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MURINE CERAMIC REPRESENTATIONS IN ANCIENT SICILY (CONTRADA SANTA ANASTASIA DI RANDAZZO, 5th CENTURY BC): A POTENTIAL REFERENCE TO PAST INFECTIOUS DISEASES?

ABSTRACT: In this article we present a set of murine vascular representations from contrada Santa Anastasia (Randazzo, Sicily), dated to the 5th century BC. We offer a full archaeological contextualisation for these items, and we discuss a potential link with the role of epidemics in the past through a combination of historico-medical, palaeopathological and infectivological arguments.

KEY WORDS: Archaeology – Infectious diseases – Epidemics – Mouse – Randazzo – Religion – Sicily

ARCHAEOLOGICAL INTRODUCTION AND METHODOLOGY

For the ancient Greeks, epidemics had a divine origin. In the First Book of the Iliad [Hom. *Il*., I, vv. 46–49], Chryses of Troy, priest of Apollo, following Agamemnon's refusal to restitute him his daughter Chryseis, invoked god Apollo Smintheus, who caused the plague in the Achaean camp. Smintheus, an attribute of the god, derives from σμίνθος (rat) and an ancient cult on the coasts of northern Asia Minor, particularly of Mysia and Troas, identified Apollo with an ancestral and apotropaic god-mouse. Moreover, Strabo [Strab. *Geog*. XIII, 1, 64–65] – and before him the ancient Greek elegiac poet Callinus (fl. mid-7th century BC) – describes a mouse depicted at the foot of the statue of Apollo Smintheus at Chryses, attributed to Scopas, and under the altar of the god, in the oracular sanctuary, were white mice (*Figures 1, 2*).

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Tradition has it that the city of Hamaxitus was founded by Cretan exiles at the suggestion of Apollo Pythius at the place where they had been at war with the "earthborn", meaning "the rats", which had burst out of the ground and devoured the laces and cords of weapons – and that the god had requested that sacrifices be made to Apollo Smintheus to ward off the danger of an invasion of rats [Aelian., *De Nat. Anim*., XII, 5].

Depictions of mice are not so numerous in coroplastics as in the figurative scenes of Attic vases: five specimens found in the area known as Kerameikos in the city of Corinth can be mentioned (Stillwell 1952), a statuette found in Locris, depicting a seated young man with a pileus holding in his hands a sort of mortar on the edge of which a mouse is standing (Winter 1903; *Figure 3*), and a statuette from Iasos from a votive context (Berti 2007). Murine representations would instead become much more popular in the subsequent Hellenistic period and a link can still be seen between them and the cult of Apollo Smintheus. According to Kiernan (2014), "[t]heories range from the relationship between mice, disease, and Apollo's role as a healer to the function of the god as a protector of crops to foundation legends involving mice. Whatever its meaning, there is no doubt that the mouse was one of the main symbols of Apollo Smintheus in ancient art". Also of considerable importance is the discovery of a *dolium* (i.e., the Greek πίθος) under the pronaos of the Upper Temple on the acropolis of Cumae, a city influenced by the cults of the motherland, known as Jupiter's, actually of problematic attribution, containing botanical and animal remains (Rescigno *et al.* 2016). Archaeozoological examination of the contents revealed several remains of rodents, which the authors speculate were kept in some room of the temple set up for this purpose in anticipation of their use, probably for ritual

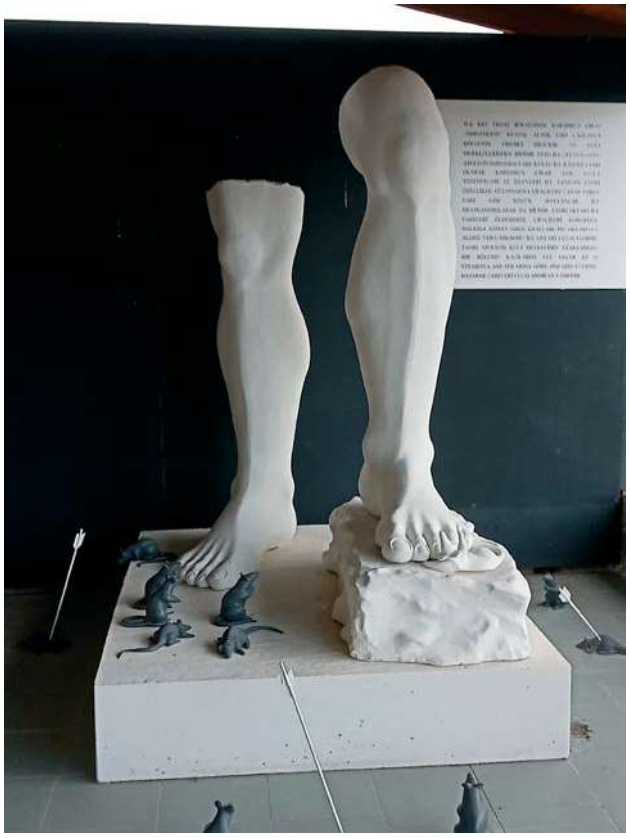

FIGURE 1: Idealised reconstruction of the statue of Apollo Smitheus in the Gülpınar Smintheion (Turkey).

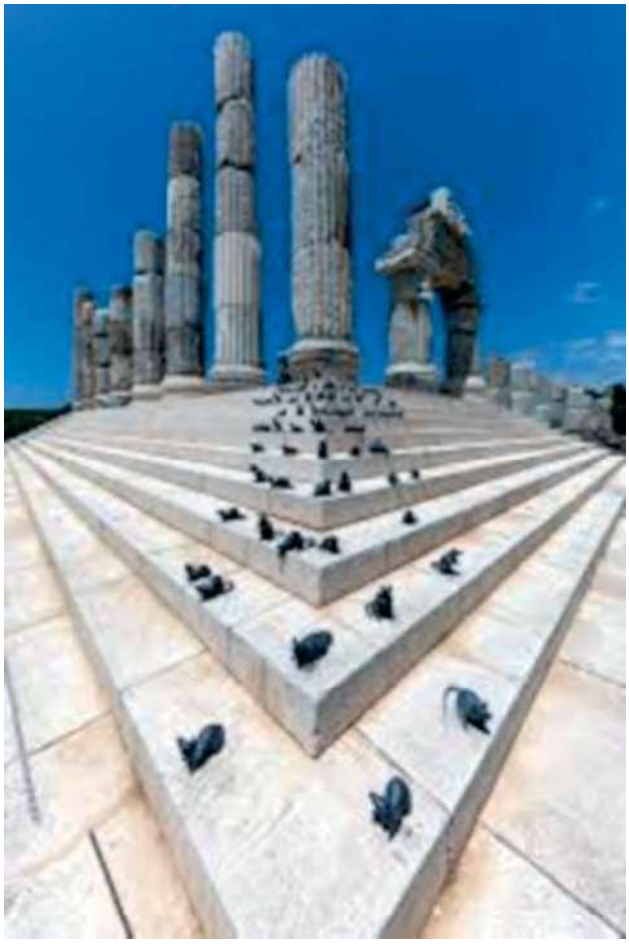

FIGURE 2: Temple of Apollo Smitheus in Gülpınar, Turkey. From Troy Culture Route. Copyright 2018: https://www.troycultureroute.com/explore/apollo-smintheus-smintheion/

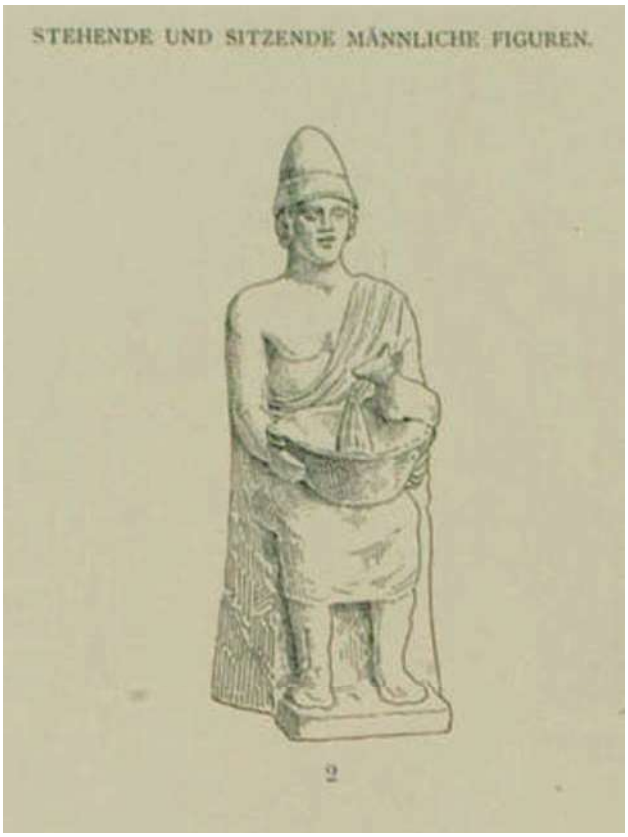

FIGURE 3: The Locris statuette as in Winter 1903, III, 1, page 179, Fig. 2.

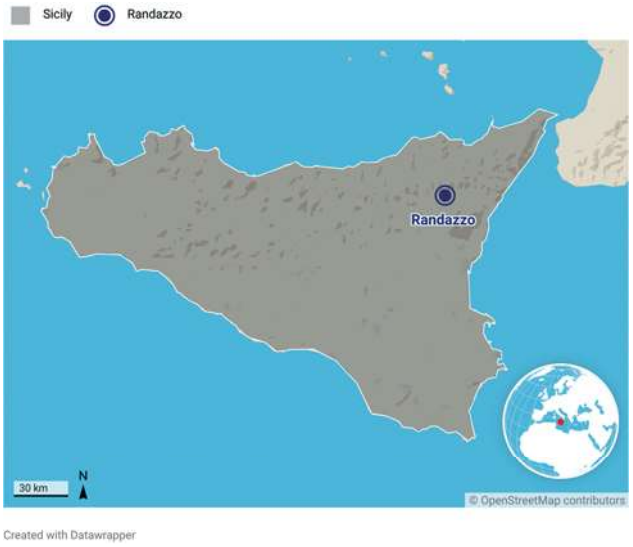

FIGURE 4: The site of Santa Anastasia di Randazzo in Sicily.

purposes. The ritual use of mice is also represented in a bronze statuette representing a priest holding a mouse from Paestum (Campania). It should, nonetheless, be underlined that an alternative interpretation for these zoological finds is equally possible, in that the remains also include wild species of rodents (e.g. of the genus Apodemus/Sylvaemus), whereas it is sensible to think that for ritual use more synanthropic species of mice would be the subject of breeding, hence it cannot be excluded that some of the found rodents originated from the surrounding environment, thus constituting a form of intrusion.This article examines the case of murine ceramic representations from the contrada Santa Anastasia di Randazzo (Catania, Sicily; *Figure 4*) in the light of the above-presented archaeological background and introducing a biomedical hypothesis derived from the history of medicine. The transdisciplinary medico-historical, cultural anthropological and palaeopathological methodologies are detailed in a series of retrospective and historical studies by our research group on ancient epidemics highlighting the interaction between science, politics, anthropology and religion (Galassi 2021, Galassi, Varotto 2020, Galassi *et al.* 2021, Galassi *et al.* 2022).

CASE STUDY: SANTA ANASTASIA DI RANDAZZO

The necropolis in contrada Santa Anastasia di Randazzo has been known in the scientific literature since the early 20th century, following a brief communication in 1907 by the father of Sicilian archaeology, Paolo Orsi (1859–1935) about the archaeological excavation campaign by the Archaeological Superintendence of Syracuse (Orsi 1907).

In fact, this was the third excavation campaign carried out in the area, as it was preceded by the first discoveries, probably the most numerous, made by the owner of the property Baron Paolo Vagliasindi (1858–1905) in 1886, and the second campaign under the direction of Architect Giuseppe Patricolo (1834–1905), representing the Palermo Bureau of Antiquities.

Therefore, the presence of a group of plastic vases shaped as rodents from the necropolis of contrada Santa Anastasia in Randazzo is an exceptional find that stands out for its uniqueness. Currently, the Randazzo Archaeological Museum exhibits four mouse-shaped vases that escaped an air raid in 1943 during WW2 (Magro 2020), but which were in fact even more numerous, as photographic evidence shows, at least

twelve (*Figure 5*). To these three more specimens must be added: they were found during the excavation by the archaeologist Antonio Salinas (1841–1914). The finds of the Salinas excavations are now preserved at the Regional Archaeological Museum in Palermo.

Although it is not possible to reconstruct the grave goods from the necropolis, as there are no detailed accounts of the excavations, the typological examination of the specimens allows us to infer the vastness of its extension, and its pertinence to a *polis* (πόλις) of considerable size located in the upper Alcantara valley, which has been anonymous until now, although numerous hypotheses have been put forward to identify it (BTCGI 1977–2012; Frasca 1997, Spigo 2003).

The vases shaped like mice (Panvini, Sole 2009) are rendered with a rounded body with a pointed tip and shaped like a rodent's head, from which semi-circular ears protrude; at the top of the basin emerge two perforated suspension sockets and a cylindrical spout with a swollen lip; the front legs are folded and extend until they meet under the snout, while the hind legs are at the sides of the basin and folded under the body; the tail is rendered at the rear. The anatomical connotations are rendered vividly in glossy black paint on reddish engobe, such as the snout rendered by a thin line dividing the eyes surmounted by eyebrows and continuing by becoming a decorative vegetal element, probably a myrtle branch, at the sides of the snout moustache rendered with horizontal lines, a rich vegetal decoration of ivy leaves joined to whorls arranged around the spout (Magro, Barresi 2012, Magro 2014, 2016) (*Figures 6a–d*).

Although for the Santa Anastasia plastic vases we do not have the excavation data to be able to identify the age of the inhumed, in other contexts we have evidence of their presence in burials of non-adults, such as the specimen from tomb 54 of the necropolis of contrada Targia in Syracuse (Ciurcina 2010), and the choice of the subjects of the plastic vases may not be causal or purely aesthetic, but connected to the social status and sex/age of the inhumed (Huysecom-Haxhi 2008). Certainly, identifiable as child grave goods, the function of the plastic vases seems to be well

FIGURE 5: The Vagliasindi Museum exhibition before the bombing in 1943 (from De Roberto 1909).

characterised by the pouring spout that assimilates them to the *guttus* type, for which the function of a feeding bottle is recognised (Dubois 2012). Interestingly, Vassallo also hypothesizes a function connected with the administration of medicines (Vassallo 2016).

The chronology of the plastic vases is set to the second half of the 5th century B.C., by comparison with the tomb contexts found on Lipari in contrada Diana (Bernabò Brea, Cavalier 1960) and contrada Pezzino in Agrigento (AAVV 1988).

DISCUSSION OF A MEDICAL HYPOTHESIS

The presence of these plastic vases in an area far from the seacoasts, set in a mountainous context with a definite agricultural vocation, even though it controlled the inland road network that connected the eastern coast, where the first Sicilian colony, Naxos, was located, to the northern coast, leads one to hypothesise that it could be connected to the cause of the premature death of the children.

When reflecting on the antiquity of plague and its precipitous historical manifestations, one cannot avoid confronting the commonplace widespread in popular thinking – but also at certain scientific levels – that sees this infectious disease with epidemic-pandemic potential as a mere memory, nothing more than a dusty page of history. On the contrary, it is, to all intents and purposes, a disease that is still present in our world, both in Asia, the cradle of pandemic spread of the disease on several occasions, and in the Americas, as sadly evidenced by

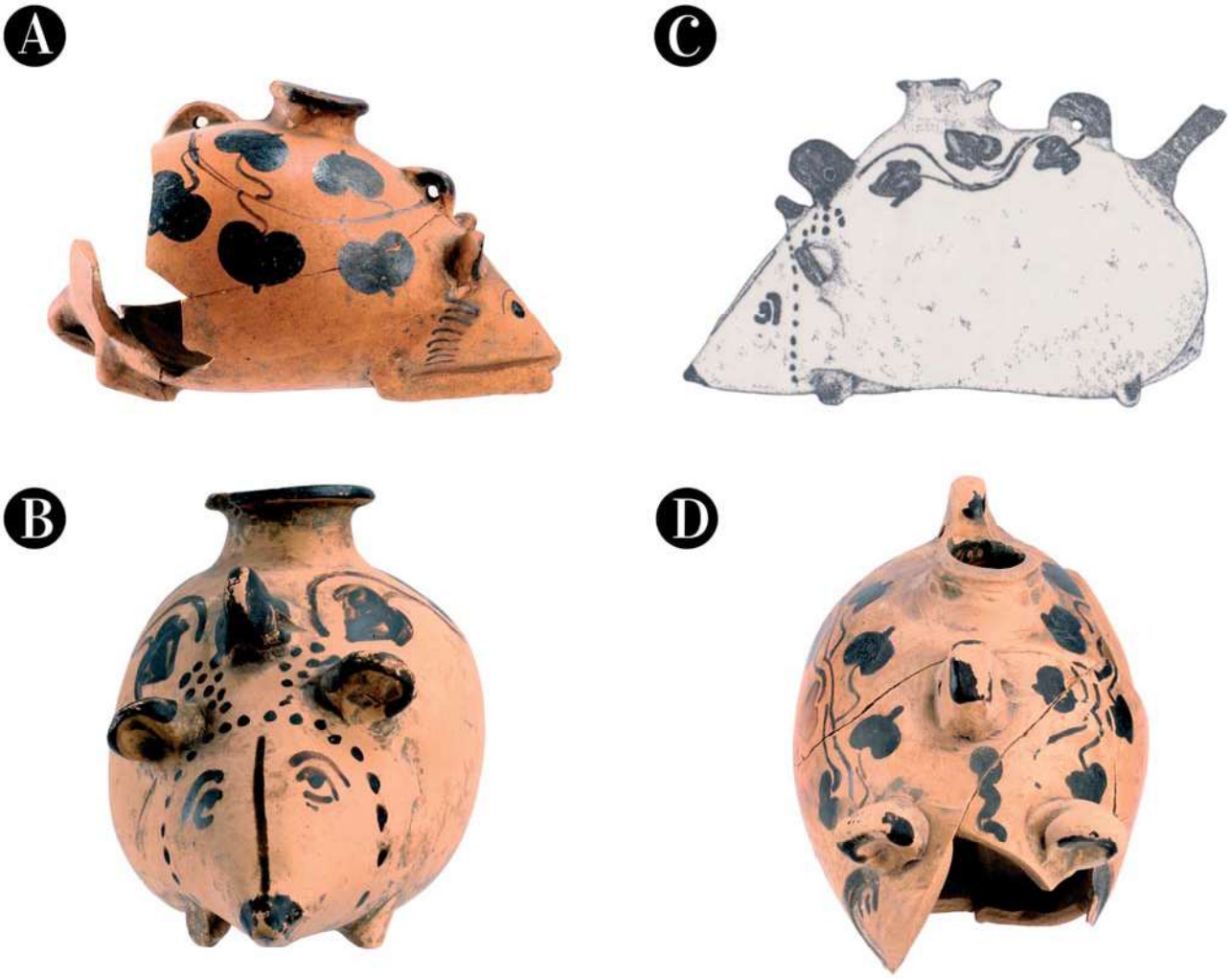

FIGURE 6: A–d, plastic murine vases (personal photograph – drawing by G. Implatini).

the case of patient Paul Gaylord (Gaylord 2014), who contracted plague in 2012 despite being initially diagnosed with cat scratch disease (*Bartonella henselae* infection) by his attending physicians (Windsor 2001), who were unaware of the clinical probability of such a phenomenon in the 21st century. If, notwithstanding inevitable amputations, the antibiotic therapy now available saved patient Gaylord's life, as well as those of numerous patients in various parts of the world, one cannot fail to see in such a pathological manifestation a significant wake-up call, especially in light of the fact that, according to official statistics of the World Health Organization (WHO), plague remains even endemic in some countries, namely Madagascar, Peru and the Democratic Republic of Congo (WHO 2022). The history of medicine teaches us that without the discoveries of Alexander Yersin (1863–1943) in 1894, who was able to identify the bacterium *Yersinia pestis* (*Pasteurella pestis*) as the aetiological agent of the plague, while palaeogenetic studies have shown how, at least since Justinian's Plague (6th–7th centuries AD), the plague has been endemic, when the ancients spoke of plague, they really meant plague caused by that specific pathogen (Wagner *et al.* 2014), albeit unknown to them at a time when epidemics were ascribed to divine wrath and explained in their spread on the basis of outdated miasmatic models (Galassi 2021). In 1898, Paul-Louis Simond (1858–1947) also clarified the role of the rat flea as a vector of the pathogen, since both species (human and murine) could be parasitised by it (Simond *et al.* 1998).

One may well wonder whether, in depicting an individual who had died of the plague and was now in the gaseous phase of cadaveric putrefaction, in his celebrated *Theatres of Death*, Giulio Gaetano Zumbo (1656–1701) deliberately chose to place a rodent on the deceased's distended abdomen, perhaps having understood ante litteram the existence of a vector link (Puccetti *et al.* 1995, Ballestriero 2010).

In the light of these considerations and the murine vascular representations presented here, one can perhaps cautiously embrace a pathological interpretation, or rather one relating to the phenomenon of murine ex-votos, also attested in antiquity in the Bible (I Samuel 5, 6–12; I Samuel 6: 4–5), where narrating the plague of the Philistines one reads of clinical signs such as boils and of the attempt to appease the wrath of the God of the Hebrews by donating boils and golden mice, explicitly mentioning the mice that "ruined the land" (Sterpellone 2004).

Rats and mice are two different species and, although they can both be susceptible to plague, it should be noted that the latter's fleas are less capable for harming the human skin (Shrewsbury 1950). Currently, most scholars tend to agree on plague originating from Central Asian rodents, while Panagiotakopulu (2004) suggested that plague might have been endemic in the Nile rat (*Arvicanthis niloticus*). This interpretation is however primarily based on literary references and fails to provide palaeopathological or genetic corroboration.

Nonetheless, even excluding bubonic plague, several diseases can be zoonotically transmitted from mice (and rodents in general): leptospirosis, salmonellosis, Lyme's disease, Hantavirus-caused murine fever, etc. (Meerburg *et al.* 2009, CDC 2023).

CONCLUSIONS

It appears evident that such associations can be considered insufficient to prove the existence of the bubonic plague at the time and to extend such a conception to the Sicilian context in the absence of palaeogenetic evidence, which, however, could well be implemented in the light of zoomorphic funerary documentation of this type.

NOTE

This paper is based on an oral presentation given at the congress "Palaia Pharmaka. La medicina in Sicilia dalla Preistoria al Medioevo: luoghi, pratiche, rimedi, strumenti", Caltanissetta, Sicily, 15 October 2022.

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