Crop Formation: Winchester, U.K. 1995

(LONGWOOD WARREN)

Laboratory Code: KS-03-58

Material: Wheat stems and heads, *Triticum aestivum*

Formation: Complex circle and ring formation at Winchester, UK on June 25, 1995.

Sampled: by "unknown"; samples submitted by Peter Stammers on July 22, 1995.

SUMMARY OF RESEARCH FINDINGS:

a)- the apical nodes from the formation samples disclosed the presence of a combination of expulsion cavities and lateral splitting, a situation which has not been previously observed to this severe degree (see examples in Fig.1 attached).

b)- four sample groups (N=10 plants each) were taken within the inner rings shown in the Deetken photograph in Fig.1, two from the formation, a standing control (distance from formation not given) and one labeled as a "lodged control".

c)- due to the low sample numbers the node data shown below include the measurements from both the A-apical and P-penultimate locations on the plant. These data are expressed as percent length change relative to the mean of the 10 control plants.

	Node Length Change			
Sample	A-apical	P-pen.	Expulsion Cavities	
"Lodged Cont."	+22%	+25%	(A)-0%	(P)-10%
#1-formation	+76%	+17%	(A)-100%	(P)-20%
#2-formation	+65%	+33%	(A)-100%	(P)-30%
Control	----	----	(A)-0%	(P)-0%

Note: all node length changes significant at P<0.05

d)- because of the paucity of sample sets in this formation the seeds were examined for germination. The seedling growth data are listed below

	Plant ht.(cm) at 7-days		
Sample	ave.	s.d.	Germination
"Lodged Cont."	1.30	0.81	100%
#1-formation	7.10	5.03	100%
#2-formation	3.58	2.51	100%
Control	2.07	2.31	95%

Due to the high variance levels in these sample sets, only the #1-formation seeds had statistically significant growth change compared with the control.

e)- the "lodged control" sample was obviously a part of the formation energy complex. the term lodging is very ambiguous and should not be applied to visual evaluations; simply use "downed" to describe the sampling condition.

COMMENTS

The "labelers" called this "the missing planet" formation. It seems that all they had to do was glance at the outer ring to find a whole "galaxy of planets". There is a point to be made here regarding the habit of naming these formations and the danger of producing a subjective bias which carries over into the sampling. For example let us surmise that the person who sampled this formation had heard it called "the missing planet" before entering the formation. His or her attention would naturally be focused on the inner ring complex, as did indeed seem to be the case, and the rich source of information within the outer ring complex would be ignored.

We repeatedly point out that these outer, small formations are as important, and in some cases provide more information, than the large interior regions. It is discouraging to find that the information we and others are able to laboriously extract from the formation samples is consistently ignored by some people. Recently, for example, a self-proclaimed crop circle "investigator" publicly stated that "all segments within a crop formation are formed at the same time". In 1992, Micheal Chorost and Stanley Morcom made a detailed study of the crop lays and found that the ancillary segments of a formation are organized before the main or large interior circle. This finding was discussed in the 1993 Argus Report as a situation where the lay patterns "do not follow a rational sequence".

As it turns out this is a very logical sequence of events. If we apply fluid dynamic principals to the vortex organization within these energy systems, we find that the secondary products of instability (small outer circles, rings and "grape shot") would be expected to strike the crop before the much larger primary vortex. This has been shown to take place without exception if external turbulence is minimal (see "Instability effects in vortex rings produced with liquids." W.C. Levengood, Nature 181, pp.1680-1681, 1958). As we have pointed out many times, in plasma physics and fluid mechanics gases, including air, are considered as having liquid properties. With the exception of crop formations occurring under conditions of extreme turbulence (as in Blue Ball, Maryland) this sequence of instability control of crop lay patterns has been consistently noted since the 1992 detailed mappings.

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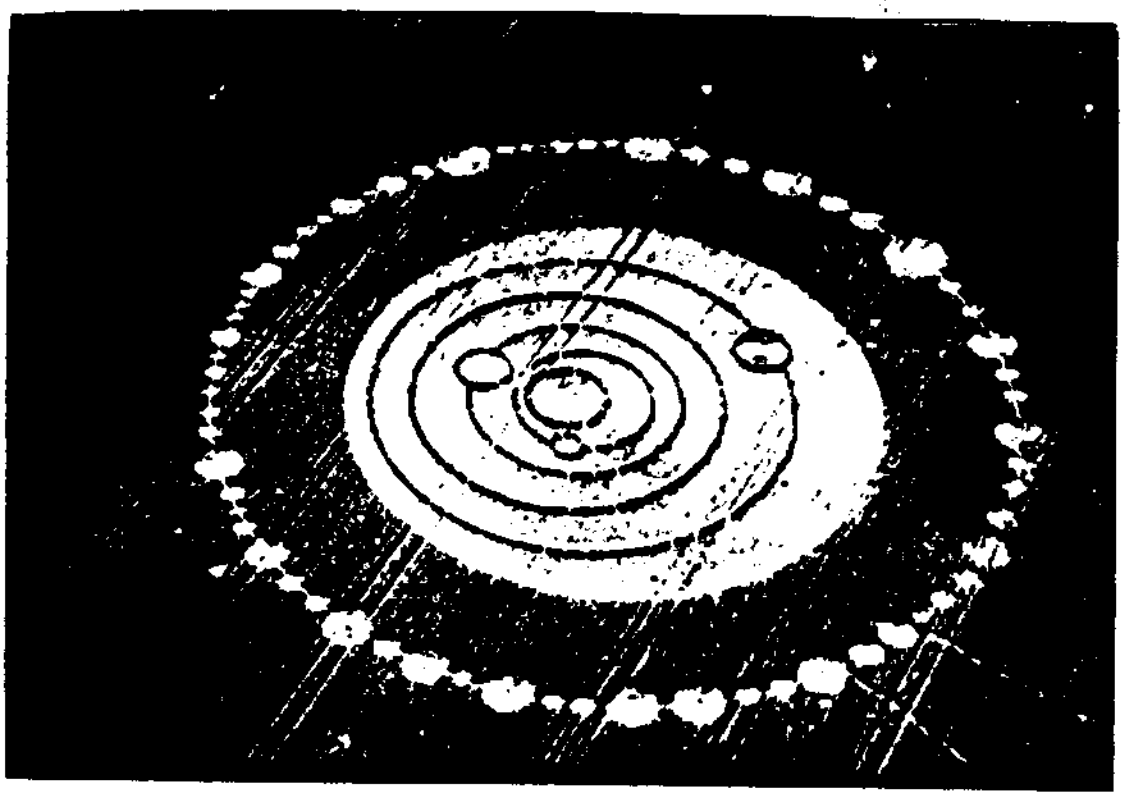
Note: Because we do not know, in this case, who the fieldworker was, we don't know if they were supplied with our "Field Sampling Protocol." The point Dr. Levengood is making, above, is that in order for the results of this work to be considered reliable it really is necessary that fieldworkers do follow the protocol, as exactly as is possible. In this particular case we suspect that a great deal of very significant information could have been gleaned in the laboratory had the protocol

Fig.1 Chad Deetken's photo of crop formation KS-03-58 (1995) Note outer ring of profuse circles indicative of a high degree of secondary instability products within the vortex complex (see text).



Examples of combined expulsion cavity-node splitting.

Note: This particular formation illustrates beautifully a patterning which one could readily anticipate as a result of plasma vortex energies. Dr. Levengood's 1958 paper, "Instability Effects in Vortex Rings produced with Liquids," Nature (181:1680-1681) graphically makes the point.