

ART. I. — *Cairns on Corney Fell, West Cumberland*. By JEAN E. WARD, M.A.,
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Read at Kendal, April 2nd, 1977.

IN 1972, a study was made of an area of small stone cairns on the side of Corney Fell at an altitude of 700 ft. (Map Ref. SD 127904). Several large, irregular clusters of cairns are obvious at various points over this area, but a compact grouping of about 70 was selected for examination. These lay 400 yards east of Buckbarrow Bridge, and were carefully surveyed before random excavation to ascertain their possible function.¹ The Ordnance Survey, on visiting the area in 1967, were of the opinion that they were clearance heaps without any obvious traces of field boundaries. These could be similar to other sites which, under certain conditions of light, slope and cover, have shown field demarcations in very faint survival.² A survey by theodolite was carried out over the area in early spring when vegetation cover was low,³ but no immediate pattern emerged. There appeared to be a greater concentration on a flattish, dry plateau than on the surrounding boggy hillside (Fig. 1). An apparent linear arrangement may have been partially dictated by the relief.

The fellside is devoted at present to rough grazing, and the thin soil on the granite base supports a poor vegetation cover. Irregular depressions on the slope are very marshy, caused by poor drainage from higher levels, but the cairns are not generally found in these. Most of the cairns are roughly circular in outline and vary from 10-30 ft. in diameter, none attaining any great height.

A random selection of two cairns was made for conventional excavation, one of 14 ft. in diameter near the road (Cairn 1) and the other 26 ft., and on the dry plateau to the south (Cairn 2). The latter was appreciably larger than any others in the vicinity. On excavation,⁴ neither cairn produced any finds and their structure was too haphazard to hint at careful construction. Cairn 1 had large stones in the centre and small ones at the edge, while Cairn 2 was exactly opposite, and had a slight tail caused by tumble. No change in the natural soil colour was observed under Cairn 1, but Cairn 2 was more rewarding. Lying roughly central was an extensive spread of pink and white ash flecked with charcoal. This seems similar to a find made under a cairn at Thwaites Fell,⁵ where a thin, flaky layer of white was seen, and also to some colouration under a cairn of the Threlkeld complex.⁶

Soil samples were carefully taken over the area of the two cairns, in order to try to ascertain if either had held a burial. Tests to determine the phosphate and manganese levels were carried out in the Laboratory of the National Museum of Antiquities of Scotland: the findings are illustrated in the Appendix. The general conclusion was that Cairn 1 was fairly sterile, but that Cairn 2 had a high enough phosphate level to suggest that it could have been used for burial.

As excavation on these cairns was rather inconclusive and also slow using the conventional methods, some revised plan is needed before the problem of Cumbrian

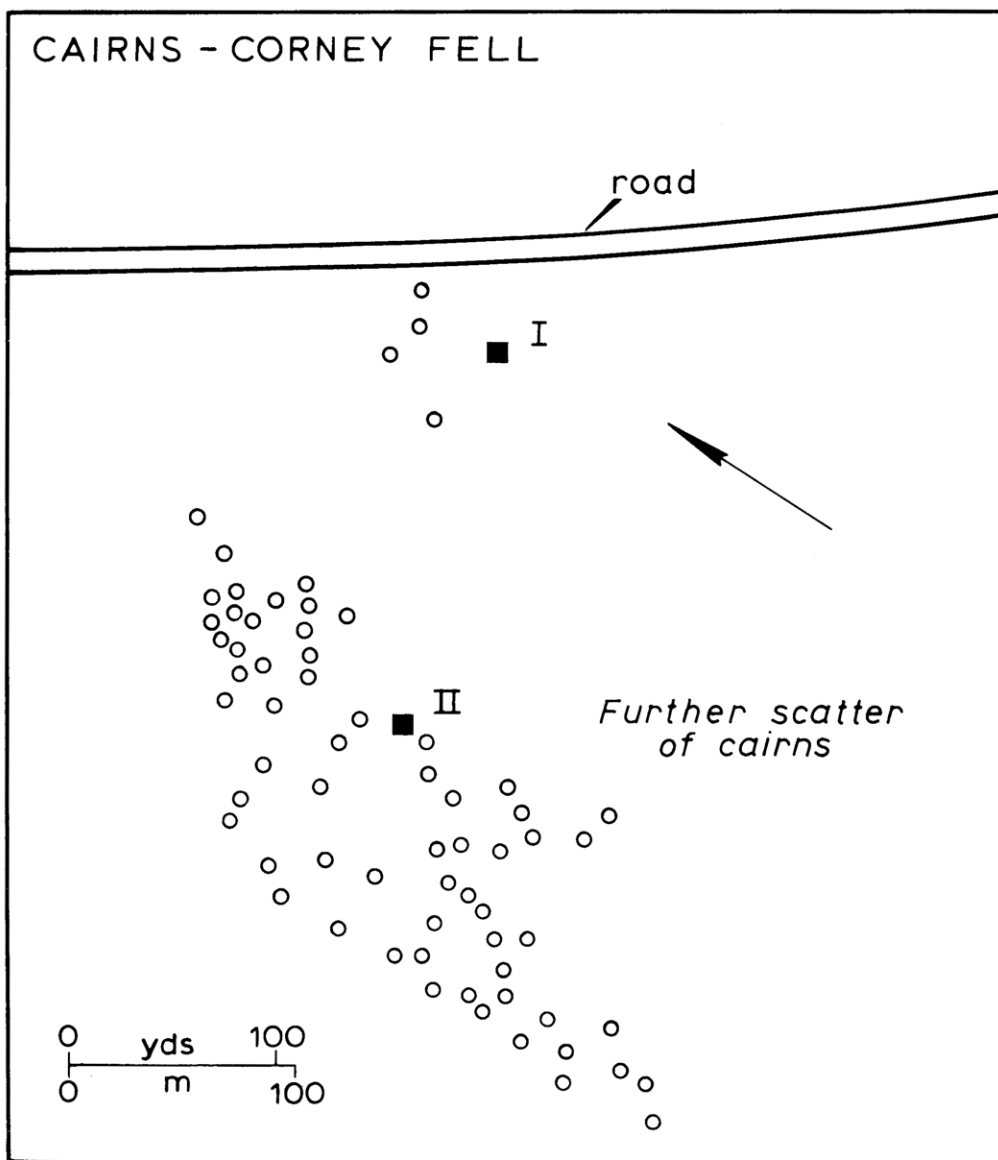


FIG. 1. - Cairns on Corney Fell, showing sites of cairns 1 and 2.

cairnfields and their functions will be satisfactorily solved. Small sample trenches and even mechanical methods may have to be employed over such numerous remains, with great stress placed on careful soil sampling and observation of colour changes. The 50 per cent probability of one of the two random samples being a burial cairn may point to an admixture of burial and field clearance. On the selected area, however, it was curious to see that the driest land was in fact dotted with the small cairns, while it might have been more practical to tip the boulders off the potential agricultural areas into the useless

sloughs. In some cases, it is also impossible to discern any clear plot between the tightly packed cairns which might be suitable for cultivation.

A rough distribution map of cairnfields in Cumberland (old county) indicates that there is a great concentration on the now agriculturally impoverished areas of the south fells. Vegetation studies, however, have shown that during past climatic optima, pastoral activity could have attained such altitudes about 1080 B.C. when grass and moor replaced woodland, and again about A.D. 300, when further forest clearance, indicated by pollen remains, suggested arable cultivation.⁷

It seems possible, therefore, that the cairnfields could belong to either period if associated with agricultural spread. Most lie at 700-1000 ft. and some have clear field systems and even settlement in close association, while others may be glacial residuals, as in Ennerdale, or possible late medieval stack bases.⁸ Many unrelated examples still pose a problem, and only intensive excavation over a long period may account for their origins, uses and context.

Acknowledgements

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Appendix

Examination of Soil Samples from Corney Fell. By J. C. McCawley, B.Sc., M.Sc., F.S.A.(Scot.).

The samples taken from two small cairns were examined for evidence of burial. A portion of each of the samples was dried at 100° and passed through a 2 mm. sieve. The specimens were then used to obtain the experimental results given below.

Phosphorus Content

The procedure used was the vanadate-molybdate method as described by Ward, Lakin, Canney *et al.*

Cairn I	A	200 ppm phosphorus	Cairn II	A	300 ppm phosphorus
	B	500 ppm phosphorus		B	500 ppm phosphorus
	C	500 ppm phosphorus		C	1200 ppm phosphorus
	D	600 ppm phosphorus		D	1200 ppm phosphorus
	E	500 ppm phosphorus		E	1000 ppm phosphorus
	F	1000 ppm phosphorus		F	600 ppm phosphorus
	G	500 ppm phosphorus			

Weight loss upon ignition and colour comparison

IA	Wt. Loss	7.0%	grey brown	IIA	Wt. Loss	6.0%	light brown
IB	Wt. Loss	13.0%	light brown	IIB	Wt. Loss	6.3%	light brown
IC	Wt. Loss	6.8%	darkest orange/brown	IIC	Wt. Loss	13.6%	darkest brown
ID	Wt. Loss	10.4%	orange brown	IID	Wt. Loss	18.7%	light brown
IE	Wt. Loss	10.0%	orange brown	IIE	Wt. Loss	3.4%	grey brown
IF	Wt. Loss	6.9%	lightest orange/brown	IIF	Wt. Loss	3.3%	grey brown
IG	Wt. Loss	6.4%	orange brown				

Cairn I

The results obtained from the samples from this cairn are rather difficult to interpret. If sample IA is taken to provide an indication of the background soil phosphorus level, then samples IB-G have higher phosphorus levels. Only IF however has an abnormally higher level than the others, and this is situated almost on the edge of the cairn at the lowest depth samples. ID is from approximately the same depth and has a phosphorus level of only 600 ppm. Similarly, the results from ignition losses and colour changes are confusing and do not entirely complement or contradict the phosphorus levels.

From the results it is impossible to present any clear evidence for burial having taken place. If a body had been present, one would have expected it to have been at, or just below, the same level as IF and ID.

Cairn II

If sample IIA (300 ppm), which is outside the cairn, is taken to indicate the background phosphorus level, then clearly samples IIC, D and E have abnormally high levels. These samples are of approximately the same depth and are situated in an area roughly 6×1 feet. Samples IIC and IID show the highest weight loss upon ignition and the greatest colour change from the original, this presumably being indicative of the highest organic content.

The pH of all the soil samples lies between 4 and 6, and at this level it has been shown that phosphates are leached from the soil very slowly. If then a burial had taken place in antiquity, the soil conditions are such that the bone phosphorus would quite likely have been retained.

In order to obtain a more conclusive result from Cairn I, the soil samples were analysed for manganese. (During excavation of a barrow at Bishops Waltham, Hants., the silhouette of a 'body' contained no more phosphorus than the neutral soil, but between 10 and 100 times more manganese. Presumably the manganese has formed loose complexes with the decaying organic material.)

The following results were obtained:

IA manganese = 1000 ppm	IIA manganese = 2000 ppm
IB manganese = 1250 ppm	IIB manganese = 5000 ppm
IC manganese = 2000 ppm	IIC manganese = 2000 ppm
ID manganese = 1500 ppm	IID manganese = 3000 ppm
IE manganese = 2500 ppm	IIE manganese = 3000 ppm
IF manganese = 2750 ppm	IIF manganese = 1250 ppm
IG manganese = 2000 ppm	

Unfortunately no clearer pattern is obtained. The results are not significantly different to suggest high concentrations of organic matter. Manganese, as the hydroxide, is only precipitated in soils at a pH above 8.0. In the slightly acid soils present in the cairns, the tendency for manganese to concentrate would be reduced.

Conclusion

No satisfactory evidence has been found to indicate remains of burial in Cairn I. In Cairn II, high phosphorus levels compared to the background tend to confirm the idea that the cairn was used for burial.

Notes and References

- ¹ DOE Scheduled site No 107, Cumberland.
- ² Communication from Mr Wardale of the Ordnance Survey.
- ³ Work carried out by Mr Thompson and Mr Huddart of the NCB Opencast Executive.
- ⁴ Grant provided by Newcastle University Fieldwork and Excavation Committee.
- ⁵ CW2 xxix 250.
- ⁶ CW2 ii 48.
- ⁷ W. Pennington, *History of British Vegetation* (1969), 83.
- ⁸ *Archaeological Newsbulletin CBA* 3. January 1973, 9.

