

THE FERN BULLETIN

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CONTRIBUTION TOWARD THE FERN FLORA OF KENTUCKY.

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As previously announced in this magazine, Miss Sadie F. Price was selected to write the fern flora of Kentucky in the series of fern floras now appearing. Her death occurred before the completion of the article, but from her notes the following list has been prepared. We shall be glad to receive further additions to this list.

OPHIOGLOSSACEAE.

Ophioglossum vulgatum L. ADDER'S TONGUE. Very common in the southern part of the State, growing in rich woods under cedar trees and in rocky fields and woods in partial shade. It is very variable, the sterile leaves being sometimes lanceolate, sometimes ovate. It fruits about the last week in May. The form called *Engelmanni* is the common one.

Botrychium Virginianum Sw. RATTLESNAKE FERN. The commonest of the genus growing luxuriantly in the mountains.

Botrychium ternatum obliquum Muhl. GRAPE FERN. This species does not appear to be common in Kentucky. I have found more plants in Barren county than elsewhere. Here it is called "sang sign;" as the country people say "it pints towards a sang (ginseng) plant." It grows under beech trees. The form called *dissectum* is rare and the sterile fronds comparatively small.

OSMUNDACEAE.

Osmunda cinnamomea L. CINNAMON FERN. Common. Grows in profusion along the Green river and its tributaries in sandy soil.

Osmunda regalis L. ROYAL FERN. This species was once abundant in Edmonson county, especially near Chalybeate Springs, but it has been uprooted and carried away by the guests at the hotel until little of it remains. Another cause of its disappearance in certain localities is that the ubiquitous saw-mill and the agent for cross-ties have laid bare many of the haunts of this shade and moisture loving species. Where I once found fine fronds measuring four or five feet in length, I now find only stunted and dwarfed specimens.

SCHIZAEACEAE.

Lygodium palmatum Sw. CLIMBING FERN. Found only in Rockcastle and Laurel counties. Mr. Williamson mentions that it was reported from there from three different places in 1878. It was once abundant at Cumberland Falls, but so many collectors visit the latter place, where *Adiantum capillus-veneris* also grows, that it is to be feared both will be exterminated. It was once so plentiful there as to resemble tangles of dodder.

HYMENOPHYLLACEAE.

Trichomanes radicans Sw. FILMY FERN. Rare. Has been reported once or twice from Laurel county, and Prof. Hussey in his report mentions it from Edmonson county. I found it in 1892 along the Green river in Warren county. It covered a space of four or five square feet and was far under a sandstone cliff. The plants had many dead fronds and few fruiting ones. The trees were being cut away and its days in this spot are probably numbered. In 1900 I visited another station for it and here it had entirely disappeared.

POLYPODIACEAE.

Adiantum capillus-veneris L. VENUS' HAIR FERN. This species grows in profusion at Burnside, near Cumberland Falls. Fronds of this species were first received by W. M. Linnéy in 1880. He mentioned it to Williamson, who wrote an account of it in *Torrey Bulletin*.

Adiantum pedatum L. MAIDENHAIR FERN. Common throughout the State.

Asplenium angustifolium Michx. NARROW-LEAVED SPLEENWORT. Common in damp, rich woods. The most luxuriant plants I have found are in Barren county in a beech grove, and in Warren County in the depths of Wolf's sink, a 90-foot sink-hole or cave entrance near Sunnyside. The fronds measure five feet in length. Large forest trees grow from the bottom of the sink and the only means of descent is by a rude ladder made between two tree trunks. Legend says this is the original ladder used by the Indians.

Asplenium Bradleyi D. C. Eaton. Prof. Hussey, who first found this rare fern in Kentucky, thus describes the region in which it grows: "All the water courses in Edmonson county, even in the spring branches, take their rise between a series of steep cliffs. This water shed is intersected on either side by deep, high-walled ravines whence gush forth cool springs which either sink in the porous sandstone or plunge headlong into the rapid creeks that flow into Green river. Under these overhanging sand-rocks, sheltered from the sure and sweeping winds, are sometimes spaces of vast extent where the aborigines had their homes, as evinced by the numerous fragments of flint and by the mortar holes in the detached masses of sand-rock. On one of these sandstone cliffs, I find *A. Bradleyi*." In 1896 I visited this region for the express purpose of finding the fern, but though I searched a number of similar localities only found it on the same cliff. It had spread over the entire wall of rock and few plants grew low down. They were all fine, large plants. I hope no fern vandal will visit this station and exterminate it. It is 'far from the maddening crowd' and I reached it by stage, private carriage and farm wagon. The fern has also been found in Grayson and Warren counties.

Asplenium ebeneum Ait. EBONY SPLEENWORT. One of our commonest species. The negroes seem to coin names for plants,

as I have heard them call this the "rick-rack fyorn," in allusion to the outlines of the fertile fronds.

Asplenium ebenoides R. R. Scott. A few specimens of this have been found in Marion county, near Salt Lick creek, surrounded by ebony spleenwort and the walking fern.

Asplenium parvulum Mart. & Gal. LITTLE EBONY SPLEENWORT. This is not uncommon in Warren county, growing in limestone soil. My first specimens were found in a sink-hole in a fox's den. This species does not seem to have been mentioned in other lists of Kentucky ferns.

Asplenium pinnatifidum Nutt. PINNATIFID SPLEENWORT. Frequent, but extremely local in Southern Kentucky, growing only on sandstone cliffs. In one locality in Warren county there was an unusual form of this species, the lower pinnae being prolonged to a great length. Dr. Underwood, to whom I sent specimens, considered it quite unique and unusual. Unfortunately I had a visiting entomologist with me, whom the Society for the Preservation of Native Plants should convert, for she gathered all the peculiar fronds. Though I have visited this same spot several times since, I have never seen this form again.

Asplenium ruta-muraria L. WALL RUE. Rare. Found mostly in eastern Kentucky.

Asplenium montanum Willd. Common and widely distributed. I have found it on many sandstone cliffs of Edmonson county, though not abundant in Warren county. It seems to fork more frequently than any of our other ferns. I have found single plants with all the fronds forked two or three times.

Asplenium trichomanes L. MAIDENHAIR SPLEENWORT. Not uncommon throughout the State.

Athyrium thelypteroides Desv. SILVERY SPLEENWORT. Common throughout the State in rich, moist soil. It is especially fine in Muhlenburg county, near Rockport.

Athyrium filix-foemina Roth, LADY FERN. Common in sandy soil. Variable.

Camptosorus rhizophyllus Link. WALKING FERN. Common throughout the State, often completely carpeting the rocks. Locally known as "wall link."

Cheilanthes vestita Sw. Abundant in certain localities. Many of the limestone knobs are crowned with sandstone. On these cliffs, facing south or west, it grows often in company of *A. pinnatifidum* and *A. trichomanes*. Williamson mentions it as a rare fern in Kentucky, but there are many cliffs that are completely covered with it.

Cystopteris fragilis Bern. BRITTLE BLADDER FERN. One of the commonest ferns on limestone cliffs. It is especially abundant at cave entrances.

Cystopteris bulbifera Bern. Common, especially through the Green river section.

Dicksonia pilosiuscula Willd. Not uncommon.

Nephrodium Goldicicum Hook. Not common. I have found magnificent plants in Ohio and Muhlenburg counties.

Nephrodium marginale Michx. MARGINAL SHIELD FERN. Most abundant in shaded rocky woods.

Nephrodium noveboracense Desv. NEW YORK FERN. Plentiful.

Nephrodium thelypteris Desv. MARSH FERN. Fairly common in suitable situations.

Nephrodium spinulosum Desv. The most common fern in sandstone regions.

Onoclea sensibilis L. SENSITIVE FERN. Common. Commonly called Oak Fern.

Phegopteris hexagonoptera Fee. BROAD BEECH FERN. Widely distributed throughout the State.

Polypodium vulgare L. COMMON POLYPODY. Not very common, though found nearly throughout the State.

Polypodium incanum Sw. GRAY POLYPODY. More abundant than the preceding, growing upon limestone rocks as well as upon trees and sandstone cliffs.

Polystichum acrostichoides Schott. CHRISTMAS FERN. SWORD FERN. One of our most abundant species.

Pteris aquilina L. BRACKEN. Not common. I find it on rocky bluffs and in thickets in well-drained soil, usually in half shade. Williamson's assertion that it is always associated with the huckleberry is rather sweeping, as it grows on many Kentucky knobs where there is no laurel or other heath. Most sandstone hills, however, have two or three species of huckleberry on them, so the bracken is often found with them.

Pellaea atropurpurea Link. WINTER BRAKE. One of the commonest ferns of the State. It is common on all limestone knobs and is a well-known feature of cave entrances, growing in crevices where no other plant can gain a foothold.

Woodsia obtusa Torr. Common on limestone, especially along rivers. One of the earliest ferns to unroll, often appearing in February.

LYCOPODIACEAE.

Lycopodium lucidulum Michx. Common in suitable places. The form named *porophilum* is found on rocks in many places. First found in Warren county in 1892. I think this is the species Prof. Hussey identified as *L. selago* from Edmonson county. I have botanized extensively in this and adjoining counties and have never found *selago*.

Lycopodium complanatum L. Not uncommon in mountainous regions.

Lycopodium obscurum L. Not uncommon.

SELAGINELLACEAE.

Selaginella apus L. CREEPING SELAGINELLA. Plentiful in suitable places.

A Correction.

On page 24 of the January BULLETIN, in the key of *Equisetum variegatum* varieties, the sheaths of varieties *Jesupi* and *Alaskanum* are spoken of as *light*. The word should be *tight* in each case.—A. A. Eaton.