NEW PERSPECTIVES ABOUT THE HISTORY OF CITRUS IN WESTERN MEDITERRANEAN: A MULTIDISCIPLINARY INVESTIGATION IN THE CAMPANIA REGION (ITALY)

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While some consensus exists about the role of South-West China and North-Eastern India in the origin and diversification of the genus Citrus, the scarcity of the archaeobotanical remains, as well as some methodological limits in unequivocally assessing taxa, do not facilitate reconstruction of the tempo and mode of spread of hesperids towards other areas, notably the Mediterranean, although rare stake can be found in Hjelmqvist 1979; Van Zeist et al. 2001. Recent discoveries of archaeobotanical macro-remains (seeds and fruits) and pollen records can be used to shed new light on this history, but this raises the problem of the precise identification of the remains.

By relying on complete inter-fertility and apomix (offspring being genetically identical to the parent plant), the classification of this specimen with the genus Citrus (or its close relatives) appears quite complicated. In fact, the “classical” classifications based on anatomical and morphological criteria (e.g., Swingle and Reece 1967; Tanaka 1977) have revealed inadequate in appropriately assessing past species. Recent phylogenetic work based on SSRs molecular (Barclay et al. 2006) and AFLP markers (Pang et al. 2007) supports the original suggestions from Scora (1975) and Barrett and Rhodes (1976) that only Citrus medica, C. maxima, and C. reticulata should be considered as “true species”, while C. limon, C. aurantiifolia, and C. aurantium more likely represent hybrids occurring from cross-breeding or natural events.

At the present day, the most ancient evidence of Citrus macro-remains are coming from Pompei.

One single mineralized pip from the House of Hercule and Ebe’s wedding, dated to the first half of the 2nd c. BC, has been mentioned by Carladi 2007. The cultivation of Citrus in Pompeii gardens is confirmed by the recognition of this pollen type in the cores of the same House (Marottoli Lippi 2000).

By comparing the presence of Citrus macro-remains and especially Citrus seeds in the zone 3, corresponding to the Roman period in the AV, we have been able to identify new evidence of Citrus pollen and macro-remains in the zone 3.

NEW EVIDENCES FROM CUMAE

New research brought to light more ancient evidence, from the city of Cumae, one of the earliest Euboean colonies, which played a major role for the transfer of cultural Greek influences in Etruscan and Roman civilizations. The record of Citrus pollen types comes from a six meter profile located in the city itself (max. depth core: 7.95 m, see figure). The six available radiocarbon dates calibrate this sequence between the first half of the 8th c. BC and the 15-17th c. AD. Seventy pollen grains have been counted. The first one appears at 898/857BC cal, at the mark -486 cm. The specie being then continuously recorded until the top of the core. Considering the insect pollination character of Citrus and the paucity of pollen transport, one must discuss the possibility for local cultivation of the trees when this pollen type is observed in rather large quantities. Citrus fruit (citron, lemon, orange) pollen are morphologically similar from one species to another but, with reference to CEPAM laboratory collection, the identification of the Cumae specimens turns to Citrus medica a citrus tree.

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