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AN INTERIM REPORT ON SEEDS AND POLLEN FROM HIBALDSTOW, LINCOLNSHIRE

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Hibaldstow 1977 F244 5th Sample SEED LIST

The remains are of seeds preserved by waterlogging except where otherwise stated.

Useful Plants	Number	
Coriandrum sativum L. (Coriander)	3	
Fragaria vesca L. (strawberry)	2	
Hordeum vulgare L. (hulled barley)	1	carbonised
Linum usitatissimum L. (flax)	2	
? Triticum sp. (wheat)	1	carbonised fragment
Weeds of cultivated land		
Aethusa cynapium L. (fool's parsley)	1	
Agrostemma githago L. (corn cockle)	1	
Anagallis arvensis L. (scarlet pimpernel)	1	
Atriplex sp. (orache)	21	
Chenopodium cf. album L. (fat hen)	5	
Chenopodium murale L. (nettle leaved goosefoot)	1	
Fumaria sp. (fumitory)	3	
Galeopsis sp. (hemp-nettle)	1	
Hyoscyamus niger L. (henbane)	1	
Papaver argemone L. (Long prickly-headed poppy)	1	
Polygonum aviculare agg. (knotgrass)	18	
Polygonum persicaria L. (red shank)	13	
Polygonum convolvulus L. (black bindweed)	8	
Raphanus raphanistrum L. (runch)	2	
Solanum nigrum L. (black nightshade)	5	
Stellaria media/nemorum (stitchwort)	8	
Thlaspi arvense L. (field penny-cress)	1	
Urtica urens L. (stinging nettle)	4	
Viola sp. (wild pansy)	7	
Valerianella dentata (L.) Poll. (corn salad)	1	

Grassland plants

Gramineae (grasses)	4
Hypericum perforatum L. (common St. John's wort)	1
Potentilla sp. (cinquefoil)	1
Pteridium aquilinum L. (bracken)	9 frond fragments
Ranunculus cf. acris L. (meadow buttercup)	23
Ranunculus cf. repens/bulbosus (creeping/bulbous buttercup)	30
Rumex acetosella agg. (sheep's sorrel)	6
Rumex conglomeratus Murr. (sharp dock)	1 seed with perigynia
? Silene sp. (campion)	1
Stellaria graminea L. (lesser stitchwort)	1
Torilis japonica (Houtt) DC	1
Urtica dioica L. (common nettle)	20

Hedgerows

cf. Prunus spinosa L. (sloe)	9 thorns
cf. Rosa sp. (rose)	1 thorn
Rubus fruticosus agg. (bramble)	2

Damp places, stream sides.

Carex cf. flacca Schreb. (glaucous sedge)	16
Carex cf. hirta L. (hairy sedge)	12
Carex cf. panicea L. (carnation sedge)	1
Eleocharis uniglumis /palustris (spike rush)	1
Hydrocotyle vulgaris L. (pennywort)	1
Isolepis setacea (L.) R.Br. (bristle scirpus)	4
Juncus sp. (rush)	1
Montia fontana L. (blinks)	5
Ranunculus flammula L. (lesser spearwort)	4
Rumex hydrolapathum Huds. (great water dock)	1 seed with perigynia
Scrophularia umbrosa Dum. (figwort)	1

Aquatic plants

cf. Apium nodiflorum (L.) Lag. (fool's watercress)	10
Potamogeton sp. (pond weed)	100
Ranunculus subgenus Batrachium (water crowfoot)	77

Unclassified plants

Rumex sp. (dock)	3
Musci indet. (moss)	

J.R.A. Greig

REPORT ON SEEDS FROM HIBALDSTOW (1977, F244, 5th sample)

The useful plants found here add three species to Vanessa Straker's list of cultivars from this site (spelt wheat, rye, hulled barley, oats and horse bean). The coriander is fairly well known from Roman and later sites and it was presumably grown for flavouring food, and does occasionally grow as a garden escape. The wild strawberry is fully native and so its appearance here does not necessarily imply that it was cultivated. The flax record is far more interesting as it may represent an important crop which does not tend to survive in carbonised remains because heat is not used in its processing. It may survive preferentially in wet sites due to being retted in waterfilled hollows (Godwin, 1975) like the other important fibre plant, the hemp (Greig & Hall, in preparation), and this may account for its appearance here. Certainly Lincolnshire has been a suitable area for flax growing in the past, as shown by the flax retting pits which appear now only as crop marks seen in various parts of the county (Buckland, personal communication) although there appears to be no trace as yet on the pollen diagram from Butterbump (grid ref. TF 495 724) which goes from the pre-neolithic period to recent times, nor from Cowick, which covers part of the medieval period (Greig, unpubl.). The wheat and barley record is as might be expected from Vanessa Straker's results.

There are 20 identified taxa of plants which are usually found growing as weeds on cultivated land. The majority of these are rather catholic in habitat requirements save for lack of competition from other plants such as grasses. The corn cockle was a typical weed of corn fields as its name implies, and the net leaved goosefoot tends to grow on rather light sandy soils, as does the fumitory, which would be expected in the area (the fumitory grows abundantly on the spoil heaps around the site).

The grassland plants are represented by about the same number of seeds as the weed but with almost half the number of taxa. The grasses do not often preserve, so the remains of 4 seeds ... probably represents a fraction of the original abundance of these plants

There is not much to show what kind of grassland might be represented here since most of the plants identified will grow on many different soil types, and the buttercups are not closely enough determined for there to be much evidence from them. However the Rumex acetosella (sheep's sorrel), the identification of which is clear from the small size of the seeds (Knörzer, 1970) tends to grow on poor and usually acid soils. Around the site itself the soil is alkaline from the underlying Lincolnshire Limestone and the building stone taken from it, and the abundance of mollusc remains demonstrates alkalinity. In other places, however, the overlying Cover Sands have become leached giving an acid ground surface where one might expect to find Rumex acetosella and also perhaps Raphanus raphanistrum (see weeds list).

The finding of possible sloe and rose thorns supplies some evidence of hedgerow, a habitat whose herbaceous components would go unrecognised as they would consist of meadow and woodland plants. This underlines the difficulty of trying to reconstruct plant communities from their remains, for weeds will by their very nature usually scatter abundant seed, but other plants may not do so and tend to go unnoticed, such as these. It is further evidence to show that Iron Age and Roman farming communities did have hedges, perhaps along field boundaries, with shrubs like sloe as in this case and elsewhere (see Smith 1978) and sometimes of box as discovered by Mark Robinson in Oxfordshire (in press).

The presence of plants like the pond weed and the water crowfoot demonstrate the presence of fairly substantial amounts of open water, and the plants of damp places could be growing at the edge of such a pond, or elsewhere.

These main plant communities deduced from the remains may not all have grown near the find-site, since they represent some very varied habitats, not all of them compatible in the rather small radius of normal seed dispersal. Many of the weeds could have been growing in any open space left to them and not picked over by chickens, otherwise they could be the result of crop processing activities such as threshing or grain cleaning carried out at some distance to the fields, but in the near vicinity of the place where the remains were preserved and found.

The carbonised grain could also be the result of local processing, perhaps in thi case heating for drying or threshing resulting in charring and preservation, for grain does not usually survive unless carbonised.

The signs of grassland plants, those of damp places and the aquatics could have been growing locally (especially the latter) or they could be the result of hay and sedge being brought in for use on roofs and floors, among other purposes.

There are no sites with remains directly comparable to those from Hibaldstow, but those from the Rudston Well (TA 089 66) (A.M. Lab. Report No.2221.) make an interesting comparison even though the conditions of deposition would appear to have been different, but both are Roman sites in the same general area. In both cases the lists of weed seeds are very similar, over three quarters of the taxa found at Rudston also occurring at Hibaldstow. The grassland lists are similar, but Hibaldstow has no members of the Compositae (the thistles, burdooks, hawkbit mayweeds etc). The difference of mode of deposition would not seem to explain their absence from Hibaldstow, since they are regular components of seed lists fr a range of other sites (i.e. Hen Domen, medieval Welsh castle, A.M. Laboratory Report No. 2530) in which seeds and even whole thistles were found. The abundanc of aquatic plants in the Hibaldstow list compared with that from Rudston would suggest that they were growing locally, a conclusion supported by R. Cameron's assessment of the molluscs which would suggest a rich fen with little trampling o disturbance. The pollen spectra of Rudston Well amd Hibaldstow are rather simila and add to the present information that Plantago lanceolata (ribwort plantain) seems to have been abundant, also perhaps dandelions to judge by the Compositae sect. Liguliflorae pollen.

S.M. Holland's results (Holland 1975) from Crosby Warren near Scunthorpe (44 917 show that during the pre-Roman Iron Age there were various times when there was increased deforestation and mixed farming, with a certain amount of soil impoverishment resulting in podsolisation and sand blowing. In Romano-British ti there is a bias towards pastoral farming and more soil disturbance. It is hard to tell how local these phenomena are, but it would seem likely that a similar pattern of change took place at Hibaldstow with mixed farming and soil degradatio which may have caused real problems to the inhabitants.

HIBALDSTOW POLLEN 10th January 1979 F 273 sample 6

The pollen results have become available since this seed report was written; there is:

1. High Gramineae, low Cerealia
2. High Compositae (L), very few seeds
3. High Plantago lanceolata
4. Pollen and seeds from weeds like Chenopodiaceae, Caryophyllaceae, Urtica and Polygonum.

These four characteristics are often associated with sites where the pollen has apparently come from vegetation growing in the immediate vicinity of the site, with little from further away, and practically none coming from flowers in vegetation deposited at the site --- in the latter case high Cerealia values of more than 10% are usually found, also Centaurea cyanus type pollen, also Compositae seeds together with the pollen, and less Plantago lanceolata, attributed to the decay of hay and straw at the place in question.

Most of the plants recorded here are weeds and ruderals where the pollen record is fairly unequivocal. The Compositae (L) record could represent one of a number of genera like Leontodon, Lapsana or Sonchus which are commonly found as macrofossils, or Taraxacum which is a very common ruderal today although it's achenes are not very frequently found, and not in large numbers either. The presence of Sanguisorba minor pollen suggests the local presence of alkaline soil, so the Rumex acetosella seeds have perhaps been brought from a distance away where there were acidic soils on the sand. The lack of tree pollen suggests a site with few local trees, in common with a number of other Roman sites like Alcester (Warwickshire) or Rudston (Linca). Some trees and shrubs which are likely to have been an important part of the local vegetation, such as the blackthorn (Prunus spinosa) to judge from the macrofossil record, do not appear in the pollen record, for Rosaceae pollen seems to be very sparsely released, so in this aspect the pollen record probably does not give a true representation of the surroundings.

This Hibaldstow pond seems to be a largely natural feature in which are preserved the signs of the weeds from the vicinity. The relative lack of evidence of cornfield vegetation or straw is interesting, but perhaps this place was instead associated with cattle drinking, and the evidence of arable crops like grain and flax has come from some distance away.

References

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