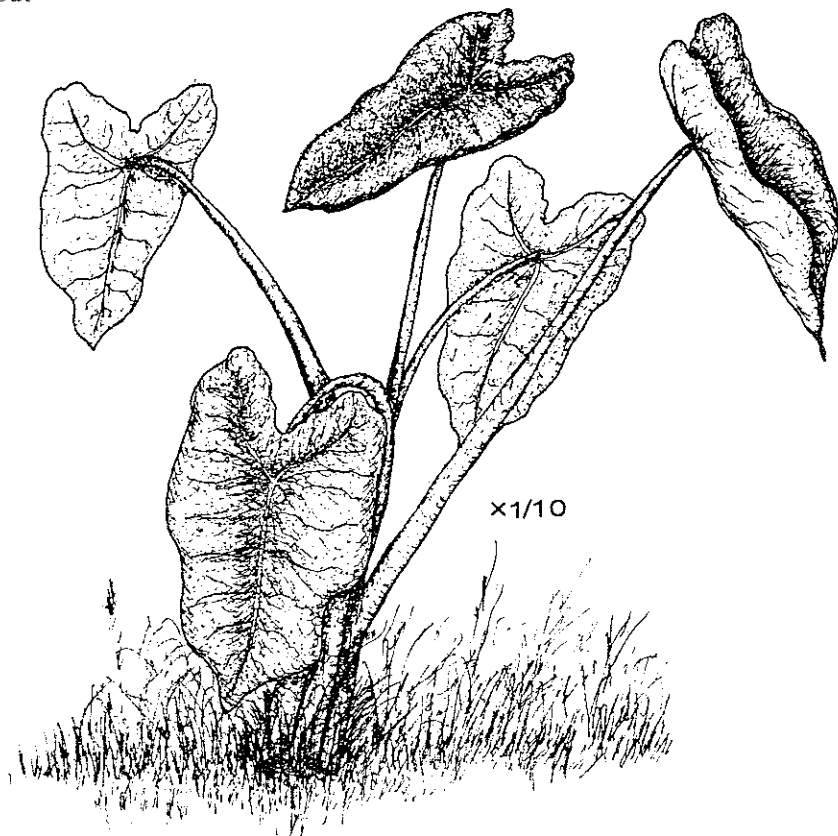
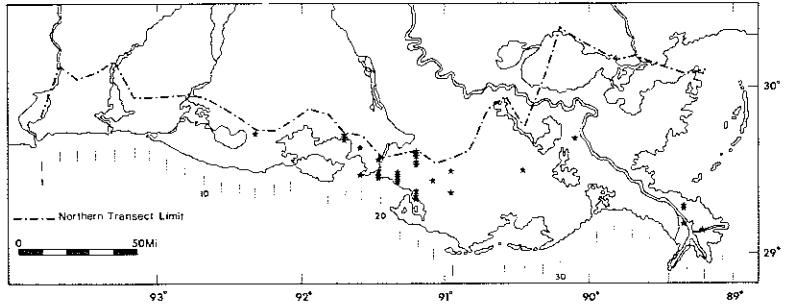
Colocasia antiquorum
(L.) Schot

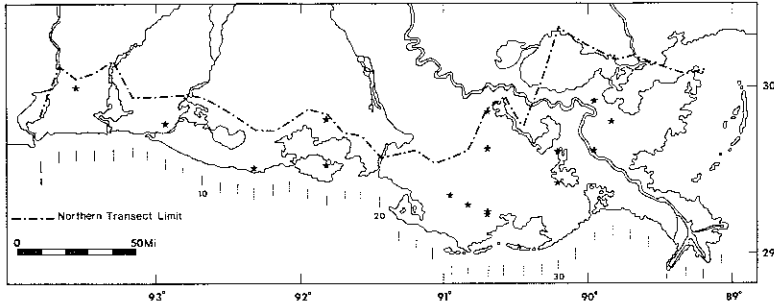
Araceae

Elephantsear

Colocasia antiquorum is an exotic ornamental plant that has spread into the wild. Leaves emerge from large starchy underground stems. Leaf blades are heart shaped and often as much as 24 inches long, hence the name elephantsear. Common along shorelines of bayous and lakes in fresh marshes, elephantsear provides some stability to banks by reducing erosion. The plant has little value for wildlife.

Waterlettuce (*Pistia stratiotes*) is a native member of the family Araceae. It is a floating aquatic plant and occurs in freshwater ponds protected from wave action and currents. The plant is used very little as food by wildlife, but its root system harbors many aquatic invertebrates.



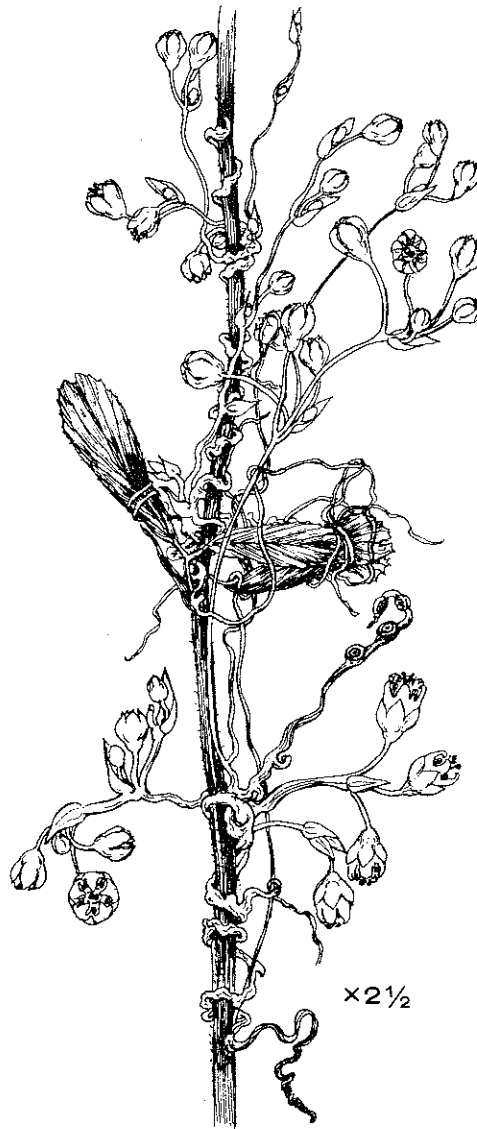


Cuscuta indecora
Choisy

Convolvulaceae

Pretty dodder

Cuscuta indecora is a parasitic, herbaceous plant with yellow, leafless, filamentlike branches and stems that often form twining mats over other marsh plants. It grows under a wide range of marsh conditions, but it is rootless and rarely comes in contact with water or soil. Its nourishment comes from host plants. It produces an abundance of seeds that are eaten by ducks and various other birds.

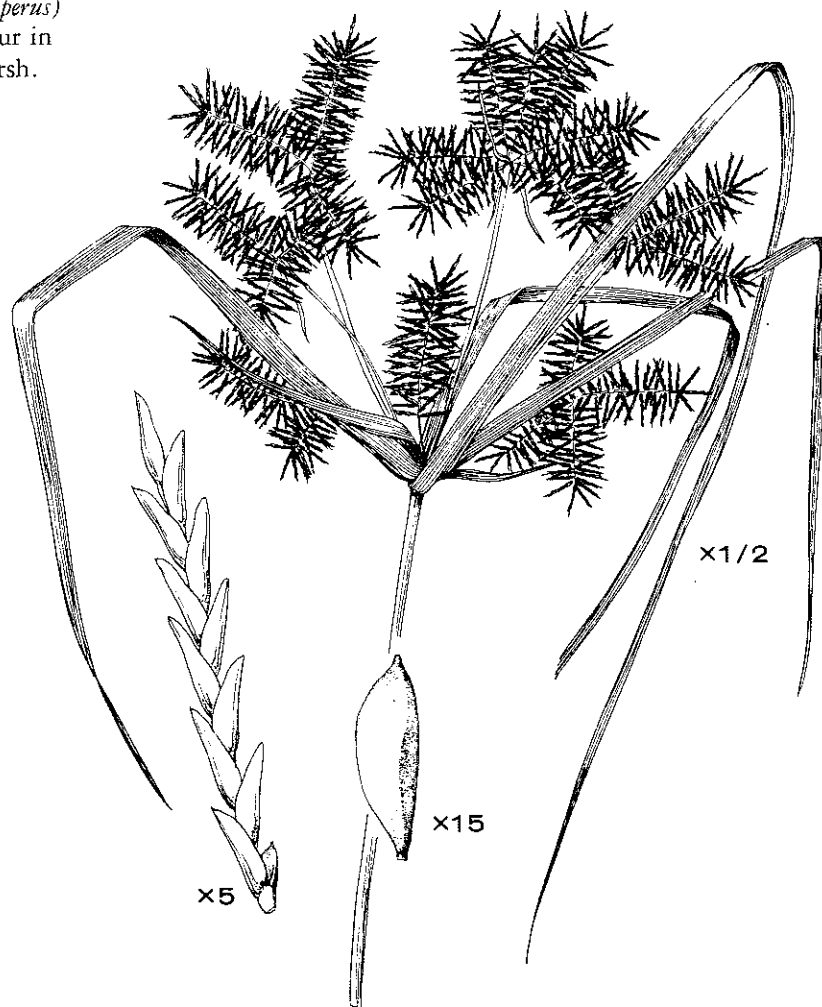
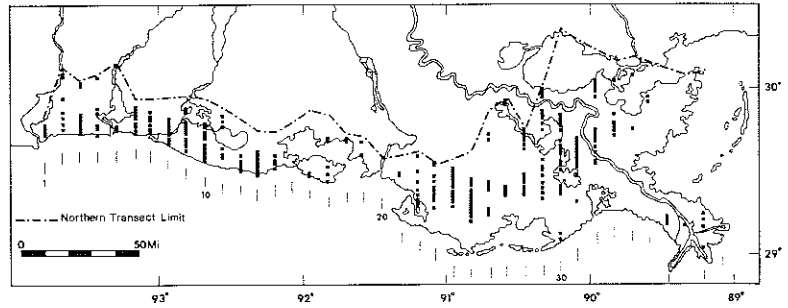


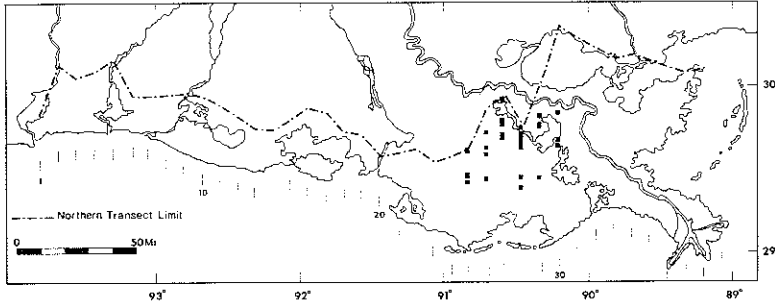
Cyperus odoratus L.

Cyperaceae

Fragrant flatsedge

Cyperus odoratus is a common sedge of fresh and intermediate marshes, reaching greatest abundance in areas subject to periodic drying. Stands reach greatest density in marsh where competition from other plants is lacking. The culm is triangular and topped with drooping leaves and a tufted seedhead. It is a prolific producer of seeds that are a preferred food of ducks. Two similar species, compressed flatsedge (*Cyperus Compressus*) and redroot flatsedge (*Cyperus erythrorhizos*) also occur in Louisiana coastal marsh.



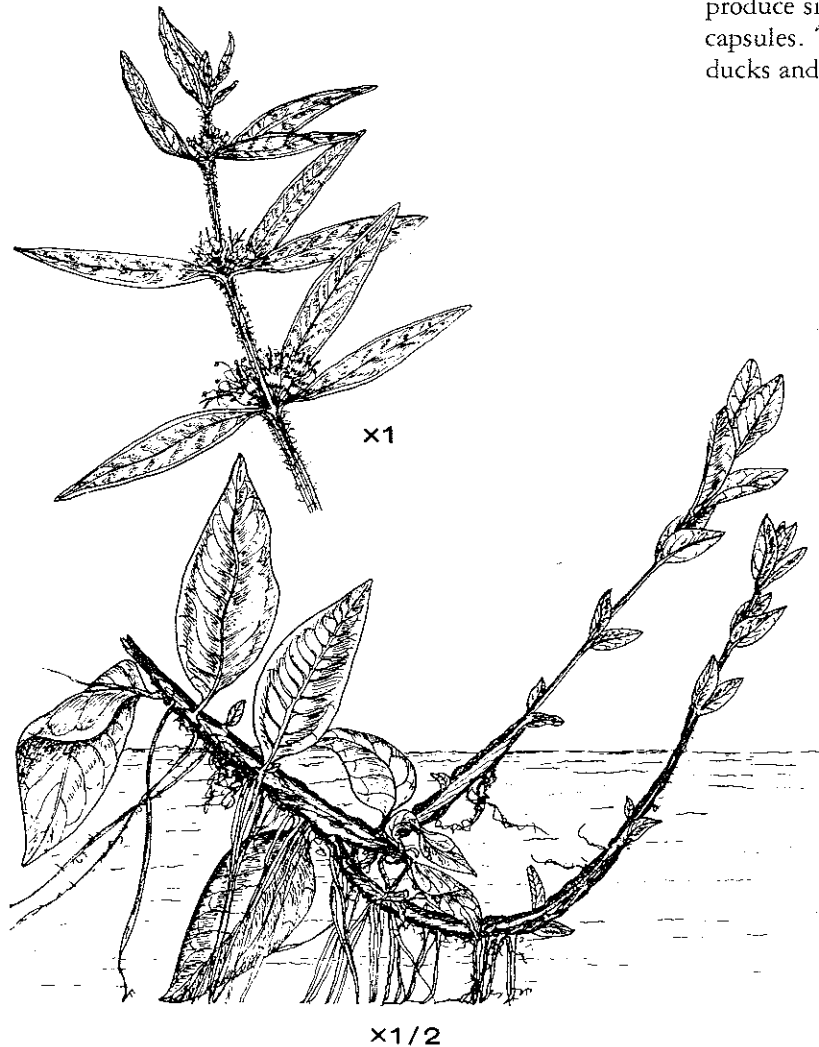


Decodon verticillatus
(L.) Ell.

Lythraceae

Waterwillow
Swamp loosestrife

Decodon verticillatus is a perennial, shrubby herb of fresh marsh, locally abundant but with limited distribution. The stem is angular, 4 to 6 feet long, and arched, rooting at the tip. Stems below the water are thick and spongy, and rooting at the tips causes the plant to spread rapidly, often forming mats over the water. Leaves are mostly opposite and lanceolate; flowers form in axillary clusters and produce small round seed capsules. The seeds are eaten by ducks and other birds.

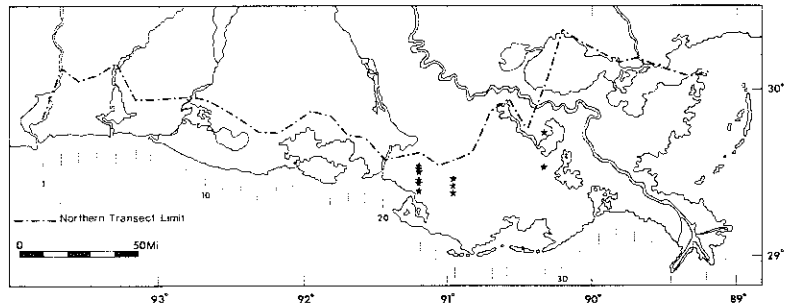


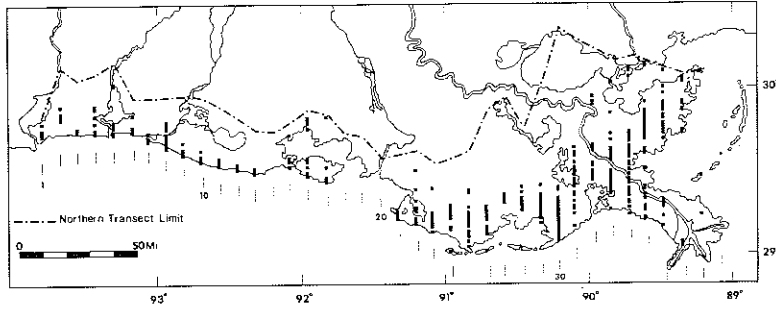
Dichromena colorata
(L.) Hitchc.

Cyperaceae

White-topped sedge

Dichromena colorata is a less common sedge of fresh marsh with an erect triangular culm, topped with an inflorescence having long star-shaped bracts. The bracts are white at the base and tipped with green, giving the appearance of flower petals; they surround a cluster (agglomerate) of small spikelets. The plant is of little value to wildlife.





Distichlis spicata
(L.) Greene.

Gramineae

Salt grass

Distichlis spicata is a short perennial grass of brackish and saline marsh. It forms dense stands on slightly elevated areas such as bayou and lake banks, ridges, and spoil deposits and is abundant all along the coast. The roots, culms, and leaves are fed on by nutria, swamp rabbits, and snow geese; and, in certain localities, salt grass is important for cattle forage. Ducks feed on the seeds they can reach from the water. This plant is an important contributor to the detrital cycle, which provides nutrients to estuarine organisms.

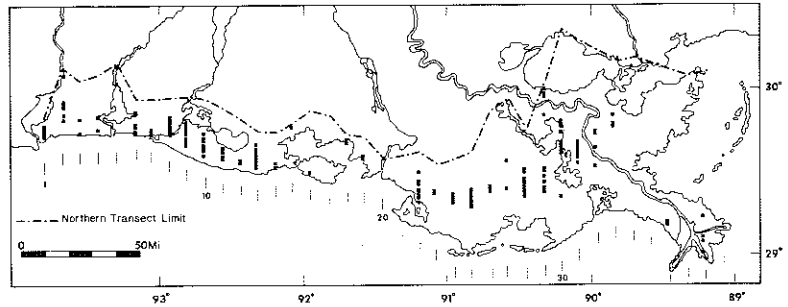


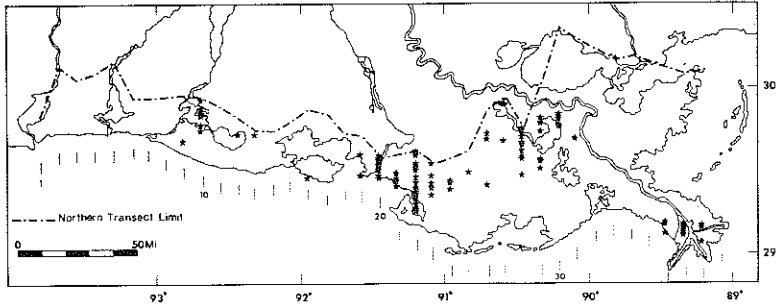
Echinochloa walteri
(Pursh) Heller.

Gramineae

Walter's millet
Coast cockspur

Echinochloa walteri is an annual grass of fresh and intermediate marshes. It forms broad, dense stands where there is no competition from other plants. This plant is common along the coast but reaches greatest abundance during dry years when much soil becomes exposed and seeds are permitted to germinate and grow. A plant growing early in the spring reaches a height of 6 to 8 feet. It produces a large, purplish seedhead and an abundance of seeds that are a choice duck food.





Eichhornia crassipes
(Mart.) Solms.

Pontederiaceae

Water hyacinth

Eichhornia crassipes is a free-floating plant that reproduces rapidly and forms dense mats over bayous, canals, and lakes. It is limited to fresh water but occurs across the coast and is a major obstacle to navigation. The dense mats also shade out valuable wildlife food plants and impede fishing. The plant has a bulb at the base of the leaf and a large, fragrant, bluish flower. The water hyacinth was introduced into this country more than a century ago as an ornamental, but it escaped cultivation to take over many natural waterways. The leaves are eaten by nutria, rabbits, deer, and other herbivores. The large hairlike root system harbors many aquatic invertebrates and is fed upon by small crawfish.



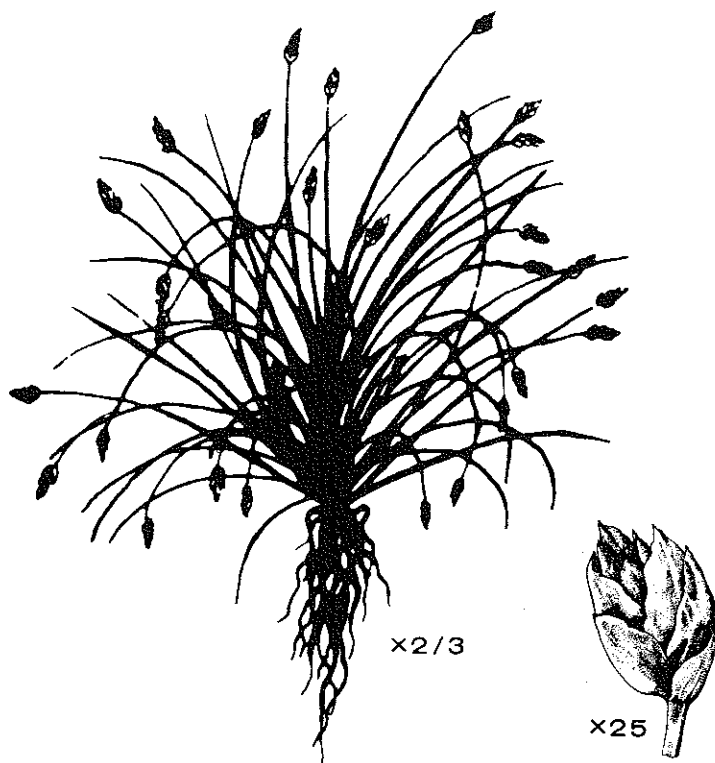
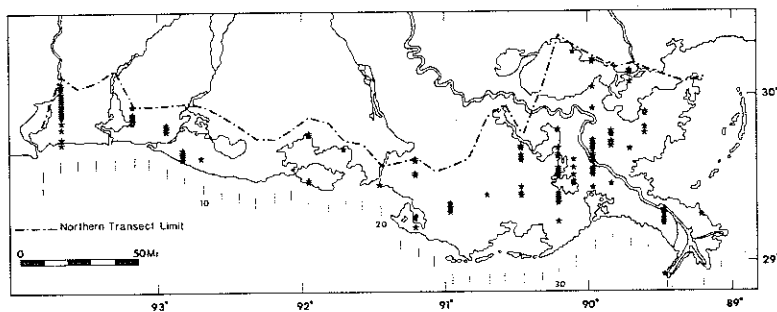
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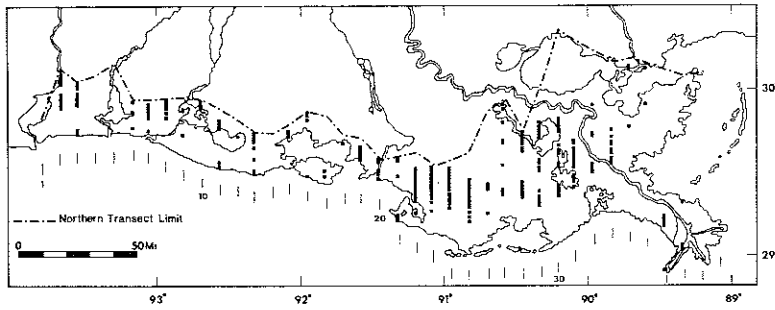
Eleocharis parvula
(R. & S.) Link

Cyperaceae

Dwarf spikerush

Eleocharis parvula is a minute sedge, 1 to 2 inches tall, which grows under salinity conditions ranging from fresh to brackish. It often forms dense mats on the bottoms of shallow ponds. Ducks and coots feed on the achenes, culms, and roots.



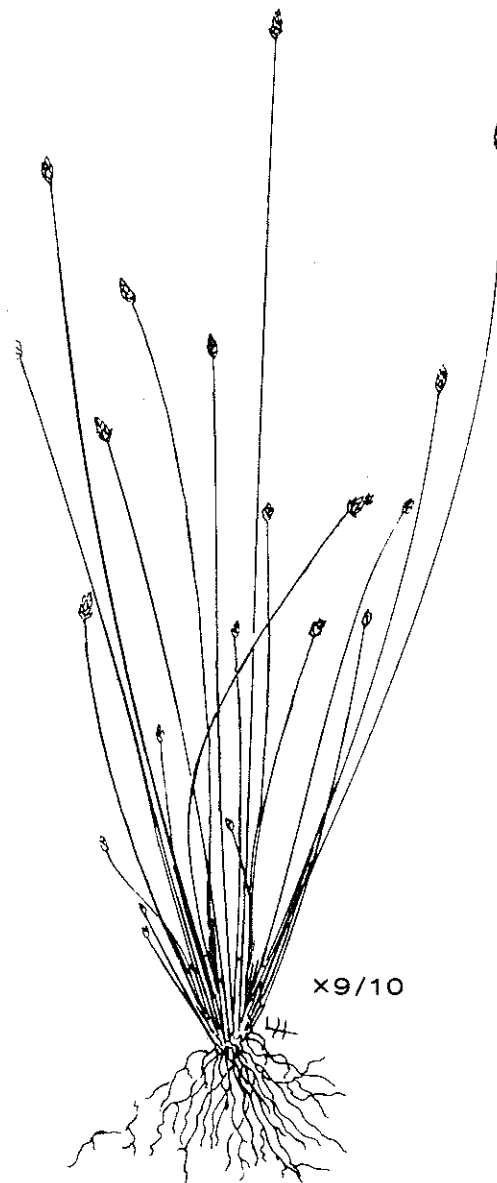


Eleocharis spp. R. Br.

Cyperaceae

Spikerush

The *Eleocharis* species are mostly perennial and evergreen sedges with round culms (except *E. quadrangulata*) having a solitary, terminal inflorescence and inconspicuous basal leaves. Culms are erect and vary from only several inches to 2 feet tall. This is a very common genus with species occurring in marshes ranging from fresh to brackish, although greatest densities are found in fresh marsh. The genus is very important to wildlife. The seeds are preferred duck food and rhizomes and culm bases are eaten by nutria and muskrats. Geese and cattle graze the upper portions of the culms.

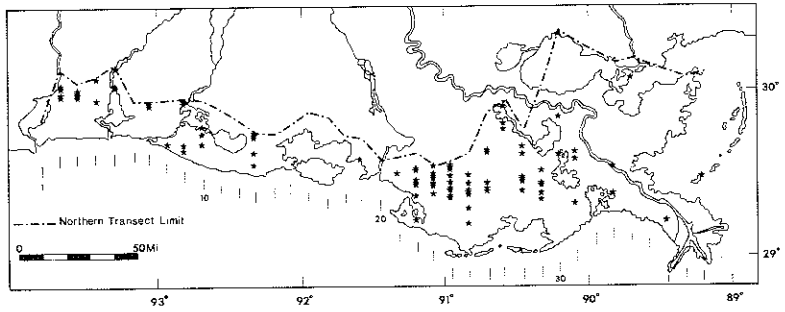


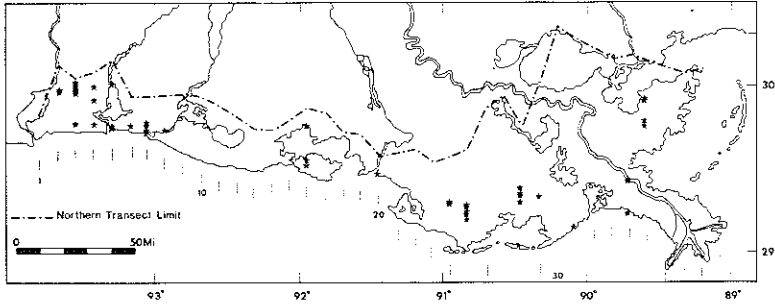
Eupatorium capillifolium
(Lam.) Small.

Compositae

Dogfennel
Yankeeweed

Eupatorium capillifolium is a slender, erect herb, 3 to 4 feet tall, with a slightly pubescent, woody stem. Leaves are crowded, filament-like, and pale green. The plant grows in fresh marsh and requires exposed soil for germination and growth. It is relatively uncommon and usually occurs on elevated sites such as ridges, bayou and lake banks, and spoil deposits. Its value to wildlife is very limited.



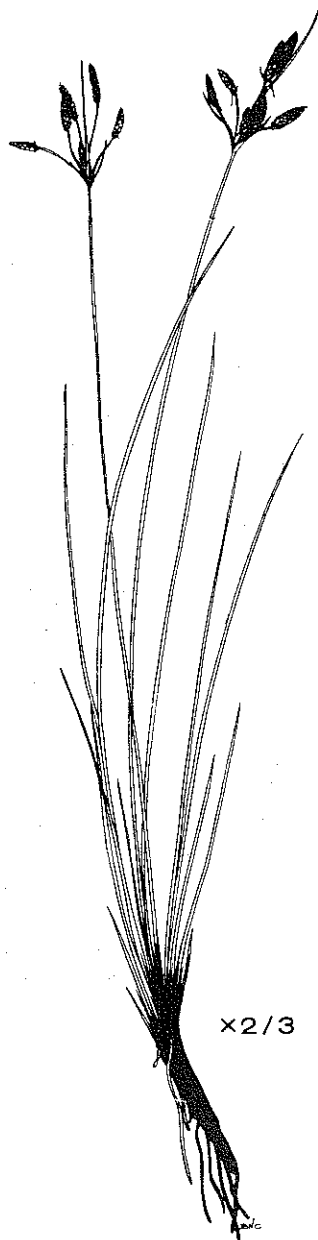


Fimbristylis castanea
(Michx.) Vahl.

Cyperaceae

Saltmarsh fimbristylis

Fimbristylis castanea is a perennial sedge, 2 to 3 feet tall, of intermediate to saline marshes. It grows in sparse stands on higher elevations. *F. castanea* is leafy at the base with a rigid culm and numerous individual spikelets at the apex. The plant has little value to wildlife.

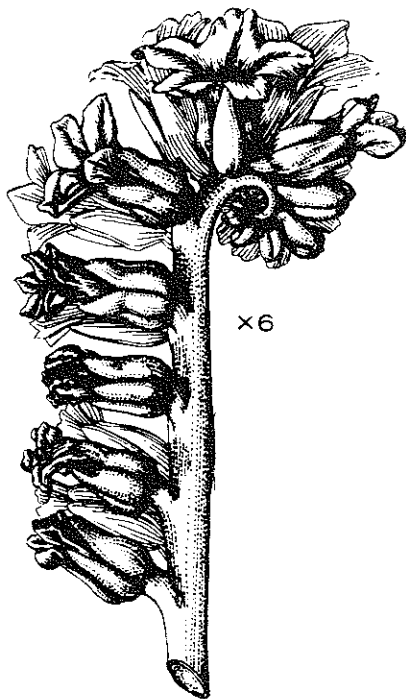
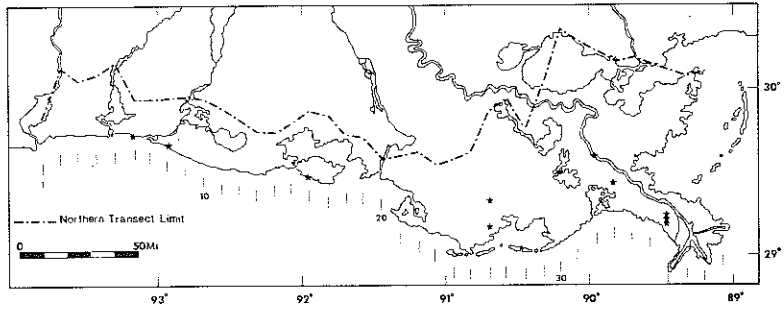


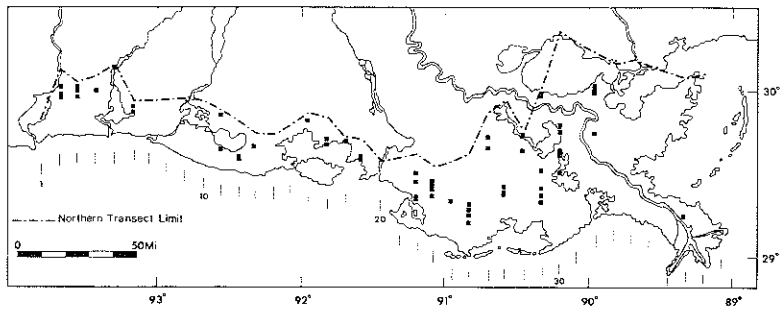
Heliotropium curassavicum L.

Boraginaceae

Seaside heliotrope

Heliotropium curassavicum is a prostrate herbaceous plant with narrow, grayish-green leaves and a terminal inflorescence. Flowers and fruit are produced in rows along one side of a stalk that usually curls at the tip. It occurs as scattered individual plants in brackish and saline marshes at higher elevations or in areas subject to prolonged drying. The seeds are used as food by ducks and other birds.





Hibiscus lasiocarpus Cav.

Malvaceae

Marshmallow

Woolly rosemallow

Hibiscus lasiocarpus is a shrubby plant, 3 to 5 feet tall, with multiple stems and pubescent stems and leaves. It produces large, funnel-shaped flowers that have white petals with purple bases. It occurs as scattered individual plants in fresh and intermediate marshes on slightly elevated sites such as bayou and lake banks. The seeds are eaten by small birds.

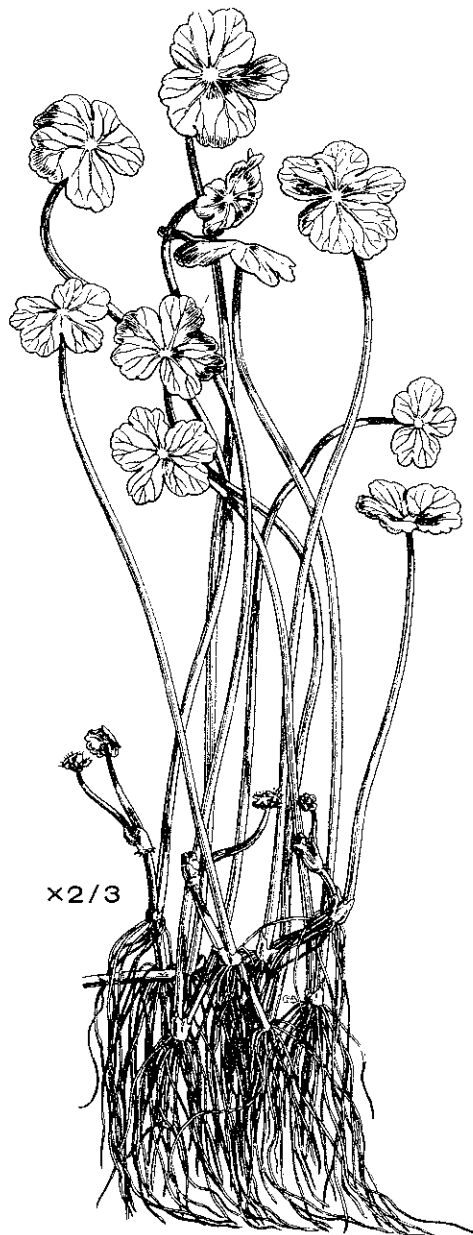
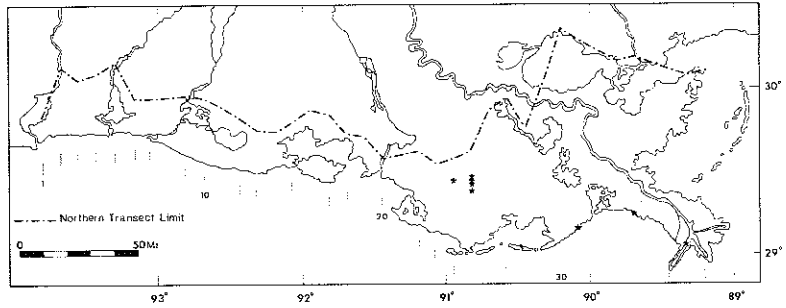


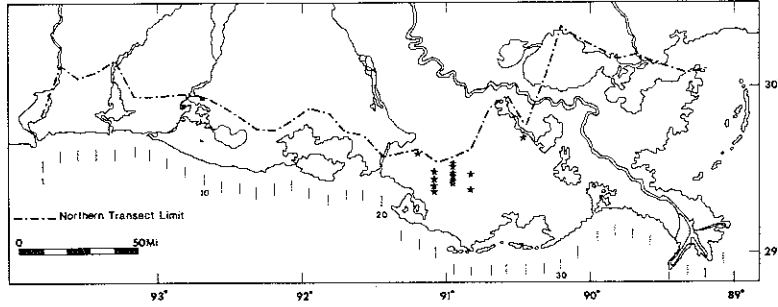
Hydrocotyle ranunculoides L.

Umbelliferae

Floating pennywort

Hydrocotyle ranunculoides is a small perennial plant of fresh marsh with creeping stems. Leaves rise vertically from the stem on long slender petioles. Leaves are reniform (kidney shaped) and 1 to 2 inches long with a sinus at the base and several deep lobes. Fruiting bodies also rise from the stem, but they are shorter than the leaves and form close, simple umbels. The plant occurs coastwide and is locally abundant. Seeds are used as food by ducks and other birds, and other parts of the plant are eaten by nutria.



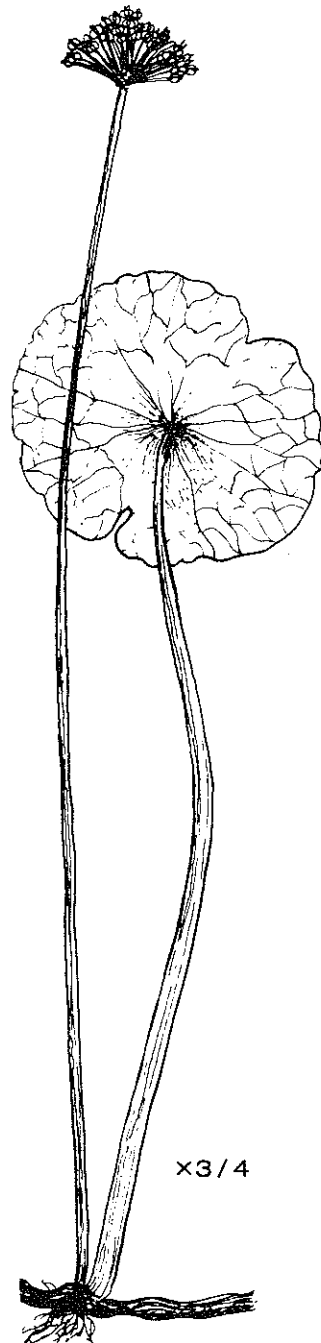


Hydrocotyle umbellata L.

Umbelliferae

Round pennywort

Hydrocotyle umbellata is a small perennial plant of fresh marsh with creeping stems. Leaves rise vertically from the stems on long slender petioles and are round, 1 to 2 inches in diameter, and crenately lobed. Fruiting bodies also rise from the stem and form a compact simple umbel usually above the leaves. It occurs coastwide and is locally abundant. There is no evidence that the plant is used as food by wildlife.

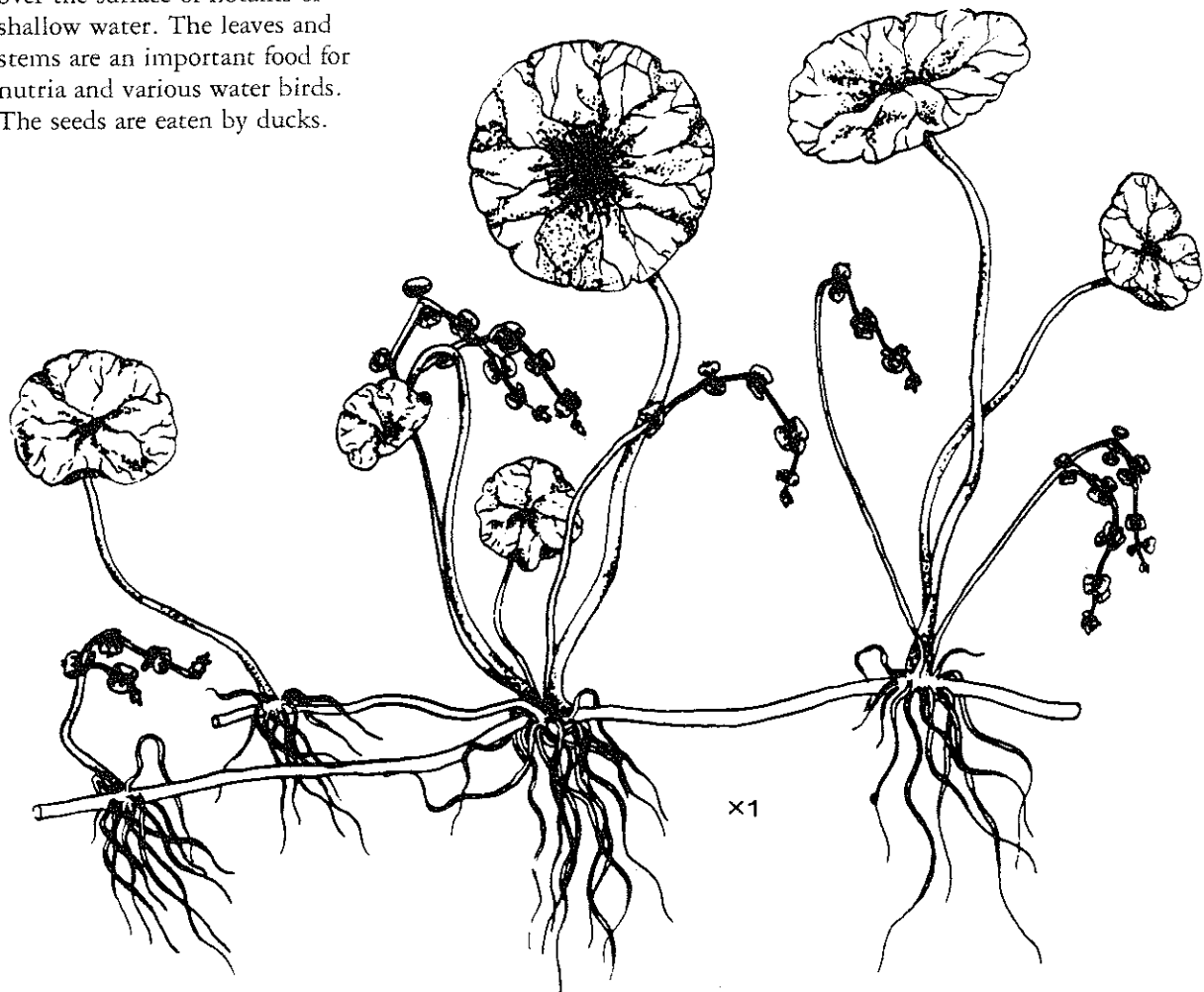
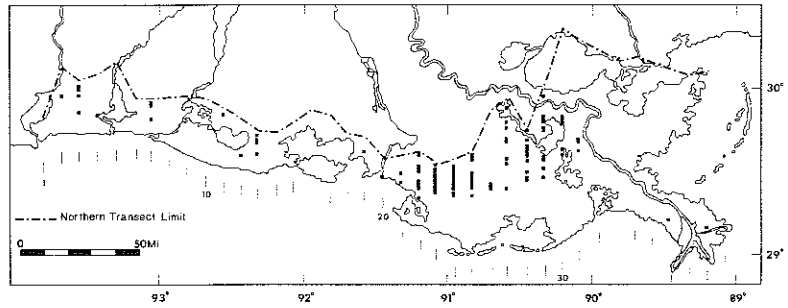


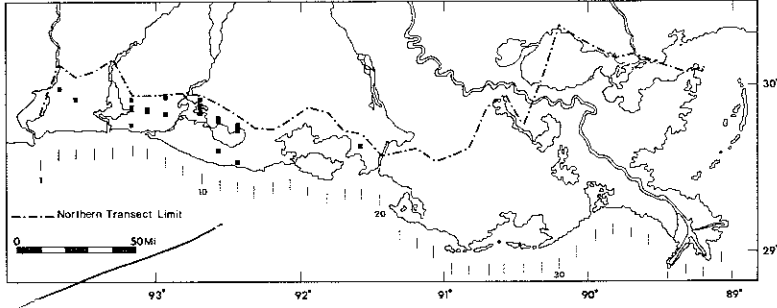
Hydrocotyle verticillata
Thunb.

Umbelliferae

Whorled pennywort

Hydrocotyle verticillata is a small, perennial plant of fresh marsh with long creeping stems. Leaves rise from the stem on short petioles and are round, 1 to 2 inches in diameter; leaves have shallow crenate lobes. Stalked fruiting structures also rise from the stem to about the same level as the leaves with the fruits forming in whorls or verticils along the stalks. The plant occurs coastwide and forms dense mats over the surface of flotants of shallow water. The leaves and stems are an important food for nutria and various water birds. The seeds are eaten by ducks.





Hymenocallis caroliniana
(L.) Herb.

Amaryllidaceae

Spider lily

Hymenocallis caroliniana is a lily with wide leaves and a thick flower stalk rising from a large bulb. The flowers are fragrant, white, and surrounded by six long bracts; they appear in the spring. Spider lilies grow on slightly elevated areas in fresh and intermediate marsh and are of little value to wildlife. A closely related plant, swamp lily (*Crinum americanum*), is also found in similar habitat.

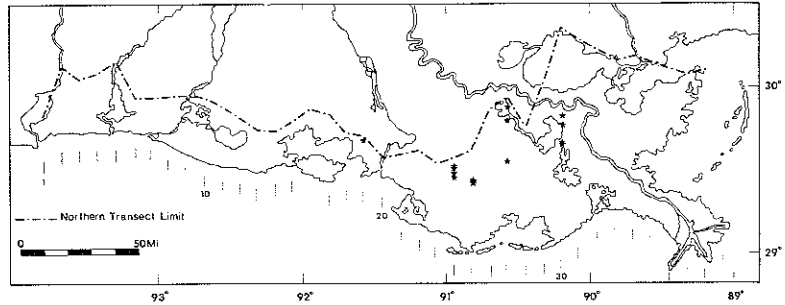


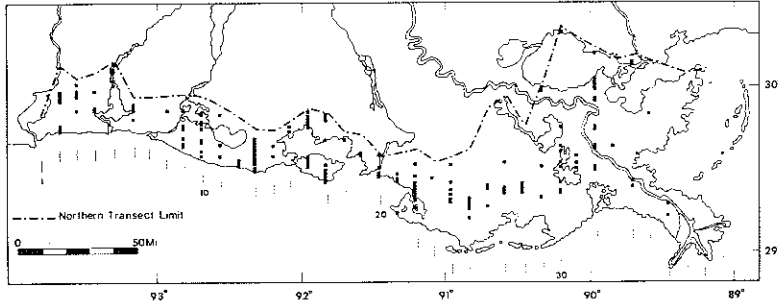
Hypericum virginicum L.

Hypericaceae

Marsh St. Johnswort

Hypericum virginicum is a small, locally common shrub, 1 to 2 feet tall, with sessile, ovate leaves rounded at the tips. Flowers develop in the leaf axil and upper parts of the plant and produce a capsule of numerous, small, tan-colored seeds. Seeds are eaten by ducks and other birds, and the leaves and tender stems are browsed by deer. The plant grows in fresh marsh and is usually found in areas with highly organic soils.



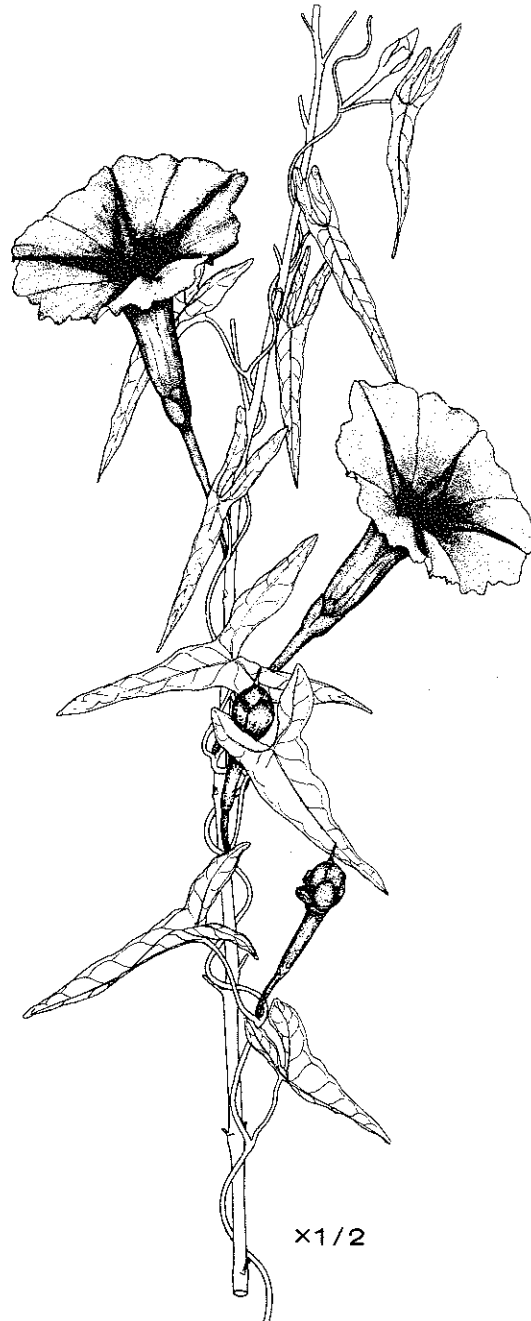


Ipomoea sagittata Cav.

Convolvulaceae

Marsh morningglory

Ipomoea sagittata is a perennial, twining vine of fresh to brackish marshes with large, funnel-shaped, lavender flowers and sagittate, deltoid leaves. It is a fairly common plant, often forming mats over other vegetation. Seeds are eaten by ducks and other birds.

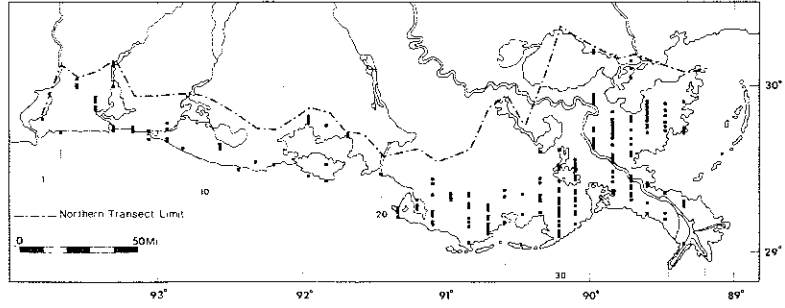


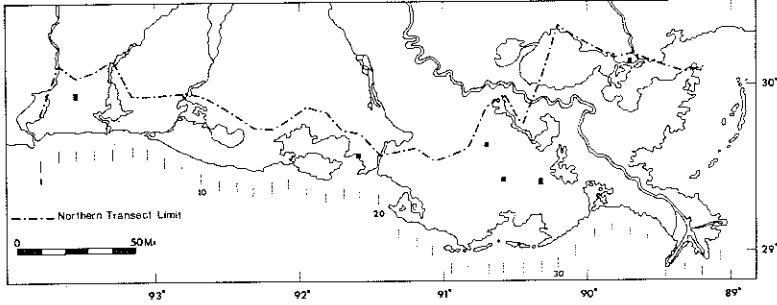
Iva frutescens L.

Compositae

Marshelder

Iva frutescens is a common evergreen shrub of brackish and saline marshes. It grows on elevated sites such as bayou and lake banks, ridges, and spoil deposits and often forms dense thickets. The leaves are opposite, lanceolate, toothed, leathery, and pale green in color. Flowers and fruits are inconspicuous and produced in terminal clusters. The plant provides valuable breeding and resting cover for birds.



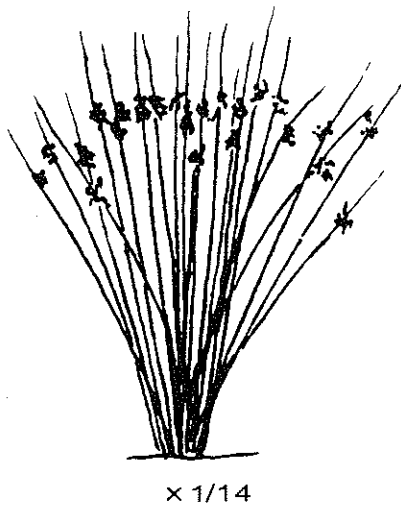


Juncus effusus L.

Juncaceae

Soft rush

Juncus effusus is a locally abundant perennial plant of fresh marsh with round, erect culms usually growing in dense clusters. The culm is 2 to 3 feet tall and light green in color; it contains a compact terminal panicle of many small flowers. A sharp-pointed bract extends upward 3 to 4 inches above the panicle and appears to be a continuation of the culm. The minute seeds form in capsules and are eaten by ducks and other birds. The roots and rhizomes are eaten by nutria and muskrats and cattle graze the culms.

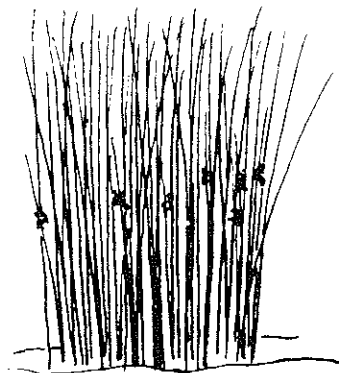
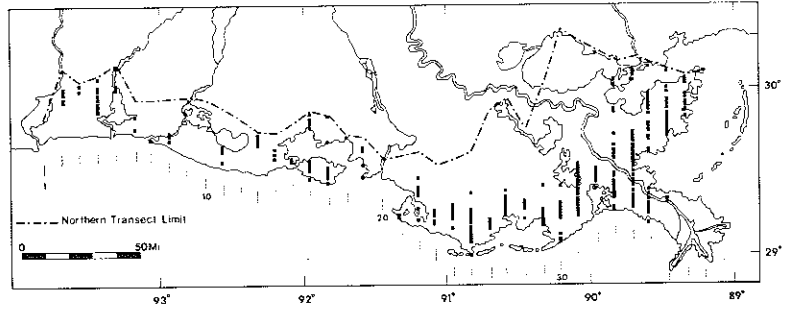


Juncus roemerianus Scheele.

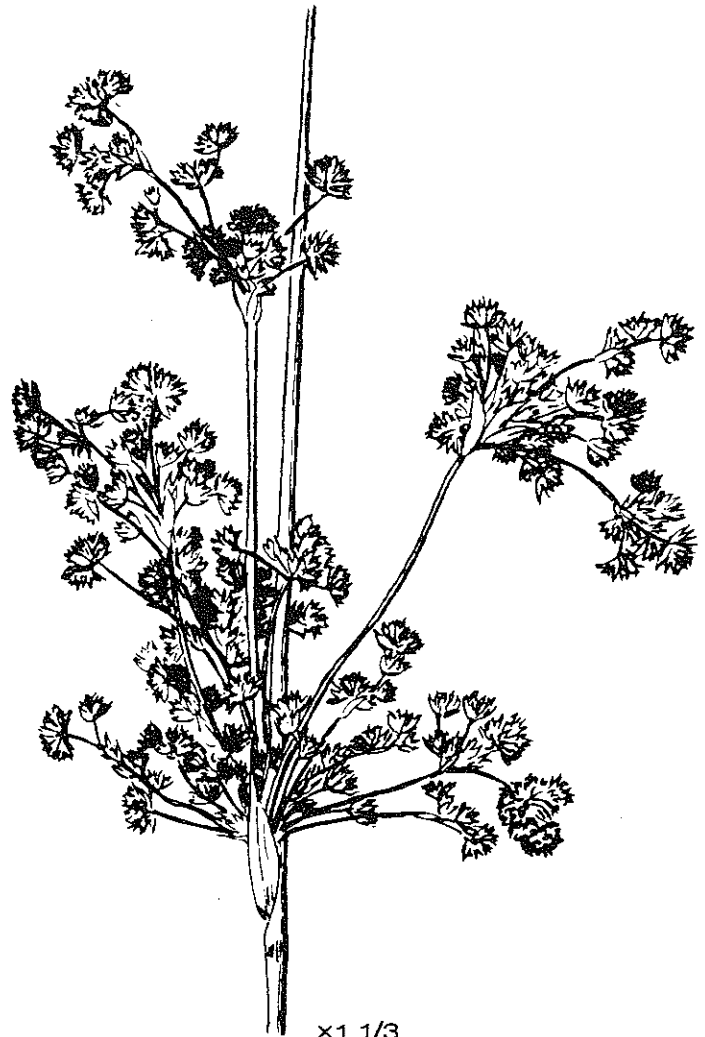
Juncaceae

Black rush
Needlegrass

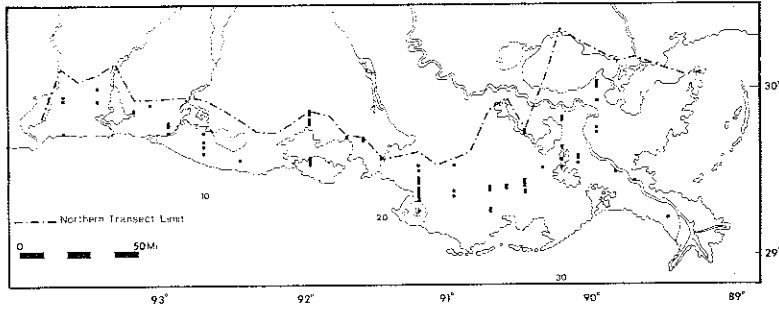
Juncus roemerianus is a common perennial plant with a round, erect culm. It frequently grows in broad, dense stands. The culm is 2 to 3 feet tall, dark green in color, and it contains a spreading, terminal panicle of many small flowers. A sharp pointed bract extends upward 3 to 4 inches above the panicle and appears to be a continuation of the culm. The plant is tolerant of a wide range of salinity levels and occurs in all marsh types, but it reaches greatest abundance in saline and brackish marshes. Frequency of flooding appears to be a critical factor regulating its distribution, and stands usually occur in marshes exposed intermittently. In tidal marshes, the plant is an important contributor to the detrital cycle, providing nutrients to estuarine organisms.



x 1/15



x 1 1/3



Kosteletzkya virginica
(L.) Gray.

Malvaceae

Saltmarsh mallow
Pink hibiscus

Kosteletzkya virginica is a branched herb, 2 to 3 feet tall, with pink flowers and cordate, coarsely toothed leaves. It grows in sparse stands in fresh to brackish marshes on slightly elevated sites such as bayou and lake banks. The seeds are eaten by small birds.

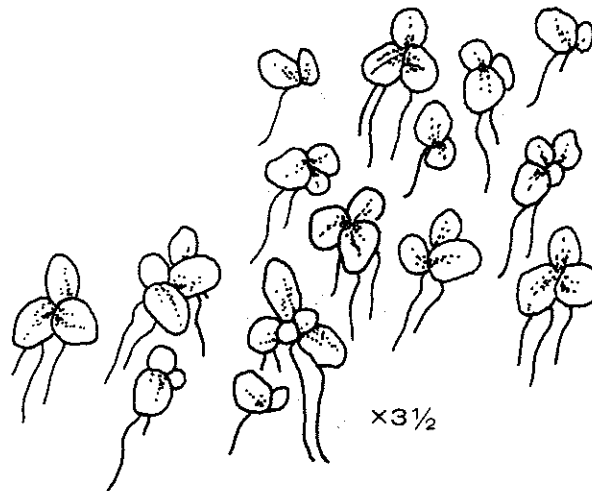
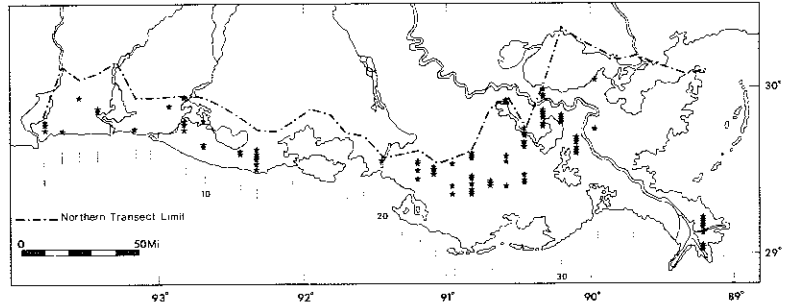


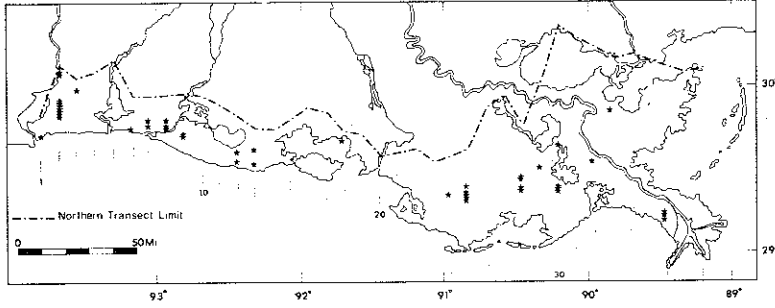
Lemna minor L.

Lemnaceae

Common duckweed

Lemna minor is a minute, floating, stemless plant that often forms a dense mat over the surface of water. It grows in bayous, canals, ponds, and moist mud flats in fresh and intermediate marsh; it occurs coastwide. The thallus or leaflike structure is flat on both sides and occurs singularly or in small clusters with one root each. The plant is an important food for ducks, coots, gallinules, nutria, and certain fishes such as striped mullet. The entire plant is consumed.



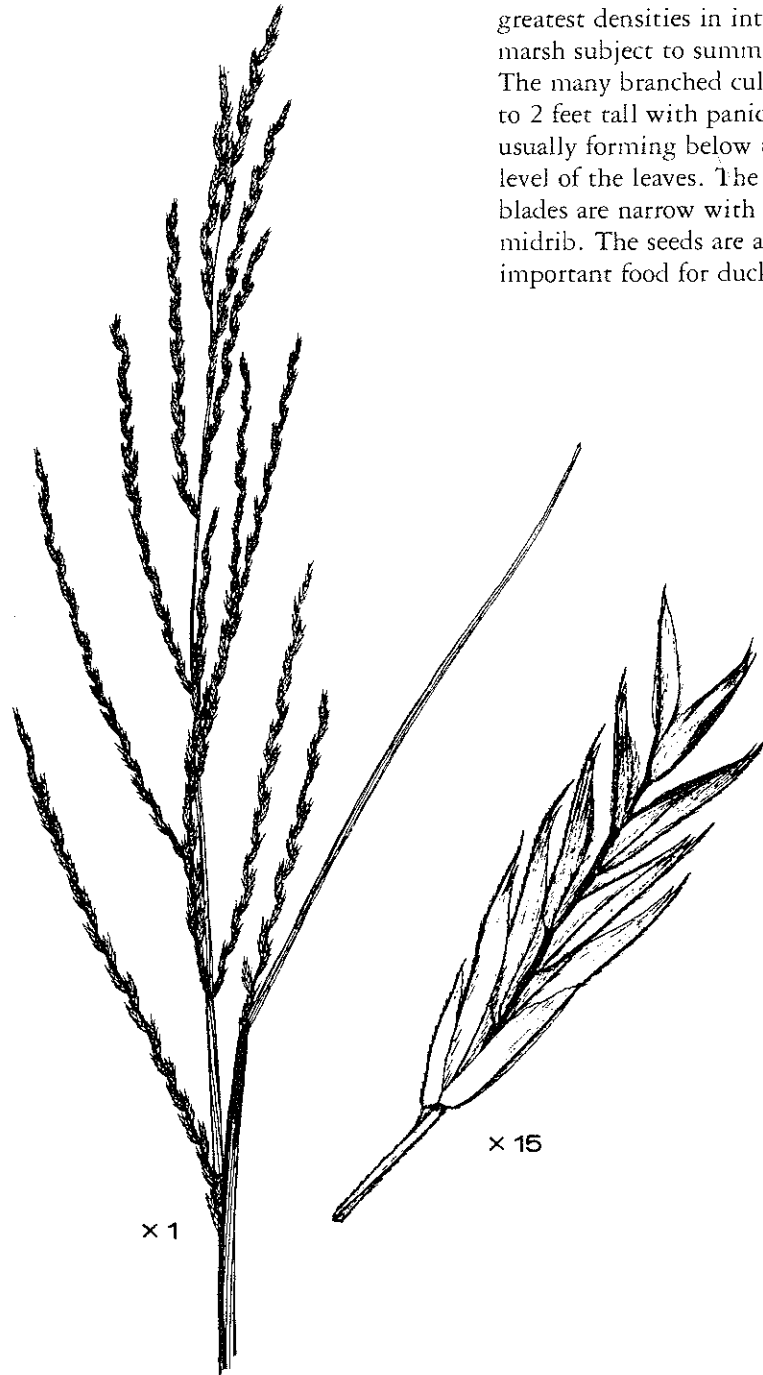


Leptochloa fascicularis
(Lam.) Gray.

Gramineae

Bearded sprangletop

Leptochloa fascicularis is an annual or perennial grass of fresh to brackish marshes, reaching greatest densities in intermediate marsh subject to summer drying. The many branched culms are 1 to 2 feet tall with panicles usually forming below the upper level of the leaves. The leaf blades are narrow with a whitish midrib. The seeds are an important food for ducks.

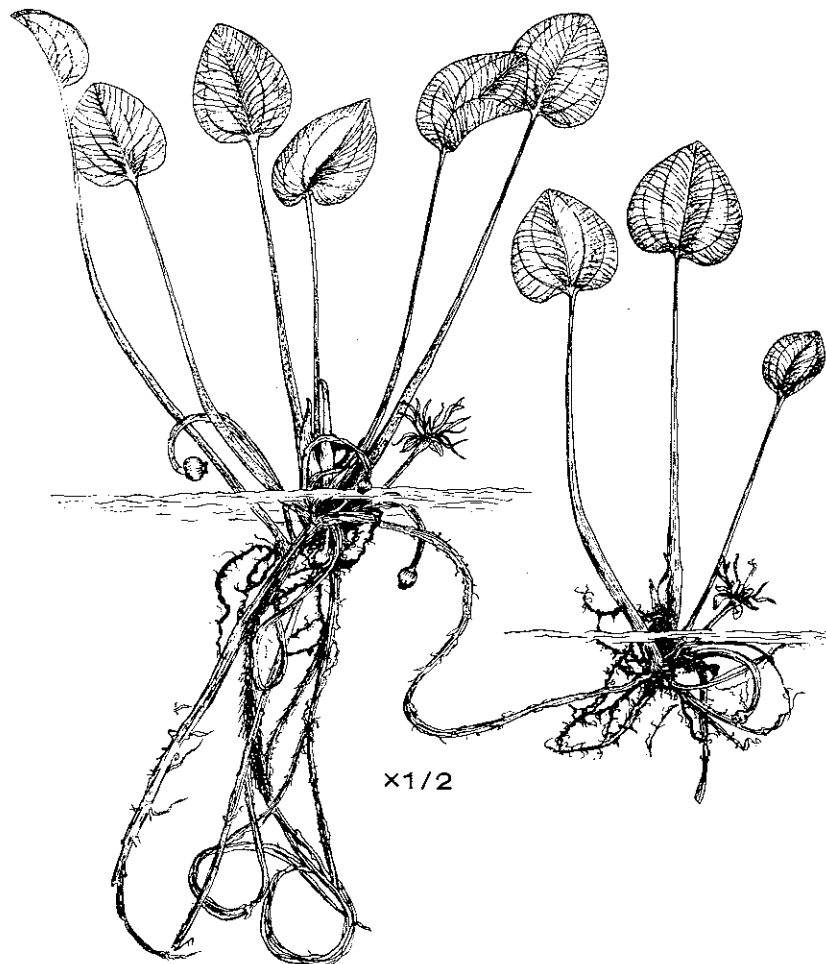
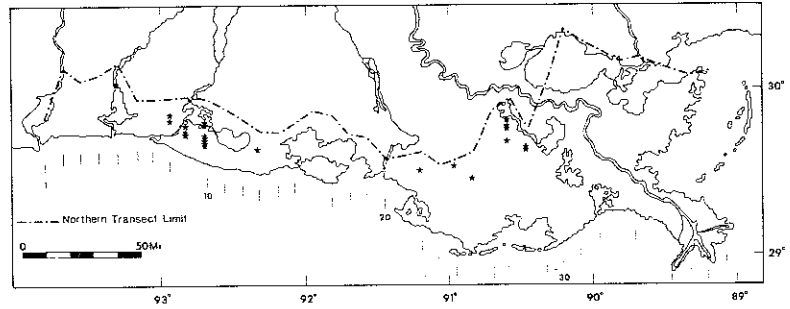


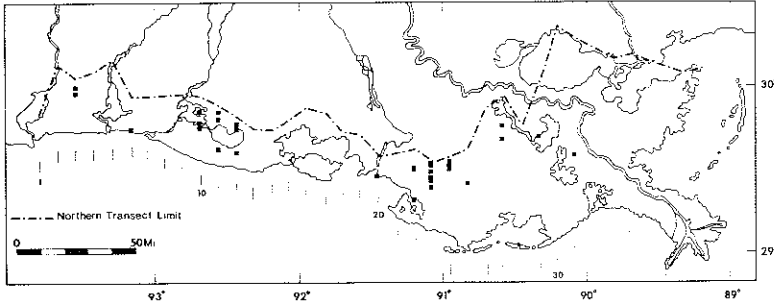
Limnobium spongia
(Bosc.) Steud.

Hydrocharitaceae

Common frogbit

Limnobium spongia is a floating, aquatic plant of fresh marsh, locally abundant in small ponds, bayous, and ditches. It produces a stolon. Leaves emerge from basal rosettes to a height of 2 to 6 inches. The leaves are 1 to 2 inches in diameter, ovate with a cordate base, and they contain spongy tissue on the lower surface. Seeds are contained in a small oval berry and are eaten by ducks. Other parts of the plant are consumed by nutria, muskrats, and deer.



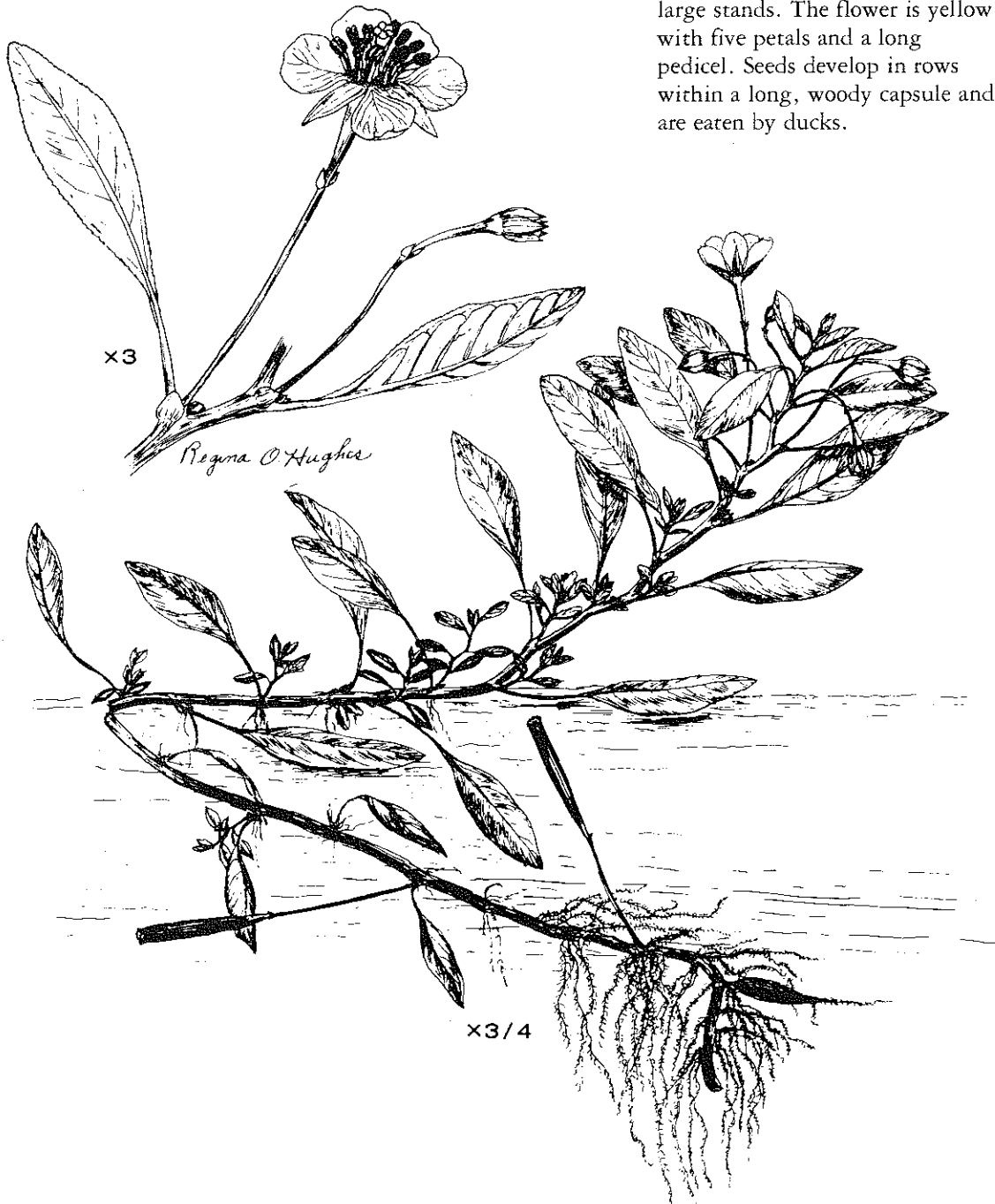


Ludwigia peploides
(H. B. K.) Raven
(*Jussiaea diffusa*)

Onagraceae

Floating waterprimrose

Ludwigia peploides is a trailing, floating herb rooted in the substrate of fresh marsh. It is widespread but it rarely occurs in large stands. The flower is yellow with five petals and a long pedicel. Seeds develop in rows within a long, woody capsule and are eaten by ducks.

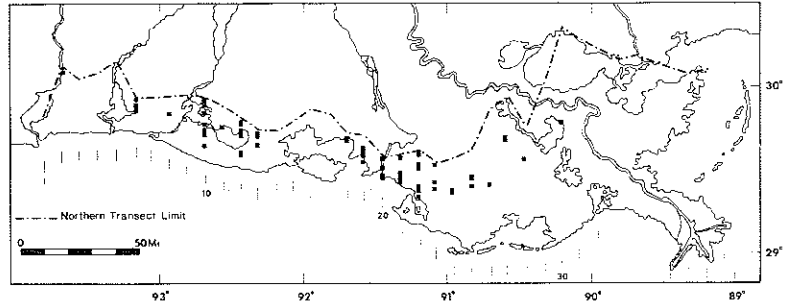


Ludwigia leptocarpa
(Nutt.) Hara

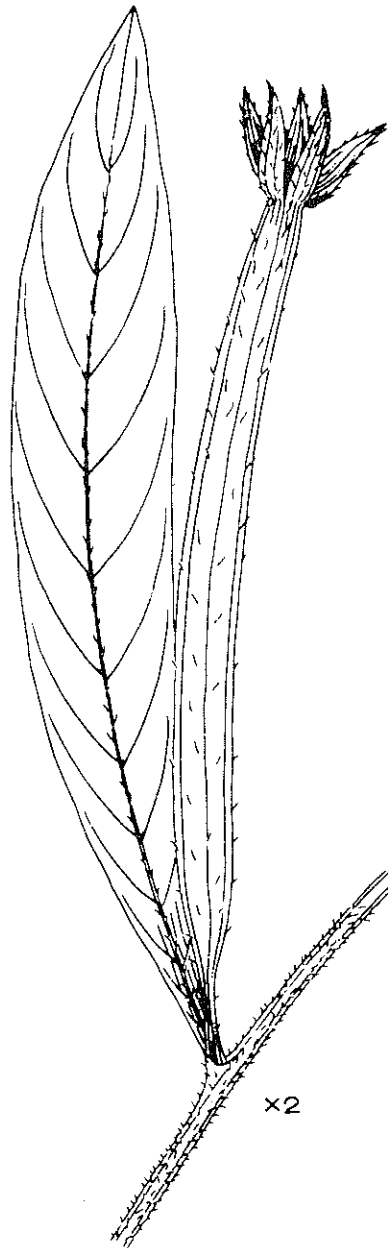
(*Jussiaea leptocarpa*)

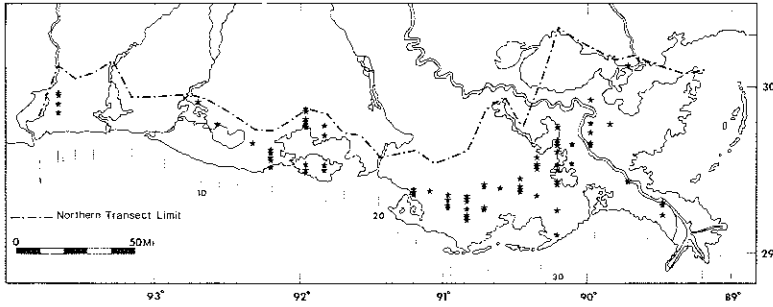
Onagraceae

False loosestrife
Primrose-willow



Ludwigia leptocarpa is a large, erect, much-branched herb, 3 to 5 feet tall, with a hairy stem and branches. The plant is locally abundant in fresh marsh at sites subject to summer drying. It produces numerous yellow flowers and conspicuous sepals. For a long time after maturity sepals remain attached to a 1 to 2 inch long capsule that contains small rows of seeds. The seeds are eaten by ducks and other birds.





Lythrum lineare L.

Lythraceae

Saltmarsh loosestrife

Lythrum lineare is an erect, perennial herb, up to 3 feet in height with an angular stem. The stem is much-branched in upper portions. It has small, opposite, linear leaves. Small, purplish flowers produce a capsule containing numerous small brown seeds. The plant grows under a wide range of salinities but reaches greatest abundance in intermediate and brackish marshes. Even under ideal conditions it occurs only as scattered individual plants and is of little value to wildlife.



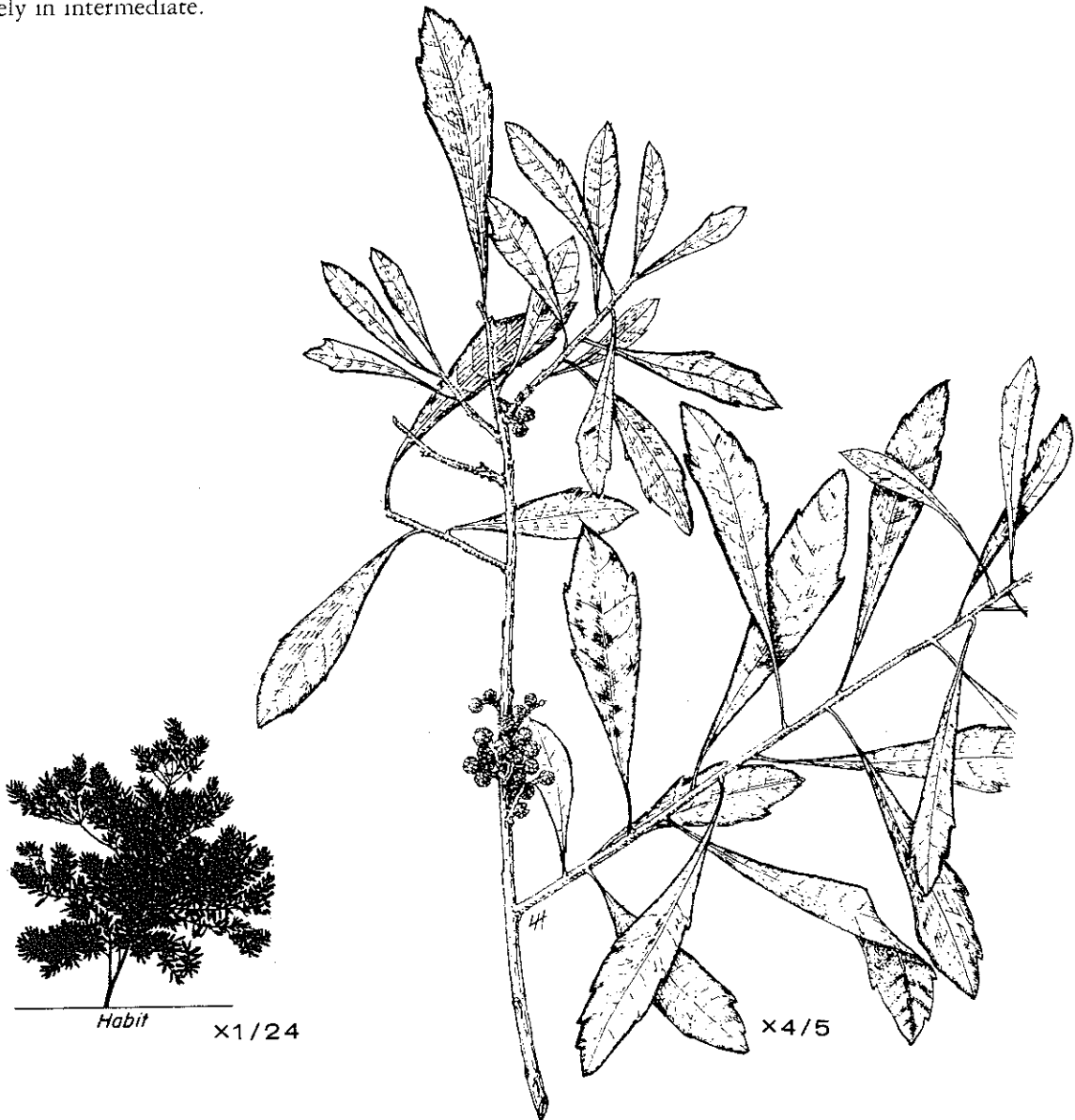
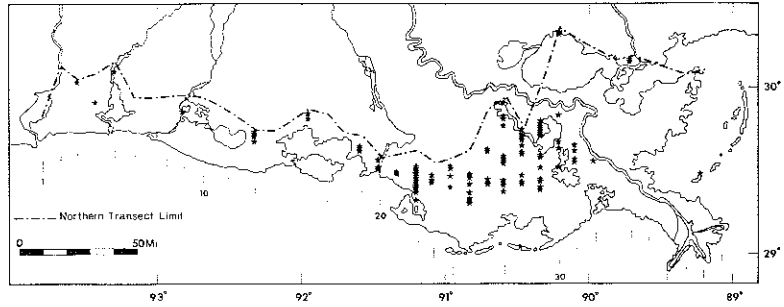
Myrica cerifera L.

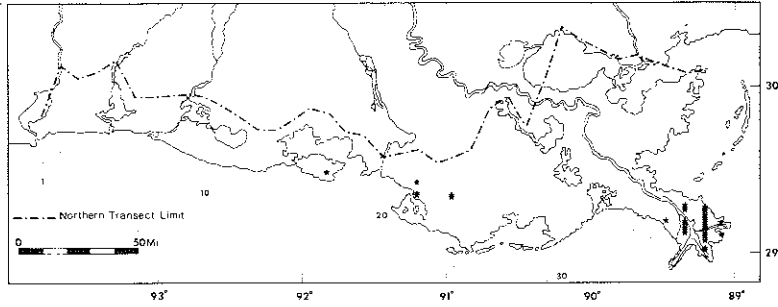
Myricaceae

Waxmyrtle

Myrica cerifera is a shrub or small tree, 5 to 10 feet tall. It is evergreen with aromatic leaves that are usually lanceolate and roothed. The small globose fruit have a whitish waxy coating and form in dense clusters.

Waxmyrtle occurs as scattered individual plants in fresh marsh and rarely in intermediate.



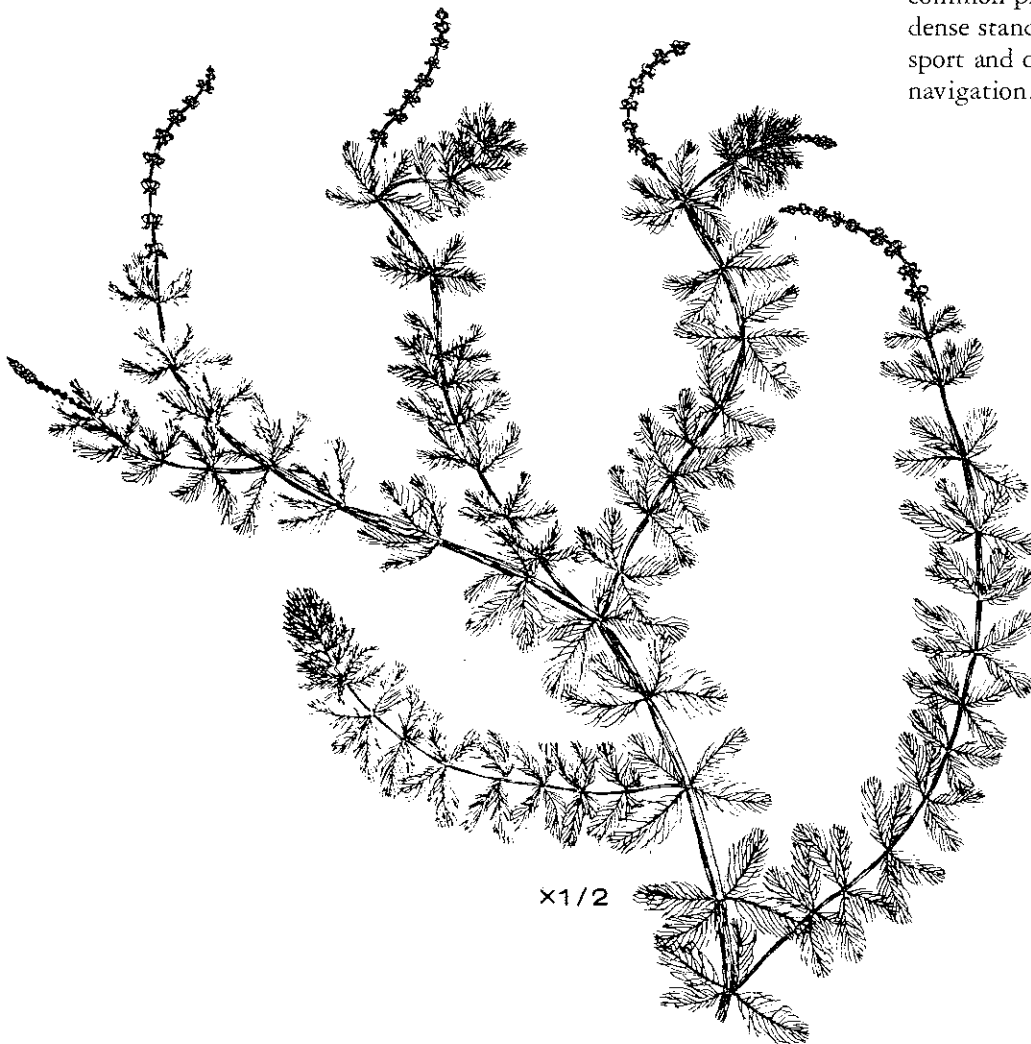


Myriophyllum spicatum L.

Haloragaceae

Eurasian watermilfoil

Myriophyllum spicatum is an exotic perennial, aquatic plant rooted in the bottoms of bayous, canals, ponds, lakes, and bays. It tolerates a wide range of water salinities ranging from fresh to brackish. The leaves are simply pinnate and occur in whorls along the stem. Flowers form along the upper portion of the stem, usually above water. The seeds are eaten by ducks and the leaves and stems by nutria; the plant is an important contributor of detritus to aquatic systems. A common plant, it grows in such dense stands that it handicaps sport and commercial fishing and navigation.

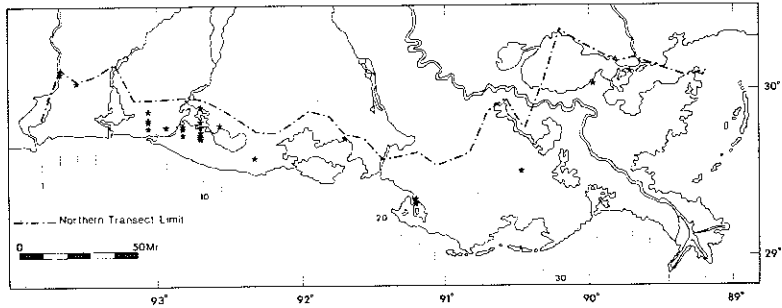


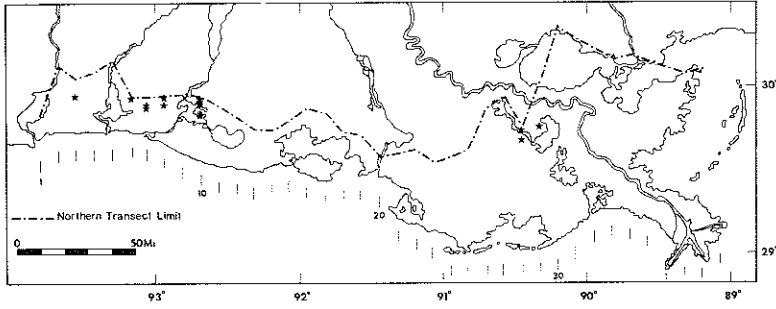
Najas quadalupensis
(Spreng.) Magnus.

Najadaceae

Southern naiad

Najas quadalupensis is a submerged aquatic plant rooted in the bottoms of bayous, canals, and ponds. The leaves are linear, opposite, and less than one-half inch long. It grows in water with salinity levels ranging from fresh to slightly brackish. Fairly common, it often forms dense mats in areas with low turbidity. The seeds and other parts of the plant are important duck food.



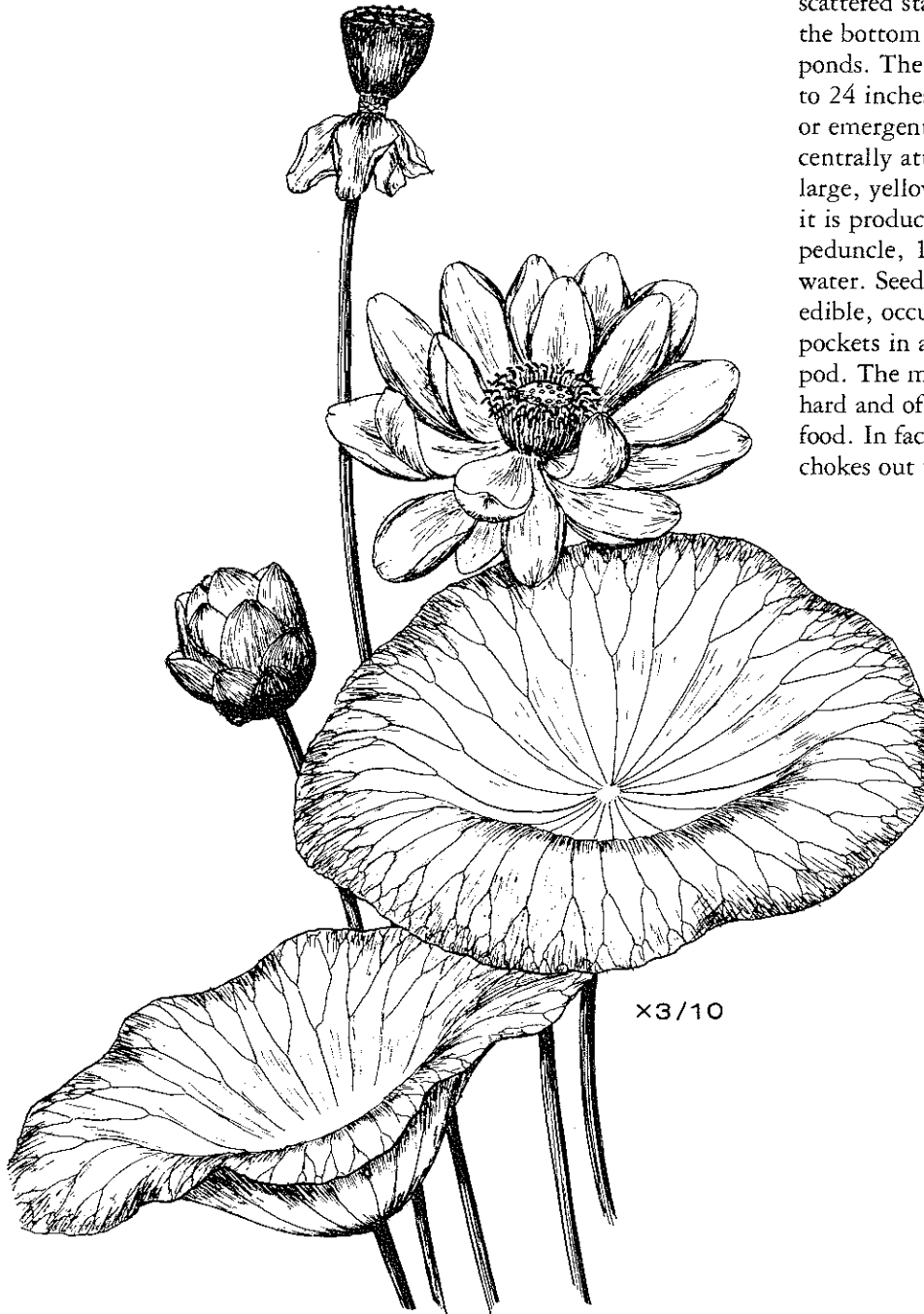


Nelumbo lutea
(Willd.) Pers.

Nymphaeaceae

American lotus
Water chinquapin
Grande volle

Nelumbo lutea is an aquatic, perennial herb that grows in scattered stands and is rooted in the bottom of shallow, freshwater ponds. The leaves are round, 12 to 24 inches in diameter, floating or emergent, with the petiole centrally attached. The flower is large, yellow, funnel-shaped, and it is produced on a long peduncle, 1 to 3 feet above the water. Seeds are acorn-like and edible, occurring individually in pockets in a large flat-topped pod. The mature seed is very hard and of little value as a duck food. In fact, the plant often chokes out valuable food plants.



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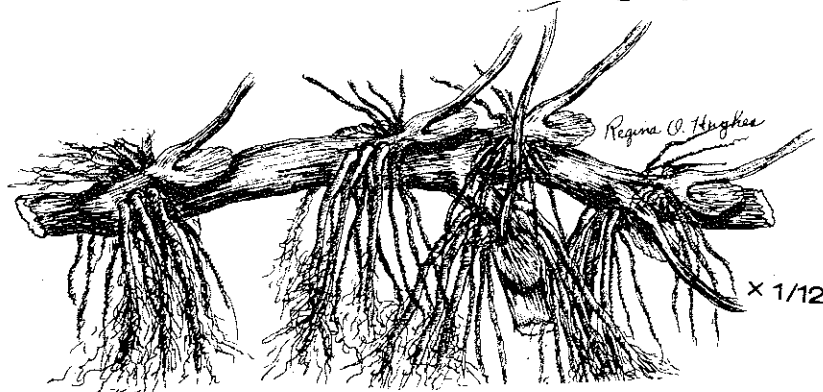
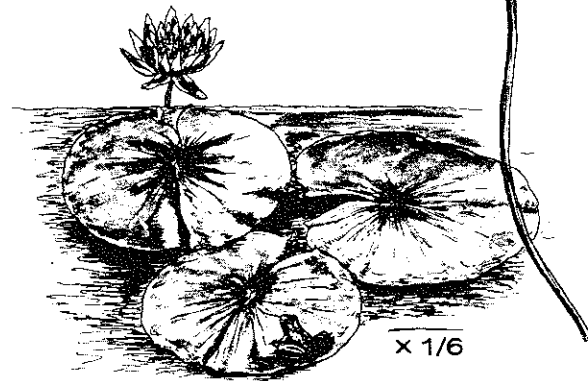
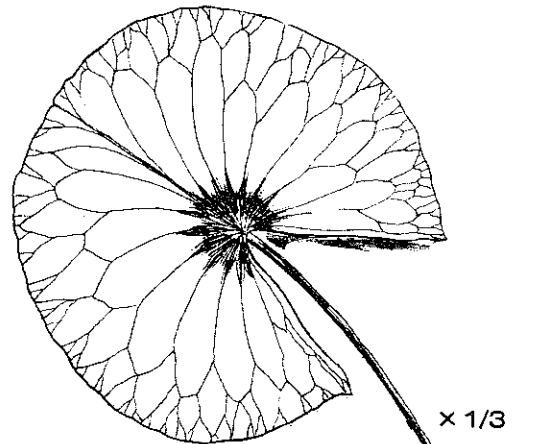
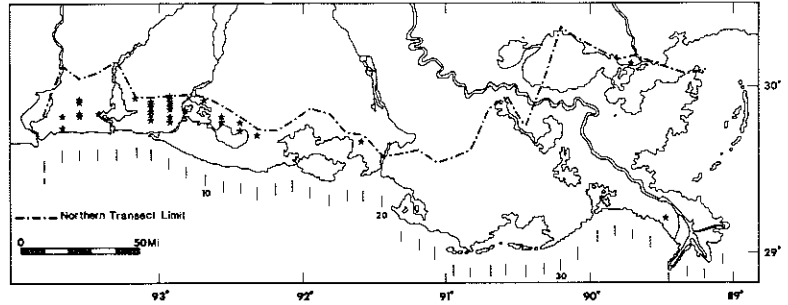
Nymphaea odorata Ait.

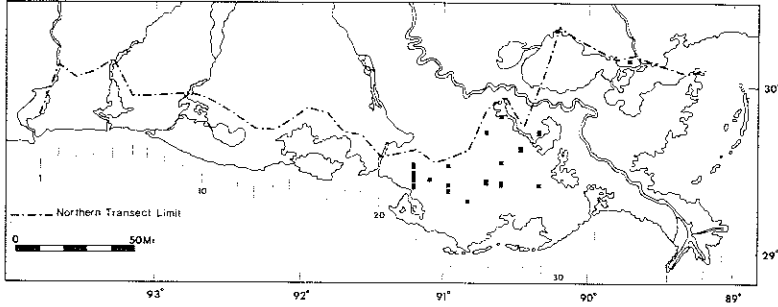
Nymphaeaceae

White waterlily

Nymphaea odorata is a fairly common aquatic plant with floating leaves that are cleft at the base, 2 to 6 inches in diameter, green above and purplish below. Leaves rise from a stout, woody rhizome in the bottom of freshwater ponds. The flower also rises from the rhizome and floats on the surface or extends slightly above the surface. The flower is white and fragrant. The seeds are an acceptable duck food, but the plant often chokes out more valuable food plants.

Banana waterlily (*Nymphaea mexicana*), a similar but less common relative of white waterlily, grows in marsh ponds with water salinities ranging from fresh to brackish and can be distinguished by its soft yellow flower. The seeds and small, banana-like tubers are excellent duck foods. Another relative, spadder-dock (*Nuphar luteum*), not only grows in marsh ponds but also occurs in tidal streams of low water salinity. Spadder-dock leaves may be as large as 12 inches in diameter. The flowers are yellow, rigid, and open only partially.



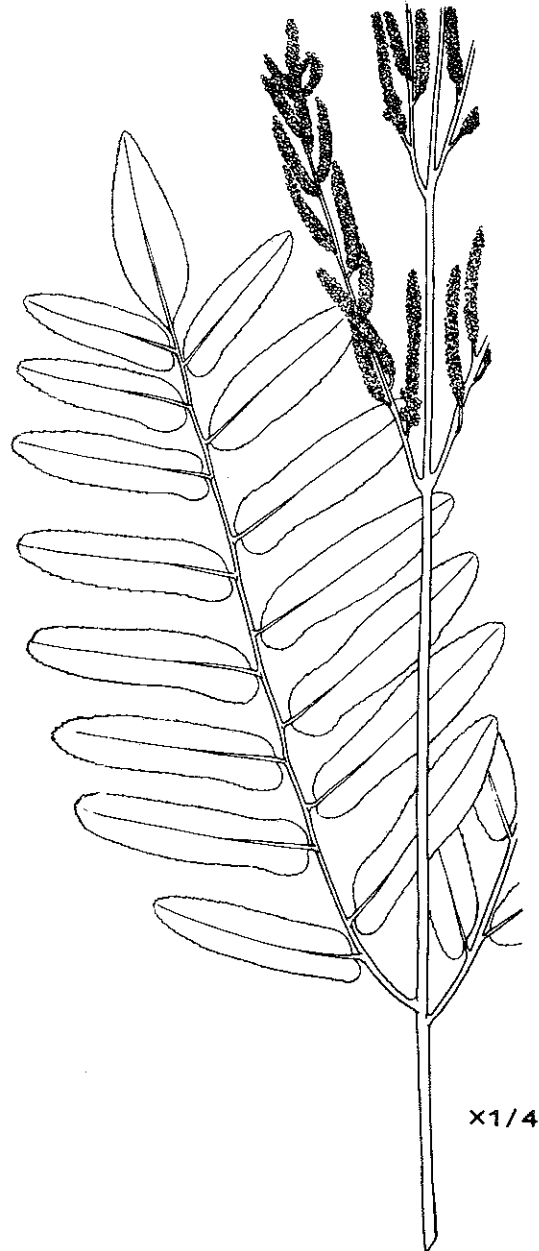


Osmunda regalis L.

Osmundaceae

Royal fern

Osmunda regalis is a perennial plant of fresh marsh with clusters of erect leaves, 2 to 3 feet long emerging from a round, fibrous, black base about 1 foot tall. It is relatively uncommon in marshes, except in marsh-swamp transition zones, and it is of only minor value to wildlife.

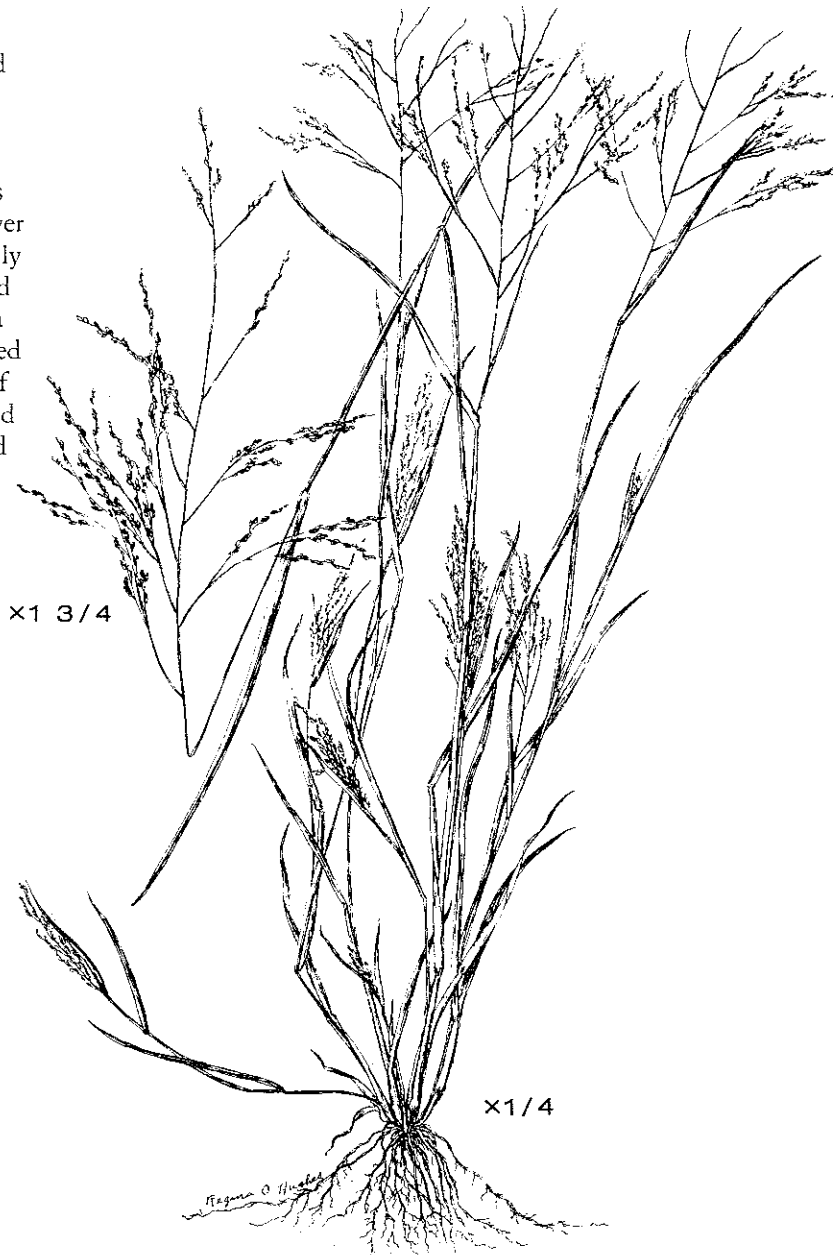
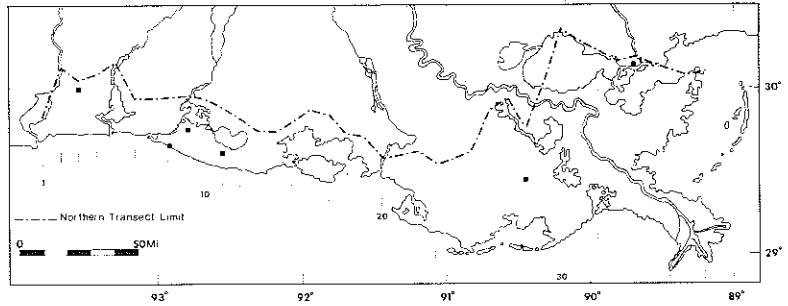


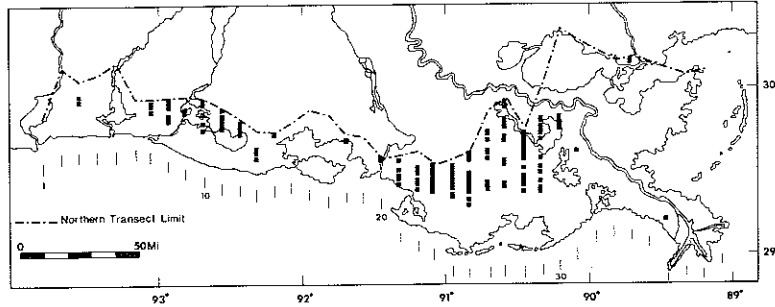
Panicum dichotomiflorum
Michx.

Gramineae

Fall panicum
Zig-zag grass

Panicum dichotomiflorum is an annual grass of fresh and intermediate marshes. Stands are produced during late summer when soil becomes dry and seeds are permitted to germinate and grow. The plant will often occupy areas that have produced stands of other annual plants earlier in the growing season. Each root system will produce several culms that reach lengths of 3 to 5 feet and usually fall over as the plant matures. The heavily branched culms commonly bend slightly at the nodes, forming a zig-zag pattern. Large, open seed heads develop at the terminal of each culm and culm branch, and the seeds produced are preferred duck foods.





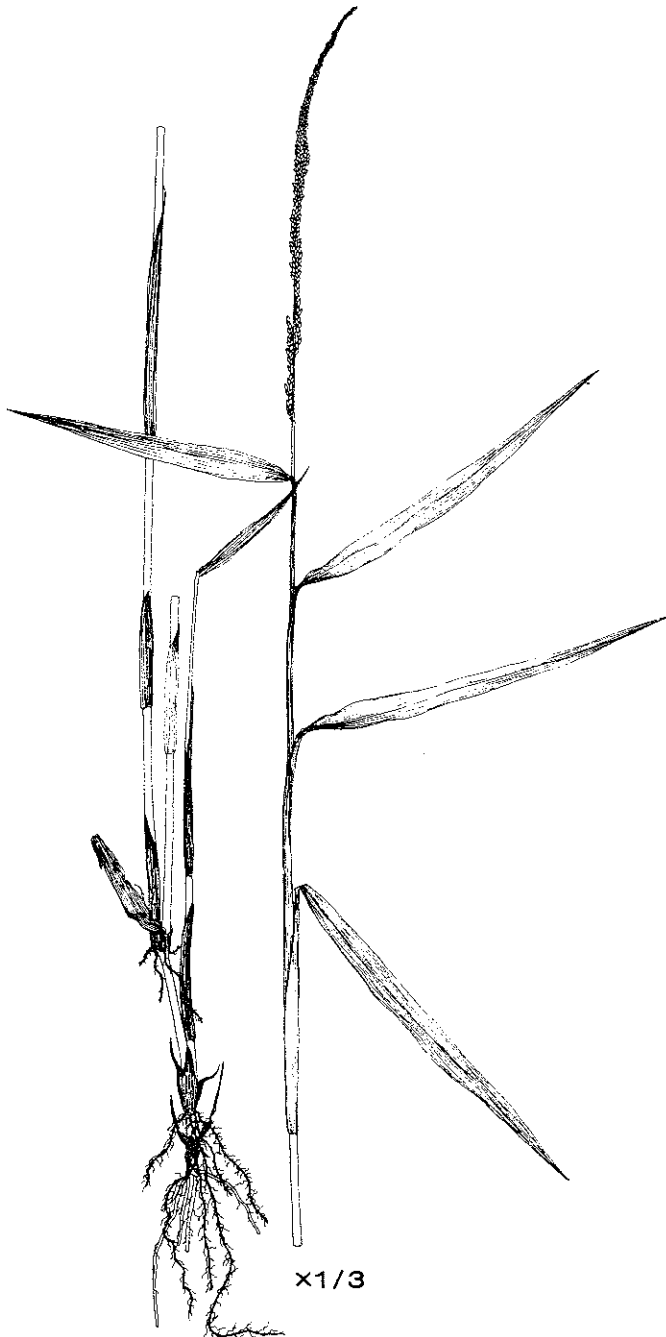
Panicum hemitomon Schult.

Gramineae

Maidencane

Paille fine

Panicum hemitomon is a very common perennial grass in fresh marsh, having extensive creeping rhizomes and cane-like culms 2 to 4 feet long. The inflorescence is long and narrow and produces seeds sparingly. On highly organic substrate it produces vast, dense, and almost homogenous stands. The plant is of minor value to ducks, and dense stands often crowd out more valuable food plants. The rhizomes are an important food of muskrats and nutria. Land building is a major role of marsh plants, and this species is probably the major contributor of organic matter to the Louisiana coastal marsh.

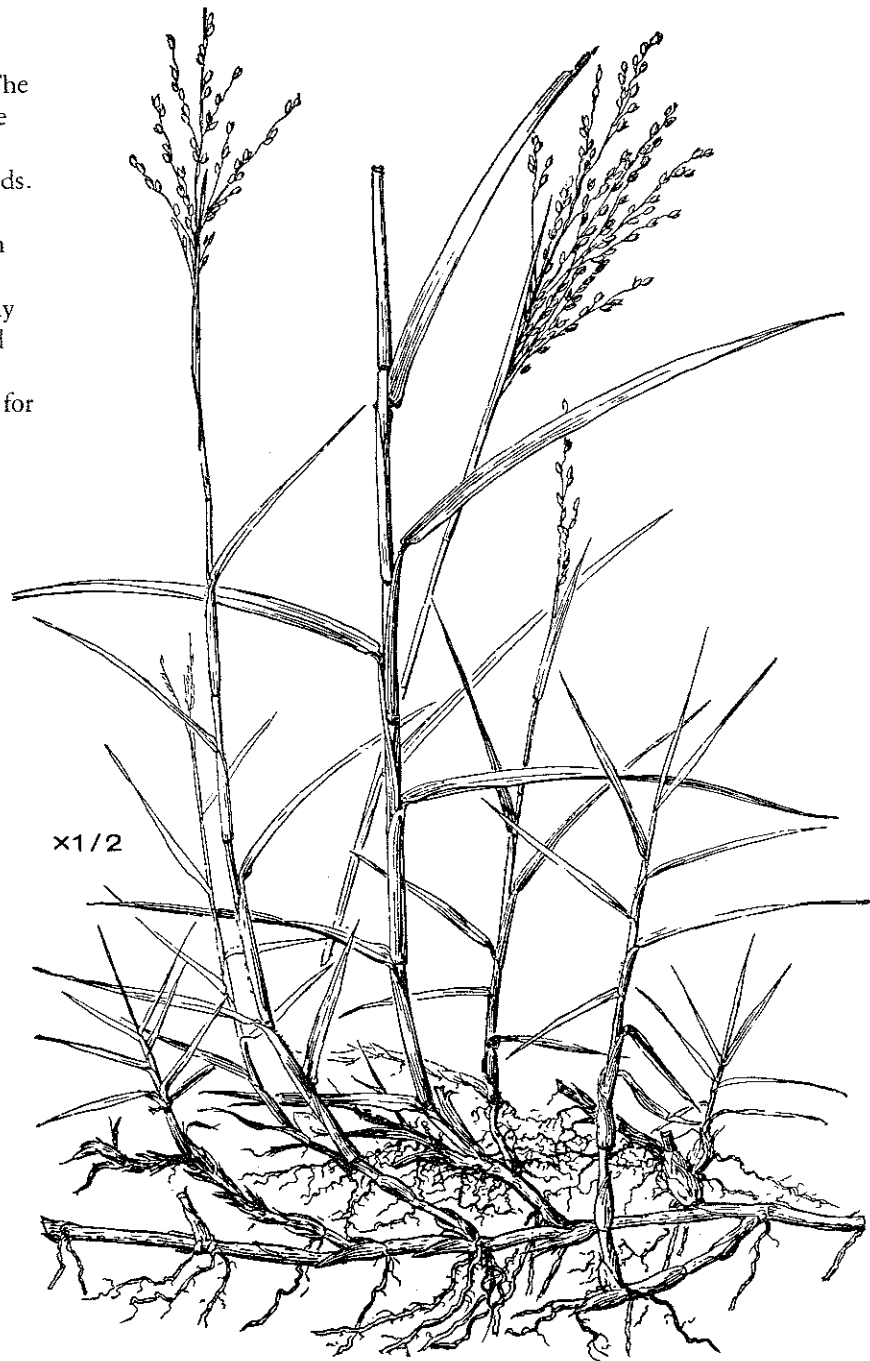
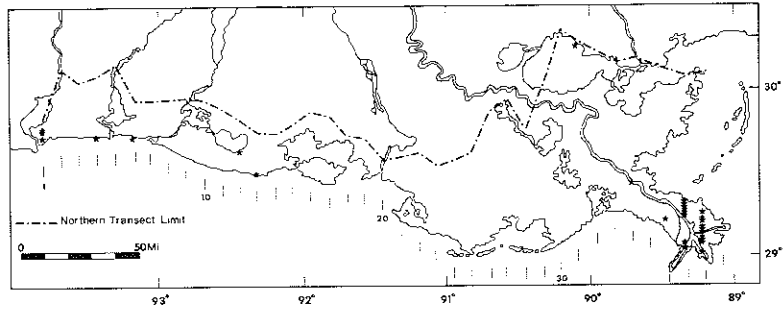


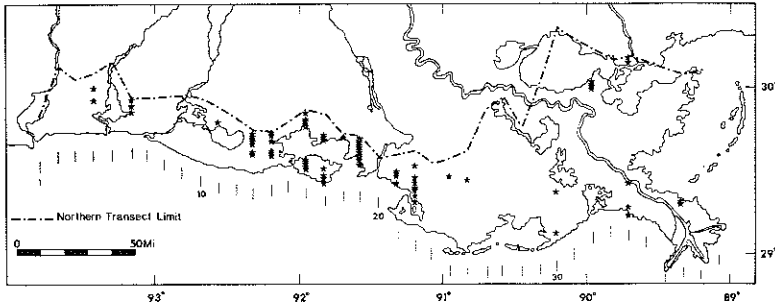
Panicum repens L.

Gramineae

Torpedo grass
Dogtooth grass

Panicum repens is a perennial grass with extensively creeping rhizomes and erect culms, 12 to 18 inches tall, rising from the nodes. Newly sprouted culms emerge from the soil sharply pointed and torpedo shaped. The inflorescence is an open panicle and produces an abundance of seeds used as food by small birds. The plant is limited in distribution and grows in fresh and intermediate marshes on slightly elevated sites. A locally abundant plant on beaches and pass banks on the Mississippi River delta, it provides forage for rabbits, nutria, and cattle.



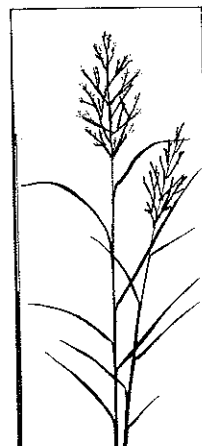


Panicum virgatum L.

Gramineae

Switch grass
Feather grass

Panicum virgatum is a large, perennial grass with bunched culms, 4 to 6 feet tall. The inflorescence is large and spreading and produces seeds eaten by small birds. It grows in dense stands on slightly elevated sites, such as bayou and lake banks, in fresh to brackish marshes. It provides valuable cover to various forms of wildlife. The rhizomes are eaten by nutria.

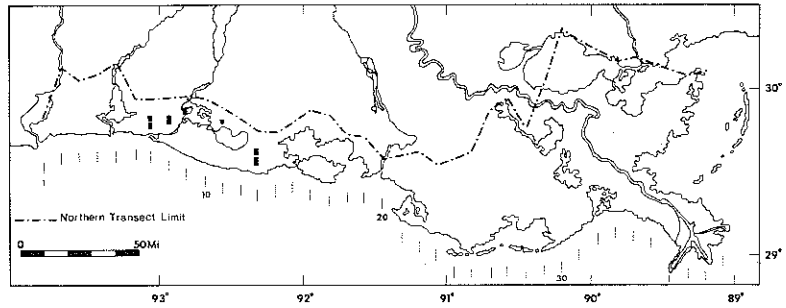


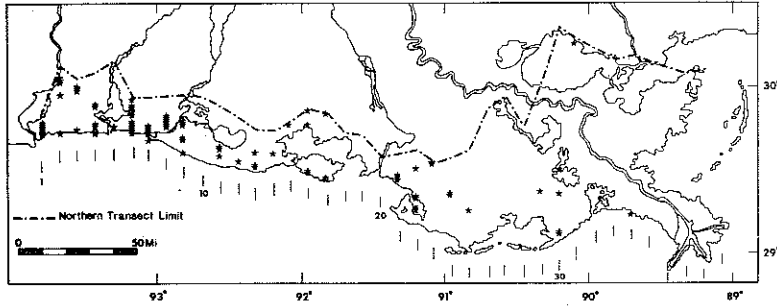
Paspalum dissectum (L.) L.

Gramineae

Mudbank paspalum

Paspalum dissectum is a perennial grass, locally abundant in fresh and intermediate marshes and forming dense mats. Culms are 6 to 24 inches tall and freely branching. The inflorescence is a panicle with two to four racemes, each having two rows of seeds on one side of the rachis. Seeds are eaten by ducks, and rhizomes and culms provide food for muskrats and nutria.



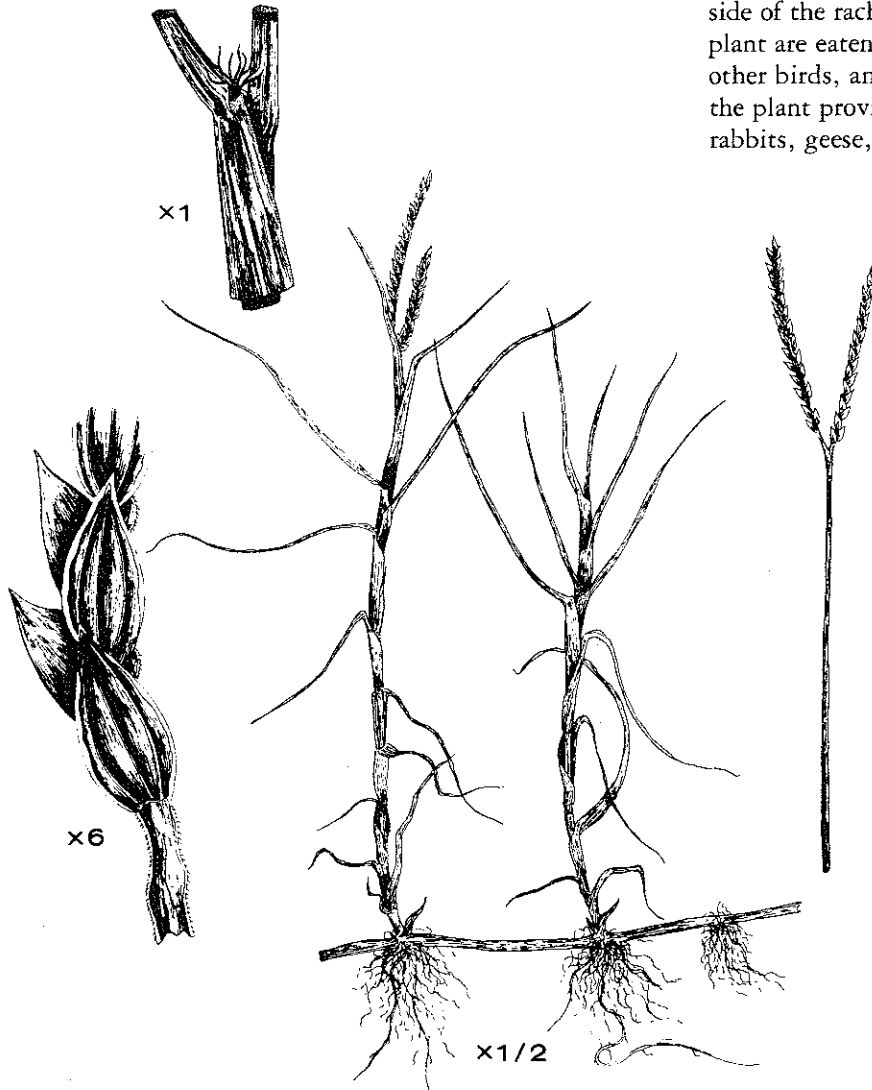


Paspalum vaginatum Sw.

Gramineae

Seashore paspalum
Joint grass

Paspalum vaginatum is a perennial grass, locally abundant in fresh to brackish marshes but reaching greatest density in intermediate marsh subject to moderate cattle grazing. The culms are compressed, 6 to 18 inches tall, and they grow from creeping rhizomes. The inflorescence consists of paired spreading racemes with each having two rows of seeds on one side of the rachis. Seeds of the plant are eaten by ducks and other birds, and other parts of the plant provide food for nutria, rabbits, geese, and cattle.

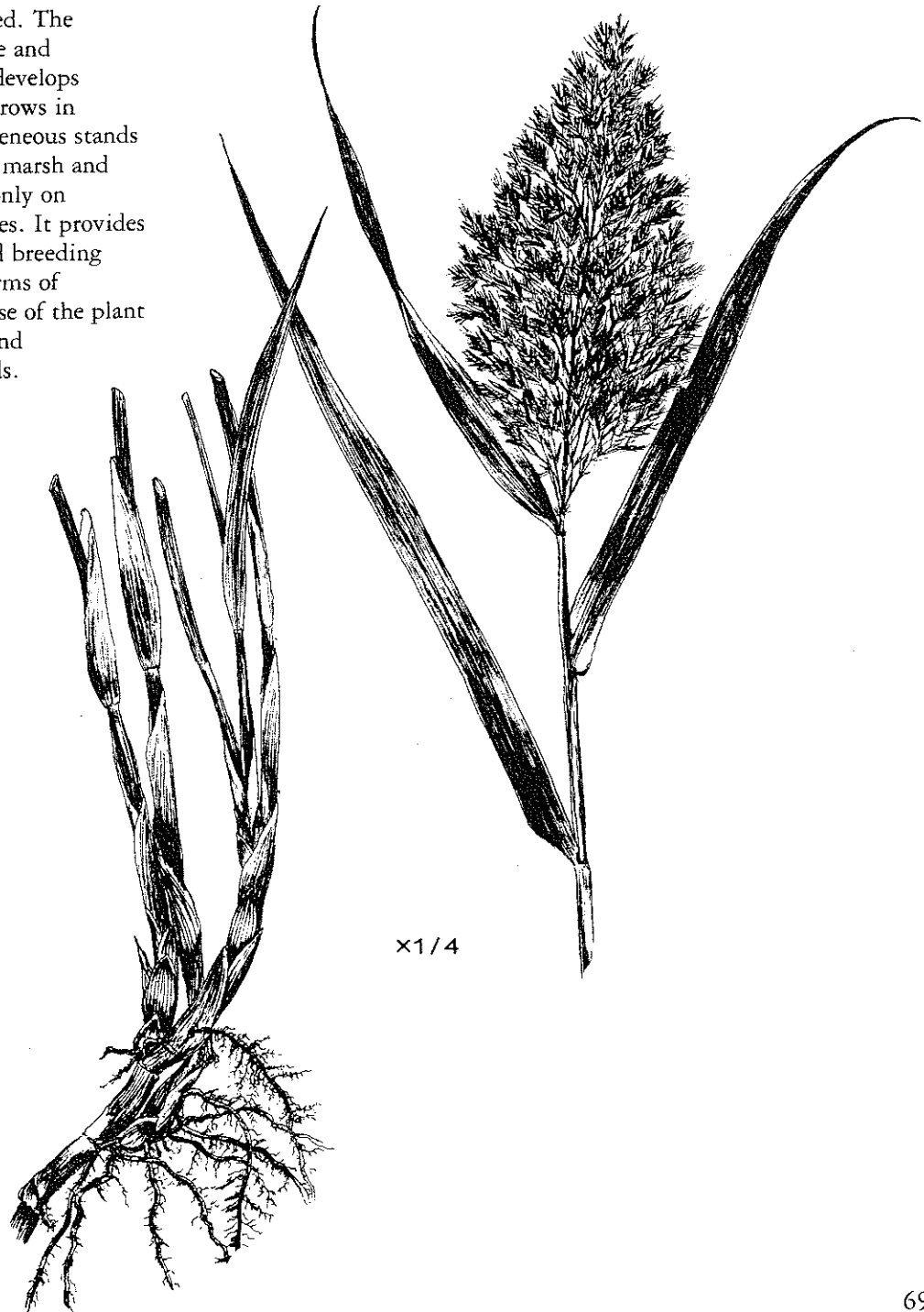
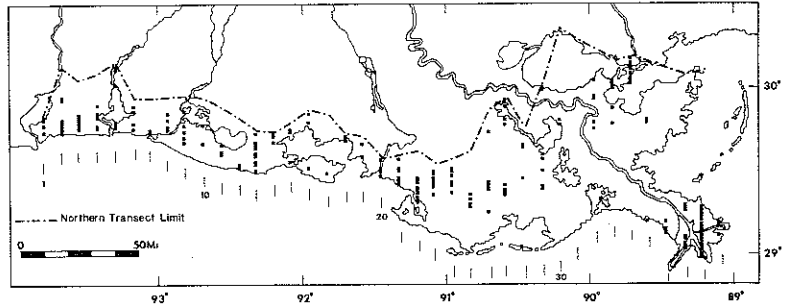


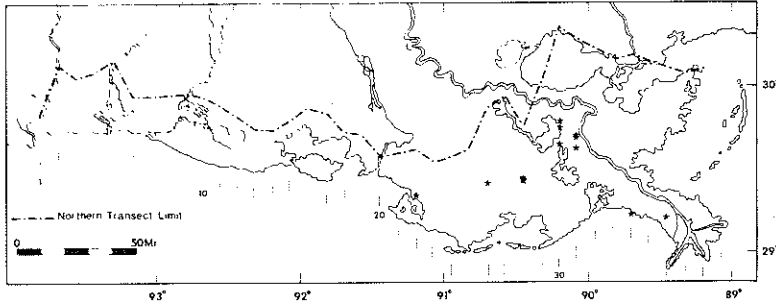
Phragmites communis Trin.

Gramineae

Common reed
Roseau

Phragmites communis is a large, perennial, cane-like grass, with stout creeping rhizomes. Culms are erect; 8 to 12 feet tall and occasionally branched. The inflorescence is large and plume-like, and it develops during the fall. It grows in dense, often homogeneous stands in fresh to brackish marsh and occurs most commonly on slightly elevated sites. It provides valuable resting and breeding cover for various forms of wildlife. A major use of the plant is for covering around duck-hunting blinds.



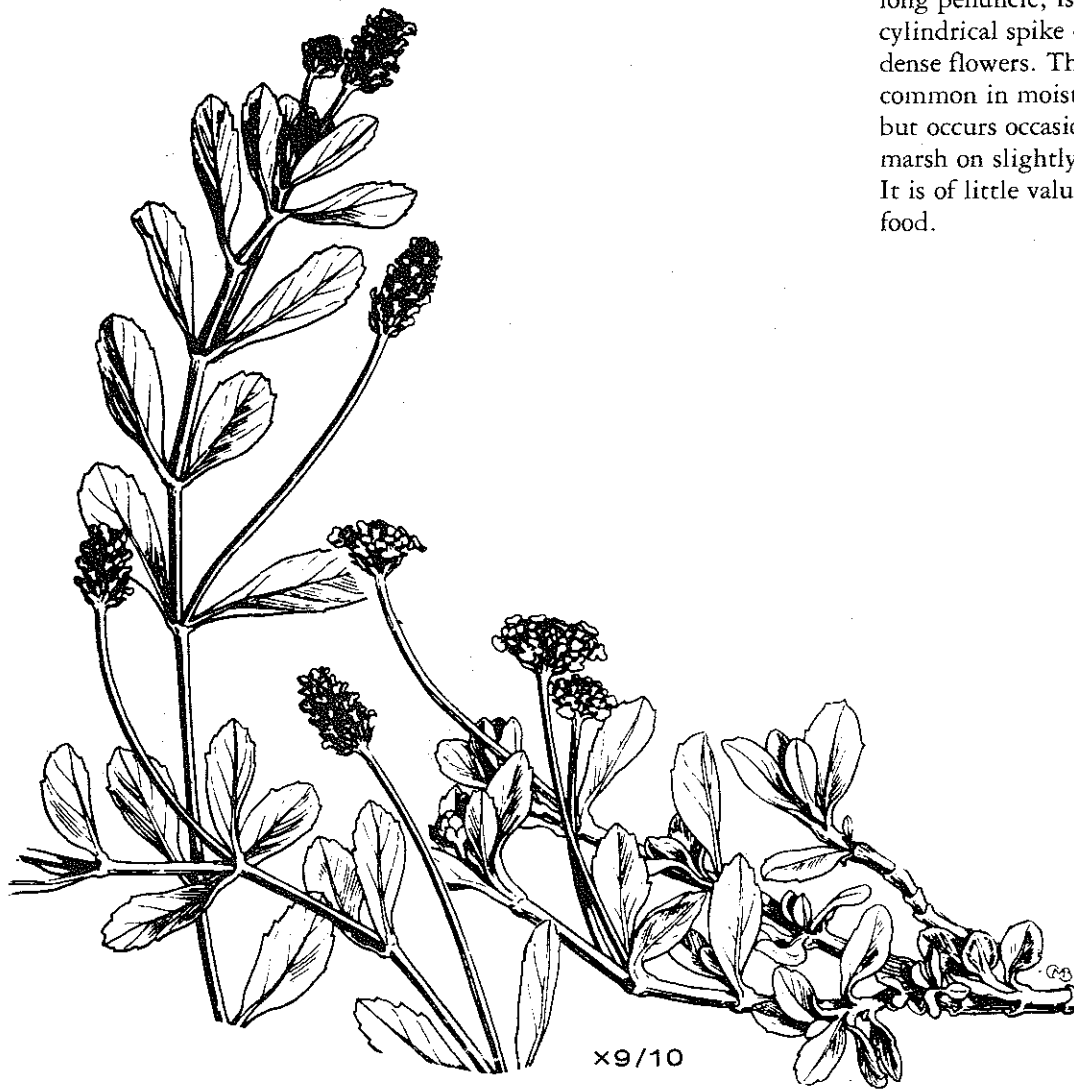


Phyla nodiflora
(L.) Greene.
(*Lippia nodiflora*)

Verbenaceae

Common frogfruit

Phyla nodiflora is a perennial, creeping herb often rooting at the nodes. Branches rise from the stem and the leaves are opposite, toothed, and leathery in texture. The fruiting head, produced on a long peduncle, is a short cylindrical spike containing small dense flowers. The plant is fairly common in moist upland sites but occurs occasionally in fresh marsh on slightly elevated sites. It is of little value as a wildlife food.

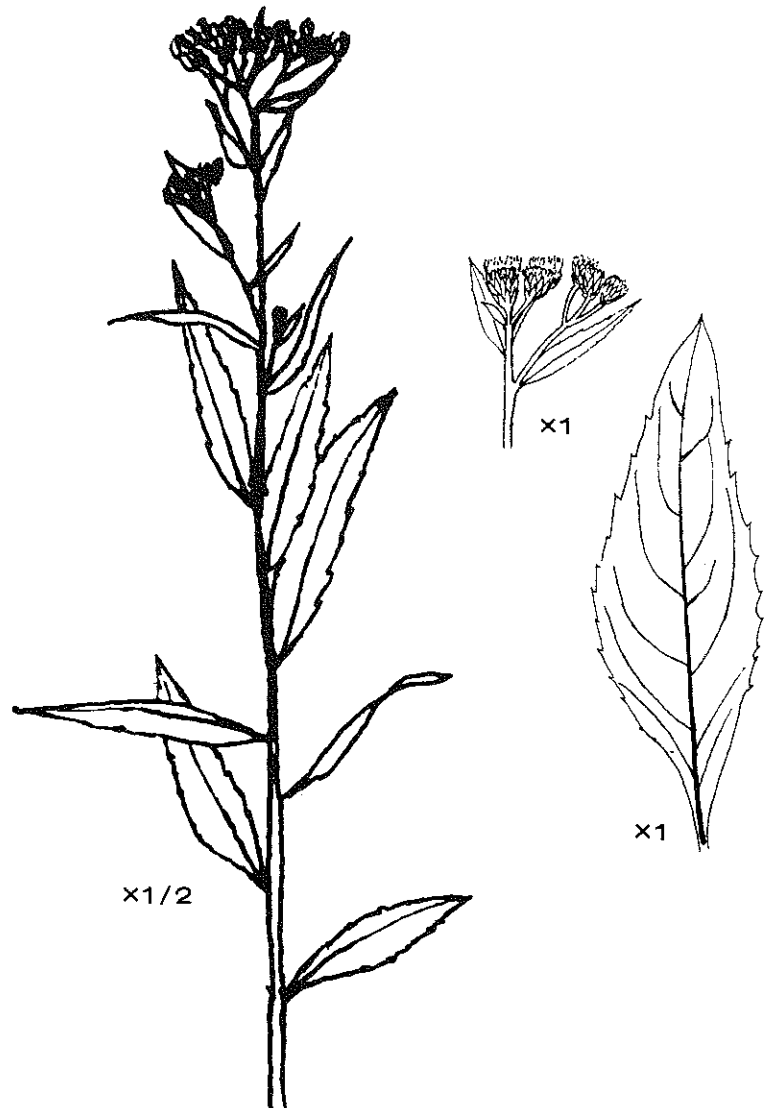
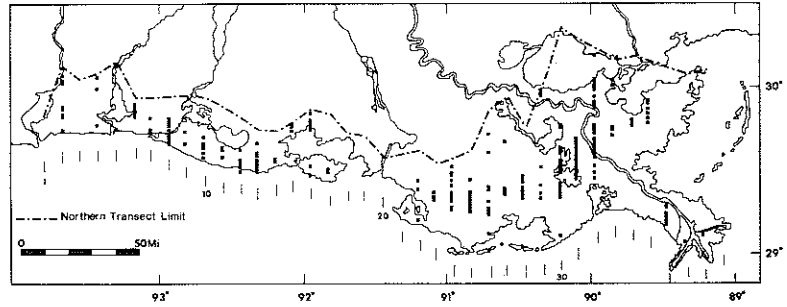


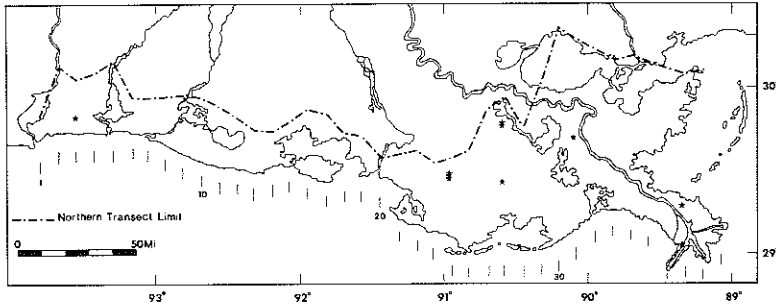
Pluchea camphorata
(L.) DC.

Compositae

Camphorweed

Pluchea camphorata is an erect herb, 2 to 4 feet tall, with flowering lateral branches shorter than the terminal. Leaves are aromatic, petiolate, lanceolate, and marginally toothed. Flowers are pinkish and clustered, and they appear at the apices of both the main stem and lateral branches the plant is widespread, grows in fresh to brackish marshes, and reaches greatest density in intermediate marsh subject to occasional drying. It is a pioneer plant, quickly invading openings in other vegetation, and it has little value to wildlife. A very similar species, saltmarsh pluchea (*Pluchea purpurascens*) occurs under the same habitat conditions. The lateral branches of saltmarsh pluchea reach the same height as the central axis, thus giving the plant a flat-topped appearance.





Pluchea foetida (L.) DC.

Compositae

Stinking fleabane

Pluchea foetida is a perennial herb, 2 to 3 feet tall, with hairy, erect culms. Leaves are unusually oblong, sessile, clasping the stem, and aromatic. Flowering heads are small, clustered, and ivory colored. The plant occupies openings in fresh marsh subject to occasional drying. It has limited value to wildlife.

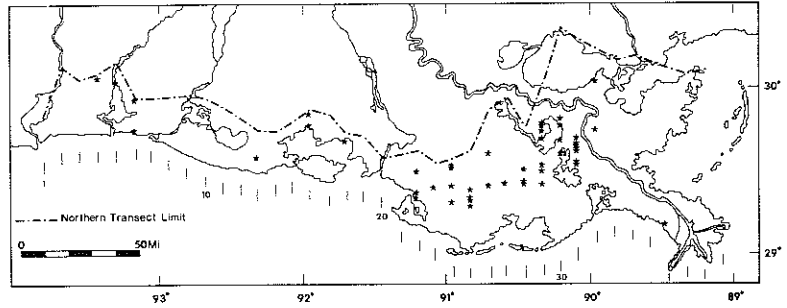


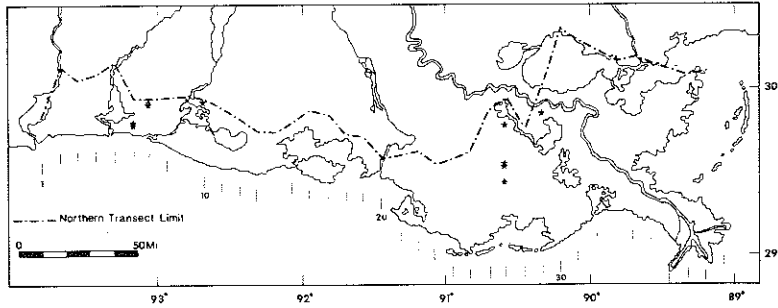
Polygonum spp. L.

Polygonaceae

Smartweed
Knotweed

The *Polygonum* species are annual or perennial herbs with branched, trailing stems and alternate, linear leaves. Stems are conspicuously jointed with a sheath enclosing each joint. The inflorescence consists of several long racemes that emerge from leaf axils or terminally and contains clustered or scattered flowers and seeds. The genus has several species and appears in fresh and intermediate marshes usually on slightly elevated sites. The seeds are a favorite food of ducks and other birds.





Pontederia cordata L.

Pontederiaceae

Pickerelweed

Pontederia cordata is a perennial herb, 1 to 3 feet tall, that ascends from a thick rhizome. The inflorescence is an erect spike with blue flowers and it appears on a flowering stem with a single leaf. Leaves are variable but usually lanceolate with a cordate base. The plant grows in fresh marsh in small stands. Rhizomes and stems are eaten by nutria and muskrats and the seeds are eaten by ducks.



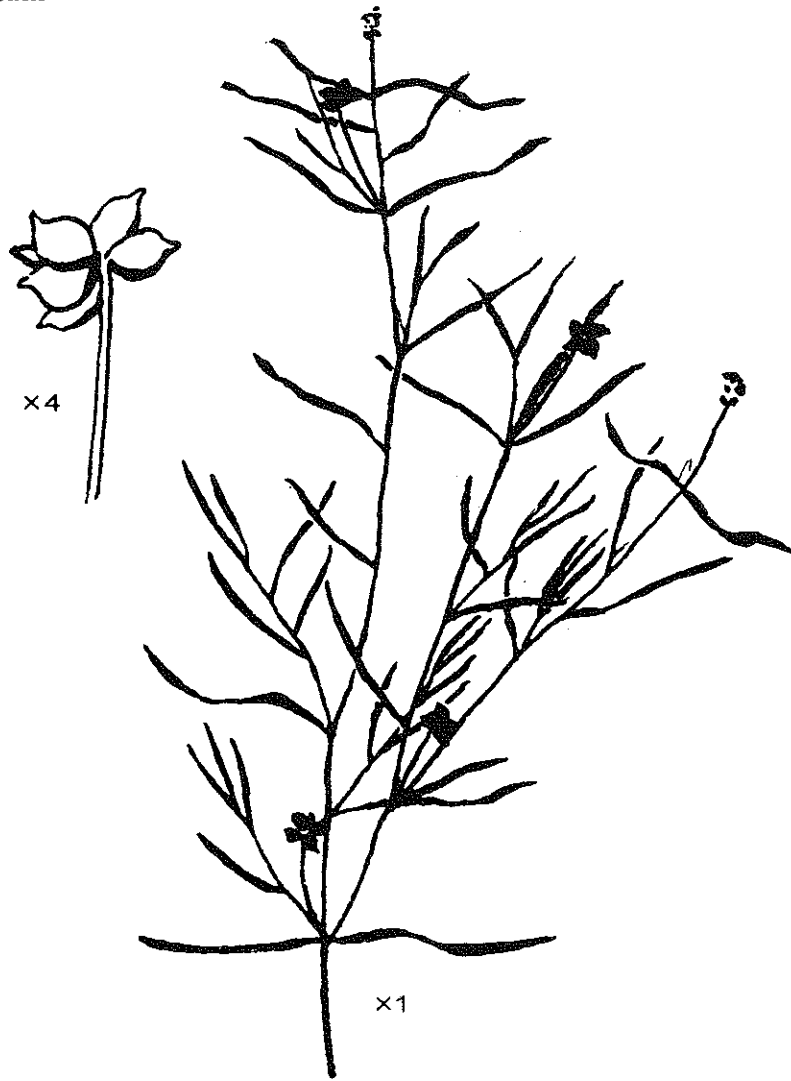
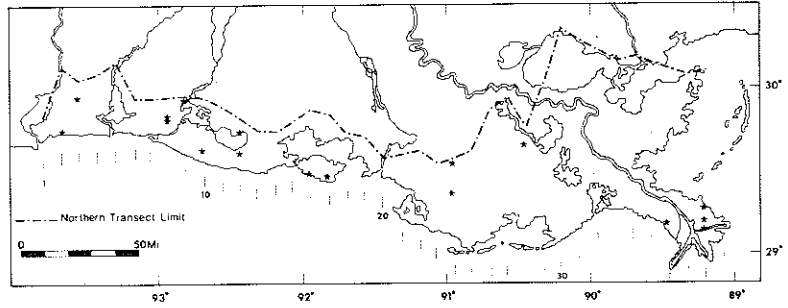
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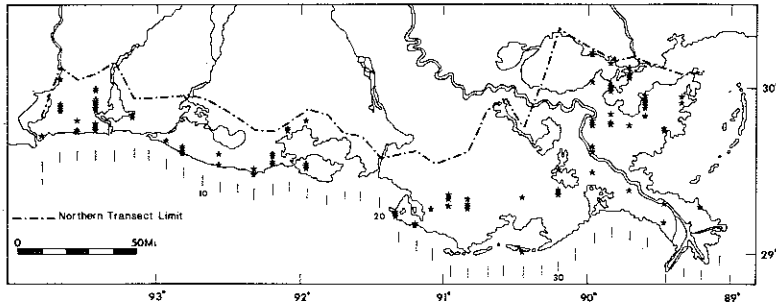
Potamogeton pusillus L.

Potamogetonaceae

Small pondweed

Potamogeton pusillus is a slender, submerged aquatic plant with many branches. Leaves are alternate and linear with parallel sides and a rounded apex. The inflorescence is an axillary, long-peduncled spike with three to five whorls. The plant roots in the bottom of shallow water bodies in fresh and intermediate marshes. Seeds, leaves, and stem of the plant are major duck foods.



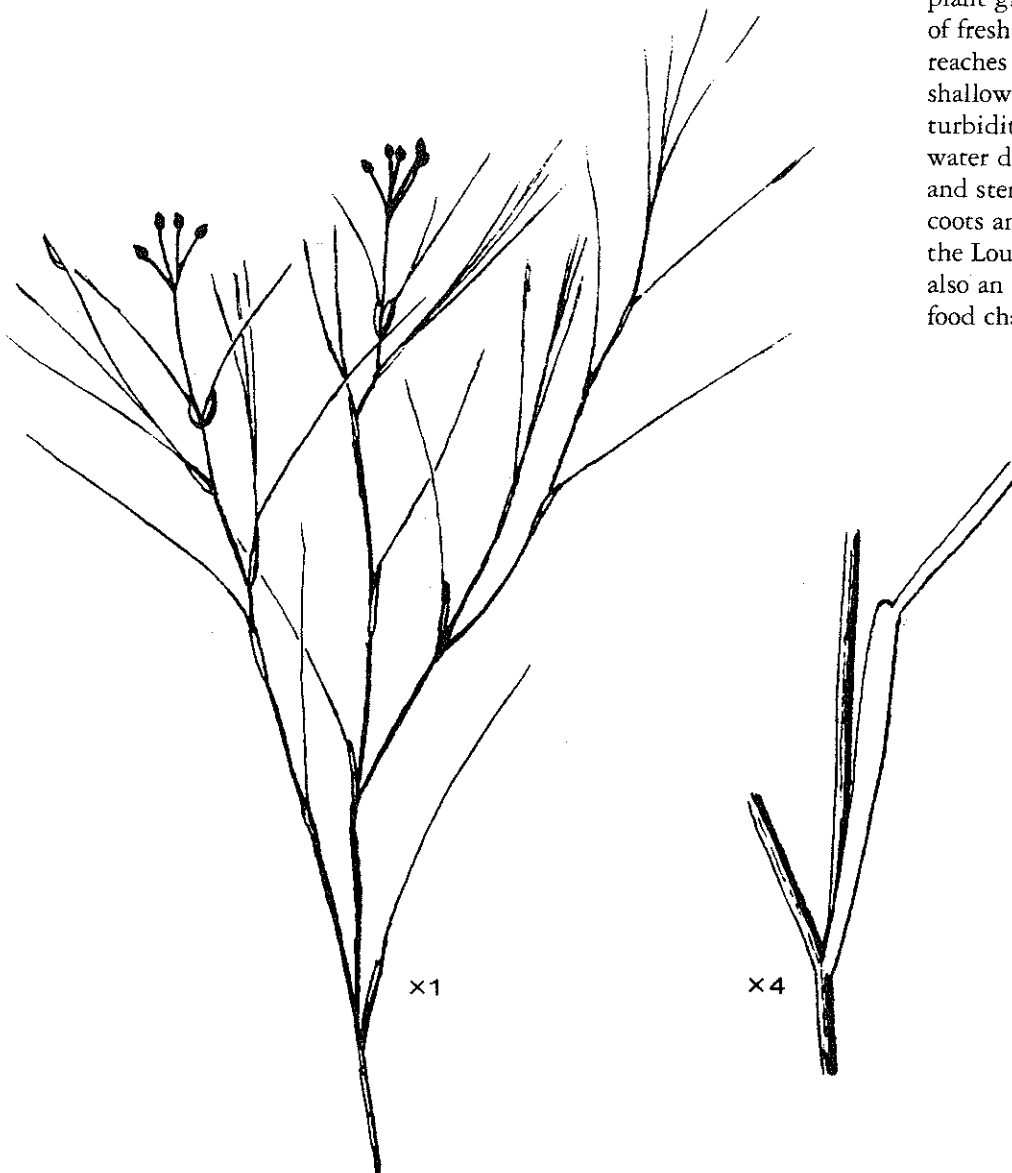


Ruppia maritima L.

Ruppiaceae

Widgeongrass

Ruppia maritima is a submerged, aquatic plant with filamentlike, branching stems. Leaves are long, threadlike, tapering, and pointed. Fruiting bodies or nutlets form in small clusters and ascend from axils on a common spiraled stalk, and each nutlet (seed) is supported by a smaller stalk or pedicel. The plant grows in ponds and bayous of fresh to brackish marshes and reaches greatest abundance in shallow brackish water with low turbidity and relatively stable water depths. The seeds, leaves, and stems are eaten by ducks and coots and are major foods along the Louisiana coast. The plant is also an important part of aquatic food chains.

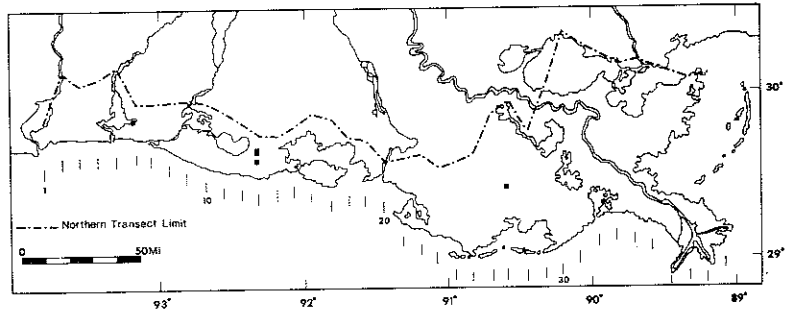


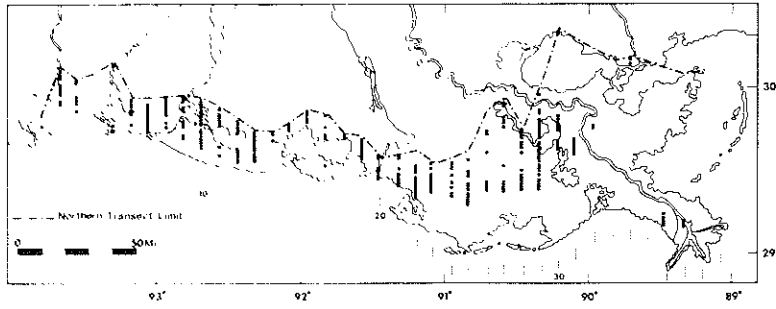
Sacciolepis striata
(L.) Nash

Gramineae

Bagscale

Sacciolepis striata is a locally abundant perennial grass of fresh marsh that usually occupies moist organic soils. The lower portion of the culm is extensively creeping and heavily rooted. The upper portion of the culm rises vertically 1 to 2 feet above the marsh and produces a long, narrow seed head. The seeds are eaten by ducks and are particularly important as food when wet summers curtail the growth of annual plants.



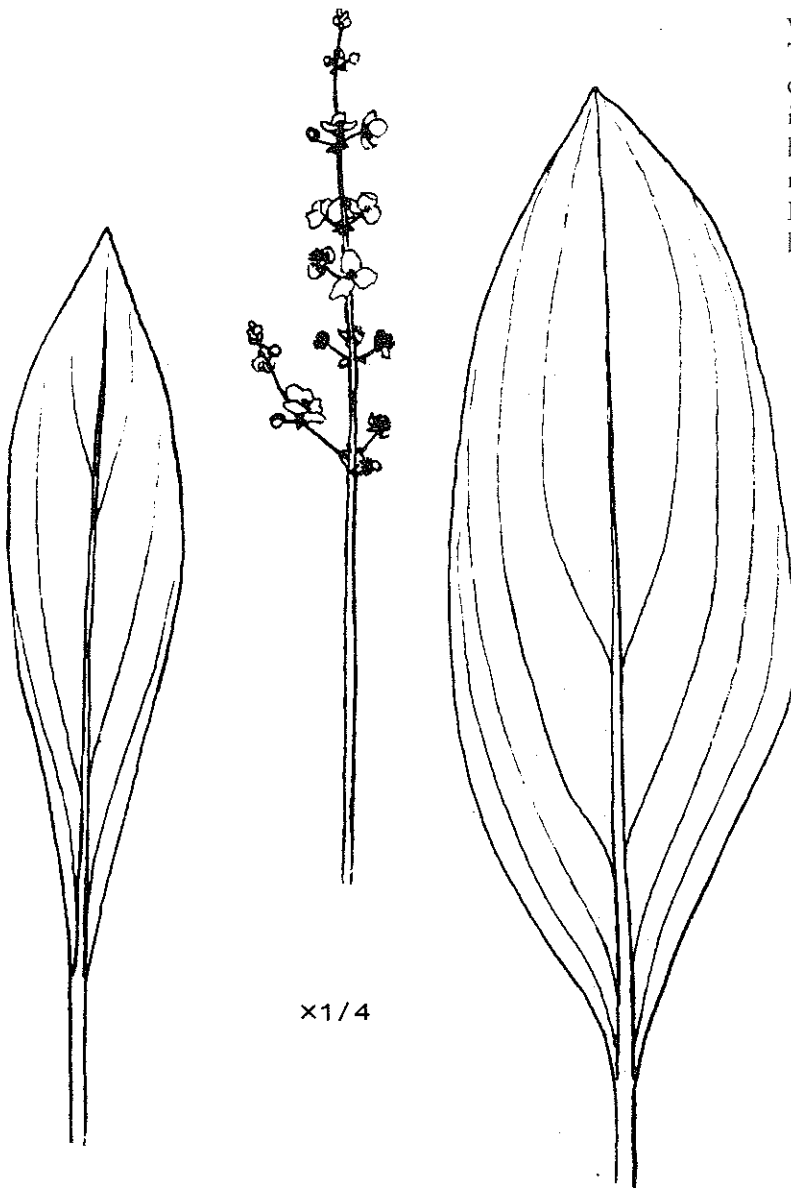


Sagittaria lancifolia L.
(*Sagittaria falcata*)

Alismataceae

Bulltongue

Sagittaria lancifolia is a perennial, stoloniferous herb of fresh and intermediate marshes. Leaves are erect and 2 to 3 feet tall with lanceolate blades tapered at both ends. The branched inflorescence extends above the leaves and contains white flowers arranged in whorls. The plant grows in dense stands over vast areas and is an important contributor to marsh building. It contributes detrital material to aquatic food chains. Nutria and muskrats feed on the basal portion of the petiole.

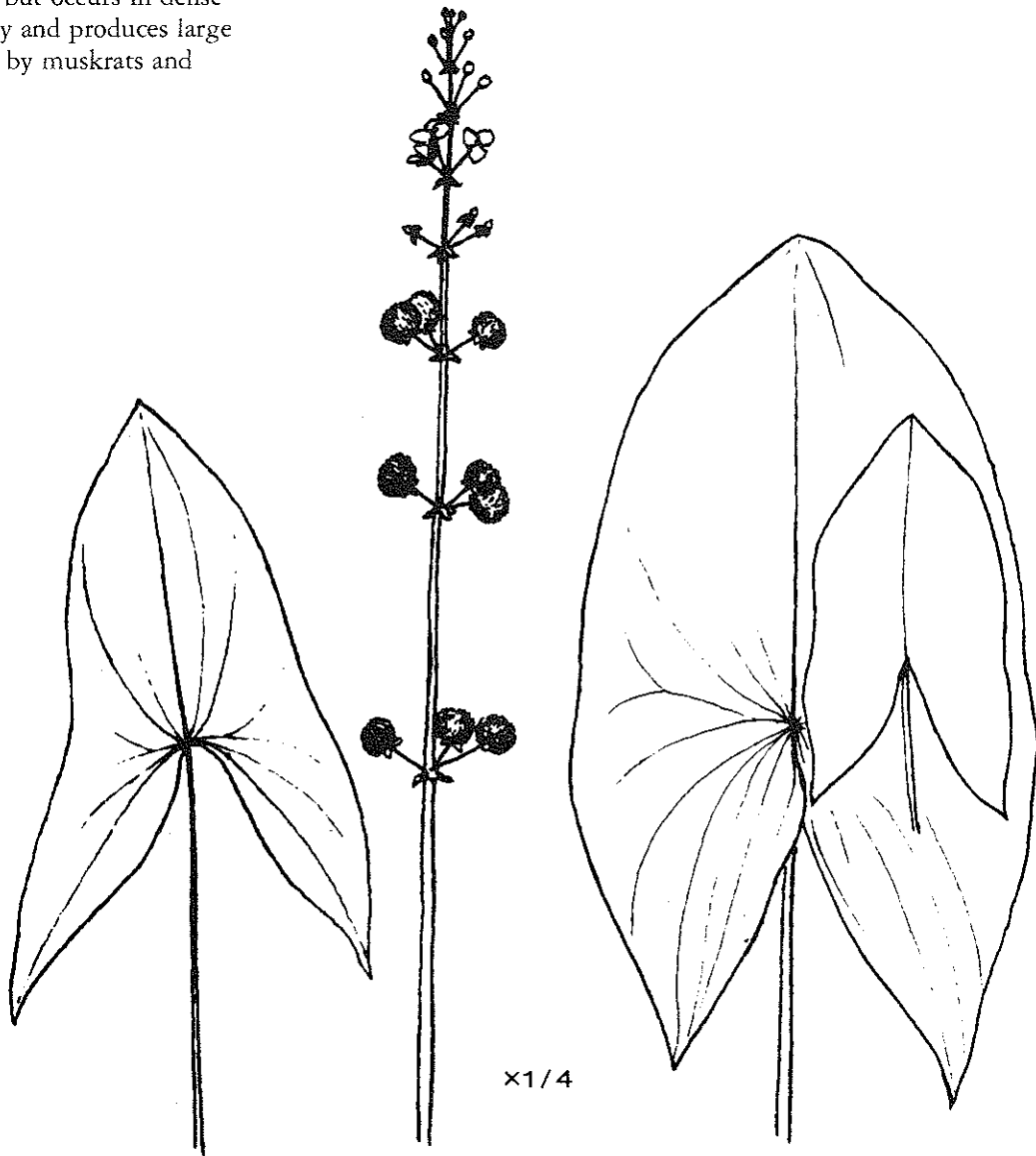
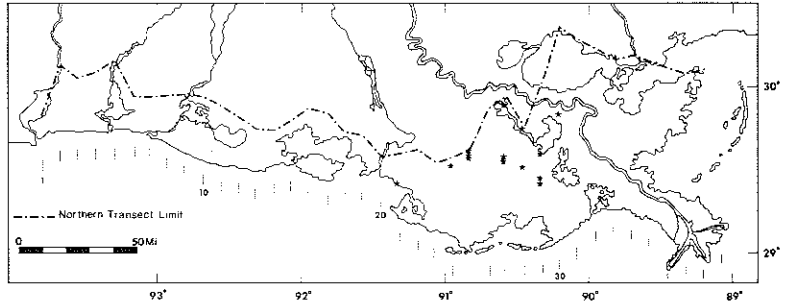


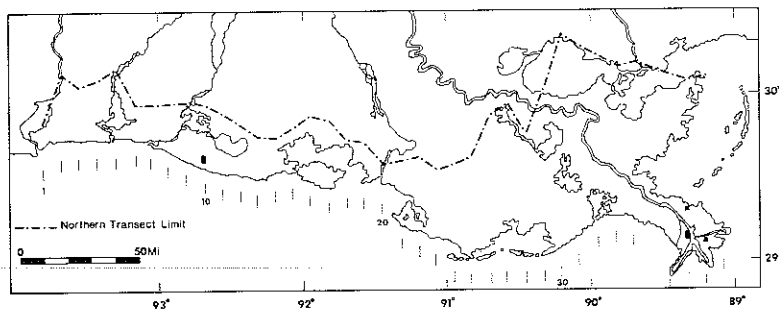
Sagittaria latifolia Willd.

Alismataceae

Wapato

Sagittaria latifolia is a perennial, stoloniferous herb of fresh marsh. Leaves are erect, 2 to 3 feet tall, with large, usually arrowhead-shaped blades. The inflorescence ascends to about the same height as the leaves and contains white flowers arranged in whorls. The plant has limited distribution but occurs in dense stands locally and produces large tubers eaten by muskrats and nutria.



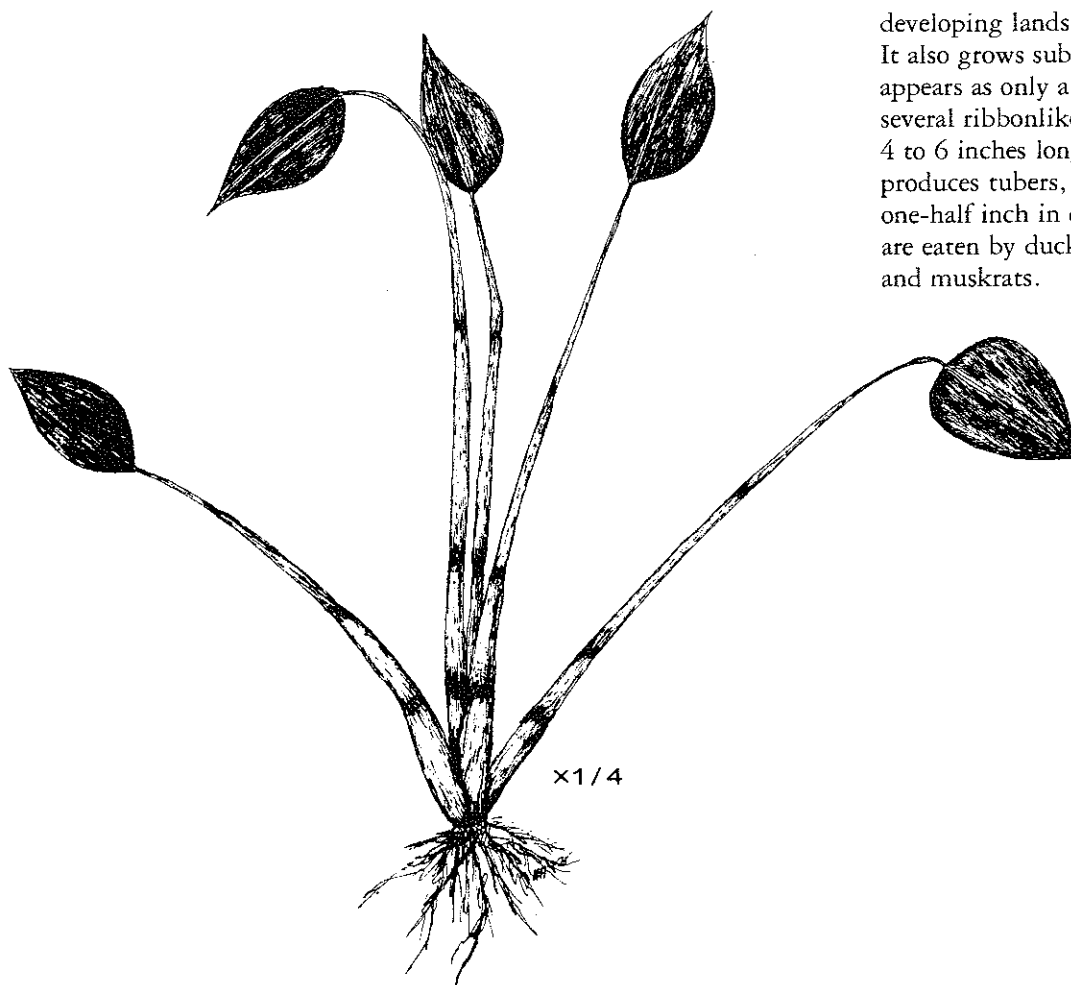


Sagittaria platyphylla
(Engelm.) J. G. Sm.

Alismataceae

Delta duckpotato

Sagittaria platyphylla is a perennial herb with three to six leaves that are 1 to 2 feet long and rise from an underground stem. Leaf petioles are long, slender, and triangular; and leaf blades are ovate to elliptic, 3 to 6 inches long. The flowers are white, occur in whorls on an erect stalk, and develop below the level of the leaves. The lower whorls of flowers are situated on downwardly curving pedicels. The plant grows in mineral soil in fresh and intermediate marshes and is common on newly developing lands in river deltas. It also grows submerged but appears as only a rosette with several ribbonlike leaf structures, 4 to 6 inches long. The plant produces tubers, one-quarter to one-half inch in diameter, which are eaten by ducks, geese, nutria, and muskrats.

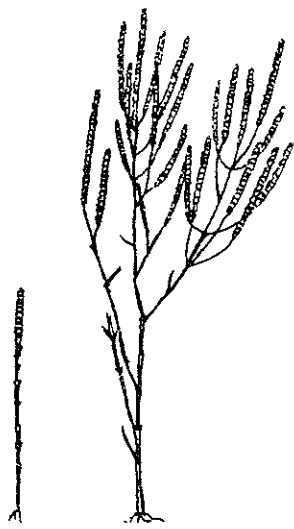
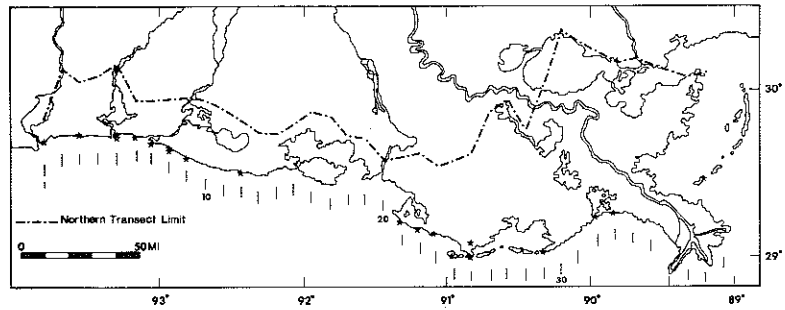


Salicornia bigelovii Torr.

Chenopodiaceae

Bigelow glasswort

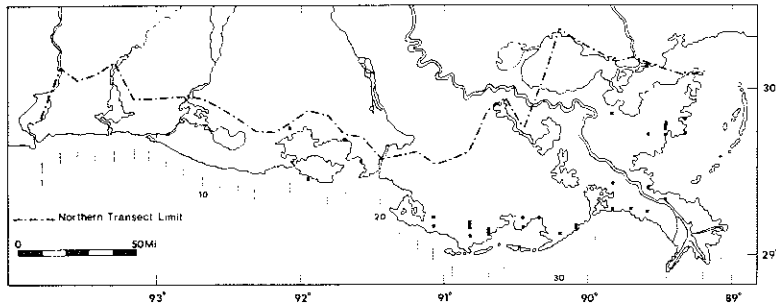
Salicornia bigelovii is an erect, annual herb with stout, jointed, branching stems and inconspicuous leaves. The plant is fleshy and contains salty juices. It grows in saline marsh on well-drained sites such as bayou and pond banks, bay shores, and back beach marshes. The seeds are eaten by ducks and other birds and the plant contributes detritus to estuarine food chains.



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x1

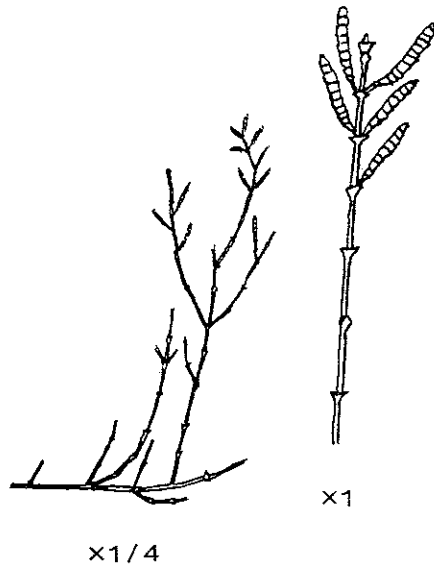


Salicornia virginica L.

Chenopodiaceae

Creeping glasswort

Salicornia virginica is a perennial, trailing herb rooting at the nodes. Branches ascend from prostrate stems and are jointed and fleshy with salty juices and inconspicuous leaves. It grows in saline marsh on well-drained sites and frequently occupies moist sites on beaches. The seeds are used by ducks and other birds and the plant provides detritus to estuarine food chains.

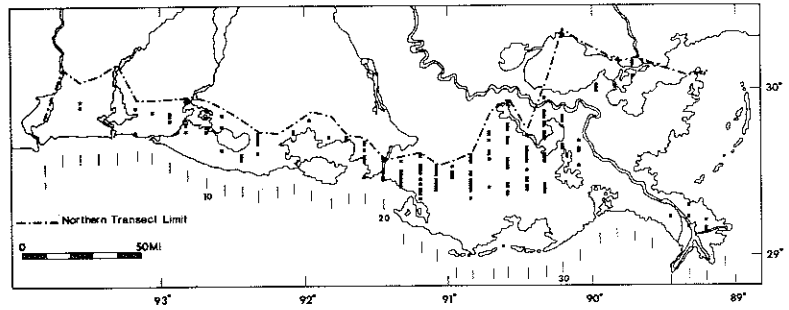


Salix nigra Marsh.

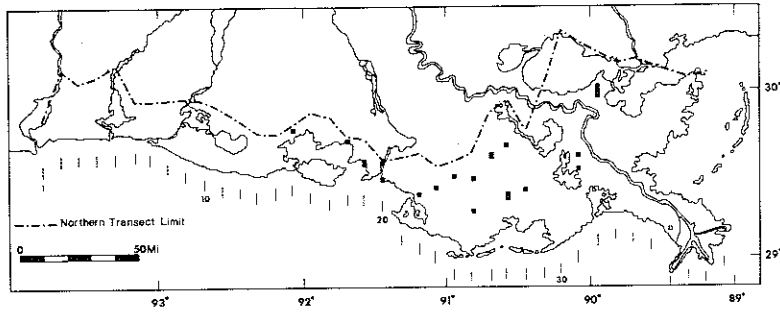
Salicaceae

Black willow

Salix nigra is a small to medium-sized tree, usually with several trunks. It grows in fresh marsh on slightly elevated sites, bayou and lake banks, and spoil deposits. The bark is smooth and green on small trees and becomes furrowed and gray on larger trees. Lanceolate leaves with serrate margins provide browse for deer. The plant is used as resting and breeding cover for various birds.



x1/2

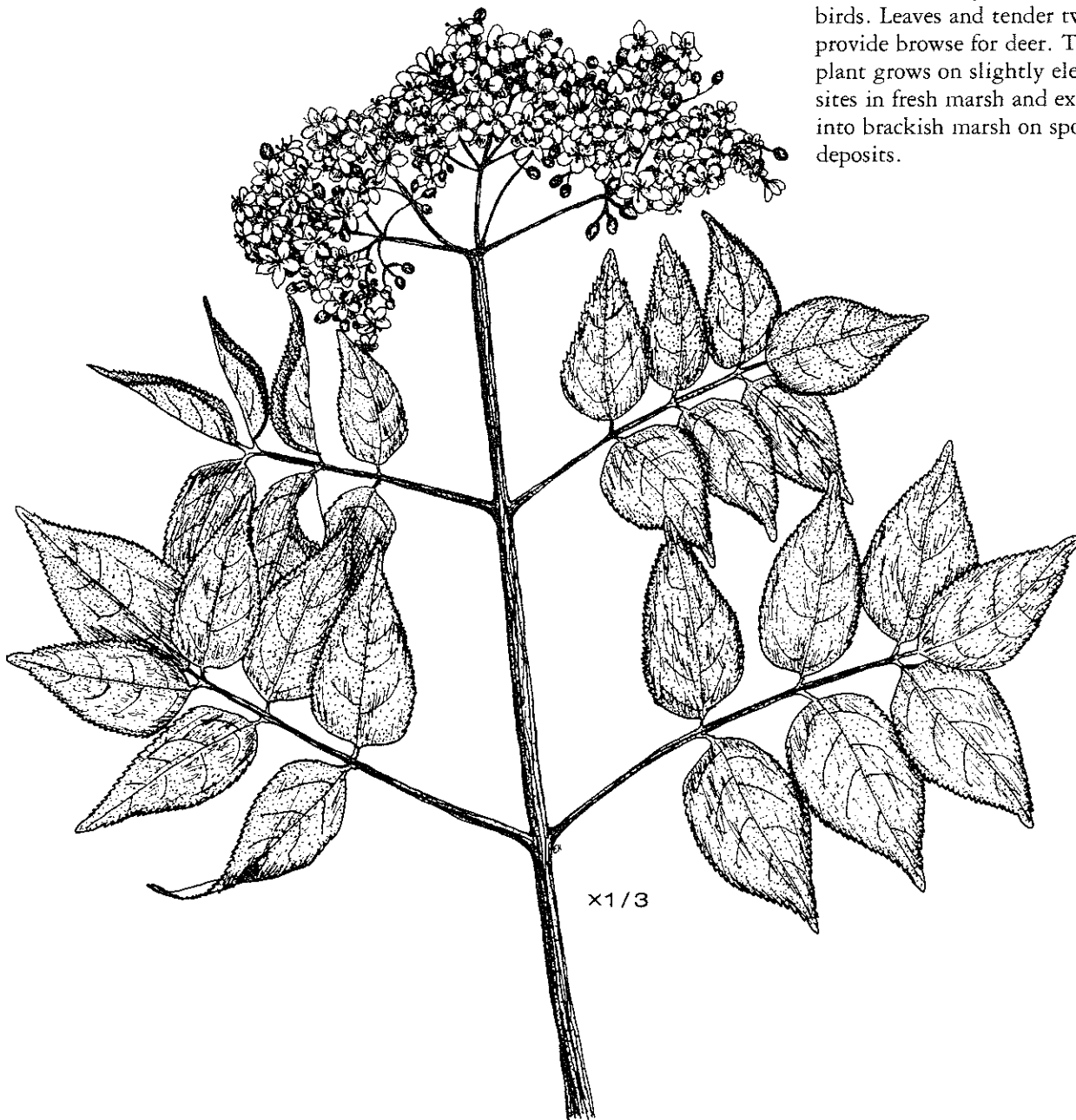


Sambucus canadensis L.

Caprifoliaceae

Common elderberry

Sambucus canadensis is a large shrub with pithy stems, large lenticels and pinnately compound leaves. The flowers are white and in dense flat-topped clusters. The fruit is a drupe, purple-black, about a quarter inch in diameter, and it is eaten by various small birds. Leaves and tender twigs provide browse for deer. The plant grows on slightly elevated sites in fresh marsh and extends into brackish marsh on spoil deposits.

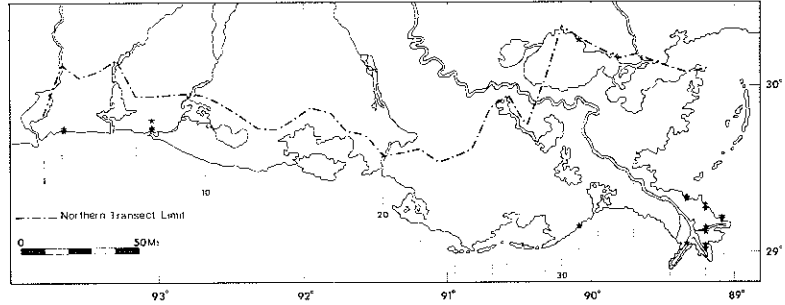


Scirpus americanus Pers.

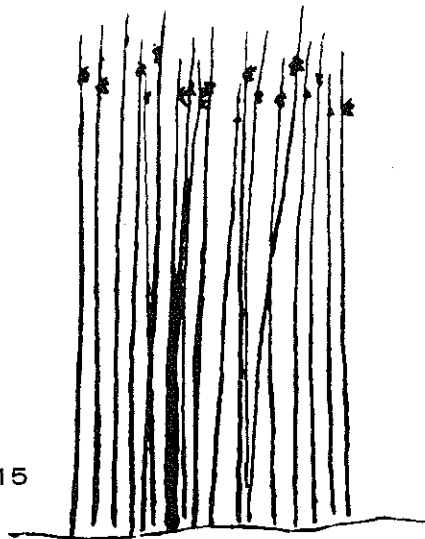
Cyperaceae

Freshwater three-square
American bulrush

Scirpus americanus is a perennial sedge with extensively creeping rhizomes. Culms are 3 to 4 feet long, triangular, and twisting with sparse leaves at the base. The inflorescence is a tight terminal cluster of spikelets, with a bract extending 3 to 4 inches beyond the spikelets and appearing to be a continuation of the culm. The plant grows on mineral soil in fresh and intermediate marshes and is common on newly deposited soil on the Mississippi and Atchafalaya river deltas and on sandy lake and bay shores. Seeds are eaten by ducks and rhizomes and tubers are eaten by geese, muskrats, and nutria.

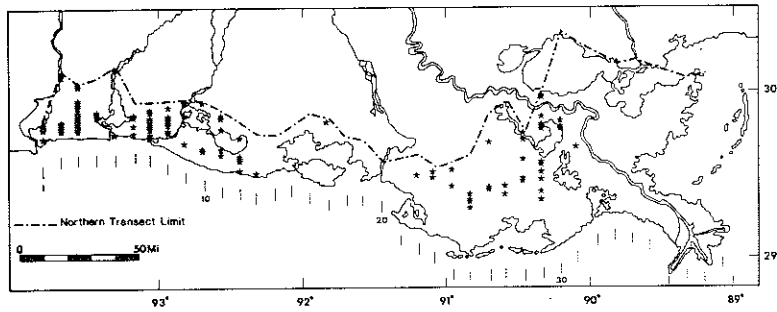


x1/15



x 1 1/2



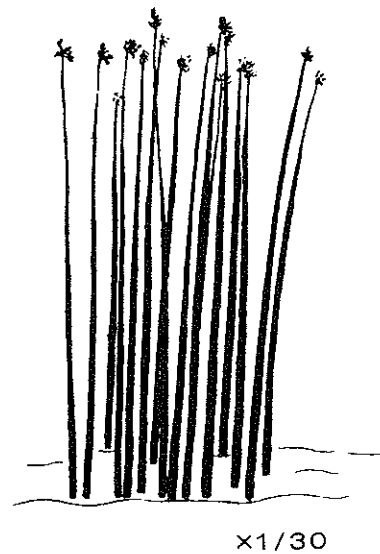
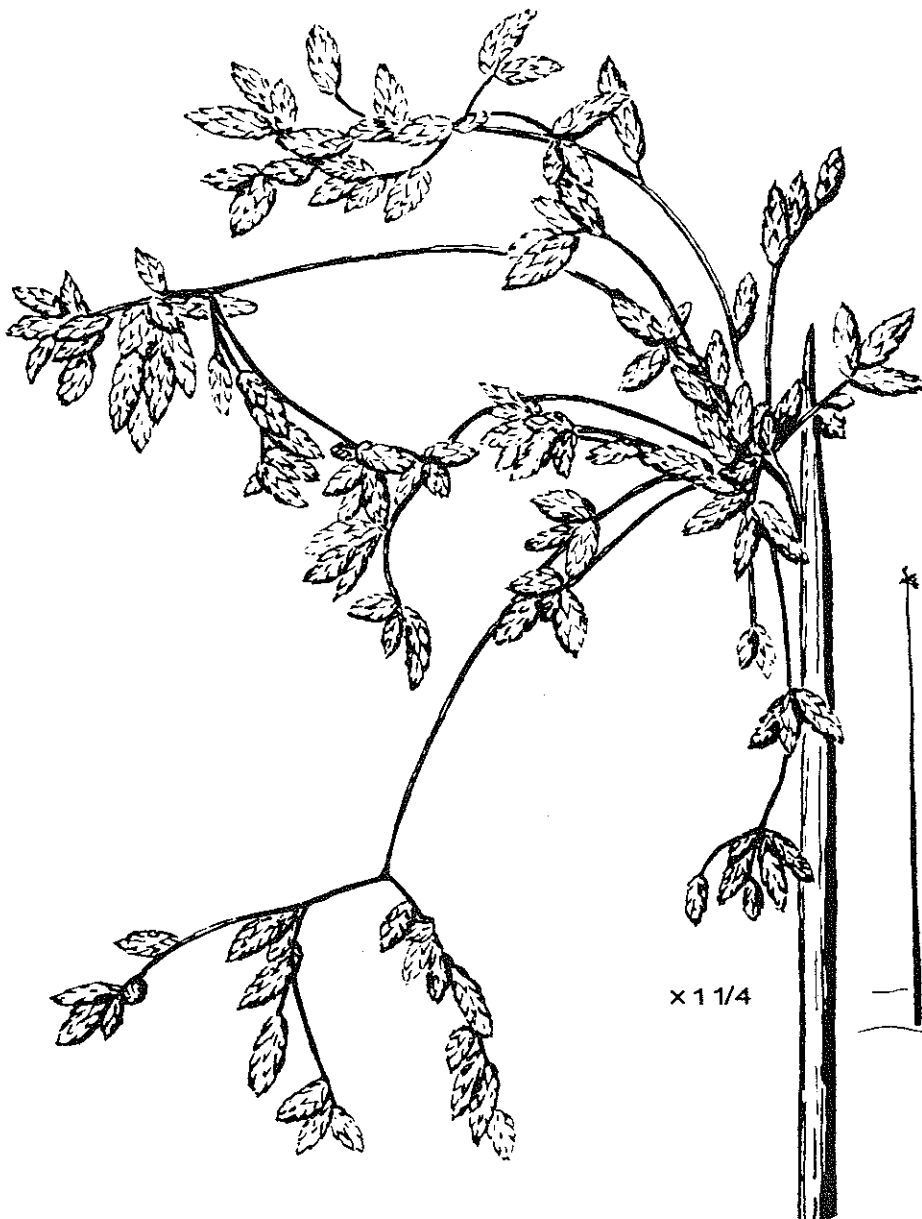


Scirpus californicus
(C. A. Mey.) Steud.

Cyperaceae

Bullwhip
Giant bulrush

Scirpus californicus is a perennial sedge with stout woody rhizomes and triangular, dark green culms, 4 to 8 feet long. Leaves are obscure and basal, and the inflorescence is a branched terminal cluster of drooping and erect spikelets. A bract extends 2 to 3 inches beyond the spikelets and appears as a continuation of the culm. The plant grows in fresh and intermediate marshes but is more common in the latter and occurs as dense, scattered stands. The seeds are eaten by ducks and the rhizomes and culm bases are consumed by geese and nutria. The plant also provides valuable resting and breeding cover for various forms of wildlife.

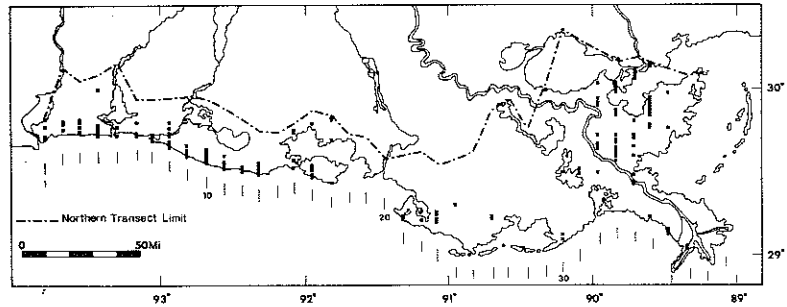


Scirpus maritimus L.
(*Scirpus robustus*)

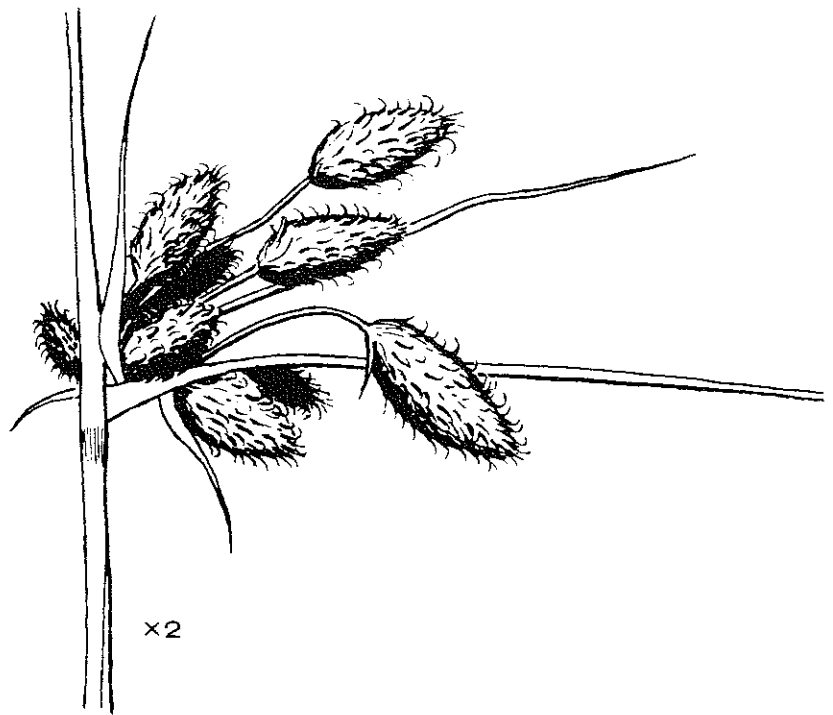
Cyperaceae

Leafy three-square
Saltmarsh bulrush

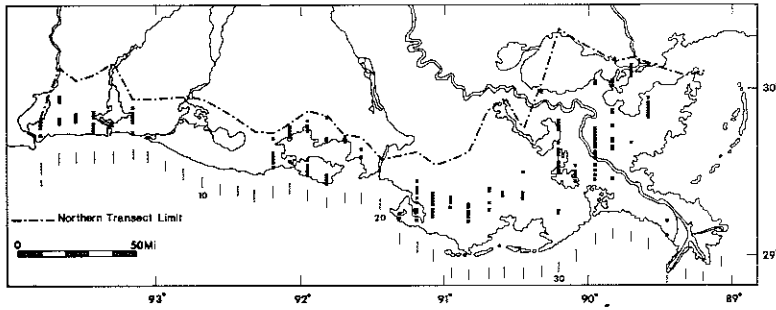
Scirpus robustus is a perennial sedge with extensively creeping rhizomes. Culms are 2 to 3 feet long and triangular with long, drooping leaves. The inflorescence is a terminal cluster of large, bristled spikelets. The plant grows in intermediate to saline marshes usually as scattered plants intermixed with other species. Rhizomes and tubers are eaten by geese, muskrats, and nutria; seeds are eaten by ducks. Detritus from the plant is carried by falling tides to estuaries where it contributes to aquatic food chains.



x1/17



x2



Scirpus olneyi E. & G.

Cyperaceae

Three-cornered grass
Olney bulrush

Scirpus olneyi is a perennial sedge with extensively creeping rhizomes. Culms are 2 to 4 feet long and triangular with sparse leaves at the base. The inflorescence is a tight terminal cluster of spikelets with a bract extending 1 to 2 inches beyond the spikelets and appearing as a continuation of the culm. The plant grows in fresh to brackish marshes, often forming dense stands over vast areas. The rhizomes and tubers are eaten by geese, muskrats, and nutria. It is considered the most important muskrat food plant along the Louisiana coast. Also, the plant contributes detrital material to aquatic food chains.

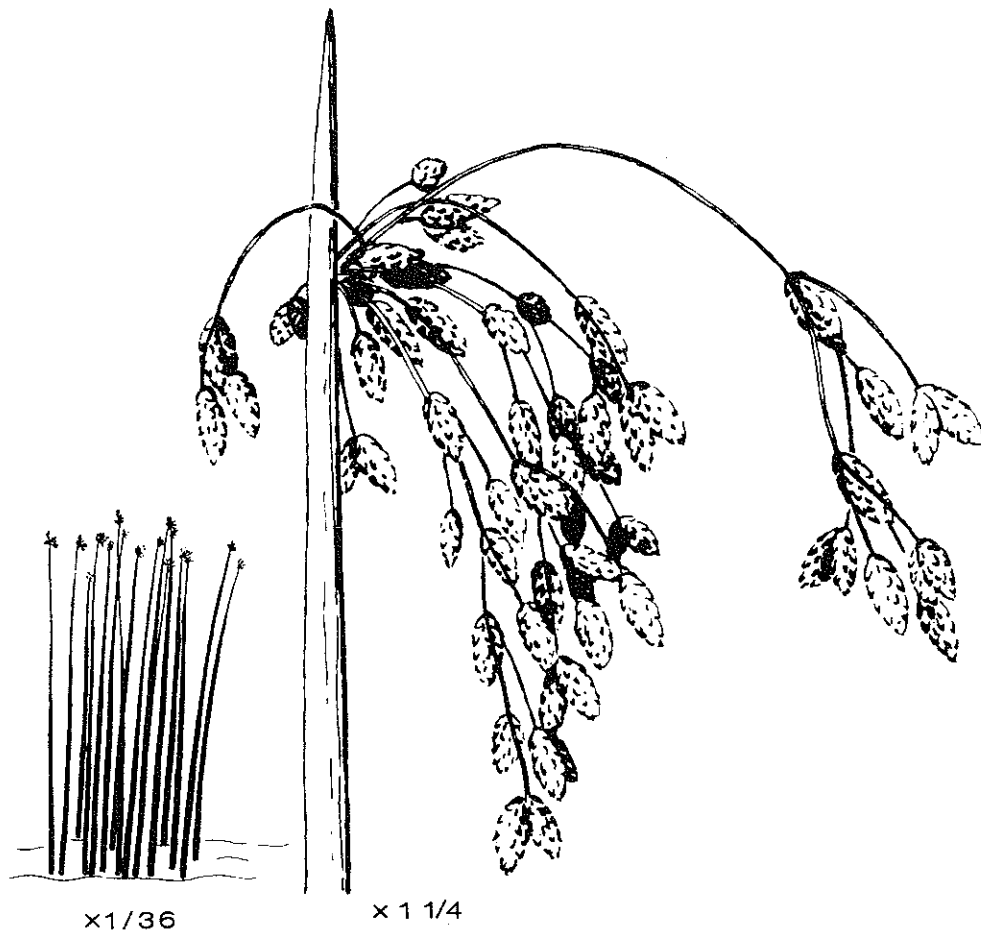
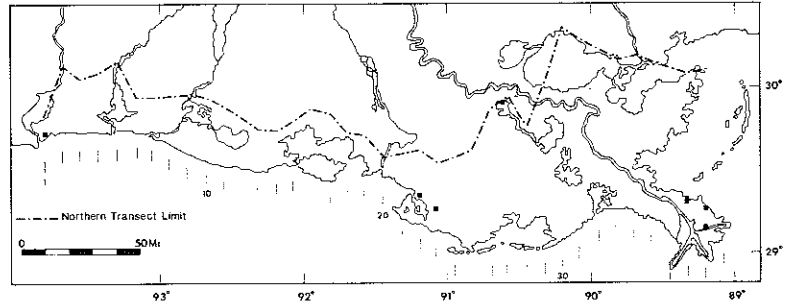


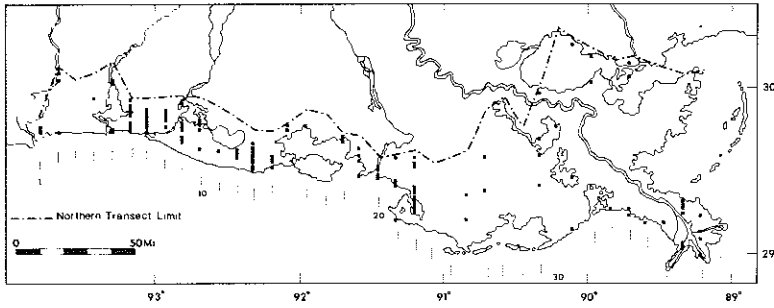
Scirpus validus Vahl.

Cyperaceae

Softstem bulrush

Scirpus validus is a perennial sedge with stout, woody rhizomes and round, light green culms, 4 to 8 feet long. Leaves are obscure and basal, and the inflorescence is a branching terminal cluster of drooping and erect spikelets. The plant grows in fresh to brackish marshes in fairly restricted, scattered stands. The seeds are eaten by ducks and the rhizomes and culm bases are eaten by muskrats and nutria.





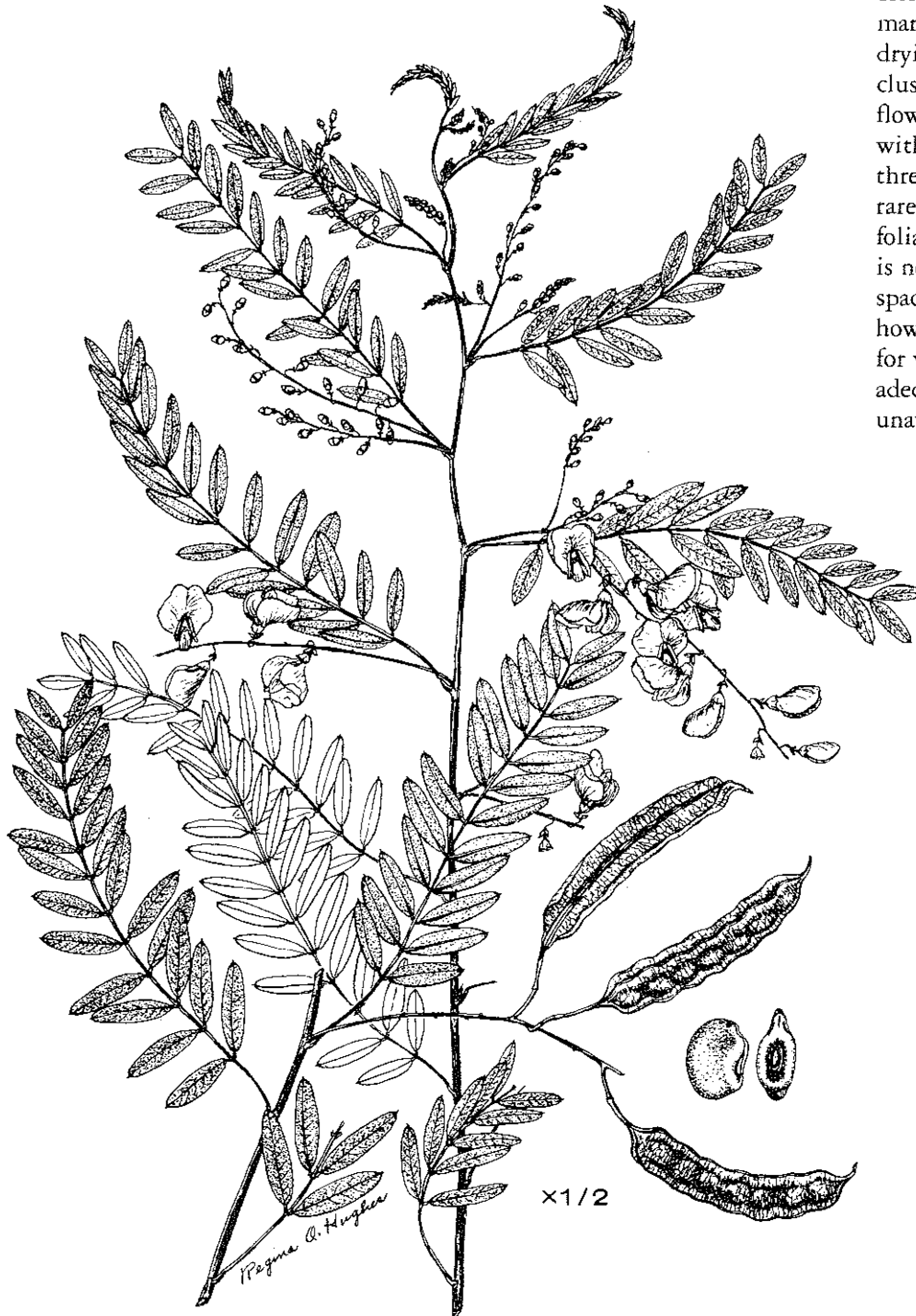
Sesbania drummondii
(Rydb.) Cory.

(*Daubentonia texana*)

Leguminosae

Rattlebox

Sesbania drummondii shrubs often form dense stands in fresh marsh subjected to occasional drying. The plant produces clusters of yellow, sweet-pea like flowers that mature into pods with four wings, each containing three to six seeds. The seeds are rarely used by wildlife; also, the foliage has an offensive odor and is not eaten. It competes for space with more desirable plants; however, it often provides cover for wildlife in areas where adequate cover would be unavailable otherwise.

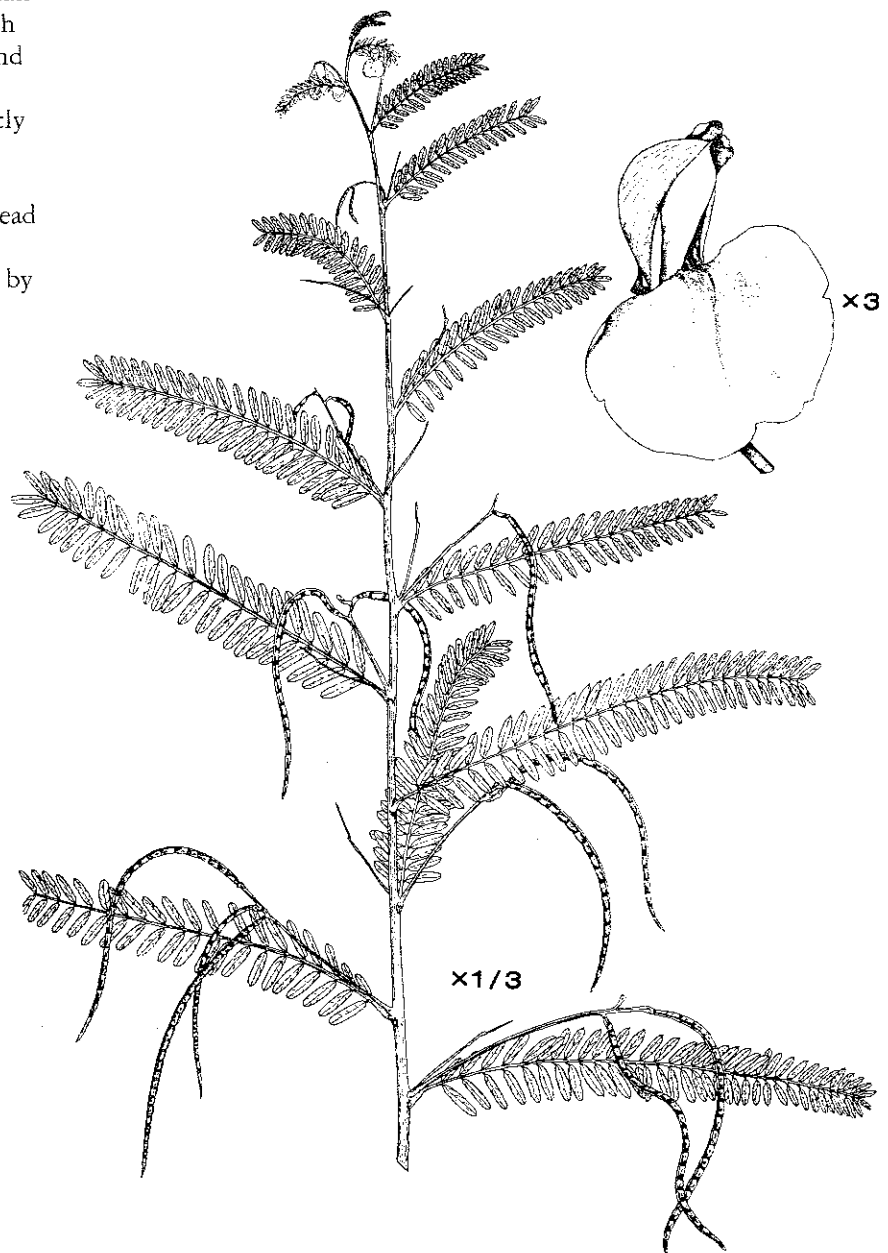
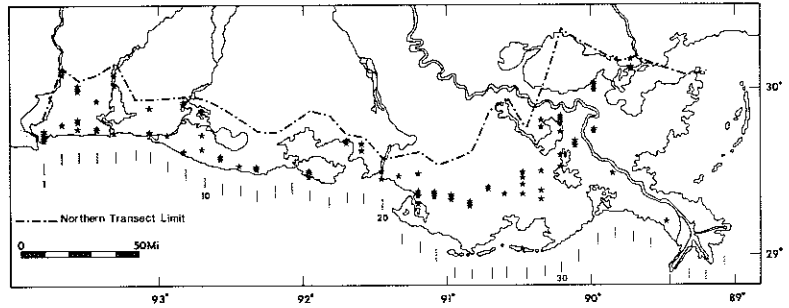


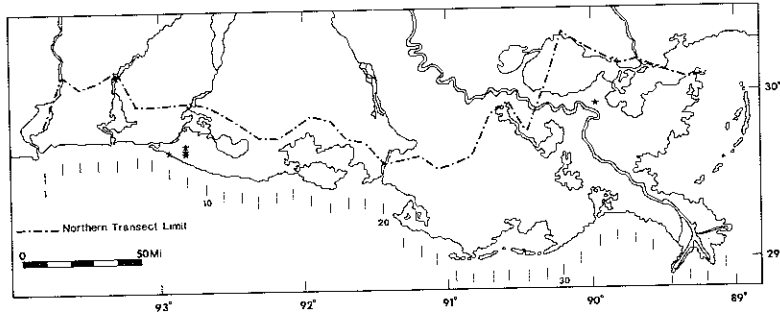
Sesbania macrocarpa Muhl.
(*Sesbania exaltata*)

Leguminosae

Coffeeweed

Sesbania macrocarpa is an annual herb, 3 to 10 feet tall, shrub-like, with pinnately compound leaves and small leaflets. Seed pods are 3 to 4 inches long, very narrow, and they contain thirty to forty small beans. The plant grows in fresh to slightly brackish marshes and requires exposed soil for seed germination. Coffeeweed mostly occurs as scattered individual plants but occasionally forms dense stands in small areas. Dead stems remain erect during the winter and the seeds are eaten by ducks and other birds.





Sesuvium maritimum
(Walt.) BSP.

Aizoaceae

Marsh purslane

Sesuvium maritimum is a fleshy, annual herb with trailing and branching stems, 1 to 2 feet long. Small, cone-shaped capsules are produced in the leaf axils and contain numerous tiny black seeds. The seeds are a favorite late summer food of ducks, particularly blue-winged teal. The plant grows in open areas in brackish marsh that is subjected to prolonged drying during the early spring and on saline mud flats.

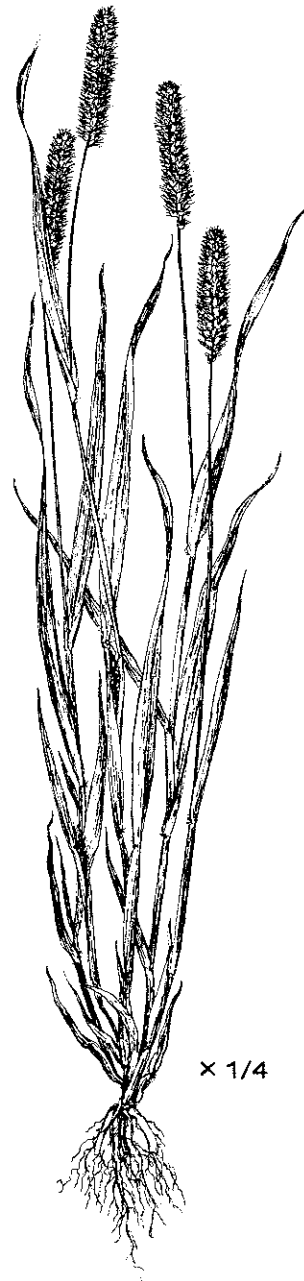
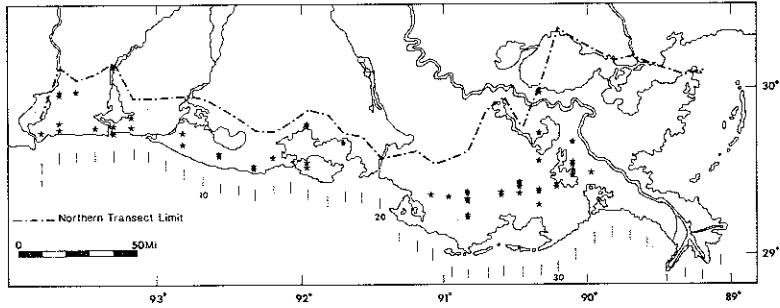


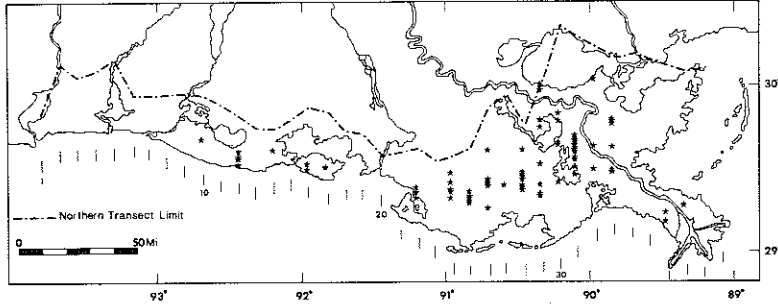
Setaria glauca
(L.) Beauv.

Gramineae

Yellow foxtail

Setaria glauca is an annual grass that grows in loose tufts with culms erect, 1 to 2 feet tall with leaves long and curling downward. The inflorescence is a terminal spike, 2 to 3 inches long, that is densely clustered with seeds and many stout bristles. The plant grows in fresh to slightly brackish marshes subject to drying and occurs less frequently than other common plants. The seeds are eaten by ducks and various small birds.





Setaria magna Griseb.

Gramineae

Giant foxtail

Setaria magna is a robust, annual grass having erect culms, 5 to 10 feet tall, with occasional branching. The inflorescence is a terminal spike 6 to 12 inches long that is densely clustered with seeds and many stout bristles. It occurs as scattered individual plants and grows in fresh and intermediate marshes that have undergone drying. The seeds are eaten by ducks and other birds. During late summer, red-winged blackbirds frequently perch on the spike and eat the seeds.

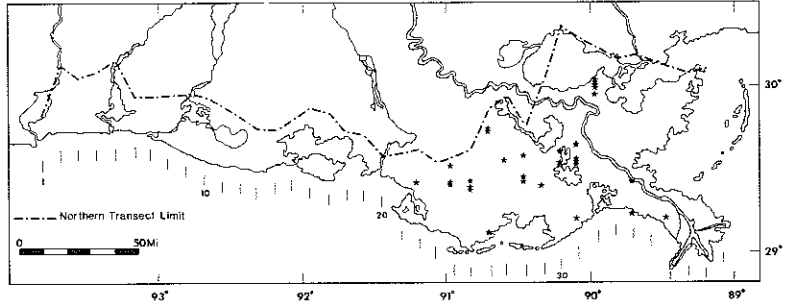


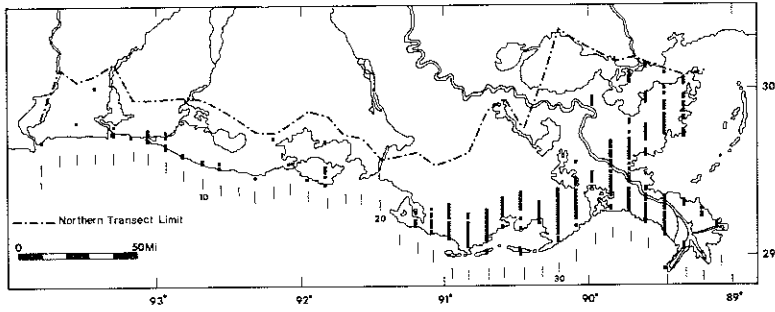
Solidago sempervirens L.

Compositae

Seaside goldenrod

Solidago sempervirens is an erect herb, 2 to 4 feet tall, usually unbranched with fleshy, lanceolate, sessile leaves. The inflorescence is terminal with small leaves and small yellow flowers. The plant grows in fresh to brackish marshes subject to occasional drying and has little value to wildlife.





Spartina alterniflora Lois.

Gramineae

Oyster grass
Smooth cordgrass
Seacane

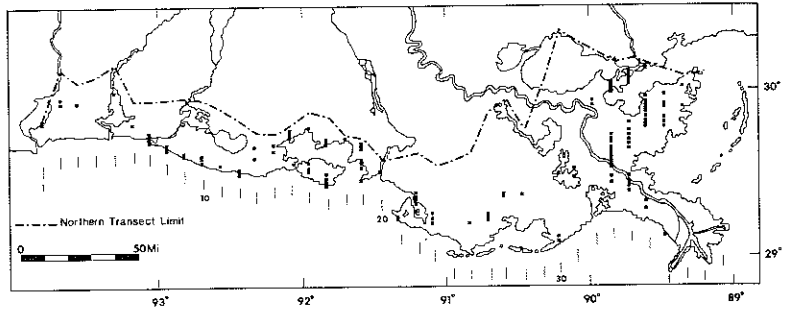
Spartina alterniflora is a perennial grass growing from extensive rhizomes. Culms are erect, 2 to 4 feet tall, thick, and spongy; leaves are wide and tapering. The inflorescence is a long panicle with tight, erect spikes. The plant grows in intermediate to saline marshes, often forming dense stands over broad areas. It is a major contributor of detritus to aquatic food chains; rhizomes are eaten by muskrats and nutria.



Spartina cynosuroides
(L.) Roth.

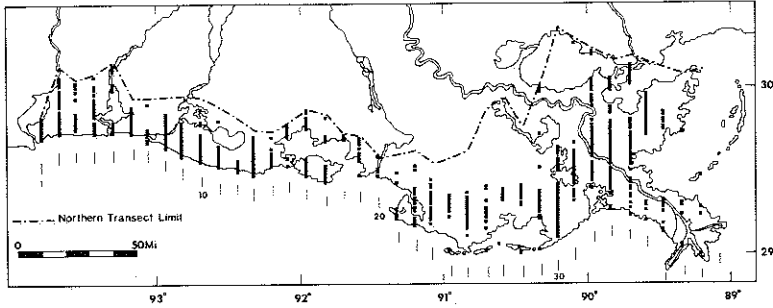
Gramineae

Hogcane
Big cordgrass



Spartina cynosuroides is a robust, perennial grass growing from stout rhizomes. Culms are erect, cane-like, and 4 to 8 feet tall; leaves taper toward the apex from a wide base. The inflorescence is a large, open panicle with spikelets almost perpendicular to the stalk. The plant grows in fresh to brackish marshes, often forming dense stands on well-drained sites such as bayou and lake banks and low ridges. The rhizomes are eaten by nutria and muskrats, and dense stands provide resting and breeding cover for various forms of wildlife.





Spartina patens
(Ait.) Muhl.

Gramineae

Wiregrass
Marshhay cordgrass
Couch grass
Paille à chat tigre



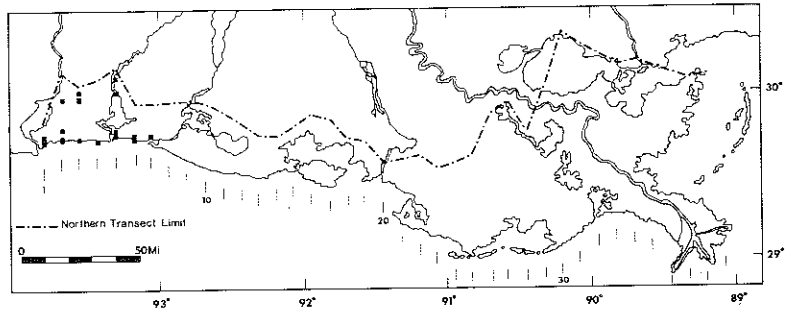
Spartina patens is a perennial grass with long, slender rhizomes. Culms are slender, mostly erect but occasionally trailing, and 2 to 4 feet long; leaf blades are long and slender. The inflorescence is an open panicle with spikes emerging from the stalk at an angle of about 45°. The plant grows in all marsh types but reaches great abundance in intermediate and brackish marshes; it is the dominant species of the Louisiana coastal marshes. It is an important food of nutria, muskrats, and rabbits, and it provides forage for cattle. When burned, the rhizomes and new sprout growth feed snow geese. Plant detritus is of major importance to aquatic food chains and for soil building. The plant also grows along the edges of water bodies and provides some measure of control to shoreline erosion.

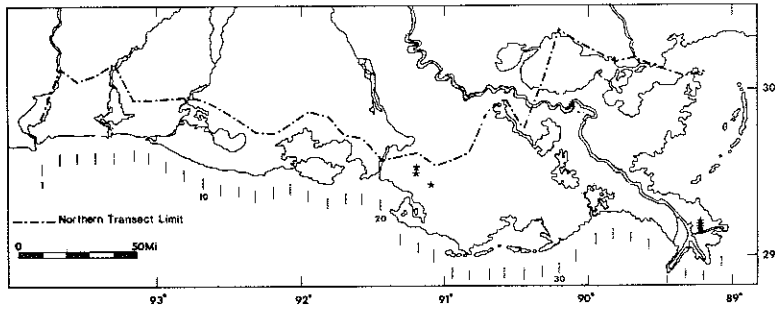
Spartina spartinae
(Trin.) Hitchc.

Gramineae

Gulf cordgrass
Marsh bunchgrass

Spartina spartinae is a tufted, perennial grass with numerous erect culms, 2 to 4 feet tall. Leaves are long and slender and have a spine-like tip. The inflorescence is a long, slender panicle with tight, erect spikes. The plant grows on well-drained sites such as river banks, bay shores, and back beach marshes in areas ranging from intermediate to saline. It has little value for wildlife but provides some forage for cattle and contributes detritus to aquatic systems.



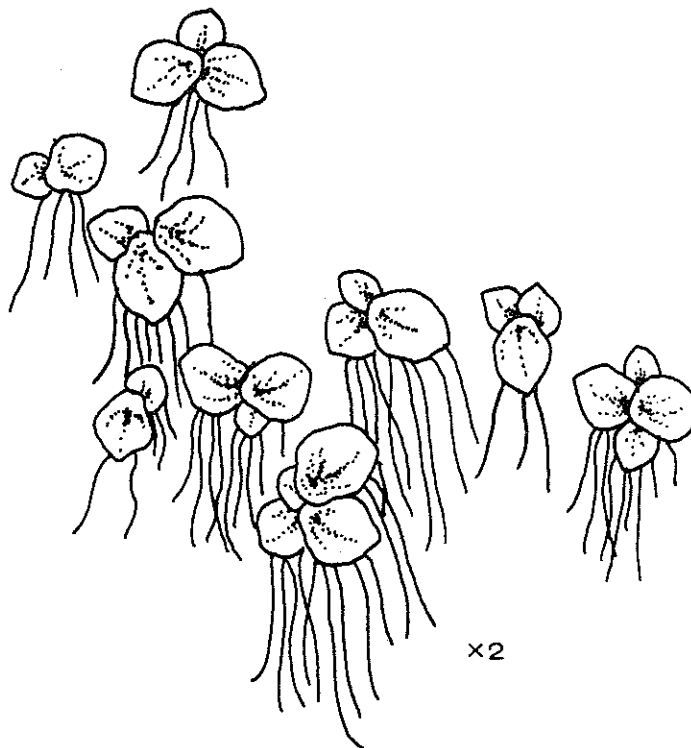


Spirodela polyrhiza
(L.) Schleid

Lemnaceae

Large duckweed

Spirodela polyrhiza is a minute, floating stemless plant of freshwater marshes, often forming dense mats over the surface. The thalli or leaf-like structures are oval, flat on both sides, green above and reddish-purple below, and they occur in small clusters. Several roots emerge from each thallus. Large duckweed occurs coastwide and is an important food for nutria, ducks, and various other water birds. All parts of the plant are consumed.

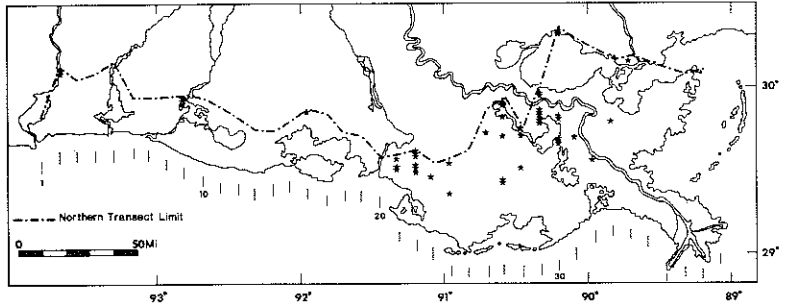


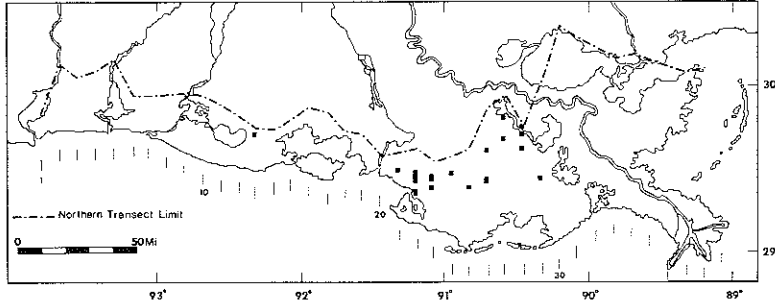
Taxodium distichum
(L.) Rich.

Taxodiaceae

Baldcypress

Taxodium distichum is a large tree with a buttressed base and outgrowths from the roots referred to as knees. The bark is fibrous and reddish-brown, and leaves are flat and featherlike. The tree produces a roughened, globose cone about 1 inch in diameter that contains heavy angular seeds. Baldcypress grows in fresh marsh on slightly elevated sites with firm soil, such as the natural levees of former river channels and the periphery of cheniers. Dead trunks often remain for many years and mark the location of fresh marshes that have undergone subsidence or were lost to saltwater intrusion. It is a commercial species having durable wood with good working qualities.



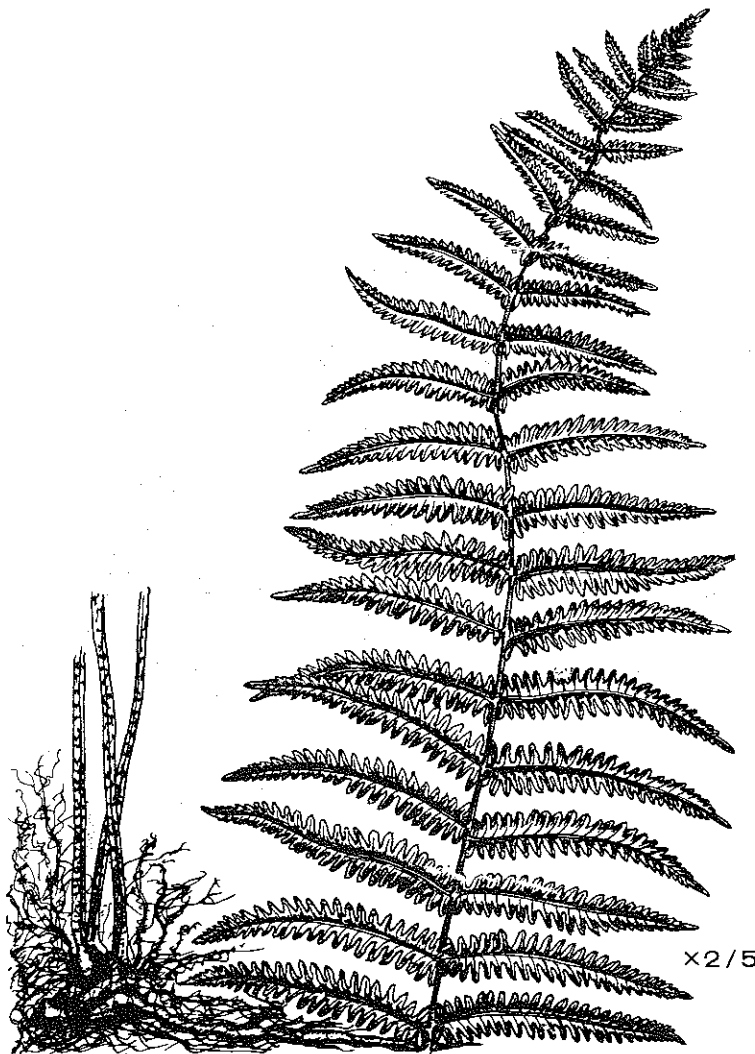


Thelypteris palustris Schott.
(*Dryopteris thelypteris*)

Aspidiaceae
(Polypodiaceae)

Marsh fern

Thelypteris palustris is a fern of fresh marsh that is not subject to prolonged inundation. Fronds are 1 to 2 feet tall, closely spaced, and ascend from long creeping rhizomes. Blades are lanceolate and pinnate, and the pinnae have deeply cut lobes. Fronds are sensitive to frost and die back during the winter. The plant is of little value to wildlife.



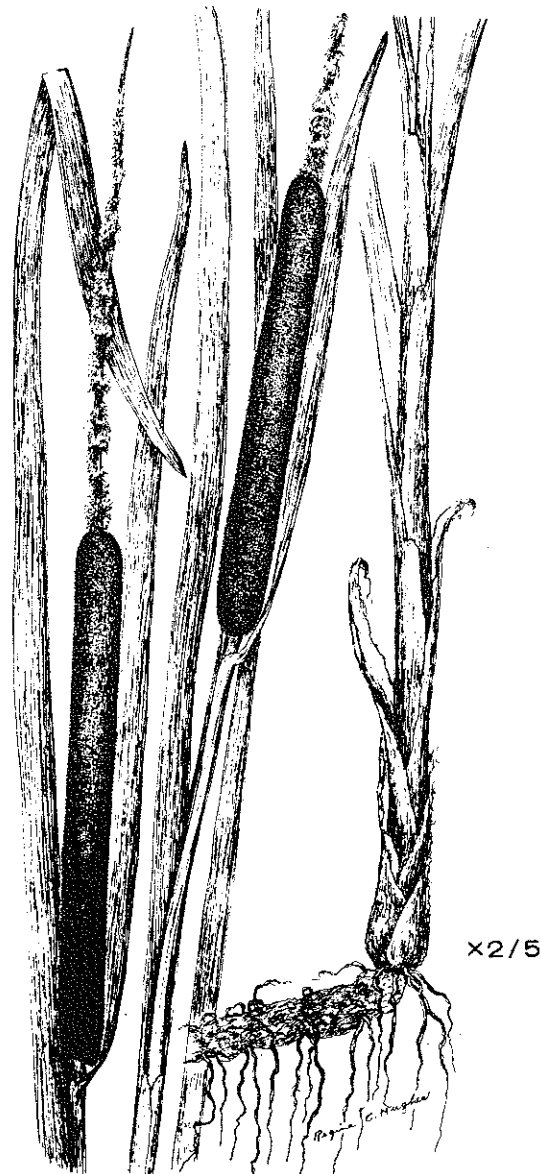
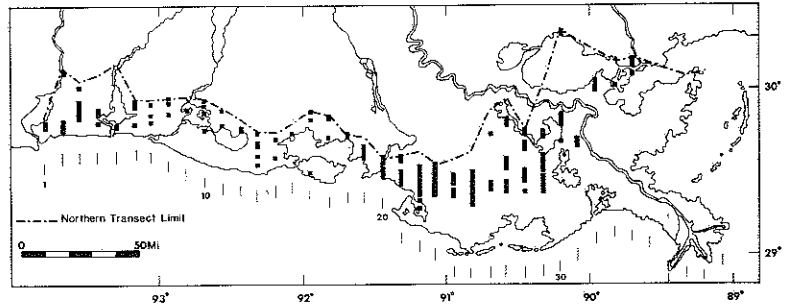
Typha spp. L.

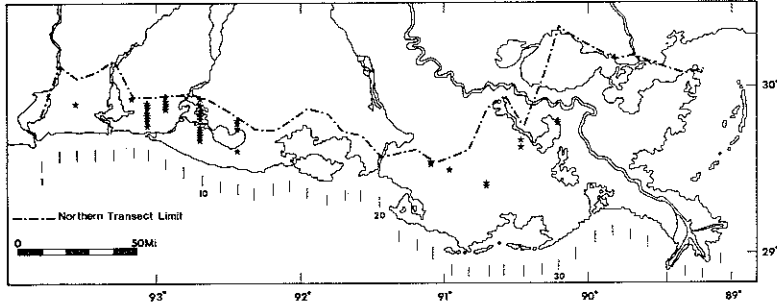
Typhaceae

Cattail

The *Typha* species are grasslike, perennial herbs with large, fleshy, creeping rhizomes. Leaves are narrow, erect, and 4 to 6 feet long, and the inflorescence is a long, brown, cylindrical spike at the end of the stem. The plants provide resting and escape cover for various forms of wildlife, and the rhizomes are preferred foods of muskrats and nutria.

Broadleaf cattail (*Typha latifolia*) and narrowleaf cattail (*Typha angustifolia*) are common species in fresh and intermediate marshes along the Louisiana coast. Southern cattail (*Typha domingensis*) is a more salt tolerant species and is occasionally found on bay shores and beaches.



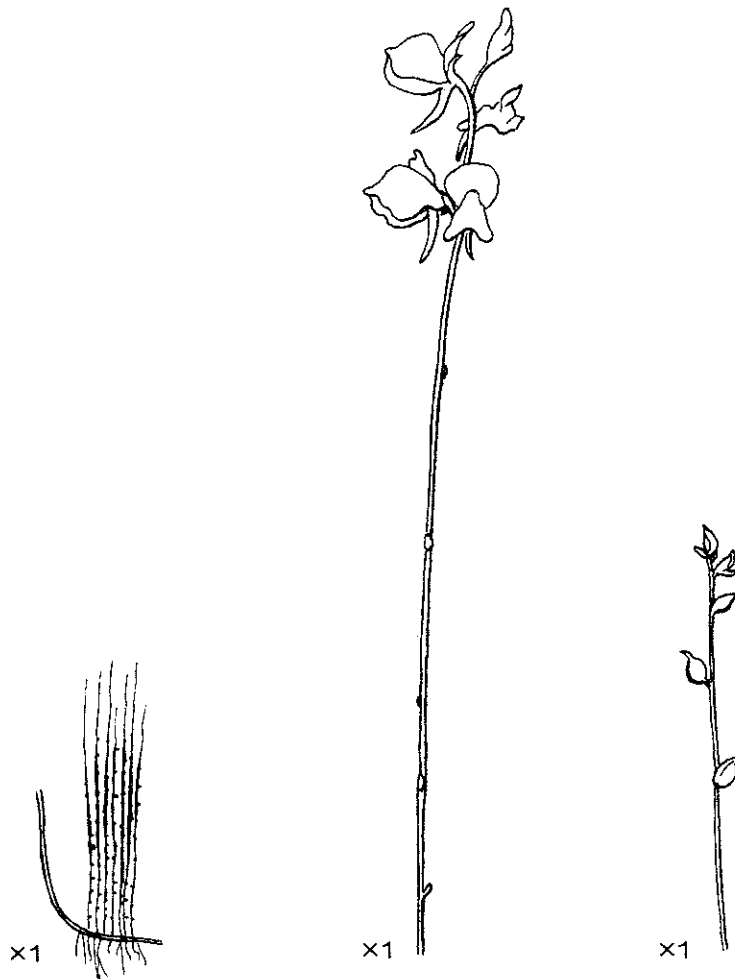


Utricularia juncea Vahl.

Lentibulariaceae

Rush bladderwort

Utricularia juncea is a small perennial herb with leaves creeping under the substrate (seen by washing away the soil). Leaves are linear and filamentous and bear minute bladders along the margins. The flower stalk is erect, 3 to 12 inches tall, and contains sparsely spaced, small yellow flowers. The plant grows in fresh marsh on moist soil or floating organic mats, often in small openings among taller vegetation. This species is of little value to wildlife.

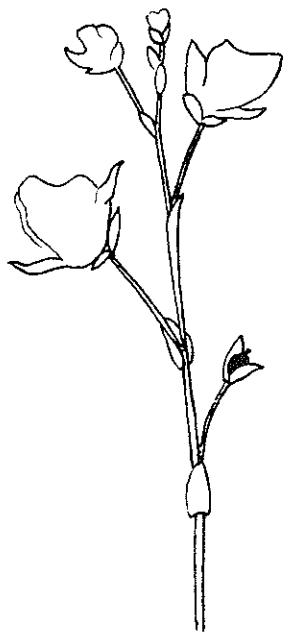
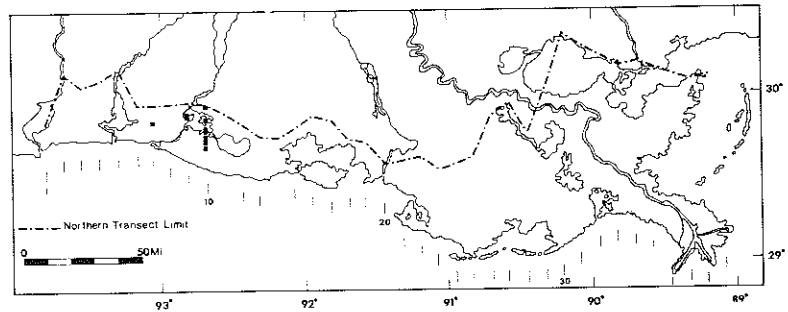


Utricularia vulgaris L.

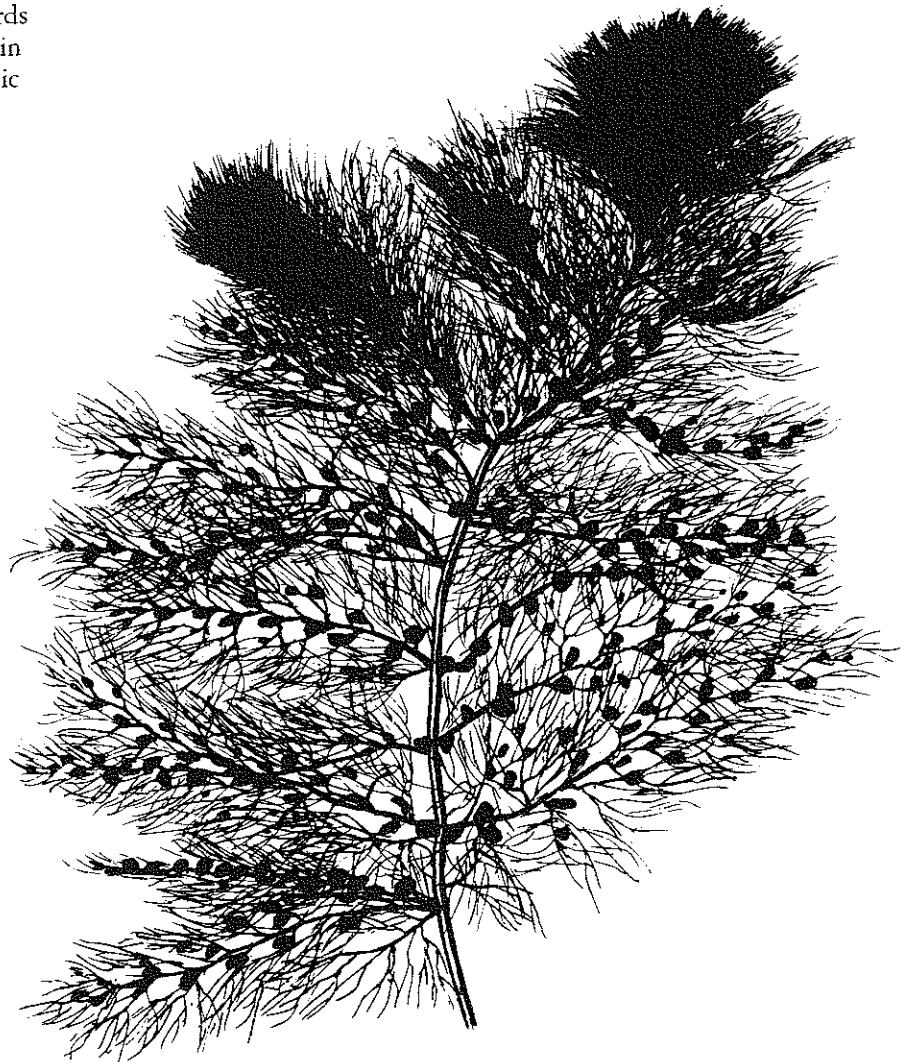
Lentibulariaceae

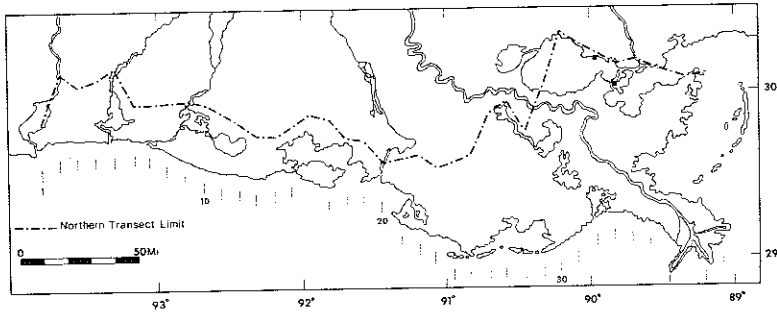
Common bladderwort

Utricularia vulgaris is an aquatic plant with long stems and threadlike, much-branched leaves. Leaves contain numerous small bladders along the margins. The flower stalk is long and erect, rising above the water surface and producing several yellow flowers with recurved pedicels about 1 inch long. Plants are usually free-floating in clear water of bayous and ponds of fresh marsh. Common bladderwort is an occasional food for ducks and other water birds and nutria, but it ranks low in comparison with other aquatic plants. Where dense stands occur, the plant presents a problem to fishing.



×1





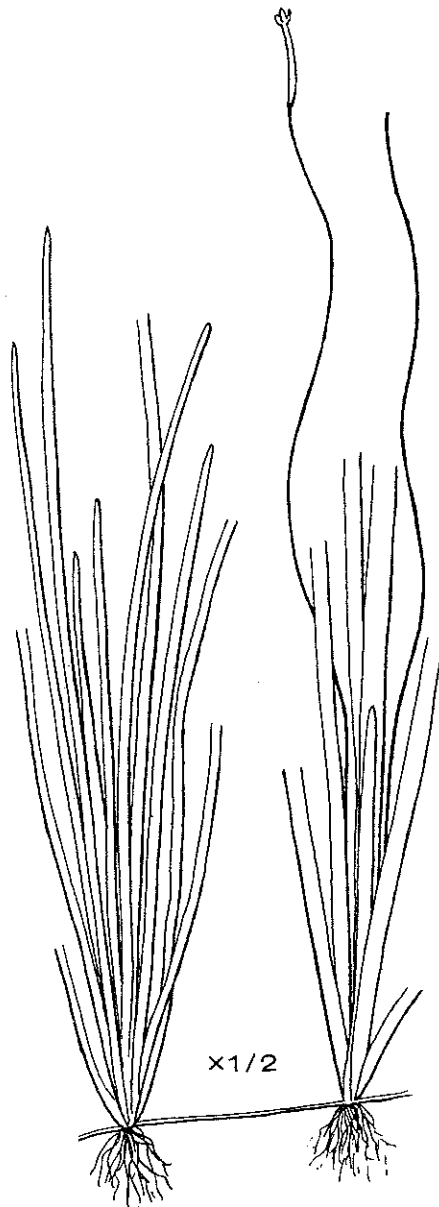
Vallisneria americana
Michx.

Hydrocharitaceae

Wild-celery
Water-celery

Vallisneria americana is a perennial, submerged aquatic plant. It is locally abundant and stolons grow in the bottoms of bayous, ponds, and lakes with salinities ranging from fresh to brackish. Leaves form in basal clusters and are ribbonlike, one-quarter to one-half inch wide and 1 to 2 feet long with rounded tips. The fruit is a capsule about 1 inch long that rises to the surface on a long, slender spiraling stalk. The plant is an important waterfowl food along the Atlantic Coast but is used only sparingly in Louisiana. However, it does attract various aquatic organisms and provides valuable nutrients and cover. In certain areas, it supplies important cover for molting blue crabs.

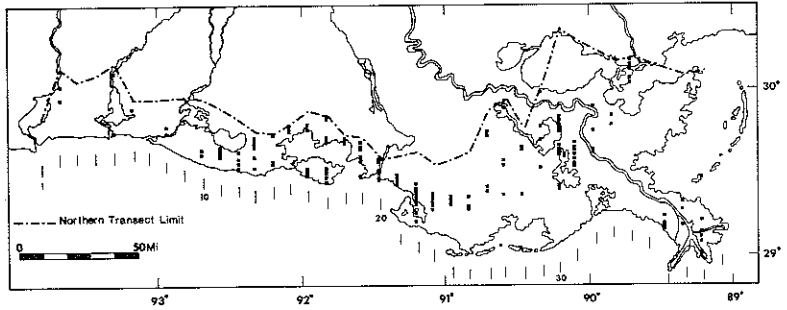
South American elodea (*Egeria densa*) and hydrilla (*Hydrilla verticillata*) are other submerged aquatic plants of the family Hydrocharitaceae. The two plants are similar in appearance and both species occur in freshwater ponds, lakes, bayous, and canals; however, hydrilla will tolerate brackish water. Hydrilla is considered a pest species because of dense growth that may interrupt boat traffic and fishing in waterways.



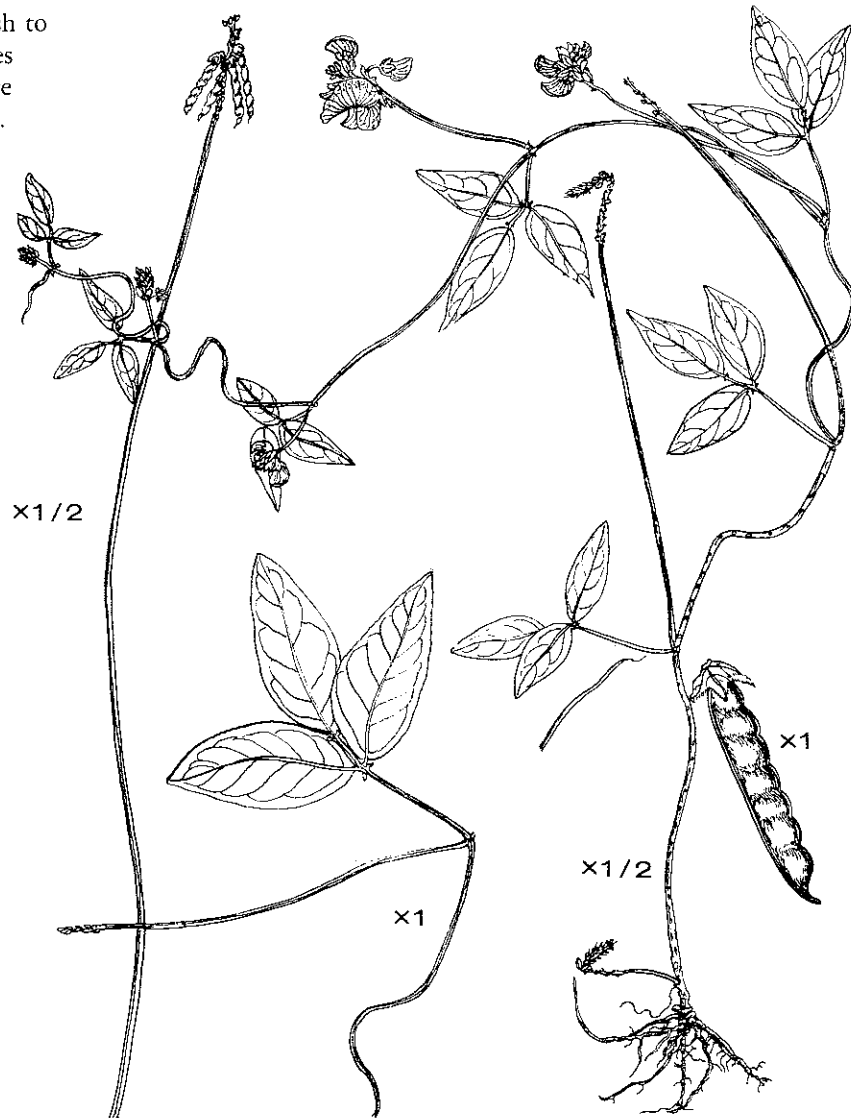
Vigna luteola
(Jacq.) Benth.
(*Vigna repens*)

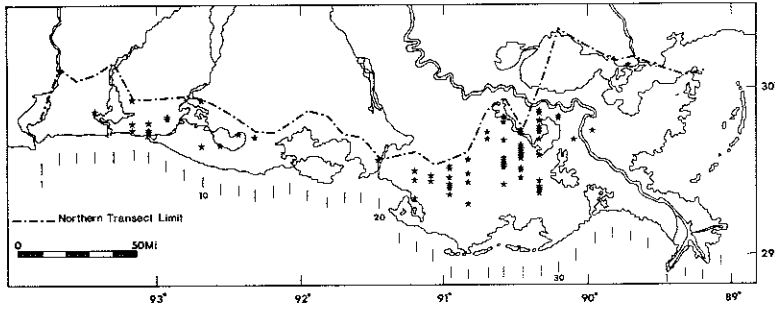
Leguminosae

Cowpea
Deerpea



Vigna luteola is a perennial climbing vine that often forms dense mats over other vegetation. Leaves are compound with three leaflets. Flowers are yellow and appear in clusters near the tip of a long peduncle. The fruit is a legume, 2 to 3 inches long. The plant grows on spoil banks and slightly elevated sites in fresh to brackish marshes. It provides browse for deer; the seeds are eaten by various small birds.



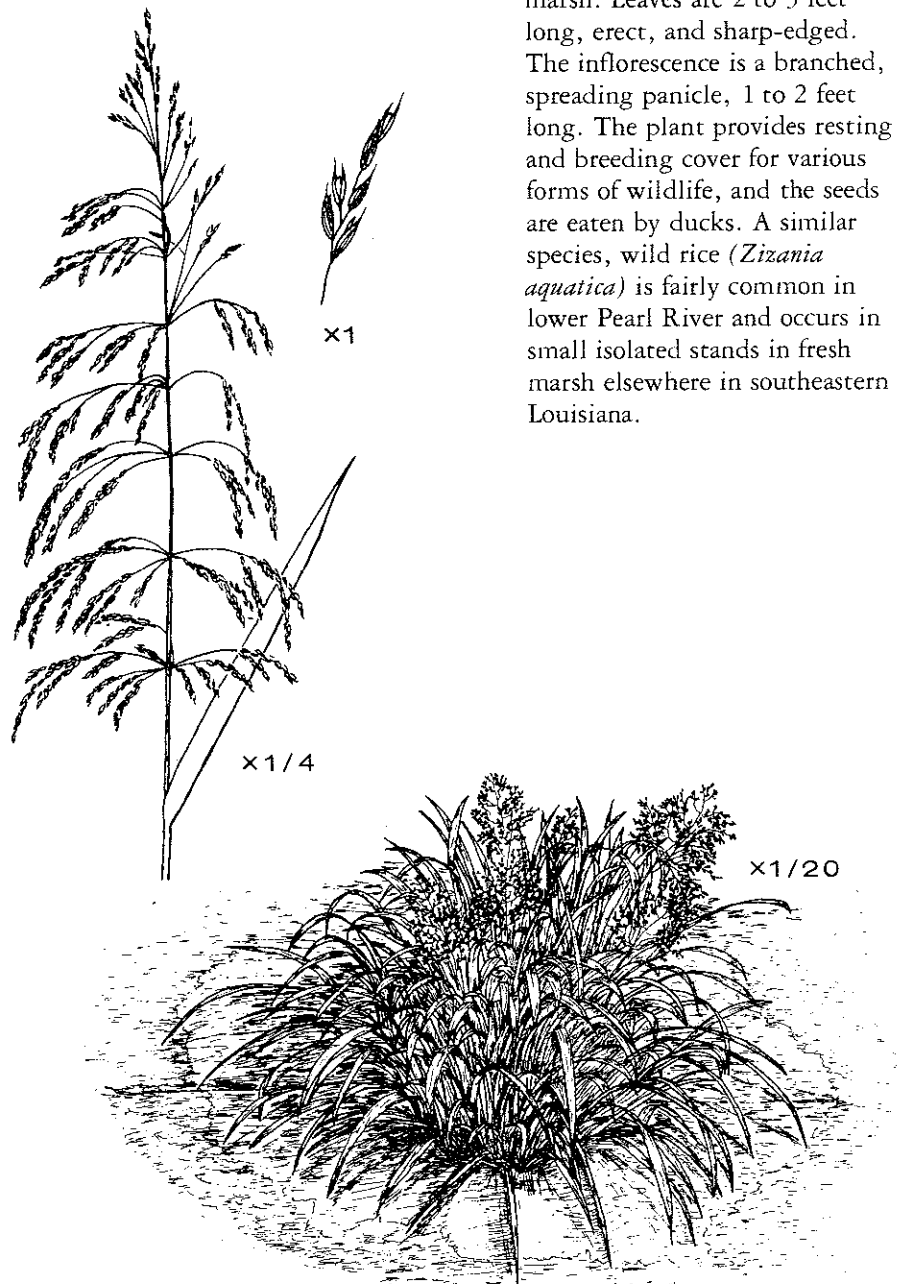


Zizaniopsis miliacea
(Michx.) Doell & Asch.

Gramineae

Giant cutgrass

Zizaniopsis miliacea is a coarse perennial grass with stout creeping rhizomes; it often forms dense circular stands in fresh marsh. Leaves are 2 to 3 feet long, erect, and sharp-edged. The inflorescence is a branched, spreading panicle, 1 to 2 feet long. The plant provides resting and breeding cover for various forms of wildlife, and the seeds are eaten by ducks. A similar species, wild rice (*Zizania aquatica*) is fairly common in lower Pearl River and occurs in small isolated stands in fresh marsh elsewhere in southeastern Louisiana.



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Appendix

Plants Listed by Family, Genus, Species

Aizoaceae

Sesuvium maritimum (Walt.) B.S.P.

Alismataceae

Sagittaria platyphylla (Engelm.) J.G. Sm.

Sagittaria lancifolia L.

Sagittaria latifolia Willd.

Amaranthaceae

Acnida cuspidata Spreng.

Alternanthera philoxeroides (Mart.) Griseb.

Amaryllidaceae

Crinum americanum L.

Hymenocallis caroliniana (L.) Herb.

Araceae

Colocasia antiquorum (L.) Schot.

Pista stratiotes (L.) Schot.

Aspidiaceae

Thelypteris palustris Schott.

Avicenniaceae

Avicennia germinans (L.) L.

Batidaceae

Batis maritima L.

Boraginaceae

Heliotropium curassavicum L.

Caprifoliaceae

Sambucus canadensis L.

Ceratophyllaceae

Ceratophyllum demersum L.

Chenopodiaceae

Salicornia bigelovii Torr.

Salicornia virginica L.

Compositae

Aster subulatus Michx.

Aster tenuifolius L.

Baccharis halimifolia L.

Bidens laevis (L.) B.S.P.

Borrchia frutescens (L.) DC.

Eupatorium capillifolium (Lam.) Small.

Iva frutescens L.

Pluchea camphorata (L.) DC.

Pluchea foetida (L.) DC.

Pluchea purpurascens (Sw.) DC.

Solidago sempervirens L.

Convolvulaceae

Cuscuta indecora Choisy

Ipomoea sagittata Cav.

Cyperaceae

Carex spp. L.

Cladium jamaicense Crantz

Cyperus compressus L.

Cyperus erythrorhizos Muhl.

Cyperus odoratus L.

Dichromena calorata (L.) Hitchc.

Eleocharis parvula (R.&S.) Link.

Eleocharis spp. R. Br.

Fimbristylis castanea (Michx.) Vahl.

Scirpus americanus Pers.

Scirpus californicus (C.A. Mey.) Steud

Scirpus maritimus L.

Scirpus olneyi E.&G.

Scirpus validus Vahl.

Gramineae

Andropogon glomeratus (Walt.) B.S.P.

Distichlis spicata (L.) Greene

Echinochloa walteri (Pursh) Heller

Leptochloa fascicularis (Lam.) Gray

Panicum dichotomiflorum Michx.

Panicum hemitomon Schult.

Panicum repens L.

Panicum virgatum L.

Paspalum dissectum (L.) L.

Paspalum vaginatum Sw.

Phragmites communis Trin.

Sacciolepis striata (L.) Nash

Setaria glauca (L.) Beauv.

Setaria magna Griseb.

Spartina alterniflora Lois.

Spartina cynosuroides (L.) Roth.

Spartina patens (Ait.) Muhl.

Spartina spartinae (Trin.) Hitchc.

Zizania aquatica L.

Zizaniopsis miliacea (Michx.) Doell & Asch.

Haloragaceae

Myriophyllum spicatum L.

Hydrocharitaceae

- Egeria densa* Planch.
- Hydrilla verticillata* Thunb.
- Limnobium spongia* (Bosc.) Steud.
- Vallisneria americana* Michx.

Hypericaceae

- Hypericum virginicum* L.

Juncaceae

- Juncus effusus* L.
- Juncus roemerianus* Scheele.

Leguminosae

- Aeschynomene indica* L.
- Sesbania drummondii* (Rydb.) Cory.
- Sesbania macrocarpa* Muhl.
- Vigna luteola* (Jacq.) Benth.

Lemnaceae

- Lemna minor* L.
- Spirodela polyrbiza* (L.) Schleid

Lentibulariaceae

- Utricularia juncea* Vahl.
- Utricularia vulgaris* L.

Lythraceae

- Decodon verticillatus* (L.) Ell.
- Lythrum lineare* L.

Malvaceae

- Hibiscus lasiocarpus* Cav.
- Kosteletzkya virginica* (L.) Gray.

Myricaceae

- Myrica cerifera* L.

Najadaceae

- Najas guadalupensis* (Spreng.) Magnus.

Nymphaeaceae

- Brasenia schreberi* J. F. GimeI.
- Caromba caroliniana* Gray.
- Nelumbo lutea* (Willd.) Pers.
- Nuphar luteum*
- Nymphaea mexicana* Zucc.
- Nymphaea odorata* Ait.

Onograceae

- Ludwigia leptocarpa* (Nutt.) Hara.
- Ludwigia peploides* (H.B.K.) Raven

Osmundaceae

- Osmunda regalis* L.

Polygonaceae

- Polygonum* spp. L.

Pontederiaceae

- Eichhornia crassipes* (Mart.) Solms.
- Pontedaria cordata* L.

Potamogetonaceae

- Potamogeton pusillus* L.

Rubiaceae

- Cephalanthus occidentalis* L.

Ruppiaceae

- Ruppia maritima* L.

Salicaceae

- Salix nigra* Marsh.

Salviniaceae

- Azolla caroliniana* Willd.

Scrophulariaceae

- Agalinis maritima* (Raf.) Raf.
- Bacopa caroliniana* (Walt.) Robins.
- Bacopa monnieri* (L.) Wettst.

Taxodiaceae

- Taxodium distichum* (L.) Rich.

Typhaceae

- Typha angustifolia* L.
- Typha domingensis* Pers.
- Typha latifolia* L.

Umbelliferae

- Centella asiatica* (L.) Urban.
- Hydrocotyle ranunculoides* L.
- Hydrocotyle umbellata* L.
- Hydrocotyle verticillata* Thunb.

Verbenaceae

- Phyla nodiflora* (L.) Greene.

Glossary

- Achenes.** A small seedlike structure.
- Agglomerate.** A tightly clustered mass of fruit.
- Apex.** The uppermost part of a stem.
- Apices.** Plural form of apex.
- Aromatic.** A characteristic odor.
- Awns.** A small pointed process or bristle.
- Axil.** The angular space between a branch or leaf and the branch to which it is attached.
- Axillary.** Situated in or growing from an axil.
- Axis.** A plant stem or stalk.
- Basal leaves.** Leaves growing on the lower portion of a plant or a limb.
- Bladder.** A thin sack filled with air or liquid.
- Blade.** The flat expanded portion of a leaf.
- Bract.** A modified leaf, usually close to a flower.
- Buttressed base.** An enlarged base on a tree such as baldcypress.
- Cane.** A long, slender, flexible stem, usually arising from the ground.
- Chenier.** A former beach, usually containing trees, located inland from the Gulf of Mexico.
- Cleft.** Any deep cut or lobe in a leaf.
- Compound leaf.** A leaf made up of two or more leaflets.
- Cordate.** Shaped like a heart.
- Cover.** A place where animals can hide or find seclusion.
- Culm.** The flowering stem of grasses and sedges.
- Crenate.** Having a scalloped margin.
- Detrital, detritus.** Dead fragments of plants.
- Deltoid.** Triangular in shape.
- Drupe.** A fleshy fruit with usually one seed and no regular opening.
- Estuary.** The mouth of a river or a bay where fresh water and sea water meet.
- Exotic.** Introduced from another country.
- Family.** A group of related genera.
- Filamentous.** Long, narrow, and thread-like in shape.
- Food chain.** A feeding sequence in living organisms in which each uses a smaller or lower member as a food source.
- Fronde.** The leaf of a fern.
- Gelatinous.** Resembling gelatin or jelly.
- Genus.** A group of closely related species.
- Germanation.** The act of sprouting or developing in seeds.
- Globose.** Round or spherical.
- Habitat.** The place or type of site where a plant or animal normally lives and grows.
- Herb.** A succulent seed-producing plant that dies down at the end of the growing season.
- Herbaceous.** Of or pertaining to a herb.
- Inflorescence.** The flowering part of a plant.
- Invertebrates.** Animals that lack a spinal column.
Example: insects, shrimp, and clams.
- Lanceolate.** Lance-shaped, much longer than wide and pointed at the tip.
- Leaflet.** A leaflike part of a compound leaf.
- Legume.** A seed of the bean or pea type.
- Lenticels.** Pores in the stem of a plant.
- Linear.** A leaf shape that is long and narrow with sides almost parallel.

Lobes. A rounded, protruding segment of a leaf or petal.

Nodes. A place on a stem that normally produces one or more leaves.

Opposite leaves. Leaves arranged on a twig in opposite pairs.

Ornamental plants. Plants grown for their beauty rather than use.

Ovate. Having an oval shape.

Panicle. An inflorescence with many branches as in certain grasses.

Parasitic plant. A plant that grows attached to another plant from which it receives nourishment.

Pedicel. The supporting part of a single flower.

Peduncle. The stalk of a solitary flower or a cluster of flowers.

Peltate. A leaf attached to its stalk from inside the margin.

Petiole. A leaf stalk.

Pinnae. Leaflets of a compound leaf or a frond.

Pinnate. A type of compound leaf with leaflets arranged on both sides of the rachis, feather-like.

Prostrate. A plant that grows flat on the ground.

Pubescent. Covered with short, soft hairs.

Raceme. A simple inflorescence with an elongated axis supporting flowers on short stalks.

Rachis. An axis bearing flowers or leaflets.

Recurved. Bent or curved downward.

Reed. A type of grass with a tall, slender, and prominently jointed stem.

Reniform. A leaf that is kidney shaped.

Rhizome. An elongated, succulent, underground stem, rooting at the nodes.

Rosettes. A plant form with leaves growing in a circular pattern and close to the ground.

Sagittate. A leaf with the shape of an arrowhead.

Sedge. A group of grass-like plants having achenes and solid stems.

Sepals. Modified leaves at the base of a flower.

Serrate. The edge of a leaf having sharp teeth, usually pointing forward.

Sessile. Without a petiole or pedicel.

Sinus. The space or recess between two lobes of a leaf.

Spathe. A modified leaf or bract enclosing an inflorescence.

Species. A group of closely related organisms that are capable of interbreeding.

Spike. An elongated, simple inflorescence similar to a raceme but having sessile flowers along the axis.

Stand. A group of plants occupying a common area.

Substrate. The base upon which a plant lives and grows.

Succulent. Having fleshy tissue.

Thallus. A plant body without true leaves or stems.

Tubers. An enlarged, fleshy part of a rhizome or stolon.

Umbel. A flat or round-topped flower cluster.

Vascular. Having xylem and phloem tissue for transporting fluids to different parts of a plant.

Verticils. Whorls of leaves or flowers at a node.

Whorl. A ring of leaves or flowers surrounding a node.

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