## ASPLENIUM RUTA-MURARIA L. var. CRYPTOLEPIS (Fernald) Wherry Wall-rue

FAMILY: Aspleniaceae (Polypodiaceae)

- SYNONYMS: Asplenium cryptolepis Fernald Asplenium cryptolepis Fernald var. ohionis Fernald Asplenium ruta-muraria L. var. ohionis (Fernald) Wherry Asplenium rutamuraria L. var. subtenuifolium C. Christens.
- HABIT: Tufted perennial, fronds evergreen, 1-6.5 cm.; sporulating June- September.
- SIMILAR SPECIES: This is the only Ohio *Asplenium* with a deltoid blade. Other Ohio ferns with such blades do not occur in the same habitat as wall-rue and are much larger and have blades with many more segments than wall-rue.
- TOTAL RANGE: MA and VT to n. MI, s. to AL, IL, IA, MO and AR; the typical variety is Eurasian.
- STATE RANGE: There are post-1980 collections from 4 counties: Adams, Greene, Highland, and Pike. There is a pre-1980 specimen from Clark County.

HABITAT: Dry to moist, calcareous rock exposures, rarely in full sun.

HAZARDS: Mechanical disturbance from rock-climbing.

RECOVERY POTENTIAL: Unknown, but possibly good.

INVENTORY GUIDELINES: Collect complete, mature fronds.

COMMENTS: This distinctive species is not likely to be misidentified, but it may be overlooked because of its small stature. Also, it blends in with its background so completely that the fern can easily escape detection. The habitat for this species is very limited in Ohio, so its state range may be accurately known.

Some authors treat our North American plants as a separate species, *A. cryptolepis.* Plants with lanceolate, long-attenuate segments have been described as a separate variety (see Synonyms) and dubbed the "Ohio Wall-rue." These plants now are generally considered but extreme leaf forms, possibly related to ecological conditions. Intergrades are frequent, especially in the Greene County population. More study is needed to understand the true nature of these variants.

*A. ruta-muraria* occasionally hybridizes with other spleenworts. Two of these hybrids have been found in Ohio. *A. X clermontae Syme (A. ruta-muraria X A. trichomanes* L.) grows in Greene County. *A. X inexpectatum* (E.L. Braun) Morton (*A. ruta-muraria* X *A. rhizophyllum* L.) was once found in Adams County.

SELECTED REFERENCES:

- Argus, G.W. and D.J. White. 1983. Atlas of the rare vascular plants of Ontario: Part 2. National Museums of Canada, Ottawa, Canada. n.p.
- Bouharmont, J. 1977. Patterns of chromosome evolution in Aspleniaceae. Nucleus 20: 65-70.
- Cady, T.F. and D. Horton. 2004. Americn Fern Journal 94: 157-159.
- Cranfill, R. 1980. Ferns and fern allies of Kentucky. Kentucky Nature Preserves Commission Scientific and Technical Series No. 1. 284 p.
- Wagner, W.H., Jr. 1963. Pteridophytes of the Mountain Lake area, Giles County, Virginia, including notes from Whitetop Mountain. Castanea 28: 113-150.
- Wagner, W.H., Jr., and F. Wagner. 1976. *Asplenium* X *clermontae* from Clifton Gorge, Greene Co., Ohio, a second North American record. Ohio J. Sci. 76: 99-102.



Division of Natural Areas and Preserves Ohio Department of Natural Resources

Created: 11/1983 Allison W. Cusick