

THE BEGINNING OF OLIVE OIL ECONOMY IN THE SOUTHERN LEVANT DURING THE EB II-III

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THE SPREAD OF OLIVE TREE CULTIVATION

The cultivation of olive tree (*Olea europaea*) is considered to have begun in Southern Levant during the EB I (3200-3000 BC), when olive remains, both charcoal and stones, become more abundant through all Palestine and, most indicative, in sites where neither the wild ancestor of the olive tree (*Olea oleaster*) could grow spontaneously (Fig.1; red and beige areas). The earliest evidence of gathering olives from the wild olive tree dates to the Palaeolithic at Ohalo Cave (17000 BC) while the first evidence of olive oil production, found in the site of Kfar Samir (4500 BC), shows that the first domestic oil productions precedes the olive tree domestication. The olive tree in fact is a plant that needs 7-10 years to bear fruits, a span of time that only a fully sedentarized and well organized society like the ones of the Early Bronze Age, could spend (Zohary-Hopf-Weiss and eds. 2012).

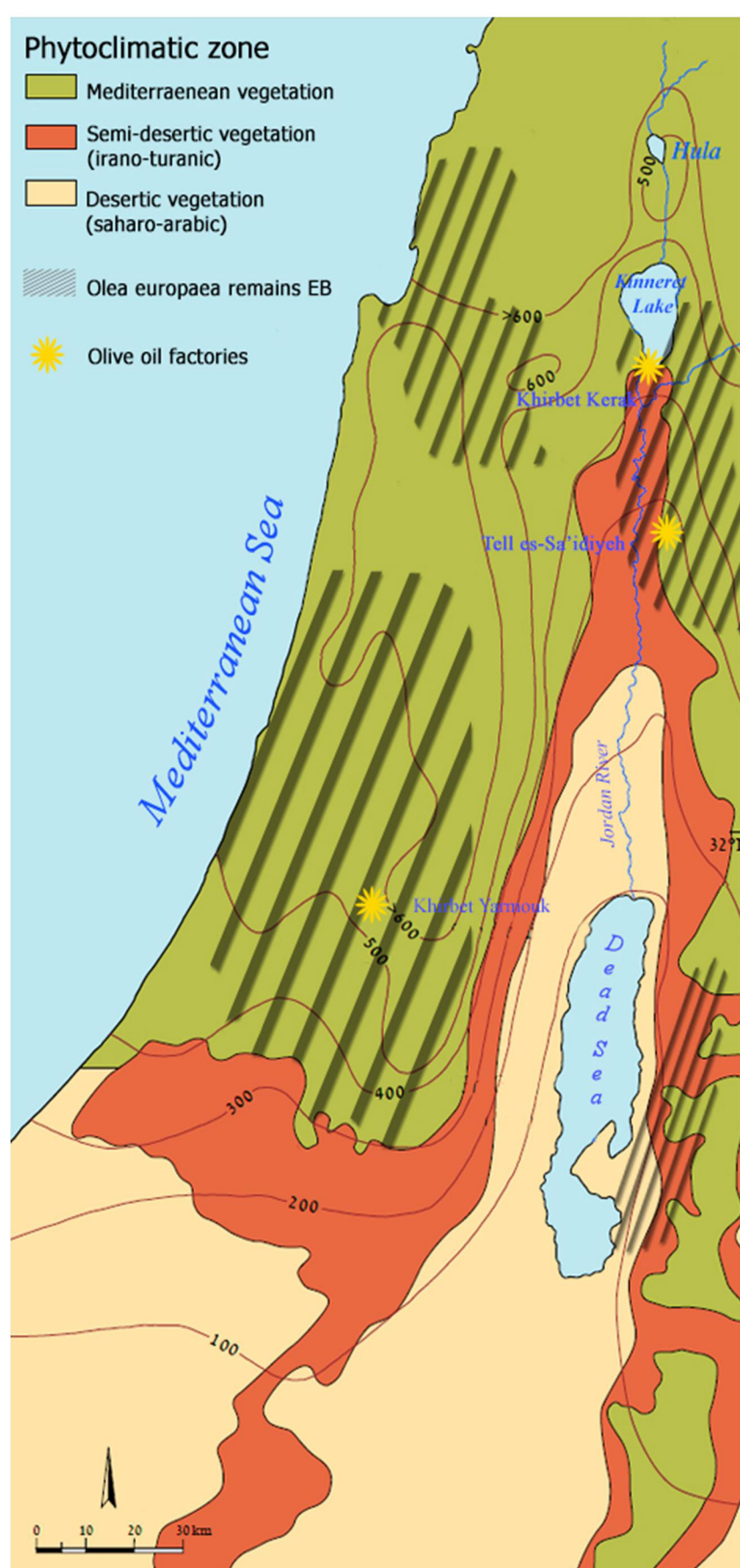


Fig. 1 - Map showing the distribution of *Olea europaea* and the location of the main EB olive oil factories.

OLIVE OIL FACTORIES IN THE EB II-III (3000-2500 BC)

With the beginning of the urbanization in the Southern Levant and the establishment of the palace institution, the oil process became a city business, with the construction of actual oil factories, both rural and urban. The process of oil extraction consisted of three main steps: crushing, separation, and pressing (Frankel 1999). First of all, the olives were pruned with rolling stones upon a flat surface or in stone mortars. In a second moment, the crushed olives were washed in hot or cold water, and the first oil was separated from the residues by floating, using spouted vats.

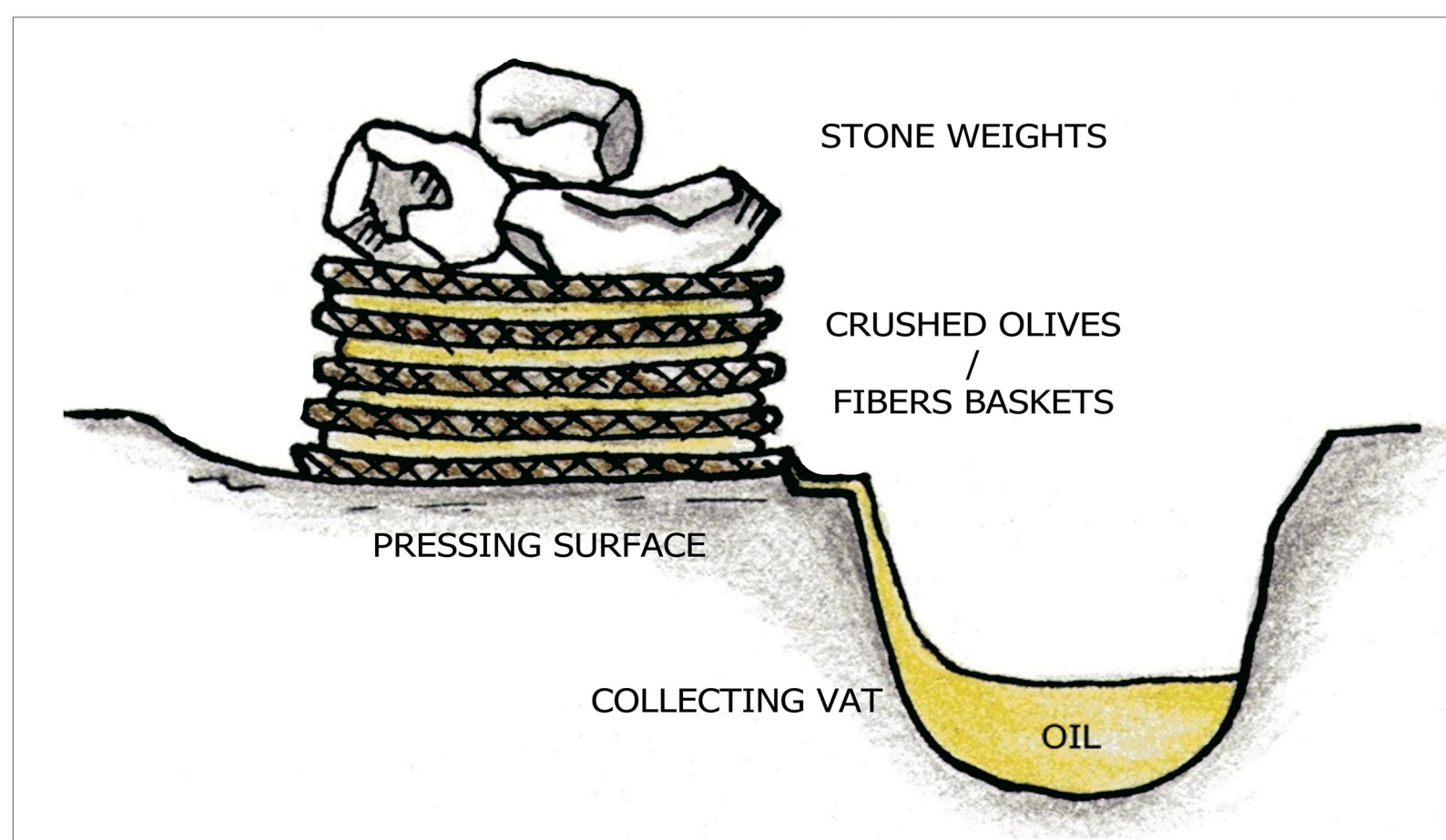


Fig. 2 - Features of an Early Bronze Age olive oil press.

Finally, the olives were pressed. The structure of a typical EB II-III oil press was simple (Fig. 2), with a main circular pressing surface encircled by a shallow drain connected to a collecting cup-mark or a vat carved in the bedrock (Fig. 3), or built up with a circle of stones and a flat stone-slabs base. Upon the pressing surface stood a pile of vegetal fibers baskets filled in between with pulp and crushed olives and left under the pressure of stone weights. From here the oil flew out through a shallow channel into the collecting vat, ready to be stored.



Fig. 3 - Rural EB oil press near Tell el-Jazari/Gezer (after Tel Gezer Regional Survey).

Significant examples of urban oil factories come from Khirbet Yarmouk/Tel Yarmouth (Salavert 2008, fig. 4), Tell es-Sa'idiyah (Tubb 1994) and Khirbet Kerak/Beth Yerah (Esse 1991). The sites show a complex olive oil economy, with evidences of oil surplus storing and rural production areas under their control. In this way olive oil became a luxury good, traded by Levantine cities with Mesopotamia and Egypt.



Fig. 4 - The oil factory of Khirbet Yarmouk/Tel Yarmouth: in the foreground the press, in the background a mortar and a stone crushing basin are visible (after Salavert 2008, 7).

At the end of the EB III, with the collapse of the first Southern Levant urbanization, the presence of the olive tree quickly shrank as a consequence of the abandonment of the olives orchards (Finkelstein 2014), and the industrial production of oil stopped, rising again only in the Late Bronze Age.

The history of the olive tree is closely interconnected to the phenomenon of the urbanization in the Southern Levant and follows, essentially, its innovative but also precarious trend.

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