Colchester Archaeological Group



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## ANNUAL BULLETIN VOL. 17 1974

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Please apply in writing to the Honorary Secretary at the following address:

Honorary Secretary Colchester Archaeological Group c/o 27 Alexandra Road Colchester Essex C03 3DF

## **GROUP NOTICES**

The following Social Activities have been arranged:

Saturday, 27 <sup>th</sup> April	Essex Congress Annual General Meeting, Methodist Church Hall. 10.30 for 11.00. Three Lectures will be given in the afternoon on "Colchester Past, Present & Future", beginning at 2.30 pm.
Monday, 6 <sup>th</sup> May	An evening outing at Cannock Mill, followed by a walk to Bourne Mill. Meet at Cannock Mill at 6.30 where cars may be parked.
Saturday, 8 <sup>th</sup> June	An all day excursion to Ickworth House, Little Saxham, Bury St. Edmunds and Framlingham. Please apply for tickets as soon as possible on the enclosed leaflet.
Monday 1 <sup>st</sup> July	An evening outing to Copford and Easthorpe. Meet at Maypole Green at 6.20 pm for departure at 6.30 pm sharp.
Monday, 15 <sup>th</sup> July	Cheese and Wine party at East Mersea Village Hall. We have been invited by Mr. & Mrs. Sunnucks to walk round their beautiful garden at East Mersea Hall. Tickets at the door 50p to include one glass of wine. The party begins at 8 pm.
Friday, Saturday, Sunday, 20, 21, 22 September	"Salt Weekend" at the University of Essex. Programme and Enrolment Form enclosed.
Monday, 30 <sup>th</sup> September	Holiday Slides Party at Ardleigh Church Hall at 8 pm Coffee and biscuits will be served
Monday, 14 <sup>th</sup> October	Annual General Meeting and the beginning of the Winter season of weekly lectures on Monday evenings.
Saturday, 16 <sup>th</sup> November	Essex Congress Symposium at the University of Essex 10.30 am for 11.00 am. Details later.

**EXCAVATIONS** - will continue on the Red Hill on Peldon Marsh by kind invitation of Mrs. K.A. Evans. The site is near the Peldon Rose. For details contact Mrs. K. de Brisay.

Other digs are to be arranged and for details of these please contact Mr. P.R. Holbert.

## COLCHESTER ARCHAEOLOGICAL GROUP SALT WEEKEND. 20, 21, 22, SEPTEMBER 1974

Several years of field and marsh walking lead to the recording of several Red Hill sites in Essex, some of which were first noted by Mr. Francis Reader. The many pieces of briquetage picked up during this time eventually culminated in excavation. In 1971 and 1972 at Osea Road, near Maldon, Essex.[C.A.G. VOLS. 15 and 16] and in 1973 a new dig was begun, and is still proceeding, at a site on the marshes in Peldon, Essex.[C.A.G. VOL. 17]

In the course of these activities various contacts were made with people who had investigated similar sites in this country and overseas. So rewarding were these that is was decided to bring together as man y `Salt People" as possible to meet each other fur the exchange of ideas and general discussion. So the "Salt Weekend "at Essex University, Wivenhoe Park, Colchester, was arranged.

As will be seen, from the programme we have been fortunate in persuading archaeologists from a wide horizon to give papers and to show slides of their sites. Each paper will be 0,f30 minutes duration followed bi, 15 minutes for questions. Many aspects of this important industry will be covered and we think there will be something to interest everybody and all are welcome.

In addition there will be displays by private individuals and museums in addition to those brought by the speakers. Full residential facilities will be provided by the University and this will afford opportunities for people to meet each other informally and we hope the Weekend will prove both interesting and enjoyable.

When it is all over the papers, with questions and answers, illustrations to take the place of the slides, a bibliography, notes on the displays and any other relevant details will be published in book form. We hope this will prove a useful book of reference in the future.

The book may be purchased at the Conference at a reduced rate prior to publication.

Any enquiries may be addressed to the Conference Secretary:

Mrs. K. de Brisay, Corner Cottage, Layer de la Ha ye, COLCHESTER CO2 OLE. Telephone:- Layer de la Haye 274.

## A BELGIC PIT AT ARDLEIGH

by F.H. Erith, F.S.A. & P.R. Holbert

In 1957, as a result of deep ploughing in field O.S. 675 there were found concentration: of Belgic pottery. Some ten other sites contained Roman pottery.

A paper of the Belgic pottery was prepared by the then Curator of the Colchester & Essex Museum (Mr M.R. Hull, M.A., F.S.A.) and submitted to the Essex Archaeological Society for publication in its Transactions, but regrettably it was not published.

The field was kept under observation however, and during the summer drought of June 1959, Cmdr. R.H. Farrands flew over this region and photographed several cropmarks.

In July of the same year, he made a second flight and published the results of both in the Bulletin. (C.A.G. <u>VOLIII No. L March 1960).</u> The map he produced then is reproduced now below.

The map shows cropmarks both north and south of the B.1029 road. South of the road in field 667 were cropmarks of six rings or circles which investigation has shown were Bronze Age ring-ditches.

The cropmarks to the north of the road in O.S. 675 were in the form of lines or tracks, and dots. The former represent filled-in ditches and the dots, filled-in pits.

It is one of these pits, marked 'X' on fig. 1, with which the following report is concerned.

In 1972, Mr Erith decided to dig a trial trench into this pit, situated close to the Elm Park boundary (Ref. TM.057287) See also fig. 2 below (Hatched area).

This investigation produced a large number of Roman sherds down to a gravel level at about 3 feet which at first appeared to be the bottom of the pit, but upon further digging, this proved to be an intrusion, when further pottery levels were revealed.

This obviously earlier pottery proved to be of Native origin and was associated with levels of heavy burning.

It was with the aim of obtaining the remainder of these very interesting finds that in 1973 members of the Colchester Archaeological Group completed the excavation of the pit.

## SUMMARY

A roughly circular pit, dug into the natural gravel levels of the area, some 18 feet in diameter and 7 feet at its deepest point, steep sided except to the north, where the slope was much more gradual, perhaps designed for easy entry. Original purpose unknown, but obviously used for rubbish disposal. A section marked A/A on the Plan, fig. 2, shows the various levels of the pit and fig. 3, shows the section, on which the levels are marked alphabetically. The ditch marked B/B on the plan fig. 2 is shown in section in fig. 4. P.R.H.



Fig. 1



Fig. 3



Fig 4

## THE POTTERY,

There were three main concentrations of pottery in this pit. The upper layers contained grey pottery in "Camulodunum" forms, noticeably Forms 108, 246, 266 and 218. Parts of several flagons and jugs were also in these top layers. Only four fragments of Saurian pottery were found and these were too small and nondescript for their forms to be identified. The lowest layers contained Belgic pottery only, often in largish fragments so that complete sections could be drawn. A third concentration around Layer H and I contained both Belgic and Roman pottery, suggesting the overlap of the two cultures which one would expect at the time of the Conquest at 43 A.D: and for a few years after. Frequently sherds from the same pot were found in different layers, and stratification cannot be defined in more detail than from these three main levels.

The most noteworthy pottery is the three "strainer bowls" in the Belgic levels which differ from Roman "strainer bowls" because here the rims turn inwards horizontally, this part having a moulding as decoration. Two of these strainer-bowls (Nos. 21 and 22) are nearly identical, with the straining perforations made by puncturing the bowl wall, after which a spout with a square base was added. In both cases the spout was missing, although a spout of similar texture was found near this spot in 1957 when Belgic pottery came up to the surface by deep-ploughing.

The third "strainer-bowl" was differently made, as a spout had been manufactured directly out of the side of the bowl. A strainer was made from a flat piece of clay 6 in. by 4 in. which was applied to the bowl internally so as to block off an arc of the circular bowl where the spout was situated. This was then punctuated with a needle to make 12 rows of perforations. The needle went on to prick the bowl wall and rows of prickings could be seen there before the bowl was restored. The side of this bowl was also extended by an internal upward flanged rim with a moulded decoration. Layer J-M. Fragments of such a vessel were evidently found at Camulodunum but not enough for a complete drawing to be made. See Cam. fig. 50 No. 8.

Drawings of some of the pottery and the small finds appear on the following pages. F.H.E.



- Carinated bowl with shoulder bulge between two prominent cordons. Dark grey. Thick soapy ware. Cam 298 Ab.
- 2. Bowl with latticing on shoulder bulge. Dark grey. Cam 218.
- 3. Bowl with shoulder bulge between two cordons of rounded profile. Grey-black. Cam 218.
- 4. Bowl with shoulder bulge between two cordons of angular profile. Grey-black. Cam 218 Aa 1. Layer "I".
- 5. Carinated and cordoned pot in mauve-brown ware. Cam 216.
- 6. As above. Cam 212 or 218.
- 7. Black ware. Shoulder bulge without the extra

cordon. Cam 220 a.

- 8. Vessel in brown-yellow ware with out-turned flange and in-turned rim. Layer I to K.
- 9. Ovoid cooking-pot with bead-rim and rilled body. Orange-brown. Cam 260 B. Layer M.
- 10. Ovoid pot in thin black ware, polished. Internal surface much pitted by flaking. Base might be deeper. Cam 92 ?
- 11. Cooking pot in pale brown ware. Cam 221 or 264.
- 12. Black cooking pot, rilled on body, but rilling not so regular as No. 9. Cam 260 B. Layer G.
- 13. Black cooking pot. Cam 221.
- 14. Cooking pot in brown ware.



## Terra Nigra Pottery

- Platter of hard, shiny black ware. Cam form 13, and see Cam Fig. 47 No. 1.
- 16. Platter, matt black. Cam P1 XLIX No. 14.
- 17. Native imitation, in fine hard shiny black ware, of a Gallo-Belgic girthbeaker, such as Cam 85 and Cam Fig. 50 No. 2. Slight latticing. Layer M.
- Pouring lip of a similar beaker of the same ware. Found with No. 17. Layer M.
- 19. Butt beaker in black ware. Very thin, with interior coating eroded with small pits, like the measles, similar to No. 10. Upper half divided by three cordons. Lower half has four extra shiny bands. Cam 103?
- Cheese Press. Coarse salmon-buff ware. Cheese presses are common at Ardleigh-a fine large one in pink core and black coat was found in Elm Park (about 50 yards away) in 1964. (C.A.G. VIII 1965, page 21, No. 23.) Form Cam 199.

#### Strainer bowls

Three bowls were found with perforations for straining liquids. Two were almost identical, and both had their spouts missing. An area about 2 inches square in the wall of the vessels was slightly pushed in and perforated with 6 rows of small holes, after which the spout was added. The walls of these two vessels were capped with an internal rim, which terminated in a raised platform with three concentric grooves.

- 21. In blue-black ware, the surface much eroded with pitting. Base over a foot-rim. Layers J-M.
- 22. In well-made shiny dark grey black. Groove at base instead of a foot-rim.
- 23. A more sophisticated version of strainer-bowl in shiny dark-grey.

#### **Pedestal Vessels**

In "Excavations at Ardleigh 1956" by Mr Hull (unpublished) there are illustrations of six pedestalled vessels from domestic sites in this same field by Elm Park. In this 1972-3 excavation there are two pedestalled pots, fairly complete in section, as well as two sherds of pedestalled feet only (not illustrated).

- 24. Red core, with very fine green-grey coating, the interior coat is mostly eroded away to reveal the central red core. This vessel may be taller than drawn. Cam 204a. Pl. LXXIV and page 257. Layer L.
- 25. Two very large fragments which overlap but do not fit. Orange Brown Ware.



## **Storage Jars**

These large, thick vessels of redbrown ware appeared in all layers, and even in the Roman levels the ware was "native" rather than grey. Many sherds were faced with "grass marked" groovings, but few fitted.

- 26. Large pink-red sherd with curve of 15in diam. Light furrowings at one end of the outer surface, and batches of regular curved grooves at the other. Intentional horizontal grooves on interior surface, presumably for measuring.
- 27. Large sherd of strong pink ware. Faint "billowing" grass markings, which probably continued downwards in straight lines. See Cain 270 A.
- 28. Large pink jar with rim polished black. A series of shallow impressions in lieu of a cordoned shoulder. Layer H.
- 29. Rim Section. Dark grey exterior, red interior. Light grey core. Diam 19in. 30. Outturned rim. Black 9in diameter.
- 31. Black rim, red neck. Diam 16in:

- 32. Black rim, red neck. Diam 12in.
- 33. Dark brown. Cordon with angled section. Imitation "maggot" impressions on neck.
- 34. Red fabric. Cordon with angled section. Row of oval impressions below cordon.

## 35. Hanging Bowl

Rough-surfaced grey ware. Cordon at waist pierced with circular stabs, possibly made with strong straw-stalk. Two opposite lugs only. Towards the bottom the bowl gets very thin, and there is no indication of any formal flat base. The strength of this vessel is round the rim, so presumably it was used as a hanging bowl. No sign of burning towards the base. Layer "I".

36. Mortarium, with pronounced overhanging rim, but minimal flange. Cam 195 A, and Fig. 53 No. 33.

## **Butt beakers**

- 37. In hard grey ware. Two layers of rouletting between three cordons. Hollow in rim for a lid. Cam 119, post conquest. Layer H.
- 38. Dark blue-grey ware. Series of rouletting between rather weak cordons. Hollow in rim to take a lid. Cam 1 15. Layer G.



(Scale: life-sized and not reduced)

- 1. Sherd of dull rose-red, lightly impressed with rows of "mouse-foot" stabbings. Diam about 6in. Layer "I".
- 2. Sherd of cream ware, originally coated pink or red. Diam 10 inches. Wavy-line incised decoration above cordon. Below cordon: decorated with groups of incised vertical lines which are broken up with deeper horizontal grooves. Layer H.
- 3. Pedestal base in pale pink with darker coat. Imitation of some obscure samian form. Layer H.
- 4. Sherd from a globular or baggy pot. Cream core and interior surface. Exterior surface olive-brown, stabbed with two belts of rouletting. Layer G.

## SMALL FINDS









#### **Object of IRON**

(a) Adze Extremely corroded and rough surfaced. See No. 2 Fig. 3 Layer `P. Compare with Hod Hill Fig. 12. G2. Type does not occur at Camulodunum, but common at Glastonbury. (Antiquities from Hod Hill in the Durden Collection, by J. W. Brailsford.) Illustrated half-size.

#### **Objects of BRONZE**

- (b) Nail-cleaner-part of a toilet set of tweezers, ear-scoop and nail cleaner. In mint condition except that the holding ringle had worn through. A complete set was found in Elm Park nearby, in 1957 with a fragment of Form 37 Samian attributed to the potter SECUNDINUS (A.D. c.110) but this nail cleaner at Vinces was in a Belgic Layer J. (C.A.G. VIII, p. 2.) Illustrated full size.
- (c) Terret or Harness-brass Compare with Cam. P1. XCIX No. 2. Find No. 2. Fig. 3. Page 6. Layer H. Illustrated full size.
- (d) Small Brooch-Camulodunum Type LV, Pl. XCI No.
  36. Wavy line ornament on bow. Spring has eight coils. Find No. 1. Fig. 3. Page 6. Layer G. Illustrated full size.





Bronze does not normally survive in good condition in the Ardleigh gravel soil, but the above three objects were in very good condition, probably owing to their being in wet clay. F.H.E.

## CONCLUSIONS

The considerable effort involved in digging a pit of this size would surely preclude its use merely as a means of rubbish disposal.

What then, was its purpose?

Was it in fact a form of habitation or sunken hearth. The layers of heavy burning at the bottom contained pottery associated with small masses of tiny rib bones, perhaps of some rodent-like animal.

Unfortunately the bones proved too fragile to submit for identification and crumbled immediately upon removal.

These bones together with the pots could well be the remains of meals, cooked and consumed on the spot.

Another probability is that it may have been a water hole, abandoned when it became foul.

#### THE DITCH

While excavation was in progress on the pit, a section was cut across the ditch that ran on a line east-west nearby to the south east of the pit. (See Fig. 1, plan Fig. 2 and section Fig. 4.)

A large amount of tight-packed Roman pottery was found in this ditch to a depth of 6 feet. The ditch appeared to have been partially filled back after a short period and no earlier pottery or small finds were found in the lower levels. P.R.H.

## THE WITHAM LANGHAM GAS PIPE-LINE

Ida McMaster, A.J. Fawn B.Sc., & P.R. Holbert.

During the summer of 1973 the Gas Board laid a pipe-line across North Essex from Witham to Langham and thus gave the Group an opportunity for some unusual fieldwork. The chance of examining an area of farmland stripped of top-soil, twenty miles long, and forty feet wide, does not often occur and, as a bonus, the contractors kindly provided a trench four feet wide with an average depth of seven feet throughout the length so that some of the surface features could be examined in section.

Mr. Tony Bonner drew the Group's attention to this ready-made excavation and, with the kind permission of Mr. Webb of the Gas Board, and the co-operation of the contractors, members were able to follow the trenching machinery and examine each section of line twice, one for the stripped surface and once for the trench.



Since the surface was considerably disturbed by the machinery, it is most unlikely that all the archaeological features in the strip were located. Nevertheless five sites were found, not counting the obvious one of Pitchbury

Ramparts which was excavated by Mr. Phillip Crummy for the Colchester Excavation Committee prior to the laying of the section of line concerned.

The five sites are shown on the map above.

## Site 1. Langley Green, near Coggeshall. (TL. 878218)

A crushed Roman cooking pot, c. 120-250 AD, was found embedded in the stripped surface about 14 ins below present ground level. It was made of hard grey material and the base showed signs of much wear internally. See below.







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	CEN	JTIN	ET	RES	_

About ten feet away was a shallow gully in the stripped surface containing dark soil with a quantity of pottery. Fig. 1 on page 24 shows a small thin-walled beaker, probably of mid first century date. The surface was light brown, unglazed, paste grey with some very small grits. The rim was not found but the base had a faint foot-ring on the outer edge.

Fig 2 above shows the rim of a larger vessel of Early Iron Age date. The body was of dark grey paste, heavily gritted, with a hard smooth surface. There were also many body sherds, varying in colour from black to red, also heavily gritted.

The course of the gully was traced for about twenty feet as an arc of a circle perhaps twenty-five feet in diameter, although the investigation was not extensive enough to determine whether it was in fact part of a circle.

Two small holes with dark infill were found in the gully but they were too shallow to identify as the bottom of post-holes.

When the pipe trench was dug later, the section showed that there were many ditches in the field in which the site was located, running more or less at right angles to the pipe trench. Judging by an old aerial photograph most of these were not archaeological features but one did contain small fragments of pottery and carbonised material.

One hundred feet south-west of the gully, the trench section revealed a small pit about three feet in diameter and one and a half feet in depth. The dark humus infill contained more of the gritted pottery and also particles of bronze which were too fragmented to be identified.

#### Site 2. King's Farm, West Bergholt. (TL. 942279)

The trench section showed a deposit of small stones between two small but distinct ditch outlines. Unfortunately the trench had collapsed at this point so that the section was spoilt and no further identification was possible. However the site lies on a ridge between two water-courses and if it is a road it may be the continuation of the Roman road (to Cambridge ?) seen near King Cole's Kitchen and Iron Latch Lane, Stanway.

#### Sites 3 and 4. Near Great Horkesley Road A 134. (TL. 977303 & TL. 978303)

Site 3, about three hundred yards to the west of the road, was a pit in the trench section, two feet in diameter and one foot in depth. The infill contained some Medieval pottery and signs of burning.

Site 4, immediately to the east of the road was an area of the order of thirty feet square where the stripped surface and the adjacent spoil heap displayed a very large quantity of Medieval pottery dating from about 1300 A.D. It is possible that a magnetometer survey would reveal a kiln.

Other records of similar period pottery found on these two sites in 1932 and 1956 appear on Castle Museum maps.

#### Site 5. Near Langham Hall. (TL. 029923)

The pipe-line runs through a small attractive valley parallel to Black Brook at this point and a very deep pit containing Medieval brick debris was seen in the trench section, a possible-indication of a kiln nearby.

#### General

Photographs of the more outstanding features were taken on the ground. Others were taken of some of the sites from the air but these were not informative as 1973 was a poor year for cropmarks.

## THE EXCAVATION OF A RED HILL AT PELDON, Essex REPORT ON THE FIRST YEAR

by Kay de Brisay, F.S.A.

The site is situated mainly in the tidal saltings which lie to the north of the Ray Channel, Ray island and eventually the Strood Channel which separates Mersea Island from the mainland (see map below). The Hill was first discovered when red earth was observed in the sides of the drainage ditch at the southern end of Field No. 378. At the north-west corner of this field stands "Saltings", the home of Mrs K. A. Evans, to whom this field belongs. The excavation could not have taken place without Mrs Evans. It was she who reported the site in the first place and invited us to excavate it. During the season she has afforded us every hospitality including a summer chalet in the garden as a site hut; the loan of a variety of equipment and herself as an energetic, tireless and consistent digger.



#### PREPARATION OF THE SITE

As mentioned above, the site was first recognised by the red earth in the sides of the drainage ditch on the landwards, northerly side of the sea wall, both of which cut across the Hill. The original plan was to put down a line of six 5 metre squares in an east-west direction to the north of the ditch. There is an irregular piece of rough land here, separated from the field by a narrow drainage ditch. This was cleared of brush, rough grass and top soil by a J.C.B. on 23rd February 1973. Early preparation was necessary in order that the machine could reach the site without endangering the winter wheat in the field.

#### MARKING OUT

The Bench Mark giving 22.58 feet above mean sea level at Newlyn is on the wall of "Rose Cottage" (see map above) situated on the opposite side of the road from "Saltings". Taking this as 6.882 metres the A1 peg on the site

is 3.600 metres lower, that is 3.287 metres. O/S Ref: TM 004157. It is interesting to recall that the level of the Al Corner Peg at Osea Road was 3.400 metres; only 0.1 13 metres higher than the Peldon site. Six five metre squares were marked out as planned (See Site Plan I below).



## THE EXCAVATION

Digging began on 22nd July. A trial trench in square AB 1/2 revealed original marsh clay at a depth of just over one metre with no Red Hill material above this.

In two further trial trenches at AB 3/4 only a thin layer of red earth was found and it was clear that only the outer perimeter of the Hill had reached this area. Accordingly the saltings on the other side of the sea wall were investigated more closely and intensive red hill material was found in the overhanging banks of the tidal basins we have called Ray Basin and Strood Basin. (See Site Plan 1 above.) It was also observed that in a few places there were isolated hummocks on all of which grew long, tough grass entirely different form the general vegetation and one such lies just south of the centre of the trench which was to be our main excavation (See Site Plan 2 below). Clearly the main part of the Hill was on the marsh and, fully aware of the difficulties involved, we marked out and levelled on to posts 'P' and 'V' an area within which it seemed the main workings might be found. Posts 'R', 'S', 'T', 'X', 'Y' and 'Z' were set up at measured points and a plan made of the whole.

Subsequently an auger was used to determine as accurately as possible the perimeter of the Hill and this is marked on the plan in red. These, together with the main trench and trial trenches are shown on Site Plan 1 above. This somewhat hazardous operation concluded we were able to begin the removal of the marsh surface, or that termed top-soil on a normal excavation, and we began at the northern end of the main trench. Once the marsh plants had been removed the top 30cm came away from the red earth beneath cleanly and easily. Parts of the southern end of the trench showed an intensive scatter of briquetage but in the centre, between Ray Basin and Strood Basin, what appeared to be clay walls soon became apparent and these were, in fact, immediately below the marsh surface material. These were carefully investigated and were found to be clay lined evaporation tanks similar to those at Osea Road. Before pursuing this operation to a lower level, the trench was enlarged at the west side of the centre in order to follow the clay at a contemporary level and also to facilitate working which was already



becoming difficult due to water standing on parts of the site where there was clay. At this point, we should perhaps point out that comparison is made throughout to the site at Osea Road and the Reports on this are included in **C.A.G. Bulletin Vol. 15 (1972)** and **16 (1973)**.

#### **PROBLEMS OF THE SITE**

These were mainly caused by water. It was only in the upper levels of the excavation and during the neap tides could anything approaching normal trowelling be achieved. As soon as any depth was reached, the water came in on all tides and at the Springs, the whole site was under water. This meant that all features were covered with a layer of muddy silt by the next tide so that it was virtually impossible at any time to obtain a completely clean picture of the site. Even when tanks A and B had been delineated, the surrounding area was a confused mass of wet clay and great care had to be taken not to destroy other features which might be under the water. Clearly the sea could not be kept out and so it was necessary to provide efficient drainage channels so that as much water as possible could be got away as quickly as the fall allowed. Even then the remaining clay surfaces were exceedingly soft and wet and long handled hoes were often more useful than trowels.

#### WORKING AREAS & HEARTHS

During the process of the initial cleaning of the site after the removal of the marsh surface several patches of what appeared to be working floor were found. These were of a similar material to those found at Osea Road; that is to say, puddled clay which had apparently been burnt in situ. Further examination showed that many of these were in the form of low walls with a thickness of approximately 15-20cm. One of these, at the highest level, had a large, rough fire-bar in conjunction with it and another had a long smooth unbroken face at one side some 50/60cm in length. Other such walls were found at different levels and all had signs of intensive burning close to them. Many sherds appeared to be the fired facing which had broken away from the actual structure of the wall. The latter are discussed in detail below.



#### THE EVAPORATION TANKS

The confused mass of clay in the centre of the trench was eventually sorted out. Clearly there had been much collapse and rebuilding before the site had finally been abandoned but two main tanks finally emerged and are

marked A and B on Site Plan 2. See also sections above. These were of the usual construction, firmly puddled clay and unfired, similar to those at Osea Road. Tank B was slightly deeper than A and, unlike Osea Road, the partition between the tanks was lower than the surrounding wall. The walls showed signs of repair, particularly on the east side where a substantial reinforcement had been added. At the southern end of Tank B an opening in the clay wall provided an outfall to Tank C. This tank, if such it was, was much smaller and more irregular and at a lower level than Tank B. Tank C also had an opening at the southern end. Tank D did not appear to have any connection with A, B or C, but it was at a lower level than Tank C and appeared to run under the baulk into the Ray Basin. In the process of clearing and delineating this area two large lumps of solid dirty clay were found; one on the northwest corner of Tank C and one where Tank B runs into Tank C. These two clay masses appeared to have its functional purpose and were first encountered at the highest level.

A level clay floor, puddled and unfired, ran along the west side of the two large evaporation tanks at midlevel; the north end of this floor sloped up into a Small circular clay basin from which a saddle-like feature, also of clay and at the top level, sloped down again to the east. To the west, the central part of this clay floor seemed to run under the high hearth wall feature but to merge with those of the mid level to the north.

#### THE PEDESTALS

These were conspicuous by their absence and none was found. Initially this caused some concern but it was soon realised that this site, though similar in some respects to Osea Road, was in the main quite different.

## THE FIRE-BARS

In the second Report on Osea Road some attempt was made to separate the fire-bar types into different Phases. So far all the fire-bars found at Peldon appear to be of Phase III; that is with a pointed centre section. But some are of a very rough construction with a heavy admixture of organic matter; this we will sub-divide into Group C. Group B is similar but is of finer construction and the material is denser with a hard smooth surface. Both Groups C and D have a thickness varying from 2.8-1.8cm. A few pieces of a much finer variation of this Phase III fire-bar with a thickness of only 1.7- 1.8cm were found in the lower levels. The points of all these Groups vary from square to rectangular or pointed. The number of pieces of fire-bar found at Peldon during this first year were as follows:

Type III- Group A- 6 Group B - 9 Group C- 11 (See below)





In the light of this year's excavation at Peldon it is possible to make a closer assessment of the relative date of the fire-bars. Those illustrated in **C.A.G. Bulletin Vol. 16.** p.33 could not be satisfactorily dated at Osea Road due to the extremely confused nature of the site. However the fire-bar termed Phase II was actually found in the lower levels of the transverse trench; and the Phase III Group A fire-bar found at Peldon and described above also came from a lower level; in addition the Phase III Group C from Peldon (see above) was found in association with the hearths to the west of Tanks A & B at the highest level. We have already assumed that the Peldon site levels are

more static than the Osea Road Hill, so that it could also be assumed that Phases I and II at Osea Road and the Phase III Group C at Peldon have the later date. In this case the original assessment at Osea Road should be reversed. If this is so, we have fallen into the erroneous assumption that the similar artifacts of a continuing industry improve at time goes by, when in fact they become more decadent. The pottery finds would seem to corroborate this; the Osea Road site yielded a large number of Romano-British and early Roman pottery whereas the first year at Peldon has produced Belgic finds only and no Roman pottery has yet been found.

## **BRIQUETAGE RIMS**

A large number of heavy briquetage rims were found, some curved and some straight. At first it was thought that all these belonged to salt-drying vessels. But, as work went on, it became clear that the straight rims belonged to something other than circular vessels. These were almost always found in association with fire-bars and patches of intense burning. Furthermore, low walls of clay baked in situ were found, as has been mentioned above, and gradually the concept of hearth walls for use in the drying of the brine emerged - born out by the complete absence of pedestals.



## POSSIBLE HEARTH WALLS

## HEARTH WALLS

One of the aforesaid clay walls was examined more closely in situ. The exposed face was of baked smooth clay and this came away in one piece quite easily from the wall behind. The slab so obtained was not baked to the extreme hardness of the fragments mentioned above but had nearly reached that stage; and although it had no rim several pieces of hearth wall with smooth flat rims were found in close association. When all these pieces had been removed, a level floor of white vitrified clay was found beside the wall. There was not time this year to excavate this feature more fully and it would not have been expedient to do so without also excavating the other hearth walls nearby. Therefore in view of the open nature of the site and the constant action of sea water and weather, it was covered over and left for examination at leisure next summer. However, a detailed study of the pieces of hearth wall recovered so far, of which there are 30 in all, was made and the conclusions are set out below.

In the case of most of these so-called hearth walls only the smooth wide rims remain but there were fourteen large pieces of the hard red material with rims. In some cases there was a straight incised line along the smooth face just below the rim (See Fig I above). This particular example also shows what appears to be impressions of fire-bars on the rim and indistinct marks of a similar nature appear on some of the others. Several of these large pieces show regular vertical grooving on the smooth face which could have been made with the fingers. Two of these rims have sharp indentations which look more like the marks made by sticks than finger-tips. Fig. 4. below. Two specimens have finished edges on two adjacent sides forming a rough right angle and it is possible that these could have come from the termination of the hearth wall perhaps at the entrance (See fig 2 above). A further point which might support the hearth wall theory is that the briquetage fragments under discussion have a smooth face on one side whilst the reverse is rough and raw-looking as if they were originally part of the wall with the smooth face of the inner side. Some have marks of burning and some green glazing. The theory outlined above cannot be taken as correct until further excavation next year enables us to uncover more of the so-called hearths and to follow what are thought to be hearth walls to a greater depth.

#### THE SALT-DRYING VESSELS

There appears to be two types of salt-drying vessels; large, circular, open pans with a diameter of from 54 - 46 cm and trough shaped vessels. A rim of the first type was beautifully decorated with very precise fingertipping (Fig. 1 below)., another showed the impression of minute regular lines as if some material had come into contact with it when it was wet. A third rim had a flange on the inner side which could have been used to support a lid and the outside of the rim had been squeezed to make a rudimentary lug handle. Another, much larger, rim had big indentations as if made by the ball of the thumb. (See figs 3 & 5 below). The second type of drying vessel of which only part of the end and a small piece of the side was recovered is, almost certainly, of a trough shape, similar to sherds found at Coopers Beach, East Mersea, and at Canvey Island. See below. As we have pointed out above, the excavation under discussion is in an early stage and, no doubt, more examples of these salt-drying vessels will be found as the excavation is extended and deepened.

## THE LIDS

A few sherds of these strange objects were found and one is illustrated below, Fig 3. The centre seems to be thick with a raised band round the outer edge beyond which it tapers sharply. Another sherd of what may be a lid is shown below Fig. 2., the edge of which is folded in on itself from both sides making a central groove.

Also illustrated below Fig. 2 is a piece of rim with faint rouletting; one end is cut and smoothed and below is a circular hole which has also been smoothed as if for a spout.

#### THE POTTERY

Very little pottery was found. The finest vessel, which was recovered from the upper levels except for one large sherd which was found in Tank B, is illustrated below.

A Belgic pedestal beaker or possibly a pedestal urn of Cunobelin type. The diameter of the body at its widest point is 21'h cm. Two separate double cordons at the shoulder and four separate burnished bands below. The material is black and hard with the characteristic soapy feel and with a marked tendency for flaking. Unfortunately the base was not recovered. In addition there were seven unidentifiable sherds of black Belgic pottery. In the marsh clay, just above the red hill material and unstratified, were some sherds of red ware and some coloured slip ware which are probably Medieval.



#### CHARCOAL

The extreme wetness of the site made it very difficult to recover pieces of carbonised wood. Several very large pieces were saved and there was a general scatter throughout the site. This was particularly marked in the vicinity of the various hearths and on some of the clay slopes near the evaporating tanks.

#### CONCLUSIONS

This report covers only the first four months of the excavation of this very complicated site but, even so, it would seem that some picture of the salt making industry which was carried on here during the first century B.C. is beginning to emerge.

It is unfortunate that more of the site could not be uncovered but, as was explained above, the incidence of the tides was an important factor and operations had always to be governed by this. Out of every twelve hours the site was inaccessible for three hours at some time or other. Digging conditions were such that only dedicated workers took part on a regular basis and the large amount of wet sticky clay to be shifted presented a heavy and

formidable task. There was always the simple problem of where to put one's feet without damaging features still under water or wet clay.



## FRAGMENT OF TROUGH-END & SIDE

Site Plan 2 above goes some way to show the different levels. It is difficult to assess how much erosion has taken place since the site was abandoned. Although there is only 30 cm of modern marsh on top of the red hill material today, the site itself does seem to be very well knit and static probably due to the preponderance of clay. But the fact remains that the Hill also shows in our auger examination of the mud at the bottom of the Ray and Strood Basins. Perhaps these were once the creeks from which the sea water was extracted to fill the evaporating tanks. There may even have been a man made gully with a system of sluices to regulate the flow of tidal water. It certainly seems possible that some form of sluice was used between Tanks B and C and at the outfall of C. Today the sea just floods gently through the rills and channels and there is no wave action. If the same conditions prevailed when the site was in use the control of the water would have presented no problems and as the land was then some 50 - 60 cm higher than today the sea would cover the site completely only at rare intervals.



It seems certain that there are many operational levels on this site and an attempt will be made next year to ascertain the full depth of red hill material above the original marsh clay. Probably new brine drying hearths were made at the beginning of each session on top of those of the year before.

It is possible that these brine drying hearths took the form of two parallel clay walls some 30 cm apart. The fire-bars would be placed across these, fairly close together and the wide shallow pans containing brine placed on top. It has been found that only gentle heat is required to crystallise the brine. The troughs could have been used in a similar way but it might have been necessary to use some form of hand-brick such as fig. above to stabilize them. Lids, such as those shown in figs 2 and 3 above could have been used to keep out the rain.

There seems to have been a much more sophisticated attention to detail in the making of artifacts here than at Osea Road; also there seems to have been a very intricate system of clay lined channels, sluices and sloping faces of clay between them which are not yet fully understood.

Such sophistication seems to suggest an earlier date than Osea Road and a site in this isolated situation may well have escaped Roman suzerainty though it may have continued working after the turn of the century. One cannot help but speculate about the people who worked this site and the ten others in close proximity. It is possible that itinerant labourers from an inland habitation area spent the summer months salt working. On the



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other hand perhaps a local chieftain owned one or more salt-making sites which were worked by his clan and each clan had its own method of working and artifacts.

The salt industry must have been a considerable asset to the community who owned it for trading with inland peoples by sale or by barter. It is unlikely that these salters lived on the marsh, even in Iron Age times it would have been damp and uncomfortable therefore one must envisage a settlement site on higher land nearby. Aerial photographs did show such a site near Osea Road, now destroyed by gravel workings, but nothing is known of a settlement in the Peldon area. Clearly more aerial survey is required.

Be that as it may, there remain many practical problems to be tackled on the Peldon excavation in 1974 and it is hoped that, with pre-cognition of the peculiar difficulties of the site, we may be able to make better use of our time.

#### ACKNOWLEDGEMENTS

In addition to Mrs. Evans our grateful thanks are due to our hard working diggers who refused to be put off by the unnatural conditions and for the many ingenious devices created to surmount these. We look forward to welcoming them back next year. We should also like to thank the many visitors who found their way to this isolated spot; their interest and encouragement were much appreciated.

# REPORT ON THE RADIOCARBON DATING OF THE RED HILL, OSEA ROAD, MALDON. ESSEX.

#### V. R. SWITSUR. M.A., Ph.D.,

University of Cambridge Radiocarbon Dating Research Laboratory.

The sample selected for dating by the radiocarbon content was a piece of carbonised wood weighing about 15 grams and representing the remains of a small branch. The difficulties in dating this material arise mainly through the possibilities of contamination with carbonaceous substances which are not contemporary with the original growth. Because of the highly porous nature of the carbonised wood there exists the probability of adsorption of substances carried in solution or colloidal suspension down through the overlying deposit. These substances might include humic or fulvic acids from decaying vegetable matter, of any age, in the vicinity which may be moved by ground water; or soluble residues from the excreta of animals grazing on the salt marsh above. Since the deposits are permeated with rabbit warrens or similar tunnels contamination from this source, continually washed down by successive rain showers, seems quite probable. More obvious contamination from downward growing rootlets of various younger ages or from material of calcareous origin such as shells or limestone rocks should not be ruled out.

In order to obtain an accurate date all these contaminants must be removed completely in the preliminary physical and chemical pretreatment of the sample prior to dating. Only the original carbon in the material will yield the correct date: this simple fact is so very often overlooked by Archaeologists bringing specimens to the dating laboratory. Fortunately, carbonised wood is a reasonably stable material and will withstand fairly vigorous chemical reagents in this cleansing operation. Thus the sample, after being pulverised, was treated with boiling hydrochloric acid to decompose any residual limestone and washed several times with boiling distilled water. The organic acid contaminants were removed by repeated treatment with hot solutions of sodium hydroxide and sodium pyrophosphate for three days. This latter, rather vigorous action removed much material as very dark brown solutions which cleared up only after many applications of the reagent. Finally the residual sample was washed several more times with boiling distilled water before being dried overnight at 105 °C.

Now that the specimen had been purified the dating procedure was commenced. The carbonised wood was compressed into a pellet and converted to carbon dioxide gas in a high pressure combustion `bomb' developed in Cambridge for this purpose (Switsur, V.R., Proc. 8th. International Conference on Radiocarbon Dating, Wellington, New Zealand. Pages BII to B23, 1972). The gas was subjected to very careful purification in order to remove any electronegative chemical impurities, before being stored in a large glass flask for 5 weeks. This latter, step is essential in order to allow time for any of the radioactive gas radon to decay away. Often buried samples such as the one investigated contain traces of this gas, which since it forms no chemical compounds cannot be removed in the normal way. It is removed by allowing it to decay away radioactively.

The radiocarbon content of the pure gas prepared from the specimen, was measured in the nuclear detector contained within a 16 ton lead castle. Measurements were continued for 18 hours on each of four occasions. From these measurements and the known characteristics of the counting equipment, the age of the sample was calculated as  $180 \pm 40$  B.C. (The correct reference to the sample is Q-1173 Red Hill, Osea Road, Maldon. 2130 B.P.  $\pm 40$ . **Radiocarbon** University of Cambridge Natural Radiocarbon Measurements XIII, 1974).

This date is a 'conventional' radiocarbon date based on the Libby half-life for <sup>14</sup>C of 5568 years. The latest accepted half-life is 5730 years and this would yield a date of  $244 \pm 40$  B.C. for the sample. However, since the radiocarbon content of the atmosphere has been shown to vary by some 1.5% during the past 1300 years (Willis E.H. et al **Radiocarbon** Pages 1 to 4. 1960), and by much more than this in earlier millenia, it is necessary to correct this raw radiocarbon date by means of a calibration curve. Several of these curves, based on measurements of known age samples of wood of the *Pinus Aristata* or bristlecone pine, have been published. Agreement on the exact shape of the calibration curve has not been reached but the latest and most complete of these curves were presented at the Radiocarbon Dating Conference in New Zealand and cover the past 7000 years. A comparison between these was given by the present author in **Antiquity** recently (Switsur, V.R., The radiocarbon calendar recalibrated. **Antiquity** Pages 131 to 137, 1973.) By using the composite curve there derived, the date of the sample from Red Hill, Osea Road, Maldon

may be calibrated to what are believed to be calendar years. The result becomes  $239 \pm 63$  B.C. Note the larger uncertainty here owing to the uncertainty in the calibration curve. This then, gives a date during which the brine heating process was in use at the site. The dating limits of one standard deviation, having a probability of some 67%, are from 302 to 176 B.C. The dating limits using two standard deviations, which means a probability of over 95% of being correct, are from 365 to 113 B.C. Even so there is no guarantee that this will represent the earliest sample available from the site. Hence, all that may be said, from this evidence, is that the process was in use at least within these, i.e. between 2338 to 2068 years ago.

We are very grateful to Dr. Switsur for carrying out the radiocarbon dating of the sample of carbonised wood from Osea Road and for allowing us to publish the results here.

## WINTER MEETINGS 1973/74

#### EXCAVATIONS AT THE HOXNE PALEOLITHIC SITE 1971-73 by J.J. Wymer, M.A., F.S.A. (22.10.73)

The evidence produced by Mr. John Wymer at our first lecture this season makes it clear that we will all have to change our concept of the glacial periods which we learned so arduously at school. Also that the village of Hoxne, lying near Diss and south of the Waveney, will obviously be one of the foremost pleistocene sites in Europe. Previous work carried out there had indicated the possibility of finding human occupation in a primary context. Apparently so much other evidence has appeared in a derived state that it would be almost a miracle to obtain human occupation material which had been dropped and covered without any later erosion or earth movement to affect its stratigraphy. Impressive paleo-botanical work of a bore-hole nature had been carried out by Professor Richard West at Hoxne and this had proved invaluable to the present assembly of scientific teams working there with Mr. Wymer during the 1972-73 excavations. Apparently the distribution of hand axes in Britain pointed to the fact that paleolithic man preferred to live near large sheets of water. For example axes appear thickest at the confluence of two or more rivers. Indeed one of the main levels at Hoxne proved to be the peat of an ancient lake bed. It seemed incredible that John Frere, who found hand axes at this brick pit site of Hoxne way back in 1797, was able to recognise the vast landscape change that must have taken place since the dropping of those axes. "Implements of great antiquity even beyond this present world" he described them.

Vertical excavations had been usual previously but now Mr. Wymer considered it vital to excavate an area horizontally with the important result that Hoxne is now the first dated site in Britain for the middle pleistocene. One most interesting inference was the possibility that the Hoxnian interglacial period was of much shorter duration; at a very loose guess - of perhaps 20-30,000 years duration in fact. Ice wedges were seen in the sections above and below the lake peat of the Zone III temperature level and above this peat lay four metres of later deposits. Within the peat were wings of 50 different species of beetle showing grassland types first and then progressing on to woodland examples above the peat. Flints in mint condition were plotted in the horizontal. Five hand axes and a couple of hundred flakes, bones of horse mainly, then deer, bison, elephant, rhino, beaver and small goose were found.

The layers above the peat, in ascending order were:- resorted lake deposits; deltaic wash; fluviatile silt; flood plain silt, a narrow band of coarse gravel laid down (not to be confused with East Anglian glacial till) and finally a thick layer of laminated river gravels. Within the flood plain silt lay the Hoxnian upper industry flints and bones.

It is hoped that the lake sediments will be used for dating by palaeo-magnetic methods. - (Hoxne is beyond radio-carbon reach). Great work has been undertaken at Lake Windermere where the oscillations of the earth's field have been used to plot the changes in climate through the geological periods. Deep sea cores have already given evidence of climatic temperatures.

Perhaps one of the earliest archaeological features in Britain may be the small area of placed stones which were noted lying beside the very edge of the ancient Hoxne lake peat.

## References

- WYMER John (1968) Lower Paleolithic Archaeology in Britain (as represented by the Thames Valley). John BAKER gives the lecturer's view (1968) of the distribution of Lower Paleolithic sites along the Thames Valley.
- (2) WEST R.G. (1968) Pleistocene Geology and Biology (with especial reference to the British Isles (Longmans) Gives the inter-disciplinary approach advocated by the lecturer, Fig. 12.10 shows R.G. West's section of Middle Pleistocene successions at Hoxne.

- (3) SPARKS B.W., WEST R.G. (1972) The Ice Age in Britain (Methuen). Plates 21, 22 & 32 showing the Hoxne excavations in progress.
- (4) EVANS P. (1971) Towards a Pleistocene Time-Scale. Part 2 of the Phanerozoic Time Scale A Supplement, Special Publication No. 5 of the Geological Society, London. Plate 1 a tentative Pleistocene chronology, and the source of information on deep sea cores referred to by the lecturer.

#### **RESCUE ARCHAEOLOGY IN YORK** by P.V. Addyman, M.A., F.S.A. (29.10.73)

Conditions of redevelopment are even more severe at Eboracum than at Colchester. The town of York lies on both sides of the Ouse which was reclaimed along some stretches of its banks as excavation had clearly demonstrated on a couple of occasions. Six major Roman roads converged on the town and the Legionary Fortress was placed in the angle formed by the Ouse and Foss rivers. By the 3rd century the civil town had grown up and in 627 Edwin, King of Northumbria, built a church there. The Vikings captured the town in the l0th century and the Normans built two castles later. A commercial centre was established at a very early date as was also its cultural reputation.

When the replanning of modern York was undertaken it was visualised that the large scale removal of respositories, factories, breweries etc. from the city centre would be needed in order to draw back people to live in the area. Also a ring road to divert traffic was planned to go through an important Roman cemetery, a priory, mediaeval suburbs and a Jewish cemetery. There are no less than 1000 odd ancient buildings in the city where at least 58 proposed developments are due to take place. The planners also failed to note on their map the presence of the Roman Legionary Fortress wall which lay right across the main project. With all this to face, Mr. Addyman, as excavation officer, described the formation of the Trust called upon to cope with the archaeological problems involved. It was encouraging to note how generous were the local authorities concerned.

First, the Roman Basilica was excavated beneath - of all places - York Minster central tower. Next came that incredibly solid sewer which fortunately has been allowed to remain, although sealed off with concrete chippings where it was uncovered. However, its course has been well plotted including its side passages ending in lavatories. Also the bath house emptying into this very long drainage system which produced, when cleared, three very fine gold pendants; numerous counters of bone or pottery; coins; pins; glass bottles etc. The micro-fauna; i.e. several kinds of beetles; showed fresh water types (lavatory flushings) dirty water inhabitants (bath water) and human excrement examples (the lavatories).

Curiously there is a lack of pottery in several of the excavated sites at York a fact which makes the recognition of layers somewhat difficult. Under Lloyd's Bank, however the woven wattle walls of the Danish house more than compensated; also the presence of the tannery and shoe shop discovered with all the necessary commodities and clues available to an expert's eye. There is so much more to describe and fortunately the official reports are almost ready for publication.

## THE EXCAVATION OF A ROMANO-BRITISH SETTLEMENT NEAR HARTFIELD, SUSSEX, by H.J. Money, M.A., F.S.A. (5.11.73)

Mr. Money, who had previously excavated Iron Age sites in Sussex and Kent, was called in to investigate the site at Garden Hill, ten miles south west of Tonbridge Wells, which was the subject of his lecture. The site, which is 550ft up, in a beautiful part of the Weald, was discovered in 1968, when the finder dug a trial trench and discovered Roman and somewhat earlier pottery. It covers about seven acres and is bounded by a bank of sub-rectangular shape with the original inturned Iron Age entrance on the east side. Here Mr. Money uncovered a cobbled roadway and stone revetting of the entrance, together with post holes of the gate posts. There also appears to be another Iron Age entrance near the west of the northern side, but this remains to be excavated later.

The eastern side of the enclosure has earth covered irregularities and Mr. Money's work has shown a small bath house (of native construction but showing obvious Roman influence) next to the stone foundations for a timber framed building where many iron nails were found. The bath house has a good sandstone paved floor and lead outlets in situ. At a later stage the hot chamber had been turned to industrial use for the manufacture of tuyeres, one (of the 20 found) being still on the end of the iron spit used when it was fired. About the same time, part of the floor in the adjacent building had been covered with clay and used as a hearth - probably for a smithy.

Mr. Money takes the settlement to be the administrative centre for an iron working industry using local Wealden ore; a site of this kind is about half a mile to the south. It was established in a small way not long before the Roman conquest and then grew in importance. The bath house is probably 2nd century and in the industrial phase 3rd

century. Mr. Money quoted Julius Caesar and Tacitus to confirm his interpretation. He hopes to discover presently a trackway to join Garden Hill to Margary's Roman Road not far away. One of his finds was a hypocaust tile with A R 0 scratched on it (no known maker's name).

Mr. Money concluded by inviting listeners to join him in his further excavations in 1974.

#### THE PAST IN DANGER - THE EVIDENCE OF AIR PHOTOGRAPHY by D.R. Wilson of the University of Cambridge Committee for Aerial Photography (12.11.73)

The subject of Cropmarks is always of interest for our members and Mr. Wilson spoke as an authority on it. He explained that his Committee's work is not confined to archaeology but also embraced land utilisation, crop diseases etc. and archaeological sites were often noted when work in such other connections was undertaken. He began by referring to the present crisis in archaeology. Though sites had always been destroyed - a photograph of mediaeval ridge-and-furrow over an Iron Age hut site, with its outer enclosure illustrated this - modern machine methods were much more destructive.

He catalogued the worst agents of destruction and showed slides to bring home what was happening. First there is the cultivation of marginal lands; Hod Hill and several deserted medievel villages being cases in point. Also deep ploughing on Fenland sites. A startling slide showed a ploughed out hill fort in Oxfordshire. Secondly there is the spread of forestry in moorland areas (slides of Roman forts in danger). Quarrying is a third cause for concern, especially in river gravels which were favourite sites from very early times. Sites shown were Lechlade, Dorchester-on-Thames, Tallington etc. Fourthly there is damage in Military Areas; e.g. Benson (Oxon) which had a cursus and a site where a row of round barrows were used for tank training. Fifthly reservoir construction - as in the Chew Valley - caused loss of sites. Sixthly Mr. Wilson showed slides exhibiting damage done by linear constructions - pipe lines, roadworks etc. The Penrith by-pass (running through a Roman military cemetery), and finally there is the mass of new construction - housing estates, factory buildings, power stations.

He said it is realized that many of the sites revealed by air photography would have to go to meet all the needs of new development, but efforts must be made to keep the more important ones. In conclusion he answered questions concerning practical points in taking air photographs and regretted there seemed to be no suitable book to help the amateur in this field. Mr. Wilson hoped to write such a manual himself, if time permits.

## EXCAVATIONS AT THE ROYAL DOCKYARD, WOOLWICH, by T. Courtney, Field Director (19.11.73)

Mr. Courtney explained that the Dockyard was built in 1512 for the fitting out if not the building of the "Great Harry". It gradually expanded into a considerable industrial site until it was closed in 1869 as a consequence of silting. Other ships built there include "The Sovereign of the Seas" (1637) and Cromwell's "President".

The excavation of part of the dockyard site was undertaken because the surviving plans and drawings show nothing of the constructional methods employed in such constructions. There is a drop of 25ft. from the adjacent roadway and the date of this "levelling down" was also unknown. Clay pipes discovered showed that this work could be dated about 1610, when an enormous tonnage of Thanet sand had been carted away to provide the dockyard site. After this a double and a single dock had been excavated, a slide showed cart ruts nearby. Levels and been dated by reference to the foundations of the Surgeon's house. A single sawpit of about 1610 was the earliest structure found - this probably used to cut timber for lining the docks. Later sawpits were brick lined and found in a row.

Over a large area a quantity of Muscovite mica was found. This material was used in making ships' lanterns. It was very expensive and speculation is caused as to the reason of the waste. A lantern window to fit a lantern about 8ft. high was shown on a slide. An unusual find, as the only surviving lantern is said to be in Venice.

Foundations of building slips, a steaming kiln, smithy and pitch-house - mostly in different phases, showing rebuilds - were found.

To get at some of the site excavators had to have a steam hammer house removed (this was due for demolition when re-development takes place). It was the last of its kind. Slides showed sandstone blocks round the anvil, and the latter made of many layers of iron ingots formerly ships' ballast, and a long horizontal tunnel which led the furnace gases to the chimney. A point of interest is that frogged bricks were found in structures built about twenty years before the date (1840) usually given for their introduction.

Mr. Courtney concluded by speaking of the hard life of the pitch house workers, many of them children, the sawpit workers etc. and also the long history of pilfering, poor work, fires in the life of the Dockyard. These glimpses of social life were of great interest to the meeting.

#### THE SWEET TRACK, SOMERSET, (THE OLDEST ROAD IN BRITAIN) by Dr. John Coles, Hon. Editor, Proceeding of the Prehistoric Society (26.11.73)

Dr. Coles' lecture dealt with prehistoric tracks discovered in the Somerset levels by peat diggers and others. He first spoke of the so-called Abbots' Way (about two miles long, between Burtle Priory and West Way - two sandy islands in the Levels) and the Bell Track. These are carbon dated to 2000 BC and 2300 BC respectively and are both of corduroy construction. Under the latter was found an ashwood hermaphrodite comparable to a mesolithic one found in Holland and to the chalk one from Grimes Graves.

The Sweet Track - the chief subject of the lecture - is named after its discoverer. It is dated circa 3200 BC and its elaborate construction suggests that the neolithic communities which used it must have been well established considerably before that date, (all the sandy islands in the levels have mesolithic remains), and it was probably built to provide a track from one settlement to another and also a way into the swamp for hunting wild fowl.

It is a plank walk supported on a well made structure of poles driven to form X shapes into the clay which is about 1 metre below the level of the walkway. The planks are in some cases radially split from oak trunks and other trees and in other cases proper cut planks, (remarkable as few are found in pre Roman times in Britain).

The track is the oldest known made track in the country. There are a few passing places and it shows numerous repairs where it had been damaged by debris being swept across it in flood time. By the 20th century an additional 20-24ft of peat had formed above it.

Dr Coles' lecture was illustrated by slides and also - an innovation for the Group - by a cine film of the workers on the excavation. The overburden was shown being removed by machine and the finer work all being done by hand, no trowel being used as the timber was so delicate.

Among the finds were two apparently unused fine neolithic axe heads (possible ritual deposits by the track), a neolithic pot with a stirrer, stone scrapers, arrow heads (one with a fragment of arrow still attached), and some polished yew pins.

Dr. Coles' slides and film showed also the processes of peat extraction, both manually and mechanically, in the levels today, and the whole lecture was of great interest to his audience.

#### ARCHAEOLOGY IN THE CITY OF LONDON by M.G. Hebditch, M.A., F,M.A., (3.12.73)

Mr. Hebditch began by raising the question as to whether the policy of archaeologists using their efforts almost entirely on Rescue digs was sound - should they put more energy in getting key sites preserved? What modern development means was brought home to his audience by a slide showing a monstrous hole with four sub-basements in Board Street.

Re-development is of course - he said - nothing new and has often revealed archaeological objects. He instanced Wren's rebuilding and the building of Mount Pleasant G.P.O. Finds from such sites started archaeological interest in the City and this received fresh impetus on the publication of Mortimer Wheeler's volume for the Royal Commission.

In 1946 Grimes' work with the Roman and Mediaeval Council on blitz sites, mostly in the West half of the City though underfinanced raised renewed interest, especially when the Mithraic temple came to light.

By the early 60's the focus changed to sites in the East part of the City where the un-blitzed areas began to be re-developed and a sense of urgency was raised in 1971, with the hasty excavations at Baynard's Castle. Little is known of the Roman street plan. No Iron Age objects have been found.

Excavations last year next to Sir John Cass Primary School (Aldgate) revealed a military ditch and one find was a bone gladius handle. This implied a small fort here so in initial stage Aldgate was not the eastern approach to Londinium.

The early history of the city is obscure. It was originally a military site. The procurator of the province was established there after the Boudiccan revolt and the rise of civilian influence shown by the Roman palace near Cannon Street. The Governor seems to have had his seat there by 70-80 A.D. and the forum buildings of the end of the 2nd century overlie what seem to be official (government?) buildings of about that date.

The Cripplegate fort of 12 acres was probably built circa 100 A.D. and the wall about the end of 2nd century. At Aldgate the wall went through previous ribbon development. Mr. Hebditch suggested that the boat load of Kentish Ragstone found when the Blackfriars underpass was built was intended for the Wall.

In later Roman times the rising sea level caused difficulties. Changes in religion caused the Mithraic figures to be buried below the floor. Interesting finds of this later period were a small silver box with interior strainer and hunt scenes on the outside, and a small Saxon saucer brooch found on the collapsed roof of the bath buildings in Lower Thames Street.

In spite of the massive redevelopments several valuable sites still remain which should have proper excavation. These are in the waterfront area and near the previously mentioned Aldgate Fort. Fortunately more funds are now available and staff for this work has been increased.

#### **BRICKS OF EASTERN ENGLAND** by L. S. Harley M.A., F.S.A. (10.12.73)

Mr. Harley began by describing (with slides) the traditional method of making clay bricks - i.e. digging the clay, tempering with sand, moulding in wooden or metal moulds, drying, and finally firing.

Though brick like objects for supports were made in the Iron Age true bricks for building were not made in this country until the advent of the Romans. Under Roman military engineers vast numbers of bricks were made, the standard type being the sesquipedalain ones (1½ ft long) though smaller ones were made for special purposes. As they seem to have been made by spreading the material on sand covered floors the thickness was not uniform, but the other dimensions were, suggesting the use of seed-box like moulds. During drying they often received footprints of dogs etc. The smaller ones were usually 12"x12" or 9"x9".

After about 400 A.D. no more bricks were made in this country until the early 12th century though Saxon and early Norman buildings often show re-used Roman bricks.

Like the first introduction of brick making into England, the second introduction also took place in Essex and East Anglia. Early mediaeval examples are found at Little Coggeshall (? pre 1170) Polstead (1140-1160) Copford (moulded bricks shaped for door and window openings (pre 1200).) These bricks were the same size as Roman bricks and resemble the "Monkish Bricks" found in Holland. They often display grass and straw marks left by lying on such material when still unfired.

The bricks in the chancel arch at Polstead are a good example of these early mediaeval bricks (the bricks in the lower courses of the building are Roman). At this time no attempt was made to build brick walls with proper bonding.

Waltham Abbey also displays "Monkish Bricks". The earliest bricks of approximately modern shape and size - though thinner - are at Little Wenham Hall (1270-90) though there is a faint possibility these are imported Dutch ones. Long before this date magnificent brick structures were being built in Southern France and Italy; perhaps monks brough the idea to this country, though the modern "one-hand" bricks had always been in use in the near east (e.g. Crete) and these may have been introduced by Crusader influence via Holland.

Early bricks were made for use on particular buildings and commercial brickyards are not known until 1303 (in Hull). These Northern bricks were a little larger, and bricks of this type were used at Wingfield College (Suffolk) in 1362 - interesting as the de la Pole family were concerned both in the Hull brick industry and in the foundation of the College.

Mr. Harley concluded by referring to the culmination of building in brick exhibited for example at Layer Marney, Hadleigh and many other places in this area.

THE ANNUAL CHRISTMAS PARTY was held on 17<sup>th</sup> December. It was well attended and enlivened by TALES FROM THE ESSEX MARSHES by Mrs. K.A. Evans. These included examples of the Essex dialect and anecdotes from Peldon and the surrounding district.

## HISTORIC BUILDINGS IN ESSEX by LG. Robertson, M.A., A.M.A., (14.1.74)

The address concerned the great number of "listed" buildings in Essex which had been the subject of applications for permission to demolish. His large number of slides showed only a fraction of those buildings which had been at risk - they included the fine house opposite Jacobs Hall (Brightlingsea), the Falcon (Wivenhoe), and the former Constitutional Club at Maldon, among many others.

He included what he termed "oddities" such as Hockley Spa, Purfleet Powder Magazines, Saffron Walden Corn Exchange, and the attractive Railway Station at Royden - built in timber in 1843.

If all these applications had been granted the entire character of the county would have gone. Mr. Robertson paid tribute to the Planning Department of the old Essex County Council which had been very co-operative with the Essex Congress and similar bodies. Fortunately most of the buildings he showed us had been saved, but he fears that the new district councils which take over responsibility for giving consent to demolish "listed" buildings on April 1st would not have such good bodies of experts to advise them as the County Design Group and would also be more easily persuaded to give such consents by pressure from local developers.

One thing that could be done was to have a body of active and informed people to take early action to prevent historic and worth-while buildings falling into neglect and becoming the object of vandalism. When they got to this state planning committees readily gave consent for demolition.

#### THE CENTRAL SAHARA & THE TASSILI ROCK PAINTINGS by W.W. McMaster & B.A. Bonner (21.1.74)

Mr. W.W. McMaster and Mr. B.A. Bonner took us by colour slides through their somewhat rigorous journey across the desert to the scenic beauty of the Hoggar mountains in central Sahara. Their aim was to photograph the Tassili cave paintings and this they did with great detail, also including shots of great sweeping sand dunes which needed a detour to reach. The main Hoggar landscape consists mostly of a dramatic purple rock formation - the brittle basalt cores of long dead volcanoes. Fossil spores show that olive, lime and oak trees once grew in the Sahara. After a flight of a thousand miles followed by a trek of five hundred miles by Land Rover, they arrived at Djanet where donkeys were procured to carry the baggage up to the cave-painting sites. This necessitated a fifty mile walk to see only a fraction of the drawings: - dashing bowmen showering arrows at hunted game, herds of cattle and a wheeled chariot with horses. Also delicately detailed dancers and many other graceful subjects. The paintings date from about 6,000 B.C. to 100 A.D. Probably the most outstanding is that of a ten foot horned giant with a bulbous head like a space-helmet. He is surrounded by praying women and strange saucer-like disks, and this gave rise to an astronaut fantasy on the part of one author.

A lovely wind-sculptured piece of petrified rock called a "desert rose" was exhibited to members afterwards; also some interesting sherds of pottery.

Mr. McMaster and Mr. Bonner are to be congratulated, not only for their endurance, but for the excellent quality of their slides which brought the feel of the clear desert air into the room; from glorious desert sunsets, delicate plants and ancient trees to the footprints of little animals in the sand.

#### RECENT EXCAVATIONS AT WENDENS AMBO by I.R. Hodder (28.1.74)

The site was noticed in the nineteenth century and excavations at Lord Braybrook's orders revealed a Roman Villa; pre Roman coins were also found. Three pots from this dig are in Saffron Walden museum. The threat to the site by the advent of the M11 caused further investigations and trenching with a JCB near the previous dig showed chalk footings. Accordingly an excavation was mounted in 1973.

The site showed continuous occupation from Iron Age times to the 4<sup>th</sup> century. The church, about a quarter of a mile away, has a Saxon font and a fine arch of Roman brick. This continuity being based on the fertile nature of the land. Excavation showed no Belgic pottery save in a Roman context - the simpler early Iron Age pottery persisting to the Roman occupation.

The large number of pits and ditches of different periods make interpretation difficult and the lack of stylistic differences in the Iron Age pottery gives little help in dating.

Among the features disclosed were a round Iron Age hut with no centre post, hearths, Roman corn drying kilns and a building with hypocaust - possibly a small bath house. Here were found several bone pins. A rather crude tile of an uncommon type with a flange on one side to avoid the use of imbrices caused considerable interest.

Some of the soil was finely sifted to separate bones of small animals, and some of the soil was washed in a "seed machine" to separate carbonised seeds. This procedure should throw more light on economic conditions at various periods.

The most important structure found was one end of what seems to be a large Roman granary. Mr. Hodder suspects it may be a pre-Boudiccan building to store grain levied on the local tribesmen - the sort of thing which caused the Boudiccan revolt. Further excavations will take place this year to see if this was the case.

#### POTTERY TECHNIQUES FOR THE ARCHAEOLOGIST by W. Davey, R.A.I., S.T.M.A. (4.2.74)

Most of us have always considered clay to be an absorbing material (not necessarily excavation wise) and Mr. Davey increased our knowledge of the finer points of pottery production. Up to  $500^{\circ}$  the firing has to be slowly and carefully carried out, after that increases of  $100^{\circ}$  may be made very quickly.

Harlow was a great production centre because of its position on the clay belt which stretches for a considerable distance. Essex clay is eminently suited to produce good ceramics provided it is processed through a fine mesh and flock etc. added to produce a slight gloss.

Much work had been carried out by a colleague in an endeavour to produce pottery of a Samian quality but so far the high degree of gloss has not been achieved.

Medieval kilns are most likely to be found adjacent to good class roads; obviously no one would want to hump a hundred weight of clay across a field in order to process it.

A temperature of  $1120^{\circ}$  melts Essex clay completely. Green glazed wares usually require a firing heat of around  $1000^{\circ}$  and colour coated ware obviously had a fast, sophisticated and carefully controlled design of kiln.

Examples were shown of a huge present day cognac peasant pot made by the coiled method, also 17<sup>th</sup> century Metropolitan and Dutch slip ware. The latter two having the same techniques of glazing, the Dutch method predating the English by about 150 years.

Usually handles are attached by making an insertion in the body of the pot but one lovely Medieval jug was shown where the potter had applied the handle to the body of the jug.

## LOOKING AT LOCAL CHURCHES by A.H. Stokes, L.R.I.C. (11.2.74)

One of our best 'home lectures' was given by Mr. Alan Stokes illustrated by some excellent slides - particularly the close-ups of chubby self-satisfied heraldic dogs. His round-up of a large number of Essex and East Anglian churches over the last ten years has been exhaustive and provided a lecture of great interest. The questions afterwards waxed thick and furious and showed that the subject was an evergreen favourite. The round-tower structures of early churches and also some with square towers in a central cruciform position might well have begun as free-standing fortified keeps to which the nave and chancel were added later when the need for a church arose. Little Bradley. Suffolk, was possibly the best example of this, with a tower thought to date from c.950. Another enigma is the vast tower of Great Tey with which the name of Richard de Luci, Justicier to Henry II, has been associated and also that of Eudo Dapifer, Lord of the Manor at an earlier date.

The glories of Copford proved that the Bishops of London provided luxurious extras such as the great original vaulting running the length of the church and supported by massive Norman abutments; also the fine wall painting of Christ in Majesty - only some 20 years later than the one at Canterbury and perhaps executed by the same artist.

Other beautiful slides included Castle Hedingham church with the wheeled window - one of only five such in England, and the delightful misericords and cushion stoup stone; Little Maplestead's crude but very early font, Fingringhoe's lovely flint porch and high font cover, the porch very similar to that at Great Bromley; also several beautiful early brick foundations such as the famous Little Coggeshall chapel dated 1220. We also saw double hammer-

beam roofs with the angels sawn off, sadly; and a Dowsing deformity at Great Bromley, fortunately not complete.

Posterity need not worry about the lack of recording of our heritage of ancient churches when such painstaking and able enthusiasts are about.

## THE HILL FORT AT POUNDBURY, DORSET by C.J.S. Green (18.2.74)

Mr. Green spoke briefly of his work on the  $2^{nd}$  and  $3^{rd}$  century extra mural settlement adjoining the Saxon Shore fort of Brancaster. His main lecture, however, was on Poundbury Hill Fort in Dorset. Except for a short period, the settlement there appeared to carry through from Neolithic times up to the time when modern computer factory incursions drove right into the very structure of the Hill Fort. Poundbury lies north of the huge Maiden Castle fort, and west of Dorchester, with the Frome river running alongside and below the rampart slopes. Cut right through Poundbury is the tunnel carrying the railway line to Bristol and much opposition to this Victorian innovation was fostered by the antiquarians of that day. The engineers did at least leave many records in the railways cuttings and the run of the  $1^{st}$ century Roman aqueduct which supplied the civil town of Dorchester was recorded then and in the recent excavations.

A tenuous Grooved Ware settlement was discovered by Mr. Green to the east at the bottom of the hill together with flint quarries within which appeared rough flakes of cortex but no worked flints were found. A large rectangular structure here was within an enclosure with signs of palisade trenches. There was evidence of cattle bones, but no corn remains and the artifacts were few, some sherds of a wavy comb design, a Deveril Rimbury urn and a loom weight.

Most spectacular was the huge cemetery with some 1100 burials, both Pagan and Christian, 800 of which were dealt with in detail. These dated from the second quarter of the 4th century and up to its close. The earliest section was surrounded by a boundary ditch over which later graves had spread in increasing numbers, disturbing the graves beneath. Obviously there were several social classes here for the graves contained first, wooden coffins with lead linings, then some were enclosed within their own mausoleum, later still the bodies were placed in stone coffins. Several had grave goods - bronze bracelets, a ring, a distaff, bone pins, combs etc whilst a few honoured people were packed in gypsum (there are Rhineland parallels to this) and had their hair covered in an unguent type tarry preservative which had successfully preserved the hair on one skull.

A Chi-Rho amulet, also traces of very fine wall plaster within some of the graves were both outstanding features, the latter also having Rhineland parallels.

Very little overlying Saxon evidence could be unravelled. There were signs of buildings and also a grubenhaus with Saxon type combs and loom weights but no pottery at all.

## THE ANGLO SAXON CHRONICLE by Professor Dorothy Whitelock, C.B.E., M.A., (Cantab), D. Litt., (Oxon), F.B.A., F.S.A., F.R. Hist. S., Evington & Bosworth Professor in Anglo-Saxon. (25.2.74)

The answer for those members who wish to follow up Professor Whitelock's high powered lecture is her classic book "The Anglo Saxon Chronicle: A Revised Translation" (D. Whitelock with D.C. Douglas and S.I. Tucker) London 1961. There is also "English Historical Documents, Vol. 1(c 500-1042)" London 1955 D. Whitelock. Most of us, listening to her fantastic grasp of that dark period in English history must have been struck by the wealth of knowledge contained within her petite frame.

Briefly, the seven manuscripts and a fragment, which all combine to give us what is today called the Anglo Saxon Chronicle are, as our Chairman so aptly remarked, in the nature of 'intrusions', if we describe them in archaeological terms. That is to say, some are copies of original manuscripts long lost. Others have had entries added at later periods or have been kept in various places where divergent manuscripts have in turn been prepared from the 'ancestral' copy.

The earliest portion of the Chronicle was compiled from earlier sources about 890 and circulated to some religious houses.

A version which reached the north was interpolated with material taken from Bede and from sets of northern annals. Two of the three surviving versions were continuations of this northern version. One of these was at St. Augustine's at Canterbury during Edward the Confessor's reign. The other was probably at York (or Worcester as other scholars believe). A third version was being written at Abingdon. These versions are sometimes independent and at other times two of them share a common source.

Lost copies have been heard of, and others may also have been lost without a trace. A veritable crossword cum detective flair is clearly needed to pursue such intricate scholastic clues.

## A 12/14th CENTURY MANOR HOUSE AT NETHERTON, ANDOVER, by J.R. Fairbrother (4.3.74).

A warm welcome was given to Mr. Fairbrother when he described the excavation of the Manor House at Netherton. The work has already continued over seven years and the very active City of London Archaeological Society, who are amateurs as we are and also dig at weekends and during holidays, is to be congratulated on their painstaking work and the excellence of their records.

Netherton-Faccombe, now a shrunken village, lies in a dry valley near Andover. The church was demolished in 1866 but the disused churchyard and the very fine Rectory survive.

Mr. Fairbrother, with the aid of plans, traced the sequence of the manorial buildings and illustrated the succeeding structures with slides. These consisted of post-holes and walls of flints, some of the later ones knapped. It is thought that the flint walls extended only as far as the ground floor and that the first floor walls were of wood. Many tiles from collapsed roofs were found and of particular interest were the ridge tiles, notably the bonnet hip tiles, the cock's comb tiles and the 'horse and rider' finial ridge tile. The latter is the earliest of this type yet found.

A considerable amount of pottery was recovered among which was the tin-glazed cup, probably an import from Spain, part of a condiment set and a little green glazed jug in the likeness of a woman with her hands raised to drink from a cup forming the spout and the twisted plait of her hair forming the handle.

Iron objects included a shovel, a billhook, a buckle, some pincers and half a pair of shears. There were many iron arrow heads varying from large to small, presumably according to the size of the target.

The garde-robes yielded a generous harvest of bird bones, the most interesting of which were those of sparrowhawk, goshawk and peregrine falcon; these being the prerogative of royalty it would suggest that the manor had been within the King's hunting ground.

Many coins were also found and among the jewellery were brooches and three finger rings, two set with semi precious stones and one made of twisted gold wire.