THE FISH REMAINS - R.A. Nicholson

Summary

In common with the findings from other Roman military sites in Britain, there was very little evidence for fishing and fish consumption from the excavations of the fort at Ribchester. Despite a sieving programme, very few fish bones were recovered. The species identified are similar to those recovered from other Roman sites in Northern Britain; salmon, eel, smelt, and plaice or flounder. Slightly more unusually thick-lipped grey mullet was also identified. All the fish were probably captured locally.

Introduction

Very few fish remains were recovered from the Roman Fort at Ribchester, despite a comprehensive sieving strategy and organic rich deposits which preserved bone well. Of those fish bones which were recovered, most were tiny indeterminate fragments. Apart from two bones, all the fish fragments were found in deposits dating to the first four phases of occupation. All the identified bones were from layers, and fills associated with phases 3 and 4.

Identifications and discussion

In common with the findings from other Roman contexts, many of the species identified are now frequently found in estuarine conditions. Eel *Anguilla anguilla*, smelt *Osmerus eperlanus*, and salmon *Salmo salar* are anadromous fish, i.e. they migrate from the sea to freshwater to spawn. Plaice *Pleuronectes platessa*, together with other right-sided flatfish are commonly found in inshore waters, and flounders *Platichthys flesus* tolerate brackish conditions and may even penetrate into freshwater, although primarily a saltwater species. The thick-lipped grey mullet *Chelon labrosus* is a shoaling fish, preferring shallow coastal and estuarine waters. Salmon would only have been available during their seasonal migrations upstream to spawn in autumn and downstream to the sea again in spring, and smelt and eels would also have been most easily trapped during their migrations up and downstream. All of these fish were probably caught locally, in the estuary or mouth of the Ribble, or possibly further north in Morecambe Bay. The only other fish represented, a cyprinid of indeterminate species, testifies to the exploitation of completely fresh water, either local rivers or pools or perhaps an artificial fishpond.

It seems that the Romans in Northern Britain did not make much use of deep-sea fish, relying instead on easily available, local resources. While at Ribchester the lack of bones may be explained by the types of deposits excavated: the punic ditch appears to have been kept clean until its rapid infilling, thereby excluding the gradual accumulation of large deposits of domestic rubbish often found in ditches and other waterlogged contexts, the same paucity of fish remains has been seen at other sites. Despite extensive sieving, at the sites of The Lanes (Nicholson n.d.[a]) and Annetwell Street (Jones unpublished) Carlisle, very few fish remains were recovered from the Roman deposits, and the fish which were represented were predominantly eel and salmon, with occasional other estuarine species and few marine and freshwater individuals. At York (Kenward *et al* 1986; O'Connor 1988; Hall and Kenward 1990) as well as further south in Leicester (Nicholson 1992 and n.d.[b]), Wroxeter (Locker n.d.), Exeter (Wilkinson 1979) Worcester (Nicholson and Scott 1992) and Southampton (Bourdillon and Coy 1980) too, the Roman deposits provide far less

evidence for fishing than do later contexts. Only one fish bone, a salmon vertebra, was recovered from Roman deposits in Lancaster (Jones and Shotter 1988) although the lack of sieving obviously affects this finding. Excavations at Vindolanda have also provided very little evidence for fish consumption (Seaward 1976) as part of the military diet, although a wide range of other organic materials have been recovered.

Of the Ribchester fish, the grey mullet is perhaps the most interesting species. Contemporary sources tell us that mullet roe was a favoured dish, and Roman recipes exist for salted mullet (Borgstrom 1962). While it is not clear which species were prefered, it is likely that the thick and thin-lipped grey mullets were used. Grey mullet bones have also been recovered from Roman levels at Wroxeter (Locker forthcoming), Southampton, Winchester and Sparsholt villa (Bourdillon and Coy 1980).

Table 1. Inventory of fish bone

Context	Sample	Volume	Phase	Feature type	Fish remains
05	4000	6.0	6	layer	1 indeterminate tiny vertebra
80	4042	2.5	5	layer	1 smelt vertebra, fish 150-200mm
107	4582	41.0	2:2	inner ditch	1 indeterminate fragment
157	4092	2kg	4:2	linear feature	3 indeterminate fragments
209	4132	6.0	3	punic ditch	12 indeterminate fragments
218	4129	13.0	3	punic ditch	6 indeterminate fragments
262	4755	12.0	3	punic ditch	1 salmon caudal vertebra, fish total length 600-900mm; 1 ?smelt vertebra; 18 indeterminate fragments
292	4211	6.0	4:2	pit	1 eel vertebra; 2 indeterminate fragments
310	4249	2.5	1:2	outer ditch	2 indeterminate fragments
315	4269	3.0	4:2	layer	6 indeterminate fragments
327	4267	0.5	1:2	outer ditch	1 indeterminate fragment
345	4295	0.5	1:2	layer	5 indeterminate fragments
353	4308	4.5	4:2	layer	1 indeterminate cycloid scale; 1 indeterminate fragment
358	4832	9.5	4:1	punic ditch	1 salmon posterior caudal vertebra, fish total length 500-600mm
363	4654	-	3	linear feature	1 eel vertebra; 8 indeterminate fragments
391	4328	3.0	3	layer	1 large cyprinid branchiostegal ray, articular end; 1 indeterminate fragment
465	4524	3.5	4:2	pit	1 indeterminate tiny vertebra fragment
555	4628	5.0	3	layer	2 smelt vertebrae, fish 150-200mm; 29 indeterminate fragments
560	4634	4.5	3	layer	5 indeterminate fragments
684	4759	9.0	3	layer	5 indeterminate fragments
686	4766	8.0	3	layer	1 thick lipped grey mullet left articular, fish total length in excess of 500 mm; 9 indeterminate fragments
728	1728	4.0	3	punic ditch	1 flounder or plaice anal pterygiophore, fish total length 350-400mm; 1 salmonid (probably salmon) rib
735	4857	52.0	4:2	drain	1 indeterminate tooth; 5 indeterminate fragments

746	4864	4.0	2:2	inner ditch	3 indeterminate fragments
810	4901	15.0	1:1	gully	17 indeterminate fragments

Table 2. Weights of fish bone, and percentage of total bone weight, from the sieved samples

Context	Sample	Weight of fish bone	% fish bone by weight
05	4000	0.1	5.6
80	4042	0.1	2.9
107	4582	0.1	1.5
157	4092	0.1	?
209	4132	0.1	1.5
218	4129	0.1	0.3
262	4755	0.6	7.1
292	4211	0.1	1.4
310	4249	0.1	3.1
315	4269	0.1	2.3
327	4267	0.1	100.0
345	4295	0.1	50.0
353	4308	0.1	2.5
358	4832	0.2	1.4
363	4654	0.3	?
391	4328	0.1	10.0
465	4524	0.1	16.7
555	4628	3.9	10.7
560	4634	0.2	3.3
684	4759	0.1	0.8
686	4766	0.5	3.8
728	1728	0.1	100.0
735	4857	0.1	0.7
746	4864	0.1	4.0
810	4901	0.2	0.6

? = total bone weight not available at time of writing

Table 3. Numbers of fish bone fragments from the fort ditches

Species	Inner ditch	Middle ditch	Outer ditch	Punic ditch	Outer ditch of stone fort	Total
Smelt	-	-	-	1?	-	1
Salmon	-	-	-	3	-	3
Eel	-	-	-	-	-	-
Cyprinid	-	-	-	-	-	-
Thick lipped grey mullet	-	-	-	-	-	-
Plaice/Flounder	-	-	-	1	-	1
Indeterminate	4	-	3	36	-	43

Table 4. Numbers of fish bone fragments by phase

	1:1	1:2	2:1	2:2	3	4:1	4:2	5	6	Total
Smelt	-	-	-	-	2+1?	-	-	1	-	2+1?
Salmon	-	-	-	-	2	1	-	-	-	3
Eel	-	-	-	-	1	-	1	-	-	2
Cyprinid	-	-	-	-	1	-	-	-	-	1
Thick lipped grey mullet					1	-	-	-	-	1
Plaice/Flounder	-	-	-	-	1	-	-	-	-	1
Indeterminate	17	3	-	4	93	-	20	-	1	138