

DISCOVERIES IN THE PEAT NEAR SHAPWICK STATION, SOMERSET

BY H. GODWIN, F.R.S.
Botany School, Cambridge

In 1906 a boat 20 ft. 7 ins. in length and cut from a single trunk of oak (monoxylous) was discovered in ditch cutting 309 feet southwards from the railway gates at Shapwick Station, Somerset and on the eastern side of the road (Fig. 1). A complete description was published at once by the late Dr. A. Bulleid in these *Proceedings* (1906).

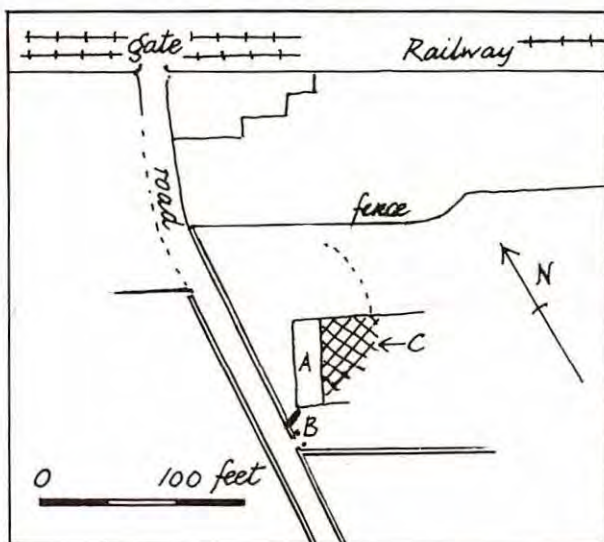


FIG. 1

Sketch map of site at Shapwick Station road crossing.

- A. Peat cuttings with stratigraphy described in text;
- B. Position of monoxylous boat excavated in 1906;
- C. Approximate area of consolidated brushwood.

Professor Clapham and I were able to conclude, as a result of investigations between 1935 and 1948, that the great complex of peat land in this part of the Somerset Levels was the drained and desiccated residue of a confluent series of natural raised bogs that formerly carried oligotrophic *Sphagnum-Calluna-Eriophorum* plant communities.¹ It was evident that such conditions prevailed at least from Neolithic until late Romano-British times and that they were, on the face of it, quite incompatible with the navigation of large boats over their surfaces. The recognition in the peat stratigraphy however of

¹ Oligotrophic communities are adapted to conditions of poor nutrition.

two horizons of *Cladium mariscus* peat indicated that for a short while the domed bogs were inundated by calcareous water from the surrounding hills, and there must have been fairly deep marginal channels of open water round and between the domed bogs. There was good evidence that both flooding episodes took place in the Early Iron Age and it was conjectured that the Shapwick boat must be referred to one, probably the earlier and more severe of these. Unfortunately it proved impossible at that time to shew whether a suitable peat sequence was present at the site of the boat discovery, but pollen analyses from material in crevices in the boat generally supported our reference of it to the Early Iron Age (Godwin, 1948).

With the advent of radiocarbon dating it was possible to establish the absolute age of the two flooding horizons beyond doubt, the earlier following immediately upon (and indeed commencing with) the construction of the Late Bronze Age wooden trackways that were dated broadly between 900 and 600 B.C. A sample of wood from the Shapwick boat itself, kindly sent to us by the Taunton Museum authorities, yielded a radiocarbon date of 345 B.C. \pm 120 (Q-357), in full confirmation of the period previously assigned to it (Dewar & Godwin, 1963).

In the beginning of 1964, with the opening up for peat cutting of the meadow abutting upon the ditch where the boat had been found 58 years earlier, it became possible to recover the evidence of stratigraphy hitherto lacking at the site. New cuttings had been made extensively, but unfortunately from the strip next the roadside ditch the upper peat had been wholly removed. None the less at a site that could well have been within 20 ft. of the prehistoric boat it was possible to make out the peat sequence shewn in Fig. 2.

What was immediately outstanding was the repetition here of the standard stratigraphy recorded for the rest of Shapwick Heath, viz., the surface of the old very humified *Sphagnum-Calluna-Eriophorum* peat overlaid by the substantial *Cladium* peat of the main flooding horizon, then peats formed in drier and more oligotrophic conditions, succeeded in turn by the slighter *Cladium* peat of the second flooding horizon. It was thus finally determined that the site of the boat did indeed provide evidence that the necessary conditions of open water had obtained at the time of its use.

The interest of the site proved however to be more extensive than this, partly in the nature of the peat types locally exposed, partly in new evidence of artefacts and partly in the recovery of unexpected animal remains. A somewhat unusual feature of the stratigraphy was the presence above the *Cladium* peat of the main flooding horizon of a substantial layer of brushwood including not only much prostrate timber but trunks of alder (*Alnus glutinosa*) rooted *in situ*. This strongly suggested that in the area some 50 ft. across where these were found, a small patch of fen woodland had developed. The *Cladium* peat itself contained abundant fruits and rhizomes of that

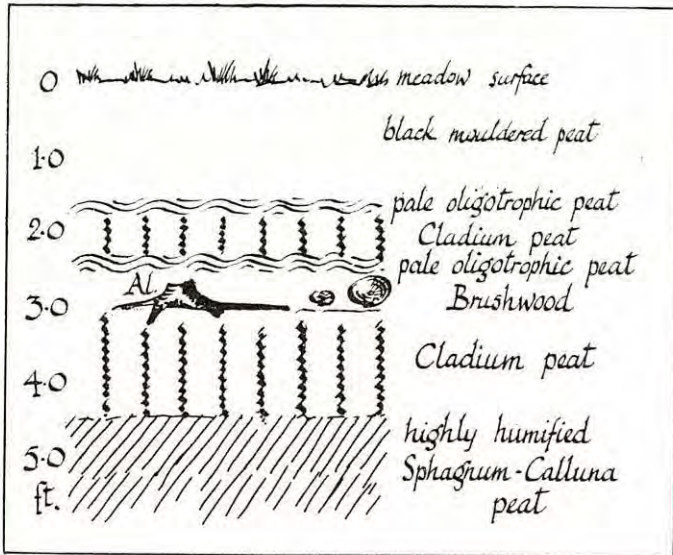


FIG. 2

Profile in peat cutting near Shapwick Station and adjacent to site of Early Iron Age monoxylous boat: the lower *Cladium* peat represents conditions suitable for navigation and the brushwood peat represents a light fenwood of about the same time. The lower highly humified *Sphagnum-Calluna* peat is of Late Bronze Age and represents totally different vegetation and hydrology.

genus, seeds of the bog-bean (*Menyanthes trifoliata*) and *Sphagnum* leaves and capsules. In one peat monolith taken to the laboratory for examination it was found that in the upper layers of the *Cladium mariscus* peat were leaves of bog myrtle (*Myrica gale*); this was followed by a layer with leaves of bog rosemary (*Andromeda polifolia*), stems of common reed (*Phragmites communis*) and increasing amounts of the moss *Scorpidium scorpioides* that grows fully submerged. The *Scorpidium* layer was replaced upwards by the papery rhizomes of *Scheuchzeria palustris*, a species no longer living in Somerset or indeed in southern Britain, and one highly typical of the open pools of raised bog. It was evident that between the upper and lower *Cladium* peat layers raised bog peat had reformed and specimens of the highly typical flora were recovered from these levels including *Calluna vulgaris*, *Erica tetralix*, *Andromeda polifolia*, *Oxycoccus palustris*, *Rhynchospora alba*, *Drosera intermedia*, *Eriophorum vaginatum* and various *Sphagna*. The situation had much in common with that exhibited in the upper peat at the site of the Westhay trackway exposed in 1944 some 650 yards to the ENE. (Clapham & Godwin, 1948).

Although some of the brushwood just above the *Cladium* layer was wood grown in place, the large cut turves gave evidence in several places of broken (not cut) sticks, up to 1 or 2 ins. diameter laid horizontally, usually in parallel bundles and sometimes one bundle transverse to others. The stems were identified as of alder (*Alnus*), willow (*Salix*), ash (*Fraxinus*), and *cf.* lime (*Tilia*). Subsequently Mr. Alexander sent a large piece of cut timber (*Fraxinus*) that had also been recovered from the wet *Cladium* peat.

At various places in the same area were found individual round pellets of soft grey clay, that had clearly been separately dropped or thrown. They appeared to be of clay such as was found lining the dug-out boat, and were probably sling pellets like those found by Bulleid in such numbers everywhere in the peat round the borders of the Glastonbury Lake Village.

It seems not unreasonable to conjecture that a small wooded islet in the *Cladium* swamp was strengthened artificially and served some temporary purpose for Iron Age man, with which the boat and sling shots were also associated. The steep angle of tilting in which the boat was found with the bow much higher at the NE. than the stern appeared difficult of explanation to Dr. Bulleid, but would be relatively simple to understand if the boat had been sunk moored on the south flank of this artificially elevated islet.

Lastly we may add that at two places we discovered in peat formed between the two flooding episodes, 'nests' of the droppings of the elk (*Alces alces*). A similar discovery had also been reported from the Fenlands of Huntingdonshire (Godwin, 1956) and there also the peat was referable to the Early Iron Age.

It was unfortunately not possible to excavate the site more fully but we are nevertheless very grateful to Messrs. Fisons Ltd. for permission to examine the site and especially to Mr. T. W. Alexander for so speedily informing us of the discoveries and taking us to view the area. We are also much indebted to Miss M. J. Burroughs for having made the various identifications of plant material.

REFERENCES

- Bulleid, A. (1906) "Prehistoric boat found at Shapwick, 1906". *Proc. Somerset Arch. Soc.*, **52**, 51.
- Clapham, A. R. and Godwin, H. (1948) "Studies of the Post-glacial History of British Vegetation. IX. Prehistoric trackways of the Somerset Levels". *Proc. R. S.*, **B. 233**, 249-274.
- Godwin, H. (1948) "Studies of the Post-glacial History of British Vegetation. X. Correlation between climate, forest composition, prehistoric agriculture and peat stratigraphy in Sub-Boreal and Sub-Atlantic peats of the Somerset Levels". *Proc. R. S.*, **B. 233**, 275-286.
- Godwin, H. (1956) *History of the British Flora* (Cambridge University Press).
- Dewar, H. S. L. and Godwin, H. (1963) "Archaeological discoveries in the raised bogs of the Somerset Levels, England". *P.P.S.*, **29**, 17-49.