RECORD OF TERMINAL NEOPROTEROZOIC EDIACARAN FOSSILS FROM KROL GROUP, NIGALIDHAR SYNCLINE, SIRMAUR DISTRICT, HIMACHAL PRADESH, INDIA

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The note records Ediacaran fossil cf. *Dickinsonia* sp. from the rocks of Kauriyala Formation (= Krol C, D and E of Auden, 1934), Krol Group exposed at about 400 m west of Thalla (30°37'15": 77° 39'30"), Sirmaur district, Himachal Pradesh, India in the northern limb of Nigalidhar Syncline (Fig.1a, b). The Kauriyala Formation (*after* Shanker et al. 1993) has also yielded other Ediacaran fossils viz. *Conomedusites lobatus*, *Tirasiana* sp. and *Beltanelliformis* cf. *brunsae* and microbial mat structures from the same horizon and locality in the northern limb of Nigalidhar Syncline, Sirmaur district, Himachal Pradesh, India (Shanker et al. 1997). The microbial structures have also been recorded in association with Ediacaran fossil of

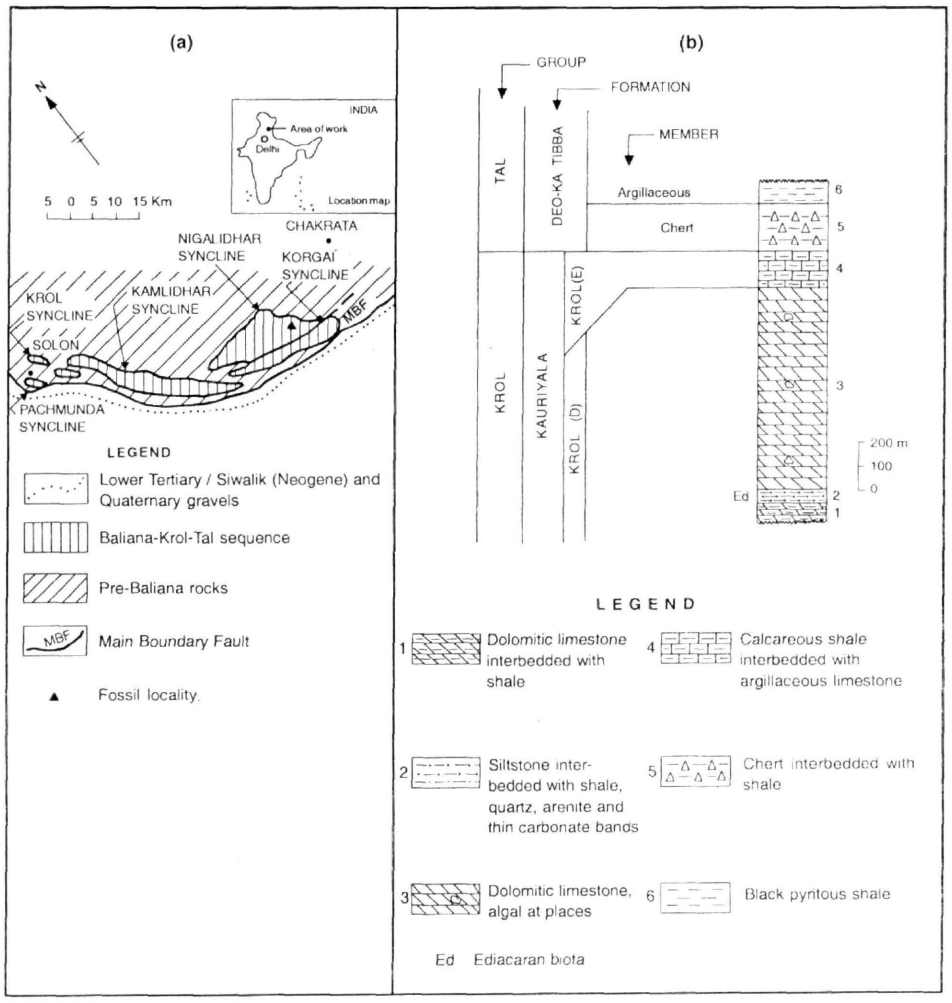

Fig.1. (**a**) Sketch geological map of Baliana – Krol – Tal sequence, Himachal Lesser Himalaya, India (*Modified after* Auden, 1934 and Shanker, 1989) showing fossil locality. (**b**) Vertical stratigraphic section of part of Kauriyala Formation, Krol Group and part of Deo ka Tibba Formation, Tal Group in Thalla – Adu section, Sirmaur district, H. P. exposed in the Nigalidhar Syncline.

Kauriyala Formation, Krol Group in the Garhwal Syncline (Mathur and Srivastava, 2004). The genus *Dickinsonia* is restricted in Proto-Gondwana (McMenamin, 1982).

SYSTEMATIC PALAEONTOLOGY

Phylum Annelida Lamark, 1809
Class Polychaeta Grube, 1850
Family Dickinsoniidae Harrington and Moore, 1955

Genus *Dickinsonia* Sprigg, 1947
Ediacaran fossil cf. *Dickinsonia* sp.
(Fig.2)

Material: Three specimens, complete and preserved as impressions along the bedding plane in convex hyporelief.

Dimension (in mm): Maximum diameter – 28; Minimum diameter – 24; Length of mid groove -20.

Description: Impression flat, broadly rounded to oval in shape with a prominent groove in the middle. It has numerous simple fine segments emerging from mid groove and extending upto the outer margin. These segments are more curved at the anterior and posterior ends than in the middle part.

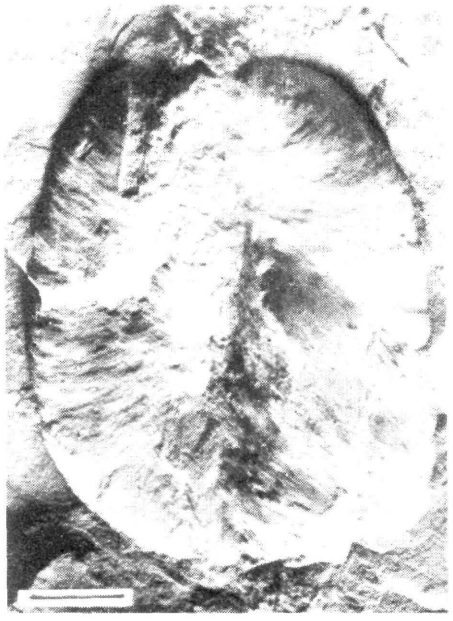

Fig.2. Ediacaran fossil cf. *Dickinsonia* sp. (Bar = 5.0 mm).

Remarks: The present form is close to *Dickinsonia costata* Sprigg recorded and described from the Neoproterozoic (Valdai Series) rocks of White Sea, Russia (Fedonkin, 1981) and South Australia (Glaessner and Wade, 1966). However, it differs from *D. costata* Sprigg in having very fine segments whereas in the form described from White Sea, the segments are coarser in the anterior end rather than at the posterior end. Further, the density of the segments in *D. costata* Sprigg is less than in the present specimen.

Repository: The figured specimen bearing GSI type No.21149 has been deposited at Central Fossil Repository Division, CHQ, Geological Survey of India, Kolkata.

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