# A Summary of the Bone Antifacts Found in Viking Dublin



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A SUMMARY OF THE BONE ARTIFACTS FOUND IN VIKING DUBLIN .

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MELISSA MACGILLYCUDDY

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#### INTRODUCTION

"Out of the North, an evil shall break forth upon the inhabitants of the land" (Jeremiah 1:4)

This prophesy came true for the inhabitants of Ireland when the Vikings paid their first visit to Ireland in the year 795.

The word Viking comes from the Norse word 'Viking' meaning pirate or raider. By the 830's their keel boat ships enabled them to take the rivers of Ireland by storm, in search of valuables to be found in the monasteries. They quickly became infamous for their destruction. A monk on the Skellig rocks writes in the margin of a manuscript:

"The wind is rough tonight, tossing the white hair of the ocean. I do not fear the fierce Vikings crossing the Irish sea".

Due to the development of their successful keel boats, these rovers and traders travelled extensively, trading precious objects from far off countries, returning to their native lands (Norway, Sweden and Denmark) with great wealth.

Around the middle of the 7th Century, the Vikings set up what they called sea ports (Longphorts in Irish), permanent settlements where they could spend the winter months, rather than returning for their annual attack. Starting with Dublin, they went on to establish bases at Wexford, Waterford,

Cork and Limerick. The modern word Dublin originates from the name 'Dubh-linn' meaning Black pool at the ford of the river Liffey, later to become known as 'Baile atha Cliath', the ford of the hurdles. It was here that the Vikings established their trading headquarters and was probably the most important trading centre in North West Europe at the time. Dublin's idyllic situation enabled quick routes to all trading centres. To the North, their routes lay through the Hebrides to Orkney and Shetland, and then to Iceland past Faroes, or straight on to Norway. Across the Irish sea lay Chester, giving access to Anglo-Saxon merchants. Sailing southwards brought them to the Carolingian Empire and even to the Arabs in Spain.

It was in Dublin that many trades were carried out, some items richly decorated in the later Viking art styles. For the three centuries of Viking settlement in Dublin, contact between the native Irish and Scandinavians grew, resulting in both cultures artistically influencing eachother. In this thesis, I shall be looking at the bone artifacts found, their function, decoration and how the Viking styles influenced the Irish metalwork ornament on the reshrining of 11th and 12th Century ecclesiastical objects.

CHAPTER 1

VIKING DUBLIN

## THE EXCAVATIONS OF VIKING DUBLIN

Evidence of Viking activity in and around Dublin was first unearthed in the 1930's. The discovery of Viking burial grounds aroused great excitement as the foundations for Kilmainham hospital were being dug. It became clear in Dublin that there once existed a well settled community by the number of women's graves found.

During the nineteenth Century, Thomas Mathew Ray kept a record of the Viking evidence he came across when supervising the laying of sewer pipes for the Dublin Corporation. It was noticed during the period of 1856 - 59 that the area encompassing Christchurch Cathedral was at one time the centre of Viking activity in Dublin, and the heart of a medieval walled town. In one of the corners of the town now stands Dublin Castle.

In 1962, the National Museum started excavations, south of Christchurch Cathedral, the triangular plot of ground within High Street, Nicholas Street and Back Lane. This excavation was undertaken by Brendan O'Riordain. Many workshops for leather, comb-making, woodcarvings and antler working were found along with imported ceramics, spices and silks from far off lands. Due to the discovery of coins, minted under Sigtrygg Silkbeard we are able to give a date to objects found alongside them.

The Vikings lived in Dublin for many generations. They had no means of disposing of refuse and so layer upon layer of debris built up as time passed. The waterlogged condition of the area preserved organic materials like a time capsule so that when carefully excavated it revealed important information about the Viking life style not yet documented. The archeologists were even able to analyse the diet of the people, the animals which were killed and their choice of menu. On this site they found what appeared to be a 'school' of artists and metalworkers, as an abundance of bone trial pieces were found. Many of these carved were faulty, which is how the name originated.

In 1981, the excavation of Woodquay, Fishamble Street began, under the supervision of Dr. Pat Wallace. Woodquay is the area situated between Christchurch Cathedral and the River Liffey. Fig. 1.

The Viking town was discovered when a group of houses were demolished to provide a site for some office blocks. The team of archeologists were allowed a short time between the demolition and the laying of the foundations in which to excavate the find. In this short period a lot of important discoveries were made.

We are now able to learn for the first time, the layout of Viking 10th and 11th Century Dublin. The first city wall and its earthen rampart consisted of floodbanks upon which a



Fig. 1.

defensive embankment was built. This bank later became the city wall which probably encompassed the town. Ten plots of the Viking age were uncovered along the Fishamble streetside of Woodquay, this is to say, a whole street perfectly intact. Maps and records were made of the house plans, pathways and rubbish pits. Houses were investigated, revealing chimneys were not used and that there existed four basic house types. We learn of their open plan layout and the construction methods of the time. This is a unique phenomenon. Never before had the Viking wattle or wooden structures been found in Ireland. Now the study of engineering and carpentry could be carried out.

The worksheds of blacksmiths, bronze-casting tools, along with non-ferrous metal workshops were found. Precious ornaments in small quantities indicate that Woodquay was once the nucleus for metalwork activity.

Other important finds were unearthed, such as the amber workers houses, where rings and beads were produced.

Many foreign items also revealed themselves.

In a neighbouring area, Christchurch Place, we can familiarise ourselves with a large bone and antler workshop and trade area where a beehive of activity was producing antler double and

single sided combs: combs of beautiful craftmanship, consisting of sawn teeth held together with antler plaques along the spine, whose delicate teeth were protected by a casing. Many bone objects were found: pins, knife handles, decorated objects and trial pieces, all of which revealed the fascinating discovery of the bone preparation, materials, tools used and decoration.

The importance of the excavations carried out in Dublin are very significant for European Urban studies, an account of the volume and range of artifacts, their evolution and production in varying degrees; the existence of three ethnic groups. These were Irish, Scandinavian and English, which raise important questions about European history.

This mine of information gives us an understanding of town layout, trade network, art styles, economical and environmental studies, diet and life style of the Vikings. We can compare finds with identical material from Viking period towns and trading posts in Sweden, Norway and Northern Germany.

Dublin spent its first 150 years very much a colony. Its people were Vikings and understandably they felt closer to Scandinavia than to the Irish people, who would have rightfully looked upon them as barbaric invaders. However, it is evident that over the years, with intermarriage and trading these barriers broke down. The word 'Margadh', market in

Irish, is taken directly from the Norse language. It is presumed that native craftsmen were commissioned to work for Viking traders. We can see the Viking influence on previously insular Irish art from the 11th and 12th Century which will be discussed in a later chapter.

The Vikings were, however, never very welcome, conflicts and battles arose. In 980, the Irish defeated the Norse at a Battle in Tara and as a result, were paid tribute by the Vikings. The Irish were prepared to tolerate them if they were kept under control, because of their skill as traders and the wealth they brought into the country.

The battles continued between the native Irish and in addition they fought battles with the Vikings. In March of 1014, the Battle of Clontarf was fought between Brian Boru (King of Munster and High King of Ireland) with the Irish from Leinster and the Vikings along with a number of their allies from Orkney and Isle of Man. The annals of Inisfallen speak of "All the foreigners of the western world" Brian fighting Sigtrygg Silkbeard, Viking King of Dublin for dynastic rivalry.

The battle was fought for fear of the future in Ireland, as across the waters the Bishop of Canterbury had been massacred by the Vikings. Their living off the countryside had reduced the natives to starvation.

The Norse were defeated and Brian met his death. It was not however, the last battle, as the Irish continued to fight amongst themselves and the Norse. King Silkbeard continued to rule for a further 20 years until his death. Dublin was still Norse-speaking when it fell to the Anglo Norman invaders in 1170.

Having dealt briefly with the foundation and settlement of Dublin as a Viking town and familiarised ourselves with the trades practiced at the time, I feel it is necessary to gain a greater insight into the work of a particular craft. I have chosen to look at the manufacturing of artifacts from bone. The examples used to illustrate the trade are pieces found during the excavations of Christchurch Place and Wood Quay. CHAPTER 2

EXECUTION OF BONE WORKING

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It has been argued that (FN 1.) in some Viking settlements, as in the later medieval ones, the trade in livestock was dominated by the skinners and tanners guilds. This gives us an idea of the importance placed on the hides and skeletal remains of animals in those days.

Bone was a valuable commodity, not only to the skilled worker, but also to the ordinary householder who could use it for many different purposes. Items such as spoons, skates and gaming pieces could be made from the readily available material. The people who used bone professionally mainly selected special parts of the skeleton. These parts were probably held aside when animals were slaughtered for hides and meat. It is these bone carved items we shall be looking at in this study.

The more refined range of objects display a wide variety of skill and production techniques. The beautiful bone pins, carved from the fibula of a pig would have had some retail value. However, these pins would not have been worn by the wealthier members of the community, as they would rather have worn precious metals and stones displaying their wealth. A Viking woman would receive a gold ring from her husband for every 10,000 dirhems he made or an additional piece of jewellery when she accumulated too many rings. (FN 2.) Bone pieces may have been purchased by the wealthy if they were of excellent quality, with additional finishes of gold leaf or jewels, examples of which were found in Scandinavia.

No pins of this category were found in Dublin. Such jewellery would have only been made out of metal. The bone craftsmen would have been professionals in their field, but would have lived the existence of itinerants, producing goods for the use of people in rural communities. They would have had a small stock-in-trade but generally would have worked on a commission basis, evidence of which was found by Brendan O'Riordain during the excavation of bone workshops in Christchurch Place.

The large amount of found bone objects, made during the 9th to the 12th Centuries, indicate that this was the golden age of bone. The vast quantities of workshops found dating from this period in New York, Scandinavia and Dublin, are known to have existed by all the remains of half completed pieces and disgarded waste.

Davidan's research of the objects found at Staraja Lodoga, south of the Russo-Finnish border in 1977, suggested that jewellery making, amber-carving and iron working were all practiced by craftsmen who worked in bone. It is not yet clear if this was the case in Dublin. It is speculated that the workshops may have consisted of semi-skilled labourers working in addition to the master craftsman. When work was slack by order, they would work for the trade at markets.

#### BONE WORKING METHODS

The working of bone may have been a difficult task, because of the inherent hardness of the material, for which it was valued. Some of the pieces found show indications that some softening process was used from the precise detail achieved in the carving of the decoration.

During the periods 1953 - 1973, and 1974, K. Zurowski experimented with bone in Poland and proposed some methods Vikings might have used to temporarily soften bone prior to carving. He found that bone soaked in various acid solutions (e.g. butter-milk, or sour milk - lactic acid, malt vinegar acetic acid) for a few days became noticeably softer.

The most marked results were achieved when bones were soaked in a 'broth' of sorrel leaves or roots. Sorrel is a plant which contains a huge percentage of axalic acid. After six weeks soaking, the bones became as soft as wood and could be moulded, carved and shaped as desired. Bracelets would have been made from rib bones, which already were shaped in an arc. The bones would then return to their normal hardness when dried, but some of their other properties were lost in the process. They couldn't be polished to the same degree and took on a dull surface colour and texture.

This technique must have added a new dimension to the trade of bone carving, but it is doubtful that the itinerant bone

carvers could have put it to much use. It took too long and some of the materials needed for softening were only seasonably available.

It is evident that the most valuable implement used by Viking bone workers was the saw. (Fig.2). From marks left on various pieces of work, it can be seen that saws from a thickness of 2.6 mm. to as little as 0.1 mm. were used. (FN 3) When cutting round section pieces of bone, the saw was rotated, so the blade could not jam in the groove. Saws were also used to apply textures and decoration to the bone. If a groove in a carving is square bottomed, it can be assumed that a saw was used; if the groove is 'V' shaped it was probably carved with a knife.

To make fine parellel cuts as in comb teeth, the Vikings sometimes used saws with double blades, making the work quicker and more uniform. These saws had blades mounted side by side wedged into a wooden spine. A metal divider between the blades ensured a constant separation.

The axe was also of value to the bone carver. Axes were used to hack pieces of bone into manageable sizes. Sometimes, the blade of the axe was carefully placed on the appropriate spot, used rather like a chizel, the back was then struck with a heavy object. The bone was split, with axes and wedges to obtain slivers for pins. Wedges would have been made of bone,



iron or sometimes pieces of wood. When accuracy was required a notch or groove was cut into the bone as a guide for the split to follow.

Knives were used to cut away small pieces and slivers from the main shaft. Knives were also used for the delicate carving of decoration, such as panels of interlacing. Draw knives were used to shave down the surfaces of objects. The blade would be drawn sideways along the surface. The surfaces of objects were smoothened and polished by a number of organic materials and fibres. Pumice stone may have found its way back from the extensive travels along the shore lines in the Northern Isles to add to the polishing tool-kit. Leather and sand rubbed together against the bone surface acted as a form of sand-paper. Rotten stone (a form of limestone) and crushed chalk, powdered charcoal and ashes of bones and antlers were also used as abrasive powders.

To create a buffer, the Viking bone workers made a brush out of hard stems of shavegrass, which were cut to fingerlength strips, bound together and soaked in water to soften them. This tool was vigorously used to scour out any blemishes. It is thought that rough dried fish skin may have been collected on trips and used for the same purpose.

From the sheer regularity and form of some artifacts, it is evident that the lathe was used to turn bone. Small holes at the ends of some cylindrical objects show where the grips of

the lathe contacted the bone. Although there have been no lathes found in the excavation of Viking sites, an illustration in a thirteenth century manuscript in the Bibliotheque National Paris, depicts a man working a bow driven lathe.

Drilling was important to the Viking bone worker for many jobs. Antler combs made with different components had to be drilled in order to be riveted. Screw drills (though not many) have been found on Viking excavation sites along with centre bits, which consist of a shaft with three points at the end. The one in the centre was cut first and acted as a guide for the two points rotating, which cut circles through the bone. Trepanning drills or surgeons drills lookalikes have also been found. These consist of a hollow metal cylinder with a toothed edge, mounted on a shaft. These could be used to cut bone discs for gaming pieces and similar objects.

Clamps were important tools, made from antler plates or whale bone, riveted together by a stout iron rivet. The piece that was being worked on was wedged inbetween the plate, held in place with the added support of pieces of wood.

Gauging was used to mark out the areas to be worked on, for instance, to mark the spacing of teeth to be sawn, in the making of a comb.

Ornamentation was varied, apart from the saw and knife decoration, it is common to find the ring and dot motif.

Because of its general irregularity in execution, it appears to have been enscribed freehand. On the other hand, the motif can be perfectly symmetrical, having been made by an implement, not unlike our own compass today. This type of decoration is known as 'Compass drawn'. The object used to incise a sharp line was a scribe or small chisel. Parallel lines to the edge were made with an implement similar to a mortice gauge of today.

In some cases the incisions were inlaid with a black pigment to high-light decoration. Examples of this can only be seen in the metalwork of Viking Dublin; traces of such pigment can be seen on some of the remaining bone trial pieces.

All of these methods mentioned above, are the results of an accumulation of evidence found in Viking settlements worldwide. However, the bone worked objects are almost uniform in execution at each site, so we can only presume from collective information that the objects in Wood Quay were worked in the same fashion.

## CHAPTER 2

### FOOTNOTES

- FN 1. Arthur MacGregor "Bone Antler, Ivory and Horn" The technology of skeletal materials since the Roman Period. Barnes & Hoble, New Jersey, 1975 Chapter 3, p. 35
- FN 2. James Graham Campbell "The Viking World" Lincoln Publishers, 1980, London Page 118
- FN 3. Arthur MacGregor "Bone Antler, Ivory and Horn" The technolgoy of skeletal materials since the Roman Period. Barnes & Hoble, New Jersey, 1975 Chapter 5, Page 55.

CHAPTER 111

VIKING ART STYLES AND PRE-VIKING IRISH ART STYLES

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#### VIKING ART STYLES

Before going on to discuss the Ringerike/Urnes period of bone carving, it is a good idea to have some background knowledge of Hiberno-Viking art styles (FN 1), because out of these styles grew the form of designs found on the bone carvings in Dublin. For three centuries, the Vikings flourished and in that short period of time, they developed a self-confident, vigorous and completely new art form. As they travelled, the collected influences from many countries and fused them together to make something completely new and different.

The styles which most influenced them were found in Irish, Anglo-Saxon and Frankish Carolingian arts and also to a small degree in oriental styles. The animal motif was the mainstay of Viking art; there are few examples of floral motifs.

In pre-Viking times, the Germanic, Irish and Scythian peoples shared a great preference for animal motifs. This preference waned for Germanics around the sixth century. With such intense attention to precision and detail, these pre-Viking decorative styles became rather overworked and weak, with the result that around the mid 800's attention was turned to contemporary work. They were attracted to the animal motifs of Irish craftsmen and to the work of the Anglo-Saxons who were slightly influenced by the Syrian vine scroll decoration, which featured animals in motion, leaping, climbing and flying.

The 8th Century Frankish Merovingian-Carolingian animal motifs with oriental origin appealed greatly to the Vikings.

The earliest known examples of true Viking art are the 9th Century artifacts found amongst the objects of the Osberg ship burial. These artifacts were made by a group of court artists. In his analysis of the find, Shetelig (FN 2) names this group the "Vestfold school". He has been able to trace pieces of work to their makers, giving them names according to their particular styles and skills. There is the 'Academician' who was the master of Bass Relief wood carving (Fig. 3) introducing a new style to the art. "The master of the prow" who practiced the 'Old Vendel' style with its British Isles influence was superficially symetric but never mechanical in appearance.

Shetelig names one man "the Baroque Master" who developed further the style in Osberg (Fig. 4). It shows a framework of strapwork roundels and small animals, their claws gripping to every possible place. He was the great influential artist who introduced the 'Gripping Beast' style to Viking art. This beast is a fantastic creature, a mixture of fear, lion dog, a sort of Goblin, full of vigour and animation. It never remains motionless, always clutching, round eyes and wide forehead with a long tuft of hair at the back of its head and an elongated body. This energetic gripping beast invention was the image the Vikings aspired to. The gripping beast does



not constitute a style but a motif.

From the works of these masters, many styles developed. The 'Borre' style, named after finds from the royal grave mounds at Borre, injected a new ring-chain motif and a new more naturalistic gripping beast (Fig. 5): a more savage animal with head looking backwards. The Vikings went wild about this barbaric and robust representation which played a major role in Norway and Sweden from the 9th to the mid 10th Century.

The ornament on the Jelling cup (Fig. 6) found in Jelling introduces the next style, spirals on hip joints and filagree imitation on the metal ornament. The metamorphosis of Jelling into the 'mammen' style becomes apparent in the introduction of tendril off-shoots from the animal body. The style is named after the design on an axe (Fig. 7) with gold inlay from Bjerringhöj in Jutland, Denmark. The animals become more naturalistic, use was made of vegetable motifs, based on vine scrolls commonly seen in 9th and 10th Century European art. Acanthus leaves were used boldly with curving and elongated tendrils.

The 'Ringerike' style grew out of the mammen during the first half of the 11th Century. The style is divided into two phases: The Ringerike/Mammen and the Ringerike/Urnes. The distinction between Mammen and Ringerike is the clearer organisation of composition and flow of ornamental lines in







Fig. 6



the Ringerike style.(Fig. 8) There is a better control and more taut appearance from the evenly curved lines, both in the main ornament and detail. There are grouping of details in clusters of rhythmically alternating or identical shapes. These shapes stand out against the background and are clearly defined in relation to eachother and to the main ornamental lines. There is a great linear quality and axiality in the overall composition. The tendrils have become slimmer and shorter with bulbous ends. The style was influenced by Anglo-Saxen and Germanic art, crossed with native traditions. Scrolls, which are elongated with an angular or scrolled thickening half way along its length with tightly curled ends, are derived from Acanthus elements from the Mammen style originally of Ottarian or Anglo-Saxon origin.

Vegetal motifs are less common in the 11th Century Urnes style but are not altogether absent. The characteristic of this style is the great use of four-legged animals, ribbon-shaped animals and snakes. (Fig. 9) There is great use of gradually widening and tapering lines in an elegant fashion. Dents on the outlines are sometimes found, usually in the limb-joint areas. The Urnes style features are the useage of two different width lines, running parallel to eachother or sometimes tapering and swelling. The overall pattern is very geometric with loops treated in a circular fashion. The Jelling beast was certainly not forgotten about, but treated in a very elegant manner, with smooth unbroken curves.







The Urnes style was the most refined and highly skilled execution of a style that the Viking craftsmen had ever produced.

The Art was used to decorate functional objects, very few pieces were made for art's sake.

In the following chapter I shall look at the bone artifacts found in Dublin, their variety of functional purposes and decoration.
# PRE-VIKING IRISH ART STYLES

The three hundred years of Viking settlement in Ireland brought about many changes, both in life-style and in art styles. The Vikings developed some of the existing small Irish towns and built new ones for their large trading centres. Contact between the two cultures grew, resulting in intermarriage in the latter century.

Irish and Viking artisans worked together and commissions were carried out by Irish craftsmen following Viking models. Thus both cultures were influenced by eachother. We have already briefly seen how Irish influences appear in the Viking art. For hundreds of years the Vikings looked at Irish art, by which they were greatly inspired and continued to do so throughout their occupation. Brønsted was of the opinion that the Jelling style ornament originates in Scandinavia through a direct imitation of Irish ornament. (FN 3). As more archeological evidence was found since Brønsted's analysis, art historians are of different opinions.

The close contact of native craftsmen working under Viking instruction had a great effect on insular Irish art, in particular the decoration on the 11th and 12th century metalwork, with which I am primarily concerned. However, the Viking style influence does appear on the decoration of some High Crosses, examples of which can be seen on two

crosses at Kilfenora and Killeany. Here we can see a double crossing scroll of lightly asymmetrical composition which has been taken as a Ringerike style motif, and clearly contains elements of the Irish Urnes style. The Irish Urnes interlace displays itself on the Killeany cross.

Before the arrival of the Vikings, Ireland had already developed a very rich art, greatly admired by its foreign contemporaries. The beginning of the development can be seen by the engraved scabbards, sculptured stones and jewellery (FN. 2), clearly following the phase of Celtic (La tène) art imported from the continent and from England, of spirals and curved lines. We can see good examples of such designs dating as far back as Megalithic times on the stones at Newgrange, County Meath.

The conversion of Ireland to Christianity was responsible for an artistic boom. All the artistic attention was focused on the decoration of religious objects.

As time went on, pilgrims visited the monasteries of Ireland, increasing the numbers. The monastery became a school of the arts. In the 7th and 8th century pupils flocked to the famous schools from England (which was reconverted to Christianity after the Roman Empire) and Europe.

The art from the 5th to the mid 7th Century, is characterised by the adapted borrowings which were incorporated with the Celtic decoration. They still followed their ancient tradition of discipline and order, adapting motifs to fit into their own language of religious symbols (FN 4).

Ireland did not entirely escape from Roman influence. Trade and expeditions to England, led to many Roman objects entering Ireland. Some of these were imitated by Irish artisans, in particular, the metalworking techniques and enamelling. Also the Picts of Scotland, neighbours of the Romans, injected styles of brooches and pins to Ireland.

The political and economic situation of the Norse towns in Ireland provided a haven for south of England based Vikings (during Danish rule) who did not belong to the land-owning aristrocracy. Merchants, soldiers and artisans had direct contact with Scandinavia, the fashion and arts. They travelled to Ireland often bringing designs which strongly increased the application in the Irish workshops. The sudden absence of Scandinavian clientele from the South of England may be the reason which resulted in the stylistic hiatus reflected in the material found.

The collapse of the Roman Empire had a great effect on the lasting influence on Irish art. Texts tell us of St. Patrick

bringing many religious objects as well as artists of Roman and Oriental origin, which characterised the art of Christian Ireland. He may have also brought manuscripts and sacred texts. We will never know how these books were decorated or to what extent they influenced Irish ornament. It is presumed the use of large capital letters is a result of such exposure.

Elements of Oriental art also played a major part in insular decoration which was exposed to Ireland in the form of religious relics. Coptic and Syrian manuscripts were greatly admired and inspired the monks to create illuminations such as the carpet page in the Book of Durrow. Such design became characteristic of Irish art. Oriental influences introduced the use of interlace, combined with the spiral.

From the middle of the 7th Century, Irish missionaries and pilgrims travelled in large numbers to Rome. Western Europe was dotted with monasteries of Irish origin, situated in Langny, Luxeril, Saint Gall, Babbio, Echternach, Würtzburg, Hanon and many others. It was here pilgrims might stay a lifetime in fear of returning to the Scandinavian terror.

Irish masters, such as Alcuin, Sedulius, Scottus, Clemens Scottus and Scottus Eriugena would be surrounded by Carolingian Empires wanting to learn from brilliant scribesmen, painters and scholars. New ideas were introduced and brought home such as the usage of colour and pigments.

With the conversion of England to Christianity, close contact resulted between England and Ireland. In 635 Lindisfarne was founded for English pupils, an artistically rich school. Anglo-Saxon influences were absorbed. It is difficult to tell works apart from Lindisfarne and Ireland.

In the 8th Century and beginning of the 9th Century, Irish art reached a technical perfection. Masterpieces of sculpture and illumination were made: The Ardagh Chalice (Fig. 10) and Tara Brooch (Fig. 11) (FN. 5), Ahenny Cross and the Book of Kells (Fig. 12) (FN 6.)

With this rich art, it is no wonder the Vikings paid so many visits to raid monasteries before settling.



Fig. 10



Fig. 11



## CHAPTER 111

## FOOTNOTES

- FN 1 For further information on Viking art styles: David M. Wilson & Ole Klidt Jensen "Viking Art" George Allen & Urwin publishers, London 1966
- FN 2 Brøgger A. W. and Shetelig H. "The Viking Ships" C. Hurst London and Arthur Vanons Riveredge N.J. 1971
- FN3 Brønsted "Early English ornament" Copenhagen and London 1924 Page 270
- FN 4 For indepth reading Vol. 1 "Irish Art in the Early Christian Period (500 - 800)" Cornell University Press, New York, 1965
- FN 5 Metal Works, National Museum of Ireland
  FN 6 Book of Kells, Trinity College Library, Dublin.

CHAPTER 1V

BONE CARVINGS

## BONE CARVINGS

Hundreds of bone artifacts were found during the various excavations of medieval Dublin. All of the items I have chosen as examples of the various objects made from bone, have been taken from the display at the National Museum at Merrion Row. Many other objects were found, but due to the present research and analyses of the collection for the new catalogue, they are not available to the public.

Most of the artifacts were for domestic use. Many of them were made at home by individuals as they were required. The first domestic utensil I shall look at is the spoon.

Hundreds of spoons were recovered, all showing various degrees of craftsmanship and again often made by laymen, rather than by skilled bone-carvers.

Spoons were generally carved from the femur of an animal: pig, horse, or cattle, which had been split into sections. The bone would have been worked fresh, in its most plastic state, enabling the carver to work with greater ease. The spoons were made in various sizes to serve different purposes. Figs. 13 & 14 are spoons demonstrating work of a more skilled bone carver. Figure 13 is perfectly intact with graceful proportions, and has a highly polished surface. Because of the nature of spoon manufacturing, they tend to be very shallow, resembling miniature oars. The example in Figure 14 has been damaged as the proportion of the handle is too short to support the elongated bowl. This by no means takes away from its antiquity. This spoon was carved from a larger piece of bone enabling the carver to give more depth to the paddle-like bowl. The beautiful scoop (Figure 15) was most likely carved by a skilled bone carver. It was used to draw out the marrow from the bones. It appears to be double ended. The scoops at each end are of different sizes. It has been worked on a slight arc, so as to gain full benefit from each scooping action.

#### KNIFE HANDLES

Knives were very important tools and great care was taken in the decoration of the handles. We are fortunate to have many examples as a result of the excavations on the 13th Century level - all are in different states of repair. In Figure 16, we can see an exquisite piece of carving. It is a very ornate piece depicting a figure with a crowned head. It shows off a great variety of surface decorative techniques. The knife was the principle tool for the bonecarver, for both carving and smoothening surfaces, and therefore, much treasured. The importance of the object reveals itself by the richness of of decoration. This particular knife is presumed to have been a precious tool as its lavish ornamentation tells. The face,







Fig. 15

Fig. 13

Fig. 14

Fig. 16





Fig. 17

hand and crown of the figure would have been carved by such a knife. The torso has an interesting texture, probably achieved by the combination of knife, gauge and chizel-like scribe incisions.

Another knife handle (Fig. 17) with less ornamentation is a good example of a popular approach taken by 13th Century carvers. The handle is enhanced with polished surfaces, complementing the three bands of motif equally spaced around the shaft. Incised within the bands are horizontal and diagonal lines forming diamond or triangular patterns. This work was probably executed with a chizel or scribe gauge and later picked out with pigment stain.

## REPRESENTATIONAL ART

The figure made from a section of long bone (Figure 18) is stylised in form, but due to the absence of head, hands and feet, it is unknown what decoration the complete figure may have once possessed. Archaeologists can only speculate as to the function it once served in Viking society. It most likely belonged to a gaming set or perhaps was a cult object or doll.

## PINS

Within the collection of found bone objects, we have a wonderful selection of beautifully intact bone pins. They were used as a form of fastener for loosely draped lengths of cloth or as hair pins. They were made from lengths of long

bone which were cut into slivers and carved. The average length would be about  $4\frac{1}{2}$  inches.

These are but a few of the vast quantity recovered. They illustrate clearly to us the zoomorphic preference in artistic motif. We can see the obvious close contact with the Scandinavian art world. The firey dragon-like depictions of Figures 19 and 22 were very fashionable at that time. The craftsmanship of Figure 21 is of an extremely high standard. The half eagle, half animal, has been carefully worked, with the stamp of large round eyes and fierce mouth so common in the Ringerike style. Figure 22 possesses the pointed forward eye and roaring exotic beast's mouth, which are the features of the Jelling beast incorporated into the fashionable design of the day.

There are some pins that are less aggressive in ornament, the crouched cat (Figure 23) however, angular in depiction is deceptive as it remains in a relatively serene position. The more delicate works of rounded forms are revealed from the bone. The elegant and graceful swan carving (Figure 24) was given much the same treatment as the ram's head (Figure25) which leads us to believe that they are both the works of the one master.

All of the pins mentioned have been carefully polished to an extremely shiny finish. Carvings would have been carried out with the knife and chizel scribe tools.





Fig. 22

#### NEEDLES

The bones for needle manufacturing would have been prepared by the same methods as the pins, but not worked to such an extent. The cruder objects are presumed by archeologists to have been used in the weaving of netting. (Figs. 26 & 27)

## WHORLS & SPINDLES

Whorls and spindles were used to spin yarn from wood (Fig. 28) The whorls were made from the ends of cattle femurs, into which the spindles were placed. The spindles were also manufactured in the same manner as pins, with the absence of decoration. Metal and wood sets were found also in the Dublin sites.

## GAMING PIECES AND DICE

The large quantity of gaming pieces found is evidence that games were a popular pastime. The sets were made from various materials and several degrees of workmanship are present: from the very basic stone pebbles and bone ends to highly decorated sets. Figure 29 shows us a number of pieces of a set made from cattle metacarpal/metatarsal shafts. More elaborate and carefully worked sets of gaming pieces have been found, carved from walrus ivory, ivory, horn, wood, stone and antler. The latter displaying an array of 'ring and dot' motif and 'compass drawn' designs.





Fig. 27

Fig. 26



## BONE SKATES

Skates made from bones were attached to the shoe, by thongs put through holes at either end (Fig. 30). The Vikings skated on frozen lakes and rivers: winters were more severe a thousand years ago. The skates were made from horses or cattle's metapodials (foot bones). It appears to have been a popular sport of the time. These skates date to the 12th Century and 13th Century. We are able to identify these bone pieces as skates by a pair found in a lake bed in Ipswich. Trapped under the ice, a woman drowned and her skeleton was preserved in the mud.

### DICE

Horse's teeth were the material used to make items such as dice (Fig. 31). The marbled grain of the polished teeth adds an interesting dimension to these pieces. Dice were carved with great care, their design and function remains the same to this day.

#### TOGGLES OR BUZZ-DISCS

Objects made from pig foot bones are the remains of what may at one time have been buzz-discs (Fig. 32), from which taut strings would have been suspended. They may also have been used as toggles, resembling duffel coat buttons of today.



Fig. 29

Fig. 30





Fig. 31

## WHALE BONE

Whales were hunted mainly for blubber which was used to fuel domestic lamps, for heat and light. Items from whale bone are plentiful. Large flat pieces were available and were useful in the manufacture of objects such as the spades shown in Figures 33 and 34. They may have been used for making butter or for caulking boats and ships. Greater attention was paid to the shape and form of the spade shown in Figure 33. The famous 'ring and dot' motif decorates the spade at random with little order. This piece of decorative work appears to have been produced free-hand judging by the irregularity of the motif, when compared with the very geometric 'ring and dot' motif decorating the gaming pieces in Figure 35 (which was obviously compass-drawn). The design is very geometrical and displays the typical floral shapes which were greatly used during the Viking period. This form of design stamps nearly all gaming pieces found, most of which were made from Antler.

## CLAMPS

The whale bone clamps (Figs. 36 & 37) held smaller bone pieces being worked upon, several sets were found, very much resembling the hand grips used by jewellers today. The choice of whale bone again was because of its size. It is more unusual to find clamps with decoration; Figure 36 (a) bears a semi-geometrical motif in panels of a horizontal and vertical zig-zag pattern, incised by the use of a gauge. One perfectly intact example remains, both sides of the clamp fixed together with an iron rivot. (Fig. 37)



Fig. 32





Fig. 35

Fig. 33



Fig. 34







Fig. 37

CHAPTER 5

TRIAL PIECES

'Trial pieces' or 'motif pieces' are small pieces of raw material, wood, leather, stone or bone (the latter I shall be focusing on), on which motif carvings were strategically positioned on the surface in relief or by incised lines. The patterns are the primary concern. They do not decorate the object but use the object to support the representation. Designs may be worked at random, superimposed on top of each other, often the carving is unfinished and full of errors. There exist, however, very well-made pieces among the collection. Five functions have been identified by Uaininn O'Meadhra (FN 1):-

1. For leisure activity;

- Learning attempts, apprentices exercises, artists working drawings (as a form of portfolio);
- Talismans, sketchings of a separate form but related to manufacturing;
- 4. An area in High Street gave clues to suggest that they were used for making sheet metal impressions in the fine metal workshop. A trial piece was found amongst the debris of ashes and crucible fragments. Christchurch Place motifs have parallels with those found on ecclesiastic surfaces. Artists may have been employed by the Cathedral. Similar impressions were also found on decorative book strap tags. From the evidence of copper alloy mounts or unfinished castings found in Christchurch Place bone workshops, we know 'trial pieces' were used as patterns for castings.

5. Four of the 'trial pieces' found have been related to leather working. The motifs found on decorated scabbards and sheaths and knife handles are identical to those of trial pieces, in the 'former' or earlier trial stage. Due to the shrinkage of the leather, the motif is considerably smaller.

Trial pieces are an Insular Celtic or even an Irish phenomenan. Out of the 350 motif pieces found in Europe, most of them come from Ireland (the earliest examples also). Originally, the Celts used to write on them. Later they developed into sketching and carving.

From looking at the Dublin wood carving styles, it is certainly true to the late Scandinavian style traits. It is to this work that the trial pieces closely relate. This indicates that the motif carvers were Scandinavian or were native Irish cutters following Scandinavian models, as they were familiar with the skill. The patterns may therefore be in fact Irish or Hiberno-Scandinavian in origin, and when found in Scandinavia tell us of the contact once had with Dublin. The workshops probably employed a mixture of Irish and Viking carvers who worked for the colonial Vikings, rather than for Scandinavian customers, and so an Irish-Scandinavian mixture of styles developed.

We can learn from the pieces how designs and patterns developed and when styles were most popular. The pieces display the Ringerike style, both in the early Mammen-Ringerike stage and developed Ringerike Urnes style. Carvers might sometimes have been given models to work from by Clients. This is evident because on some trial pieces, along with the finished carvings, can be seen other designs, scratched into the bone surface, where the artist 'doodled'. This can be detected by archeologists who are familiar with conflicting styles found on the site. (FN 2)

Viking Dublin is unique for its rich design centre. It is presumed that areas still await to be excavated. It was a royal urban colony and haven for travellers and traders with cultural interchanges occuring. Anglo-Scandinavian and Saxon elements added to the variety of motifs. Motifs include the triquetra, duplex and paired ring knot in closely fitted panels. Most of these were enhanced by dark pigment stains which have since virtually disappeared, leaving only a slight trace.

The best examples of Irish and Scandinavian mixed motif bone work are those pieces which are carved on the surfaces of a hollow, cylindrical section of long bone (Fig. 38). <u>Side 1</u>: In the motif (a) can be seen a finely worked beast with a single ball and claw foot form and with splayed club

ended jaws which are typical elements of insular Irish design. At the same time, we can see Scandinavian elements of a forward pointing eye and lappet off-shoots (off-shoots were, however, also used in the Book of Kells decoration) (FN. 3). The motif in (b) consists of two closed loop biped figures (footed animals) whose shape forms a double figure of eight. The wide bands run along beside them. The motif is very compact, with its bulbous tendrils, leaving very little background space. The head and snout meet forming an interweave of knotted lapets, representing feet. The head has rounded eyes which help depict the stylised form, disguised by the overall design.

A symmetrical foliate motif (c) is worked in a double figure of eight further decorating the surface of the bone. It is formed on a wide band, with interlinking tendrils where the two central loops meet. The spiral motif fills the loops at either end, displaying a fashion that grew out of the Mammen style into the Ringerike. The overall style of the piece is that of the Urnes style.

Other similar motifs are practiced on every workable surface. Side 2: On this side, we can see a fine example of a pair of interlaced snakes, carved in flat relief, leaving very little background space between the broad bands. The snakes form a pear shape with an open loop ending, where the knotted tail and head form an L shape. The head has pointed forward eyes, an open widely splayed jaw from which the snout is represented with downward curls, displaying teeth. On top of the head we have matching curls of bulb ended tendrils, facing upwards depicting a crest.



Fig. 38 (Side 1)

(a)

(c)



•

Fig. 38 (Side two)



Fig. 38 (a)

000



Fig. 38 (b)



Fig. 38 (c)

Narrow lapets run along-side and occasionally twist around the major bands, forming an elaborate design. Shadow sketches can be seen behind this motif.

Strong Scandinavian elements are evident in the motif piece illustrated in Fig. 39. It is thought to be the work of a Viking craftsman. It displays a pair of snake patterns, one on each side of the piece. Both are of different designs, filling the width of the bone, which is highly polished. It is late Ringerike-Urnes in style.

<u>Side 1</u> (a) The snake forms are made up by ribbon-like bands. Both snakes mingle together by a paired knot feature at the centre of the design. The heads are placed at either end of the shaft. They are eyeless, and have different snout details from eachother. The overall curved pattern sweeps into the head line from the neck with no depiction of head form. We can see the spiral joint representation, surrounded by characteristic Scandinavian sets of short lines with cross bands.

<u>Side 2</u> (b) The motif is of a single snake whose head is centred with the head lappet looped symmetrically on either side. The head has forward-pointed almond shaped eyes and knotted nose lappets with strands that appear to be worked in a haphazard manner, but are in fact carefully placed. This is a typical trait of the Scandinavian approach. The motif is unfinished, with visible mistakes and roughly cut outer loop contours.



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Fig. 39 (a) Side One





Figs. 39 (b) Side two

Both the incised motifs have curled tendril endings and are a great deal cruder than the craftsmanship of the previous motif piece.

The surface of Figure 40 has been finely sketched upon by mere needlepoint marks, revealing pattern attempts. Motif (a) has been deeply carved, in a rough manner in the form of an open-looped snake. It displays interweaving lapets and spiral tendrils. No great detail to the head has been given other than widely splayed jaws and a representation of what may be a beard.

When looking closely at the bone, we can see traces of a sketch (b), which is constructed by a single line incision. It is most probably a working drawing for (a) but was decided against. A little spiral design appears to be representing the animals tail. It is unknown which design the bone carver felt more at home with or which design he was learning to carve.

Animal and snake interlock, was not as commonly pursued as was the production of motifs such as triquetra and closely interlaced panels. A good example of the variety of carving exercises found on one piece can be seen on Figure 41. There are various degrees of workmanship on the pointed triguerra and interlaced panels. The 6 x 10 cord interlacing is the larger of the two interlacing panels (a); has pointed ends and curved side ends, all worked within a rectangular field. It has not been very finely carved and is rather uneven in layout. Traces of an animal head sketch reveal the outwardly curling jaws







with bulbous ends. The eyeless head stretches into a band-like collar.

The remains of the rectangular band (b) is crudely carved, with irregularly spaced interlacings.

The piece of rib bone (Fig. 42) which has been broken at both ends, displays upon its scratched surface a variety of exercise techniques. One can notice when looking closely at the piece many scratched out designs, erased by the use of a sharp knife edge, leaving more traces of the working drawings.

Among the pin scratched sketches are many carved designs. Reading from right to left, we can see (a) an irregular interlace of a 4 x 12 cord plait. It has pointed corners and curved sides. Next to it lies (b) an example of a duplex form in a square field. We can tell by the width of the bands that the designs collectively are grouped as a set, practicing different design elements. The neighbouring carving displays a double duplex (c) in yet another square field, enclosing the bands. These bands do not interlace but merely form the broken line motif, which influenced Irish design in later times. Next to (c) we can see a triquetra in a triangular field line -(d), again the bands do not interlace with one another. Beside the triquetra attempts of what may have been another plait in a rectangular field, and lastly, we can feintly see working drawings, some of which were made by a compass. A true example of a practice piece!


Fig. 42

Because of the volume of Rigerike style artifacts found in Dublin, archeologists are of the opinion that it may have been in Dublin that the style greatly flourished. (FN 4) setting the fashion for Scandinavian design. The works would travel in model form from which the foreign craftsmen could work.

#### TRIAL PIECES : CHAPTER 5

### FOOTNOTES

FN 1 Micheal Ryan "Ireland and Insular Art" AD 500 - 1200

> Uaininn O'Meadhra "Irish, Insular, Saxon and Scandinavian elements in the motif pieces from Ireland" p. 159 Dublin R.I.A. 1983

FN 2 As above p. 162

FN 3 The Book of Kells: Cannon 11, Matthew, Mark, Luke The Beginning of the Breves of Matthew

FN 4 Signe Horn Fnglesang "Some aspects of the Ringerike style" Odense University Press 1980 Chapter 1. CHAPTER 6

THE INFLUENCE OF VIKING ART STYLES ON 11TH AND 12TH CENTURY IRISH METALWORK Irish art was an on-going development which by no means collapsed as a result of the Viking invasions. In fact, on the contrary, a new stage of artistic adaption followed. When the military power of the Vikings was broken it gave the Irish Churches a great opportunity for material restoration. The Vikings had pillaged the Churches and monasteries of valuable ecclesiastical objects. It was at this time the monasteries reshrined their objects in the most lavish manner.

Practically all the book shrines, most of the bell shrines and croziers in the National Museum of Ireland were works of this period (1091 - 1127). The Soiscéal Molaise (Fig. 43) dates to the first quarter of the 11th Century and shows us the development of the earlier approach, with the Ringerike style treatment which is of Viking influence. These reveal themselves through the broken contours and animal depictions which derive from the 10th Century Scandinavian Jelling style. However, Viking styles did not have a major impact until mid 11th Century.

On the Shrine of the Stowe Missal (Figs. 44 (a) & (b)) the reintroduction of vine scroll vegetal motifs, based on the classical vine scroll, reappear in Irish art. This is due to the exposure of such design to Irish artisans by means of Scandinavian tastes.

The Kells crozier (Figs. 45a, 45b, 45c) displays different elements. Beside the 11th century foliage on the upper strip,



Fig. 43



Fig. 44 (a)



Fig. 44 (b)



*a*. Upper binding-strip  $\binom{1}{1}$ 



b. Lower binding-strip  $\binom{1}{1}$ 





Fig. 45 (c)

the two panels of Irish animal motif, possess the Scandinavian forward pointing eye feature.

Metal pieces from the mid llth century show first signs of Scandinavian Ringerike style influence, depicting the combination of 'lion and snake' motifs, scrolls and lobed tendrils.

The most popular designs were animal heads with interlaced moustaches and manes and the ribbon-like bodies of two or three line widths arranged in a figure of eight pattern, as on the crook of the Clonmacnoise Crozier (figs. 46a and 46b). The pattern, like all good Ringerike ornament is asymmetrical and decorates the surface with the typical tendrils of the style. The tendrils, however, are not as ragged as some from the high Ringerike style, but smoother, resembling more the tendrils of the refined Urnes style. The inlay decorating the head of the bronze carving displays a number of snake-like animals looped together in the same manner as those found on the Misach Shrine (Figs. 47a, 47b). The Misach book shrine displays two open-work plaques, consisting of ribbon-shaped animals poorly integrated. The treatment of the animals were composed in an open manner, with the body lines interrupted by single tendrils. This is interpreted as an Urnes style element. The original panels of the Misach book share similar features with the Cathach Shrine (Figures 48a, 48b, 48c). The shrine can be dated by the inscription on the bottom plate to 1062 - 1098. The two



Fig. 46 (a)



Fig. 46 (b)





Fig. 48 (a)



Fig. 48 (b)



Fig. 48 (c)

Ringerike style panels have been practically covered by later mounts, so that only the centre part is visible. Both panels are executed in relief, with the Irish technique of inlaid silver wire. Two ribbon shaped animals, in the figure of eight motif, decorate both panels. The two bands are even in width throughout, without dents or broadenings. Each ribbon is used as a seperate interlace element. The thin tendril offshoots form an open interweave pattern inside the animal loops. The interlace points which interrupt the main animal bodies have been grouped with the Ringerike style, while the use of the bands are associated with the Urnes style.

Brendain O'Riordáin pointed out to me how the trial piece (Figure 38) found in High Street bears remarkable resemblance with the panels of the Shrine. This evidence is important as it indicates that the Cathach Shrine was made in Ireland, and the production of the designs were carried out in Dublin. As the Misach Shrine (Fig. 47) is so similar, it is presumed to have been made in Ireland around about the same time. The dating on the bottom of the shrine tells us that the height of the Ringerike Urnes style occured in Ireland during the second half of the 11th century.

The Urnes style was fully adopted and transformed for the decoration of masterpieces by the Irish workshops. This style is characterised by an animal interlace, loosely woven, but more disciplined than the previous Irish version of the

Ringerike style. It is based on quadrupeds with splayed jaws, through which snakes with bulbous eyes are interwoven. In many objects the interlaced animals are composed of silver set against a plain bronze background and are outlined with narrow inlays of niello.

The wonderful 'Cross of Cong' which is said to enshrine a relic of the true cross, is decorated with animal interlacing bands of varying thicknesses expanding and contracting, so true to the Urnes style (Fig. 49a, 49b, 49c). The Shrine of St. Manchan (Fig. 50a, 50b) and the religuary of St. Lachtin's arm (Fig. 51a, 51b, 51c) also follow the same interplay betweeen wide and thin animals forming loops.

There can be no doubt that these are derivitives of the Scandinavian Urnes style. The glorious St. Patrick's Bell Shrine (Fig. 52a, 52b) which was made between 1094 and 1105, displays in high relief interlaced animals worked in a very complex manner. The bell shrine is covered with these beasts, with long thin jaws, whose bodies are made up of graceful hoops elegantly flowing and interweaving amongst eachother. To finish the beasts in decoration, their eyes were depicted by studs of blue glass.

These beautiful Ringerike and Urnes style masterpieces contain in their design Irish motifs and ancient formal elements. Never did they neglect their past of rigid rules and disciplines.



Cross of Cong (c. 1123 A.D.).

Above	Fig.	49	(a)	
Right		49	(b)	
Below		49	(c)	







Fig. 50 (a)



Fig. 50 (b)



Above	Fig.	51	(a)	
Right	Fig.	51	(b)	
Below	Fig.	51	(c)	







Fig. 52 (a)



Fig. 52 (b)

Fig. 52 (c)

They used Irish animals in a Scandinavian manner and style treatment. The Irish Ringerike and Urnes style decoration was not a complete imitation of Viking art. The Irish rule of repetition of identically shaped motifs was a rule generally avoided by Viking artisans, although not unheard of. It is clear to see that the Irish artisans developed their own original style, with great Scandinavian influence.

It appears that the outstanding monastic artwork was carried no further after the 12th Century. It is believed that such a high standard was accomplished that they could not improve themselves. A new era of Irish art emerged.

#### CONCLUSION

From closely looking at the bone carvings, we have had an isolated insight to an important Viking trade: the varied useage of the raw material, from basic household utensils, to very skillfully carved art works.

The important archeological find at Christ Church Place has enabled scholars to research the preparation and production of bone making, also the identification of Viking Dublin art styles carried out in specialised art schools. The combination of styles tell us of the close contact between the two cultures and their influence on eachother. When comparing the motifs on bone trial pieces with 11th and 12th century metalwork found in Ireland, we can safely presume that the metalwork was a product of the Dublin school. This valuable evidence has also enabled art historians to trace the development of Irish art styles.

Not only did the Vikings pillage, destroy and destruct, they contributed to major developments in Ireland, both economically, with the first minting under Sigtrygg Silkenbeard, at the end of the 9th Century, and in the laying of town foundations. These once Viking trade centres, have 1,000 years later grown into some of Ireland's major towns and cities. Upon the excavated site at Wood Quay stands the sad sight of a hideous monstronsity, celebrating the Viking Dublin Millenium. (Fig. 53).

The great public awareness of the importance of our Scandinavian settlers, has created a buzz of excitement and activity for all of us to learn from and enjoy this year.



Fig. 53.

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## INTERVIEWS

Dr. Barry, T.

Mr. Butler, V.

Mr. Stalley, R.

Dr. Wallace P.

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Photographs - Courtesy of the National Museum, Ireland

Drawings - by Melissa MacGillycuddy

All items of bone are on display in the National Museum, Merrion Row.

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All Irish Metalwork (except Fig. 45) can be seen in the National Museum of Ireland Treasury, Dublin.