

THE PRESENT STATUS OF PALEOBOTANY IN ILLINOIS

A. C. NOÉ, UNIVERSITY OF CHICAGO

The first Survey of Illinois contains in Volume 2 (1866) and Volume 4 (1870) numerous descriptions of fossil plants by Lesquereux. The Swiss naturalist, who had arrived in the United States as a companion of Louis Agassiz, was destined to become the father of paleobotany in this country, while Sir William Dawson had inaugurated the same science in Canada. Lesquereux's domicile was in Cincinnati, and he acted as a consulting paleobotanist for the newly created state surveys, as well as for the United States Geological Survey. His interests were broad, but the majority of his publications deal with the Paleozoic floras, foremost among which is the *Coal Flora of the Carboniferous Formation in Pennsylvania and throughout the United States*. In Atlas, Volume 1, (1879); Volume 2, (1880); and Volume 3, (1884) many specimens from Illinois are described and pictured.

Lesquereux apparently did not visit many localities, but had specimens sent to him. While this method saved much time, and accounts for the large amount of Lesquereux's publishing, it had obviously two drawbacks—the exact geologic horizon of the plant deposit was rarely determined with accuracy, and only specimens which looked good to the average collector were sent. Lesquereux did not have at his command the rich paleobotanic literature which the great French, English, and German paleobotanists produced in the last quarter of the nineteenth century, and in which the coal floras of western Europe were described. Therefore a rather complete revision of Lesquereux's determinations seems to be highly desirable before the study of American fossil floras can proceed much further. It is urgently to be hoped that a catalogue of the Paleozoic floras of North America may soon follow Knowlton's catalogue of the Mesozoic and Cenozoic plants of North America.

In the years 1906, 1907, and 1908, a new period of Paleozoic plant studies in Illinois was inaugurated.

David White, now chief geologist of the United States Geological Survey, was invited by the chief of the State Geological Survey of Illinois, Frank DeWolf, to renew in cooperation with the State Survey the study of the fossil plants of the Illinois coal fields. During those years, Dr. White visited the plant deposits of the western and southern coal outcrops, and mining districts of Illinois. His observations are given in Bulletins 4, 8, and 14 of the Illinois State Survey. Dr. White had a great advantage over Lesquereux. He visited the localities himself, equipped with excellent geological experience, and he had at his headquarters in Washington one of the most complete collections of Paleozoic plants and paleobotanic literature at his command. Dr. White restricted himself in these publications to a preliminary report, and his larger treatment of Illinois coal plants is still to be hoped for.

The author has found the support of the State Geological Survey very helpful in making collections and observations throughout the coal seams of the state, in order to assist by the contribution of paleobotanic facts in the determining and revision of the correlation of Illinois coal seams.

During the summer, 1921, a number of localities in the following counties were visited: Jackson, Union, Williamson, Johnson, Pope, Saline, Harding, in southern Illinois; and Will, Grundy, LaSalle, Bureau, in northern Illinois. In the early spring of 1922 collections were made in McDonough, and outcrops visited in Rock Island, Knox, and Scott. The work is to be continued during the summer of 1922, and arrangements with the Geological Survey of Kentucky promise to give an opportunity for obtaining valuable information in that state, which may throw light upon certain paleobotanic problems of Illinois.