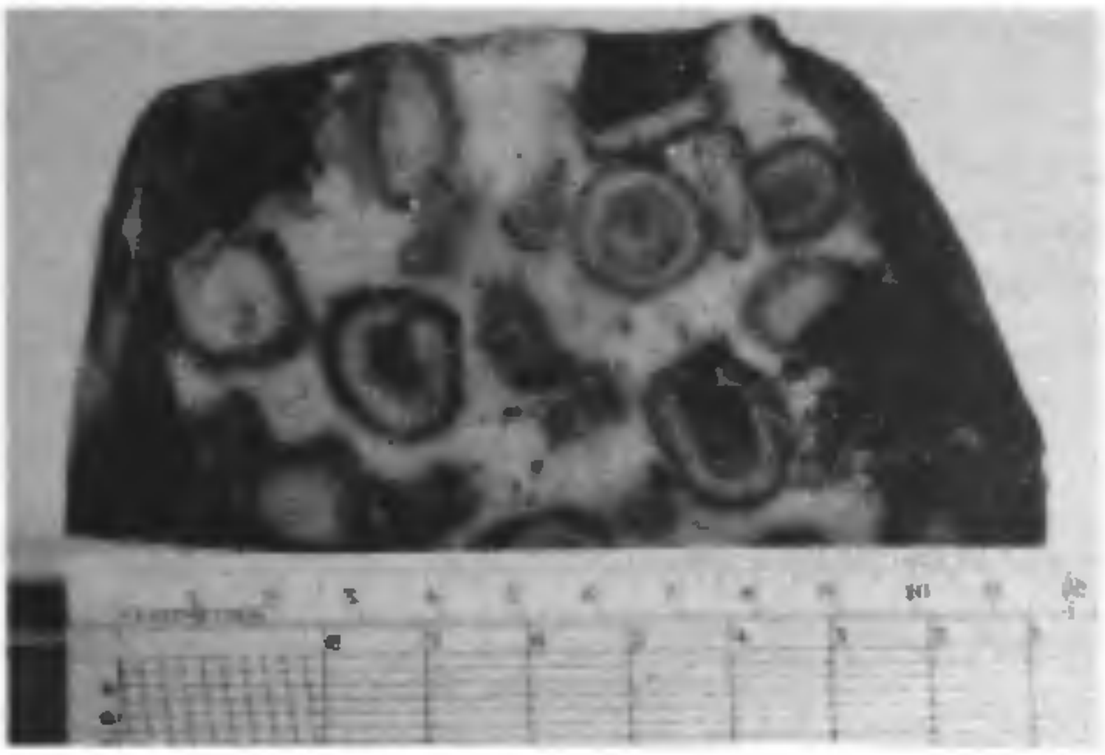

Figure 3. Cut and polished section of quartzite exhibiting inner structure of the oncolites.

centric rings around a nucleus are noted.

Since oncolites require periodic desiccation for their formation, their occurrence indicates palaeo-environmental conditions characterised by the dominently submerged shore water in the intertidal zone.

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A LABORATORY TECHNIQUE FOR TESTING EFFICACY OF SOME NEMATICIDES AGAINST RICE ROOT NEMATODE

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IN earlier preliminary screening, carbosulfan 25 ST at 0.02% a.i. was used as seed treatment, against rice root nematode under agar tube culture and found effective in preventing the penetration of the host roots by the nematode up to a period of 30 days (unpublished). Using the same technique the study was extended, however, with carbofuran 3G and phorate 10G at 0.02% a.i. concentration.

Hoagland's[1] plant nutrient agar medium was dispensed into large tubes (20 cm × 3 cm) so that a third of each tube was filled with the medium. The tubes were plugged with cotton and sterilised at one kg pressure per sq cm for 20 min and allowed to set, keeping them erect in wire baskets. Seeds of paddy var. Jaya were first surface sterilised (0.1% mercuric chloride for two minutes and washed with three changes of sterilised water). The seeds so treated were divided into three lots. The first lot was soaked for 24 hr in sterilised tap water, the second and the third lots were also soaked for a similar period but in 0.02% a.i. of carbofuran 3G and phorate 10G respectively. Seeds from each lot were aseptically transferred into eight agar tubes at two per tube. Two days after germination, seedlings in each tube were aseptically inoculated with fifteen surface sterilised[2,3] rice root nematode larvae by placing them close to seeds where primary roots had emerged and entered the agar medium. Observations were recorded on the 10th, 17th and 20th days (table 1). Each tube with the seedlings was placed in boiling water to allow the medium to melt. Two to three drops of lactophenol cotton blue[4] were transferred by a dropper. The seedlings were moved into hot lactophenol cotton blue while the medium, now coloured blue, was poured into petri dishes. The intensity of blue colour of roots so treated was removed by soaking them in lactophenol so that nematodes within the roots could be observed clearly. The deeply blue coloured nematodes within the medium could easily be counted with the aid of a stereoscopic binocular dissection microscope. The nematodes found enmeshed in the clustered roots were taken as those not penetrated. Those either seen within roots directly, or teased out by needles under the microscope were included among those actually penetrated. The counts made of nematodes on the 10th, 17th and 20th day after inoculation within and outside roots and in lactophenol washings are presented in the table. In cases where nematodes were found either enmeshed with roots or in the lactophenol washings, used to wash the excess cotton blue off roots, it is presumed that they have been feeding on root epidermis. However, the results clearly show that the nematodes failed to penetrate the roots of seedlings from seeds treated with carbofuran, during the period of 20 days, although, they had penetrated by the 10th day, the roots of seedlings, from seeds treated with phorate and untreated control. This simple technique may prove useful as a quick method for comparing the

Table 1 *The number of nemetodes of rice root recovered from within and outside rice roots*

The No. of days after which observation was made following nematode inoculation	Treatments, the number of plates observed at different intervals	Nematode numbers (Total 15)		
		Within the roots	Within the medium	In lactophenol washings
10 days	Carbofuran 1	0	11+4 (enmeshed with roots)	0
	Phorate 1	6	8	1
	Phorate 2	2	13	0
	Control 1	0	15	0
	Control 2	6	8	1
17 days	Carbofuran 1	0	13	2
	Carbofuran 2	0	12	3
	Carbofuran 3	0	10	5
	Phorate 1	9	5	1
	Phorate 2	5	9	1
	Phorate 3	5	9	1
	Control 1	6	4	5
	Control 2	5	10	0
20 days	Carbofuran 1	0	12	3
	Carbofuran 2	0	12	3
	Carbofuran 3	0	9	6
	Carbofuran 4	0	11	4
	Phorate 1	5	5	5
	Phorate 2	4	9	2
	Phorate 3	3	10	2
	Control 1	5	7	3
	Control 2	2	8	5
	Control 3	7	6	2
	Control 4	3	2	10

efficacy of systemic nematicides is checking parasitic nematode penetration of the host roots.

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EGG ADAPTATION OF INFECTIOUS BURSAL DISEASE VIRUS

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INFECTIOUS bursal disease (IBD) or Gumboro disease is emerging as a viral disease in India. Recently, during the investigations into a series of Ranikhet disease (RD) outbreaks, in a number of broiler farms located around the city of Bombay, it was observed that there was an association of IBD in all the cases[1,2]. The present work was undertaken to study the behaviour of the local isolate of IBD[2] virus in serial egg passages in chicken embryo. Antiserum for confirmation was obtained from Intervet Laboratories, U.K. and the immune serum was raised in rabbits[1].