



MICROFOSSILS FROM THE NEOPROTEROZOIC BUXA DOLOMITE, WEST SIANG DISTRICT, ARUNACHAL LESSER HIMALAYA, INDIA AND THEIR SIGNIFICANCE

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ABSTRACT

A diversified assemblage of organic-walled microfossils comprising 31 benthic and planktic forms (cyanobacteria and acritarchs) has been recovered in petrographic thin sections from the lenses and the bedded chert belonging to the Buxa Dolomite exposed near Igo Bridge, Daring-Basar road in West Siang District of Arunachal Pradesh. In this assemblage, 17 taxa of cyanobacterial remains belonging to Chroococcaceae, Nostocaceae and Oscillatoriaceae, 14 forms of acritarchs belonging to Sphaeromorphida, Scaphomorphida and Sphaerohystrichomorphida subgroups are present. The cyanobacterial remains are *Huroniospora psilata*; *Eosynechococcus moorei*; *Paratetraphycus giganteus*; *Glenobotrydion aenigmatis*; *Myzococcoides minor*; *Palaeoanacystis suketensis*; *Oscillatoriopsis brevicconvexa*, *O. robusta*, *Partitiofilum yakshinii*, *Palaeolyngbya contenata*; *Siphonophycus typicum*, *S. rugosum*; *Polythrychoides lineatus*; *Obruchevella parva*; *O. valdaica*; *Veteronostocale amoenum* and *Veteronostocale* sp. The 14 taxa of acritarchs are *Margominuscula rugosa*; *Granomarginata vetula*; *Lophosphaeridium rarum*, *L. jansoniusii*; *Trachysphaeridium robustum*; *Micrhystridium lanatum*, *M. ampliatum*; *Baltisphaeridium cerinum*; *Archaeohystrichosphaeridium semireticulatum*, *A. cellulare*; *Vandalosphaeridium reticulatum*; *Gorgonisphaeridium pindyium*; *Meghystrichosphaerium perfectum*; and *Navifusa bacillaris*.

The present microbiota compares well with the known assemblages from the Late Neoproterozoic (Vendian) sediments of Northwest and Central Lesser Himalaya, India and its equivalent sediments in other parts of the world. The presence of both benthic and planktonic forms in the assemblage indicates deposition in lagoonal tidal flat condition whereas contact with open sea was occasionally available.

Key words: Microfossils, Neoproterozoic, Buxa Dolomite, West Siang, Arunachal, Lesser Himalaya