derivatives. The molecular mechanism for action of pyridine compounds on encystation is not known but could be related to their effect on cAMP levels, as several effects of nicotinic acid are mediated through adenylate cyclase system[14,15].

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TRACE FOSSILS FROM PRECAMBRIAN ROCKS OF MEGHALAYA

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THE proterozoic metasediments forming the intracratonic rocks of Shillong Group occupy central and eastern parts of Meghalaya Plateau and comprise low grade metasediments representing essentially, an assemblage of rudaceous- arenaceous facies. These metasediments have been intruded by metadolerites and granites. The latter has been dated at 754 ± 25 M.Y[1].

The trace fossils *Chondrites* Sp (figure 1) have been found in the brown coloured phyllitic rocks of Shillong Group from the area around the village Raitong (25°46′:92°01′) in East Khasi Hill District of Meghalaya. The fossils are present within the lower sequences overlying the basal conglomerate horizon.

These trace fossils, sometimes referred to as fucoid, and described as "consisting of plant-like ramifying tunnel structures that neither cross each other nor anastomose but radiate around a central tube[2]"; are seen as ramifying burrows varying in length from

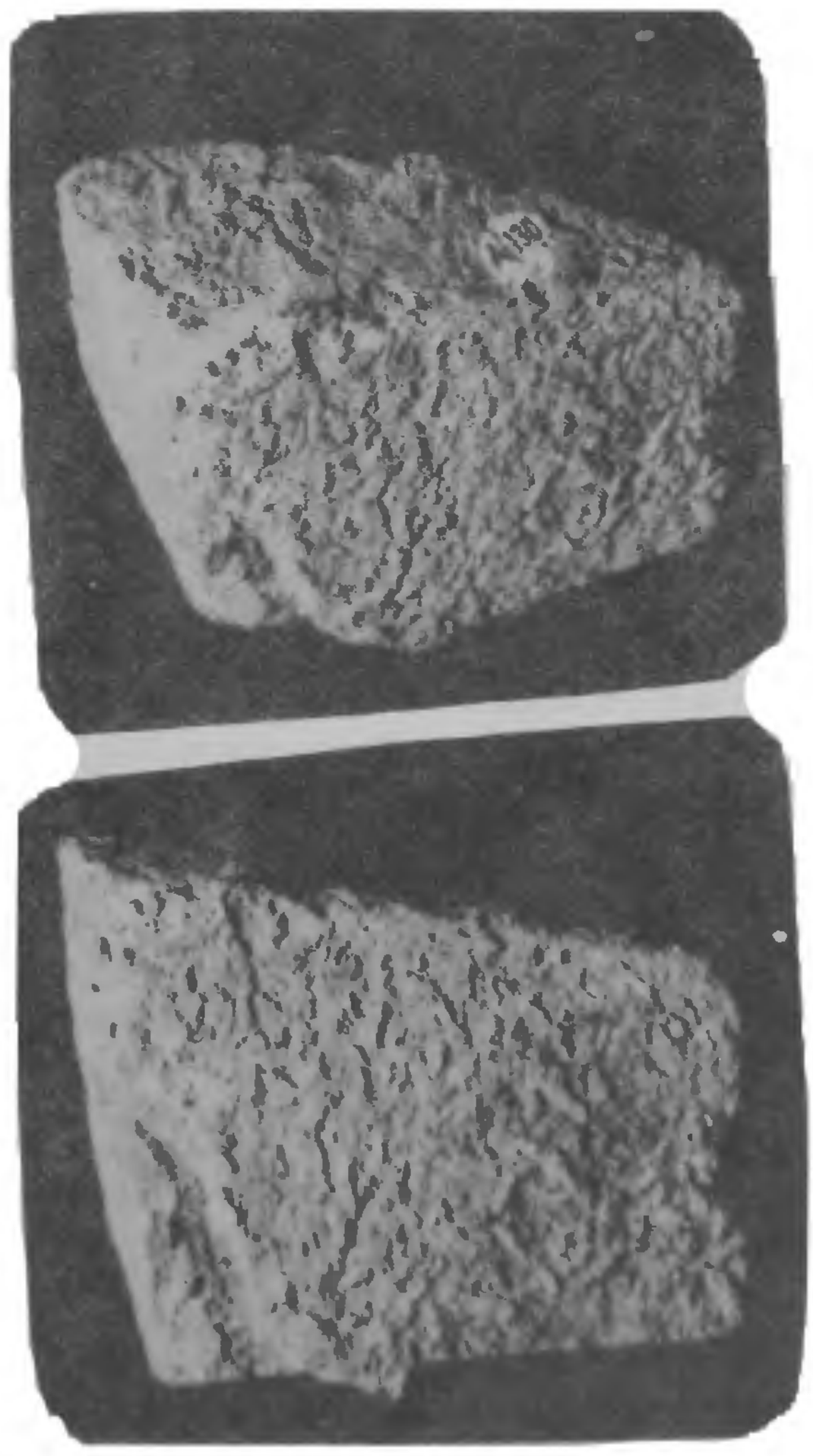

Figure 1. Trace fossils *Chondrite* sp.

5 mm to 2.0 cm. The average length is around 1.5 cm while the width varies between 3 mm and 5 mm.

Since these markings are made by a marine worm, their presence along with the sedimentary structures indicate shallow water shelf conditions of deposition of the rocks of Shillong Group.

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THE URANI-FEROUS BIOTITE-SERICITE SCHIST OF KASTURI GATTU HILLOCK, NORTH-EAST OF SOMASILA, NELLORE DISTRICT, ANDHRA PRADESH

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SOMASILA is a village about 90 km, West of Nellore, situated on the Madras–Vijayawada railway line. Somasila is located on the northern bank of North Pennar River, just at the point where the river, flowing east, emerges from the Velikonda Range of hills in the Eastern Ghats (in the South-Western corner of Toposheet No. 57 N/6).

The hillock of Kasturi Gattu is approximately 70 m high (from the ground level) and is located about 5 km NNE of Somasila, and about 2 km north of the village of Khambampadu. There are a number of quarries on this hillock, where the fairly hard rock is quarried and used in the construction of the Somasila dam, now being built across the River Pennar.

The base of Kasturi Gattu hillock on the western side, is composed of lower Proterozoic amphibole–biotite–quartz rock, quartz–biotite–muscovite–chlorite schist, Quartz–Chlorite schist etc.

In the northern part of Kasturi Gattu hillock, dark coloured biotite–chlorite schist is present, and as one proceeds to the south, the schist is silicified and feldspathised, partly obliterating the schistosity. It is observed that bands of silicified and feldspathised schist are separated by non-silicified biotite-schist bands. Four bands of the silicified schist were observed in the quarries, in the southern part of Kasturi Gattu hillock.

The unsilicified biotite-chlorite schist in the northern part of the hillock, is not radioactive, but the silicified and feldspathised schist seen further to the south, is weakly to moderately radioactive assaying 0.01 to 0.02% U_3O_8.

The schist, traversed by a Joint/fracture plane trending N30° East, shows higher radioactivity, and assays upto 0.10% U_3O_8. In all these radioactive schistose rocks, the contents of ThO_2 is less than 0.01%.

The lowest lithological member of the Middle Proterozoic formation–the regolith, represented by quartz-sericite phyllite is moderately radioactive and contains upto 0.012% U_3O_8, with practically no thorium. This unit is overlain by a moderately radioactive oligomict quartz-Pebble conglomerate, assaying upto 0.013% U_3O_8 and 0.06% ThO_2. The top most bed is a white quartzite, which is a marker horizon and can be traced for one kilometer, in a NW-SE direction.

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SISTER CHROMATID EXCHANGES IN VIRUS-INFECTED CHINESE HAMSTER OVARY CELLS

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MONITORING the frequency of sister chromatid exchanges (SCEs) has become a sensitive indicator of subtle alterations in the genetic material. It is known that SCE frequencies can be elevated by a host of chemical and physical agents; however, relatively few reports have been published on SCEs induced by viruses. Here we report the results of studies on SCEs in Chinese Hamster Ovary (CHO) cells experimentally infected with 4 DNA viruses belonging to 3 groups, *viz* Poxvirus (Vaccinia), Herpesvirus (Herpes Simplex