

unlike that of the Upper Shali limestone which measures 2,500 feet (West, 1939), is of insignificant thickness. Moreover, its association with the cobble bed makes it distinct from the sequence of the Shali formation, and its correlation with the latter redundant.

The occurrence of these tectonic windows in the inner part of the Himalaya is a convincing proof of the enormous horizontal translation suffered by the Jutogh nappe during the Himalayan orogenic episode.

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**EXIMISPORA—A NEW GENUS FROM THE TERTIARY SEDIMENTS OF ASSAM\***

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During a study of palynofossils from the Tertiary sediments in Assam, a few very interesting specimens were found which could not be assigned to any of the known genera. Thus a new generic name is proposed to accommodate such and closely comparable specimens. These specimens were recovered from the Barail and Tipam sandstone formations exposed along the southern edge of the Garo hills. The associated palynomorphs consist of a variety of spores, pollen, hystrichosphaerids, dinoflagellates, etc. (Salujha *et al*, 1971).

The slides containing the holotype and isotypes are preserved in the Palynology laboratory, Institute of Petroleum Exploration, Oil and Natural Gas Commission, Dehra Dun.

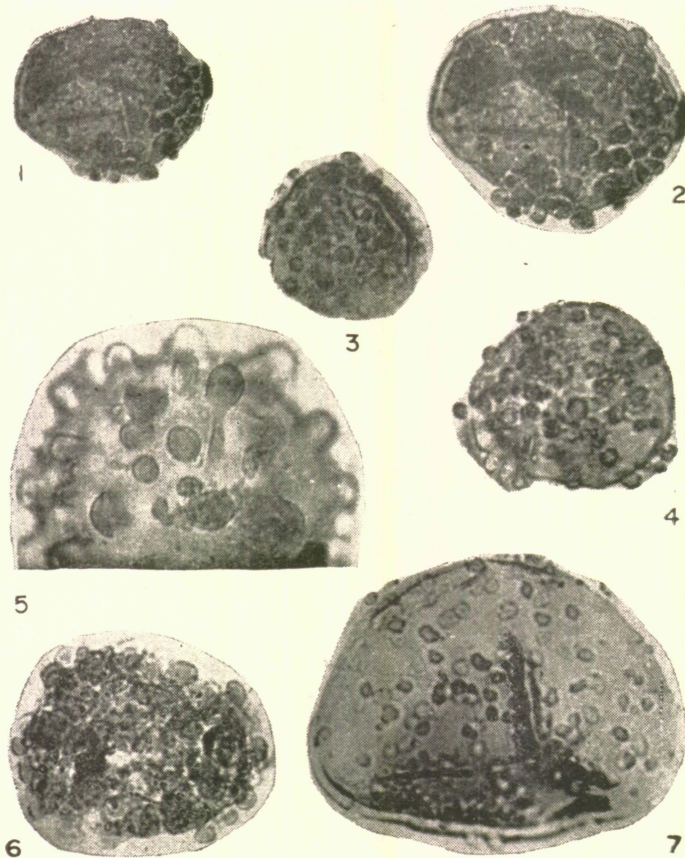
*Eximispora* gen. nov.

*Type species: Eximispora tuberculata* sp. nov.

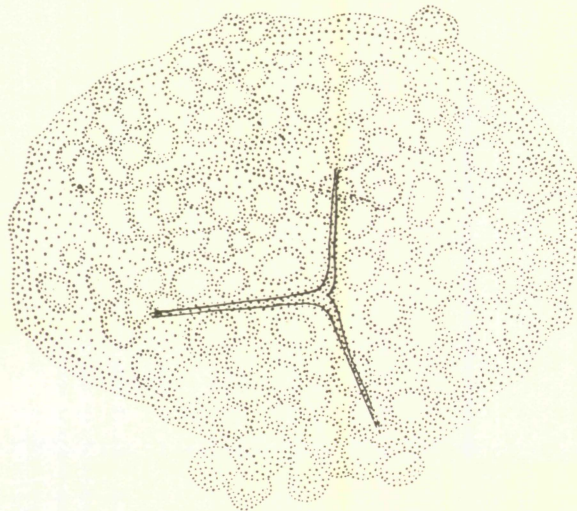
*Diagnosis:* Roundly triangular to subcircular, size 30.4 – 52.8 × 38.4 – 67.2  $\mu$ ;

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Figures 1-6. *Eximispora tuberculata* gen. et sp. nov.;  
 Photo Nos. 1/19, 1/20 ( $\times 600$ ), 36/24, 31/8, 34/12 ( $\times 800$ ), 34/27.  
 Figure 7. *Eximispora* sp.; Photo No. 36/1.  
 All magnifications  $\times 400$  unless otherwise indicated.



Diagrammatic sketch of *Eximispora* showing tubercles and the trilete mark.

trilete mark faintly to prominently discernible, laesura  $1/2 - 3/4$  radius long; exine mediumly thick, ornamented with sparsely to densely arranged tubercles of varying shapes, usually  $2-8 \mu$  high, area in between the tubercles smooth to finely structured.

*Comparison*: *Bullasporis* instituted by Krutzsch (1959) differs from the present genus in being distinctly triangular, with bullate processes of different sizes which are strongly embedded in the spore wall. *Verrucosisporites* Ibr. 1932; Smith & Mitarbeiter, 1964), *Converrucosisporites* Pot. & Kr., 1954) and *Verrucatotrilétes* (V. H. Klinken 1964) are roundly triangular to subcircular with distinct verrucose ornamentation. *Cycloverrutrilétes* (Schulz, 1964) is circular and its exine bearing loosely arranged, spherical sculptural elements and is recorded from the Middle Buntsandstein. *Distaverrusporites* (Muller, 1968) differs in having verrucate sculpture restricted to equatorial and distal areas with proximal face smooth. *Echinatisporites* (Krutzsch, 1959) differs in having spines for ornamentation. The generic prefix is derived from a Latin word 'Eximius' meaning 'exceptional'.

Stratigraphical range: Oligocene to Miocene

*Eximispora tuberculata* sp. nov. Fig. 1, Nos. 1-6

*Holotype*: Fig. 1, No. 1.

*Type locality*: Simsang river traverse, Garo hills, Assam.

*Diagnosis*: Light brown, subcircular, size  $40 - 64 \times 38.4 - 51.2 \mu$ ; trilete mark distinct in two specimens, faintly discernible in others, laesura  $1/2 - 3/4$  the radius long; exine  $\pm 1.5 \mu$  thick, ornamented with densely arranged tubercles of varying shapes, usually  $3.5 - 8 \mu$  high evenly distributed all over the body, a few seen protruding at the margin, area in between the tubercles usually smooth, occasionally faintly structured.

*Comparison*: A specimen described as *Lygodium* sp. by Ghosh, Jacob & Lukose (1964; Fig. 1, No. 9) may belong to this species. Manum has illustrated two specimens (1962; Pl. 20, Figs. 1-2) as *Triletes* (?) which compare closely to the present species.

*Eximispora* sp. (Fig. 1, No. 7)

*Description*: Light brown, roundly triangular, size  $52.8 \times 67.2 \mu$ ; trilete mark distinct, laesura  $\frac{2}{3}$  the radius long; exine  $\pm 2 \mu$  thick, covered with sparsely arranged tubercles, seen protruding at the margin, tubercles  $\pm 3.2 \mu$  high, area in between the tubercles finely structured.

*Comparison*: *Eximispora tuberculata* described above is subcircular, ornamented with bigger and densely arranged tubercles.

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