

LYGODIUM MICROPHYLLUM (CAV.) R. BROWN

Lygodiaceae/Climbing Fern Family

- Common Name:** Old World climbing fern
Synonymy: *Lygodium scandens* (L.) Sw., *Ugena microphylla* Cav.
[sometimes placed in Schizeaceae, ray fern family]
Origin: Africa to Southeast Asia, south Pacific islands, Australia

Botanical Description: Fern with dark brown, wiry rhizomes and climbing, twining fronds of indeterminate growth, to 30 m (90 ft) long; main rachis (leaf stalk above petiole) wiry, stemlike. Leafy branches off main rachis (constituting the pinnae) once compound, oblongish in overall outline, 5-12 cm (2-5 in) long. Leaflets (pinnules) usually unlobed, stalked, articulate (leaving wiry stalks when detached); leaf-blade tissue usually glabrous below; fertile leaflets of similar size, fringed with tiny lobes of enrolled leaf tissue covering the sporangia along the leaf margin.

NOTE: May be confused with *L. japonicum*, whose pinnae are often twice compound (see preceding pages).

Ecological Significance: Considered a principal agricultural weed in Malaysia and present as a weed in Vietnam (Holm *et al.* 1979). Reported from Florida natural areas of Broward, Highlands, Lee, Martin, Palm Beach, and Sarasota counties (EPPC 1996). In 1993, infested 1,233 acres (11% of the area) of Jonathan Dickinson State Park and the Loxahatchee National Wild and Scenic River, including many acres of cypress swamps (Roberts and Richardson 1995). By 1995, infested 17,000 acres (12% of the area) of the Loxahatchee National Wildlife Refuge (Palm Beach County), blanketing entire tree islands and even clambering over sawgrass in standing water (Jewell 1996). Poses management problems for both wildfires and prescribed burns because growth into canopy creates an avenue for fire to spread where swamp waters have usually provided a natural barrier. Has caused loss of some canopy trees with such “crown” fires, as well as loss of native bromeliads residing on tree trunks (S. Farnsworth, Palm Beach County, 1995 personal communication; Roberts 1996).



Section of rachis with pinnae

OLD WORLD CLIMBING FERN

Distribution: Center of dispersal in Florida reported by Beckner (1968) and Nauman and Austin (1978) as Loxahatchee River Basin in southern Martin and northern Palm Beach counties. Herbarium specimens now recorded from Broward, Collier, DeSoto, Highlands, Lee, Polk, and Sarasota counties (Wunderlin *et al.* 1996). Widespread in Old World tropics from Africa and India to Malaysia and in Australia from Ryukyu Islands south to New South Wales (Singh and Panigrahi 1984, Tagawa and Iwatsuki 1979).

Life History: Wiry rhizomes able to accumulate into dense mats 1 m (3 ft) or more thick above native soil (J. Street, Palm Beach County, 1996 personal communication). Vegetative growth and production of fertile pinnules continuous throughout year. Can germinate from spores in 6-7 days, with 5-month-old spores still having an 80% germination rate (Brown 1984). Fertile pinnules usually produced where plant receives sunlight, with such exposed locations also aiding windborne dispersal of the spores. Often establishes first at pineland/wetland ecotone. Usually killed back by fire, but not eliminated (Maithani *et al.* 1986).

RER



In natural area, Martin County

RER



Fertile pinnules