

A commercial nursery near Abu Hummus (Egypt) and re-use of amphoras for the trade in plants

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In memoriam Alix Wilkinson

Advances in archaeological techniques have made possible an increasingly detailed study of carbonized plants, pollen and other botanical remains, but an understanding of how plants (rather than foodstuffs or spices) moved through the Roman world and how they were traded has lagged behind.¹

To date, much of the research on plants during the Roman era in Egypt has focused on foodstuffs from sites on its E coast. The Beheira Survey, conducted by M. Kenawi in 2008-11,² is the first project to look at the Western Delta in detail.³ In documenting 63 sites, the work has created the first comprehensive archaeological maps, identifying several wine⁴ and olive-oil production centres, and broadening our knowledge of the local economy. This paper argues that a complex within the survey area near Abu Hummus, excavated by H. Riad in 1960, was a nursery. Other examples of nurseries that raised plants, to be transplanted into the gardens of houses, villas, estates and temples, will also be reviewed, as well as the types of vessels used for the propagation of plants in nurseries, and their transport.

The plant trade in Hellenistic and Roman Egypt

Athenaeus praises Egypt's temperate climate, which allowed for excellent gardening all year round, including roses and other flowers. There was such an abundance in the winter of 275/274 B.C. that the floor of Ptolemy II Philadelphus' tent could be covered in a carpet of petals (*Deip.* 5.196d). This implies at least one, if not several, large flower farms in or around Alexandria to supply them.

Administrative papyri demonstrate that highly specialized, intensive horticultural and agricultural production existed in the Ptolemaic period, especially in the Fayum.⁵ As is evident from the Zenon papyri (the correspondence between the administrator Apollonius and Zenon, the manager of his estate in Philadelphia), by the mid-3rd c. B.C., live plant stocks could be obtained in quantities in the Western Delta sufficient to supply the demand for their use for propagation elsewhere. In order to stock the garden (*paradeisos*), vineyard and orchards of his estate at Philadelphia, Apollonius obtained suckers of vines, olives and other fruit trees grown at Memphis and in the district of Alexandria,⁶ as well as from Fayum villages such as Crocodilopolis,⁷ and sent them to Zenon for propagation. Nut and fruit trees were grown in nurseries in Memphis and planted in Apollonius'

1 Macaulay-Lewis 2010.

2 The Beheira Survey formed the subject of Kenawi's doctoral research under the supervision of E. Papi and M. de Vos Raaijmakers.

3 Kenawi 2009 and 2011.

4 Kenawi 2010.

5 Carroll-Spillecke 1989, 54-56 and 84; Sharp 1999, 174-85. Photographs of most of the papyri mentioned below may be found by way of <http://www.papyri.info/>

6 *P.Cair.Zen.* 2 59159 of 7 Jan. 255 B.C. Edgar 1924, 27-8; Orrieux 1983, 87.

7 *P.Cair.Zen.* 4 59736 of the mid-3rd c. B.C. Kloppenborg 2006, 432-33.