Social access and dispersal of condiments in North-West Europe from the Roman to the medieval period

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Abstract The introduction and dispersal histories of eight common condiments in North-West Europe are explored: celery, dill, coriander, black mustard, fennel, summer savory, caraway and parsley. The presence of these condiments in archaeobotanical reports from the study area was recorded, together with information on chronological phase, type of site, social status and mode of preservation. Analysis of the data suggests the presence of very distinct patterns of dispersal that highlight the socio-cultural significance of the foods in question.

Keywords Roman · medieval · archaeobotany · condiments · spices · herbs · North-West Europe

Introduction

At the start of the first millennium A.D. the expansion of the Roman Empire resulted in movements of people and products that had a particularly pronounced impact on North-West Europe. Roman conquest brought armies, politicians, new elites and urbanism. Alongside these the introduction of various goods was witnessed, among them many new food plants from the Mediterranean region and South-East Asia. Furthermore, the expansion of trade, the discovery of new trade routes, and the constantly changing socio-political realities in the following centuries led to the import of even more plant foods into the area, thus changing culinary customs and traditions. It is the purpose of this research, being part of the PhD thesis of the first author within the framework of a major research project directed by the second author (see Acknowledgements), to shed light on the various processes that affected the

distribution and social access to these foods in North-West Europe, by monitoring the dispersal histories of some of these new introductions.

For this purpose the archaeobotanical records of eight condiments that were introduced into North-West Europe at points between the Roman and the medieval periods (ca. 100 B.C. to A.D. 1500) are examined. These are celery (*Apium graveolens* L.), dill (*Anethum graveolens* L.), coriander (*Coriandrum sativum* L.), black mustard (*Brassica nigra* (L.) W.D.J. Koch), fennel (*Foeniculum vulgare* Mill.), summer savory (*Satureja hortensis* L.), caraway (*Carum carvi* L.) and parsley (*Petroselinum crispum* (Mill.) Nyman). These species were selected as they form the most common condiments retrieved archaeobotanically from the area and periods under study and, therefore, can provide a robust basis for the analysis. Moreover, since these condiments do not represent staple foods but rather denote a refinement in taste, some elaboration on their exotic and/or luxury status will be possible. 'Exotic' foods are defined here as those food plants that are not native to North-West Europe, as well as those whose widespread cultivation appears to have been introduced during or after the Roman period.

The species

A brief overview of the selected condiments is provided here (taken from Smartt and Simmonds 1995; Vaughan and Geissler 1999; Zohary and Hopf 2000; Prance and Nesbitt 2005). Coriander, fennel, summer savory, parsley and dill are native to the Mediterranean region. Black mustard originated in Asia Minor and Middle East and from there spread to become naturalised in Europe. Celery and caraway are present all over Europe. Wild varieties of the former grow in moist coastal areas, while the latter is adapted to cooler climates. All eight condiments were known to the Romans for their culinary and/or medicinal uses. Coriander was, in fact, one of the most popular condiments in the Roman cuisine, mentioned in 18% of the recipes cited by Apicius (Cool 2006, p. 66). It was used both for its leaf and its seed, and demand was so high that it was extensively cultivated in Egypt and other places to satisfy the Roman market (Prance and Nesbitt 2005, p. 162). Fennel, dill and celery were valued both for their green leaves and seeds; parsley and summer savory were popular for their

leaves; caraway and black mustard were grown predominantly for their seeds although their leaf is also edible.

There is good evidence, based on relevant finds in Central Europe, that some of these condiments, such as coriander (Wiethold 2003, p. 277) and dill (e.g. Zohary and Hopf 2000, p. 206; Jacomet 2007, p. 245) preceded the Roman expansion to the North and West (see also Kreuz 2004). Nonetheless, their availability increased significantly with the Roman expansion, to the degree that gardening of herbs and vegetables became characteristic of the period (e.g. Bakels and Jacomet 2003, p. 542; Wiethold 2003, p. 277).

Material and methods

All available published archaeobotanical reports covering the Roman to the medieval period for the modern-day countries of Belgium, Britain, Denmark, France, Germany, Luxembourg, Switzerland and The Netherlands, were consulted. For this stage of the project only the presence of species introduced into the area during this time span was recorded and their preservation mode noted. Further work is ongoing, and this will include an analysis of presence and absence data. Information on the eight condiments was retrieved from the current dataset. For reasons of consistency, since the prevalent preservation mode of the condiments in question was waterlogging, only these data are examined here. Additional information was recorded for each site where a species was encountered, namely: dating evidence, type of site and geographical location. The sites were classified into three broad chronological groups: Roman (ca. 100 B.C.-A.D. 500), early medieval (ca. A.D. 500-950) and medieval (ca. A.D. 950-1500). These groups will form the basis of the analysis, with the recognition that the borderlines between these periods vary across this large study area. Sites that fall across periods were classified according to best match, taking into account the particular socio-political circumstances of the area.

The site classification uses site types relevant to the period (Table 1). Note, however, that each ‘site’ refers to an excavation, with the result that some towns or other site types that have hosted several excavations are represented more than once in the

dataset. Moreover, if a site includes information on different contexts (see listing, Table 1) then a separate record was created for each of these. In the case of rural sites, when a distinction between lesser and nucleated/village was not possible, these were classified as 'non-elite'.

Results

The dataset

The waterlogged dataset comprises a total of 854 sites, divided into the three periods thus: Roman – 331, early medieval – 96, medieval – 428. The various site types occur in more or less equal numbers for the Roman period, but slightly more rural sites exist for the early medieval period and significantly more urban sites are evident for the medieval period.

Chronological distribution

In order to identify the chronological distribution of the species, line charts have been produced in which the number of sites with a particular species is expressed as a proportion of the total number of sites in the database, by time period. Coriander, celery, and summer savory appear to decrease over time from the Roman period (Fig. 1), with only celery remaining present in the following two periods at a substantial level. Dill (Fig. 1) is common during the Roman period but drops in frequency during the early medieval phase before reaching its original levels again in the medieval period. Black mustard, fennel, caraway and parsley, although present since the beginning of the study period, become noticeably more widespread during the medieval phase (Fig. 2).

Social distribution

To tackle the question of social access to condiments, their proportion in each site type per time period was calculated. In the Roman period all condiments are present in a variety of site types (Fig. 3). A slightly stronger association with military contexts and major towns is evident, apart from black mustard, which has an equally strong presence in rural sites. In the early medieval period (Fig. 4) only coriander, celery and

summer savory have been encountered in trading centres. These three species, along with dill, are found in a mixture of urban and rural sites. Parsley is absent archaeobotanically during this period, and caraway and fennel are particularly rare (and thus omitted from the chart). Black mustard continues to have the strongest rural association. Finally, in the medieval period (Fig. 5), all condiments are mostly found in towns, both in secular and religious (i.e. monastic) contexts. Black mustard occurs also in a fair number of rural sites in contrast to all remaining condiments, which are present in very few – mostly elite – rural sites.

Geographical distribution

The geographical dispersal of the species was plotted on maps to detect regional differences. Although the spatial dispersal is different for all species, three general trends are observed during the Roman period. The first group, represented by coriander (Fig. 6), includes also celery and dill; these species are widespread across the Rhine frontier zone, not only in military sites but also in various other sites in close proximity to the forts. Additional records of these condiments are scattered on Roman territory, with a substantial presence in Britain, in military sites of the north and urban and rural sites further south. Coriander and celery have occasional findspots outside the Roman frontiers, such as the coriander seed recovered from a third century A.D. deposit at the rural native settlement in Klötze, Germany (Fig. 6). The second group includes summer savory, as well as fennel, caraway and parsley; these occur almost exclusively across the Rhine frontier and in a few selected sites mostly in Britain. Finally, the spatial dispersal of black mustard is rather distinctive in not being strongly associated with the *limes*, unlike all other species. Its distribution shows no specific pattern apart from the northern part of Roman Britain where it is found on military sites. In the early medieval period a more north-easterly distribution is delineated, represented by celery (Fig. 7). Finally, during the Middle Ages, all condiments have a similar dispersal, indicating a strong connection with urban sites in the north-eastern part of the study area. Fennel is plotted on Fig. 8 to illustrate this patterning.

Discussion

The Roman period

From the early stages of the Roman expansion into North-West Europe, coriander, celery, dill and summer savory become some of the most common condiments. According to the archaeobotanical data, Roman military sites and towns were widely supplied with these species, demonstrating the expansion of new flavours alongside the movement of people (army and elites) and an extensive trade network for their provision. Their trade may have even extended occasionally outside the Roman frontiers, according to relevant findspots, although celery finds could also be indicative of naturally grown plants. Many of the rural sites where these four condiments occur lie in close proximity to forts or towns, but coriander, celery and dill are also found in more distant – and not necessarily elite – rural sites (Fig. 6). Summer savory is the least widespread of this group of condiments, which may be explained by the fact that it was used for its leaves, which are rarely found archaeobotanically, and it has a stronger association with the *limes*. Overall, the relatively wide availability of these four condiments may hint at local cultivation, not least to meet the evident demand created by the army and the town dwellers.

Fennel, parsley and caraway have a similar, but more limited, distribution to that of summer savory. Interestingly, the urban occurrences of fennel and parsley derive almost exclusively from major town contexts and, in particular, from London and York in England, and Xanten in Germany, all initially important legionary bases. Thus, a principally military association can be claimed for these two species. The current dataset indicates that caraway is found in few but various site types in close proximity to the *limes*, almost exclusively in modern-day Germany. Again a strong military connection is apparent, but this is more localised in comparison with other condiments. A plausible explanation for this could be that with the increased demand for spices by the military and the introduction of a more varied cuisine to the new provinces, caraway, being locally known and available in this part of Europe, could have both been easier to access and provided an incentive for its growing for regional trade. Its failure to expand beyond this area may signify that, unlike coriander for

instance, caraway was not considered one of the main ingredients in Roman cuisine, but held instead a rather more localised appeal.

The dispersal of black mustard is quite diverse, as it is more evenly distributed across all site types compared to other equally rare condiments. Numerical evidence indicates that black mustard occurred in substantial quantities in many of the Roman rural sites alongside various other condiments and typical Roman foods (Marinval et al. 2002), which excludes its occurrence as a contaminant of other species. For Roman Britain a strong military association may be easier to infer for black mustard. Overall, this condiment might have been locally cultivated but, according to the archaeobotanical evidence, it did not become popular and widespread in the northern provinces and its cultivation probably took place on a small/local scale.

The early medieval period

From the Late Roman period onwards and with the final collapse of the Roman Empire a general decrease of condiments in the study area becomes apparent. This observation accords with a general trend for a reduction of all foods that were recorded for the purposes of this research. Although the archaeology of this particular period was until relatively recently faced with many problems, not least problems of visibility (e.g. Christie 2004, pp. 4-5), there are some indications that the trend observed is indeed not an artefact of the fewer sites excavated.

Coriander, one of the most common Roman condiments, sees a dramatic reduction during this period. Its presence in a few major towns and trading centres possibly indicates the continuation of its supply, albeit on a smaller scale. As the dataset currently stands, the only other site where coriander was found is an elite rural manor, in Serris-Les Ruelles, France, and its associated non-elite quarters (de Hingh and Bakels 1996), which further demonstrates the restriction of coriander to fewer select or privileged sites. A similar picture is observed for summer savory, another common Roman condiment, and also for fennel and caraway, while parsley is not visible at all archaeobotanically, possibly suggesting a failure to gain popularity outside the strictly military/Roman context.

The presence of black mustard remains more or less at the same levels as in the previous period. However, its distribution is mainly limited to rural non-elite sites, which could imply local cultivation of the species, as a possible continuation of previously established practices. It is worth noting however that black mustard has not been recorded from any early medieval context in Britain, where a predominantly military association was observed for the species under Rome. Therefore, it seems that this condiment followed different historical trajectories in different parts of the study area. In Britain, with the collapse of the Empire black mustard disappears, but in many sites on the Continent it appears to have become part of local horticultural regimes, possibly acquiring different connotations through time while being integrated into local diets.

Dill and celery are the two most common condiments during this period. The natural occurrence of celery in the local vegetation might have contributed to its relative frequency when other condiments disappear from the culinary map. Dill seems to be one of the first condiments associated with the newly emerging towns – a process completed in the next phase. Once again there are no rural occurrences of the two condiments in Britain (Fig. 7). Finally, an expansion in the occurrence of the two species towards the eastern parts of the study area can be interpreted as an indication of the changing socio-political situation in the region and a shift of orientation towards the north-east, as the Mediterranean ceased to be the main focus of trading activities.

The medieval period

In the last 500 years under study the picture of condiments changes significantly. The records of most condiments increase. Of the typical ‘Roman’ condiments, however, the presence of summer savory increases only slightly, never to regain its Roman levels, while coriander becomes fairly well distributed once again but is by no means the most important condiment of the period. Instead, a new wave of introductions renders available a variety of spices and herbs, with black mustard, fennel, caraway, and parsley becoming widespread – at least in archaeobotanical terms – for the first time in North-West Europe. Nevertheless, the augmented access to condiments is strongly biased towards urban contexts of all levels. This is very likely related to the

fact that, according to more detailed dating, their rise really takes place after the end of the eleventh/beginning of the twelfth century A.D., hinting at their association with an expansion of urbanism and a flourishing economy. Of the rural sites, most medieval occurrences are on elite sites. Black mustard, continuing to have overall the most non-elite rural instances of the condiments, may have been favoured by the peasantry to provide a strong flavouring as an alternative to more expensive, imported spices (Dyer 2006, p. 36). At the same time, its presence in towns is more significant now compared to previous periods, possibly within the context of a rise in the demand in urban trade. Other locally grown species, such as caraway, might also have increased in popularity among those who could not afford imported condiments (Küster 2000, p. 436).

As noted above, the medieval dataset includes more urban than rural sites since many more excavations have taken place in towns. In the spatial distribution, however, each location with condiments is depicted only once, thus eliminating the effect of multiple excavation reports from the same place. Nevertheless, the medieval dispersal pattern (Fig. 8) is still dominated by urban contexts, supporting their marked association with condiments. The limited presence of condiments in rural sites may thus be partly attributed to a clearer distinction in the role and function of rural and urban sites, and a greater dichotomy between social strata. In this period, the peasantry became increasingly tied to the lords and, as a result, control over food resources may have been tighter, allowing peasant farmers in rural non-elite sites less scope for diversification and limited access to luxury items, such as some of the condiments. At the same time, many new towns were founded, their markets acting as local economic foci. These attracted peasants who, accustomed to working the land, cultivated plots to provide for themselves (Tannahill 1973, p. 194). Dyer (2006, p. 40), in his historical study on medieval garden produce in England, even concludes that "horticulture was practised more intensively in town than in the country". Therefore, many of the horticultural goods intended for the town markets were probably produced within the urban environment and then disseminated through an urban network.

The apparent shift in the occurrence of all eight condiments towards the north-eastern parts of the study area, already implied for some of them during the previous

centuries, is now completed. Two factors can be suggested as playing the most important role in this shift. These were the growth of the German Empire that became the strongest state in Christendom during the twelfth century and which controlled the trade routes in the North, and the emergence of the Hanseatic League at the beginning of the thirteenth century to dominate the Baltic-North Sea trade (see for example Karg 2007). A closer look at the geographical distribution of the condiments indicates their marked absence from France, with the exception of a record of fennel from the town of Troyes (Ruas 1992); whether this pattern reflects the actual situation in this area is hard to judge. The comparatively fewer medieval towns studied archaeobotanically in France have very probably a strong impact on the creation of this pattern. In medieval Britain only caraway is absent; of the remaining species, all occur mainly across the south and/or the east, apart from fennel and black mustard, which have a rather wider distribution, possibly reflecting their increased popularity.

Finally, a factor to consider is whether the increase in the 'visibility' of any of these condiments is related to a change in preference for the edible part consumed. Although this is very difficult to determine archaeobotanically, the overall similar extent of species that were typically consumed either for their leaf (e.g. parsley) or seed (e.g. caraway) in any period of time, may suggest that in such a large-scale research approach the social bias is easier to discern, overshadowing preservation biases. Turning to historical evidence there is no clear-cut indication for the exclusive use of a specific part of most of these condiments. Fennel is an interesting example, as there are many references to the use mainly of its seed during the medieval period against witchcraft (Prance and Nesbitt 2005, p. 214), but also as an appetite suppressant. However its leaf and bulb are also mentioned in medieval cookbooks (e.g. Redon et al. 1998, pp. 73-75). Could it be assumed that the increase in fennel occurrences mainly reflects an increase in the use of its seed, in contrast with the Roman period when it was valued mostly for its leaves (Kiple and Ornelas 2000, p. 1773)? The resemblance of its geographical dispersal along the *limes* during the Roman period to that of other rare condiments can be interpreted as an actual indication of its failure to significantly increase in popularity outside the military context. If this were not so, then a wider distribution pattern should be expected to emerge, as in the case of summer savory. Therefore, by combining all the evidence, even if certain biases regarding the part preferred as edible existed in different time

periods, the general patterns seem to be reliable, if with a possible deviation in terms of scale.

Conclusions

The evidence of this study highlights the importance of cultural culinary preferences in the introduction and dispersal of foods. While all eight condiments were known to the Mediterranean world at the beginning of the Roman imperial period, not all became widespread or reached various sectors of society in the northern provinces. A variety of condiments was used by the Roman army but only some of the most popular spread outside the military confines; many condiments seem to have largely remained imports as luxury items for soldiers and people used to a Mediterranean diet. Over the following centuries, with the consolidation of Roman rule (notably via towns) coriander, celery, dill and summer savory were taken up by some of these populations and were even possibly cultivated in the provinces, becoming locally available. This was both caused by, and triggered their increased popularity/demand. Within the context of a more elaborate cuisine, condiments such as black mustard and caraway that were probably already locally known, became easier to access either to meet the army demand (especially in the case of caraway) or perhaps as part of a more localised version of the changing cuisine by some people (notably in the case of black mustard). Local differences also emerge, hinting at differences between Roman Britain and the Continent.

Most condiments almost cease to exist by the end of the Roman period, highlighting that the previous ubiquity of many of them was strongly connected with Roman foodways and economic breadth. While condiments such as coriander and summer savory represented a broadening of the culinary horizons of the people in North-Western Europe, this refinement in taste was not simply a case of new ingredients; more importantly it also conveyed messages of social status and changing culinary and cultural manners for those that chose to employ them. Noticeably, some of the most common condiments following the collapse of the Roman Empire are those that occur naturally in North-West Europe, such as celery and black mustard, which further hints at returns to more localised horticultural regimes. The almost complete

absence of caraway during the early medieval period further suggests that in the preceding period it was not fully integrated into local customs.

Later, during the Middle Ages, the urban expansion prompted a new diversification in the taste. A variety of condiments became increasingly available to town dwellers with an emphasis on a different set of species (e.g. fennel and black mustard). This can be partly attributed to a shift in the centre of the socio-economic focus towards the north-east and the changing specific weight that different foods carried. Most condiments became principally a luxury of urban life. Their general absence from medieval rural non-elite sites stresses the changing nature of the urban context compared to that of the Roman period, when a tighter bond with the countryside seemed to be in action. Condiments were no longer indicators of cultural differences but they marked mainly socio-economic divisions, also stressing how closely the elites now identified with towns – a situation visible, but less prominent, under Rome.

To conclude, not all species followed the same trajectory. While some continued as luxuries, some lost their status to become locally available, and others lost and regained their status later in time within different contexts. The local availability of some condiments rendered them easier to access and to be taken up in the local diet but, being part of newly emerging 'spiced-up' cuisines, not all of them became fully established. Thus, this study shows that food choices are never a simple matter of what is available; rather, they are employed in a network of complex processes in order to sustain both the physical and social individual; foods are not static but are crucial guides to charting human and economic impacts and movements.

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Captions

Fig. 1 The chronological distribution of common Roman condiments (waterlogged records only). N = the total number of occurrences of a species

Fig. 2 The chronological distribution of condiments mostly associated with the medieval period (waterlogged records only). N = the total number of occurrences of a species

Fig. 3 The social distribution of condiments for the Roman period (waterlogged records only). N = the total number of occurrences of a species

Fig. 4 The social distribution of condiments for the early medieval period (waterlogged records only). N = the total number of occurrences of a species

Fig. 5 The social distribution of condiments for the medieval period (waterlogged records only). N = the total number of occurrences of a species

Fig. 6 The Roman distribution of coriander (waterlogged records only).

Fig. 7 The early medieval distribution of celery (waterlogged records only).

Fig. 8 The medieval distribution of fennel (waterlogged records only).

Table 1 Site type classification according to time period

Table 1. Site type classification according to time period

Roman		*Early medieval and medieval*	
Rural	lesser, nucleated, elite	Rural	lesser, village, elite
Urban	major, minor	Urban	major, minor, castle
Military	extramural, intramural	Trading centre	Early Medieval only
Ceremonial	burial, temple/shrine	Religious	urban monastery, rural monastery, cemetery/burial
Other	industrial, shipwreck	Other	industrial, shipwreck

Figures:

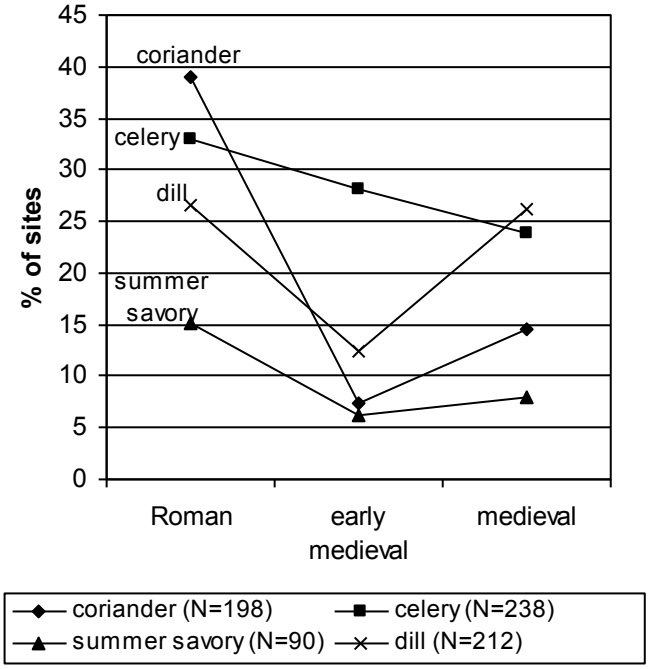

Figure 1 The chronological distribution of common Roman condiments (waterlogged records only).

N = the total number of occurrences of a species.

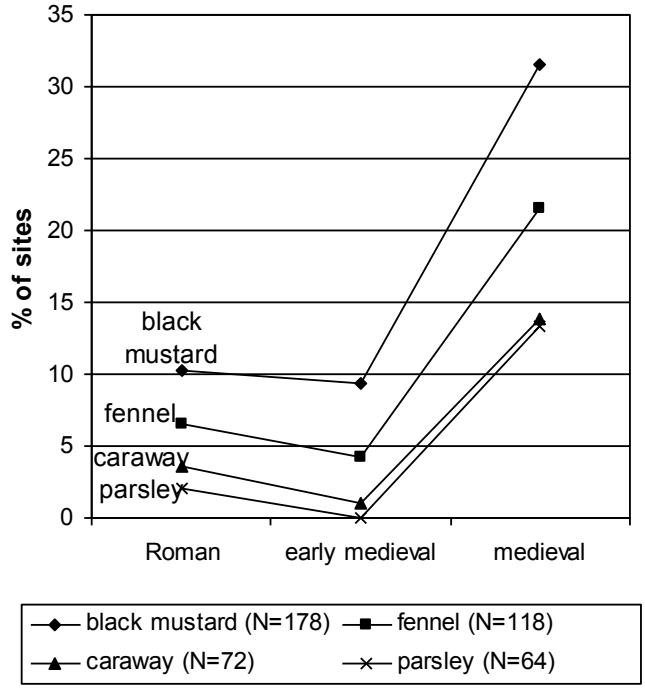

Figure 2 The chronological distribution of condiments mostly associated with the medieval period (waterlogged records only). N = the total number of occurrences of a species.

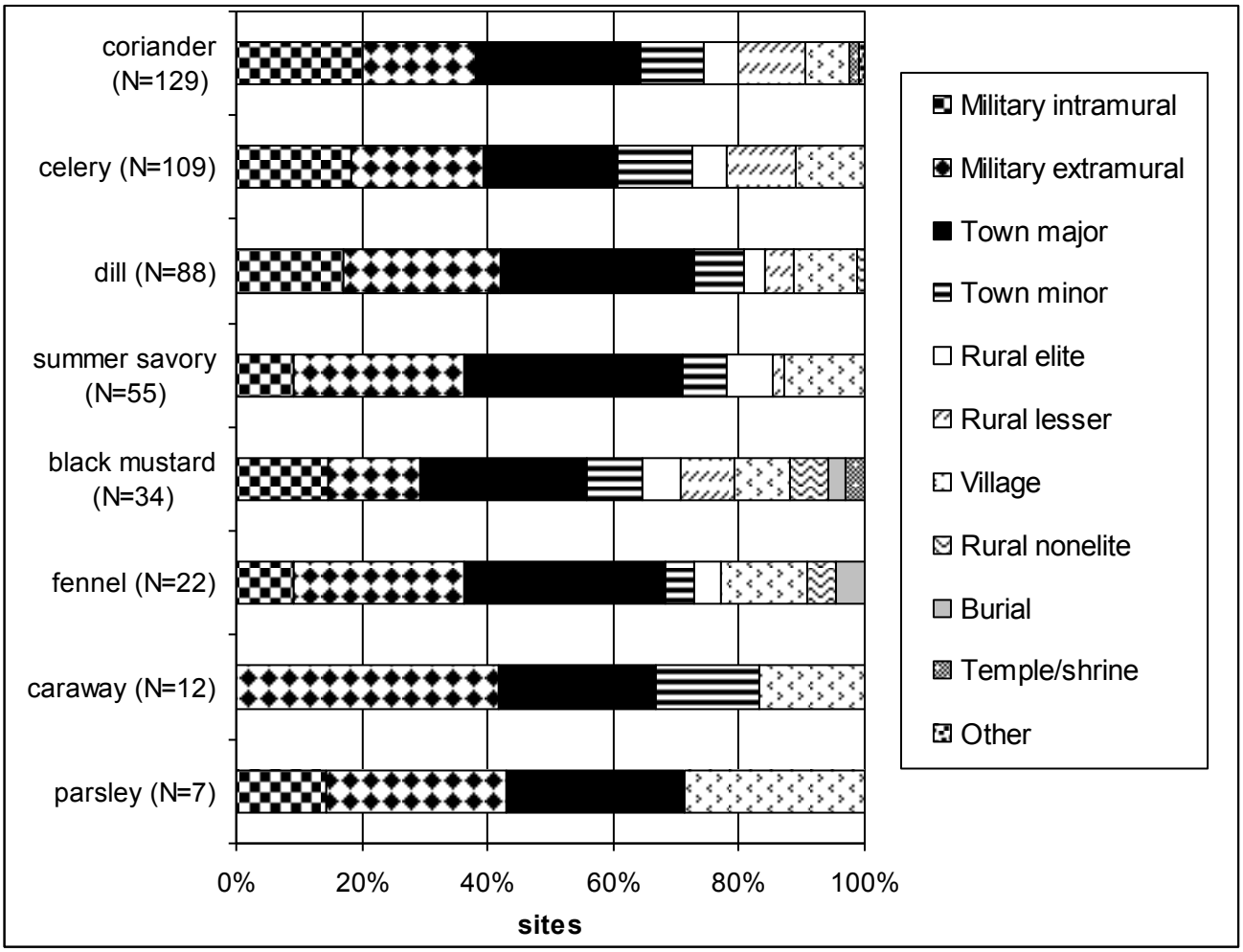

Figure 3 The social distribution of condiments for the Roman period (waterlogged records only). N = the total number of occurrences of a species per time period.

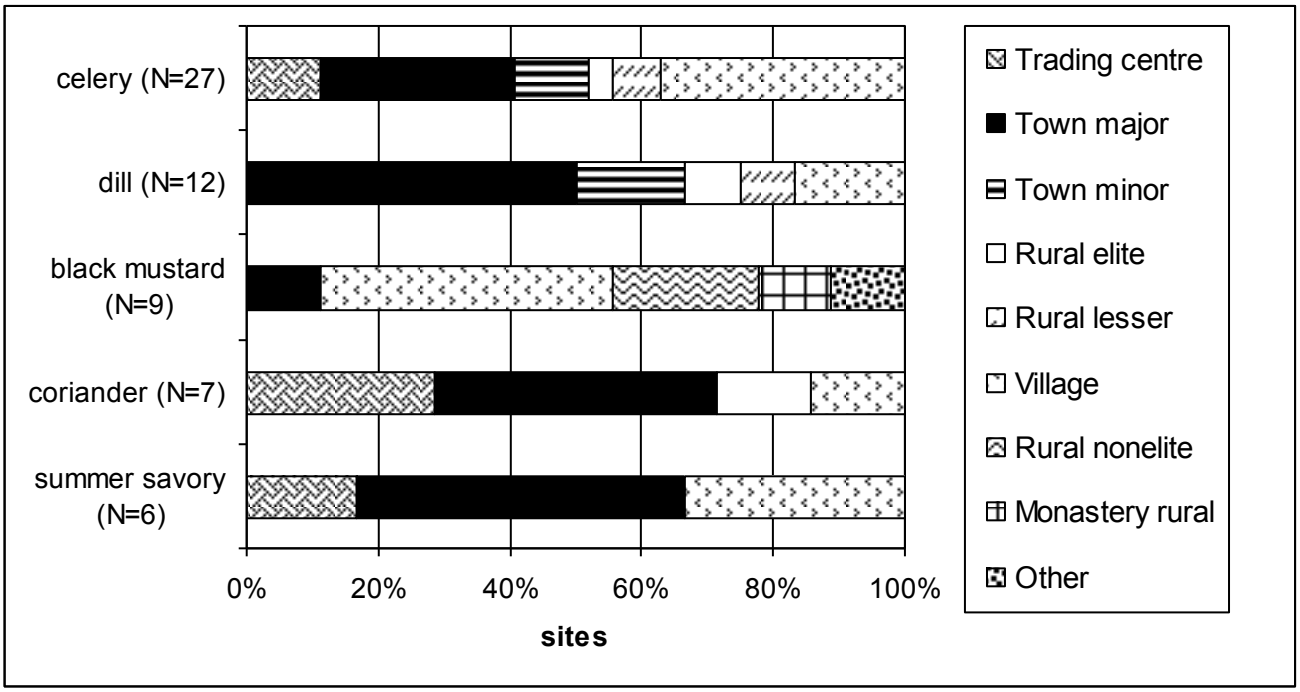

Figure 4 The social distribution of condiments for the early medieval period (waterlogged records only). N = the total number of occurrences of a species per time period.

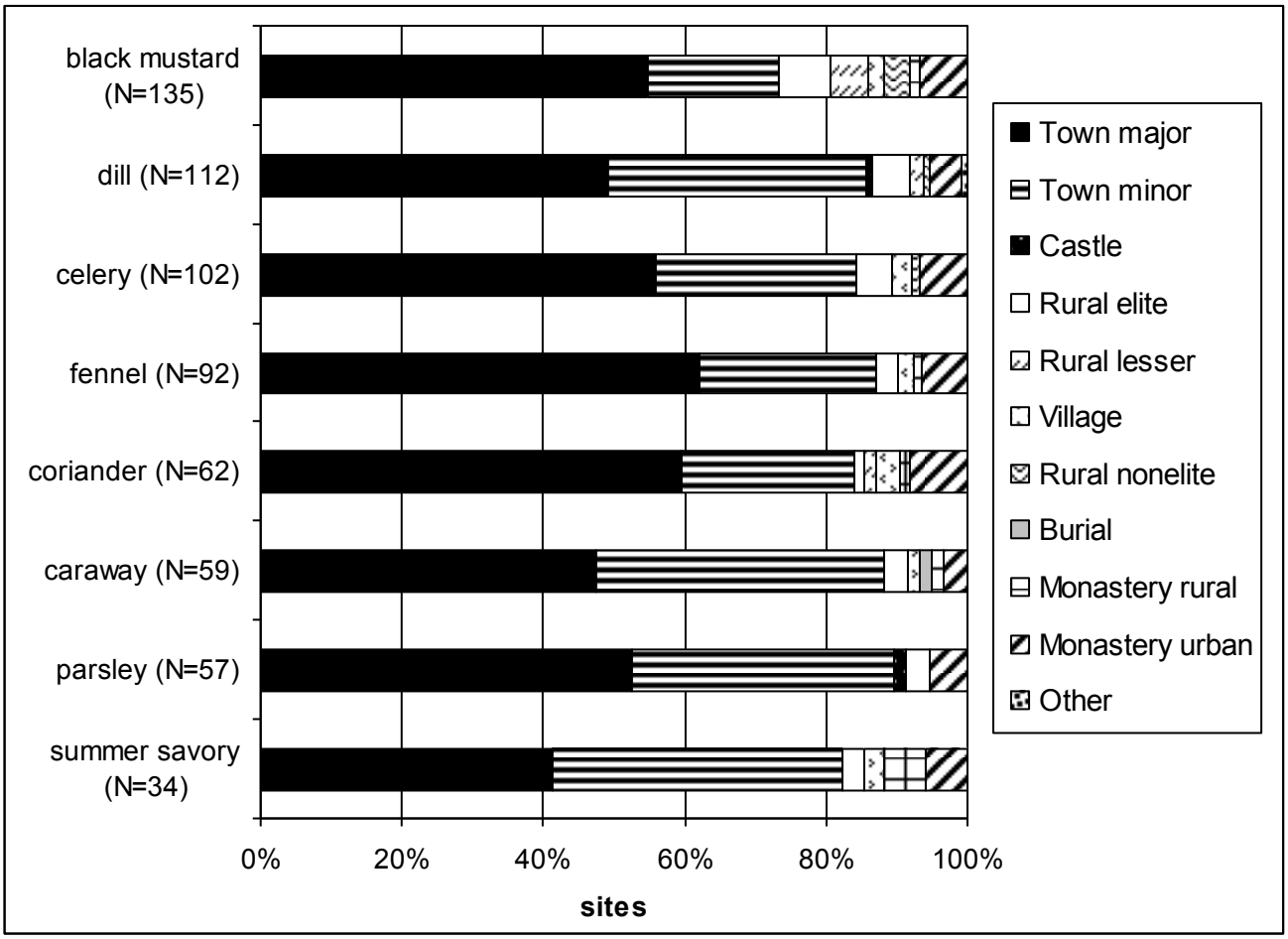

Figure 5 The social distribution of condiments for the medieval period (waterlogged records only). N = the total number of occurrences of a species per time period.

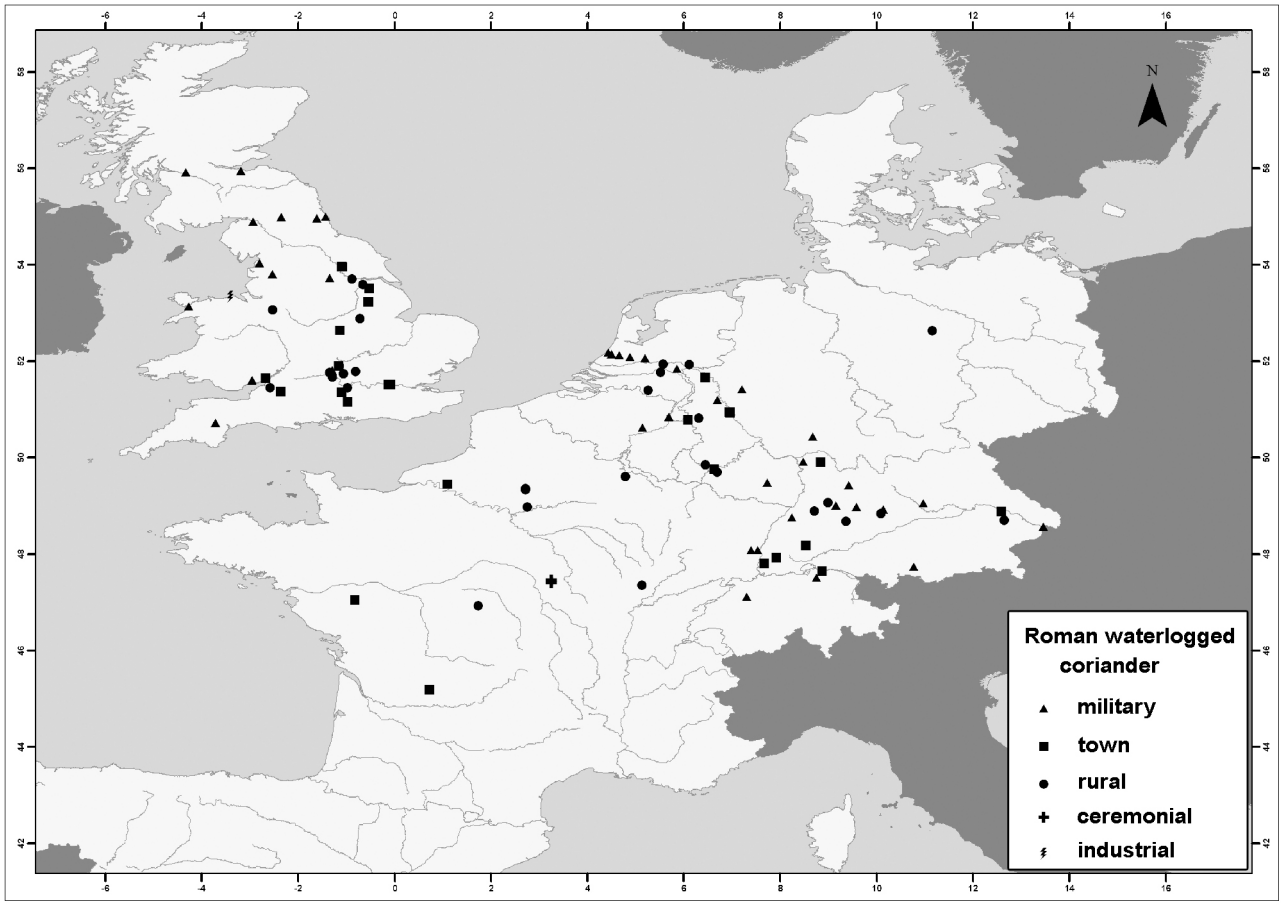

Figure 6 The Roman distribution of coriander (waterlogged records only).

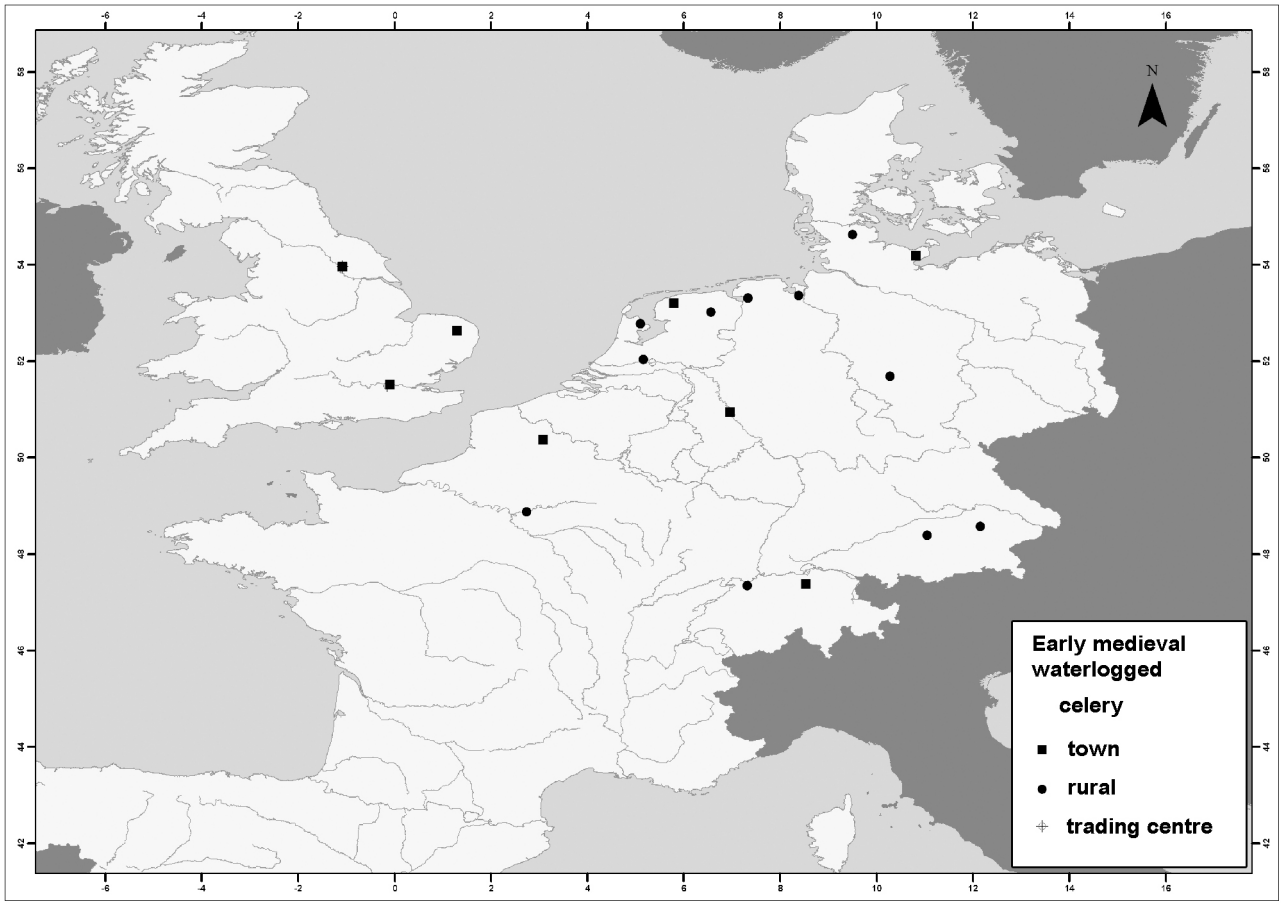

Figure 7 The early medieval distribution of celery (waterlogged records only).

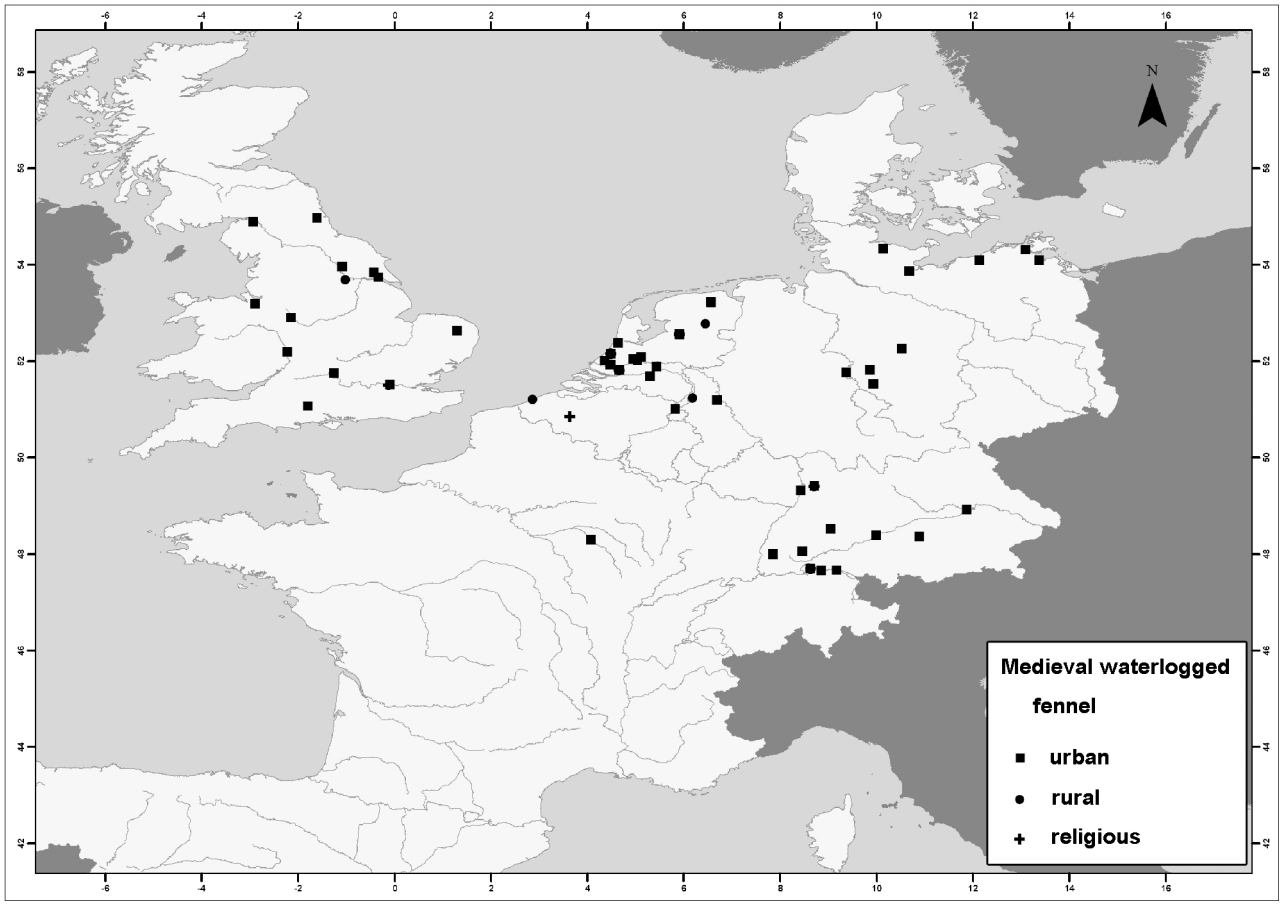

Figure 8 The medieval distribution of fennel (waterlogged records only).