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# CONIFERS OF THE TAXODIACEÆ

FROM THE

## WEALDEN FORMATION OF BELGIUM

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(WITH 8 PLATES.)



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## INTRODUCTION

The late Professor Charles BOMMER made a very extensive collection of fossil plants from the Wealden formation of Belgium. The fossils are preserved as lignite in a fine silt or clay and have rather the appearance of charcoal, being black and brittle but very little compressed; they are not however charred and when soaked in a dilute alkali they swell and soften and are then amenable to sectioning by the ordinary methods of celloidin embedding used for woody tissues. It is their preservation which gives these fossils their great importance for fossil plants with their internal structure preserved are rare at all periods, and an extensive flora preserved entirely in this way is almost unique.

Professor BOMMER not only collected the fossils and amassed the many thousands of fragments which are preserved in the Institut royal des Sciences naturelles de Belgique; he commenced their investigation. For this purpose he prepared a fine series of plates of photographs and drawings and these plates were duly printed. He also wrote voluminous notes about the flora and certain introductory sections may indeed represent final drafts, but virtually nothing was published, apart from some brief preliminary notes on certain species.

When I was asked by Professor V. VAN STRAELEN to prepare BOMMER's work for publication it was naturally my hope that I could in large measure draw directly on his work, and that it would be possible to publish large sections with little more than editing. Unluckily this proved quite impossible; his descriptive notes must indeed be regarded as a record of passing ideas and it would be quite unfair to BOMMER's memory as well as useless to a reader to attempt to print them. It is of course true also that with Botanical progress much of what was written as long ago as 1890, even though added to and emended during the next thirty years has become out of date. It has however been possible to make use of a good many of BOMMER's photographs which are excellent and of some of his spirited and characteristic drawings.

The collection consists in the main of pieces of woody tissue. It comprises a good many fern species, mostly represented by pieces of petiole and rhizome; excellent and abundant specimens of the fern-like plant *Weichselia*, a remarkable series of coniferous cones and enormous amounts of lignite (wood), probably largely of conifer origin.

The investigation of this whole flora in detail worthy of its preservation will take many years. So far all that has been attempted has been the investigation of certain conifers. This paper contributes an account of two species of Taxodiaceous conifers bearing cones on their leafy twigs. A paper written by Mr. K. L. ALVIN of Birkbeck College, London, contributes a description of three Abietinean female cones. These two papers by no means complete the conifers; three or more species of possibly Abietinean cones remain as well as some leaves resembling *Pinus* and a vast material of wood fragments.