A permineralized conifer pollen cone from the Deccan Intertrappean beds (Uppermost Cretaceous) of India

by

D. K. Kapgate*, N. Awasthi** and S. Chitaley**

With 5 plates, 3 text-figures

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Summary

A permineralized conifer pollen cone is described here from the Uppermost Cretaceous Deccan Intertrappean beds of Mohgaonkalan, Chhindwara District, Madhya Pradesh, India. The cone is small, exposed longitudinally showing a central axis with 10–12 sporophylls on each side. Each sporophyll consists of a stalk and expanded head. A few microsporophylls are seen with pollen sacs on the lower surface of the head. Some detached pollen sacs are also seen in close association. Pollen grains are small, non-saccate, spheroidal, inaperturate, scabrate; with granulate exine and exinal folds. Comparisons with the known fossil pollen cones from Upper Jurassic – Cretaceous of different parts of the world show that this cone is different in many characters to warrant its assignment to a new genus and species, Deccanostrobis araucarioide. The generic name is after the Deccan plateau of India; and the species is attributed to the family Araucariaceae, mainly on the basis of some similarity in pollen structure and tracheid pitting.

Key words: Conifer, Araucariaceae, pollen cone; Deccan Intertrappean; Uppermost Cretaceous; India.

Introduction

The Deccan Intertrappeans are beds of lacustrine, fluvial or riverine deposits between the traps formed by successive lava flows that erupted intermittently towards the end of the Cretaceous. They occupy today an area of 525,000 km² mainly in western and central India. Of the three groups into which Traps and Intertraps are divided as “lower”, “middle” and “upper” by Wadia (1966) the lower Intertrappeans are very rich in plant fossils. They are exposed chiefly in central India around Nagpur, Wardha, Chhindwara and Mandla districts.

The age of the Deccan Intertrappean beds has long been a matter of controversy. Earlier some geologists regarded them as Upper Cretaceous, while Sahni (1934) and later most other palaeobotanists (Bande et al. 1988), on the basis of preponderance of angiosperms from Nagpur-Chhindwara-Nawargaon area and

* Authors’ addresses: Department of Botany, J. M. Patel College, Bhandara (M.S.), India.
** Department of Paleobotany, the Cleveland Museum of Natural History, 1 Wade Oval, University Circle, Cleveland, OH 44106-1767, U.S.A.

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