

## *Acrostichum danaeifolium*

Family: *Pteridaceae*

Giant leather fern; leather fern; inland leather fern



Fronds can be up to 12 feet tall.

### Giant Leather Fern

**Synonyms:** *A. excelsum*; *a. lomarioides*; *Chrysodium damaeifolium*; *C. lomarioides*; *C. hirsutum*

**Origin:** Florida Keys to Dixie and St. Johns Counties; Central and South America; Caribbean

**USDA Zone:** 8b-12b (Minimum 15°F)

**Growth Rate:** Medium

**Plant Habit:** Upright

**Plant Type:** Herbaceous perennial

**Soil Requirements:** Wide

**Salt Tolerance:** High

**Nutritional Requirements:** Low

**Drought Tolerance:** Low

**Potential Pests:** Scale insects; slugs

**Typical Dimensions:** Up to 12 feet long and 5 feet wide

**Leaf Type:** Pinnately compound

**Propagation:** Spores; divisions from rhizomes

**Invasive Potential:** Not known to be invasive

**Human hazards:** None

**Uses:** Aquatic; wet sites; specimen plant; foliage plant; groundcover



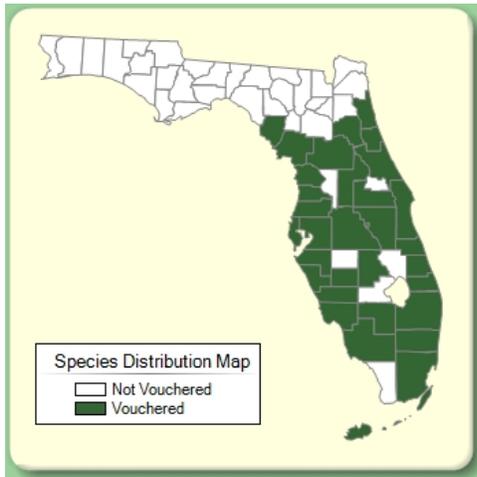
Unfurling new growth in February.



Newly invigorated giant leather fern used as a groundcover in a roadway median of a gated community.

## Geographic Distribution and Ecological Function

Florida is the only state where the giant leather fern, *Acrostichum danaeifolium*, is found. It is widely distributed in central and south Florida. It also occurs in Central and South America and in the Caribbean. The giant leather fern grows in coastal hammocks and in brackish and mangrove swamps and further inland along canals and pond edges. It grows vigorously in full sun to full shade but it will not tolerate freezing temperatures. A similar species, the golden leather fern, *Acrostichum aureum*, is pantropical and has slightly smaller fronds. Unlike the giant leather fern it is native only to coastal areas and is rarely found in Florida. The golden leather fern is confined to the southwestern coastal counties from Manatee County south. The giant leather fern's strong, spongy roots and rhizomatous habit have ecological value in preventing erosion along the edges of inland waterways.



Distribution map based on vouchered plant specimens only. From Atlas of Florida Vascular Plants.



Giant leather fern naturally occurring in fresh water of North Fort Myers.



A natural growth of giant leather ferns in south Lee County with an encroaching housing development in the background.

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## Growth Habit, Morphology and Reproduction

The giant leather fern is Florida's largest fern. It is a huge fern with erect fronds that are typically 6 feet tall but can grow to 12 feet long and up to 2 feet wide. It is a natural clumper that is best featured in a landscape with plenty of room where it will make a dramatic statement. It grows in width by suckering from underground rhizomes. This allows it to form larger clumps. Fronds are pinnately divided. There are between 20 to 60 pairs of leaflets, typically spaced very close together and sometimes overlapping. Leaflets are coarse and leatherly with smooth margins. They are dark green above and a paler green below. The fronds are either fertile or non-fertile. Fertile fronds are taller and more erect than non-fertile fronds. They are densely coated underneath with golden brown or reddish spore cases. Sporangia spread across the lower surface of the leaflets and eventually coalesce to resemble a mat of brown felt. Spores from these leaflets can produce hundreds of young plants when embedded in moist open soils, along paths or on the edges of ponds. Suckers can also be removed from a clump and transplanted to form new plants. A distinguishing characteristic between the giant leather fern and the golden leather fern is the location of the spores on the fronds. The fertile leaflets of the giant leather leaf fern typically occur along the entire length of the frond whereas those of the golden leather fern occur only toward the apex (usually the apical one to seven pairs of leaflets). Another distinguishing feature between the two species is that the golden leather fern generally has no more than 20 pairs of leaflets



**Left:** Fertile leaflet covered with a mat of spores **Right:** Non-fertile leaflet is not capable of spore production.



Spores on the underside of the fertile leaflets extends from the top to the bottom of the frond.

Habit of giant leather fern. Fronds can be up to 12 feet tall and 2 feet wide.

## Planting and Maintenance Guidelines

Giant leather fern can be planted at anytime of the year with irrigation and at the start of the rainy season without irrigation. It makes a bold statement and will need plenty of room for full development. Space plants 48 to 60 inches apart on center. A slightly shaded and moist location is ideal for maximum frond length and a primeval statement. Prolonged direct sun, especially in the summer, can burn foliage. Old fronds will die as they age and the plant will become unkempt. Remove these older fronds to maintain a good appearance. Such routine maintenance can help clumps of giant leather ferns maintain an acceptable appearance for many years. However, some clumps will lose vigor and height and may need an occasional severe pruning. Pruning back to the ground will not kill the plant and should reinvigorate

old declining stands. When necessary, severe pruning should be done no more than once a year, at anytime of the year. June is probably the best time to do this as it is the start of the rainy season. This will also allow for the plants to regain their spectacular appearance in time for the arrival of winter visitors. After pruning remove the pruned and dead material. Where it is not subject to inundation, mulch the area after a severe pruning to improve its landscape appearance. In a damp location the giant leather fern requires no fertilization to become established and to maintain its best appearance. However, in drier areas some ferns grow best with regular fertilizer applications. Fertilizer applications of nitrogen and phosphorus should be avoided in the rainy season as prescribed by several county ordinances.



December. Pruned three weeks earlier.



December



February



February, two months later



July, seven months later



This plant, one of many assigned to a wet swale, has lost its vigor and is in need of pruning and removal of dead material to revive it.

This fact sheet was reviewed by Peggy Cruz, Lee County Extension; Cathy Feser, Collier County Extension; John Sibley, Master Gardener and owner of All Native Garden Center, Nursery & Landscapes and Jenny Evans, Sanibel-Captiva Conservation Foundation.

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