

Pilatriscyncolpites triangulatus gen. et sp. nov. from the Oligocene of Upper Assam, India

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Key-words—Palynology, Triscyncolpate pollen, Oligocene, Assam, Meghalaya.

DURING the course of palynological investigation on the subsurface Tertiary sediments in Upper Assam, a large number of specimens of triscyncolpate pollen have been recovered from the Barail sediment (Oligocene) of Nahorkatiya well no. 268 (Lat. 27°15':Long. 95° 40") at 2270 m depth (Text-fig. 1) The palynotaxon referred to the newly proposed genus *Pilatriscyncolpites* is very distinct and morphologically different from other triscyncolpate pollen genera in having pilate sculpture. *Pilatriscyncolpites* is represented here by only one species, viz., *P. triangulatus*. Some of the associated palynotaxa in this assemblage are *Crassoretitriletes vanraadshoovenii* Germeraad, Hopping & Muller (1968), *Polypodiaceasporites constrictus* Kar (1979), *Meyeripollis naharkotensis* Baksi & Venkatachala (1970), *Palmidites maximus* Couper (1953), *Tricolpites reticulatus* Cookson ex Couper (1953) and *Palmaepollenites nadhamunii* Venkatachala & Kar (1969). The material for the present investigation was supplied by the Oil India Limited, Dhuliajan, Assam. The slide and negative of the Holotype are deposited in the repository of the Birbal Sahni Institute of Palaeobotany, Lucknow.

Genus - *Pilatriscyncolpites* gen. nov.

Type species—*Pilatriscyncolpites triangulatus* sp. nov.

Generic Diagnosis – Pollen triangular in polar view; triscyncolpate, colpi long, distinct. Exine upto 2µm thick, sculpture pilate, interpilar exine ornamentation pseudomicroreticulate.

Description – Pollen generally found in polar view, size ranges from 38-55 X 36-53 µm, apices rounded, interapical margin convex, sometimes irregularly folded. Triscyncolpate, colpi distinct, broad at equator and tapering at poles, sometimes open in polar view. Exine tectate, tectum perforate, 1-2 µm thick, sexine as thick as nexine,

sculpture pilate, pila well built, 4-8 µm long, sparsely placed, interpilar exine granulose, grana closely placed forming pseudomicroreticulate ornamentation in surface view.

Comparison—*Triscyncolpites* Kar (1979) resembles the present genus in triscyncolpate condition, but the former is readily separated by its distinctly triscynmargocolporate nature which are united to provide a pseudotriradiate ridge like pattern; the exine is also pilate-baculate. *Myrtacidites* (Cookson & Pike) Potonié (1960) resembles *Pilatriscyncolpites* in triangular shape and triscyncolpate nature but the latter is differentiated by its pilate sculpture and microreticulate ornamentation. *Marginipollis* Clarke & Frederiksen (1968) though triscyncolpate, possesses appreciably thickened colpi margin to form beak like protrusion in equatorial view and the exine structure is areolate-foveolate. *Retiscyncolpites* Guzmán (1967) is triscyncolporate and the exine is reticulate. *Meyeripollis* Baksi & Venkatachala (1970) apparently resembles *Pilatriscyncolpites* in general organisation but the former is tricolporate and the exine is warty. *Pilatriscyncolpites* proposed here is separated from all other triscyncolpate genera by its well developed pilate and pseudomicroreticulate ornamentation.

Pilatriscyncolpites triangulatus sp. nov.

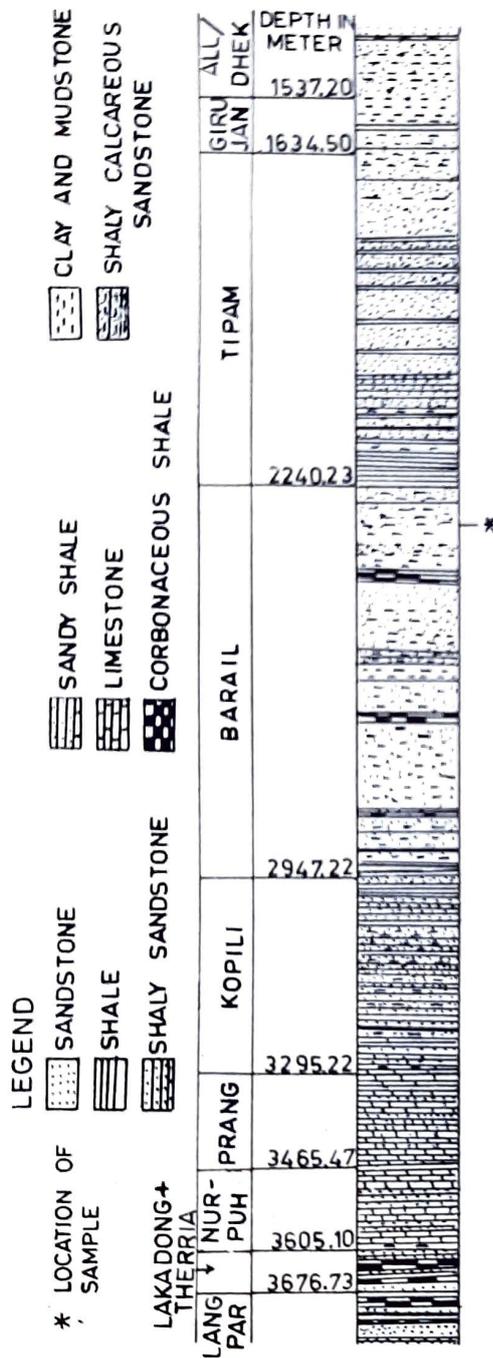
Figs 1-2; Text-fig. 2

Holotype – Fig. 1, Size 47 x 45 µm, slide no. B.S.I.P. 10922 (E 33/3)

Type Locality – Nahorkatiya well no. 268, depth 2270m, Assam.

Horizon & Age – Barail, Oligocene

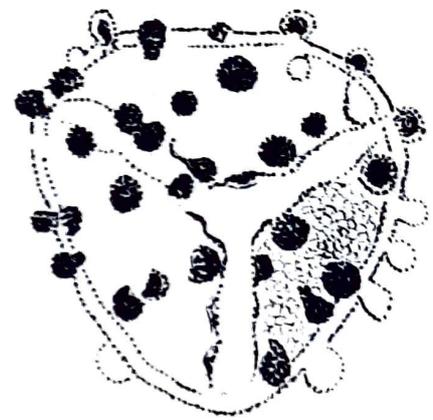
Description – Pollen grains triangular in polar view, size range 36-52 x 34-50 µm, apices rounded, interapical



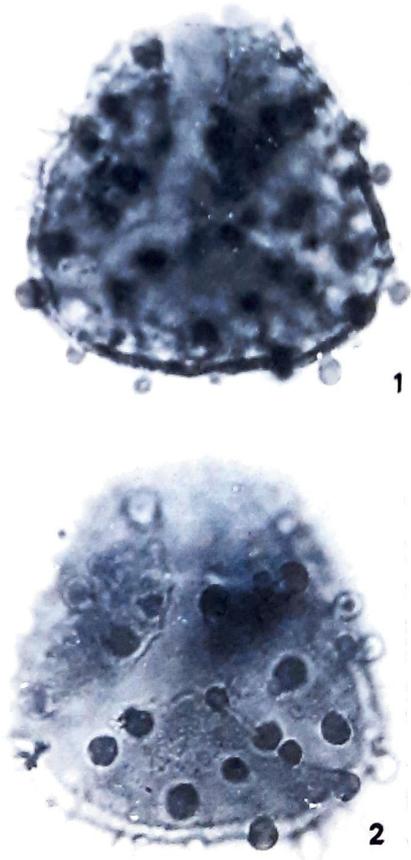
Text-figure 1. Location of sample.

margin convex. Trisyncolpate, colpi distinct, broader at equator and tapering at pole. Exine pilate, pila 4-8 μm long, 2-5 μm broad, narrow at base and swollen at tip, sparsely placed, interpilar exine granulose, very closely placed, forming pseudomicroreticulate ornamentation in surface view.

Affinity – Not known.



Text-figure 2. Diagrammatic sketch of holotype, x 1000.



Figures 1-2. *Pilatriscyncolpites triangulatus* gen. et sp. nov.
Figure 1. Showing the general organization of the pollen and trisyncolpate condition (Holotype, x 1000).
Figure 2. Showing the microreticulate ornamentation (same specimen, x 1000)

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