

Spread of the Exotic Fern *Lygodium microphyllum* in Florida

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Lygodium microphyllum (Cav.) R. Br. (Schizaeaceae) was first reported as an adventive in Florida about a decade ago by Beckner (1968). The plants were known to Beckner from three collections in Martin County near Jonathan Dickinson State Park and a single collection in Palm Beach County from Delray Beach. These climbing ferns should no longer be considered adventive, since they are now naturalized in both these counties. On the fringes of their range, the plants occur mostly in small clumps, while toward the center of the distribution near the Loxahatchee River and Loxahatchee Slough (Fig. 1), *Lygodium* may cover acres. One colony in Palm Beach County (Sect. 12, T44S, R41W) was one-quarter of a mile long and about 200 yards wide in January 1978.

In Florida, the plants are confined to wet, disturbed sites. We have found them only near canals, rivers, ditches, in disturbed swamps, and other sites which have standing water for a large part of the year.

We have not determined when the plants were introduced, although the oldest collection we have seen was made in February 1958 (R. A. Long, FLAS). The apparently oldest center of dispersal for *L. microphyllum* is in the Loxahatchee River area. Large and seemingly old colonies are abundant, suggesting that the plants have been there longer than the past two decades. Another, apparently younger, focal point is in southeastern Palm Beach County. Perhaps the small colony (Fig. 1) was started by the plants being cultivated in nurseries in the 1950's. If, as we have assumed, the ferns first became established in the Lower Loxahatchee River area, how they were dispersed upstream is unknown. Spores might have been spread accidentally by birds, since young plants often appear first in small isolated patches on the margins of cypress heads.

Two other members of the genus have been reported in Florida, *L. japonicum* (Thunb.) Swartz and *L. palmatum* (Bernh.) Swartz. The former is an Asian fern naturalized from the Carolinas to Texas (Radford et al., 1968; Correll & Johnston, 1970). An old collection of *L. japonicum* in Dade County was considered to have escaped on vacant lots, but we suspect that it was only persistent from cultivation. We have not seen recent populations in southern Florida. *Lygodium palmatum* is considered a native of the eastern United States, ranging from Massachusetts to the Carolinas and Kentucky (Radford, et al., 1968). Although reported in Georgia and Florida (Small, 1938), we have seen no specimens.

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At present the two Asian species *L. japonicum* and *L. microphyllum* are well established in Florida. *Lygodium japonicum* is naturalized only in northern Florida and *L. microphyllum* only in southern Florida. Both seem to be spreading and eventually may meet. In southern Florida, *L. microphyllum* has already affected the native vegetation by smothering shrubby and herbaceous plants.

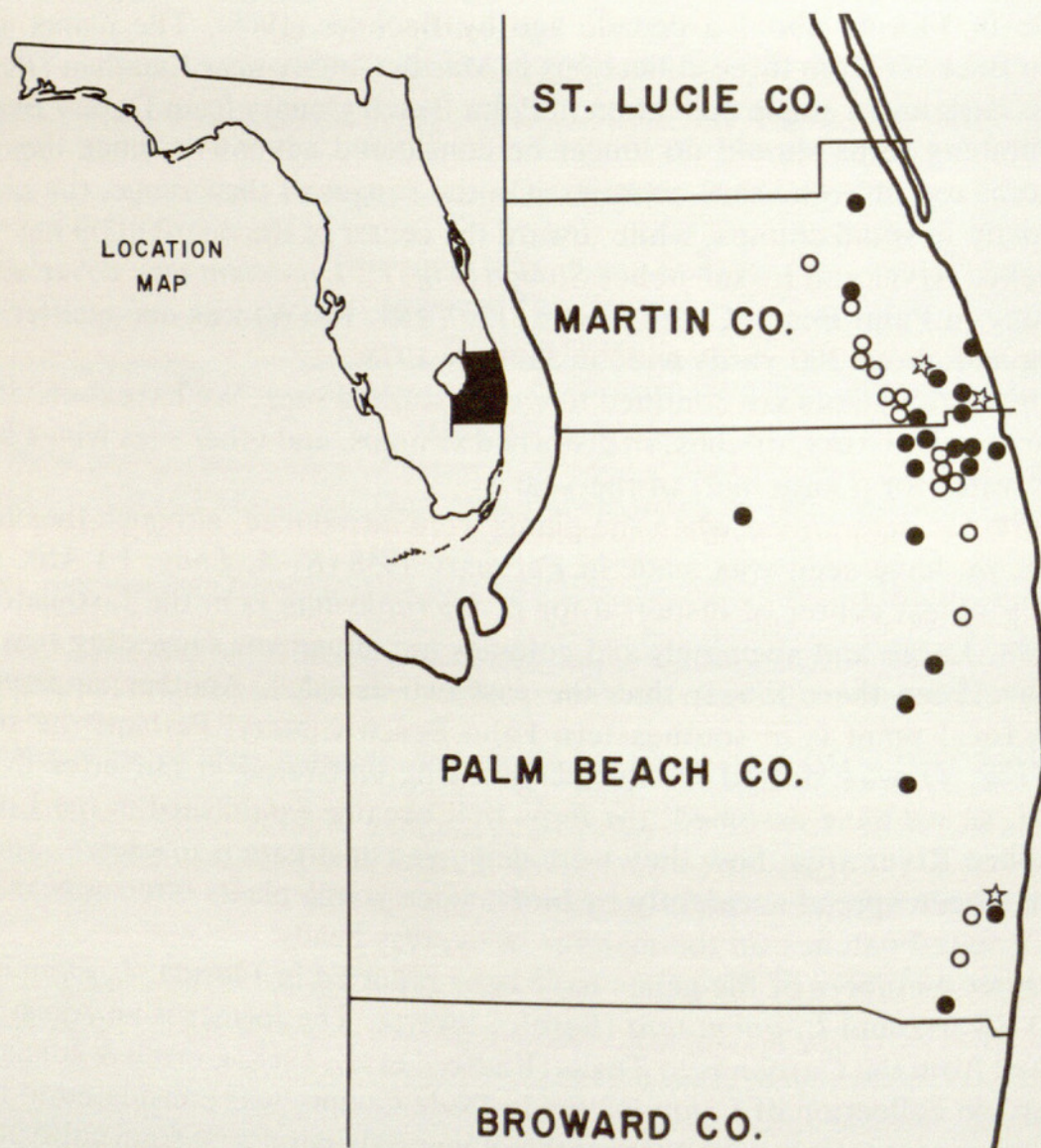


FIG. 1. Distribution of the Climbing Fern *Lygodium microphyllum* in southeastern Florida. Stars represent the points where the plants were known in the late 1960's. Dots are sites for which voucher specimens now exist. Open circles are where plants have been seen but no vouchers have been collected.

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