

A study of wild and domestic animal evidence from animal marks on Roman ceramic tiles

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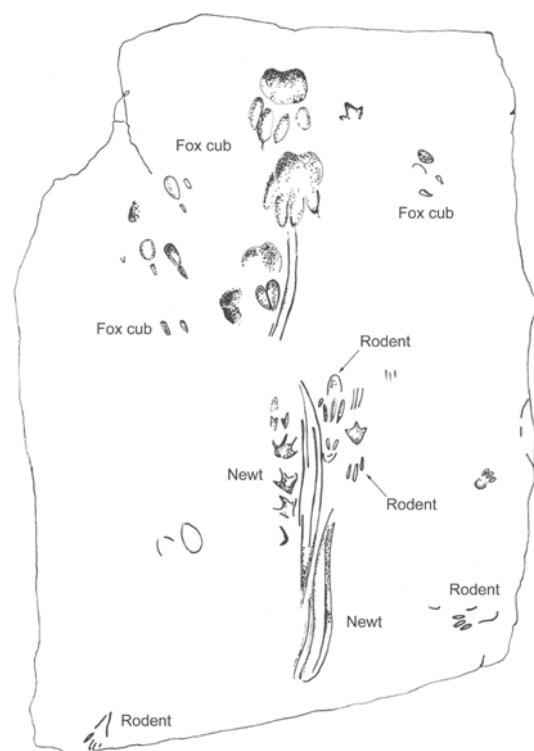


An interpretive illustration titled: 'A night on the tiles' Julie produced showing some of the species identified leaving their marks on the tiles laid out to dry.

After the discovery of one complete Roman ceramic tile at the community Aylsham Roman Project, Norfolk, in 2016 that showed an animal mark, analysis showed it was covered in the marks from at least four species. Animal tracking skills were applied to the rest of the ceramic building material (CBM) assemblage (allowing for shrinkage of clay) and at least 20 species of wildlife and dogs were identified. This more intense study has shown the value of an analysis of animal marks on CBM for providing a wealth of quite precise local environmental evidence when bone preservation may be poor, and also that archaeological evidence can contribute to current wildlife projects.

Many footprints on CBM are incomplete, which often reflects the activity of the animals, with bounding and running animals leaving partial prints. Some CBM might show multiple species and double prints if they are in a 'high traffic' area. Occasionally prints are damaged when the drying CBM might be exposed to an intense storm. Dogs and domestic cats plodding around the site while the owners work often leave full, clear prints that are instantly recognisable.

The first marked tile noticed at Aylsham had the attention of volunteer Teresa Rogers, who wondered if she had seen a rat-tail drag, but the surface was confused with other marks. Examination with a variety of reference material and using image enhancement on photographs of the surface, I managed to identify a fox cub, newt footprints and tail/body drag and fast-running and jumping rodents. This tile



Plan of the Roman roof tile with a newt drag from the centre right and fox cub prints from the centre left. Random, often partial, rodent prints also present. Credit: Julie Curl

Pine Marten, incomplete paw print.
Credit: Julie Curl



beautifully placed the time of CBM production to spring, when the young cubs are coming out of the den and newts are actively hunting after hibernation. Furthermore, the position of the fox and newt prints and the abrupt end of the newt movement suggested that the little cub had one of its first successful (albeit easy) hunts – a wealth of information in one tile.

My lifelong interest in animal tracking came from my father and grandfather and I have long felt examination of archaeological CBM might yield more than just the occasional dog and cat print. My bone report for the project did not take long as only a fairly small assemblage was recovered from the largely acidic soils. So, with the support and help of the landowner, Peter Purdy, who is a history and wildlife enthusiast, I had the chance to examine all CBM found for any evidence of animal activity. While dogs and human fingerprints were the most commonly seen, other species identified included deer, hare, a range of mustelids (including stoat and otter), badger, herpetofauna species, a wide range of rodents, two types of cat, porcine prints, a baby bear and at least two birds. In total, at least 20 species have so far been identified at the Aylsham site.

The cat prints included two examples of marks that were left by a cat with larger paws, with prints exceeding 60mm. While these were initially hoped to be from the native lynx, they actually compared better with the African serval and African/Asian caracal, cats seen in Roman art and known to have been kept as pets. While not environmental evidence, this certainly suggests trade and a suitable environment for them to escape to and hunt in. Research continues on these felines. The baby bear print was probably the native brown bear, which it is assumed was still resident in the Roman period, but the possibility of a performing animal must be considered.

From an environmental perspective, perhaps the most important prints to be discovered were those of the pine marten, with at least two prints found to date. The pine marten is assumed to have been resident in Norfolk, but evidence from bone is scarce. Such evidence, often only in the form of single bones, is not conclusive proof of residency as these animals have beautiful fur

that may have been traded as skins. Examination of the pine marten prints at Aylsham show a running and bounding animal, probably one hunting the rodents or one running from larger predators or people.

The drying tiles are clearly attracting a variety of creatures. Invertebrates, including snails, slugs, insects and woodlice, would have been attracted to the moisture, shade and cover. Invertebrates would have also been present on any vegetation used for separation of tiles during drying, or underneath the tiles. The invertebrates would attract a range of rodents, birds and herpetofauna, even foxes. In turn, the rodents and herpetofauna would have attracted larger predators including the mustelids, foxes and cats noted above. Some animals, such as the deer, hare and pig/boar would have been foraging in and passing through the area and visiting the water. Otter would be expected in a wetland environment, in particular a river environment where fish could be caught. Smaller bodies of water also attract otter, including fish-stocked ponds or pools with frogs, toads or newts. Otter can stray from the waterside areas in search of birds' nests for chicks and eggs, and they will also take small mammals. Many of the animals are woodland and pasture species, which gives some indication of the habitat where the new villa or farmhouse was built.

The bone assemblage produced only a fraction of these species and largely the more robust survivors – cattle, dog, equid and deer. With the destruction of much of the bone evidence, this study has been very worthwhile. The study of the prints is already contributing to current and forthcoming plans for wildlife reintroduction projects. As a side project from this study, I am hoping to compile a catalogue of wildlife and dog prints, the latter to help widen the identification of dog prints to suggest size and type.

Notably in the UK we are encountering environmental problems with the relatively recently introduced grey squirrel, and an excellent natural predator that could be released here in Norfolk is the pine marten. Until recently, we only had minimal and inconclusive evidence for their presence here. Now, the prints from Aylsham can confirm live, running and bounding animals leaving their mark on Roman ceramics and this new evidence could lead to their return to Norfolk.



Julie Curl

With over 35 years working in archaeology and the Norfolk Museums Service, Julie is a specialist in animal bones, molluscs, animal marks on ceramic material and small finds, and an archaeological and natural history illustrator producing finds drawings, reconstructions and wildlife illustrations for publications and displays. She is a Research Associate with Norfolk Museums Service and University of East Anglia and has undertaken palaeontological and conservation work on the West Runton Mammoth project. Her life-long interest in animal tracking has been put to use with the Aylsham Roman Project and other organisations, where over 20 species of fauna have been identified on ceramic building material.