

<http://www.pjbs.org>

PJBS

ISSN 1028-8880

**Pakistan
Journal of Biological Sciences**

ANSI*net*

Asian Network for Scientific Information
308 Lasani Town, Sargodha Road, Faisalabad - Pakistan

Discovery of Megaspore Assignable to the Genus *Calamospora* from Borehole Sample Obtained from Jhang

Shahida Khurshid

Botany Department, Government College for Women, Samanabad, Lahore, Pakistan

Abstract: The present paper deals with a rare Specimen belonging to genus 'Calamospora'. Schaff, Wilson and Bentall (1944) the specimen is large in size as compared to other sps. Of the genus *Calamospora*. So it was placed in separate group (*Megaspora* group). Its size is 3927 μm -3465 μm .

Key words: Megaspore, *Calamospora*, borehole-Jhang Pakistan

The flora of Permian period is quite different from the neighboring eras (Carboniferous/and from succeeding Triassic period. During later stage Permian miospores were studied by a no of Palynologist. Virkki (1946) Studied the Permian Palynoflora of Australia and Katwai assemblage. Balme (1970) studied many samples from Salt Range with age from Lower Permian to late Triassic (Chhidru formation and Mianwali formation). Abundent Plant micro fossils and same megafossils were obtained from the Permian material showing great diversification in the Paenymorph. The Permian Miospores of Pakistan have been comprehensively discussed by Masood (1983) and Khurshid (1997). *Calamospora* genus has been frequently used for Permian and early mesozoic spores. Many of the dispersed spores assigned to *Calamospora* and undoubtedly of *Calamania* origin. *Calamospora* (Mega spore group) is a rare species and only a few miospores of such large size are found at the depth of 2312 ft. of Borehole near Jhang Punjab (Fig. 1).



Fig. 1: *Calamospora* sp. Recorded from sample #2312

Material has been collected from the Bore hole near Jhang by Geological Survey of Pakistan and provided for by investigation. During the investigation of specimen (at the depth of 2312). This *Calamospora* (Mega Spore) was found. Maceration and isolation was made as recommended by Smith and Butterworth (1967). The isolated materials was mounted in glycerine jelly and preserved in Palaeobotanical Lab. Punjab University Lahore.

Systematic Position of *Calamospora* (Megaspora group)

Anteturma: Sporites, Potonie (1956).

Turma: Trilete, Dettmann (1963).
Suprasubturma: Acavatriletes, Dettmann (1963).
Subturma: Azonotriletes Luber, Dettmann (1963).
Infraturma: Laevigate, Potonie (1956).
Genus: *Calamospora*
Type species: *Calamospora hartungiana*, Schopf *et al.* (1944).

Calamospora (Mega Spore)

Description: Megaspore and subcircula, trilete marking not distinct, exine thin, Infra-Punctate $\pm \mu\text{m}$ thick exinal folds, many and variable size. Dark in colour. Margin undulating.

Dimensions: Specimen Collected 1 (one) Equational diameter 3927 μm and 3465 μm .

Comparison

Size Variation present in genus *Calamospora* from 40 μm to many hundred microns. Longer spores often possess a high gloss when by reflected light. Trilete marking very short sometime not much distinct. Only one such specimen has been found which is of very large size (3927 μm and 3465 μm), having the characters of *Calamospora* group. Thin exine, many exinal folds. On the basis of these characters this spore is placed in *Calamospora* mega Spore group. It is found at the depth of 2312 ft. From 'Bore hole' near Jhang.

References

- Balme, B.E., 1970. Palynology of Permian and *Triassic strata* in the Salt Range and Surghar Range, West Pakistan. In: Stratigraphic Boundary Problems: Permian and Triassic of West Pakistan, Kummel, B. and C. Teichert (Eds.), Vol. 4, University of Kansas, Department of Geology, Lawrence, USA., pp: 305-453.
- Dettmann, M.E., 1963. Upper *Mesozoic microfloras* from South-Eastern Australia. Proc. R. Soc. Victoria, 77: 1-148.
- Khurshid, S., 1997. Palynological study of core samples obtained from bore hole near Jhang, Punjab. Ph.D. Thesis, University of the Punjab, Lahore, Pakistan.
- Masood, K.R., 1983. Studies on gondwana flora of salt range of Pakistan. Ph.D. Thesis, University of the Punjab, Lahore, Pakistan.
- Potonie, R., 1956. Synopsis der gattungen der spora dispersae I. Teil: Sporites. Beiheft. Geot. Jahrb., 23: 1-103.
- Schopf, J.M., L.R. Wilson and R. Bentall, 1944. An annotated synopsis of paleozoic fossil spores-and the definition of generic groups. Illinois State Geological Survey Report of Investigations No. 91, pp: 60.
- Smith, A.H.V. and M.A. Butterworth, 1967. Miospores in the coal seams of the carboniferous of Great Britain. Palaeontological Association, London. Special Paper in Palaeontology No. 1, Pages: 324.
- Virkki, C., 1946. Spores from the lower gondwanas of India and Australia. Proc. Nat. Acad. Sci. India, 15: 93-176.