SHORT COMMUNICATION

A NEW LEGUMINOUS FRUIT FROM THE MIDDLE BHUBAN FORMATION OF AIZAWL, MIZORAM

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This note reports the occurrence of a new leguminous fossil fruit from the Lower Miocene Bhuban Formation of Aizawl, Mizoram.

The State of Mizoram lies in the northeastern corner of India and many of its formations are rich in fossils though quite a few are yet to be published. In order to build up the flora and fauna of the region, a rich collection of fossils has been made from near Aizawl by one of us (BDM). The present investigation is mainly concerned with the western flank of Aizawl Hills where a fossiliferous locality, Edinthar, was discovered. It lies 1.5 km northwest of Aizawl (Fig.1) town near Chandmari (23°44'15"N; 92°43'25"E) on Sairang-Kolasib road. In the Aizawl District, the Upper Bhuban Formation occurs along Zemabawk-Tuirial road, while rest of the area is covered with the underlying Middle Bhuban Formation. Their contact is transitional and marked by the change in facies from arenaceous in the former to argillaceous in the latter. Middle Bhuban Formation consists of splintery shales, silt-shale alternations and sandstones. The sandstones are thickly bedded, medium to coarse grained and show evidence of animal activity in the form of burrows. The present fossil fruit (Fig.2) has been collected from the silty sandstone and is Lower Miocene in age.

Family: Fabaceae
Genus: Leguminocarpon Goeppert, 1855

Leguminocarpon cassioides sp. nov.
Fig.2

Material: The study is based on the solitary specimen which is a cast.

Description: Fruit compressed, legume, about 32 cm in length, 2.9-3.3 cm in width and 1-1.7 cm in thickness, cylindrical in shape, indehiscent, apex and base rounded; margins straight, more or less parallel; texture seemingly leathery; seed chambers ill preserved, 5-15 mm apart; seeds not seen.

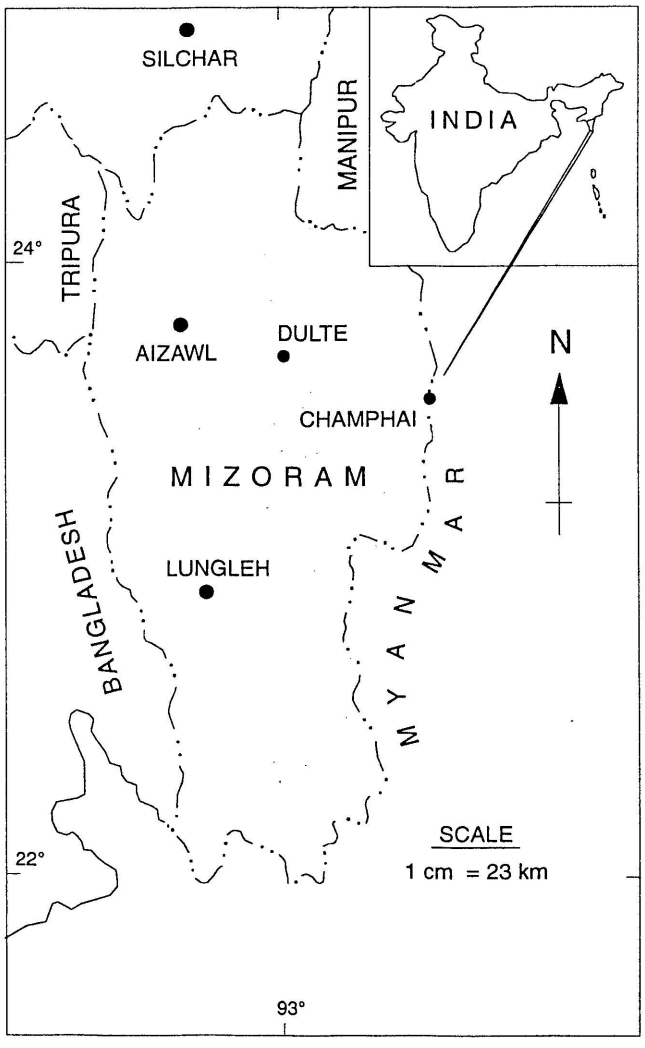

Fig.1. Map of Mizoram showing the fossiliferous locality of Aizawl.

Holotype: Specimen No. BSIP 38886

Horizon and Locality: Middle Bhuban Formation; Edinthar, Aizawl District, Mizoram, India.

Age: Lower Miocene.

Affinities: Although it is difficult to identify the fossil fruits on the basis of external morphological characters, yet

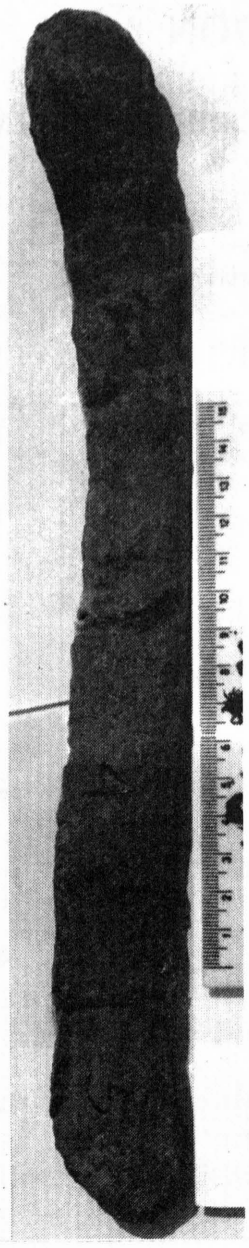

Fig.2. *Leguminocarpon cassioides* sp. nov. - The fossil fruit in low power showing its shape and size, 0.5x.

it appears from the above characters that the fossil fruit could be a legume of Fabaceae. Among various genera of the family, it shows maximum resemblance with *Cassia* Linn., especially with *C. fistula* Linn.

Goeppert (1855) instituted the genus *Leguminocarpon* for the fossil fruit referable to the family Fabaceae. Though the above specimen was compared with various species of the genus known so far from India and abroad (Carter, 1854; Lakhanpal and Dayal, 1966; Lakhanpal and Guleria, 1982; Bhattacharyya, 1985; Herendeen and Dilcher, 1992; Awasthi and Mehrotra, 1995), it was found different from them due to its larger size. As it is distinct from all the known species of the genus, it is being described here as a new species of *Leguminocarpon, L. cassioides* sp. nov., the specific name indicating its resemblance with *Cassia*. It is a tropical genus of herbs, shrubs and trees comprising about 580 species out of which 20 are found in India (CSIR, 1950).

The finding of Caesalpiniaceous (Fabaceous) pollen from the same horizon (Mandaokar, 2000) supports our finding. Though the woods resembling *Cassia* are already known from the Neogene of Assam and Arunachal Pradesh (Prakash, 1966, 1975; Prakash and Awasthi, 1970), the above finding from Mizoram not only confirms its presence but also points out the fact that the genus was widespread in the northeast India during the period.

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