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REPORT ON THE SALT WEEKEND

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	Finger-Tipping on Body	on Rim	Internal Rim Grooves	Two external Rim Grooves at Neck	Number of Rims
1. Boucaud	1	3	1	—	9
2. Anse du Sud	—	2	—	—	5
3. Epinette	—	2	1	—	
4. Fougerais (F)	3	3	3	—	18
5. Paupelinière	—	2	1	1	9
6. Frenelle	—	—	—	—	1
7. Calais	—	—	2	—	3
8. Fougerais (B)	—	—	21	2	33
9. Tara	—	—	3	1	8
10. Birochere	—	—	—	—	2

Dr. Gouletquer told the meeting that Dr. Tessier had found his first salt making site ten years ago and was the first man to reconstruct the shape of the so-called 'auget' at La Frenelle in Brittany. This led to an explanation of similar sites along the Atlantic coast from the River Loire to the point of La Gironde. The 'auget' was made of white clay with thin walls. It was sun-dried and probably only used to dry wet salt crystals. Deposits had been found of several augets packed in piles within each other. Crystalline salt would have been obtained by natural evaporation

but no tanks or vessels which could have been used for this purpose had been found.

General discussion on shapes and sizes of containers followed and whether or not boiling took place. With regard to the large briquetage containers, Mr. Rodwell said that, in his opinion, these were used in Essex for the boiling of sea water and that this produced the green glassy slag which formed on the outside of the containers. Enormously hot fires were used which caused the clay to run, forming slag.



IRON AGE & ROMAN SALT-MAKING SITES ON THE BELGIAN COAST

H. Thoen

During the systematic examination of the Gallo-Roman settlement of the Belgian coastal plain, new information was obtained on salt-making in this area and earlier finds and publications were reconsidered.

The data acquired are mainly the result of intensive research into three fields:- the technical processes, the relation with the soil, and the chronology.

I. IRON AGE (Fig. 34)

The settlement of the coastal plain has always been strongly affected by the recurrent periods of transgression and regression which have resulted in a very complex soil structure. (Tavernier & Ameryckx 336)

Seen from a geological point of view, the outstanding event during the Iron Age has been the 'Dunkirk I' transgression, during which the Subboreal peat area was flooded via an extensive network of creeks, from about 500 B.C. till the beginning of our era.

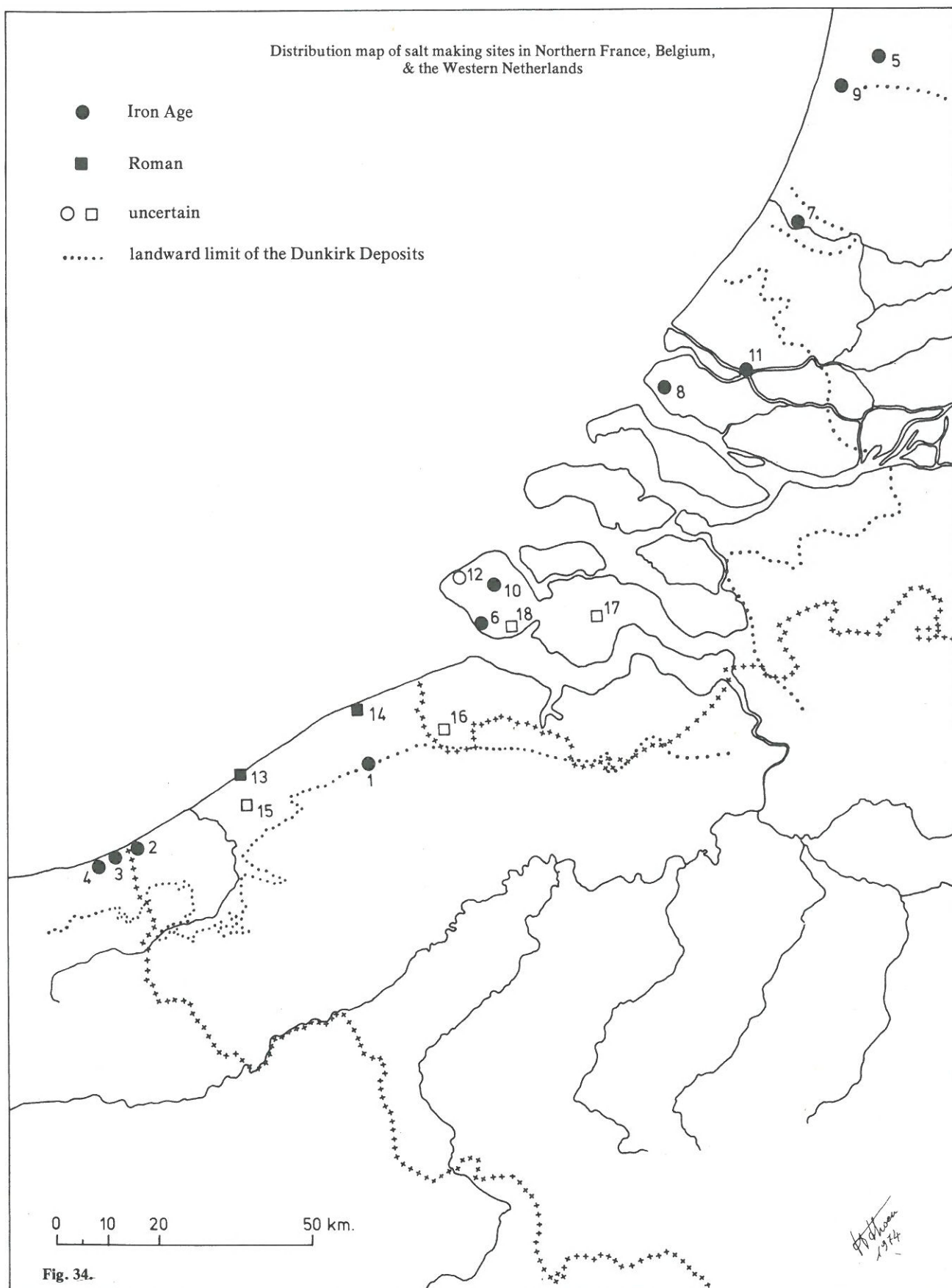
Little is known about habitation sites in this period. At the time of the Roman invasion the area was part of the territory of the Menapii. (de Laet 86) In the Belgian coastal area only two settlements are known at present:- De Panne in the south-west and Bruges in the north-east. Both sites yielded traces of a salt-making industry.

A. De Panne (West Flanders, Belgium)

The settlement of De Panne has long been known. Archaeological remains, both from the Iron Age and Roman periods, were found in the dunes along the French-Belgian border and in the adjacent territory of Bray-Dunes (Département du Nord, France). Excavations before World War I (de Loë 88, 90, 91) (Cumont 71) and in 1920-30 (Rahir 266, 267, 268) brought to light numerous briquetage objects such as clay 'nails', evaporation pans, fragments of perforated clay plaques, flattened clay balls etc. The excavators, however, thought these objects to be part of a prehistoric pottery making site (de Loë 91, 92) (Rahir 266, 267, 268). Rahir identified the raw material used as being local clay from the coastal plain. He undertook to prove this by mineralogical and chemical analysis of the clay and of fragments of Iron Age pottery (Rahir 92).

Subsequently, however, it turned out that the analysed clay samples belonged to a Dunkirk II deposit, c. 300-700 A.D., so that Rahir in fact thought the pre-Roman pottery of De Panne to be made of post-Roman clay! (Loppens 205) The thesis of a pottery workshop was nevertheless not rejected, and it was not until 1952 that the possibility of a salt-making industry emerged by referring to similar finds from the Seille valley (Marien 212). A definitive conclusion was finally reached by Nenquin who lists De Panne as the only Belgian salt making site (Nenquin 243).

The next problem which arises is one of dating. Nenquin (243) and many authors after him (Bogaers 23) accept that briquetage was found in an Iron Age context as well as Roman. Two inscriptions discovered at Rimini have been repeatedly cited. They are dedicated by the *Salinatores Civitatis Menapiorum* and the *Salinatores Civitatis Morinorum CIL XI 390/1* to L. Lepidius Proculus, a centurion of the Legio VI Victrix in Novaesium (Neuss) during the reign of Vespasian (69-79 A.D.) for services rendered to salt commerce (Favorel 113) (Will 367) (Bogaers 23). Excavation reports (de Loë and Rahir) reveal, however, that all the elements of briquetage were either discovered in an Iron Age context or where Roman occupation had disturbed the remains of the Iron Age strata; on no occasion were they exclusively Roman.



IRON AGE 1 Bruges. 2 De Panne. 3 Bray-Dunes. 4 Zuydcoote. 5 Assendelft. 6 Koudekerke. 7 Leiden. 8 Rockanje. 9 Santpoort. 10 Serooskerke. 11 Vlaardingen. 12 Domburg.

ROMAN 13 Raversijde. 14 Zeebrugge. 15 Leffinge. 16 Aardenburg. 17 's Heer Abtskerke. 18 Ritthem.

VLIZ (vzw)
VLAAMS INSTITUUT VOOR DE ZEE
FLANDERS MARINE INSTITUTE
Oostende - Belgium

From this we conclude that there is no proof of salt-making during Roman times in De Panne and that this activity was confined to the local Iron Age community.

Dating the Iron Age material from De Panne has been a topic for extensive discussion. According to Marien, settlement has been dated to the La Tène II and III periods, continuing into the Roman occupation (Marien 213), but De Laet has pointed out that some of the material can be compared to finds from the early La Tène period (LT I & II) (De Laet 87). Final publication of the finds should settle this problem. In the meantime we emphasise that the choice of the Iron Age site was governed by physical-geographical factors (a beach flat protected from the sea by older dunes); its development is paralleled by the Dunkirk I transgression, so that settlement in the Early La Tène is acceptable. On the other hand, habitation came to an end during the final phase of the Dunkirk I, therefore probably during the La Tène III period. Continuity with the later Roman occupation, which began in the Flavian period, is improbable.

B. Bruges (West Flanders, Belgium)

We came across the briquetage finds of Bruges whilst 'digging' in the reserves of the Gruuthuse Museum. This material consists mainly of clay cylinders; it belongs to a site known as Fort Lapin, which is situated slightly to the north of the town. The finds were made around 1900 during harbour development alongside the canal from Bruges to Zeebrugge and belong to three different periods: Iron Age, Roman and the Middle Ages.

The excavations were undertaken by a geologist (Rutot 308) who cared little about the archaeological remains, but who fortunately paid attention to the geological context.

Contrary to De Panne, Bruges is not situated on the present coast-line, but some 12km inland, on the limit of the coastal plain and the sand region. However, the Iron Age settlement of Bruges, as well as that of De Panne, has a direct relation with the Dunkirk I transgression since the salt-making is situated along an active Dunkirk I creek. This is important in dating the site, as its development can only have been possible in the later stages of the transgression or, even more likely, at the beginning of the subsequent regression, thus probably during the La Tène III period. Again there has been no continuity with the later Roman settlement which dates back to the third century.

CONCLUSIONS

1. Both Iron Age settlements are directly related to the Dunkirk I transgression:-
 - De Panne developed on a protected beach flat when the transgression had flooded the greater part of the coastal area;
 - the salt-making site of Bruges came into being on a Dunkirk I creek ridge.
2. The technical process used is the one associated with briquetage. In Belgium it is typical for the Iron Age and has never been found in a Roman context. This has also been observed in Northern France (Zuydote, Bray-Dunes) (Favorel 113) (Will 367) and the western part of the Netherlands (Assendelft, Koudekerke, ① Leiden, Rockanje, Vlaardingen and Domburg) (Helderman 153) (Modderman 232) (Nenquin 243) (Wind 371) (Dumontak & van den Berg 98) (van den Berg 347) which all can be dated to the Iron Age. (See Fig. 34)
3. **Dating**:- the relationship of the two settlements with the Dunkirk I transgression provides us with a relative chronology since De Panne came into being during the primary phase and Bruges during the intermediate or even final phase of the Dunkirk I transgression.

II. ROMAN PERIOD (Figs. 34 & 35)

Salt-making during Roman times is confirmed by ancient texts. We have already mentioned the inscriptions dating from the Vespasian reign, dedicated by the *Salinatores Civitatis Menapiorum* and the *Salinatores Civitatis Morinorum*. For Belgium these inscriptions have erroneously been related to salt-making at De Panne, since the briquetage finds must now be dated exclusively to the Iron Age.

The importance of salt-trading in our regions is also apparent from the altars which were dredged up from the East Scheldt, off Colijnsplaat (Zeeland, The Netherlands) a few years ago. Amongst the dedicators of these votive altars, erected c. A.D. 200 and dedicated to the local goddess Nehalennia, there were four *negotatores salarii* (salt merchants, three of whom were from Cologne, the capital of Germania Inferior) as well as three *negotatores allecari* (dealers in fish sauce, one of whom was from the Treveri territory) (Bogaers 23). These inscriptions are considered to be proof of the commercial relations with Britannia, but do not, of course, preclude the existence of a local industry.

In Belgium, we can mention two Roman salt-making sites:- Zeebrugge and Raversijde.

A. Zeebrugge (West Flanders, Belgium)

In 1904, during harbour development works, a wooden construction was discovered in the peat. It consisted of a rectangular frame, extending over more than 700 sq.m which was divided into compartments by parallel rows of beams; these beams were linked two by two. The length of the beams was between 12 and 12.5m and the distance between the rows varied from 2.6 to 3m. The construction was held firmly in place by vertical driven piles. The total width was 22m, the overall excavated length about 31.5m at the western edge and about 39.5m at the eastern edge. The horizontal beams were of pine wood (*Pinus silvestris*), the piles of birch wood (*betula*). The whole installation was orientated north-west and south-east and sloped slightly downwards towards the east (de Loë 89, 93) (Gillès de Pélichy 94).

The interpretation of this wooden frame has aroused much discussion. The excavator thought it to be the sub-structure of pile-dwellings in a marshy area, similar to the so-called 'crannogs' of the British Isles (de Loë 89). The absence of any kind of floor and the deliberate slope make this theory difficult to accept. Others mentioned oyster-farming (Van Den Abeelen 346) and a Menapien harbour or landing-stage (Lambrechts 188) (Verhulst 355).

The first to think of salt-making was Breuer. He interpreted the construction as a saltern and linked the system with briquetage, the technical process of salt-making. (Breuer 29, 30) This view was not generally accepted because no briquetage was thought to have been discovered at Zeebrugge. We can, however, back-up the salt-making theory by some important arguments.

First of all there is no doubt about dating the frame. Its position on the Subboreal peat and below a Dunkirk II clay sediment indicates a construction in the Roman period. Arguments in support of salt-making are twofold:-

1. The presence of a number of small rectangular pans, used as moulds for salt-cakes. They appear frequently in Iron Age salt-making contexts; e.g. De Panne.

① Trimpe Burger (pers. comm).



Fig. 35a. Vertically driven-in piles of a wooden saltern construction on the beach.



Fig. 35c. Salt cake moulds



Fig. 35b. Section of a pile showing stratification.

1. Modern clay with eroded peat
2. Silt layer of Roman salt making
3. Subboreal peat
4. Calais clay deposits

Fig. 35.

2. The soil map shows that there is a direct connexion between the site and the old network of creeks mentioned above when we discussed the finds from Bruges. This, probably together with artificial ditches, allowed access of sea-water at high tide into the wooden framework and its different basins which could be locked by its partitions. ②

B. Raversijde (near Ostend, West Flanders, Belgium) (Fig. 35)

The archaeological site of Raversijde has long been known for its finds of the Roman period and especially of the Middle Ages. (*Chocqueel 54, 55, 56*) It is situated partly on the present beach between the towns of Middelkerke and Ostend. The mediaeval peat-cuttings are normally visible at low tide. The Roman strata have been greatly disturbed by the Dunkirk transgressions and later by the mediaeval settlement.

In April 1973, whilst discussing the Belgian coastal plain during the Roman period for my doctoral thesis, Mr. and Mrs. E. Cools, both amateur archaeologists from Ostend, drew my attention to a number of piles driven-in vertically on the Raversijde beach. This initiated the beginning of new and more systematic research which had to be carried out under extremely unfavourable and difficult conditions. ③ The results of our work on the Roman Age are given for the first time in this paper. We were able to ascertain that the character of this large Roman settlement was mainly determined by salt-making.

Our findings were as follows:-

1. Construction and process (Fig. 35a) — although we only discovered some rows of piles and some stretches of ditches, there is a remarkable similarity with the Zeebrugge construction. At Raversijde, however, there must have been several of these; remains have been recognised scattered over a distance of nearly two kilometres. Here, as well as in Zeebrugge, sea-water was caught in a system of basins. The latter were connected to a network of ditches, which in turn received the water from a creek. This had direct communication with the sea through a gap in the dunes.
2. Stratigraphical position (Fig. 35b) — the wooden construction was made on the peat. The piles pierce the Subboreal peat-layer and their bases protrude into the Calais deposits of probably Atlantic date. During Roman times a finely sedimented clay layer was deposited on the peat surface. From this clay layer a number of Roman objects have been recovered.
3. Technical implements (Fig. 35c) — as in Zeebrugge a number of small salt-cake moulds were found which show a remarkable and very specific ornamentation.

② The system described above was proposed in our doctoral thesis on "The Belgian coastal plain during the Roman period" presented at the State University of Ghent on April 3rd 1973. A fortnight later we came across a similar construction on the beach at Raversijde, near Ostend.

③ The site is accessible only at low tide. Continual shifting of the sand, the construction of breakwaters, repair work on the dyke, touristic activities and uncontrolled digging turn any serious attempt at research into a nightmare. Work on the Roman settlement is carried out by myself with the assistance of Mr. & Mrs. E. Cools, who work closely together with my colleague F. Verhaeghe (RUG) on the Mediaeval site at Raversijde.

4. Chronology — the chronological elements consist mainly of local pottery from the coastal area; they belong to the end of the second and third centuries. Carbon dating of wood samples taken from the piles give the following results:-

1602 ± 83 B.P. = 348 ± A.D. 83

1871 ± 83 B.P. = 79 ± A.D. 83 ④

By the technique described above, concentration of salt sea-water or *brine* was obtained by natural evaporation. The next operation was extracting the *salt* by boiling the brine, thus by artificial heating. There are some clues which indicate that it was done by peat fires in small ovens. The peat fuel supplied the briny ashes, from which also salt was extracted after purification, mixing with sea-water and evaporation. It is possible that the ovens which have been found at 's Heer Abtskerke (Zeeland, The Netherlands) must be ascribed to a similar process. In the same context a lot of scoriae were found, the so-called "*zel-as*", a waste product of peat fires. ⑤ Similar ash-layers were also discovered in Zeeland (The Netherlands) at Aardenburg and Ritthem, and recently in Leffinge (West Flanders, Belgium).

GENERAL CONCLUSIONS

1. Within the coastal regions of northern France, Belgium and the western Netherlands salt-making sites from both the Iron Age and the Roman period have never been found in the same place. The location of these sites has indeed been influenced primarily by the coastline which shifted repeatedly as a result of the different phases of transgression and regression. This movement of the coastline resulted for instance in an Iron Age salt-making site at Bruges, on a contemporary Dunkirk I shore, whilst a Roman salt-making site was discovered several kilometres to the west, at Zeebrugge, after the coastline had retreated during the subsequent so-called Roman regression (Fig. 34).
2. As regards the technical aspect, briquetage was in general use during the Iron Age. During Roman times a more industrialised form of salt-making appears, namely by means of elaborate wooden constructions fixed into the peat layer, along ditches and creeks which were directly connected with the sea. Salt was probably also produced by artificial heating in small ovens (peat-fires). The only briquetage elements which remain are the so-called salt-cake moulds which are notable for their remarkable ornamentation (Fig. 35c).

④ *Institut royal du Patrimoine artistique*, Brussels. (unpublished)

⑤ Trimpe Burger (pers. comm).

ACKNOWLEDGEMENTS

The willing co-operation of Ir. J.A. Trimpe Burger (State Service for Archaeological Investigations in the Netherlands) has made it possible to include some parallel finds from the Dutch coastal area. We are indebted to Mr. E. Cools for his help in the field and for translating this contribution from the Flemish. We wish to thank here Prof. Dr. J. Nenquin (Ghent) and Prof. Dr. S.J. De Laet, Director of the Seminar for Archaeology at the University of Ghent, the former for encouraging this study, the latter for his welcome suggestions. For clarification of some geological problems we have been greatly helped by Prof. Dr. J. Ameryckx and Prof. Dr. W. De Breuck from the Geological Institute of Ghent University. We also wish to express here our sincere thanks to the Department of Public Works especially the Coastal Service at Ostend directed by Ir. R. Simoen, and the building contractors Van Huele Bros., Ostend, for their help in the field. We are greatly indebted also to Mr. L. Louwyck, Ostend Airport for his help in aerial reconnaissance flights and the Belgian Air Force, (sections VSI/IRP C.O. Lt. Col. Candries and CEEP, C.O. Cdt. Coertjens) for their magnificent contribution in aerial photography. Finally the curators and staff of the Royal Museum for Art & History of Brussels, the Gruuthuse Museum of Bruges and the Communal Museum of Ostend, assisted us in our work by granting access to their collections.



The principle of getting raw material as well as of manufacturing and evaporating the salt did not change at that time. As in previous periods the brine was brought to the saltern through timbered ditches 0.35m wide and 0.20—0.30m deep. In the middle part of one of the ditches there was a rectangular storage tank 2.40 x 1.40m and 0.50m deep where the brine got rid of impurities (clay etc.) and flowed to the reservoir as a pure raw material. Then it was poured out to clay vessels, put on hearths and evaporated. The whole installation — apart from hearths — was covered with a roof propped on poles which left numerous traces all over the area. Their lay-out, however, does not indicate the form, the size or the number of the buildings.

The hearths for salt evaporating from the Late La Tène Period were of 0.80—1.20m diameter. One big hearth from the Early Roman Period was of 7m diameter made of big stones lined with clay and placed on the surface of the ground and is worthy of notice. In the Late La Tène Period brine was boiled in small graphite pots, and at the beginning of the Roman Period big clay vessels of the shoulder diameter of 0.80m and about 1.00m high (Fig. 50e) were used for this purpose. The second stage of salt manufacturing process: evaporating and portioning is the most poorly represented of the archaeological material found. Numerous tumbler-shaped cups occurring in Kraków-Kurdwanów and single specimens in Wieliczka (site XI) prove it was analogous to Halstatt Period.

The oven for salt manufacturing from Late La Tène Period discovered at Otloczyn (Kujawy) (Fig. 50f) is of a completely different character. It is situated where the Vistula terrace bends about 150m away from the brine springs, which is situated below within the river valley. It is circular, of 2.90m diameter and its vertical section consists of two parts, lower and upper. Its lower part is made up of an oven with two chambers with a hearth of stone sunk 0.70m into the ground, while a large circular clay basin with side walls 0.08—0.10m thick was used to boil the brine brought from the neighbouring spring forming its upper part. No briquetage connected with evaporating and portioning the salt was found there. So it may be assumed that in the Late La Tène Period the salt manufacturing process was not carried on in the same way, at least not in the same vessels, everywhere in Poland. Some differences existed between Little Poland and Kujawy. Further excavation which should be carried on, especially in Great Poland and Kujawy, may elucidate the problem.



Summary of the Proceedings by the Chairman

I think we are all left with the impression of the high quality of the contributions made. These have been one of the finest features of the Conference which has been one of the more successful of any we have attended. Conferences are made up of various parts; this one I see as a combination of good quality papers, an exhibition of material, a visit this afternoon on which I hope the sun will shine, and then eventually, the publication of the Proceedings themselves. That should achieve a complete and wholly successful conference and let us hope that that is how it will work out.

The papers themselves have made their appeal to all those who attended. To the professional who is interested in salt production they have shed a great deal of light, I am sure, on areas other than those with which they are dealing; while for those who are more generally interested in archaeology and the position of the salt industry within man's general activities, they have yielded a considerable body of information. One of the nice things is the way in which both professional and amateur have been represented here this weekend. I am not a great believer in professionalism in archaeology and I am delighted that we have had contributions from those engaged full time in other work and yet can offer so much. (*Hear, hear*) We have heard of these interesting similarities over such a wide area, in this basic human need and the processes and means of satisfying it and its problems. Professor Kondo's contribution was the most striking. We saw briquetage which had such remarkable affinities with what we are looking at from Europe itself. Then, one's thoughts immediately spring to ideas of diffusion or parallel development; I do not think there is any necessity to argue one way or another, though the point could be seized upon by protagonists of either point of view.

A general impression of my own is of a basic process of salt preparation, but within that, the utmost diversity depending on the initial quality of the raw material. Clearly, as with Frau Kleinmann's description of Saale, one has a high quality brine which gives the economic edge and so evaporation and crystallization processes are correspondingly speeded up. Elsewhere we have seen the difficulties of achieving a concentrated brine from sea water or from the ashes of roots or plants or from salt impregnated soil and so there is a great deal of diversity in the original sources of the brine. Then the evaporation and crystallization process and finally the conversion of the 'slush' — I suppose the best term one can think of — into the dried cake which could then be transported. There is a great deal for us to discuss, the briquetage still remains a problem, the mounds still remain a problem to some extent, although Dr. Gouletquer has clearly shown the growth of debris into a miniature Monte Testaccio in his West African sites. But whether this was the same in Essex perhaps we have still to learn.



BIBLIOGRAPHY

Abbreviations

AB	Annales de Bretagne	LMARG	Lower Medway Archaeological Research Group
ACACS	Annales du Cercle archéologique du Canton de Soignies	LNQ	Lincolnshire Notes & Queries
ACamb	Archaeologia Cambrensis	LRS	Lincoln Record Society
ACant	Archaeologia Cantiana	NA	Norfolk Archaeology
AJ	Antiquaries Journal	NAH	Nationale Arqueologia Hispanica
An	Antiquity	PANSA	Polska Akademia Nauk Sprawozdania Archeologiczne
ANL	Archaeological News Letter	PCNFC	Proceedings of the Cotteswold Nature Field Club
AP	Archeologia Polski	PDNHAS	Proceedings of the Dorset Natural History & Archaeological Society
Arch	Archaeologia	PGA	Proceedings of the Geologists Association
ArchJ	Archaeological Journal	PHFC	Proceedings of the Hampshire Field Club
Antiq	The Antiquary	PPS	Proceedings of the Prehistoric Society
ASAB	Annales de la Société d'Archéologie de Bruxelles	PPSEA	Proceedings of the Prehistoric Society of East Anglia
ASEB	Annales de la Société d'Emulation de Bruges	PRAI	Proceedings of the Royal Archaeological Institute
BMAH	Bulletin des Musées Royaux d'Art et d'Histoires	PRS	Pipe Roll Society
BMSAB	Bulletins et Memoires de la Société d'Anthropologie de Bruxelles	PSAL	Proceedings of the Society of Antiquaries of London
Brit	Britannia	PSANHS	Proceedings of the Somerset Archaeological & Natural History Society
BROB	Berichten van de Rijksdienst voor het Oudheidkundig Bodemonderzoek	PSIANH	Proceedings of the Suffolk Institute of Archaeology & Natural History
BSAN	Bulletin de la Société des Antiquaires de Normandie	PTRS	Philological Transactions of the Royal Society
BSPF	Bulletin de la Société préhistorique Française	PUBSS	Proceedings of the University of Bristol Speleological Society
BSPM	Bulletin de la Société polymathique du Morbihan	RA(Hants)	Rescue Archaeology (Hants)
BSSLAP	Bulletin de la Société des Sciences, Lettres et Arts de Pau	RB-P	Revue du Bas-Poitou et des Provinces de l'Ouest
CA	Cornish Archaeology	RCHM(E)	Royal Commission on Historical Monuments (England)
CAGAB	Colchester Archaeological Group Annual Bulletin	RGR 5	Royal Geographical Society Research Series No. 5
CBA RR 10	Council for British Archaeology. Research Report 10	SA	Staffordshire Archaeology
CH	Cheshire Historian	SAJS	South African Journal of Science
CL	Country Life	SAN	Société des Antiquaires de Normandie
CNSS	Congrès National des Sociétés Savantes	SNQ	Sussex Notes & Queries
CPF	Congrès Préhistorique de France	TBAS	Transactions of the Birmingham Archaeological Society
DAG	Dissertationes Archaeologicae Gandenses	TCWAAS	Transactions of the Cumberland & Westmorland Antiquarian & Archaeological Society
EA	The East Anglian	TEAS	Transactions of the Essex Archaeological Society
EDR	Ely Diocesan Records	TGAS	Transactions of the Glasgow Archaeological Society
EJ	Essex Journal	TLCAS	Transactions of the Lancashire & Cheshire Antiquarian Society
EN	Essex Naturalist	TLCHS	Transactions of the Lancashire & Cheshire Historic Society
ER	Essex Review	TWNFC	Transactions of the Woolhope Naturalists Field Club
Germ	Germania	VCH	Victoria County History
Inst Arch	Institute of Archaeology, London	WA	World Archaeology
JAH	Journal of African History	WAM	Wiltshire Archaeological Magazine
JE	Journal of Ecology	WHS	Worcestershire Historical Society
JEPNS	Journal English Place Name Society	WPZ	Wiener Prähistorische Zeitschrift
JIA	Journal of Industrial Archaeology	WZUH(G-S)	Wissenschaftliche Zeitschrift d. Univ. Halle (ges.-sprachwiss. Reihe)
JMV	Jahresschrift für Mitteldeutsche Vorgeschichte		
LAASRP	Lincolnshire Architectural & Archaeological Society Reports & Papers		
LAO	Lincoln Archives Office		
LDAS	Lincolnshire Diocesan Architectural Society		

BIBLIOGRAPHY

1. Abir, M. *The Amoleh* (1970) 119 (see Gray & Birmingham. bib. 133)
2. Akeroyd, A.V. 'Archaeological & historical evidence for subsidence in southern Britain.' *PTRS* (1972) 151-69
3. Allen, A.F. 'Roman remains: Higham marshes.' *ACant* lxxviii (1954) 213
4. Allen, D.F. 'The origins of coinage in Britain: a reappraisal' in *Problems of the Iron Age in southern Britain* (1966) (ed. S.S. Frere)
5. Allison, K.J. 'The lost villages of Norfolk.' *NA* xxxi pt. 1 (1955) 119
6. Anon. *El Epitome* (1960)
7. Anon. 'Monopoly for making salt.' *Antiq* xvii (1888) 33
8. Applebaum, S. 'Roman Britain' in *The Agrarian History of England i* (1972) 2 (ed. H. Finberg)
9. Atkinson, J.C. 'Sites in the marshlands of Costham & Redcar.' *ArchJ* xxxvii (1922) 196
10. Baddeley, W.St.C. 'Salt: its origin, uses & folklore.' *PCNFC* xix, pt. 3 (1918) 205
11. Bailey, C.J. 'An early Iron Age B hearth site indicating salt-working on the north shore of the Fleet at Wyke Regis.' *PDNHAS* lxxxiv (1963) 132-6
12. Baker, F.T. 'The Iron Age salt industry in Lincolnshire.' *LAASRP*, n.s., viii (1960) 25-34
13. Baring Gould, S. 'Mehalah' (quoted) *EN* i (1880) 115
14. Barth, F.E. 'Prähistorische Knecholzschaffungen aus dem Salzberg zu Hallstatt.' *Mitteilungen der Anthropologischen Gesellschaft in Wien* xcvi/xcvii (1967) 254-272
15. Beck, J. 'Salt in Cheshire.' *CH* viii (1958) 1
16. Benton, P. *History of Rochford Hundred* (contains account of Foulness) (1867)
17. Bernus, E. & S. 'Du sel et des dates. Introduction à l'étude de la Communauté d'In Gall et Tegidda-n-Tesemt.' *Etudes Nigériennes* (1972) 31
18. Bertaux, J.P. 'Le briquetage de la Seille.' *Bulletin de l'Académie et de la Société Lorraine des Sciences* xi No. 3 (1972) 168-228
19. Birmingham, D. *Kisama* (in the Mbundi kingdom of Ndongo) Pre-colonial African trade. (1970) 164 (eds. R. Gray & D. Birmingham) (see Abir & Gray)
20. Bloch, M.R. 'History of salt (NaCl) technology.' *Actes du VII^e Congrès International d'Histoire des Sciences* (1953) 221-5
21. Bloch, M.R. 'The Roman Limes — a fortified line for the taxation & protection of the salt trade?' *7th Congress of Roman Frontier Studies* (1967) 186-190
22. Blumstein, N. 'Roman pottery from Hoo.' *ACant* lxx (1956) 273-7
23. Bogaers, J.E. 'Nehalennia en de epigrafische gegevens' *Deae Nehalenniae*. Gids bij de tentoonstelling Nehalennia de Zeeuwse godin. Zeeland in de Romeinse tijd, Romeinse monumenten uit de Oosterschelde. Middelburg. (1971) 33-43
24. Boon, G. *Silchester: the Roman town of Calleva* (1974) 2nd. ed.
25. Bovill, E. *The golden trade of the Moors* (1968)
26. Bradley, R. 'Roman salt boiling near Eastbourne.' *SNQ* xvii (1968) 23
27. Bradley, R. & Lewis, E. 'Excavations at the George Inn, Portsdown.' *PHFC* xxv (1968) 27
28. Bradley, R. & Hooper, B. 'Recent discoveries from Portsmouth & Langstone Harbours: Mesolithic to Iron Age.' *PHFC* (forthcoming)
29. Breuer, J. *La Belgique romaine* (1944)
30. Breuer, J. *Romeinsche België* (1946)
31. Briard, J. 'Le site du Curm en Guissény (Finistère)' *AB* lxxii (1965) 49-72
32. Bridbury, A.R. *England & the salt trade in the later Middle Ages*. Appendices B. & E. (1955)
33. *Brit.* i (1970) 313 (37) f.n. 46-7
34. Brothwell, D.R. *Food in antiquity* (1969)
35. Brown, E. *An Essex island parish* (Foulness) (1927)
36. Brownrigg, W. *The art of making common salt* (1748)
37. Bryant, M. 'The flora of Langstone Harbour & Farlington marshes.' *PHFC* xxiv (1967) 5
38. Bujau, A. 'Les briquetages du sud de la Vendée.' *RB-P* lxxvi 2 (1965) 147-50
39. Bulleid, A. 'Romano-British potteries in mid-Somerset.' *PSAL* xxvi (1914) 137
40. Burchard, H. 'Study on the origin of the salt exploitation of Poland.' *PANSA* iv (n.d.) 180
41. Burchell, J.P.T. 'The shellmound industry of Denmark as represented at Lower Halstow, Kent.' *PPSEA* v pt. 1 (1925) 73-8
42. Burchell, J.P.T. 'A final account of the investigations carried out at Lower Halstow, Kent.' *PPSEA* v pt. 3 (1928) 289-96
43. Burchell, J.P.T. 'The marshes of the Medway estuary in Romano-British times.' *Nature* clxxiii (1954) 832
44. Burchell, J.P.T. 'The Upchurch marshes, Kent.' *ANL* vi No. 4 (1957) 16
45. Bushe Fox, J.P. *Excavations at Hengistbury Head* (1915) 89-91
46. Calkin, J.B. 'The Isle of Purbeck in the Iron Age.' *PDNHAS* lxx (1949) 29-59
47. Callender, M.H. *Roman Amphorae* (1965) 281 Fig. 1
48. Cappon, P. *La couche de cendres de Maran* (1886)
49. Castellanos, J. de. 'Elegias de Varones Ilustres de Indias.' (4 vols) *Biblioteca de la Presidencia de Colombia*. (1955)
50. Cato (234-149 B.C.) *De Re Rustica* X. (ed. Hooper, W.D. & Ash, H.B. 1935)
51. Chaloner, W.H. 'Salt in Cheshire 1600-1870.' *TLCAS* lxxi (1961) 58
52. Chaplin, R.E. & Coy, J.P. 'Cliffe 1961'. *ACant* lxxvi (1961) 205-6

53. Childe, V.Gordon. *The Dawn of European Civilisation* (4th ed) (1947) 116 (trade routes) 195 (the German Bronze Age) 196 (sources of trade)
54. Chocqueel, A. 'Essai de détermination approximative de la densité des populations néolithiques, gauloises et belgo-romaines d'une partie du littoral belge, basé sur les restes d'occupation rejetés par la mer ou découverte en place, sur la rive droite de l'ancienne embouchure de l'Yser.' *ACACS* viii (1938-42) 232-41
55. Chocqueel, A. 'Fouille d'une fosse d'époque belgo-romaine comblée de poteries brisées.' *ACACS* xi (1949) 7-10
56. Chocqueel, A. *Les civilisations préhistoriques et anciennes de la Flandre occidentale d'après l'examen d'objets leur ayant appartenu* (1950)
57. Clarke, D. *Analytical Archaeology* (1968)
58. Cochet, Abbé. 'Des salines et de l'action de la mer sur les côtes de la Haute-Normandie.' *SAN* xix (1851) 255
59. Cole, W. 'The exploration of some Red Hills in Essex with remarks upon the objects found.' *EN* xiv (1905-6) 170-183
60. Collis, J. 'Theoretical & functional interpretations of British coinage.' *WA* iii (1971) 71
61. Colmenares, G. *Fuentes Coloniales para la Historia del Trabajo en Colombia* (1968)
62. Cooper, E.R. 'Old time saltworks in Suffolk.' *PSIANH* xxiv (1940-8) 25
63. Columella (c. A.D. 60) *De Re Rustica* II, IX, 10, (ed. Forster, E.S. & Heffner, E. 1968)
64. Coppens, Y. 'Notice sur les fours à augets de la côte meridionale bretonne et plus spécialement du Morbihan.' *AB* ix 2 (1953) 336-53
65. Coppens, Y. 'Inventaire des stations d'augets morbihanaises.' *AB* lxi 2 (1954) 295-305
66. Cragg, J. *His Diary* (1790). LAO
67. Craig, M. 'Shovelers & Scrapers.' *CL* (1961) 291
68. Critten, I.S. 'The Salt Works' in *The Story of Southwold* (1948) (ed. M.J. Becker)
69. Cross, D.A.E. 'The salt industry of Lymington.' *JIA* ii (1965) 86
70. Crump, W.B. 'Saltways from the Cheshire wiches.' *TLCAS* liv (1939) 84
71. Cumont, G. 'Monnaies trouvées dans les gisements côtiers de La Panne (Flandre Occidentale).' *ASAB* xxi (1907) 73-9
72. Cunliffe, B. 'The Somerset Levels in the Roman period.' in *Rural settlement in Roman Britain* (1966) (ed. C. Thomas) 68-73
73. Cunliffe, B. 'Chalton, Hants. The evolution of a landscape.' *AJ* liii (1973) 173
74. Cunliffe, B. *Iron Age communities in Britain* (1974) 279
75. Daaku, K. & Newbury, C. (see Mefflax, C. bib. 221)
76. Dalton, W.H. 'Geological aspects of the Red Hill problem.' *PSAL* 2nd. s. xxii (1908) 181-2
77. Dalton, W.H. & Miller Christy. 'On two large groups of marsh mounds on the Essex coast.' *TEAS* n.s. xviii (1925) 27-40
78. Darby, H.C. *The draining of the Fens* (1940) Fig. 26.
79. Darby, H.C. *The Domesday geography of eastern England* (1952) Fig. 32.
80. Davies, A.S. 'Salt works in Merioneth.' *ACamb* xcv (1940) 79
81. de Brisay, K. 'Preliminary report on the exploration of the Red Hill at Osea Road, Maldon, Essex.' *CAGAB* xv (1972) 22-43
82. de Brisay, K. 'A further report on the excavation of the Red Hill at Osea Road, Maldon, Essex.' *CAGAB* xvi (1973) 19-36
83. de Brisay, K. 'The excavation of a Red Hill at Peldon, Essex. Report on the first year.' *CAGAB* xvii (1974) 25-42
84. de Fleury, L. 'Les cendres de Nalliers : une fabrique de potasse à l'Illeau : opinion nouvelle.' *RB-P* i (1888) 3-11
85. de la Sauvagère. *Recherches sur la nature et l'étendue d'un ancien ouvrage de Romains appelé communément le briquetage de Marsal* (1740-70)
86. De Laet, S.J. 'Les limites des cités des Ménapiens et des Morins.' *Helinium* i (1961) 20-34
87. De Laet, S.J. *Prehistorische Kulturen in het Zuiden der lage Landen* (1974)
88. de Loë, A. 'La station préhistorique, belgo-romaine et franque de la Panne, commune d'Adinkerke (Flandre Occidentale), note préliminaire.' *BMSAB* xx (1901-2) 1-8
89. de Loë, A. 'Découverte d'un ancien ouvrage en bois dans les travaux de creusement du port de Zeebrugge.' *BMAH* iii (1903-4) 84-6
90. de Loë, A. 'Fouilles à la Panne.' *BMAH* vi (1906) 3-6
91. de Loë, A. 'Continuation des fouilles de la Panne.' *BMAH* viii (1908) 35-9
92. de Loë, A. *Belgique Ancienne. Catalogue descriptif et raisonné II : Les Ages du Métal* (1931)
93. de Loë, A. *Belgique Ancienne. Catalogue descriptif et raisonné III : La période romaine* (1937)
94. de Pellichy, G. 'Note sur l'ancien ouvrage en bois découvert au port de Zeebrugge.' *ASEB* lv (1905) 177-81
95. Dewar, H.S.L. & Seaby, W.A. 'A Roman counter-sunk handled jar from Huntspill.' *PSANHS* xciv (1950) 161-4
96. Dodwell, B. *Feet of Fines for Norfolk & Suffolk*. *PRS* n.s. xxxii (1958) 112-3, No. 230
97. Dufournet, P. 'L'entrepôt des sels du Regonfle-sous-Bassy. Haute Savoie.' *CNSS* xciii (1968) 215
98. Dumon Tak, A.M. & van den Berg, J. *Westerheem* xxii (1973) 242-7 Fig. 4.
99. Dundonald, Earl of. *The present state of the manufacture of salt explained* (1785)
100. East Anglian, The. *EA* iv (1869) 69
101. Edeine, B. 'La technique de fabrication du sel marin protohistorique à Lion-sur-Mer, Calvados.' *BSPF* lix (1962) 92-7
102. Edeine, B. 'La technique de fabrication du sel marin dans les sauneries protohistoriques.' *AB* lxxvii (1970) 95-133
103. Ely Diocesan Records. G/3/27 f.42
104. Ely Diocesan Records. G/3/27 f.232
105. Esteve-Guerrero, M. 'Fabrica de salazón romana en la Algaída.' *NAH* i (1952) 126
106. Evans, J. 'Archaeological horizons of the Kent marshes.' *ACant* lxvi (1953) 116, 112
107. Fagan, B. & Yelland, J. *Azania* iii (1968)
108. Francis, A.G. 'On subsidence of the Thames estuary since the Roman period at Southchurch, Essex' *EN* xliii (1932) 151-70
109. Farrands, R.H. 'Essex Red Hills in the Hamford Water area.' *CAGAB* ii (1959) 25-7
110. Farrar, R.A.H. 'A note on the prehistoric & Roman salt industry in relation to the Wyke Regis site, Dorset.' *PDNHAS* lxxxiv (1963) 137-44
111. Farrar, R.A.H. 'The techniques & sources of Romano-British black burnished ware.' *CBA RR* 10 (1973) 67-103
112. Faure, M. 'Inventaire des évaporites du Niger.' (Mission 1963) 'Rapport Confidentiel' (1963) B.R.G.M. 62
113. Favorel, P. 'La région de la Panne à l'époque préromaine, romaine et franque.' *Handelingen van de Koninklijke Geschied- en Oudheidkundige Kring van Kortrijk* xxxii (1961-2) 4-223
114. Fiennes, Celia. *Thro' England on a side-saddle in the time of William & Mary*. Diary of Celia Fiennes, 1677.
115. Flinders Petrie, W. (Kelp suggested as origin of Red Hills — discussion.) *PSAL* 2nd. s. xxiii (1910) 88-96
116. Fox, C. 'Salt works at Hook, Warsash.' *PHFC* xiii (1935) 105
117. Frank, Tenney. *An economic survey of ancient Rome* ii (1933-40) 325-6
118. Frankenstein, S. (see Rowlands, M. bib. 302)
119. Furley, R. 'An outline of the history of the Romney Marsh.' *ACant* xiii (1880) 182
120. Gabet, C. 'Le centre d'exploitation du sel Port-Coutard.' *Celticum* xii (1964) 231-5
121. Gabet, C. 'Le site à sel de la Petite Aiguille.' *Roccaforsis* 2nd. s. No. 2 (1973) 38-72
122. Gidon, F. 'Les anciennes laveries de sable salée de la basse Normandie.' *BSAN* xi (1932) 339-45
123. Giot, P.R. 'Le briquetage de Kerlavos, Trégastel, Côtes-du-Nord.' *AB* (1965) 87-94
124. Goodyear, F.H. (Salt glaze and slag on salt-making sites) *Archaeological Site Science* lxxvi (1971) London
125. Gouletquer, P.L. & Tessier, M. (see Tessier bib. 338)
126. Gouletquer, P.L. & Pinot, J.P. 'Les briquetage de Trégor.' *AB* lxxv (1968) 142-8
127. Gouletquer, P.L. 'Les briquetages à piliers trifurqués des anciens golfes picton et santion.' *AB* lxxvi (1969) 120-37
128. Gouletquer, P.L. 'Les briquetages armoricains : technologie protohistorique du sel en Armorique.' *Travaux du Laboratoire d'Anthropologie Préhistorique de la Faculté des Sciences de Rennes*. (1970)
129. Gouletquer, P.L. 'Les briquetages de l'Age de Fer sur les côtes suds de la Bretagne.' *BSPF* (Etudes et Travaux) lxxvii (1970) 399-411
130. Gouletquer, P.L. 'Briquetages et sauneries.' *AB* lxxviii (1970) 135-52
131. Gouletquer, P.L. 'Les bouilleurs de sel.' *Science et Avenir* No. 328 (1974) 572-7
132. Gouletquer, P.L. 'The development of salt-making in prehistoric Europe.' *EJ* viii No. 1 (1974) 2-14
133. (Eds.) Gray, R. & Birmingham, D. *Pre-colonial African trade* (1970)
134. Green, C. 'East Anglian coast-line levels since Roman times.' *An* xxxv (1961) 21-8
135. Grey, E. *SAJS* xli (1945) 45
136. Haarnagel, W. 'Probleme der Küstenforschung im südlichen Nordseegebiet.' *Schriftenreihe der Provinzialstelle f. Marschen und Wurtenforschung*. (1940-57) 1-6
137. Haarnagel, W. 'Die spätbronze früheisenzeitliche Gehöftsiedlung Jemgum bei Leer auf dem linken ufer der Ems.' *Die Kunde (neu folge)* 8/1-2, (1957) 37 et seq
138. Haarnagel, W. 'Die Marschen im deutschen Küstengebiet der Nordsee und ihre Besiedlung.' *Berichte zur deutschen Landeskunde*. 27/2 (1961) 203-19
139. Haarnagel, W. 'Die Grabung Feddersen-Wierde und ihre Bedeutung für die Erkenntnisse der bauerlichen Besiedlung im Küstengebiet im dem Zeitraum vom 1. Jahrhundert vor bis 5. Jahrhundert n. Chr.' *Zeitschrift f. Agrargeschichte und Agrarsoziologie*. 10/2 (1962) 145-57
140. Haarnagel, W. 'Die Untersuch einer spätbronze-alteisenzeitlichen Siedlung in Boomborg/Hatzum, Kreis Leer in den Jahren 1963 und 1964 und ihre vorläufiges Ergebnis.' *Neue Ausgrabungen in Niedersachsen* 2 (1965)
141. Haarnagel, W. 'Die historische Entwicklung der Forschung, insbesondere der Wurtener Wafenforschung im Küstengebiet der Nordsee.' *Festschrift z. 70. Geburtstag von K.H. Jacob-Friesen*. (1965) 243 et seq.
142. Haarnagel, W. 'Die prähistorischen Siedlungsformen im Küstengebiet der Nordsee.' *Erdkundliches Wissen*. xviii (1968) 67-79
143. Haarnagel, W. 'Die Siedlungen im Nordsee-küstengebiet.' *Westfälische Geog. Studien* xxv (1971) 90-112
144. Habington, T. 'Survey of Worcestershire.' *WHS* (1899) (ed. J. Amphlett)
145. Hallam, H.E. 'Salt-making in the Lincolnshire Fenland during the Middle Ages.' *LAASRP* n.s. viii (1960) 85-112
146. Hallam, H.E. 'Settlement and society.' map 6. Cambridge. (1965)
147. Hallam, S.J. 'The Romano-British salt industry in south Lincolnshire.' *LAASRP* n.s. viii (1960) 35-75
148. Hallam, S.J. 'Villages in Roman Britain — some evidence.' *AJ* xlv (1964) 19-32
149. Hallam, S.J. 'Settlement round the Wash' in J.I. Bromwich, S.J. Hallam & P. Salway. — *The Fenland in Roman times* (ed. C.W. Phillips) (1970)
150. Harding, D. *The Iron Age in lowland Britain* (1974)
151. Hassall, M. (see Hodder & Hassall bib. 157)
152. Hazzledine Warren, S. & Reader, F.W. 'Investigation of a marsh mound for the Morant Club.' *TEAS* n.s. xviii (1925) 27-40
153. Helderman, F.J. *Westerheem* xvi (1967) 186-8
154. Hell, M. 'Die neolithischen Funde vom Dürrnberg bei Hallein. Ein Beitrag zur ältesten Salzgewinnung.' *WPZ* cxii (1933)
155. Henshall, A.S. 'Textiles & weaving appliances in prehistoric Britain.' *PPS* x (1950) 135
156. Hodder, I. *Models in archaeology* (1971) 895 (ed. D. Clarke)
157. Hodder, I. & Hassall, M. 'The non-random spacing of Romano-British walled towns.' *Man* n.s. vi (1971) 391
158. Hofman, E. & Morton, F. 'Der prähistorische Salzbergbau auf dem Hallstätter Salzberg.' *WPZ* lxxxii (1928)

159. Hogg, A.H.A. 'Some applications of surface fieldwork' in *The Iron Age and its hill forts* (ed. D. Hill & M. Jesson) 105
160. Holden, E.W. 'Salt works at St. Botolphs.' *SNQ* xxiii (1962) 304
161. Holden, E.W. 'Possible Medieval salt pans at Pett Level.' *SNQ* xxv (1962) 301-4
162. Holinshed's Chronicle 1577. iv (1807) 255
163. Hooper, B. (see Bradley bib. 28)
164. Hopkins, A. *An economic history of West Africa* (1973) 47
165. Houghton, F.T.S. 'Saltways.' *TBAS* liv (1929-30) 8-10
166. Hughes, M. 'Excavations at Brownwich Farm, Titchfield, 1971.' *RA(Hants)* i (1973) 5-28
167. Hume, I.N. 'Romano-British potteries on the Upchurch marshes.' *ACant* lxxviii (1954) 72-90
168. Hutchings, R.J. 'Romano-British industrial mound at Cliffe.' *ACant* lxxxii (1966) liv
169. Hutchinson, W. *History of the county of Cumberland* II (1794)
170. Jasmin, P. (Tolmer, L'abbé) in 'Textes sur les salines normandes au XVII^e siècle: sal sincerum et sal purpureum: les routes du sel.' *BSAN* xlix (1946) 425
171. Jeffers, D. 'Structure of the past.' *CL* (1953) 1151
172. Jelgersma, S. 'Holocene sea level changes in the Netherlands.' *Mededelingen van de Geologische Stichting* serie C vi (1961) 7
173. Jenkins, G. *Traditional country craftsmen* (1965) 151
174. Jenkins, J.H.B. 'Chemical examination of Red Hill material.' *PSAL* 2nd. s. xxii (1965) 182-6
175. Jessup, R.F. 'Romano-British industrial site.' *ACant* xlii (1930) xlviii
176. Jodlowski, A. 'The problem of salt exploitation in the vicinity of Cracow in ancient times & in the early Middle Ages.' *AP* xiv (1969) 162
177. Jodlowski, A. 'Eksploracja soli na terenie Malopolski w Pradziejach I we Wczesn sredniowieczu.' *Studia i materialy do dziejow zup solnych w Polsce* iv (1971)
178. Jodlowski, A. 'Salt working in Little Poland in prehistory and in the Early Middle Ages.' *Institut d'archaeologie polonaise de l'Université de Cracovie*. (1971) 63-5
179. Johnson, A. & Salisbury, E. 'Translation of Norfolk Domesday.' *VCH Norfolk* ii (1906) 39
180. Jorns, W. 'Zur saltzgewinnung in Bad Nauheim während der Spätlatenezeit.' *Germ* xxvix (1960) 178
181. Jorns, W. 'L'industrie du sel aux sources de Bad Nauheim à la fin de la Tène et à l'époque carolingienne.' *Ogam* xiv (1962) 237
182. Kelly, D.B. 'Upchurch: Slayhills marsh.' *ACant* lxxvii (1963) 201-3
183. Kelly, D.B. 'Eastchurch.' *ACant* lxxxii (1967) 291-2
184. Keune, J.B. *Jahrbuch der Gesellschaft für lothringische Geschichte und Altertumskunde* xliii (1901) 366 et seq.
185. Kondo, Y. *Ancient salt making site at Ubé, Japan* (1943) (in Japanese — illust.)
186. Lacroix, B. *La fontaine salée à l'aube du premier Age du Fer* (1966) 7-43
187. Laing, L. 'A Greek tin trade with Cornwall?' *CA* viii (1969) 15-23
188. Lambrechts, P. 'De streek tussen Noordzee en Schelde tijdens de Romeinse overheersing.' *Kultureel Jaarboek voor de Provincie Oost-Vlaanderen*. (1951) v.2. 21-42. — *Oostvlaams Verbond van de Kringen voor Geschiedenis, voorlichtingsreeks* nr. 15. Gent.
189. Laver, H. 'Report on Red Hills.' *PSAL* 2nd. s. viii (1880) 269-70
190. Laver, H. 'Salt works in Essex.' *ER* lii (1943) 184
191. Lawrence, C.F. *Bygone Middlewich* (1921)
192. Lejards, J. 'L'industrie du sel sur les côtes du Morbihan: fours et stations d'augets dans la commune de Sene.' *Soc. Sav. Rennes*. (1968) 325-37
193. Leland's *Itinerary* (1535-43) (ed. Toulmin Smith, 1908): Droitwich, II 93-4: Northwich, Nantwich, III 4: Cheshire Pits, V 6: Droitwich, V 10.
194. Lewis, I. (ed.) *Islam in tropical Africa* (1960)
195. Liddell, D. 'Salt from the Solent.' *CL* (1957) 918
196. Lilly, D. & Usher, G. 'Roman sites in the north Somerset levels.' *PUBSS* xiii 37
197. *LAO* 34/427. KR. 87 M.3.
198. *LRS* 18 27 *LAO*
199. Linder, E. 'The Red Hills of Canvey Island.' *EN* xxvi pt. 3 (1938-9) 133-60
200. Linder, E. 'The Red Hills of Canvey Island.' (supplementary note.) *EN* xxvi pt. 5 (1939-40) 270-2
201. Linder, E. 'The Red Hills of Canvey Island in relation to subsidence in the Thames estuary.' *PGA* li pt. 3 (1940) 283-90
202. Linder, E. 'The Red Hills of Canvey Island.' (supplement) *EN* xxvii pt. 2 (1940-1) 48-63
203. Linder, E. 'Notes on various objects found in the Red Hill excavation at Canvey Island.' *EN* xxvii pt. 3 (1940-6) 98-101
204. Linder, E. (exhibit of relics from Canvey Island Red Hill) *EN* xxvii pt. 3 (1941) 120
205. Loppens, K. *La région des dunes de Calais à Knocke* (1932)
206. L.M.A.R.G. 'Investigations at Hoo.' *ACant* lxxx (1965) 273
207. L.M.A.R.G. 'Investigations at Chetney Island.' *ACant* lxxx (1965) 273
208. L.M.A.R.G. 'Investigations at Stoke.' *ACant* lxxx (1965) 274
209. L.M.A.R.G. 'Briquetage & pottery finds at Bedlams Bottom.' *ACant* lxxxii (1966) lix
210. Lukis, F.C. 'Dymchurch, Kent & the Channel Islands.' *ArchJ* vii (1850) 175
211. Maglione, G. *Géochimie des évaporites et silicates en milieu continental confiné: les dépressions interdunaires de Tchad, Afrique*. Thèse de Doctorat d'Etat ès Sciences Naturelles. Université de Paris. (1974)
212. Marien, M.E. *Oud-België. Van de eerste landbouwers tot de komst van Caesar*. (1952)
213. Marien, M.E. 'Tribes & archaeological groupings of the La Tène period in Belgium: some observations.' in *The European Community in later Prehistory: studies in honour of C.F.C. Hawkes* (eds. J. Boardman, M.A. Brown & T.G.E. Powell) (1971) 211-41
214. Mariette, H. 'Une site protohistorique de production du sel à Etaples, Pas de Calais.' *CPF* xix (1969) 284
215. Mariette, H. 'Matériel de production du sel à l'Age du Fer dans la Boulonnais, Pas de Calais.' *Actes du VII^e Congrès International des Sciences Préhistoriques et Protohistoriques, Prague* (1971) 807-11
216. Matthias, W. 'Das mitteldeutsche Briquetage formen Verbreitung und Verwendung.' *JMV* xxxv (1961) 119-225
217. Matthias, W. *Die Salzherstellung — ein bedeutender Wirtschaftsfaktor der frühbronzezeitlichen Bevölkerung der mittleren Saale* (forthcoming)
218. Maudson Grant, S. 'Ancient pottery kilns.' *LNQ* viii no. 62 (1904) 33-8
219. Mauny, R. *Tableau géographique de navigation l'ouest Africain au Moyen Age* (1961)
220. Mayhew, A. *Rural settlement & farming in Germany* (1973)
221. Meillassoux, C. *The development of indigenous trade & markets in West Africa* (1971) 93-4
222. Miles, A. 'Funtun Marsh salt-panning site.' *ACant* lxxx (1965) 260-5
223. Miles, A. 'A Romano-British industrial site.' *ACant* lxxxii (1966) lix
224. Miles, A. & Syddell, M.J.E. 'A Romano-British industrial site at Cooling.' *ACant* lxxxii (1967) lv
225. Miles, A. 'Romano-British salt-panning hearths at Cliffe.' *ACant* lxxxiii (1968) 272-3
226. Miles, W.A. *The Deverel Barrow* (1826)
227. Miller Christy 'Exploration of the Red Hills.' *EN* xiv (1906) 193-204
228. Miller Christy & Reader, F.W. 'The opening of a mound at Chadwell St. Mary.' *TEAS* n.s. xviii (1914) 218-23
229. Miller Christy & Dalton, W.H. 'On two large groups of marsh mounds on the Essex Coast.' *TEAS* n.s. xviii (1925) 27-40
230. Miller Christy. 'The history of salt-making in Essex.' *EN* xxvii (1940-1) 193-203
231. Miracle, M. 'Plateau Tonga entrepreneurs.' *J. Rhodes-Livingstone Museum* xxvi (1959)
232. Modderman, P.J.R. 'De boeren en zoutjieders in het kustgebied 400-0.' in *Panorama der prehistorie, de jongste opgravingen in Nederland*. (1960) 30-1
233. Modderman, P.J.R. 'De Spanjaardberg; voor- en vroeghistorische boerenbedrijven te Santpoort.' *BROB* x-xi (1960-1) 210-62
234. Morant, P. 'Barrow Hills, Malden.' (also history of records from 1584 & many useful references) *TEAS* n.s. xviii pt. 1 (1925) 40-53
235. Morton, F. 'Analyse eines Grunsalzes aus dem Hallstätter Salzberg.' *WPZ* (1930) 138
236. Morton, F. 'Zur Frage de Grubenarbeit im Hallstätter Salzbergwerk.' *AAust* ii (1949) 68
237. Morton, F. 'Ein neuer Tragsack für Salz aus Halstatt.' *WPZ* xxvi (n.d.) 157
238. Muggeridge, F. 'Romano-British pottery kilns & cemetery.' *ACant* xiv (1933) xliii
239. Murray, P. 'Salt boiling at Stafford.' *SA* i (1972) 11
240. McIntire, W.T. 'Salt pans of the Solway.' *TCWAAS* xlii (n.d.) 1
241. Nash, T. *Collections for the history of Worsceshire* ii I (1781) 299-300
242. Neilson, G. 'Annals of the Solway until A.D. 1307.' *TGAS* n.s. iii pt. 2 (1899)
243. Nenquin, J. 'Salt: a study in economic prehistory.' *DAG* vi (1961)
244. Nenquin, J. *Salt in prehistoric Europe* (1964)
245. O'Cook, M.A. 'A Romano-British site near Decoy Farm, High Halstow.' *ACant* lxxxiv (1969) 255-7
246. Ordnance Survey *ACant* lxxx (1965) 278
247. Owen, A.E.B. 'Hafdie: a Lindsey name & its implications.' *JEPNS* (in press)
248. Paepé, R. 'La plaine maritime entre Dunkerque et la frontière belge.' *Tijdschrift van de Belgische Vereniging voor Aardrijkskundige Studies* xxix (1960) 47-66
249. Pales, L. 'Les sels alimentaires, sels minéraux. Problèmes des sels alimentaires en A.O.F.' *Edition Mission Anthropologique de l'A.O.F.* (1950) 25-8
250. Parkin, C. *Topographical history of Freebridge Hundred, King's Lynn* (1772) 266
251. Payne, G. *ACant* xxi (1895) xlvii. xxix (1911) lxxvi
252. Peacock, D.P.S. 'A petrological study of certain Iron Age pottery from western Britain.' *PPS* xxxiv (1968) 414
253. Peacock, D.P.S. 'Romano-British salt working site at Trebarveth, St. Keverne.' *CA* viii (1969) 47-65
254. Peacock, D.P.S. 'A contribution to the study of Glastonbury ware from south-western Britain.' *AJ* xxxix (1969) 41-61
255. Perraton, C. 'Salt marshes of the Hampshire/Sussex border.' *JE* xvi (1953) 240-7
256. Petrie, W.F. (see Flinders Petrie, W. bib. 115)
257. Philp, B.J. 'Romano-British west Kent, A.D. 43-100.' *ACant* lxxxvi (1963) 74-82
258. Piedrahita, D.F. de 'Historia General de las Conquistas del Nuevo Reino de Granada y Fundacion de Bogotá. Biblioteca Popular de Cultura Colombiana. Editorial ABC. Bogotá.
259. Pittioni, R. 'Prehistoric Copper Mining in Austria.' London. *Inst. Arch.* vii (1951) 16
260. Polti, J. 'Les salines royales d'Arc-et-Senans.' *Monuments Historiques de la France* (1938) 17
261. Porteres, R. 'Les sels alimentaires. Cendres d'origine végétale. Sels du cendres comme succédanés du chlorure de sodium alimentaire et catalogue des plantes salifères en Afrique intertropicale et à Madagascar.' *Edition Mission Anthropologique de l'A.O.F.* (1950)
262. Pinot, J.P. (see Gouletquer, bib. 126)
263. Poncelet, L. 'La briquetage de la Seille.' *Bulletin de l'Association des amis de l'Archeologie Mosellane* (1967)
264. Ponsich, M. & Tarradell, M. *Garum et industries antiques de salaison dans la Méditerranée occidentale* (1965)
265. Quilgars, H. 'La question des 'augets de terre' découvertes sur les côtes de la Bretagne méridionale.' *BSPM* (1902) 191-202
266. Rahir, E. 'L'Age du Fer a La Panne. Une fabrique de poteries.' *BMSAB* xlii (1927) 14-67
267. Rahir, E. *Vingt-cinq années de recherches, de restaurations et de reconstitutions* (1928)
268. Rahir, E. 'La Panne. Fabrication de poteries. Habitats et sépultures de l'Age du Fer. Romanisation des habitants de l'Age du Fer.' *BMSAB* xlv (1930) 10-82
269. Rainbird Clarke, R. *East Anglia* (ref. Wollerton & Runcion Holme, Norfolk) (1960)

270. Rastell, T. 'An account of the salt waters of Droitwich.' *PTRS* (1678)
271. Ravenscroft, W. 'Old Lymington salterns.' *PHFC* vii (1914-16) 81
272. Ray, J. *A collection of English words not generally in use* (1674) (in B.M.)
273. Reader, F.W. 'Summary of the Report of the Red Hill Exploration Committee.' *PSAL* 2nd. s. xxi (1907) 440-1
274. Reader, F.W. 'Report on the Red Hills Exploration Committee.' *PSAL* 2nd. s. xxii (1908) 164-90
275. Reader, F.W. 'Additional remarks & comparison of objects from other localities.' *PSAL* 2nd. s. xxii (1908) 190-207
276. Reader, F.W. 'Report to Red Hill Committee. Further details on Goldhanger & Canewdon.' *PSAL* 2nd. s. xxiii (1910) 66-88
277. Reader, F.W. 'The Red Hills & salting mounds of Essex.' *PWAS* xvi (1911) 28-39
278. Reader, F.W. 'Tanks & mounds at Tolleshunt d'Arcy.' *TEAS* n.s. xviii pt. 1 (1925) 53-6
279. Reader, F.W. & Hazzledine Warren, S. 'The investigation of a marsh mound for the Morant Club.' *TEAS* xviii n.s. (1925) 27-40.
280. Reader, F.W. & Miller Christy. 'The opening of a mound at Chadwell St. Mary.' *TEAS* n.s. xiii (1914) 218-23
281. Reinhardt, W. 'Studien zur Entwicklung des ländlichen Siedlungsbildes in dem Seemarschen der Ostfriesischen Westküste.' *Probleme der Küstenforschung im den südlichen Nordseegebiet* viii
282. Richardson, K. 'The excavation of Iron Age villages on Boscombe Down west.' *WAM* liv (1951) 123
283. Richmond, I.A. & Crawford, O.G.S. 'The British section of the Ravenna Cosmography.' *Arch xliii* (1949) 18, 44
284. Riehm, K. 'Vorgeschichtliche Salzgewinnung an Saale und Seille.' *JMV* xxxviii (1954) 112-56
285. Riehm, K. 'Die Red Hills der englischen Küste und ihre Problematik.' *JMV* xliii (1959) 235-8
286. Riehm, K. 'Prehistoric salt boiling.' *An* xxxv (1961) 181-91
287. Riehm, K. 'Solbrunnen und Salzwirkersiedlungen in ur- und frühgeschichtlichen Halle.' *WZUH (G-S)* x/3 (1961) 849-58
288. Riehm, K. 'Werkanlagen und Arbeitsgeräte urgeschichtlicher Salzsieder.' *Germ* xi (1962) 360
289. Riehm, K. & Nughisch, K. 'Der Heinrich-Heine-Felsen in Halle/S. als spätbronze- und früheisenzeitliche Siedlungsstätte.' *WZUH (G-S)* xii/11 (1963) 923-42
290. Riehm, K. 'Genormtes Formsaltz aus dem urgeschichtlichen Salzbergbau in Hallstatt.' *AAust* xxxviii (1965) 361-74
291. Riehm, K. 'Aufschubreiche Neufunde im urgeschichtlichen Salziedergebiet der Sudbretagne.' *JMV* liii (1969) 361-74
292. Riehm, K. 'Neufund früheisenzeitlicher Salzformen in Halle (Saale).' *JMV* lvi (1972) 195-201
293. Riehm, K. 'Vom Solquell zum Solbrunnen. Eine topographische Studie zur Gründungsgeschichte der Stadt Halle.' *JMV* lvii (1973) 197-209
294. Roach-Smith, C. *Collectanea Antiqua* vi (1848-80) 184
295. Roach-Smith, C. 'Medway estuary.' *PSAL* 2nd. s. ii (1863) 238
296. Robson, J. 'Notes on the discovery of vestiges of the ancient salt-works at Northwich, Cheshire.' *ArchJ* xxii (1865) 77-8
297. Rodwell, W.J. 'Notes on Canvey Island.' *TEAS* 3rd. s. i pt. 4 (1965) 265
298. Rodwell, W.J. 'The excavation of a Red Hill on Canvey Island.' *TEAS* 3rd. s. ii pt. 1 (1966) 14-33
299. Rodwell, W.J. 'Note on three Red Hill sites on Canvey Island.' *TEAS* 3rd. s. ii pt. 2 (1968) 158
300. Rodwell, W.J. 'Note on two Red Hill sites on Canvey Island.' *TEAS* 3rd. s. ii pt. 3 (1970) 329-30
301. Roblin, M. 'Salines et fontaines salées. Leur influence sur l'empement et la fixation de l'habitat en France au cours de l'Antiquité et du haut Moyen Age.' *CNRS* (1968)
302. Rowlands, M. 'The archaeological interpretation of prehistoric metal working.' *WA* iii (1971) 210-14
303. Rowlands, M. & Frankenstein, S. 'Social organisation in the Iron Age of central Europe.' *PPS* (Paper presented Oct. 1974) unpublished
304. *PRAI* (1850) p. xliii. Note: Hand-brick in church foundations at Wainfleet, Lincolnshire.
305. *RCHM(E)* Inventory of the historical monuments in the county of Dorset ii pt. 3 (1970) 495, 522, 523, 593
306. *RCHM(E)* Essex iii Red Hills noted: pp. 8, 94, 107, 134, 147, 148, 176, 191, 219, 221, 231
307. Rudkin, E.H. & Owen, D.M. 'The Medieval salt industry in the Lindsey marshland.' *LAAS* n.s. viii R.P. (1960) 76-84
308. Rutot, A. 'Sur les antiquités découvertes dans la partie belge de la Plaine Maritime et notamment sur celles recueillies à l'occasion du creusement du nouveau canal de Bruges à la mer.' *BMSAB* xxi (1902-3) 2
309. Sahlins, M. in *The relevance of models for social anthropology* (1965) (ed. M. Benton)
310. Saule, M. 'L'exploitation du sel, la céramique de l'Age du Bronze et de l'époque Gallo-Romaine à Saliés-de-Bearn.' *BSSALP* 4th. s. v (1970) 29-40
311. Saule, M. 'Découverte de poteries à Saliés-de-Bearn.' *BSSALP* 3rd. s. xxvi (1965) 5-14
312. Simon, F.P. *Noticias Historiales de las Conquistas de Tierra Firme en las Indias* (1882-92)
313. Skole, J. *The road to Timbuktu* (1956)
314. Smith, A.H. 'English Place-name elements.' *JEPNS* ii. xxvi (1956)
315. Smith, H.P. 'The occupation of the Hamworthy Peninsular in the Late Celtic & Romano-British periods.' *PDNHAS* lii (1931) 96-130
316. Smith, R. 'Park Brow. The finds & foreign parallels.' *Arch* lxxvi (1927) 14-29
317. Smith, R.A. 'The Essex Red Hills as salt-works.' *PSAL* 2nd. s. xxx (1917-8) 36-53
318. S.P.C.K. Publication. *Salt-making in India* (salt soil) (1850-80) 286-7 & 294-6
319. Soula, L. 'Les sels alimentaires, sels du Manga (Niger). La Thénardite de Maine-Soraa.' *Edition Mission Anthropologique de l'A.O.F.*
320. Springer, A. *Die Salzversorgung der eingeborenen Afrikas vor der neuzeitlichen europäischen Kolonisation.*
321. Spurrell, F.J.C. 'Early sites & embankments on the margins of the Thames estuary.' *ArchJ* xlii (1885) 269
322. Sorby, C. 'On the salinity of sea water along the Essex coast.' *EN* xiv pt. 7 (1906) 235-6
323. Stonehouse, J. 'Salt & its manufacture in Cheshire.' *TLCHS* v (1853) 100
324. Stopes, H. 'The salting mounds of Essex.' *ArchJ* xxxvi (1879) 369-72
325. Stukeley, W. *Itinerarium Curiosum* v (1724)
326. Sumner, H. *Earthworks of the New Forest* (1917)
327. Surtees, R. *History & Antiquities of the County Palatine of Durham* iii (1823) 150 (sites at Costham & Redcar)
328. Sutton, G. *Smoke across the fell* (1947)
329. Sutton, J. & Robert, A. 'The Uvinza salt industry.' *Azania* iii (1968) 45
330. Swinden, H. *The History of Great Yarmouth* (1772) 549
331. Swinnerton, H.H. 'The prehistoric pottery sites of the Lincolnshire coast.' *AJ* xii (1932) 239-53
332. Swinnerton, H.H. *The earth beneath us* (1955) 65, p1 IX. 130-1, 134-6
333. Switsur, V.R. 'Report on the radiocarbon dating of the Red Hill at Osea Road, Maldon, Essex.' *CAGAB* xvii (1974) 43-4
334. Tarradell, M. (see Ponsich & Tarradell, bib. 264)
335. Tavernier, R. & Ameryckx, J. *Atlas van België*. Blad 17 (Kust, Duinen, Polders) (1970)
336. Tessier, M. 'Sites côtiers de l'Age du Bronze du Pays de Retz, Loire Atlantique.' *AB* lxxii (1965) 75-85
337. Tessier, M. & Gouletquer, P.L. 'Le four à augets de la Frenelle, La Plaine-sur-Mer, Loire Atlantique.' *AB* lxxiii (1966) 56-65
338. Tessier, M. 'Découverte d'un nouveau briquetage à Préfaillies, Loire Atlantique.' *AB* lxxiv (1967) 100-6
339. Tessier, M. 'La station du Calais; Saint-Michel-Chef-Chef, Loire Atlantique.' *AB* lxxv (1968) 138-41
340. Thompson, F.H. *Roman Cheshire* (1965) 94-6, Fig. 27, pls. 43-6.
341. Thompson, M.W. 'A group of mounds on Seasalter Level, near Whitstable, & the Medieval embanking in this area.' *ACant* lxx (1956) 44-67
342. Thompson, P. *The History of Boston* (1856)
343. Trollope, Bishop. 'British hut circles in Tetney.' *LDAS* xiv (1876)
344. Usher, G. (see Lill, bib. 196)
345. Van Den Abeelen, G. 'Courtrai et Rome. Réflexions après de grandes découvertes.' *Les Etudes Classiques* xxxi (1963) 3-33
346. van den Berg, *Westerheem* xvii (1968) 170 & Fig. 20
347. van den Berg, (see Dumon Tak, bib. 98)
348. van Es. 'Friesland in Roman times.' *BROB* xv/6 (1965-6) 37-68
349. van Giffen, A.E. 'Der Warf in Ezinge Provinz Gronigen, Holland, und seine westgermanischen Häuser.' *Germ* xx/1 (1936)
350. van Giffen, A.E. 'Die frühgeschichtlichen Marschenfeldungen die Terpen oder Warfen.' *Jahrbuch d. Manner vom Morgenstern*. xxxvi (1955)
351. Varro, (116-27 B.C.) *Rerum Rusticarum*. (ed. Hooper, W.D. & Ash, H.B. 1935) I. lxiv
352. Vattisina, J. 'Long distance trade routes in African history.' *JAH* iii (1962) 3, 374
353. Vawdrey, B. le. *PSAL* 1st. s. iv (1856-9) 244-6
354. Verhulst, A. *Het Landschap in Vlaanderen in historisch perspectief* (1964)
355. V.C.H. *Worcestershire* i (1901) 7 & 17
356. V.C.H. *Worcestershire* iii (1913) 72-3
357. V.C.H. *Hampshire* v (1912) 471
358. V.C.H. *Norfolk* ii (1906) 39
359. Waldecker, J. 'Sel et salines en Afrique.' *Journal Institut Problème Congolés*. lxxv-vi (1967) 9
360. Ward, J.D.U. 'East Anglian salterns.' *CL* (1957) 1104
361. Warren, S.H. & Reader, F.W. (see Hazzledine Warren & Reader, bib. 152)
362. Watkins, W.T. *Roman Cheshire* (1886) 313
363. Wheeler, W.H. 'The fens of south Lincolnshire.' *LAASRP* xx (1896) 24
364. Whitlev, Dr. 'Saltways of the Droitwich district.' *TBAS* xl (1926) 1-16
365. Wickham, H. 'On Roman pottery from Hoo.' *ACant* x (1876) 75-6
366. Will, E. 'Le sel des Morins et des Ménapiens' in *Hommage à A. Grenier* (1962) 1649-57
367. Wilmer, H. 'Late Celtic remains on the coast of Brittany comparable with the Red Hills. (Quiberon)' *PSAL* 2nd. s. xxii (1908) 207-14
368. Wilmer, H. 'The Red Hills of Essex.' in *The Great Eastern Railway Magazine*. see *ER* xxiv (1915) 109-10
369. Wilmer, H. & Reader, F.W. 'Report on the Red Hills Exploration Committee — 1906-7.' *PSAL* xxii (1907) 164-214
370. Wind, C. *Westerheem*. xix (1970) 252-5
371. Wood, E.S. *Collins Field Guide to Archaeology* (1963) 196. (notes on Essex, Kent, Lincolnshire.)
372. Wood, J.G. 'Much March — & salt from Droitwich.' *WNFCT* xxxiv (1954) 294
373. Woodruff, C.H. 'Otterburn Creek.' *PSAL* 2nd. s. vii (1877) 291-2
374. *Worcestershire, The Place-names of* *EPNS* iv (1927) 286
375. Worrall, W.E. 'Clays — their nature, origin & general properties.' (1968) 103



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