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SALINATORES AND SIGILLATA : THE COASTAL AREAS
OF NORTH HOLLAND AND FLANDERS
AND THEIR ECONOMIC DIFFERENCES IN THE 1ST CENTURY AD

In the literature concerning the native habitation of the coastal area of Holland north of the Roman imperial border during the first century AD, one is struck by a discontinuity in the Roman imports found there. If, in a number of settlements, these imports are dated, chiefly on the basis of terra sigillata, to the period 40-70 AD, in a number of others, the foreign items appear at their earliest in the period around the beginning of the 2nd century AD (cf. Helderma 1971, 79-83). Only seldom do we meet with Roman finds of the intervening Flavian period; and according to Glasbergen this is true for the whole of the north of the Netherlands (Groenman-van Waateringe *et al.*, 1966, 121-2).

For comparison it is sensible to look at a similar coastal area not too far off, but situated inside the Empire and not subject to the troubles that broke out in the Rhine Delta at the time of the Year of the Four Emperors. We refer to the Flemish coastal area and the adjacent coastal area of Zeeland. This area can serve usefully for comparison because, though within the Empire, it occupied a marginal position therein, as one may deduce from its situation somewhat aside from the Roman road network (see Thoen 1978, Map 1). Thoen assumes that the paucity of road traces in this coastal area is chiefly to be ascribed to the floods of Dunkirk 2, which in the first instance dislocated the road network, damaged its foundations, and in large measure swept them away (Thoen 1978, 73-4). In the course of this article an attempt is made by the present writer to answer the question of whether, and to what degree, there was a road network in the Flemish coastal area at all.

What does Thoen say in respect to the Roman imports, especially of terra sigillata, in the Flemish coastal area? 'The earliest sigillata products come from South Gaul. They date chiefly to the Flavian period; a few exceptions go up to the reign of Nero (54-68), but only from Vespasian (69-79) can we speak of a more or less regular import' (p. 113; see also pp. 194 and 204). In the adjacent area of Zeeland, too, the earliest Roman import piece (apart from the coins) – a t.s.-sherd found in an indigenous settlement on the island of Walcheren – dates from c. 70 AD; and the Romanisation of the islands of Zeeland and South Holland is not undertaken on a large scale until the last quarter of the first century, as Trimpe Burger (1975, 135) remarks.

How can we explain this striking discrepancy between the two coastal areas? For this we must look for other objects of comparison between the two areas. What interest could the Roman population in the hinterland have had in contact with the residents of these coastal districts? What could they deliver to the Romans? To what extent can these contacts also be attested archaeologically?

As most important aspects of the economic life of the Flemish coastal area, Thoen (1978, 80 ff) points to fisheries and salt panning, other local activities such as pottery, local iron-working and textiles, agriculture and stock-raising, and trade. He notes (p. 101) that some of the products, such as wool, hides, salt, fish sauce, and meat, were traded further. That a product such as hides could also have played a role in the coastal area of Holland may appear from the fact that the revolt in 28 AD, which probably took place in North Holland, was caused by extortion in the collection of taxes in the form of hides (Van Es 1981, 33 and 94; Bloemers 1980, 160)¹. 'The income from fishing, salt panning and all the products arising therefrom (salted meat, fish sauce) made the coastal population economically viable', according to Thoen (1978, 94). For these reasons only these specifically coast-bound economic activities in the Belgian and adjacent Zeeland and North French coastal areas will, in the following, be compared with similar activities in the coastal zone of North Holland. Finally, we shall examine what conclusions can be drawn from all this.

FISHING

The products of fishing in the Flemish coastal area were not only consumed locally, but were traded farther afield, as is attested by the numerous heaps of mussel and oyster shells that are found, for example, in the excavation of Roman villas in Southern Belgium (Thoen 1978, 84).

Sporadic details are available over fishing in the coastal area of Holland. In the Roman military settlement of Velsen and in the Roman castellum of Valkenburg Z. H. fish remains were found. In the former bed of the Oer IJ river at Velsen remains were found of freshwater and marine species. The remains of the marine species almost certainly ended up there as a result of human activity. The remains of the freshwater species, on the other hand, could partly have come from fish which died a natural death. The castellum of Valkenburg, comparable in terms of location and date, has yielded fewer species than the settlement of Velsen. This is most probably a result of the collection technique employed (Brinkhuizen 1979, 86-89). Here too, the numbers of oyster shells present amply confirm the Roman's delight in the shell-fish. There may have been oyster beds in the Rhine estuary. The oyster shells from periods I and II of the 1962 excavation campaign at Valkenburg were equivalent in size to modern, farmed, specimens (Clason 1977,

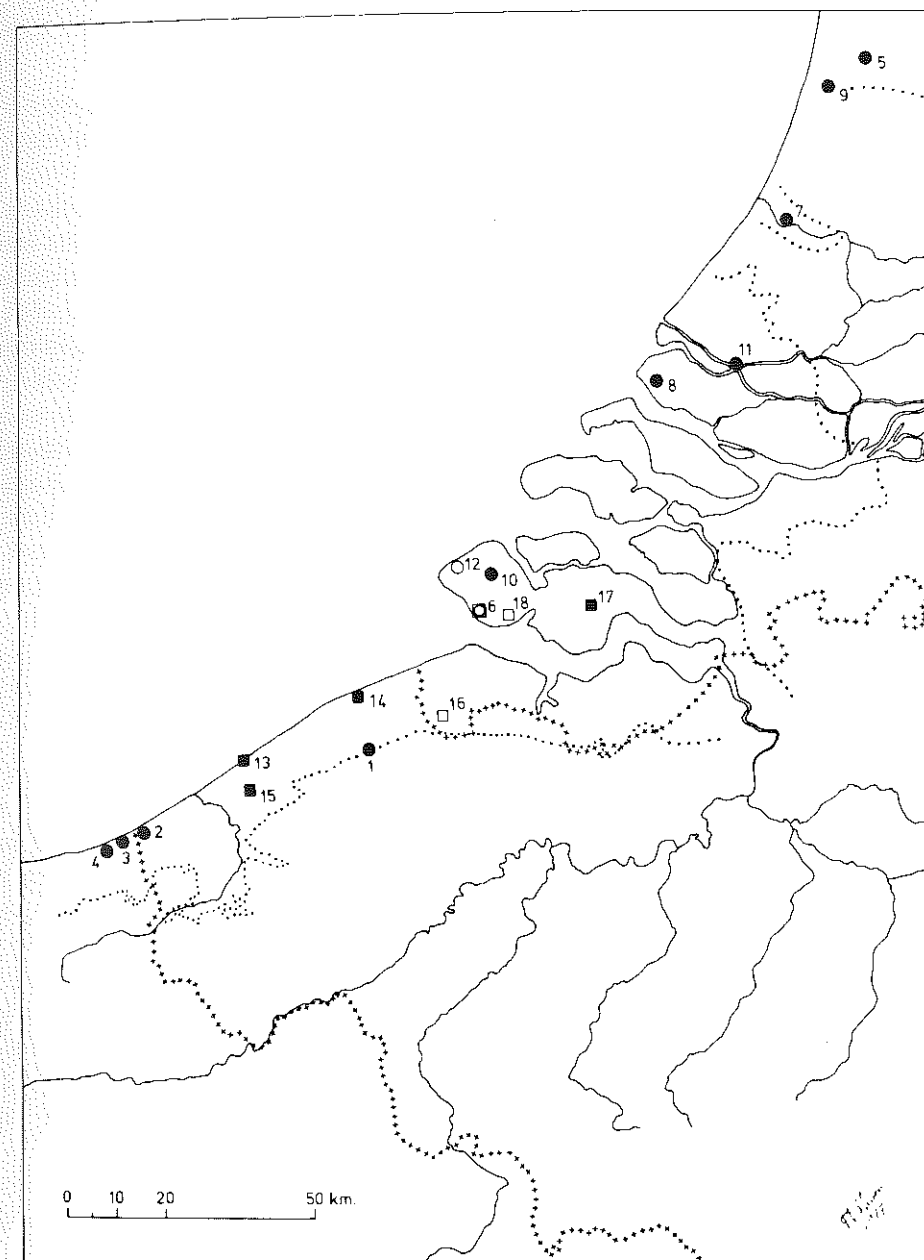


FIG. 1. - Distribution map of salt-making sites in N. France, Belgium and the W. Netherlands (after Thoen 1978, fig. 27)¹.

● Iron Age ■ Roman ○ □ uncertain.

Iron Age : 1. Brugge ; 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 : 6. (?) Koudekerke ; 13. Raversijde ; 14. Zeebrugge ; 15. Leffinge ; 16. Aardenburg ; 17. 's Heer Abtskerke ; 18. Ritthem.

¹ The dotted lines are apparently intended to represent the limits of the Belgian littoral and its extension into the neighbouring areas of France and the Netherlands.

¹ It is fairly obvious that in the coastal regions salt was used to cure hides or skins. That this method of preservation was familiar to the Romans may be inferred from Forbes' remark that the earliest reference to the practise can be found in (a scholion at) Aristophanes' 'Clouds' (1237) where Strepsiades points at the stomach of his enemy Pasiás, and exclaims : "Well-salted he would make an excellent wineskin", though this may simply refer to the salting of a hide (Forbes 1966, 7, 49). This particular discussion may have reached its gruesome close in the discovery of the remains of a Roman soldier in a wine barrel in the Roman fort at Velsen - that is, if this murder is to be linked to the events surrounding the (salted ?) hides in 28 AD (Schimmer jr. 1979, 111-113).

144 and 226, note 247). We might then wonder whether these creatures were not of more than local interest. It would be useful to investigate whether oyster shells of similar dimensions also occur in Roman settlements further upstream.

In the creek bed of the 'Hain' at Krommenie were found a number of lower jaws of pike of various size, on the basis of which Helderma concluded that the daily menu in the Roman period in the Zaan district was supplemented with some fish (Helderma 1971, 75). There are no clear indications for a trade in fish. For this one must look to the adjacent Frisian terp area. An altar stone dedicated to the goddess Hludana, found in the terp of Beetgum, mentions lease-holders of fishing rights. This could suggest that a factory of Roman professional fishermen was located there (Van Es 1981, 247 and 266). The evidence that Roman citizens practised a trade in the fish products called 'allec', fish sauce – an extract of various fish, greatly valued for its taste and also as medicine – is provided by two of the Nehalennia altars found at the Colijnsplaat: one of them offered by two partners, Lucius Secundius Similis and Titus Carinius Gratus, and the other by Caius Gatullinius Seggo (Bogaers 1971, 39-40; Stuart and Bogaers 1971, 63 and 70).

SALT PRODUCTION

If we study the distribution map published by Thoen (fig. 1) of the salt panning centres in western Belgium and the adjacent coastal area in France and the Netherlands, it is noticeable that going from south to north the salt centres dated to Roman times do not occur beyond the area of the Scheldt estuary. Traces of this activity in the adjacent Dutch coastal area are dated exclusively to the Iron Age and even, as at Assendelft for example, to its earliest phases (Hallewas 1971, 34). In the Netherlands there is no evidence for salt production from sea water (briquetage²) and from salt-impregnated peat (moernering³) (Brongers and Woltering 1975, 34) at an earlier date. When the Romans reached the Netherlands, according to these authors, salt extraction must have been fairly general in the coastal area. They state that briquetage seems to give way to moernering, and that in this period salt production seems to flourish especially in what is now Zeeland (p. 35; Trimpe Burger 1975, 144). A series of hearths found at 's-Heer Abtskerke near Goes, dating from around the end of the second century AD (Thoen 1978, 93) combined with large quantities of zelas⁴, found in the

² Briquetage is a process by which sea-water was poured along tower-like structures, made of porous ceramic objects (see Thoen 1978, p. 53, fig. 6). Exposure to air, sun and wind during the trickling down rapidly concentrated the brine, which was collected and sprayed over the structure again until the fluid was sufficiently strong to be used in the crystallization process with the help of fire (Brongers and Woltering 1975, 34-35).

³ Moernering is a process by which salt-impregnated peat or saliferous plants are burned; the ashes are then dissolved in water, and from this solution salt is obtained through evaporation (Brongers and Woltering 1975, 35).

⁴ Zelas is the debris of moernering.

immediate vicinity, suggest salt production at an industrial level⁵. This kind of activity could have brought a certain prosperity to the area. Indications of this are found in the two shrines dedicated to the goddess Nehalennia, at Domburg and Colijnsplaat respectively, where altar stones have been found of negotiatores salarii, salt merchants, of Cologne and Trier. Although this trade was, according to inscriptions on other stone altars, probably directed chiefly at England, it can be assumed, according to Brongers and Woltering, that local salt production was also involved (p. 35). The salt may have been transported in the remarkable cylindrical pots of native manufacture found in the west of the Netherlands not only in native but also in Roman settlements (such as Valkenburg-Woerd) and there indeed in relatively large numbers⁶ (Bloemers 1978, 387-388; 1980, 160). It remains to be verified whether these also occur in towns, castra and castella along the Rhine and its tributaries and it would also be worth investigating whether these pots are made from marine clays. Long prior to the discovery of the Nehalennia altars, which date from the end of the second or the third century AD, it was known that salt extraction was practised in the Zeeland and Flemish coastal area by the Menapii and the Morini, thanks to two inscriptions found at Rimini (Italy). These were dedicated by the salinatores civitatis Menapiorum and the salinatores civitatis Morinorum to L. Lepidius Proculus, who as centurio of Legio Victrix in Novaesium (Neuss, Germany) during the reign of Vespasian (69-79) had been of service in the purchase of salt (Thoen 1978, 85). In the Belgian coastal area, archaeological evidence of salt extraction has been found from the La Tène period (De Panne and Bruges), from sites to be dated in the Iron Age in the adjacent Northern French coastal area at Bray-Dunes and Zuydcoote, and from the Roman period at Raversijde ((end) 2nd and 3rd century AD), Zeebrugge and Leffinge (second half 2nd century AD) (Thoen 1978, 85-93).

CONCLUSIONS

What conclusions can be drawn from this far from complete survey of fishery and salt extraction? With respect to the Flemish coastal plain Thoen (1978, 96) remarks: 'The last word has not yet been said on the importance of salt extraction in our coastal area. There must be many more sites where salt was extracted than those already recorded (fig. 27). In any case, the Roman administration saw the vital importance of salt production. Whereas in the Iron Age salt production was private enterprise or an activity of a local community, in Roman times it became a ... state monopoly!' Perhaps this was also true of salt extraction in the coastal plain of Holland for the short period of time – the Early Roman period – when the expeditions to the North were staged, although a direct connection between this

⁵ The archaeological indications for salt extraction along the coast of the North Sea in general, and in particular at 's-Heer Abtskerke, are called in question by Van de(n) Berg and Hendrikse (1978, 131-134; 1980, 229-231).

⁶ Also found in Flanders, not however in the terp area in the north of the Netherlands.

activity and Roman imports to that area has not yet been demonstrated. It is striking in this connection that the distribution of Claudian-Neronian terra sigillata does not extend farther north than Dorregeest, gem. Uitgeest – not far from the most northerly known salt extraction centres along the Dutch coast, namely Assendelft and Heemskerk (fig. 1; Brongers and Woltering 1975, 34) – while the import of this pottery to North Kennemerland and West Friesland begins only in the 2nd century (Haalebos 1971, 33 and 37).

Can the chronological discrepancy in the Roman import of terra sigillata between the Belgian and Zeeland coastal plain on the one hand and the Dutch coastal area north of the Imperial border on the other, noted at the beginning of this article, be related to salt extraction? If so, can the chronological difference between the Belgian coastal plain – where, on the basis of the terra sigillata, it can be presumed that the Gallo-Roman occupation began in the early Flavian period – and the remainder of the Menapian area, where various settlements go back to the time of Claudius (41-54), exclusively be attributed to a less favourable milieu for living in the coastal area in the Early Roman period, as Thoen (1978, 194 and 204) assumes? Or did economic factors also play a role? Remarkably, the same author (p. 195; see also 58) notes that the coastal settlement of De Panne I does not go farther back than the Flavian period, although this place was not flooded during Dunkirk I, and the unfavourable conditions for occupation which extended to the area outside it with Dunkirk I deposits and peat never developed here. For the North Holland coastal area, and in particular the peat area of Krommenie and environs, where Roman import pieces dating after 70 AD do not occur, Glasbergen gives as one explanation the worsening environment, which would have made continuing occupation of this peat area impossible (in Groenman-van Waateringe *et al.* 1966, 121-2). Thus, according to these two authors: in the Flemish coastal area more favourable environment while in the North Holland area a less favourable environment, both in the Flavian period. And in both cases the basis of this judgment is the occurrence and non-occurrence respectively of Roman imports of the Flavian period. Recent excavations of the IPP in the Assendelfter Polder have shown that the native occupation there went on without interruption during the first centuries AD (verbal communication R. W. Brandt). This suggests that – to the extent that one may speak of worsening environment – this was hardly of any influence on the habitation. It would seem more probable that the explanation for the differences in the occurrence of Roman imports is to be sought not in differing environmental situations, but in differences of economic activity along the North Sea coast during the first century AD. Or concretely: what sort of exports are to be balanced against the Roman imports? From this it would appear that fish and salt are the most probable, as these had a more than local significance. In the following, salt will be emphasised, because we have more information about it and because salt was also used as a preservative for fish (Brongers and Woltering 1975, 34) which was essential if the fish was to be exported. In the article of Will (1962, 1653) cited by Thoen (1978, 96) this connection is also made, in the following words: 'Le pays des Ménapiens était

connu dans tout l'Empire par la qualité de ses jambons et Strabon déjà savait que les Ménapiens se nourrissaient largement de viande, fraîche ou salée. La présence du sel conditionna donc manifestement la préparation des salaisons, comme ailleurs, et ainsi nous entrevoyons, avec une certaine précision tout de même, toute l'importance que le sel pouvait tenir dans l'économie des Morins et des Ménapiens'.

That the Menapian ham was still well known ca. three centuries after Strabo is shown by the price edict of Diocletian, of 301 AD, in which appears: 'As maximum price is established ... for a ham of the best quality, or of a Menapian or Cerritan shoulder ... 20 denarii' (Diocletian, Edictum de pretiis IV, 8) (see Thoen 1978, 96 and 101).

The article by Will, entitled 'Le sel des Morins et des Ménapiens', offers numerous interesting details and observations on the subject of salt extraction – and export – in the early phase of the Roman occupation. It is perhaps relevant to present a short summary of the contents below.

Point of departure for this article is formed by the two inscriptions dedicated to the previously mentioned L. Lepidius Proculus by the salinatores civitatis Menapiorum and the salinatores civitatis Morinorum. The writer speculates about the circumstances under which this officer might have rendered his services to the salinatores of these two civitates. The usual view is that this primipilus, having arrived at the end of his military career, was entrusted by the Emperor with the fiscal control of the salt works. But it is striking that this function is not cited at the end of a noteworthy and honourable record. Will believes that it is more likely that the meeting between the officer and the salinatores occurred earlier, namely after the former was transferred to the Legio VI Victrix, then stationed at Novaesium (Neuss) on the Rhine and a point along the limes directly to the east of the home of the salinatores. Possibly the necessity of provisioning the legion caused the officer to make this contact in the period around 70-80 AD. Possibly the necessity caused the salinatores to extend their trade to the Rhine. But the actual course of the affairs of L. Lepidius Proculus is not very clear.

The very concept of 'salinatores' is also rather obscure. Does it refer to the salt workers, or to the tenants of the salt pans or to salt merchants, or to the fiscal agents entrusted with the control of the state monopoly? The monopoly had existed in Rome since early times, and continued so under the Empire. Its purpose is said to have been not to ensure the income for the state, but rather the delivery of the required salt to the public at a reasonable price. The fact that the two inscriptions record expressly that the salinatores belonged to the civitas Morinorum and the civitas Menapiorum renders it doubtful to Will that we are here concerned with merchants. He assumes rather that they were involved in the production of the salt. In addition, a territorial difference is spoken of. This is undoubtedly explained by the fact that the Roman organisation was merely an adaptation to the realities of Gaul. The production of salt by the two peoples must have gone far back in time, and formed a sort of national industry for them. Will asks whether there is reason to believe that their salt production was of more than

local importance. Where and how was the salt obtained? It is a fact that in the Middle Ages and later salt was acquired from La Manche, despite its sometimes doubtful quality. A curious detail in this connection is that in the fifteenth century the little to be recommended salt of Ponthieu was still being sent to Paris. From the writings of Pliny the Elder and Tacitus we know that it was easy to obtain salt from areas periodically flooded by the sea. This was the case in an important part of the territory of the Morini and Menapii, as is clear from Caesar's references to the numerous bogs, which served as refuge areas for the population. They were regularly flooded via the equally numerous lagoons, whereby natural salt pans were formed, which could have been very extensive. The salt could have been won from these salt pans in a comparatively simple manner through the application of artificial heat. Use of the briquetage technique has been established in the Roman period and in the period preceding it, not only along the French-Belgian Channel coast, but also elsewhere in France and England.

An indication of an entirely different character in relation to salt extraction is formed by the road network. We know of the importance of salt trade routes in earlier centuries. Did such routes also exist in the territory of the Morini and Menapii? If one projects the course of the roads which are known from the beginning of the Roman Imperial period, and which disappear under alluvial deposits at some distance from the sea, one comes out at two salt extraction centres of the past, namely Grande Synthe and Zuydcoote, two places 15 km apart. The remarkable thing is that these two roads are laid on at such a short distance from each other, in an area that was of old only sparsely inhabited. The reasons for this could be of military character since the coastal land of the Menapii served as a refuge area for Celtic rebels. But this does not necessarily exclude other functions. These roads could well have been old salt trade routes, built and consolidated by the Romans; who were thereby in position to control one of the principal factors of economic activity in the land, and were thus assured that the valuable product could quickly be transported to the hinterland. This answers the question as to whether the salt production was of more than local importance.

For the land of the Morini the same is broadly applicable, even if the data are less trustworthy and extensive.

Will ends his article with the following words: 'The two inscriptions in honour of L. Lepidius Proculus thus appear to go far beyond the simple figure of a Roman centurion. They form the key that permits the interpretation of a whole series of indications and finally the discovery of one of the principal activities of the land of the Morini and Menapii. The data we possess on economic life in antiquity are not so numerous that we can afford to neglect even meagre ones'.

'Dedicated to Lucius Lepidius Proculus by the salinatores for his services', so one can read on the two inscriptions. If Will is correct, the conclusion is obvious that these services consisted in the launching of the salt export from the Flemish coastal area and the adjacent coastal area of Zeeland (for instance from De Panne?) shortly after 70 AD by this officer, and perhaps by corresponding functionaries of other legions. The question can then be posed: from what area

did the Roman troops in Germania Inferior get their salt before this? Very probably the coastal area of North Holland, fitting into the framework of the northwards-oriented policy of the Roman emperors. Possibly the Roman military installation at Velsen played a role in the consolidation of the salt export to the Roman troops in the interior. Terra sigillata could have been one of the exchange products. Possibly the extraction of salt was still in the hands of the original Menapian (?) population which still remained in the region after the incursion of the Frisians. The most northerly extension of the typical combed (De Panne) pottery – Assendelft & Krommenie (see Sarfaty 1971, 38-40 and 47) – coincides not only with that of the salt production centres but also with that of the Claudian-Neronian terra sigillata. The current view is, however, that it is not to be assumed that the territory of the Menapii extended so far to the North (Trimpe Burger 1975, 144-146; Van Es 1981, 25-27). Although the northwards-oriented policy which had been pursued since 47 AD was definitively abandoned, and the troops were withdrawn to the Rhine border, this need not have had direct consequences for the salt export. The military presence at Velsen until 55 AD (Glasbergen and Van Lith 1977, 5 and 14; see also De Weerd 1977, 279-280; Morel and de Weerd 1980, 477; Van Es 1981, 94-5 and 98) might point in this direction. It is not inconceivable that the salt export from the North Holland coastal area continued until around 70 AD, whereafter it was displaced to the Belgian and adjacent coastal areas of Zeeland and North France (until then neglected by the Romans?). Apart from the activity of L. Lepidius Proculus, this may be deduced from the fact that the earliest terra sigillata found in this district is from the Flavian period. It is tempting to point to the Batavian rebellion as the cause of this change, in consequence of which the coastal area of Holland was for a time out of the reach of the Romans. For their salt requirements they would necessarily have looked around for other possibilities. They would have found these in a more southerly coastal area in many respects resembling that of North Holland, but far enough removed from the northern border area which was so turbulent around 70 AD, but a coastal area previously ignored by the Romans because it was a refuge area for Gallic rebels.

Despite the fact that peace was speedily restored along the Rhine border of the Empire, the new situation with respect to the salt export was retained for the coming centuries, because the northwards oriented policy of the early Roman emperors, which could have been an incentive for the restoration of the North Holland salt export, was dropped. Possibly this is why no Flavian terra sigillata is found in Holland north of the Rhine. Only in the 2nd century AD, when the Roman Empire had been living in peace with the surrounding tribes for a long period, does the terra sigillata import revive. But the salt export remained concentrated along the Belgian coastal plain and the adjacent area of Zeeland and Northern France⁷.

⁷ This article is translated into English by J. J. Butler. The author wishes to thank C. van Driel-Murray for her helpful comments.

BIBLIOGRAPHY

- BERG, J. VAN DEN & W. HENDRIKSE (1978). IJzertijdbewoning te Arnemuïden. *Westerheem* 27, pp. 127-135.
- BERG, J. VAN DE & W. HENDRIKSE (1980). Een Romeinse schelpkalkbranderij uit de eerste eeuw te Koudekerke (Zid), Met notities over zoutwinning. *Westerheem* 29, pp. 220-232.
- BLOEMERS, J. H. F. (1978). *Rijswijk (Z.H.), 'De Bult', Eine Siedlung der Cananefaten*. Amersfoort (Nederlandse Oudheden 8).
- BLOEMERS, J. H. F. (1980). Engels Drop. Een poging tot ontleding van het romanisatieproces in Nederland. *Westerheem* 29, pp. 152-173.
- BOGAERS, J. E. (1971). Nehalennia en de epigrafische gegevens, In : *Deae Nehalenniae* ; Gids bij de tentoonstelling Nehalennia de Zeeuwse godin, Zeeland in de Romeinse tijd, Romeinse monumenten uit de Oosterschelde, Middelburg/Leiden, pp. 32-43.
- BRINKHUIZEN, D. C. (1979). Preliminary notes on fish remains from archaeological sites in the Netherlands. *Palaeohistoria* 21, 1978, pp. 83-90.
- BRONGERS, J. A. & P. J. WOLTERING (1975). Prehistory in the Netherlands : An Economic-Technological Approach. *Berichten van de Rijksdienst voor het Oudheidkundig Bodemonderzoek* 23, 1973, pp. 7-47.
- CLASON, A. T. (1977). *Jacht en veeteelt van prehistorie tot middeleeuwen*, Haarlem.
- ES, W. A. VAN (1981). *De Romeinen in Nederland*, Haarlem.
- FORBES, R. J. (1966). *Studies in ancient technology*, Volume V, Leiden.
- GLASBERGEN, W. & S. M. E. VAN LITH (1977). Italische und frühe südgalische Terra Sigillata aus Velsen (Provinc Nord-Holland), *Rei Cretariae Romanae Fautorem Acta* 17-18, pp. 5-21.
- GROENMAN-VAN WAATERINGE, W. GLASBERGEN & M. F. HAMBURGER (1966). Een boerderij uit de eerste eeuw na Chr. te Krommenie (N.H.), In : *In het voetspoor van A. E. van Giffen*, Groningen, pp. 110-128 & 178-179.
- HAALEBOS, J. K. (1971). Romeins importaadewerk in Alkmaar en omgeving. *Alkmaars Jaarboekje* 7, pp. 33-39.
- HALLEWAS, D. P. (1971). Een huis uit de vroege ijzertijd te Assendelft (N.H.). *Westerheem* 20, pp. 19-35.
- HEIDERMAN, E. J. (1971). Enige resultaten van vijftien jaar archeologisch onderzoek in de Zaanstreek. *Westerheem* 20, pp. 52-83.
- MOREL, J. & M. D. DE WEERD (1980). Early Roman harbours in Velsen, In : *Roman Frontier Studies 1979* ; Papers presented to the 12th International Congress of Roman Frontier Studies, Oxford (BAR International Series 71), pp. 475-494.
- SARFATIJ, H. (1971). Friezen - Romeinen - Cananefaten, Balans van tien jaar oudheidkundig bodemonderzoek (1960-1970) in de provincies Noord- en Zuid-Holland. *Holland* 3, pp. 33-47, 89-105 & 153-179.
- SCHIMMER jr., E. L. (1979). De Romeinse waterputten te Velsen. *Westerheem* 28, pp. 109-116.
- STUART, P. & J. E. BOGAERS (1971). Catalogus van de monumenten, In : *Deae Nehalenniae* ; Gids bij de tentoonstelling Nehalennia de Zeeuwse godin, Zeeland in de Romeinse tijd, Romeinse monumenten uit de Oosterschelde, Middelburg/Leiden, pp. 59-87.
- THOEN, H. (1978). *De Belgische kustvlakte in de Romeinse tijd, Bijdrage tot de studie van de landelijke bewoningsgeschiedenis*, Brussel (Verhandelingen van de Koninklijke Academie voor Wetenschappen, Letteren en Schone Kunsten van België, Klasse der Letteren 40, nr. 88).
- TRIMPE BURGER, J. A. (1975). The Islands of Zeeland and South Holland in Roman Times. *Berichten van de Rijksdienst voor het Oudheidkundig Bodemonderzoek* 23, 1973, pp. 135-148.
- WEERD, M. D. DE (1977). The date of Valkenburg I reconsidered : the reduction of a multiple choice question, In : *Ex Horreo* ; IPP 1951-1976, Amsterdam (Cingula 4), pp. 255-289.
- WILL, E. (1962). Le sel des Morins et des Ménapiens, In : *Hommages à Albert Grenier*, Bruxelles-Berchem (Collection Latomus vol. 58), pp. 1649-1657.