



THE WESTERN MARMARICA COASTAL SURVEY, LIBYA

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The Western Marmarica Coastal Survey works between Kambut and Ras el-Mellaha, roughly 80 km from the Libyan-Egyptian border; latterly the work has concentrated upon a test area 20 x 20 km around Marsa Lukk (Figure 1). This is a region of flat limestone scarp that falls sharply into the sea and is riven with a number of wadis that open almost directly into the sea, with little cultivable land on the coastal edge. Agriculture is concentrated in the wadi beds, although with careful management of water the area between wadis was also farmed to a limited extent. Even so, returns are small and settlements similarly sparse: this is a semi-arid area, with rainfall averaging 95 mm per year, well below the 200 mm required for the dry-farming of grain. Fortunately, the water table in the wadis is naturally high and further recharged by the wadi floods in December-January.

In only three seasons, the WMCS has documented 119 sites in the wider survey area, a mere fraction of those yet to be recorded in what is, in archaeological terms, largely *terra incognita*. At Ras Dafna, some 10 km from the coast, a scatter of small outcrops of limestone containing diagenic chert nodules was identified. The nodules were of variable quality, but much of the chert tools and debitage found in the survey came from this site or others like it. Diagenic chert forms under specific and contingent conditions on the seabed and so is not to be predictably located by prospectors searching the landscape for new chert sources. Fortuitously identified at some point in the past, to date this outcrop represents the only chert source in coastal Libya east of the Gebel Akhdar in Cyrenaica, and as such was visited over a vast period of time, notably in the Middle Stone Age, and the Oranian-Capsian and Neolithic periods.

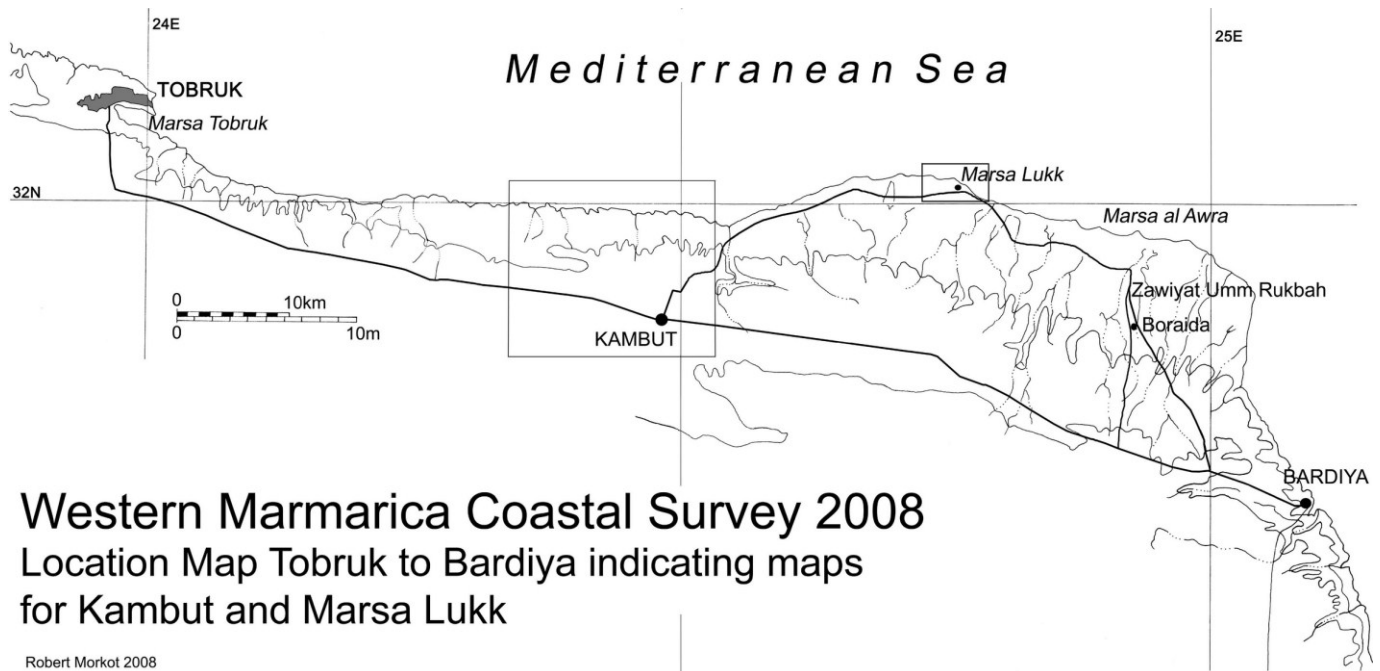


Figure 1

Lévallois cores and flakes were identified close to the chert outcrop and a concentration of MSA lithics was also found on the current shore line north-east of Ras Dafna. Human activity in the region during the Oranian-Capsian period is found on 15 sites largely confined to only two wadis, always mixed with later Neolithic material. The Neolithic sees the intensification across the region of activity, particularly alongside the broader wadis and outcrops overlooking the sea. At WMCS 51 a cluster of 17 hearths were found, with clear evidence of primary tool making and the drilling of stone beads. Fragments of ostrich egg shells and the presence of perforators suggest bead manufacture at

other locations. The Neolithic repertoire was influenced by both North African and Western Desert traditions, although the latter was more evident in the production, rather than the hunting toolkit. Small pointed and backed blades exhibit a microlithic tradition recalling those found in mixed Capsian/early Neolithic levels at Haua Fteah (c. 7,000 BP), while some of the drills and endscrapers are similar to those found in the oases of the Western Desert. Tanged bifacial arrowheads with bifacial retouch are strongly comparable to the North African repertoire (Figures 2a and 2b).



Figure 2a



Figure 2b

The earliest settlements in the survey area date to the 1st century BCE, with significant expansions in the 4th and 5th centuries CE, in line with settlement patterns across Libya. Initially (1st-3rd centuries CE), small farms spread along individual wadis and it seems that each wadi system was self-contained and oriented to the sea. This heterarchical arrangement of settlements persisted until the 5th-6th century CE, when villages emerged. Based upon earlier foundations, these villages were located close to broader wadis, and for the first time roads appear to link them to inland routes, suggesting that they

served as collection centres for goods that came from more than one wadi. What was collected remains something of a mystery: olive presses and facilities for processing fish products are markedly absent. Yet, in spite of the fact that agricultural returns in this region must have been low (due to both environmental and manpower constraints) surpluses were achieved: 11 kiln sites have been identified around Marsa Lukk alone, most, but not all, attached to farms, and mostly producing variants of Egyptian-style transport amphora (Figure 3). As a result of their labours, the local population was able to access a wide range of ceramics

from Egypt, Cyprus, the Levant and the Aegean islands; Tripolitanian amphora are found but rarely. This suggests an orientation towards the east in line with the regions political realities: the study area was included in the Ptolemaic administrative district of *Marmarica*; in 96 BCE it became part of the Roman province of *Creta et Cyrenaica*; in the 3rd century CE it was decoupled from Crete to become part of the province of *Libya Inferior*, to be reunited with Egypt in the Justinian administrative reforms.

Classical authors from Herodotus to Livy record the names of the tribes living in the study area, and with differing subdivisions, the area was ethnically stable for at least 1,000 years, with the *Marmaridae* who gave the region its name the dominant group. Evidence for a mobile population, which many have provided a seasonal agricultural labour force, presents across the study area. The wadi el-'Ayn, a source of perennial sweet water, is dotted with rock art sites, some with layers of intercutting images suggesting visitation over an extended period (Figure 4a-b). Some motifs occur in other wadis in loose association with chert scatters; cup and channel marks are definitely Classical or later,

since they occur in an area that was quarried. The rock art represents the easternmost extent of rock art in Cyrenaica and is largely unique, although the cup and channel marks are also found in the wadi Tashwinat in the Tadrart Acacus. Libyan Desert ware, a coastal phenomenon, also occurs in relation to a number of cairn burials scattered across the study area, and on the edges of a small number of villages (Figure 5). The WMCS survey has expanded the repertoire of shapes in Libyan Desert ware (originally called Shell Tempered ware); this ware dates to the 3rd-7th centuries CE and circulated eastwards along the coast at least as far as Marsa Matruh.

In sum, the Western Marmarica Coastal Survey is engaged in recording the history of an area that was dynamically engaged in long-range contacts, primarily to the east, over at least seven thousand years. Further details may be found in *Libyan Studies* 39-40 (2008-2010) and www.arch.ox.ac.uk/ocma-fieldwork-marmarica.html.



Figure 3



Figure 4a



Figure 4b



Figure 5
