

THE NETTED CHAIN FERN IN ILLINOIS

ROBERT A. EVERS and JERRY A. SNIDER
Illinois Natural History Survey, Urbana, and
University of North Carolina, Chapel Hill

ABSTRACT.—The netted chain fern, *Woodwardia aroleata* (L.) Moore, is reported for the first time from Illinois.

Until 1944, botanists were unaware that the chain ferns grew in Illinois. In July of that year Dr. George D. Fuller (now deceased) and Prof. G. Neville Jones discovered the Virginia chain fern, *Woodwardia virginica* (L.) Smith, in a bog several miles east of Antioch, Lake County, Illinois. They collected specimens (G. N. Jones 16512) which have been distributed to a number of herbaria. On September 28, 1944, Dr. Fuller made another collection (G. D. Fuller 9703) at the same locality. In 1947, Dr. Fuller and the senior author visited the Antioch bog and made collections (R. A. Evers 4577). Since 1944, the Virginia chain fern has been the only known representative of *Woodwardia* in Illinois.

On August 9, 1967, we visited the Benson's Bluff area, located southeast of Goreville, Johnson County, Illinois, to observe the two stands of filmy fern, *Trichomanes boschianum* Sturm, that the junior author had previously located. After we observed these stands, we examined more of the many sandstone cliffs and outcrops of these ravines. Much to our surprise, on a ledge of one of the cliff faces, we discovered the netted chain fern, *Woodwardia aroleata* (L.) Moore, both sterile and fertile

fronds. The moist, shaded ledge on which the fronds were growing measured about 1.5 meters long and less than 0.3 meter wide. Wild hydrangea, *Hydrangea arborescens* L., was growing nearby. We collected specimens of the fern (R. A. Evers 92546; Jerry Snider 563) and deposited them in the herbarium of the Illinois Natural History Survey (ILLS) and in other herbaria.

The nearest known stand of the netted chain fern to the Johnson County locality is the one discovered by Dr. Julian A. Steyermark, $3\frac{1}{2}$ - $3\frac{3}{4}$ miles southeast of Bloomfield, Stoddard County, Missouri. Steyermark reported in his *FLORA OF MISSOURI* (1963, p. 28) that the fronds of this rare fern in Missouri were growing "along sandy banks of a spring branch. . . ." The Stoddard County locality is approximately 75 miles (by air) from the Johnson County site. The next nearest stand is also in Missouri, near Poplar Bluff, Butler County, almost 100 miles distant.

Whether this stand of netted chain fern will survive in the Benson's Bluff area in southern Illinois is very uncertain. A super highway is planned to traverse a part of this area and its construction may destroy the cliff on which the fern grows. Further examination of the numerous sandstone outcrops in southern Illinois could result in the discovery of other stands of this rare fern.

Manuscript Received August 23, 1967