An Egyptian grand cru: wine production at Plinthine

Recent archaeological discoveries as well as archaeobotanical and environmental studies in Plinthine shed new light on wine production at this small village on the *taenia* ridge between the Mediterranean Sea and Lake Mareotis, writes **Bérangère Redon**. Viticulture was practised here from the New Kingdom to the Ptolemaic period. For the first time, we gain information on the grape varieties and winemaking process in an area whose wines were once famous but are still little known within archaeology.

Wine production in ancient Egypt

Wine in ancient Egypt? The country is not renowned for its wines in Pharaonic times, and in the classical literature the Egyptians are considered as beer drinkers. The famous historian of the 5th century BC, Herodotus, even states that the inhabitants of the country did not grow vines on their soil (II, 77). Winemaking and -consumption in Egypt is usually associated with the arrival of wine-drinking populations in Egypt after the conquest of Alexander the Great in 331 BC, for which there are indeed numerous papyrological and archaeological data (dozens of wineries have been excavated, mainly of the Roman and Byzantine periods).

View from Kom el-Nogous to the west, with

fig trees now replacing

the ancient vineyards.

The Osiris temple of Taposiris is visible in the

. background. However, viticulture is evidenced in Egypt from the Predynastic period and the Old

Kingdom onward, especially on the fringes of the Nile delta where the first vines might have been imported from the Near East. While mentioned in written sources, represented on paintings adorning the tombs of the Theban valley, and evoked by the thousands of labels found with the jars that contained the precious liquid, the production of wine in pharaonic Egypt has never been studied in the field. This is because until recently, no archaeological evidence of a pharaonic winery has been found, other than a very poorly preserved example at Tell el-Dab'a

One of the most famous Egyptian vintages was grown on the territory called 'the Western River', mentioned on a few dozens of jar labels found in Tell el-Amarna (representing more than 70 percent of the jar labels ever found at the





Below: plan of Kom el-Nugus / Plinthine and its vicinity, with the find spots of wine-production remains.



site). The 'Western River' probably merged with or included the Mareotis region, on the shores of Lake Mareotis (nowadays Maryut), located at the gates of Alexandria and well known for its wine production in Roman and Byzantine times. The quality of the Mareotis wine is praised by Latin poets, such as Virgil and Horace. According to them, it was white, sweet, and aromatic. Strabo even says that the ancients let the Mareotis

wine age (XVII, I, I4). Among the vintages produced in the region, the wine of the *taenia*, the sandstone ridge separating the Mediterranean Sea from Lake Mareotis, was judged of better quality than the wine from the southern Mareotis area by Athenaeus, an Egyptian author of the 2nd century AD. According to him, 'the *taeniotic* wine, in addition to being sweet, [was] somewhat spicy and slightly astringent' (I, 33).



Location of the site of Plinthine, on the *taenia* ridge, in the Mareotis region.



Above: map of northern Egypt, showing the Mareotis region.

Photogrammetric image of the Saite grape grinder at Plinthine.

Image: MFTMP / M. Vanpeer

Grape pips, skin, pedicel and stalk fragments found in the Plinthine samples dated to the Saite period.

the stamped wine jar may suggest that a royal vineyard was cultivated at Plinthine during the Eighteenth Dynasty.

After a period not well-documented on the site so far, wine production clearly intensifies again during the Twenty-sixth Dynasty, as



Right: the entrance to the Saite grape grinder of Plinthine.

Plinthine - a wine-producing village

With the support of the French Ministry of Foreign Affairs, the French Institute of Oriental Archaeology (Ifao), and the Arpamed fund, the French mission of Taposiris Magna and Plinthine (MFTMP) recently launched a project dedicated to the study of the wine production of a *taeniotic* site – Plinthine – over the longue durée from the pharaonic period to the end of Ptolemaic era. Coupling soil analyses, the study of grape varieties and excavations, the analysis focus on the whole production chain, from the grape seed to the jar.

Plinthine is remarkably situated on the shores of the Mediterranean Sea and Lake Maryut, 2 km east of Taposiris Magna, a well-known city occupied from the Ptolemaic period to early medieval times, in the extreme north-west of what Herodotus considered as the territory of Egypt. The site consists of a large, horseshoe-shaped *kom* (Kom el-Nugus), II m high, atop the ridge. Our excavations have shown traces of occupation from the Late New Kingdom to the Late Ptolemaic or Early Roman period. It overlooks a village, built on the southern slope of the ridge, looking toward Lake Mareotis, whose last phase of occupation - the only one we have studied so far - dates back to the Hellenistic period. Dated to the same period, the necropolis of Plinthine is situated 500 m to the west. Between the *kom*



and the necropolis, scattered pottery dated to the New Kingdom is visible on the surface.

Three phases of viticulture at Plinthine

Interestingly, Hellanikos, a Greek author of the 5th century BC (quoted by Athenaeus I, 60), reports that viticulture was invented at Plinthine. This is likely a legend, but our recent finds show that wine production began well before the mention of Hellanikos, probably during the New Kingdom, and that this tradition lasted for more than a millennium, with unexpected intensity.

First evidence was discovered in 2015, during a survey in the 'New Kingdom area', where several ovens and ceramics, including a wine jar stamped with the name of the eldest daughter of Akhenaten, Merytaten, were found. Besides other artefacts (among them a limestone stela of Sety II) that attest a royal presence on the site during the next dynasty,

shown by the discovery of an exceptionally well-preserved grape grinder, whose construction can be securely dated to the second half of the 7th century BC. It is located in a vaulted room that belongs to a complex building still only partly excavated, and is built in a very fine local limestone, covered with mortar. The grinder consisted of a raised treading platform $(1.89 \times 2.14 \text{ m})$ where the grapes were pressed underfoot by several people, and a monolithic vat of 9 hl into which the juice flowed from the platform through a drain. A unique example in pharaonic Egypt, its closest parallels can be found in the paintings that adorned the tomb walls of the Valley of Nobles in Thebes, in particular in the tomb of Nakht (TT 52). It is also very similar to the winery depicted in the Petosiris tomb, dated to the early Hellenistic period, except for the lion-head drain, which becomes common only during the Graeco-Roman period in Egypt.

Other tomb paintings show that the men were singing while pressing the grapes, and hold poles or strings attached to the roof or to the hips or shoulders of their neighbours in order not to slip on the grapes. Treading was indeed not all that easy, as the quick onset of fermentation while grapes were being pressed meant that workers were probably a little drunk while pressing. The third period of wine production evidenced at Plinthine dates to the Ptolemaic

period. A few decades after Alexander the Great's conquest of Egypt, a community of new inhabitants of Hellenic origin settled on the site, as shown by their funerary customs

> Left: detail of the treading platform, built from limestone slabs and covered with mortar.

Below: a reconstruction of the Saite grape grinder.



Sections and plan of the Saite grape grinder.

The New Kingdom

grape grinder shown in the tomb of Nakht at

Thebes (TT 52) (after

XXVI).

Davies 1917, pl. XXIIIB,

and offerings, and some rare inscriptions. They clearly perpetuated the wine tradition of Plinthine, as shown by the discovery of the only wine-producing villa in Mareotis that can securely be dated to the Ptolemaic period. It is located at the fringes of the necropolis and is organised around a grape grinder, similar to the earlier, Saite one (with a treading platform and a deep vat for the juice), but larger. The work conducted by Olivier Callot (CNRS, Lyon) and then Louis Dautais (Université Montpellier III) show that it was abandoned in the second half of the Ptolemaic period. Like the Saite one, the Ptolemaic wine factory was housed within a larger building, which might have been a private residence, indicating that wine production occurred in a domestic context. The Saite treading platform of the 7th century BC could likley produce 400 l in one go, the capacity of the Ptolemaic platform might have been twice as much. Both represent significant quantities, though, of course, they are small compared to the later large-scale production of some villas of the Roman world.

Soil analysis and wine quality

Such continuity in the Plinthine wine production is due above all to the quality of the terroir and the composition of soils that seem to be partiularly suitable for viticulture, as demonstrated by the geomorphological analyses conducted by Maël Crépy (post-doc CNRS): the soil is composed of a mix of substratum fragments, fine siliceous sand coming from the desert to the south and coarse calcareous sand originating from the seashore, with a proportion of silt and clay that is lower in the upper part of the ridge than nearer the lake, resulting in good drainage characteristics and making the soil easier to work. It is also significant that the samples taken at Plinthine are less alkaline than those coming from Taposiris Magna. Plinthine was definitely the best place in the area to produce wine of quality.

This undoubtedly stimulated the central role played by viticulture at the site, in particular during the Saite and Ptolemaic periods, as demonstrated by the discovery of thousands of grape pips, stems or fragments of grape skin and vinegrape charcoal fragments during our excavations (no New Kingdom levels have been sampled so far; probable Third Intermediate Period layers with grape seeds





and charcoal have been studied, but their chronology is not well established and they were not taken into account for this article). All the soil samples analyzed by Charlène Bouchaud (CNRS) and Menna el-Dorry (MoA and IFAO), and dated to these two periods contain grape remains, while other species grown at the site are few and derive solely from inhabitants' food and wood requirements. The raison d'être of the village seems indeed to have been the production of wine, at least under the Saite and Ptolemaic dynasties.

Was the Plinthine wine a grand cru or a piquette? Archaeobotanical research has not yet made it clear. The morphometric study conducted by Clémence Pagnoux (post-doc École française d'Athènes) shows that numerous grape varieties were grown and

pressed at Plinthine during the Twenty-sixth Dynasty and in the Ptolemaic period, with, respectively, 28 and 15 different grape varieties identified so far, ranging from species close to the wild vine to varieties well-known elsewhere in the Middle East or Greece. The cépages assemblage change between the two periods may perhaps reflect the evolution of the customers' taste, though it could also be due to technological and techno-biological transfers that took place after the Greek conquest, when many Hellenes (in the broad sense of the word) came to settle in Egypt and especially in Alexandria and the nearby Mareotis area. However, the evolution of the diversity of the cultivated grapes is also a manifestation of attempts to adapt varieties to the Plinthine terroir.

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Trading networks

Thanks to the production of wine on its slopes during pharaonic times, Plinthine was at the heart of commercial networks since the precious beverage was first produced, initially for consumers living in the Nile Valley. While not yet identified with certainty, the Plinthine cru is likely to be one of the wines well-known from Egyptian sources, drunk at the tables of the pharaohs and the social elites as 'wine of the Western River'. Probably favoured by its location on the Mediterranean coast, Plinthine was also part of Mediterranean trade during the Saite period, and the local production of wine in Plinthine is contemporaneous with massive imports of wine amphorae from eastern Greece (Samos, Chios, Lesbos, Clazomenes, Athens, etc.), Cyprus and the Phoenician world that are currently studied by Mikaël Pesenti. This raises many questions about the techno-biological transfers these exchanges might have facilitated before the Ptolemaic period and about the interface role that Plinthine certainly played at a time when Egypt was opening up to the Mediterranean. This is one of the questions the next campaigns will try to answer.











Top: the early Hellenistic grape grinder of the Petosiris tomb at Tuna el-Gebel.

Above: photogrammetric image of the Ptolemaic villa and its grape grinder, near the necropolis of Plinthine.

Left: detail of the Ptolemaic grape grinder of Plinthine: the lower vat.