TIPPERARY HISTORICAL JOURNAL
1995

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ISSN 0791-0655

Dungarvan – a faunal report

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Introduction

In the course of excavations in Dungarvan during the summer of 1989 on a site at the junction formed by St. Augustine Street and Church Street, bone material was recovered from layers and spreads of soil which had accumulated across most of the excavated surface. A smaller sample of bones was recovered from the basal layer of a ditch (F1), which has been interpreted by the excavator as representing a possible moat associated with the medieval town's defences.

Ceramic and artifactual evidence from the base of the ditch suggested that it had been rapidly backfilled some time during the 17th and 18th centuries. As there are no significant differences between the layers and the ditch material in terms of species and anatomical elements represented, and as the samples concerned are very small, the remains are treated together in the following analysis.

Methods

All fragments were identified to species wherever possible with the aid of the modern skeletal collections of mammals and fish at the Department of Archaeology, UCC. While many bones could be confidently taken to species level, other more fragmentary bone was less easily classified. This material was grouped into a number of species categories based on size.

Bones that in all probability derived from cattle were classified as large mammal fragments (LM in Table 1), while those bones that probably came from sheep or pigs were classified as medium mammal fragments (MM in Table 1). All ribs were identified as large and medium mammal fragments only.

It is possible that some bones classified as large mammal remains could be horse, as this species is found at the site. Diagnostic bones of sheep were identified in all layers and none of goat. It is assumed therefore that all sheep/goat bones are sheep, and are referred to as such in the remainder of the text. The quality of measurable material was negligible and has not been included in this report. A full list of measurements is available from the writer on request.

Retrieval

The entire mammal sample was excavated by normal hand recovery in the trench. It was evident during excavation that some deposits were very rich in terms of the fish bones and shell and, though sieving was not a routine part of the excavation process, some deposits were sampled specifically for the retrieval of marine resources.

An analysis of the contents of the residues indicated that, while much valuable information would have been lost in terms of the contribution of fish and shellfish to the diet, very few

animal remains were recovered. The sieved mammal sample consisted for the most part of small fragments of unidentifiable bone probably from the major domesticates.

Mammal and Bird Remains

The total number of bones examined was just over 130, of which 71 were positively identified. The numbers of bones for each species are given in Table 1. No attempt was made to reconstruct specific ratios as the small size of the sample made statistical analysis impractical. The most common species was cattle (39 specimens), with some identifications of sheep (20 specimens) and pig (5 specimens). The only wild mammal present was a species of mouse, probably house mouse *(Mus muschulus).* The bone, a complete femur, was recovered from a soil sample taken from the basal layer of the ditch (F1).

The physical condition of the bone material was poor; this consequently made the identification of gnawing and butchery traces difficult. There was a scattering of charred fragments in most deposits, some of which were barely scorched. More had taken on the characteristic blue/grey appearance of bone which had been in the hearth for a considerable period of time before being discarded.

It was not possible to assess age/slaughter patterns, given the small size of the samples. The most accurate method of establishing age structure is by an assessment of the eruption and wear of the mandibular cheek teeth. The only mandible present was that of a sheep and this did not provide any ageing data. Evidence from the state of fusion of the long bones indicated that veal and lamb were eaten, perhaps on an occasion.

Most other cattle and sheep bones originated from mature animals, probably over three years of age. All pig bones were from animals in their first or second year, with no evidence, however, of suckling pig. In general, the ageing sample was small; therefore it would be unwise to comment in detail on the results.

The three post-cranial bones identified as horse were all complete, and ageing evidence combined with a single tooth indicated an animal about 6-10 years old. Using Kieswalter's multiplication factors, it was possible to obtain a wither's height of 143cm from a complete metacarpus. This individual would have stood at about 14 hands, representing an animal of small horse size.

Measurements on the dog bones indicated the presence of a small collie-sized dog. None of the bones of the three main domesticates were sufficiently intact to enable an assessment of the original height of these animals. As on other post-medieval sites, the cattle bones were on the whole more robust and larger than those of earlier medieval stock.

Very few butchery marks were noted, which is probably the result of the poor preservation conditions prevailing at the site. The only marks identified were those caused by saws, cleavers and large knifes. All cattle vertebrae were split down the midline of the body, which indicates that carcasses were suspended from a hook prior to disjointing. A cattle radius had been split lengthwise in order to gain access to marrow.

In terms of body part representation, most skeletal elements of cattle were present, which indicates that the animal was brought into the town on the hoof and slaughtered nearby. None of the horse and dog bones bore evidence of butchery marks; these animals presumably were not eaten.

A very small amount of bird bones was examined. Six bones were identified as domestic fowl, two of which were by the presence of either a domestic duck or a mallard *(Anas platyrhynchos);*

the separation of these two species on the basis of a single bone is virtually impossible. Although no immature bones were recovered, it is presumed that a small amount of poultry would have been kept by individual householders as, in addition to supplementing the meat diet, fowl and ducks would also have been regarded as important providers of eggs, down and feathers.

Marine Resources

The remains of fish were found in several deposits and, with the exception of a few of the larger head bones, all the bones came from the residues of soil samples processed in the Archaeological Services Unit in UCC. Two of these samples were taken from bone rich areas in the general layers across the site, while the third came from the basal layer of the ditch. The samples were wet sieved using a 1mm Endecotte sieve, and the bones were then allowed to dry before being sorted into species groups.

Table 2 shows the total number of fragments of each species of fish identified. In many cases a large proportion of the fish bones were categorised as unidentifiable fragments, while the very small specimens may represent the stomach contents of some of the larger fish found at the site. In all, 731 fragments of fish remains were recovered, of which 30% were unidentifiable. Hake, *Merluccius merluccius*, was the most common species, comprising 95% of the identifiable sample (by fragment count). The large number of hake bones should not be considered unusual as the 18th century port books for Dungarvan record that the post-medieval fishery was dominated by this species (Egan, 1894, 625).[1]

In all, 485 hake bones were identified which, on the basis of complete basiocippitals, represent the remains of 11 individuals. The remaining species, cod, *Gadus morhua*, plaice/flounder, *Pleuronectes platessa/Platichthys flesus*, scan or horse mackerel, *trachurus trachurus* and gurnard, *Triglidus sp.* were represented by less than 15 bones each. While hake, cod, plaice and flounder are still fished commercially in Irish waters, scad and gurnard are not regarded as important food fishes today.

Estimates of the original length of the fish represented were made by matching the archaeological material against modern comparative skeletons from fish of known length. In all layers the majority of hake bones represented fish with estimated lengths between 80cm/100cm. Only 25 hake bones suggested small fish with lengths under 40cm.

All the cod bones derived from fish with lengths around 50cm. The gurnard bones probably came from a 30cm long fish, while a single plaice/flounder bone suggested a fish with a length of just less than 20cm. The sizes of the hake are remarkably similar throughout the deposits, reflecting probably a single catch.

Smith, writing in 1756, noted that shortly before his time it was recorded that six men in a boat could catch 1,000 hake with a hook and line in a single night.[2] He regrets the fact that this quantity had halved in his lifetime and attributed the extreme decline in hake numbers to the use of trail nets. Port records for the seven years before and after the introduction of trail nets into the Dungarvan area in 1731 indicated that the quantity of hake being caught had halved *(ibid)*.

All parts of the hake skeleton are represented, which suggests that the fish were caught locally and brought back to the town whole. The larger hake and cod would have been taken from boats offshore, but flounder are known to occur in estuarine conditions, and this suggests that at least some fishing was carried out in the immediate vicinity of Dungarvan.

Finally, mention should be made of the relatively large quantity of shells which were retrieved from all layers by conventional excavation. Unfortunately limited time and resources

precluded a detailed molluscan analysis. However, the identification of a variety of edible species such as cockles, *cerastoderma edule,* mussels, *Mytilus edulis,* oysters, *Ostrea edulis,* and periwinkles, *Litterina litterea,* indicates that shellfish were significant items of the local diet.

Conclusions

This collection of post-medieval bones from Dungarvan comprises an accumulation of food waste of the former residents of St. Augustine Street and Church Street. Most of the identifiable mammal bones consists of the remains of cattle and sheep, with lesser quantities of pigs. While the major part of the sample consists of the bones of hake, cattle (due to their greater size), would have provided the bulk of the meat eaten.

What is clear, however, is that marine life was heavily utilised and finds of shellfish and fish bones give plentiful evidence for such exploitation of local resources. Although the bones sample is too small to provide the complete answers, an examination of the material has given us some insights into the meat requirements of a coastal urban community.

TABLE 1

Total number of mammal fragments

	Horse	Cow	S/G*	Pig	Dog	LM*	MM*	Unit	Totals
Cranial		15							15
Horn core		4							4
Mandible			1						1
Teeth	1	2	3	3					9
Atlas			1						1
Vertebrae		1							1
Humerus		1	1	1					3
Radius		2	2		1				5
Scapula		2	3		1				6
Femur			1		1				2
Tibia	1	4	5						10
Pelvis		1	1	1					3
Tarsus	1	3							4
Carpus	1	4	2						7
Rib						5	7		12
LBF						22	11	16	49
TOTAL	4	39	20	5	3	27	18	16	131

*S/G = sheep/goat; *LM = large mammal; *MM = medium mammal.

TABLE 2

	Cod	Hake	Plaice/Flounder	Scad	Gurnard	Unid.*	Totals
Vertebrae	7	384		4			395
Maxilla		10					10
Premaxilla		17					17
Dentary	2	15					17
Quadrate	3	8			1		12
Articular	2	7			1		10
Praeopercular		3					3
Cleithrum		2	1	1			4
Ceratohyal		6		1			7
Eiphyal		3					3
Post temporal		1					1
Parasphenoid		1					1
Ectopterygoid		1					1
skull		5				92	97
Basioccipital		11					11
vomer		11					11
Dorsal spine					2		2
Branchiostegal						59	59
Fin rays						70	70
TOTAL	14	385	1	6	4	221	731

*Unid. = unidentifiable.

FOOTNOTES

1. Egan, P.M.: History, Guide and Directory of County and City of Waterford (Waterford, 1894).
2. See Egan, op. cit., pp. 624-625.