

CYSTOPTERIS FRAGILIS (L.) Bernhardt
Brittle Fern

FAMILY: Dryopteridaceae

HABIT: Stems creeping; fronds to 40 cm long; sporulating August to October.

SIMILAR SPECIES: The genus *Cystopteris* is a difficult group. *Cystopteris fragilis* is very similar to *C. tenuis* but differs in having the pinnae perpendicular to the rachis and margins of pinnae with sharp teeth. Haufler et al (1993) report that *C. fragilis* is often found on cliff faces compared to *C. tenuis*, which often grows on boulders and soil.

TOTAL RANGE: Canada south to NY, n. Ohio, Michigan, Minnesota, Nebraska, Utah, and California.

STATE RANGE: There are pre-1980 collections from Tuscarawas County.

HABITAT: Cracks and ledges on cliffs, often calcareous substrates.

HAZARDS: Mechanical disturbance from rock-climbing.

RECOVERY POTENTIAL: Probably poor.

INVENTORY GUIDELINES: Collect complete, mature material. Care should be taken not to over-collect.

COMMENTS: Older manuals do not include the other species of the *Cystopteris fragilis* complex (i.e. *C. protrusa*, *C. tenuis*). This has led to false reports of this species in Ohio.

The genus *Cystopteris* is a difficult group and careful examination is required for species identification. *C. fragilis* hybridizes with other species of *Cystopteris* and Haufler has annotated one specimen at The Ohio State University Herbarium as being a hybrid. The hybrid was collected in the same area as the genuine *C. fragilis* specimen.

Because it is similar in appearance to the frequent *C. tenuis*, it is possible that this species has been overlooked. It should be sought throughout northeastern Ohio.

SELECTED REFERENCES:

Flora of North America Editorial Committee, eds. 1993+. Flora of North America North of Mexico. 4+ vols. New York and Oxford. (The Dryopteridaceae is treated in Volume 2.)



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