UF UNIVERSITY of FLORIDA
IFAS Extension

FLORIDA DEPARTMENT OF AGRICULTURE & CONSUMER SERVICES
DIVISION OF FORESTRY

Sword Fern

Nephrolepis cordifolia

(L.) Dryopteridaceae

Biology

- True fern
- Reproduces via spores
  - Year round in south Florida
- Grows in woodland areas
- Possibly introduced as an ornamental

Distribution & Impacts

- Found in 23 counties from the Gainesville (Alachua county) area south
- Wooded areas, shaded moist environment
- Aggressive spread, forming dense stands
- Quickly displaces native vegetation
- Spores readily dispersed by wind & water

Sword Fern Distribution in Florida

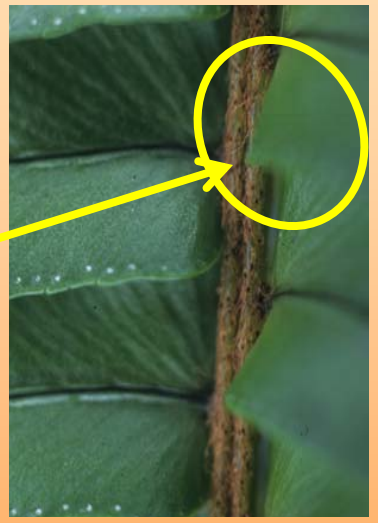
Identification

Mature Plant

- Fronds grow up to 3 feet in height
- Both sterile and fertile (spore producing) fronds

Leaves

- Over 100 leaflets (pinnae) per frond
- Auricle overlaps rachis
- Sori (spore containing structures) produced between midvein and margin



Rhizomes & Stolons

- Rhizomes are orange-brown with hair-like scales
- Stolons form small underground tubers - distinguishes this fern from native ferns

Management

Preventative

Cultural

Mechanical

Biological

Chemical

Preventative

1. Limit planting as an ornamental
2. Remove existing plants, including resprouts and before seeds are produced
3. Avoid mechanical disturbance in forested areas – logging, rouging, etc. where sword fern is present

Cultural

1. Alternative landscape plants to replace sword fern
2. Programs to educate homeowners about the problems associated with this plant and proper identification
3. Maintain good ground cover and mixture of plant species to reduce establishment

Biological

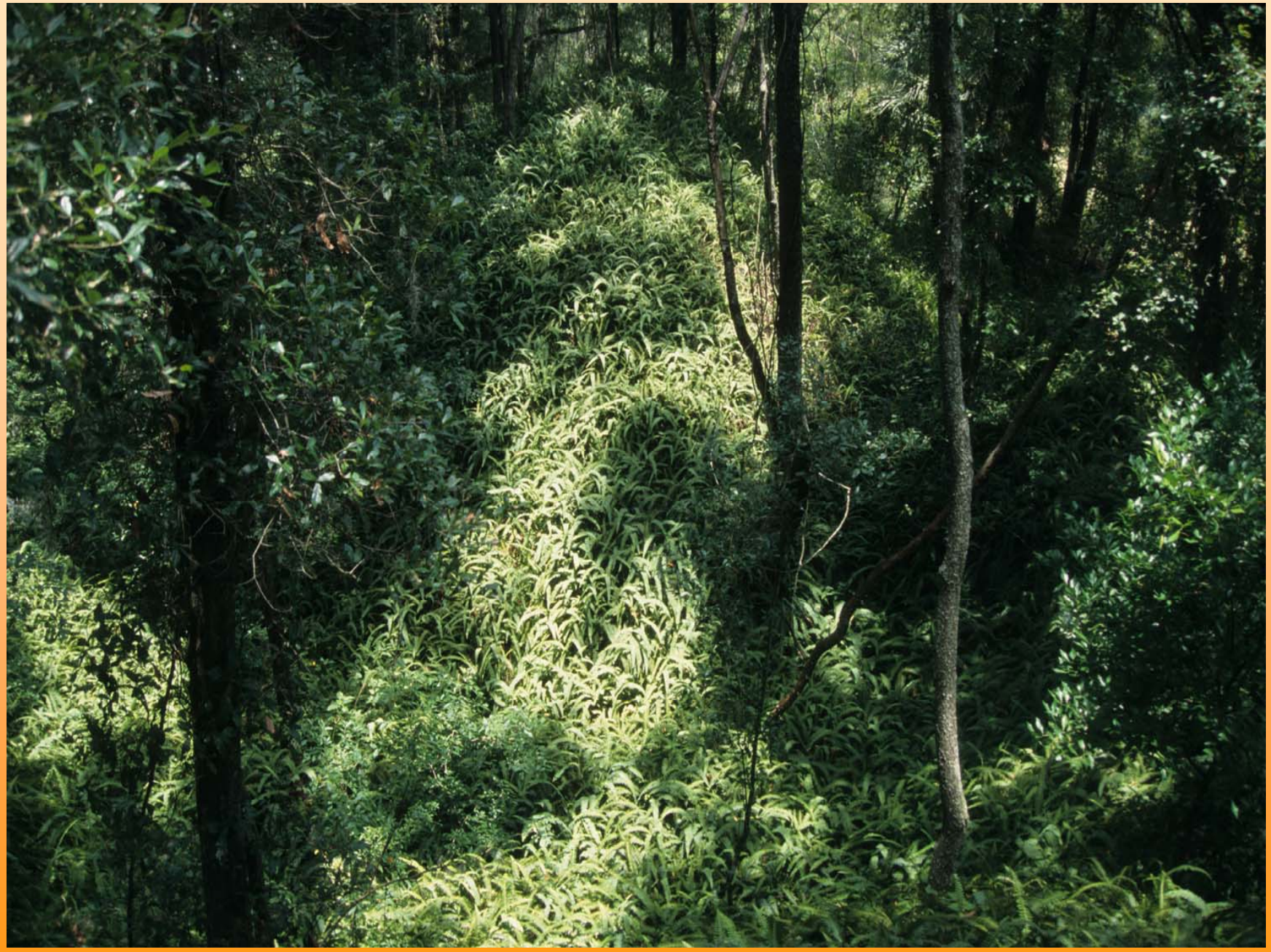
1. There are no known biological control agents available for sword fern management in Florida or the southeastern U.S.

Mechanical

1. Hand pull young seedlings, including all stolons with tubers, repeated pulling for resprouts
2. Mowing or cutting is effective, although likely impractical, but must be repeated to control resprouts

Chemical

1. Over-the-top applications of glyphosate at 1 to 2% solution plus 0.25% surfactant
2. Thoroughly wet leaves with herbicide
3. Retreatment will likely be necessary for complete eradication
4. Limited testing with other herbicides



Useful Links

- Floridata Homepage: http://www.floridata.com/main_fr.cfm?state=Welcome&viewsrc=welcome.htm
- University of Florida Center for Aquatic and Invasive Plants: http://aquat1.ifas.ufl.edu/welcome.html
- The Plant Conservation Alliance's Alien Plant Working Group. Weeds Gone Wild: Alien Plant Invaders of Natural Areas: http://www.nps.gov/plants/alien/index.htm

Useful Links

- Invasive Plants of the Eastern United States: http://www.invasive.org
- USDA Natural Resources Conservation Service. Plants Database: http://plants.usda.gov

Literature Cited

- Langeland, K.A. and K. Craddock Burks. 1998. Identification and Biology of Non-Native Plants in Florida's Natural Areas. IFAS Publication SP 257. University of Florida, Gainesville. 165 pp
- Langeland, K. A. 2001. Natural Area Weeds: Distinguishing Native and Non-Native "Boston Ferns" and "Sword Ferns" (Nephrolepis spp.). EDIS Publication SS-AGR-22. Agronomy Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, Florida.