STUDIES IN MUSACEAE

III. Fossil Records of Musaceae and the Origin of Bananas

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INTRODUCTION

In recent years much work has been done on the taxonomy, phytogeography and cytogenetics of bananas. As a result of these studies Cheesman (1947 a) has revived Ensete Horan. as a genus separated from Musa L. This division was opposed by Chakravorti (1951), who suggested that Ensete should be reduced to the status of a sub-genus of Musa L. He has also concluded that Musa (including Ensete and all the cultivated forms of bananas) originated in Assam-Burma-Siam and Indo-China.

The following pages are devoted to a review of the literature concerning the fossil records of Musaceae and a study of the bearing of the fossils on the problem of the origin and interrelationship of bananas.

FOSSIL RECORDS OF MUSACEAE

Many plant fossils have been referred to Musaceae but the affinities of some of them are so doubtful that it is difficult to be sure that they are even Angiosperms. For example, Scitaminites musaeformis Sternburg (1825), a fragment of a fossil leaf, and Musaeites primaevus Presl. (in Sternburg, loc. cit.), a stem, are from the Upper Carboniferous of Bohemia (Czechoslovakia). Considering the age of these fossils it becomes doubtful whether they were Angiosperms or not, as there is hardly any known Pre-Cretaceous fossil which can be safely considered as an Angiosperm (Scott, Barghoorn and Leopold, 1960). Definite Musaceous fossils are known from the Tertiary or Post-Tertiary strata of Java, Europe and America and Late-Cretaceous or Early Eocene formations of Colombia and India (Fig. 1).

* In a paper of Berry (1925 a) one comes across the spellings Musaphyllum, This appears to be a misprint and the correct spellings are Musophyllum.
Fig. 1. Sketch map showing the distribution of fossil records of Musaceae. Broken line indicates the Northern limit of past distribution of Musaceae and dotted lines the present area of distribution of the same. Black circles indicate the distribution of undetermined genus or genera of Musaceae. The sign plus in a small circle indicates Musa L. and the Minas in a circle Ensete Hortum.