

July 18, 1994

RESEARCH REPORT: PINELANDIA BIOPHYSICAL LAB.

LABORATORY Code: KS-02-46

PLANT MATERIAL: Rape seed plants, *Brassica napus* from two formations.

FORMATIONS: Both occurred near Avebury, Wiltshire, UK, and samples were collected by Mr. Steve Alexander and submitted by Mr. Barry Reynolds.

Formation I. Crescent Moon, at the sanctuary, Avebury - formed
23/24 April, 1994.

Formation II. Circle with bar at west Overton, Avebury - formed
27/28 April, 1994 ("thought to be a hoax").

COMMENTS: Due to the fact that the top section of each plant group, broke off and intermingled within the sacks it was not possible to examine the apical regions.

LABORATORY EXAMINATION:

Cell wall pit examinations were conducted on the remaining sections of plants. The pit fields were located within the tracheid fibers of the outer tissue on the plant stems.

Formation I. Convex side of bends at base of plants (N=30 pits/sample)

<u>Sample</u>	<u>Ave. Pit Dia. - microns</u>
Control Sample #1	1.81 s.d. 0.35
Formation Sample #2	3.59 s.d. 0.83*

*-P<0.05

Although there is a significant difference between the pit sizes in these two samples it should be kept in mind that pit comparisons alone can not be taken as a criteria for a genuine formation. This is especially true since this is the first sample group of rape seed examined in this laboratory and there is no data base for comparison.

Formation II. Stem segments (N=30 pits/sample)

<u>Sample</u>	<u>Ave. Pit Dia. - microns</u>
Control Sample #3	2.90 s.d. 0.72
Formation Sample #4	3.17 s.d. 0.77 (N.S.)

In this sample set the pits were much larger in the controls - the reason for this is not known. There is no significant difference between the pit diameters in these two sample groups. Within the four sample population the only tissue providing any indication of an abnormality was located within in the formation Sample #2 pit fields. Here the pits disclosed very pronounced "stretch marks" in the cell wall microfibrils. This suggested a very rapid heat expansion. This effect was not observed in any other sample.



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