

## ARCHAEAN STROMATOLITE NEAR BHIMASAMUDRA, KARNATAKA

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The lower metasedimentary members, particularly the cherty dolomitic limestone associated with banded iron-manganese formation and phyllite, of the Chitradurga Group of Dharwar Supergroup show evidence of the existence of life in the Archaean (Suresh, 1985; Mukhopadhyay and Ghosh, 1983; Murthy and Reddy, 1984 and Baral, 1984). We report here the occurrence of stromatolitic structures in the central part of the Chitradurga schist belt.

Stromatolitic structures have been observed 2 km south of Bhimasamudra (North lat.  $14^{\circ}10'15''$  : E long.  $76^{\circ}15'15''$ ) in the Chitradurga district (Fig. 1).

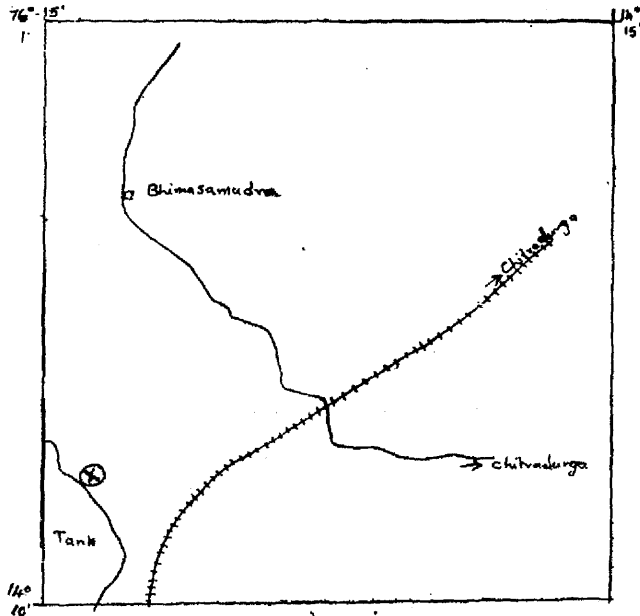


Fig 1 LOCATION MAP.

⊕ Stromatolite occurrence

The stromatolitic structures are found in cherty dolomitic limestone. The limestone is interbedded with banded ferruginous-manganiferous chert and phyllite, which trend N-S with steep dip towards E. These rocks constitute the lowermost formation of the Chitradurga Group, which is considered to be more than 2.6 b.y. old.

The stromatolitic structures are seen as a colony of ellipsoidal, discrete bodies; the long axes of these ellipsoidal bodies being 30 to 40 cm and the short axes being

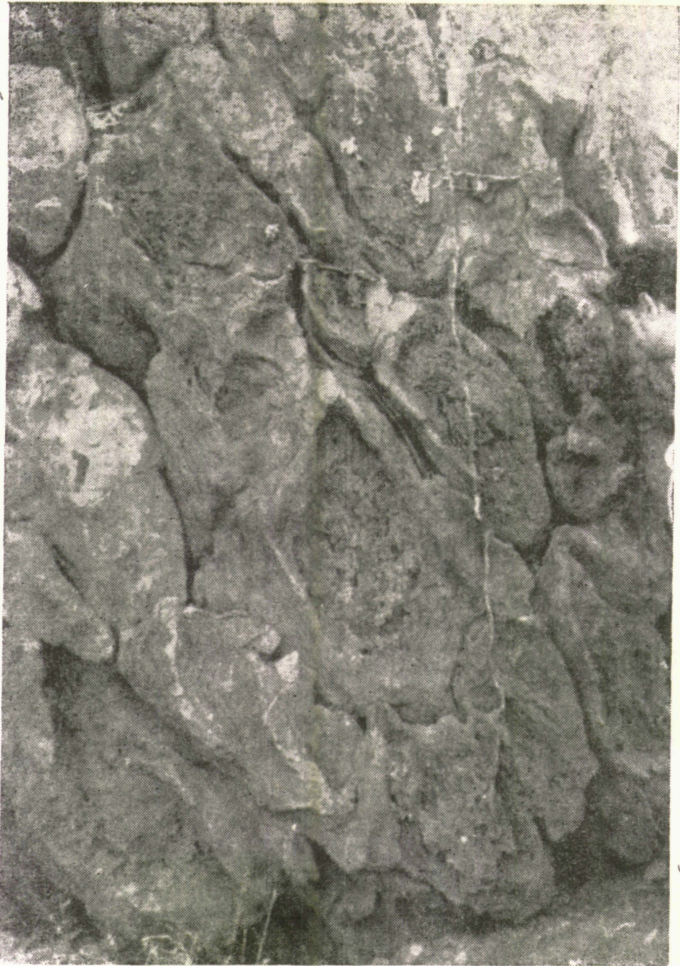


Figure 2. Stromatolites in cherty dolomitic limestone  
Bhimasamudra.

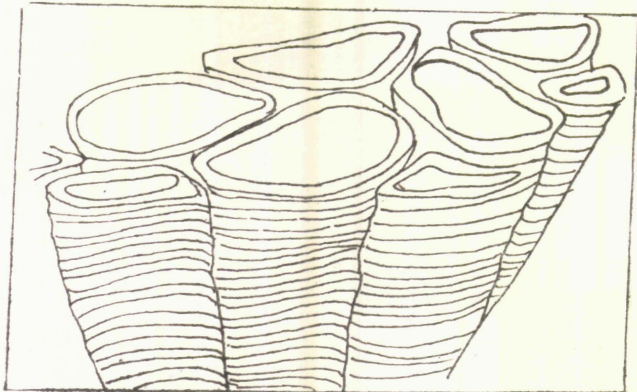


Figure 3. Idealised diagrammatic sketch of stromatolites  
showing vertical section.

15 to 20 cm. Each ellipsoidal body shows thin concentric layering indicating the growth of these structures. Illustration (Fig. 2) shows the horizontal section of the colony along bedding. Some vertical sections too are exposed which show columnar, unbranched nature of the stromatolites as diagrammatically illustrated in Fig. 3. Further studies are underway for identification and classification of these structures.

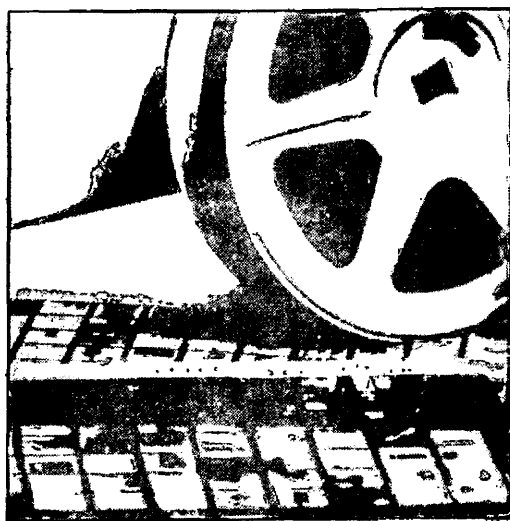
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