

# The Excavation of 'Bryggen', the old Hanseatic Wharf in Bergen

By ASBJØRN E. HERTEIG

*Curator of the Historical Museum, the University of Bergen, Norway*

'BRYGGEN', the old Hanseatic Wharf with its old-fashioned wooden architecture, is not only one of the most passionately disputed quarters in the modern city of Bergen, but it also forms one of the most fascinating and predominant features of the town.

Unfortunately one half of this valuable group of buildings was reduced to ashes by a great fire in July 1955. The loss was all the more serious because in this burned section (PL. XII, A) the original style of building of the eleventh and twelfth centuries was better preserved than in any other part of the town. It was the core of what was still left of the old Wharf and, as such, a reflection of the architectural setting of the twelfth-century town, when Bergen was the capital of the country and the economic centre of Norway.

This part of the Wharf was founded in surroundings greatly influenced by the widespread contacts abroad inherited from the travels of the Vikings, and later on, as a staple and dwelling-place of the Hanseatic merchants in Bergen, the Wharf kept its international character far into modern times. Therefore, this fire was not only a national catastrophe, but in certain ways even a matter of international importance. It did, however, clear the way for archaeological excavations of the ground with its huge layers of architectural and cultural remains.

According to the Norse sagas the original town was founded within this area by King Olav Kyrre about 1070, but nobody knows whether this earliest settlement was a gradual evolution from a tiny sea-port to a town only regulated by the king, or if the sagas are to be understood as indicating that the king founded a completely new town on the uninhabited and not easily cultivated shores which sloped down to the bay.

Anyhow, we have fairly good reason to believe that when the present excavations have come to an end they will also have brought more precise knowledge about the foundation and the earliest stages of the town.

A series of foundations, layers of ashes and refuse, remains of buildings and streets from one town lying immediately upon another is of the most outstanding importance for the interpretation of the material excavated.

The sagas as well as other written sources have many references to fires in Bergen, often accurately dated, and the Wharf being the oldest part of the town, was laid waste by most—at least 8—of them. The most important took place 1170 (1172?), 1198, 1248, 1332, 1413, 1476 and 1702. All except the last fire in 1955 totally destroyed the Wharf. The chronological importance of this series of

closely-dated fires is quite obvious. But their importance is even greater as the main part of the material excavated comprises imports from the North Sea area. Of the vast archaeological material so far found nothing has yet been fully examined, but observations made during the work allow us with certain reservations to outline the most important results achieved.

The burned area (FIG. 65) comprises about 70 square metres. Theoretically we could have planned an excavation of the whole area, but we had to take

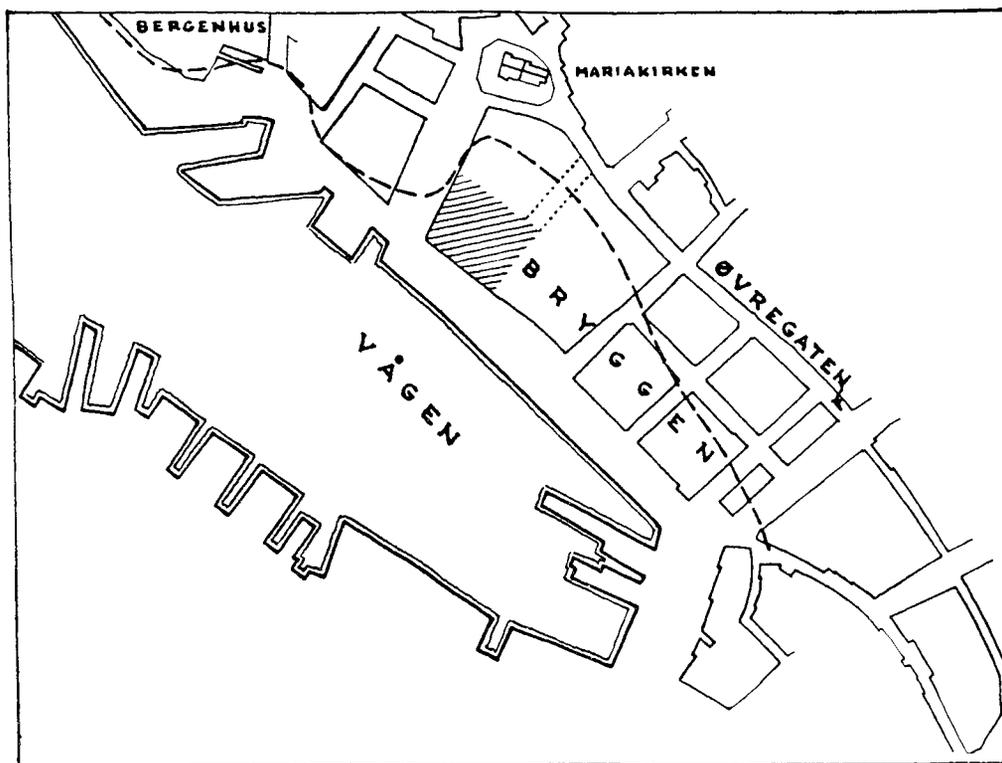


FIG. 65

PLAN OF THE HANSEATIC WHARF AT 'BRYGGEN', BERGEN, NORWAY (p. 178)

Bergenhus = The Fortress Bergenhus. Mariakirken = St. Mary's Church. Øvregaten = The Street.  
Vågen = Harbour

into account the strong demands of the house-owners that the building ground should be cleared for new houses as soon as possible. Besides that, a complete excavation most probably would have involved great economic problems. We had, therefore, to concentrate our research on certain sections of the burned area, and this choice fitted in well with certain local conditions and difficulties, such as the weather in Bergen, which almost forced us to dig in smaller sections. Where it could easily be done, however, larger sections have been excavated simultaneously. One of our chief aims has been to get a clear impression of one

section lengthwise and one across the settlement, and I think we have succeeded in getting a fairly good idea of the development within this important part of the town.

The present town-plan, which is so characteristic for the Wharf, with long parallel rows of houses two and two together, with a passage between, has been traced back to the rebuilding after the fire in 1198. This gives a considerably earlier date for the lay-out of the town than was hitherto known.

In front of this more or less compact row of houses the quays jutted a little out to sea. After each fire the quays and buildings were built further out, so that little by little, according to the experiences undergone and the increasing demand for new building ground, the settlement extended more than 300 ft. out into the sea, resting on depths of about 30-35 feet. The houses as well as the quays were built on thick layers of refuse, which in course of time had been swept off the pier-heads, and filled up the harbour, making calls by larger ships difficult or even impossible, and providing another and a fairly good reason for extending the Wharf out into the sea.

Already we have succeeded in locating the fronts of the Wharf in all stages of the medieval period<sup>1</sup> back to the rebuilding after the fire in 1170. Owing to favourable circumstances we have also managed to locate the sea-beds corresponding to these different stages. This gives us important data about the development of the town and also to a certain degree provides indications about the type of ships which were used.

It is obvious that in 1170 or thereabouts, with only three or four feet of water in front of the piers, no deep-drawing ships of the medieval type could have been used, so that ships of the shallower Viking type may still have been employed. After this period the depths in front of the piers increased considerably, which indicates a development in ship-building. This I think is in a way stressed by the fact that there was a fairly large extension of the Wharf between the two fires of 1248 and 1332, and this extension falls exactly in the most flourishing period of our medieval history.

Special mention must be made of the earliest stratum hitherto excavated, that of 1170, because it represents a much more advanced stage than was to be expected from the available written sources, according to which the foundation of the town goes back to about 1070.

Tests which have been made indicate that the shore at the time of the official foundation of the town is to be found about 330 ft. behind the present façade and 420 ft. behind the fronts of the present quays. This means that the front of the Wharf of 1170 would have reached at least 100 ft. out into the sea and, when erected, it was not built on the sandy sea-bed, but banked on a hard floor of refuse about 12 feet thick.

This seems to me to represent such an amount of activity on the spot before 1170 that I can hardly imagine it to have taken place only in the 100 years which separate this date and the foundation of 1070, and we must postulate an

<sup>1</sup> The term 'medieval period' does not here correspond to the historical one, but covers the centuries from the Viking age to about 1500.

earlier date for the local settlement than the official foundation by the king. How much earlier, it is at present impossible to say, but there are no technical hindrances that would prevent us from getting into contact with the primary settlement, if only we can get the necessary amount of money.

Without excavating these earliest strata our recent observations have already greatly changed all assumptions about the origin of the town and the topographical situation which preceded it. This is perhaps shown more clearly on FIG. 65. The presumed original shore is indicated by a dotted line. At that time there was on the site a fairly wide, sheltered, natural bay cut about 225 ft. inland. Its shores were narrow and the mountain rose steeply behind them. These observations provide a more detailed interpretation of the many vague topographical indications in our written sources and this may in turn contribute to our knowledge of what actually happened.

A survey of the architectural remains reveals a series of houses, the ground floors of which were used for storing, the first floors as dwellings only. A number of these houses have been erected in timber-post construction, but block-technique has been most commonly used.

In one instance a house built after the fire in 1248 has yielded so much material (PL. XII, B), that we have succeeded in reconstructing it (FIG. 66), with, I think, the almost exact dimensions of both stories and the first floor gallery. The only thing in the main construction of the house which cannot be deduced from the archaeological material is the angle of the roof. According to old traditions and written sources, however, we know quite well that the angles of such roofs covered with birch bark vary only within a few degrees and were, in fact almost constant. The type is still to be seen in our folk museums and in the valleys. It is usually considered to have been developed in the country and not in the towns, but we now have very good reasons for believing that the opposite is true, and that the natural background of this peculiar type of house with its narrow ground floor is to be found within the early medieval towns of Europe.

I suppose that this type was a natural development in towns like Bergen, where they had to rebuild on exactly the same sites after a fire. They could not expand except by building out into the sea, but even for this there were certain limits. Neither could they build their houses higher because this was forbidden by local laws. Therefore, every inch of obtainable ground was so valuable that they used the space above passages and streets. And so the type of house, I think, developed simply by force of circumstance.

Besides the remains of this reconstructed house, we have others, at times, with about  $1\frac{1}{2}$  metres of the walls preserved. This is, however, due to special circumstances as, e.g., when after a fire the lower half of the ground floor of a house, originally placed at the edge of a pier, was pulled off its foundations and down to the sea-bed in front of the pier. In its second 'underwater' state such house-frame served as a foundation for a new house, and this is the reason for its excellent preservation.

From the earliest phases of the town the Wharf has housed the stores and dwelling-houses of the wholesale-dealers. Here wares from different countries

were stored and in their wake foreign customs and manners followed. Much of this has perished for ever or is in its nature untraceable, but the humidity of the soil has offered extraordinarily good conditions for preserving most kinds of organic material, especially wooden, bone and leather objects, though pottery still predominates amongst the finds. About two-thirds of the whole material (of more than 150,000 units) consists of potsherds.

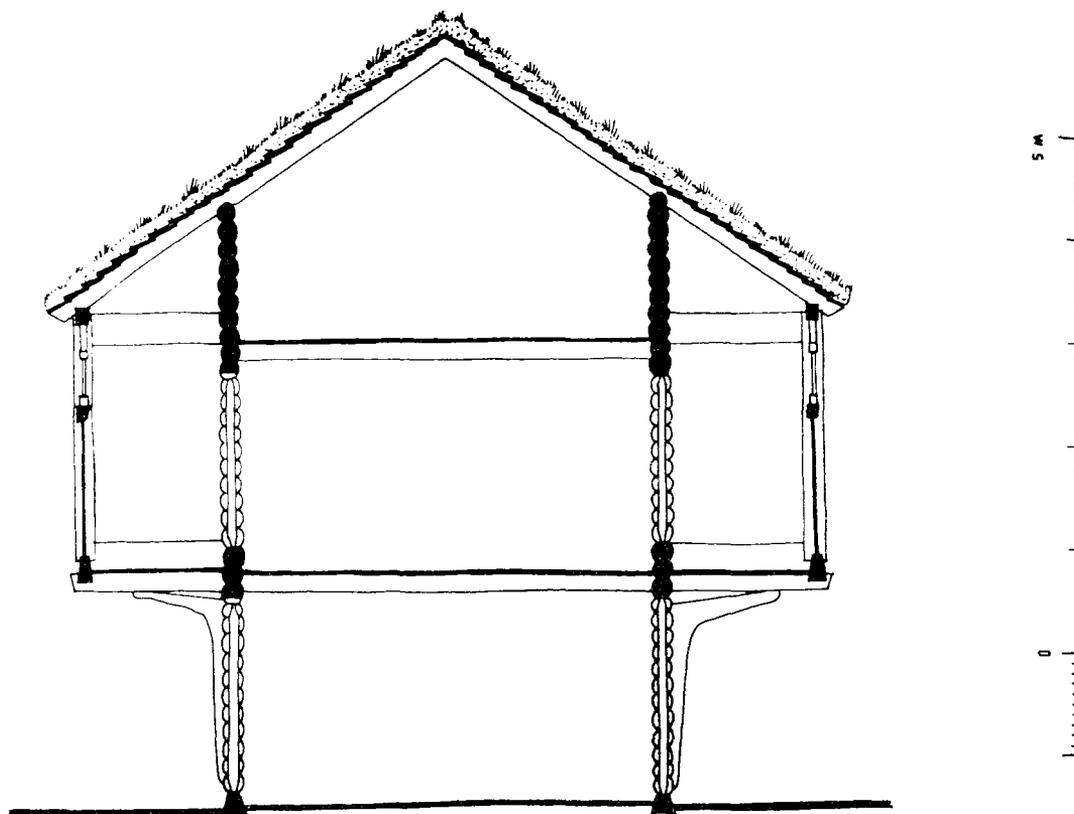


FIG. 66

SECTION OF RECONSTRUCTED BLOCK-HOUSE AT 'BRYGGEN',  
BERGEN, NORWAY (p. 180)

The chief interest in this connexion lies in the good, and up to this time completely unprecedented, representation of English as well as continental pottery from the eleventh and twelfth centuries, but the rest of the period is also covered by a good representation of pottery, all of which is imported. Native ware has not been traced before the early renaissance and recent times.

Among the continental ware Pingsdorf types (PL. XIII, c) and globular forms predominate. There is, however, a wide range of combinations of forms, patterns and fabric. A special type is the little round-bottomed cooking-pot with a curved lug-handle (PL. XIII, D), a type of which fragments have also been found at the

medieval market-place Borgund near Ålesund, halfway between Bergen and Trondheim. From the rest of Scandinavia only one example is known, which comes from the harbour of Kalmar in Sweden.

Besides the continental ware, English glazed and unglazed pottery from these centuries is comparatively well represented, but sometimes it is rather difficult to divide English from continental ware, especially at this early stage. This happens, for example, with certain fragments of unglazed ware decorated with roller-stamps or with applied thumb-pressed bands.

The origin of a few jugs of thin whitish ware, almost biconical in shape with sagging base and decorated with a transparent green glaze restricted to spots on the upper part, is also uncertain. On the other hand comparatively large and wide jugs of presumed English origin have been found in firm eleventh- and early-twelfth-century contexts (PL. XIV, B). They usually have a broad sagging base, at times steadied by a few thumb-marks, and a narrow mouth, and are decorated with a speckled green glaze which frequently gets a metallic hue, often shining like dull silver.

After the fire in 1198 there is a growing frequency of English pottery, which corresponds very well with the historical records. The predominant type here is the face-jug, chiefly from the thirteenth century. One jug (PL. XIII, A) has an exact parallel (PL. XIII, B) in the University Museum of Archaeology and Ethnology, Cambridge. Fabric, form, all details of the handle, collar and neck, type of face and the applied arms on the shoulder are identical on both pieces, but the Cambridge one is covered with green glaze while the other has a metallic-looking glaze, in a few places faintly speckled with green.

Chemical tests have proved that the glaze on these jugs has a lead base, but it is not quite clear why it has got this special appearance. It might be due to overfiring, but then I should expect the surface to be coarse and blistered, whereas it is usually smooth and shining like silver. When fragments of these jugs are picked up from the soil, they are usually covered with a very thin blue powder, and I suggest that this metallic tone may be due to a vivianite process caused by the large concentration of phosphorus in the soil. Anyhow, it seems likely to be a secondary local phenomenon and that is perhaps the reason why it is almost unknown in England and on the continent.

There can, however, be no doubt that the two face jugs mentioned have the same East Anglian origin. It is no surprise that the rich ceramic industry of that area is represented in our material, because some of the ports most frequently visited by Norwegian sailors in the thirteenth century were the east coast towns of Boston, King's Lynn and others, a fact which is fairly well documented by historical records, e.g. the English custom-rolls.

Besides these anthropomorphic jugs there are others highly decorated with strips, scales and foliage designs, while some neatly-made miniature objects (PL. XIV, A) are completely undecorated, though their surface is glazed all over, and is smooth and shining with a metallic blue colour or, at times, a silvery hue.

Some of these objects are horses; in one instance there is a man on horse-back; others are rattles (PL. XIV, A, right), jugs, etc., and these undoubtedly were

children's toys. Most of them belong to the thirteenth century, but the earliest go back to the late eleventh or early twelfth century.

Even polychrome pottery is represented by a few sherds, e.g. a strap-handle decorated with a triple green leaf of the same kind as is represented on jugs found in London.<sup>2</sup>

With the exception of the polychrome fragments nearly all forms and patterns excavated at 'Bryggen' have also been found at Borgund.

It is an interesting theme to study the frequency of English as compared with continental pottery during this period, because it may give an astonishingly true picture of the alternating emphasis in the mercantile contacts between Norway and these areas. As a whole I think the continental ware predominates before about 1200. From then the English pottery is in the ascendancy up to about 1400. After that time there is no more English pottery found, while on the other hand Bergen seems to have been inundated with continental ware of high standard.

Quite new, but not unexpected, is the good representation of continental pottery from the eleventh and twelfth centuries. In this connexion we have to bear in mind the well-known speech delivered in Bergen in 1186 by the Norwegian King Sverri, according to which the Germans imported wine in such quantities 'that wine in Bergen was then no dearer than ale'. On another occasion in the same year he said:

'We desire to thank the Englishmen who have come here, bringing wheat and honey, flour and cloth. We desire also to thank those who have brought here linen or flax, wax or cauldrons. We desire next to make mention of those who have come here from the Orkneys, Shetland, the Faereys or Iceland; all those who have brought here such things as make this land the richer, which we cannot do without. But there are the Germans who have come here in great numbers, with large ships, intending to carry away butter and dried fish, of which the exportation much impoverishes the land; and they bring wine instead, which people strive to purchase, both my men, townsmen, and the merchants. . . .'

It is not surprising that this trade from the Rhine area brought to Bergen many of the containers and jugs in which wine was kept and served. Bergen was the great import centre and staple, hence the coastal trade carried pottery as well as other imported articles to the local fairs and markets. Such a local market was Borgund near Ålesund.

As far as I know all our English and continental types were imports, while in Sweden and Denmark imitations of them were made to a large extent. There is also another marked difference between Norway and southern Scandinavia in the components of the imported pottery. While we have in Bergen at present at least 2,000 of the German *Trichterbecher*, there seems to be hardly a single fragment of this type in Denmark and Sweden. I have not studied the reason for this, but it might be due to different habits of drinking rather than to different

<sup>2</sup> *London Museum Medieval Catalogue* (1940), fig. 70: these jugs were, however, imported into London from SW. France.

contacts in the lower Rhine area. The small beakers used by the Norwegians, for example, might indicate drinking of wine, while the bigger ones in southern Scandinavia were chiefly intended for ale.

The extensive import of pottery from England and the continent may be the chief reason why no native ceramic industry existed before the renaissance. The flourishing pottery industry of the migration period had practically disappeared by the Viking age, and a native industry of this type had no chance in competition with the huge masses of pottery of high standard imported during the middle ages. If there existed any potters at all in the centuries after the Viking period, they had to work for their own supply, but that was not sufficient to keep the old tradition alive.

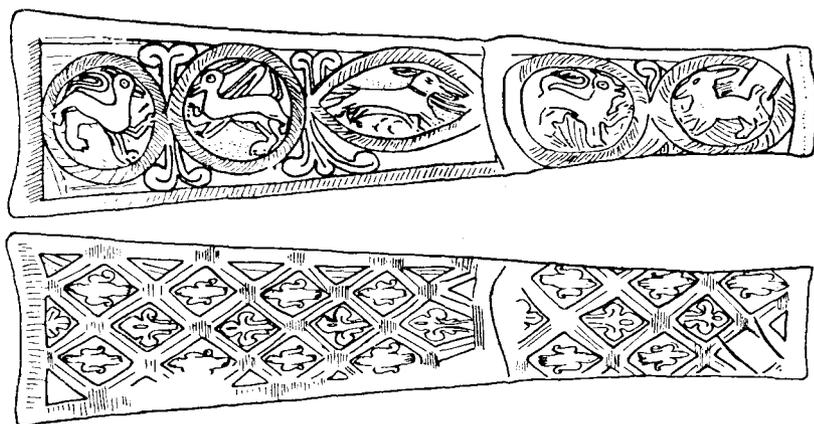


FIG. 67

DECORATED LEATHER KNIFE-SHEATH FROM 'BRYGGEN',  
THIRTEENTH CENTURY (p. 184)

Imported glazed pottery rich in colours seems to have been used in the bigger towns by the inhabitants, the kings' men and the merchants, but most probably to a large degree even by people from the country as well, especially on the coast.

Among the large quantities of leatherwork there is a good selection of sheaths for swords and knives decorated with different patterns and techniques. Besides the well-known armorial motives, lions, eagles, stamped patterns bordered by lozenge-shaped frames, fleurs-de-lis, etc., are frequent (FIG. 67). Subject and composition are often related to the Viking style of ornament, which favoured weird birds or animals, framed by ovals or medallions. The greater part of this decorated leatherwork belongs to the thirteenth century and most probably a great deal was imported from England, where parallels can be found for almost every detail in shapes, patterns and composition.

There are about 3,000 single shoes, mostly of common types, but a few are elaborately decorated, one example even with a runic inscription.

Works of art are chiefly represented by figures carved in wood or bone. This category also includes some of the artistically decorated works of the comb-makers, as well as neatly-cut chessmen.

Wood and bone have also been a favourite material for runic inscriptions, of which 223 have been unearthed. Although often written in so-called crypto-runes most of them are easily interpreted. Their contents are usually a mixture of humble prayers and magic, but there are also love-runes, for exciting or enhancing love. One of the inscriptions (FIG. 68) is illustrated by a carved fleet of 48 ships, some of which are decorated with dragons' heads and standards on the prows.

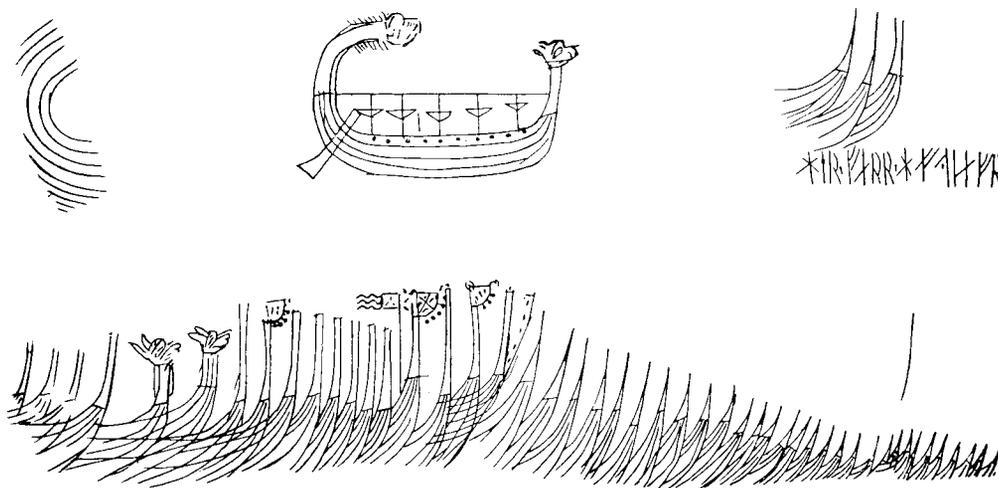


FIG. 68

RUNIC INSCRIPTION ON WOOD, ILLUSTRATED BY A FLEET OF VIKING SHIPS,  
THIRTEENTH CENTURY (p. 185)

One of the most outstanding single objects, however, is probably an oak beam from the second half of the thirteenth century belonging to a ship of a type which until quite recently was unknown in Scandinavia. The excavation of the old harbour of Kalmar in Sweden, however, brought at least four ships of this type to light, one of the characteristics of which is a system of transverse beams, the ends of which project through the planking, which again fits into notches in the beam-heads.<sup>3</sup> According to the preserved beam the length of the ship may be estimated at about 90 feet, the width about 24 feet.

It is difficult to judge whether this beam belonged to a Norwegian or to a foreign ship. Some German and Norwegian historians have maintained that the success of the Hanseatic merchants was chiefly due to their superior ships, of which the Scandinavians had no equivalents at all. This contention has never been proved. On the contrary written documents, e.g. the English custom-rolls, provide evidence that Norwegian seamen on Norwegian ships in the thirteenth

<sup>3</sup> Harald Åkerlund, *Fartygsfynden i den forna hamnen i Kalmar* (Uppsala, 1951).

century brought over to England cargoes larger than even the biggest ships of the Viking type could have carried. Therefore, if we should succeed in identifying this ship with the transverse beams, a decisive light might be thrown on paramount political and commercial problems of the medieval period that are now in dispute.

Besides this single object, hundreds of interesting details deserve to be mentioned, but I shall only add that the majority of the material consists of all kinds of domestic utensils, personal belongings, amulets and the like, but very few tools. I must however, mention four small lathes from the middle of the thirteenth century, because they may bring about a revaluation of our view of medieval handicrafts, since it is commonly held that lathes were unknown before the renaissance.

To sum up, it must be noted that during the greater part of the medieval period refuse from the whole town, and not only from the quay where the merchants lived, was tipped into the harbour. The kings strove in vain to forbid it. In some places off the old piers we can even find large heaps of imported pottery intended for sale, broken, but completely unused. These are certainly breakages thrown off the ships before discharging. In this way the excavated material has given and will give a richer and more adequate expression of the cultural standard in Bergen in general, which might not have been expected with the purely mercantile background of the Wharf. The cultural pattern of the more important ports of northern Europe must, however, to a large extent have been similar; therefore the present excavations in Bergen with their extraordinarily good conditions for obtaining an absolute chronology, may have far-reaching consequences.

Up to the present we have carried out a little more than one half of the excavation as originally planned, but the most important part is lying just outside or immediately behind the burned area. We sincerely hope that it may be possible not only to continue for another two or three years, but even to extend the research to this area, where we might get into contact with the earliest phases of the town and the primary settlement.