

# *Lygodium japonicum* (Thunb.) Sw.



**Common Name:** Japanese climbing fern

**Synonymy:** *Ophioglossum japonicum* Thunb. ex Murray (sometimes placed in Schizaceae, ray fern family)

**Origin:** Eastern Asia, temperate to tropical

**Botanical Description:** Fern with climbing, twining fronds of indeterminate growth, to 30 m (90 ft) long; main rachis wiry, stemlike. Leafy branches off main rachis (constituting the pinnae) compound, triangular in overall outline, 10-20 cm (4-8 in) long and about as wide. Leaflets (pinnules) lobed, stalked, with terminal lobes often dissected (pinnatifid), basal lobes irregularly lobed or dissected; leaf-blade tissue pubescent below with short, curved hairs. Fertile leaflets contracted in shape, with two rows of sporangia along the leaf margin, which is enrolled to partially cover the sporangia.

**NOTE:** May be confused with *L. microphyllum* (Cav.) R. Brown, Old World climbing fern, but its leaflets unlobed (usually), glabrous below, articulate stalked (leaving wiry stalks when blade detached).

**Ecological Significance:** Present as a weed in the Philippines and considered a common weed in Taiwan (Holm et al. 1979). Most frequently naturalized in north and west Florida, in shady or sunny, usually damp, disturbed areas such as yards and roadsides, but also in less disturbed edges of swamps, marshes, lakes, creeks, hammocks, and upland woodlands. Can form tangled masses over ground cover and shrubs, its dense canopy eliminating the underlying vegetation (Nauman 1993a). Reported forming sun-blocking “walls” of fern in tributary floodplains of the Apalachicola River

(L.C. Anderson, Florida State University, 1997 pers. comm.), and smothering seedlings of overstory tree species (K.C. Burks, Florida Department of Environmental Protection, 2001 personal observation). Introduced in 1932 as an ornamental (Gordon and Thomas 1994). Reported as weedy in southern Alabama as well (Nauman 1993a).

**Distribution:** Occurs naturalized in the United States from the Carolinas through Georgia, Florida, Alabama, Mississippi, and Louisiana, to Texas and Arkansas. In Florida, documented as invading upland hardwood and mixed forests, mesic flatwoods, bottomland forests, floodplain forests, basin marshes, strand swamps, bay-galls, seepage slopes, and ruderal communities. In Florida, occurs across north and west Florida and south into central Florida, with documented sightings as far south as Hardee and Highlands counties (FL Dept. of Agriculture, unpublished records), and Broward County (R. Pemberton, USDA, 1997 pers. comm.). Verified herbarium specimens collected from naturalized populations in 42 Florida counties as far west as Escambia County in the Panhandle through the peninsula south to Lee and Broward counties (Wunderlin and Hansen 2004). Has also been reported from natural areas in 14 additional counties (FLEPPC 2005).

**Life History:** North of the frost line, leaflets die in winter but stalks of leaves usually remain intact, providing a “ladder” for climbing stalks of new growth. Spores wind-dispersed, and perhaps carried in dust on moving objects such as vehicles. Thought to prefer soils of circumneutral pH (Nauman 1993a).