

The Getty exhibit was exemplary in demonstrating what international partnerships can do to create accessibility, and the successful publication of the catalog ensures that the many admirable accomplishments of the Georgian researchers and exhibition curators will remain accessible after the exhibit's conclusion. If the recent return of the objects to Tblisi and Vani's local museum underscores the general absence of Colchian culture in North American museums, the unequivocal success of the Getty exhibit has generated a great deal of optimism in ongoing collaborative enterprises that promise to illuminate further the history of this fascinating region through its artifacts.

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Notes

1. The Homeric epics indicate that the story of Jason and the Golden Fleece was circulating in the eighth century B.C.E. The earliest canonical account is found in the third century B.C.E. in the *Argonautica* of Apollonius of Rhodes.

2. This support was provided in partnership with the Ministry of Culture, Monuments Protection, and Sport of Georgia, and with funding from the Getty Museum's Villa Council.

3. This is the period to which ancient Greeks assigned Jason and their Trojan War heroes.

4. For a more accessible account, see Krulwich 2007.

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Out on the Tiles

Animal Footprints from the Roman Site of Kefar 'Othnay (Legio), Israel

Tracking animal footprints from archaeological sites is not a common endeavor. Nevertheless, once found they provide knowledge about the composition, abundance, and environmental range of animal communities and their activities around human habitations. Carnivore footprints found on tiles in the Roman village of Kefar 'Othnay near the Roman camp of the Sixth Legion Ferrata in the Jezreel Valley complement the known spectrum of animals known from the site by conventional zooarchaeological methods and point to the straying of dogs, cats, and small wild carnivores in and around the site.

The site of Kefar 'Othnay is situated at the meeting point of Mount Carmel and the Samaria Hills in the Jezreel Valley, near the camp of the Sixth Legion Ferrata. It is located near a main junction for several Roman imperial roads, which are connected to Caesarea, Scythopolis, Akko-Ptolemais, and Jerusalem via Neapolis (fig. 1). The excavated site is identified with the village of Kefar 'Othnay mentioned in the Mishnah (compiled ca. 200 C.E.) as the southern boundary of Jewish Galilee (m. Gittin 7:7). During 2004–2008, the site, which is currently part of the Megiddo prison compound, was methodically excavated on behalf of the Israel Antiquities Authority (fig. 2). The findings included several Jewish ritual baths (*miqvaot*) and Jewish stone vessels. Additional excavated structures included the famed ancient Christian prayer hall dated to the Roman period, specifically the third century C.E. The mosaic floor of that Christian prayer hall was paid for by a centurion from the Roman Legion (Tepper and Di Segni 2006).

The animal footprints discussed here were found in loci from several domestic structures dated to the beginning of the second/third century C.E., belonging to the main phase of the Middle Roman stratum at the site. These tracks include five footprints from carnivores, four of which were printed on roof tiles and one on a ceramic jar/amphora (see fig. 3 below). Petrographic and mineralogical analyses of the tiles show that they were made of local clay and burned in a nearby production center (Shapiro, personal communication). Tiles stamped with "LEG VI FER" provide evidence for tile production by the Roman Legion during their occupation of the site (Tepper 2007). The imprints were made when the animals walked over the newly formed tiles and vessel, laid to dry in the open air before being fired. Their abundance reflects a frequent presence of stray carnivores such as dogs and cats in the vicinity of site.

Since the body-size range of canids is large and certain fea-

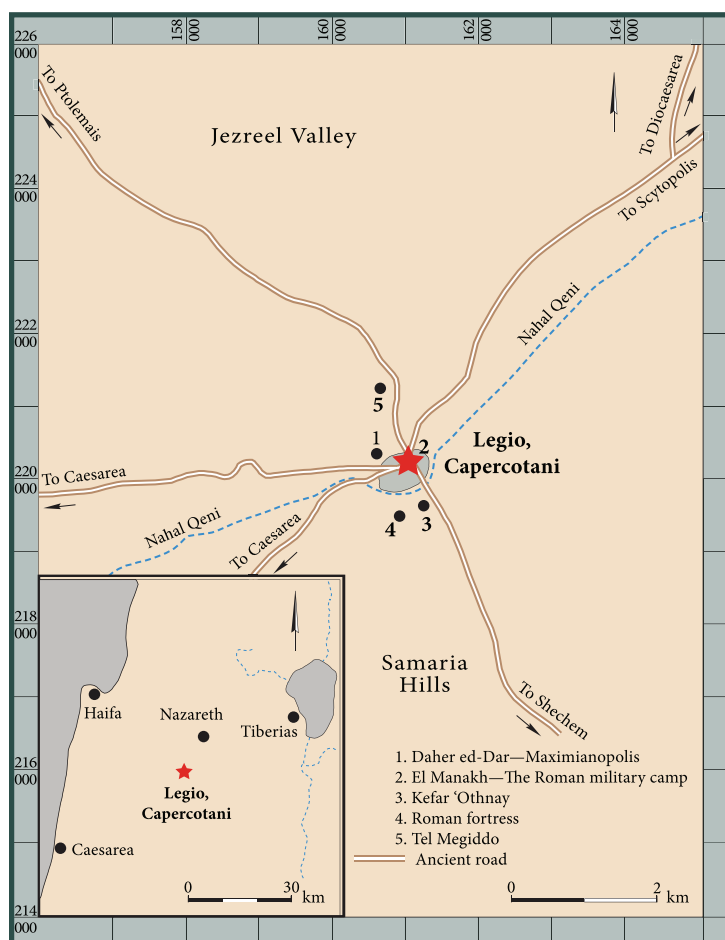


Fig. 1 (above). Schematic map of the Roman imperial road and the settlements in the Legio region (after Tepper and Di Segni 2006, 7).

Fig. 2 (right). Aerial photograph (sky-view) of area Q, looking west (Tepper and Di Segni 2006, 21).



tures in canid tracks are common to all of the dog family (dog, wolf, jackal, and fox), it is impossible to characterize the Kefar 'Othnay footprints with much certainty. However, it is rather easy to distinguish front and hind tracks, as the front foot is larger than the hind foot, and the toes of the front paws tend to spread more as they strike the ground (Murie and Elbroch 2005, 157). It is noticeable that footprints from Kefar 'Othnay reflect two types of dogs. The first imprint, found on a tile fragment in Locus 1001, was made by the front feet of a medium-sized dog, roughly the same size as a Cocker Spaniel, or a jackal (*Canis aureus*; fig. 3a). A second imprint, found on another tile in Locus 5058, was made by the front foot of a large-sized dog similar in build to a wolf (*Canis lupus*; fig. 3b).

The most distinctive difference between cat and dog tracks is reflected in the shape and size of the palm pads on the front feet. The pads of cats are relatively larger, and the toes appear to be arranged in a curved row in front of the main pad. Cats normally keep their claws retracted, so claw marks usually do not appear in their tracks (Murie and Elbroch 2005, 244). An example of a cat footprint can be seen on a tile fragment found in Locus 9268 (fig. 3c). The cat footprints were imprinted after the tile was marked by human fingers with two diagonal lines. This indicates that the cat walked on the tile after it was marked but before it was fired.



Fig. 3. Cat and dog footprints on Roman tiles (a–d) and amphora fragment (e) from the Roman village of 'Othnay. (a) Front-leg imprint of a medium dog or a jackal (Locus 1001). (b) Front-leg imprint of a large dog (Locus 5058). (c) Front-leg imprint of a cat; note the weak imprint of the lateral lobe of the hind heel pad below (Locus 9268). (d) Hind-leg imprint of a badger (Locus 2005). (e) Claw imprints of a front leg of a small carnivore, probably a cat (Locus 7103).

Another indicator of cat footprints is the prominent third digit left by front footprints. Close examination of such a print reveals an oval-shaped, shallow impression below the front foot. On the same tile, an additional print was made by the lateral heel pad of the cat's hind foot, appearing to the left of the clear heel pad imprint of the front foot. Together these prints make a set or track. This track encodes further refinement information on the activities of the cat at the site. As the hind foot tends to overstep the front foot, we interpret the exposed gait to represent a cat that was moving in a slow trot. Since both of the prints are quite shallow, it appears that they were imprinted while the clay was fairly stiff, with moderate moisture content.

The remaining footprint on the tile from Locus 2005 appears to have been made by an animal with long and strong claws, most suitable for extensive digging (fig. 3d). Given the size of the print, the shape, and the depth of the impression caused by the claws, it seems reasonable to assume that it was made by a badger (*Meles meles*), a common nocturnal carnivore in northern Israel that lives in the vicinity of agricultural lands and human habitation (Mendelsohn and Yom-Tov 1999). The

footprint is relatively narrow and includes impressions of only four of the five toes. Therefore it seems that it was made by the hind foot when the animal was trotting. Given the depth of the print, it appears that the badger was passing on the tile while the clay was fairly fresh with low yield strength, probably during the evening when the tiles were left to dry.

The last footprint found in Locus 7103 is also relatively narrow and includes an impression of only three claws pushed into the surface of the ceramic jar (fig. 3e). Given its dimensions, it appears to have been made by a cat leaning on a freshly made jar. The claw prints could have been made by the cat stretching up the drying jar while the vessel was raised on a rack, that is, not like the tiles drying on the ground. Although the origin of the jar cannot be determined, it appears that at least some of the ceramic vessels at the site were made of the same local clay used to manufacture the tiles (Shapiro, personal communication).

The animal footprints found in Kefar 'Othnay provide information about the ecological and domestic landscape of this village during Roman times. They vividly demonstrate that cat, dog, and also nondomestic stray carnivores roamed in the

immediate area around the site, a phenomenon that is also chronicled in historical accounts from the period (Schwartz 2000, 2003; Valer 2007). As such, these animal footprints enhance our understanding of the known zooarchaeological remains, which are dominated by the routine component of livestock, mainly sheep and goat, and to a lesser extent domestic fowl and cattle (Abado, Raban-Gerstel, and Bar-Oz, personal data). Carnivores are only represented in the assemblage by a few isolated dog and weasel (*Mustela nivalis*) bones.

These footprints are not unique, but they are rare for the ancient Near East. While surveying the literature, we found that there are only a handful of little-known archaeological sites with recognizable animal footprints in this region. These include the Aceramic Neolithic site of Ganj Dareh (goat footprints on mud bricks; Hesse 1978); the Iron Age site of Rehov (dog footprint on mud brick; Marom, personal communication); the Roman sites of Acco-Remez (cat footprint on tile; Tepper, personal data), Kabri (cat footprint on tile; Stern and Getzov 2006, 110), and Hippos (several dog footprints on bricks; Eisenberg, personal communication); and the Byzantine site of Shuni (dog footprint on plaster layer; Tepper, personal data). Additional animal footprints, found mostly on bricks and tiles, were reported at Roman sites in Britain located (like Kefar 'Othnay) near a Roman camp (Elliot 1991; Brodribb 1987, 125; Denison 2000; for additional archaeological examples of animal footprints in coastal deposits, see also Kinahan 1996; Roberts, Gonzalez, and Huddart 1996).

We believe that there are many more animal footprints in various archaeological sites waiting to be documented and explored. However, the challenge of gathering and analyzing them is formidable, as the vast majority of animal footprints have not been reported. In the coming years, with the increased awareness and documentation of finds, we anticipate that more footprints will be discovered in various archaeological contexts and on different artifacts within and around sites.

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