



Common Name: MARL SPLEENWORT

Scientific Name: *Asplenium heteroresiliens* Wagner

Other Commonly Used Names: Carolina spleenwort, Wagner's spleenwort, Morzenti's spleenwort

Previously Used Scientific Names: *Asplenium X heteroresiliens* Wagner

Family: Aspleniaceae (spleenwort)

Rarity Ranks: GNA/S1

State Legal Status: Threatened

Federal Legal Status: none

Federal Wetland Status: none

Description: Fern with erect, evergreen fronds. **Leaf stalk** $\frac{3}{8}$ - $\frac{3}{4}$ inch (1 - 2 cm) long, shiny, dark brown to black. **Frond** (leaf blade) 2 - 6 inches (5 - 15 cm) long, with 12 - 30 pairs of leaflets. **Leaflets** leathery, mostly opposite, scalloped or toothed on both upper and lower margins, with small “ears” on the upper margin near the stalk. **Sori** (spore cases) narrow and elongated, in 1 - 5 pairs along small veins on the lower surface of each leaflet, each sori partially covered with a flap of white tissue (**indusium**).

Similar Species: Ebony spleenwort (*Asplenium platyneuron*) is common in woodlands and disturbed areas throughout Georgia; it has alternate leaflets. Blackstem spleenwort (*A. resiliens*) has opposite leaflets with smooth, untoothed margins; it also occurs in crevices on limestone.

Related Rare Species: Marl spleenwort originated as a hybrid of blackstem spleenwort (*Asplenium resiliens*) and varicolor spleenwort (*A. heterochroum*). Varicolor spleenwort is a rare fern with sharply toothed, opposite leaflets that lack “ears.” Only 2 sites for this species were ever known in Georgia, in Colquitt and Camden Counties, and these may have been destroyed.

Habitat: Limestone ledges, tabby walls, caves, and outcrops of marl (sandy clay derived from limestone or shell).

Life History: Marl spleenwort originated as a hybrid between blackstem spleenwort (*Asplenium resiliens*) and varicolor spleenwort (*A. heterochroum*) which is why one of the scientific names for this species includes the “X” symbol. In appearance, it is intermediate between the two “parents.” However, marl spleenwort produces fertile spores and is not dependent on crosses between its “parents” to perpetuate itself. It does, however, produce some infertile, misshapen spores along with its fertile spores.

Survey Recommendations: Surveys may be conducted year-round since fronds are evergreen.

Range: Georgia, Florida, Alabama, South Carolina, and North Carolina.

Threats: Destruction and degradation of habitat by exotic invasive species, cave explorers, and developers.

Georgia Conservation Status: Fewer than 5 populations are known, only one in a conservation area.

Conservation and Management Recommendations: Control exotic weeds, especially spider brake fern (*Pteris multifida*) and Chinese brake fern (*P. vittata*). Protect caves and cave openings, historic tabby buildings, and limestone and marl outcrops from disturbance.

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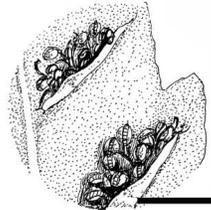
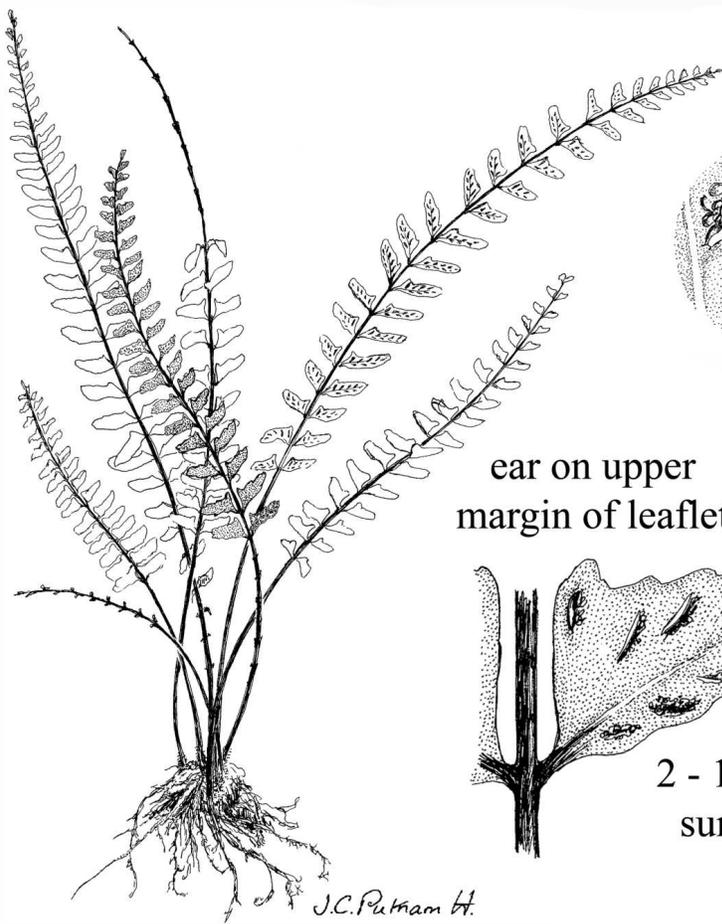
Author of species account:

Date Compiled or Updated:

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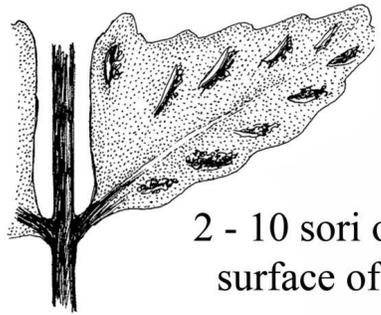
K. Owers, Jan. 2010: updated status and ranks, added pictures

MARL SPLEENWORT
Asplenium heteroresiliens



indusium partially covering sorus

ear on upper margin of leaflet



2 - 10 sori on lower surface of leaflet

J.C. Putnam bt.