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Author(s): Donald White
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1985 Excavations on Bates's Island, Marsa Matruh*

DONALD WHITE

Marsa Matruh (fig. 1) is situated at what is conventionally taken to be the eastern limit of the Marmaric coast.[1] The town has been investigated more fully over the years than most of the coastal sites lying within the territory bounded by El Alamein to the east and Tobruk to the west.[2] Most of its systematic exploration was undertaken in the winter of 1913/14 by the American archaeologist, Oric Bates, working for Harvard University's Peabody Museum.[3] Perhaps because of his premature death in 1918,[4] the results of Bates's work at this site are not as fully

* The preparation of this report has been greatly facilitated by help from Dr. M. McClellan. I furthermore owe special thanks to P. Russell for her preliminary observations on the excavation's pottery, which have been incorporated into the following text. All errors, however, should be taken as exclusively my own. Since the subject straddles two areas, the reader may wish to refer to the lists of abbreviations published by the *American Journal of Archaeology* 82 (1978), 3-10 and 84 (1980), 3-4 and the *Lexicon der Ägyptologie* IV (Wiesbaden, 1982), ix-xiii when reading the following notes.

[1] The Marmarica fell between ancient Cyrenaica and Egypt-proper and included the desert regions as far south as Siwa (thus its occasional name, *Marmaricus Hammon*). By Hellenistic times its western limits were set at Darnis (modern Derna in eastern Libya, 75 km east of Cyrene) and embraced the towns of the eastern Gebel Akhdar as far east as Antipyrgos (modern Tobruk). In post-Diocletianic times the Marmaric coast was absorbed into *Libya Inferior* or *Libya Sicca*. Darnis was designated its later Byzantine provincial capital, following an interval when that function was carried out by Paraetonium, now Marsa Matruh. The western limit of Egyptian territory was evidently fixed as early as the reign of Ramesses II at Zawiet Umm El Rakham, the site of Apis ca. 20 km west of Marsa Matruh. Following the division of Alexander's empire, Paraetonium was linked with Egypt, and for all practical purposes the Eastern Marmarica may be thought to have begun west of Marsa Matruh. See *RE* 18, 3 (1949), 1881-83. A. Rowe, "A Contribution to the Archaeology of the Western Desert: I," *Bull. John Reylands Lib.* 36 (1953), 129. R. Goodchild, *Tabvla Imperii Romani* Sheet H.I. 34: *Cyrene* (London, 1954), 3.

[2] Apart from Marsa Matruh some of the potentially more interesting Iron Age settlements known to us through the ancient testimonia and whatever sparse site reconnaissance has taken place in this historically neglected region include the aforementioned Antipyrgos (Tobruk; see R. Goodchild, "Greco-Roman Cyrenaica," *Geology and Archaeology of Northern Cyrenaica, Libya* [Amsterdam 1968], 31; also *RE* 1, 2 [1894] 2534), Catabathmus Major (Salloum), Aenesisphyra harbor (Sidi Barrani), Apis (Umm el Rakham), and Leuke Akte (Ras el Hikma or el Kanayis). See J. Ball, *Ministry of Finance, Survey of Egypt: Egypt in the Classical Geographers* (Cairo, 1942), 66ff. Also Rowe (supra n. 1) 141-42. For Apis see also *RE* 1, 2 (1894), 2807 and Catabathmus Major, *RE* 10, 2 (1919), 2449-50. Apis has been archaeologically investigated. See L. Habachi, "The Military Posts of Ramesses II on the Coastal Road and the Western Part of the Delta," *BIFAO* 80 (1980), 13-30.

[3] O. Bates, "Semitic Traces in the Marmarica," *PSBA* 37 (1915), 201-7, referred to henceforth as Bates, *Pottery*. O. Bates, "Excavations at Marsa Matruh," *Harvard African Studies* 8 (1927), 125-97, hereafter Bates, *African Studies*. O. Bates, *Ancient Egypt (London, 1915), 165*. See also *RE* 18, 3 (1949), 1182-84. J. Pacho, *Relation d'un voyage dans la Marmarique, la Cyrénaïque et les oasis d'Audjeleh et de Maradah* (Paris, 1827), 28ff. Minutoli, *Reise zur Oasis des Jupiter Ammon* (1824), 63ff., pl. iv.* R. Fourtau, "La côte de la Marmarique," *BIE* (1914), 98-128. B. Khun de Prorok, *Mysterious Sahara* (Chicago, 1929), 248-51. O. Gueraud, "Signature d'un Plâtrier," *BSAA* 30 (1936), 31-33. E. Breccia, *Ann. du Musée Greco-Romain 1931-32* 2 (1933), 24. G. Walpole, "An Ancient Subterranean Aqueduct West of Marsa Matruh," *Ministry of Finance, Survey of Egypt*, Paper No. 42 (1932). E. Breccia, "Una statuetta del Buon Pastore da Marsa Matrouh," *BSAA* 26 (1931), 247-57.* A. Adriani, *Ann. du Musée Greco-Romain 1935-1939* 3 (1940), 159. A. Rowe (supra n. 1) 4. Bibliographical entries marked with an asterisk have not been seen by the present writer. Recent archaeological excavation at Marsa Mutruh has been directed by Ezzat Osman el Hamhmy, Chief Inspector for Eastern Matruh, on an extensive late Roman period establishment occupying the sandstone ridge north of the town's west lagoon in the vicinity of the rock shore features known locally as "Cleopatra's Bath." Publication is pending.

[4] See *necrology* by A. Coolidge, *Harvard African Studies* 2 (1918), before preface.

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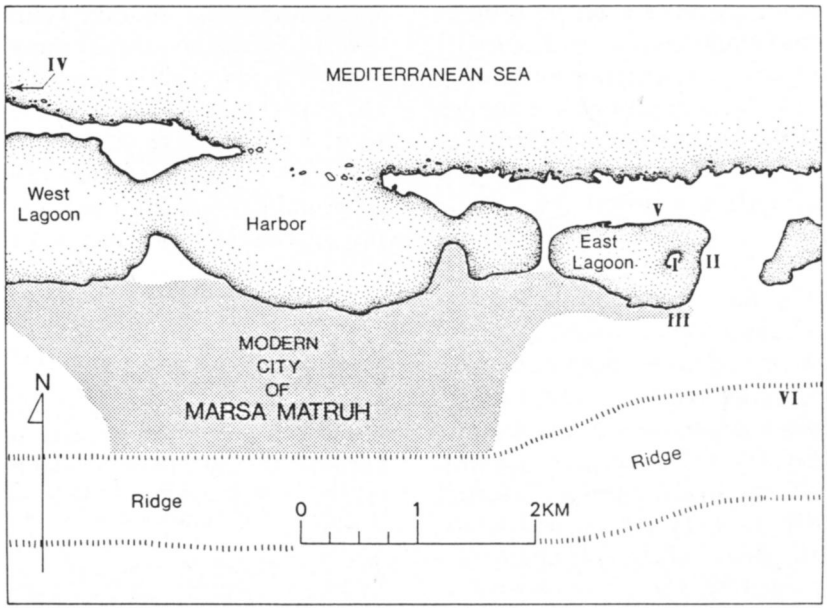

Fig. 1. Sketch plan of Marsa Matruh. I: Bates's Island. II: Sandstone outcropping with traces of ancient inhabitation. III: Rock-cut stairs. IV: Site of Egyptian Antiquities Organization excavations. V: Roman period walls. VI: Bates's "Libyan" cemetery.

appreciated as they deserve to be, particularly by Bronze Age and Classical period specialists who for the most part remain unfamiliar with his published observations about the small island situated at the eastern end of the salt water lagoon east of the modern harbor.[5]

The important features of what Bates found on the island may be summarized as follows.[6] According to the evidence of what he was able to collect from its surface, as well as excavate, the island was inhabited at various times from the Late Bronze Age down to the modern period. Beginning with the most recent, its principal occupations were 1) the modern period, indicated by Arab glazed sgraffito ware dated from the sixteenth-to-eighteenth centuries, a gun flint, and an iron cannon ball; 2) the Hellenistic and Roman Imperial periods, documented by copper (sic), glass, and pottery (black glaze and red slip as well as various other painted wares); and 3) the Late Bronze Age, documented by Cypriot White Slip sherds. Of the last-mentioned sherds Bates was able to send a sample of twenty-two to the Peabody Museum.[7]

[5] Bates, *African Studies*, 177, 188–87, map 1. pls. 57–58, published posthumously. Bates, *Pottery*, 207–8.

[6] According to his field notes published nearly a decade after his death, Bates delegated the responsibility of digging the island to his assistant, W. J. Harding-King, and himself visited the site on only a few occasions, which may account for certain inaccuracies in his published descriptions and sketch plans.

[7] After locating the sherds, the Peabody Museum's director C. C. Lamberg-Karlovsky and its Assistant Collections Manager, Ms. Una MacDowell, were kind enough to send the collection to the University Museum for study and photography in the spring of 1985. An additional sherd from the same group (Peabody Acc. No. 46-4-40/5917) is clearly later and seems to be part of a sixth century B.C. Greek kotyle rim; a second, non-joining fragment of the same kotyle (85I-P-17) may have been excavated this past summer in the area of Bates's house. Bates himself did not recognize any Greek sherds earlier than the Hellenistic period. Although he was unfamiliar with the Cypriot origin of the White Slip sherds in 1913/14, he had correctly identified them by 1915 when he wrote a characteristically perceptive appraisal of their significance. See Bates, *Pottery*, passim.

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In addition, Bates observed what he called a "large ruinous stone circle (ca. 3 m. in diameter)" on the island's crest a short distance south of its center,[8] referred to in local tradition as "the tomb of the Jew." While no attempt was made to excavate its core, Bates did, however, manage to investigate the remains of a house north of the so-called tomb, and it was from the house area that the majority of his expedition's finds were recovered, including the Cypriot ware.

While Bates's clearance of the house generates a number of problems that need not be reviewed in detail here,[9] it is important to note that his belief that its walls were post-antique is accurate and that his effort to conduct tests on both its interior as well as its exterior northwest corner led him to identify correctly in their broad outlines the major occupation phases of the island.

In addition to these topographical contributions, Bates made a second significant discovery that potentially bears on the early history of Matruh. On the mainland, at a distance of about a mile and a half to the southeast of the island, he discovered a small cemetery atop the stony ridge overlooking the eastern outskirts of the modern city (fig. 1).[10] Five shallow cist burials were examined; three were found to be completely stripped of contents. Two tombs (A.1 and A.2), however, each contained single skeletons, laid on their sides in semi-contracted positions, and surrounded by a few simple stone vessels, terracotta pots, and shells, interpreted by Bates as belonging to native Berber Libyan interments of perhaps the second millennium B.C.

Finally, it should be noted that Bates's meticulous research into the early history of Marsa Matruh decisively confirmed the modern town's identification as the site of ancient *Paraetonium*.[11]

On the strength of Bates's pioneer work a decision by the University Museum was reached in 1984 to request permission from the Egyptian Antiquities Organization Committee to survey the East Lagoon's eastern shore and to initiate a reexcavation of Bates's Island during the summer of 1985.[12] On behalf of the University Museum I wish to thank the Committee members and most particularly their chairman, Dr. Ahmed Kadry, for enabling our work, whose results form the contents of the following preliminary report, to go forward.[13]

[8] Bates, *African Studies*, sketch plan, 186, 187.

[9] But see below, pp. 64-65.

[10] Bates, *African Studies*, 137-40, Map, site A, pl. 4, 1-2. Also Bates, *Ancient Egypt* (London, 1915), 165.

[11] For a full discussion of Marsa Matruh's ancient identity, together with a scholarly review of the town's history from its supposed foundation at the time of Alexander the Great's visit to Siwa, 331 B.C., until later antiquity, see Bates, *African Studies*, 125-36.

[12] Bates himself referred to the island as the "Island of the Jew" or *Gezirah-t el-Yahudy*, as it was apparently called locally in his day. For discussion of the two versions of the local tradition that linked the island with either one or two Jews see Bates, *African Studies*, 187; *Pottery*, 201-2; "Ethnographic Notes from Marsa Matruh," *Royal Asiatic Society* (Oct. 1915), 736-39. Today no one seems to recall the older toponym, and, without detracting in any way from the pertinence of Bates's ethnographic observations, it seems appropriate to rename the island after its archaeological discoverer, who is himself still dimly remembered by elderly persons living in Marsa Matruh.

[13] The list of acknowledgments for any new archaeological project is of necessity a long one, and the reader should understand that the large number of persons mentioned here in no way diminishes our sense of sincere gratitude to each and every individual. In addition to Dr. Kadry, without whose support the project could never have taken shape, I must mention Mr. Kamal Fahmy, Director of Excavations in Lower Egypt, who took time to visit the project and to share with us his unparalleled knowledge of the region's archaeology. Locally, Mr. Feisal As-Mawy, Director of Antiquities for Matruh, along with the expedition's inspector, Mr. Ezzat Osman el Hamhmy, Chief Inspector of Antiquities for Eastern Matruh, rendered every possible assistance to facilitate our work. Here in the United States, special thanks are owed to Mr. Zahi Hawass of the University Museum's Egyptian Section, Professor David O'Connor, again of its Egyptian Section, and Dr. Robert Dyson, Director of the University Museum, for their many expressions of support. Dr. O'Connor will share responsibility for publishing whatever pharaonic Egyptian material emerges from our fieldwork. Since the project is also co-sponsored by the American Research Center in Egypt, I am happy to be able to thank here Dr. Paul Walker, Executive Director of ARCE, and Dr. Richard Verdery, Director of ARCE-Cairo, for their considerable assistance in making the season a success. Finally, there are the project's various financial supporters whose generous contributions have enabled the work to go forward. In addition to an allocation from the University Museum, including a Sorensen Fellowship, the costs of the 1985 season were met by gifts from Mr. Mandon Bates, Mr. and Mrs. Woodruff Emlen, Mr. and Mrs. Willy Gorrissen, Mr. and Mrs. E. Gordon Keith, Mrs. Catherine Lower, Mr. and Mrs. Robert Maxwell, Mr. and Mrs. Charles Saffer, Mr. and Mrs. James Satterthwaite, Mr. George Vaux, and finally a pair of friends who wish to remain anonymous.

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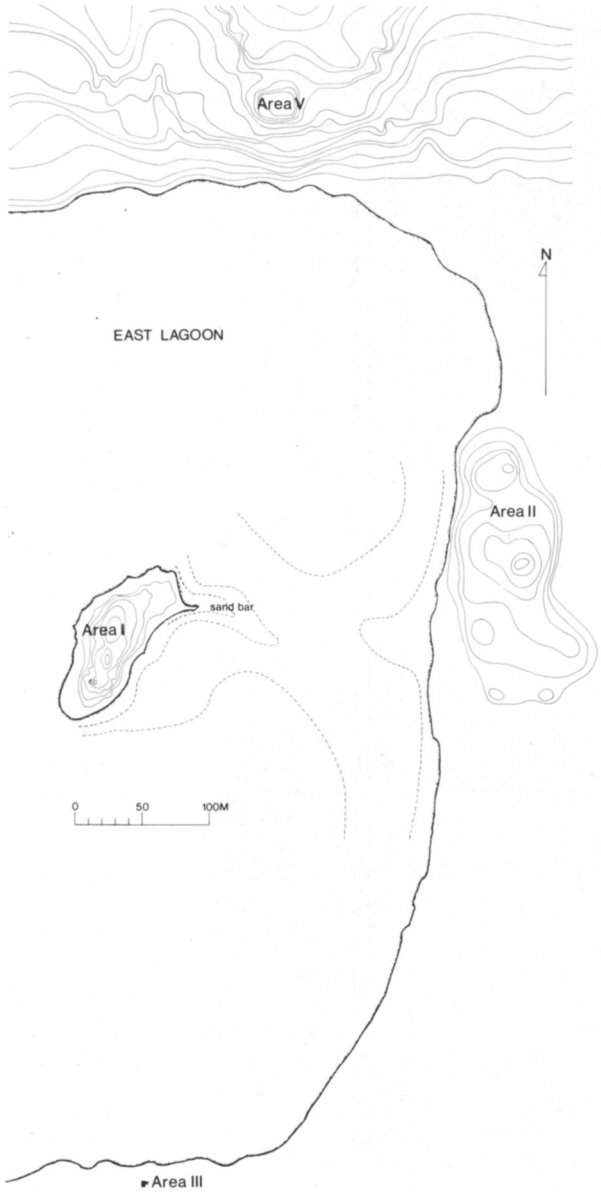

Fig. 2. 1:1000 survey plan of eastern end of East Lagoon, showing locations of Areas I, II, III, and V. Contour lines are drawn at meter intervals above sea level and at half-meter intervals below sea level.

Reconnaissance and Survey

The first work undertaken by the expedition[14] was to explore and survey the shore area, sandstone coastal ridges, and adjacent flat lands that lie to the north, east, and south of Bates's Island, as well as to undertake a preliminary search for his "Libyan" cemetery located on the mainland to the southeast. For purposes of the resulting survey plan of the lagoon (fig. 2), the sites that produced significant ancient features have been designated Areas I (Bates's Island), II, III, and V, respectively. Area IV, which does not appear on this plan, refers to the Department of Antiquities' excavation on the sandstone ridge west of the town's main harbor,[15] while Area VI, the site of Bates's hypothetical Libyan cemetery southeast of the island, can be found on the sketch plan of Marsa Matruh (fig. 1). The various mainland features explored by the expedition were as follows.

Area II

A low outcropping of weathered sandstone (max. el. 7 m a.s.l.) rises directly east of the beach opposite the island. Sand flats that spread to either side of the outcropping, which extends ca. 210 m north to south and 95 m east to west, lead away to a second lagoon system to the east. The low-lying flats must have flooded during the winter months before the construction of a causeway in 1965 to separate the modern harbor from the east lagoon, leaving the Area II ridge surrounded by water. Few if any ancient features are today visible on its rubble-strewn surface. The rocky crest at the northern extremity, however, preserves a possibly ancient circular depression, roughly 2 m in diameter, neatly cut down almost a meter into the bedrock pavement (fig. 3). A rock-cut channel of unknown purpose leads off to the northwest, while a rectangular rock-cut pit of similar size is fragmentarily preserved nearby. Time did not permit clearing and surveying either feature, and their identities and period remain to be established.

A scatter of sherds was observed on the southwest slope of Area II leading down to the beach

[14] The staff consisted of Dr. Murray McClellan, assistant field director, Dr. Kenneth Schaar and Dr. Margaret Schaar, surveyors, James Thorn, architect, Joan White, conservator, Pamela Russell, pottery consultant and registrar, David Conwell, area supervisor, and the present writer, field director and photographer.

[15] See above, n. 3.

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Fig. 3. Possibly ancient circular depression cut into bedrock at northern end of Area II ridge.

Fig. 4. View of Area III rock-cut stairs from north.

opposite Bates's Island. Most were Roman period in date, but, significantly enough, we also recovered a limited number of badly preserved black glaze sherds that theoretically could date between ca. 600 and 300 B.C. Patchy concentrations of sherds on the beach trail into the shallow water covering what may once have been a neck of land connecting Areas I and II in at least later antiquity.[16] The sand bank on Area II's landward-facing northeastern slope exposes lenses of fill containing Roman period sherds that may have drifted down from some kind of late settlement associated with the rock-cut pits on the ridge crest.

[16] See below, p. 58.

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Area III

A set of rock-cut stairs (figs. 4–5) are preserved in the stone outcropping that separates the beach along the southern edge of the lagoon from the rising ground to the south. Their existence was previously noted by Bates.[17] A second flight of steps leads east off the main stairs into a small rock-cut chamber (2.10 × 1.20 m) equipped with a drainage sump in its floor and water channel running off to its north. A niche is let into the south wall of the chamber, whose bedrock ceiling (originally 1.90 m above floor level) has partially collapsed. Thirteen steps of the main flight of stairs survive. Their width is ca. 1.80 m, and their overall rise in elevation is 3.10 m. Other than the fact that they seem to have led down to the level of the present-day beach, their original purpose remains obscure. No trace of walls is visible nearby, but the soft sand of the lagoon bottom may cover whatever docking facilities originally existed in this area. The zone to their rear, in other words, back up the rocky slope to the south, produced isolated concentrations of Hellenistic and Roman period sherds that argue for some form of suburban extension of ancient Paraetonium in its later period.[18]

Area V

On the northern shore opposite the island the sandy beach rapidly gives way to the distinctive sandstone ridge that separates Matruh's chain of lagoons from the sea. In sharp contrast to the ridge area at the opposite end of Paraetonium north of its West Lagoon, which retains a deep sand/soil cover and shows signs of having been at one time relatively densely built up, the eastern ridge consists of windswept sandstone outcroppings that display few signs of ancient inhabitation. Exploration of this sector led to the discovery of a rocky hillock (now Area V) whose summit (14 m a.s.l.) is occupied by the walled outlines of a ruined building. Its plan is square and measures ca. 15 m east-west × 16.45 m north-south. Enough traces of secondary walls survive to indicate that the interior was subdivided into a series of rooms at ground level. The best preserved of the inner subdivision walls runs east-to-west for ca. 2.30 m parallel to the exterior north wall; a well-preserved coating of white wall plaster, 0.003 m thick, adheres to its face. The structure was entered by a flight of steps that lead up the eastern slope of the hillock. Traces of what may be a collapsed cistern tank appear amid the rubble fill covering the bedrock slightly to the southwest of the building's center. All of the surface sherds that were examined inside the walls of the Area V structure as well as from its immediate vicinity appear to date to the Imperial Roman period. Remains of a possibly unrobbed chamber tomb are visible on the short downslope north of the summit. Two partly caved-in tomb *dromoi* pierce the opposite, south slope overlooking the lagoon. No formal excavation or drafting of Area V was undertaken.

Area VI

What we take to be the area of Bates's "Libyan" cemetery was rediscovered on the crest of the rocky ridge south of the main road leading east from Marsa Matruh to El Alamain (fig. 1). No trace of surface sherds or other diagnostic finds of any period were observed in the general area of the emptied cists nor was any clearing undertaken to verify the identity of the zone as the one explored by Bates, but the expedition has received permission from the Egyptian Antiquities Organization to renew excavation in 1986.

Geomorphology

The geological history of Matruh's harbor and lagoon system in general and especially of its eastern lagoon, Bates's Island, and the surrounding environs is beyond my competence to present in any detail but should at some future date form the subject of a fuller study. Some preliminary

[17] Bates, *African Studies*, 185, 191, no. 54.

[18] The line of the ancient city's walls have not yet been traced. It remains unclear whether the territory south of the East Lagoon was extramural by the early imperial period or was instead incorporated into the urban nucleus. The concentrations of sherds south of the Area II stairs suggests the existence of separate villas rather than developed city blocks. For what Bates took to be the Justinianic cross-wall protecting the original core of the town at the tip of the western horn of the modern harbor, see Bates, *African Studies*, 136, 184, site map, feature no. 102.

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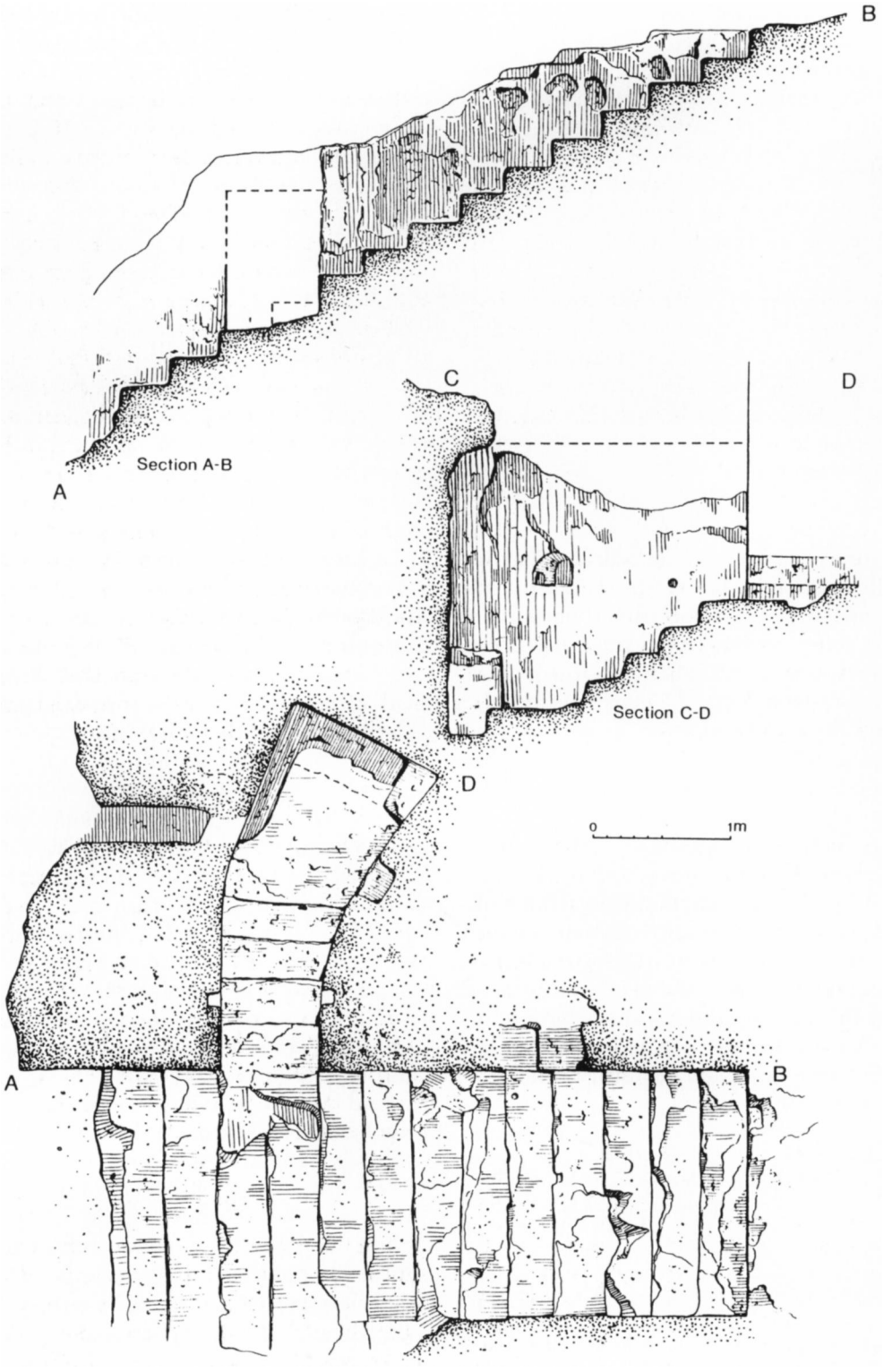

Fig. 5. Plan and cross-sections of Area II rock-cut stairs.

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Fig. 6. Bates's Island from north.

observations[19] are, however, in order at this time. Today the modern harbor of Marsa Matruh consists of two parts, a small inner harbor and the main outer harbor. The latter is an oval basin approximately 1.25 km north-to-south and 2.4 km east-to-west. Its ca. 1,250 m wide mouth is framed by the two previously mentioned sandstone coastal ridges and is itself hemmed in by a line of rocks that protrude above the surface of the water. The inner harbor lies at the east end of the main harbor. It is roughly 700 m square (apparently natural, i.e., not a *cothon*) and connects with the Eastern Lagoon through a sluice gate under a modern causeway which was constructed over the flats separating the two elements in 1946. In Bates's day ca. 350 m of semi-dry land separated the lagoon from the inner harbor, but it is difficult to determine whether or not this indicates any fundamental change in water level over the past seventy years.

[19] See Bates, *African Studies*, 126–27 and site map. No formal survey and mapping were undertaken by the present expedition of the western lagoon area, which lies inside a military security zone. Reports of large-scale alterations to the southeast shore in preparation for the construction of a modern port facility suggest that little may remain of "Contra-Paraetonium." It was possible, however, to run rudimentary checks on Bates's plan of the harbor, which was originally based on British Admiralty Chart no. 3567. The changes have been incorporated into the present town plan (fig. 1). In regard to the East Lagoon, K. Schaar recorded its principal dimensions and surveyed in detail its eastern third (fig. 2).

A large lagoon, indicated by Bates to be more than two miles long, lies west of the harbor. He interpreted its northeastern shore area to be the most likely site for the original, Hellenistic town of Paraetonium and the traces of settlement apparently visible in his day on the opposing south shore to be part of a secondary settlement simply called "Contra-Paraetonium."[20] It was Bates's view that the West Lagoon served as Paraetonium's harbor during the Roman period and that it would have been where Cornelius Gallus trapped and sank Antony's fleet in 31 B.C.[21]

East Lagoon

The East Lagoon measures approximately 1.35 km east-to-west and has a maximum north-to-south width of ca. 700 m. Water depths were not recorded except for the area east of Bates's Island but appear to be less than 3 m for most of the lagoon basin (fig. 2). The eastern shore area consists of sand and salt flats, which lie only a few centimeters above water level, with the Area II ridge rising abruptly from the surrounding plain. The flats lead to a second eastern lagoon. As has already been suggested, during the winter months when storms flood the East Lagoon with sea water from the main harbor, the flats are

[20] Bates's site map, features 100 and 31 respectively.
[21] Bates, *African Studies*, 131. Dio Cass., LI, 9.

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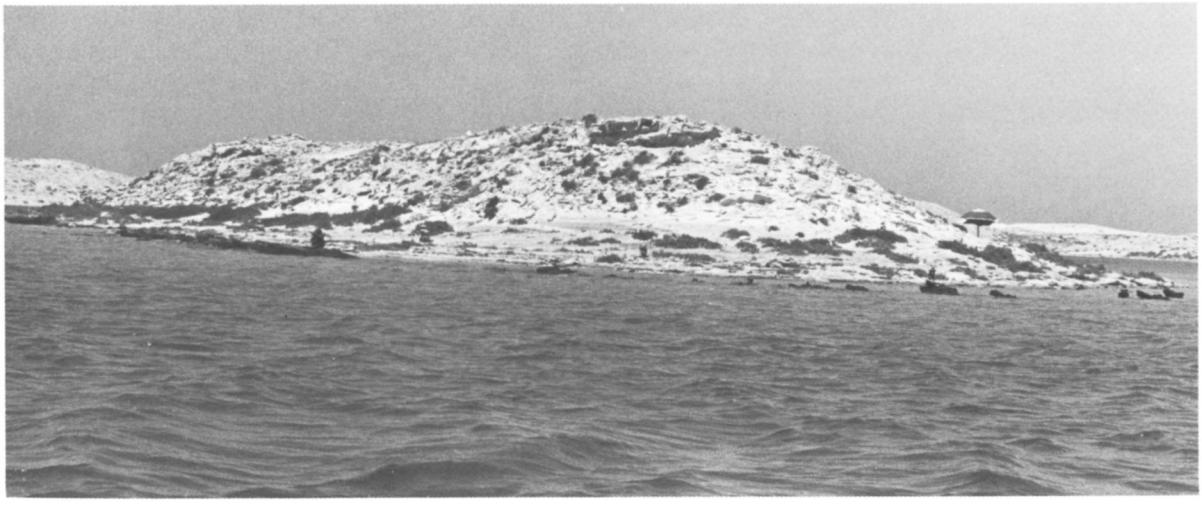

Fig. 7. Bates's Island from southwest.

probably partially under sea-water, while in the days before the causeway's construction they were without any question seasonally under water, which must have left Area II a temporary island.

Bates's Island

The island (figs. 6–9) measures approximately 135 m northeast-by-southwest and 55 m northwest-by-southeast. Its maximum above-sea-level elevation is 6.10 m. Like the coastal ridge to its north and Area II to its east, the island is formed from layers of sandstone (fossilized sand dunes?) that present a wind-eroded rocky scarp largely stripped of sand along its western face.[22] By way of contrast, much of the island's axial ridge or crest, its eastern beachfront, and the sloping low ground occupying its northeastern quadrant are covered with layers of sand which in places can collectively reach depths of more than 2 m over bedrock. With the exception of restricted argillaceous deposits in the lower northeast corner of the island (area I8 III/S) that may have been introduced from the mainland, the successive levels are made up of granular sands, each variously stained with differing amounts of impurities such as ash and decaying organic material, as opposed to actual humus.

Apart from the usual scrub growth covering its sandy surface between the rock outcroppings, the island is bare of vegetation and shows no signs of ever having been cultivated. There are no traces of springs or wells, and whatever fresh water was available must have been collected in cisterns that still remain to be discovered.

Today the island can be easily approached by wading across the shallow water separating its northeast corner from the beach in front of the southern half of Area II. The two areas are in fact connected by a broad sandbar that is nowhere deeper than a man's midsection. Water level falls off to either side of the bar to a depth of at least 2 m. Informal photos taken from the air,[23] as well as whatever preliminary surveying of the shallow water surrounding the island could be carried out during the season's one windless day, indicate that a sandstone shelf extends out most of the island's perimeter for a distance of perhaps an

[22] The prevailing wind during May, June, and July was from the west. During our two-month stay we experienced only one calm day. For the rest of the time the wind blew from brisk to near gale force. Bates's comments on Marsa Matruh's winter weather and especially its violent winds are a convincing argument for believing that the island's occupation over the centuries has been seasonal much of the time. See Bates, *African Studies*, 127.

[23] Taken during commercial flights to Marsa Matruh from Cairo during the summers of 1984 and 1985. No formal aerial reconnaissance has been undertaken to date, and Marsa Matruh's strategic role as a military base will probably rule out such work in the near future.

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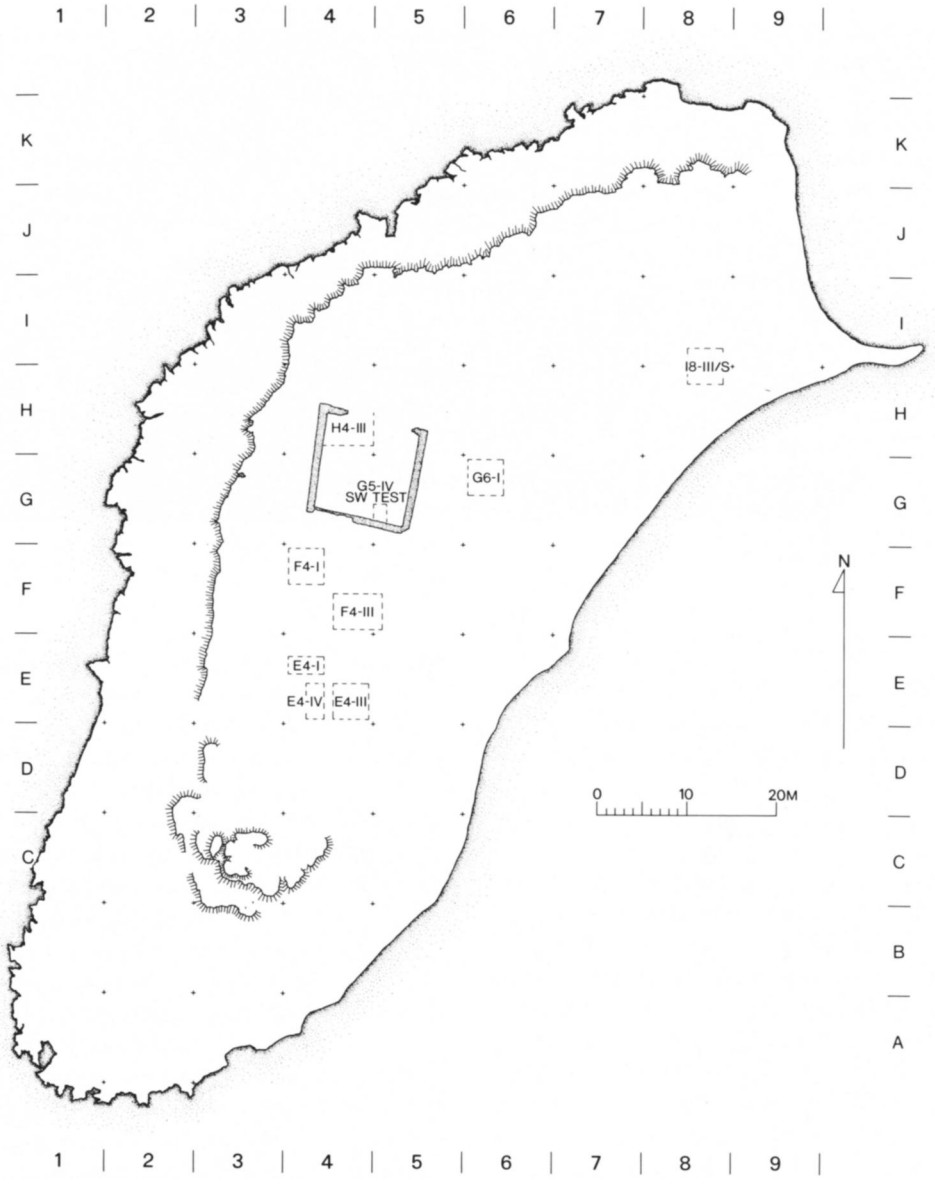

Fig. 8. Plan of Bates's Island (Area I), illustrating 10 m grid, 1985 trenches, and outline of island's exposed rock features.

additional 10 m before disappearing beneath the sandy bottom of the lagoon. The underwater sandbar that projects from the northeast corner of the island runs east for nearly 60 m before dropping below a meter's depth. It is therefore clear that all of this zone becomes part of the above-water island when the lagoon level drops by a meter. Submerged clusters of sherds off the southeastern shore of the island as well as on the sandbar at its northeast tip (fig. 10), make it strikingly apparent that the island was in fact larger in antiquity than it is today. This is further borne out by the discovery of a line of four ashlar blocks (S111) in the water 10 m east of the island's northeastern tip (fig. 9). The blocks lie at a depth of ca. 1.30 m. A second underwater feature was observed ca. 2 m northwest of the island's north tip. It consists of a rectangular slot

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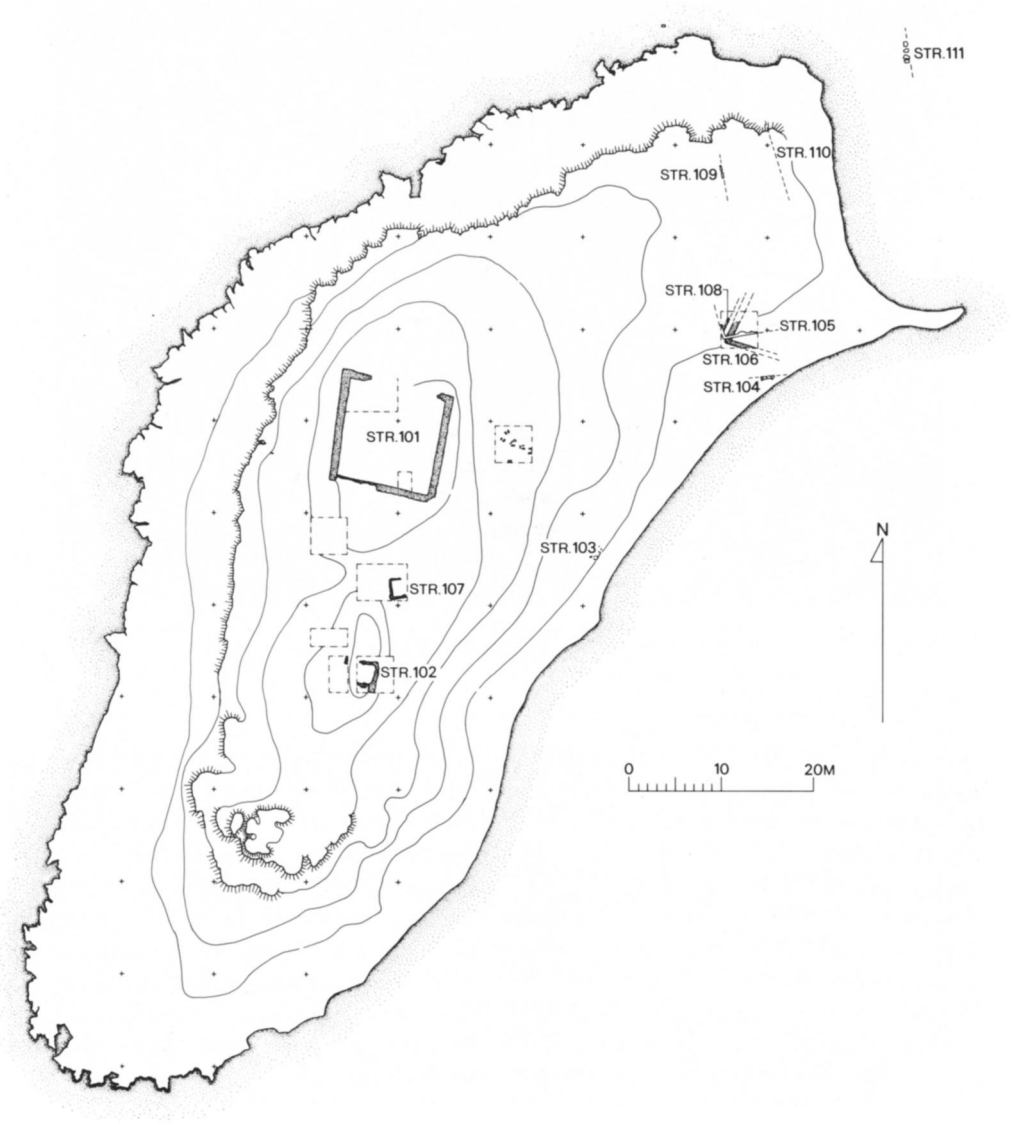

Fig. 9. Contour plan of Bates's Island, showing all excavated wall features and structure numbers.

of unknown purpose, cut in the sandstone shelf, measuring $0.49 \times 0.27 \times 0.04$ m. Since, in addition, living observers claim to remember seeing the island connected to the lagoon's beach since Bates's day (when it was separated), it is apparent that the combination of seasonal weather, gradual climatic change and, more recently, the activities of man, have caused the lagoon, flat lands, and island to change shape continuously since the Bronze Age.

While our understanding of changing water level at Marsa Matruh is in its infancy, a good deal has been learned about the phenomenon elsewhere in the Mediterranean. Flemming has argued that there has been no net eustatic change of seal level in the Western Mediterranean over the last 2000 years to within an accuracy of $+/-$ 0.5 m. All Western Mediterranean cities that show evidence of having been displaced from their original relation to sea level occur on deltas

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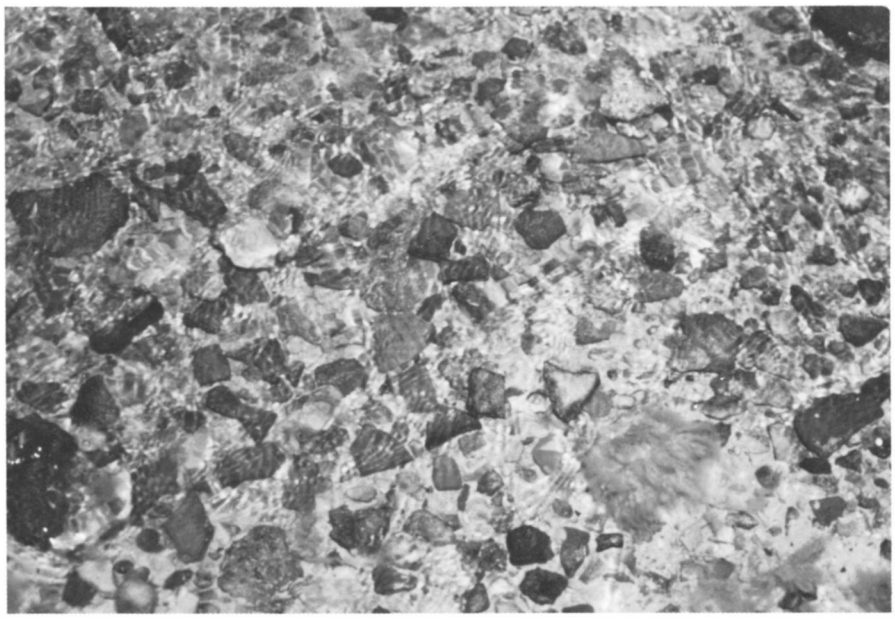

Fig. 10. Sherds lying on submerged surface of island's sandbar.

or in volcanic or seismic zones. He further states that the weight of published evidence points to the same conclusion for the Eastern Mediterranean.[24] If true, there is little to be gained in referring to regional parallels, such as Apollonia, the port of Cyrene, where a rise in water level of at least 2.5 m has taken place since later antiquity,[25] since according to this theory strictly localized tectonic activity is the principal cause of most instances of altered water levels since the beginning of this era. If volcanic/seismic disturbance turns out to be inapplicable to Marsa Matruh, the explanation may eventually be found to lie instead in the silting up of the land between Marsa Matruh's inner harbor and the East Lagoon. In the meantime, it is clear that the island was considerably larger in later antiquity, if it was not indeed joined to the beach area adjacent to Area II by an isthmus. On the other hand, none of the sherds recovered from the beach in front of Area II, the submerged shelf surrounding the island, or the sandbar are earlier than the sixth century B.C. Most are in fact considerably later. On the island itself, the sherds collected from the surface of the island's low-lying northeastern saddle and the artifacts excavated from the I8 III/S test trench, which lies close to water level in the same sector (fig. 8), were all post-Bronze Age. This tentatively suggests that the lagoon's water level may have been higher during the later second millennium B.C. than it was in later antiquity and is today.[26]

ISLAND EXCAVATION

The work on the island during 1985's pilot season was directed toward achieving three practical goals. The first was to produce a basic graphic survey, the second to reevaluate the results of Bates's work of three-quarters of a century

[24] N. Flemming, "Archaeological Evidence for Eustatic Change of Sea Level and Earth Movements in the Western Mediterranean During the Last 2,000 Years," *The Geological Society of America* Special Paper 109 (1969).

[25] N. Flemming, *Cities in the Sea* (Garden City, NY, 1971), 95-135.

[26] If this turns out to be the case, it would seem to fly in the face of evidence for water levels elsewhere throughout much of the Mediterranean in the prehistoric period. See *Quaternary Coastlines and Marine Archaeology* (ed. by P. Masters and N. Flemming, New York, 1983), ix-xii, 135-73, 325-33. On the other hand, compare Hala Sultan Tekke on the coast of southeastern Cyprus whose landlocked inland Salt Lake was

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ago, and the third to acquire fresh information through renewed excavation. In the course of pursuing the latter two goals, five major occupation phases were isolated. The easiest way to discuss Bates's work as well as the results of the current project's new test trenches will be to concentrate on these five phases, namely Recent Historical times, Roman, Hellenistic, Archaic/Classical, and finally the Late Bronze Age.

The Island Survey Plan; Stratigraphic Designations

A 10 m square grid (fig. 8) was established over the island, oriented to true north. Reference to individual gridsquares is made by citing the upper right-hand coordinates. Each 10 m gridsquare is quartered, with Roman numerals I–IV assigned to each quarter, starting in the upper left-hand, i.e., the northwest corner. Separate architectural features are assigned three-digit structure ("S") numbers. The first digit refers to the "Area" (which in the case of the island is "1"); the second and third enumerate features sequentially as they are excavated. Thus, the Late Bronze Age chamber brought to light south of Bates's House is located in F4-III and is designated S107.

In the case of the island plan showing exposed natural rock features and contour elevations (fig. 9), unbroken contour lines occur at meter intervals and refer to elevations above sea level. In the case of the plan of the East Lagoon (fig. 2) the broken contour lines show below sea level depths at half-meter intervals.

All plan and section elevations are taken from sea level.

Finally, the island stratigraphy is based on deposits; each deposit is referred to by two numbers, e.g., "deposit 2.3." The first number indicates its relative stratum. Consequently the nomenclature of any deposit stratified above "2.3" must begin with 1.-, while any deposit stratified immediately below it must begin with 3.-. The second number refers to the sequence number of deposits that are stratigraphically equal. Thus "2.3" is the third deposit found in stratum 2. Each trench has a separate set of deposit numbers; a 2.3 deposit in one trench does not necessarily have anything to do with a 2.3 deposit found elsewhere. Where, however, an otherwise homogeneous fill is divided by either a feature (e.g., wall) or a point arbitrarily selected by the excavator, its subdivision into separate parts is indicated by a slash, e.g., 2.3/2.4.

Most Recent Historical Period

Traces of activity from the past forty or so years are apparent nearly everywhere on the island's surface. Its surface stones and dried brush are used each fall by local hunters to build up blinds in the corners of Bates's House for shooting migratory birds, an activity which has contributed in no small way to the former's obvious delapidation since its clearance over seventy years ago; shotgun shells littering the sand are the most tangible reminders of this pursuit. On the other hand, the lead rifle bullets and traces of rusting iron shrapnel that are frequently encountered scattered over much of the island must belong to the Second World War period when Marsa Matruh repeatedly exchanged hands between British and German forces. Luckily no mining apparently took place.

A large undetonated artillery shell found in shallow water just east of the island suggests that it was also shelled, if not bombed. This may explain the existence of a sloping crater inside Bates's House as well as why the house interior bears so little resemblance to its abbreviated description by Bates.[27] A badly smashed skeleton came to light immediately below the sand surface in area E4-IV. To judge from the disarticulated condition of the remains the victim may also have been hit by a shell. According to our workmen, a German soldier was buried during the war on the island. While no insignia or traces of uniform survived to corroborate this identification, the interment in a shallow pit was clearly undertaken under hasty conditions.

connected to the sea during the LBA. See J. Gifford, "Paleogeography of Ancient Harbor Sites of the Larnaca Lowlands, Southeastern Cyprus," *Harbor Archaeology: Proceedings of the First International Workshop on Ancient Mediterranean Harbours; BAR International Series 257* (ed. A. Raban, Oxford, 1985), 45–48. I owe the reference to David Conwell.

[27] Bates, *African Studies*, 186. Bates, *Pottery*, 202–3, pl. XX.

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Fig. 11. View of Bates's House (S101) from the north, after surface cleaning.

Bates's House. Its Arab Period Occupations

After some preliminary investigation had been carried out on its interior, it soon became apparent that Bates was correct in believing that the island's house remains belong to relatively recent times. We therefore decided to clean and record but not excavate its outer walls and most of its interior. Two limited areas inside the house were selected for comprehensive testing. This produced evidence for perhaps two post-antique occupation phases associated with the house. Little direct evidence for either phase was recovered from the tests conducted elsewhere on the island,[28] which means that for all practical purposes Bates's House and the island's later occupations are synonymous and may therefore be treated under the same heading.

While significant discrepancies exist between Bates's written descriptions of both the house and the stratigraphy of its interior and what the present expedition has found, the present preliminary report will concentrate on the results of our current findings.

The house (S101) occupies the northern end of the island's central spine in gridsquares G4, G5, H4 and H5 (figs. 11–12). It measures approximately 12.5 m east-to-west and 12.9 m north-to-south. Its dry masonry sandstone walls consist of mainly undressed rubble stones, ranging from fist-size to lengths of 0.50 to 0.70 m. Some of the stones, selected to possess at least two flat, parallel faces, may have had their rougher edges trimmed but are otherwise natural. A relatively small number have squared-off corners, i.e., are roughly worked ashlars. These appear particularly in the southeast and southwest corners. A roughly wedge-shaped block with a rabbeted margin, perhaps representing a reused ancient voussoir,[29] was built into the east wall 7.80 m from the southeast corner. An ancient sandstone triglyph fragment[30] (fig. 13) was incorporated into the opposite, west wall.

Of the four outer walls the north is the least intact with much of the damage to its elevation occurring since Bates's day. Surviving mainly in its east and west corners, the wall is preserved to a maximum height of two courses of rubble, set directly over a gray sand fill. Its width is between

[28] An exception is provided by trench G6-I ca. 5 m east of Bates's house (fig. 8) in which some Arab period pottery was found beneath surface rubble, interpreted as the remains of the scattered superstructure of the east wall of S101. Trench E4-III ca. 18 m south of Bates's house (fig. 8) also produced an Arab-period carinated bottle fragment in its deposit 2.1.

[29] W: 0.38 m. L.: 0.47 m. Upper th.: 0.16 m. Lower th. 0.27 m.

[30] 85I-AS-2. H: 13.8 cm. W: 19.6 cm. Th.: 6.5 cm. Glyphs are cut to a depth of 0.035 m and measure 0.05 m across.

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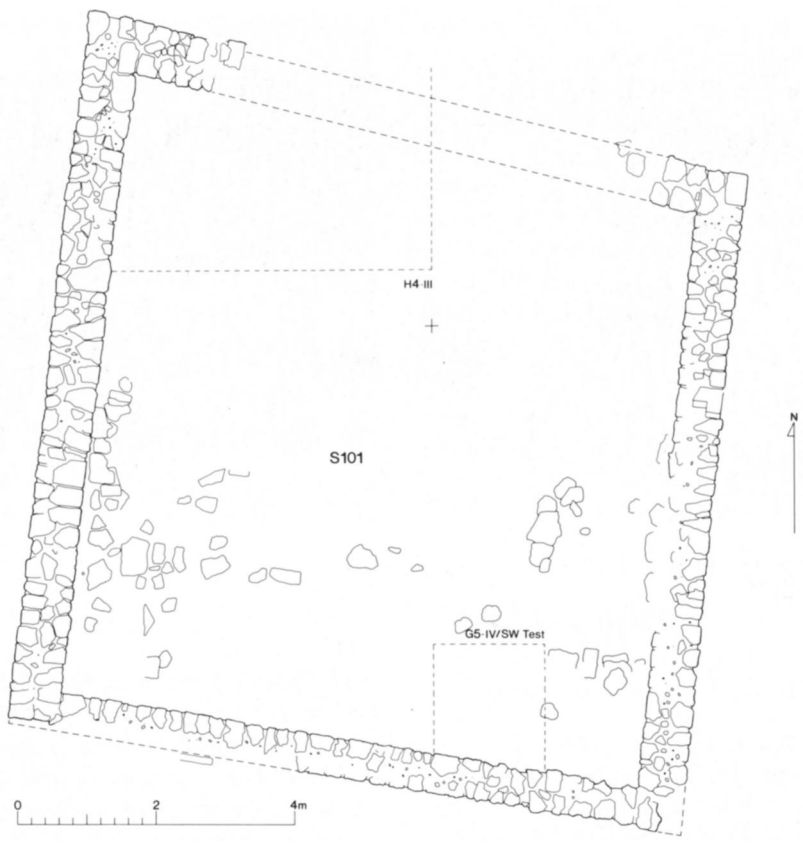

Fig. 12. Plan of Bates's House (S101), showing locations of test sondages G5-IV/SW Test and H4-III.

0.80 and 0.85 m. The west wall is 0.90 m wide and is preserved to a height of three rubble courses or 0.50 m, again resting on dark gray soil. The east wall is ca. 0.80 wide; traces of four rubble courses are visible on the exterior of its south corner. Its footings remain unexposed. Finally, the south wall measures 0.80 m wide but has been reduced to roughly half that width for 6 m across its western half, probably by hunters in search of material for their blinds. A large blind built into its southeast interior corner has caused considerable damage to both the east and south walls. A maximum of three rubble courses, ca. 0.40 m high, are all that is preserved of its elevation.

Bates's published sketch plans,[31] which err drastically in their rendering of the house's plan and correct size, show a division wall separating the interior into two rooms, the smaller of the two occupying the south end of the building. In 1985 some very fragmentary traces of what may have been part of an interior cross-wall were visible in the sandy floor of the crater blown out of the house during the Second World War, but time did not permit their clearance.

The first and most comprehensive test of S101's interior was carried out against the inner face of the south wall. A 2 × 2 m *sondage* to bedrock was dug 1.60 m west of the southeast corner in G5-IV.[32] The wall, partly buried in 1.1 surface sand, rests on three basic overlays of fill (fig. 14). 2.1 is a compact gray sand fill that buries the lower 0.20 m of the wall as well as runs under its footings. The strong likelihood is therefore that the south wall postdates the 2.1 fill, which was either cut away to provide a construction trench

[31] Bates, *African Studies*, sketch, 186. *Pottery*, pl. XX.

[32] Designated G5-IV, SW Test.

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or was shoveled back against its north face after the wall's erection.

The 2.1 sand was filled with numerous clusters of plain white wall plaster fragments as well as broken pieces of modern windowpane glass; it also contained a number of heavy iron nails. This suggests that an earlier modern-period structure occupying the same spot may have been demolished in order to make way for the south wall. If the house in fact possessed a shallow room at its south end, as Bates's sketch plans indicate, the chamber may be a secondary addition and the 2.1 fill contemporary with the initial occupation of the primary unit to its north. In light, however, of our limited testing of S101's interior, any further suggestions would be purely guesswork.

Apart from its construction detritus, 2.1 contained half a dozen lead musket (?) balls, three bronze pendants, a quantity of glazed Arab sgraffito ware sherds (fig. 15) as well as presumably Arab period plain ware carinated sherds, and a Turkish clay pipe (fig. 16). The pipe appears to be the most closely datable object in this assemblage and can be assigned to the late seventeenth early eighteenth centuries.[33] The carinated plain wares and sgraffito wares, the latter painted with various combinations of green, white, yellow, and red, and incised with crudely executed floral designs, remain under study. Bates encountered similar sgraffito sherds and thought that they belonged to the same years as our pipe.[34] Two of the three bronze pendants preserve traces of decoration in low relief and are clearly religious medallions. 85I-M-2 carries the inscription "SALVATOR MUND" along with obverse and reverse profile heads of Christ and Mary.

According to Feisal As-Mawy, Director of Antiquities for Matruh, the island was used by Greek sponge divers before Bates's arrival.[35] Perhaps they were joined by Maltese divers, which would explain the Latin inscription. In any event, the seventeenth and eighteenth century use of the island cannot thus far be directly linked to the extant walls of S101, which had been reduced to a ruin by the time of Bates's visit.

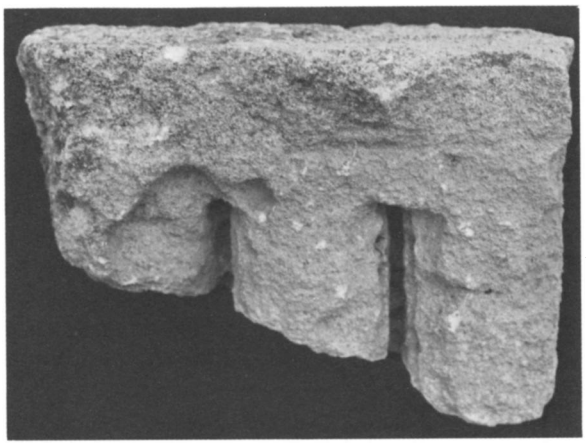

Fig. 13. Triglyph fragment, 85I-AS-2, from west wall of Bates's House.

Another 0.80 m of G5-IV fill separates bedrock from the bottom of 2.1. Level 3.1/3.2 consists of 0.40 m of nearly pure sand, mixed with a sparse number of sherds that range from Late Bronze Age to the Roman Imperial period.[36] The lowest stratum above bedrock, 4.1/4.2, buries a thin, 0.30 m wide rubble wall that runs from the south balk some 1.20 m to the north before petering out. To judge from a single corrugated sherd excavated in 4.2 fill east of the wall, the latter may also belong to the Imperial period. On the other hand, Late Bronze Age White Slip sherds from both levels 3.1/3.2 and 4.1/4.2 suggest the existence of some kind of considerably earlier occupation of the same spot.

A second test of a more limited kind was carried out on S101's northwest corner in H4-III where Bates had investigated the inner face of the west wall.[37] In the process of clearing it became

[33] 85I-TC-2. For the type see R. Robinson, "Clay Tobacco Pipes from the Kerameikos," *AthMitt* 98 (1983), 274, pl. 52.8.

[34] Bates, *Pottery*, 202.

[35] The town continued to be used by Greek sponge divers until at least as recently as 1950. A lively description of their activities as well as the post-war appearance of Matruh is provided by W. MacArthur, *Auto Nomad in Barbary* (London, 1950), 343.

[36] Roman Imperial is represented by coarse ware corrugated sherds that are dated elsewhere between the second and fifth centuries A.D. See J. Riley, "Coarse Pottery," *Excavations at Sidi Khrebish, Bengahzi (Berenice)* (Tripoli, 1983), II, 264-65, where it is rightly observed that the evidence for wheel corrugated wares after the third century A.D. is less firm than for the earlier period.

[37] Bates, *African Studies*, 186. The spot is indicated by an X on the sketch plan.

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apparent that most of this sector had been badly disturbed. The actual northwest corner did however reveal a thin lens of very dark soil (2.1) filled with many seashells, probably to be equated with the 2.1 deposit against the south wall. Beneath this came a layer of orange sand with white flecks (3.1), containing traces of a single posthole (3.2). No datable material was recovered for either the 3.1 layer or the posthole.

The Roman Period

Given the often staggeringly large amounts of Roman period pottery that litter the surface of ancient settlement sites along Matruh's western coastal ridge[38] and Areas II, III, and V around the

[38] In addition to the Area IV Roman-period establishment, supra n. 3, excavated by Ess. Ezzat Osman in the vicinity of "Cleopatra's Bath," a second major later period covers the crest of the coastal ridge a short distance west of the first. It has not been excavated. Surface Roman sherds also appear in the area of Bates's "Justinianic" cross-wall; supra n. 18.

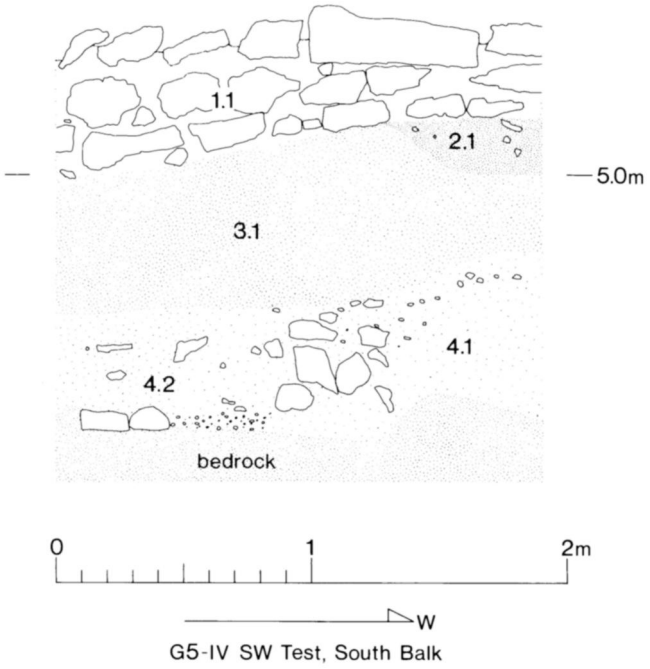

Fig. 14. Cross-section of south balk, G5-IV, SW Test, under south wall of Bates's House.

Fig. 15. Sgraffito ware glazed dish, 85I-P-85, dating perhaps to the 17th or 18th century.

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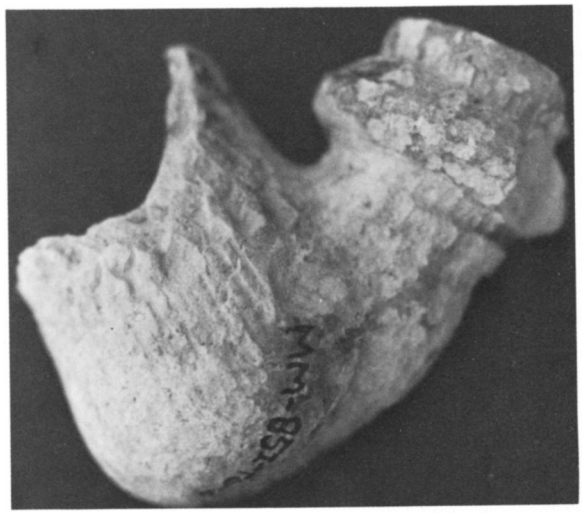

Fig. 16. Later 17th, early 18th century Turkish clay pipe, 85I-TC-2.

east end of its East Lagoon,[39] to say nothing of the majority of other coastal sites near Matruh, the number of Roman remains on the island must be regarded, for whatever reason, as sparse. Nevertheless, the period is represented by both artifacts and wall remains.

The former can appear in either secondary, frequently unstratified, contexts or in uncontaminated, stratified occupation levels. As examples of the first, the stone triglyph and "voussoir" recovered from Bates's House[40] may have come from a Roman period structure demolished on or near the same locus, since some Roman period pottery was recovered from G5-IV, deposits 3.1, 3.2, 4.1 and 4.2. In E4-III (fig. 8) where a 4.00 m^2 *sondage* was opened to test the stratigraphy in the area of what Bates described as the "Tomb of the Jews"[41] a small number of Roman period corrugated sherds were excavated from the 1.1 surface as well as two accumulations of rubble, designated 2.1 and 2.2. The test trench to its immediate west, E4-IV (fig. 8), also contained a few Roman sherds in a 2.1 deposit below the Second World War skeleton. Again, some Roman pottery occurs underwater on the sandbar running east of the island's northeast promontory.[42] Disassociated from any walled remains and found either on or just below the island's surface, each of these sherd accumulations may well have found their way into their present contexts in post-ancient times.

Roman period "Pi"-Shaped Constructions (G6-I)

A 4 m^2 trench (figs. 17–19) was opened 5 m to the east of Bates's House in order to investigate what appeared before excavation to be the line of a wall. The removal of its 1.1 fill quickly revealed that the entire zone was covered with a tumble of rubble stone, and that the impression of a wall was simply based on the coincidental alignment of some of the bigger stones. As was mentioned above,[43] the recovery of Islamic period sherds beneath the fall of stones suggests that they were originally part of the east wall of Bates's House.

After removing the ca. 0.20 m thick fill (2.1) containing the Islamic pottery, a uniform yellow-orange sand layer (3.1) appeared across the entire trench (fig. 19). This proved to be a ca. 0.50 m thick layer that follows the natural slope of the hill. A series of eight small stone formations, shaped in plan like the Greek letter "pi," lie buried in the 3.1 sand blanketing G6-I. Their distribution seems to lack any clear-cut pattern, apart from their apparently having been set out in the open air. It remains to be determined if they were also surrounded by a court or some other kind of enclosure.

Each pi-shaped construction forms an approximate cube, made of two large upright stone slabs backed by a third upright. No traces of permanent

[39] Supra, pp. 54–56.

[40] Supra, p. 64, nn. 29–30.

[41] In other words, the spot where the island's Jewish inhabitant (or two Jewish brothers) was supposed to be interred (see supra n. 12). "On the island is a large ruinous stone circle (ca. 3 m in diameter." The spot is marked with a "B" on his sketch plan. Bates, *African Studies*, 185–87. Bates's assistant, Harding-King, apparently never had an opportunity to investigate the so-called grave circle, whose location could be readily picked out at the beginning of the 1985 season at the southern end of the island's central rocky spine in gridsquare E4. Three trenches were opened in an effort to find the tomb (fig. 8). E4-I was largely sterile; the remaining two, E4-III and ER-IV, contained no traces of a grave, apart from the Second World War burial of the German (?) soldier, referred to supra, p. 63.

[42] Supra, p. 62.

[43] Supra, n. 28.

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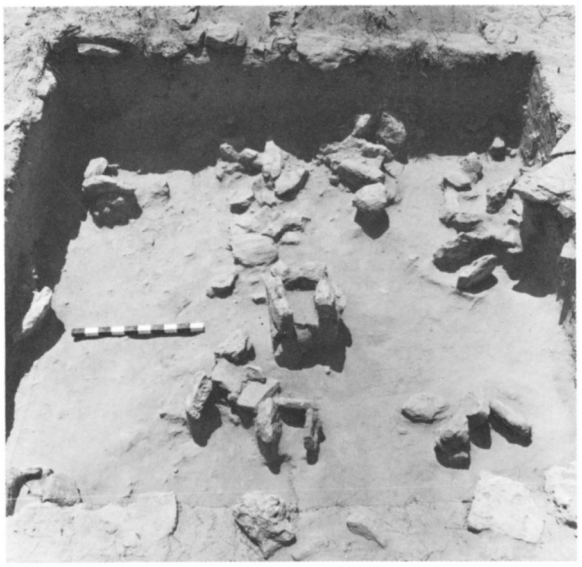

Fig. 17. (Above) View of G6-I from east, showing "pi"-shaped constructions.

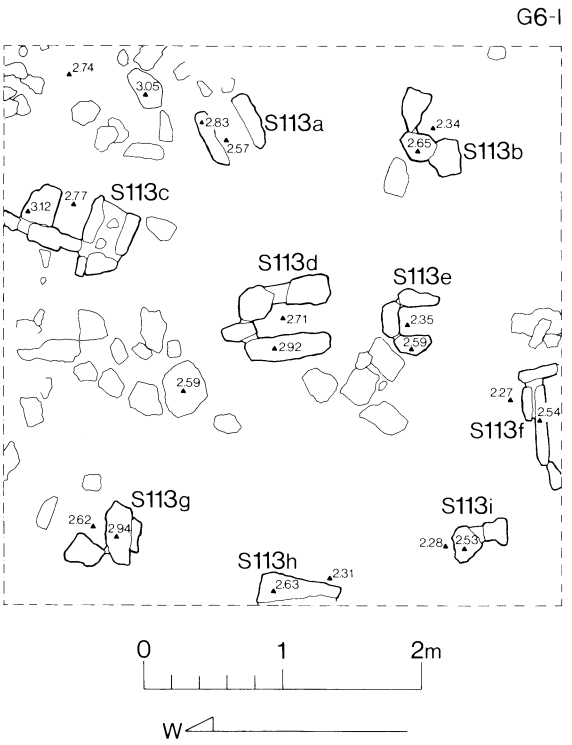

Fig. 18. (Right) Plan of G6-I.

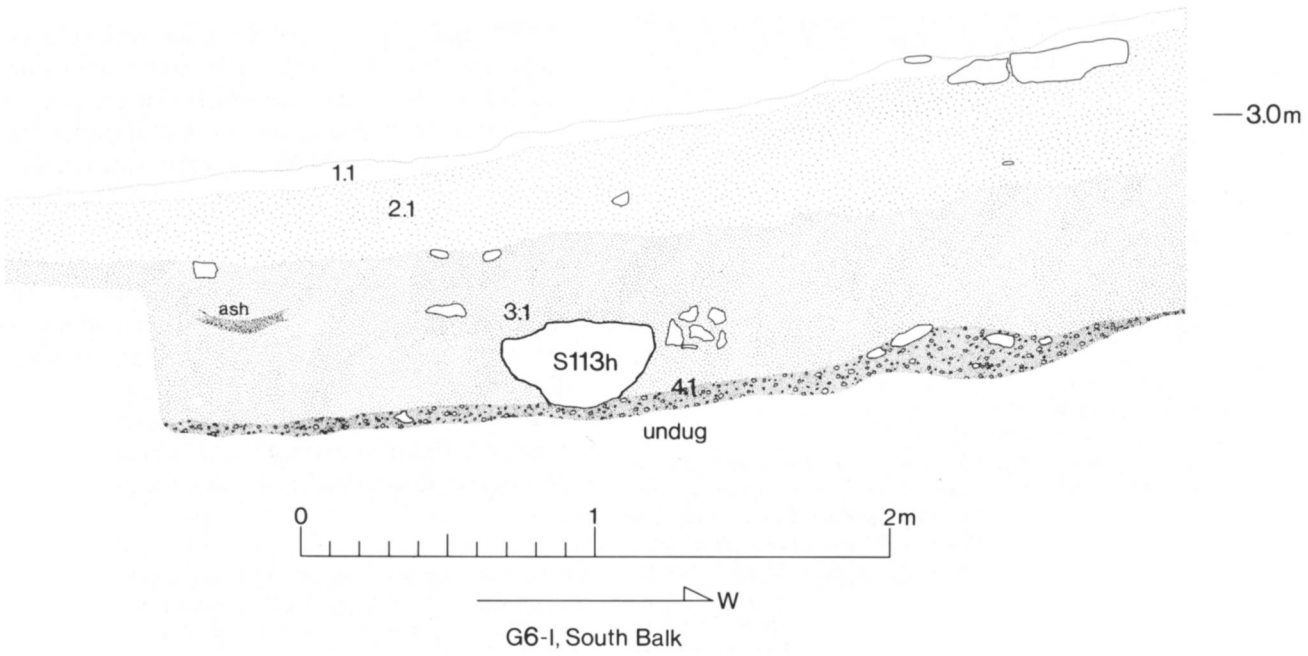

Fig. 19. Cross-section of south balk of G6-1.

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Fig. 20. View of I8-III/S from south, showing S105, S106, S108 and S112.

fronts, covers, or floors survive, although their construction in wood cannot be ruled out. Most measure roughly half a cubic meter or somewhat less in overall size. Nothing was found inside any of these curious structures to explain their original purpose. On the other hand, the 3.1 fill in which they were buried contains a large quantity of fish, large animal, and small animal bones that may someday provide a clue. Since none of the pi-shaped elements displayed traces of burning, they may have had more to do with storage than either sacrifice or cooking. On the other hand, all eight appear to have been built on top of a thin layer of the same 3.1 fill that also buries them, which seems to argue for their having been sunk in sand fill from the outset. This in turn perhaps complicates their interpretation as storage receptacles.

A further complication stems from the fact that a ninth, similar construction was recovered bedded on a distinctly separate fill, a dark soil with numerous small stones designated 4.1. While 3.1 contained pottery dating from the mid-Hellenistic period until the later Roman period (corrugated wares of the second century A.D. or later), 4.1, which was only partially cleared, seems to be no later than the Hellenistic period. Thus whatever their uses, the pi-shaped constructions may have a long history on the island but seem to be primarily associated with the Roman Imperial period.

Roman-Period Walled Structure (S105, Area I8-III/S)

A 4 m^2 test trench (figs. 20–23) was excavated due-west of the island's sandbar to investigate the sloping low ground occupying its northeast corner. Attention was drawn to the site of I8-III/S[44] by a sliver of exposed wall surface, eventually designated S105. The choice of location was fortunate since the trench led to the discovery of the most diversified overlay of walled remains unearthed anywhere on the island. S105 represents this area's Roman Imperial phase.

The structure consists of the southwest corner of a room. Its east-west wall (S105a) is 3.80 m long, while only 1.50 m of the north-south leg (S105b) is visible before disappearing into the trench's west balk. The rubble footings of both walls are preserved, along with just enough stones from their superstructures to indicate that their

[44] Since the trench falls into two gridsquares, its full designation should be "I8-III, SW Text/H8-II, NW Test" but is here shortened to I8-III/S.

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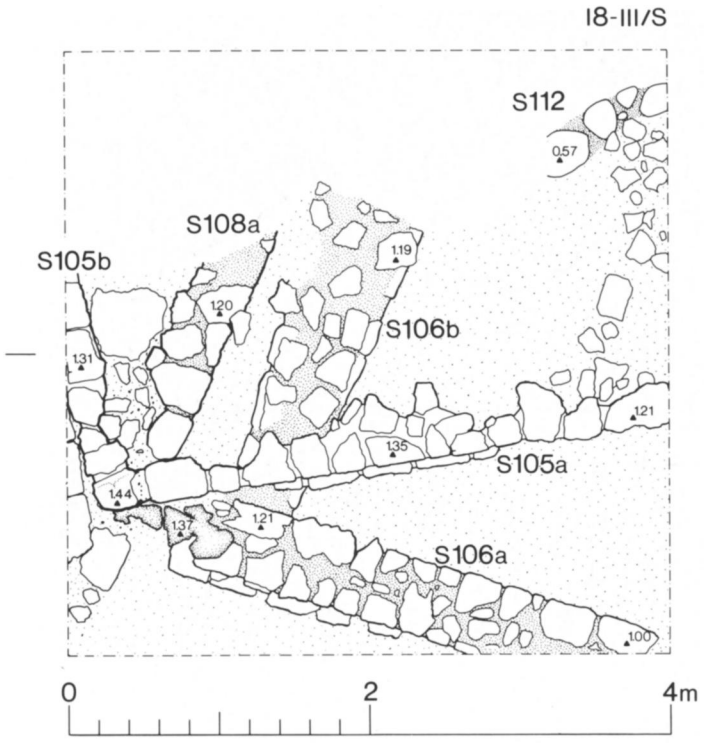

Fig. 21. Plan of I8-III/S.

elevations were constructed from hammer-dressed rubble, laid up dry. S105a is ca. 0.50 m wide; while insufficiently excavated, S105b appears to be somewhat thinner. Very fragmentary remains of irregular paving stones joined with cement (3.1/3.2) were excavated abutting the exterior faces of both walls.

The lines of S105's walls cut through two earlier structures (S106 and S108). In order to level their foundations S105's builders appear to have removed stones from the earlier features. These may well have been reused in S105 only to be robbed a second time when the latter was eventually demolished.

That S105 was eventually pulled down was borne out by the presence of an irregularly shaped stone-robber's pit in the northwest corner of the trench. This was refilled with a damp dark brown sand with a distinctively pasty, lumpy texture before drying out. Its upper level is designated "2.1 (pit)" and lower level "4.1 (pit)" (fig. 22).[45] Together, these contained a large quantity of mostly white, unpainted plaster fragments[46] backed with a crude cement grouting. It also contained a number of undated bronze and iron fragments as well as a fairly large selection of corrugated Roman period sherds that could depress the date of the stone-robbers' activity to perhaps as late as the fifth century A.D. Various glass fragments including a pendant in the shape of a one-handled pitcher,[47] and the season's single

[45] At a depth of 0.10 m below the footings of wall S105b 2.1 was arbitrarily redesignated 4.1. The excavator, D. Conwell, regards both as part of a single essentially homogeneous fill. "Pit" has been attached to both deposits to differentiate them from the similar fill between S105a and b.

[46] A single fragment of painted plaster was recovered from the pit fill. 85I-MO-10 measures 8.2 × 7.8 × 1.85 cm. The painted side has a deep reddish brown ground. To the side is a thin blue band. Its central motif appears to be leafy foliage, painted in shades of deep forest and grassy green. At the side is a round red element, highlighted by a pink stripe (a fruit, berry or flower?).

[47] 85I-G-6. L. 2.0 cm. D. 1.1 cm.

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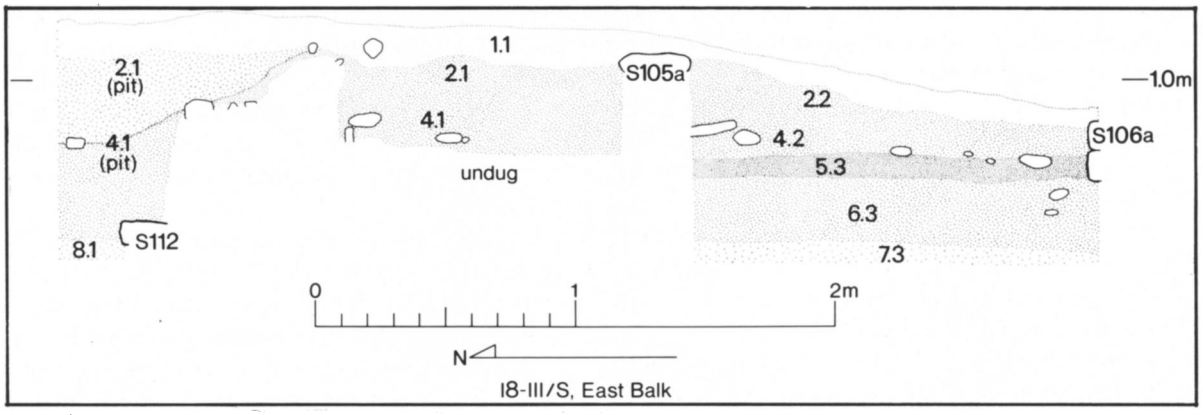

Fig. 22. Cross-section of east balk of I8-III/S.

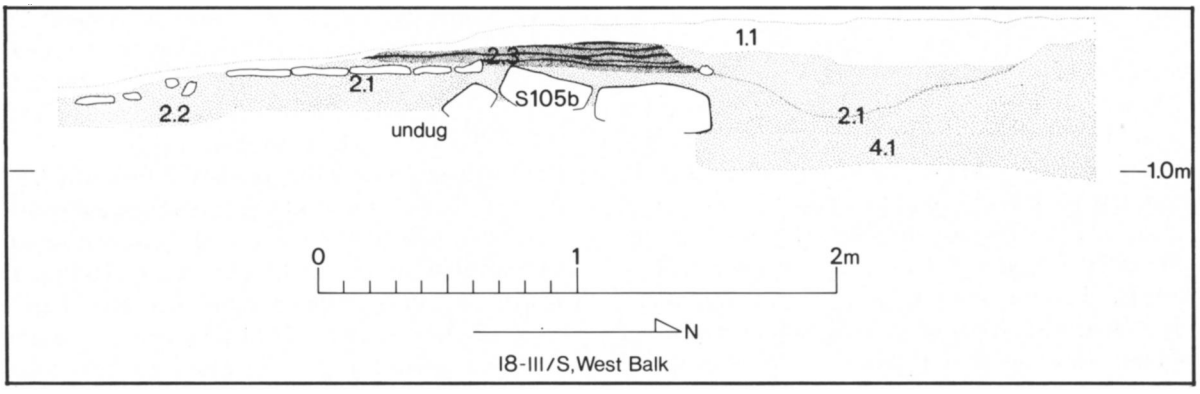

Fig. 23. Cross-section of west balk of I8-III/S.

fragmentary marble inscription[48] (fig. 24), were also retrieved from pit fill.

A virtually identical damp dark brown sand deposit was cleared to either side of the foundations of both S105a and b. Because it so closely resembles in color and texture the fill from the stone-robbers' pit, the likelihood is that the robbers cut through what was the continuation of the same fill to remove stone from the northwest corner of the trench and then dumped the same distinctive dark brown sand back into their pit

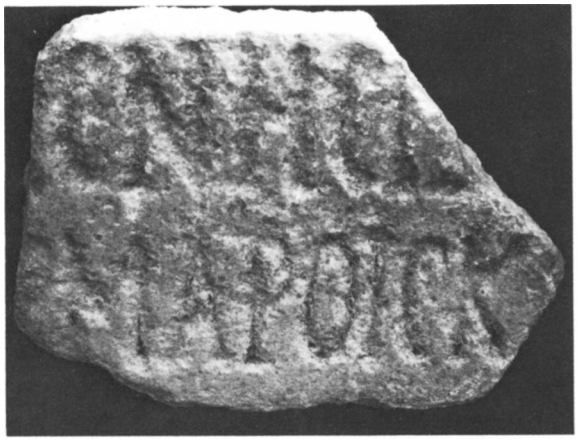

Fig. 24. Roman period marble inscription, 85I-SO-26, from stone robbers' pit in I8-III/S.

[48] 85I-SO-26. White marble slab, 12 × 16 × 2.8 cm. The letter forms are clearly late. While the second line seems to preserve part of a proper name, the text requires further work before any conclusions are possible.

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once their operation was complete. This effectively prevented separating the two fills when the excavation of the northwestern corner was still in progress and in turn led to mistakenly designating the fill between the walls with the same labels as the pit fill, namely 2.1/4.1; the dark brown sand outside S105a and S105b was called 2.2/4.2.

Despite the similarity in sand color and texture (as well as a confusing preliminary stratigraphical designation) the contents of the fill adjacent to the walls differ strikingly from that of the pit. The latest datable object from 2.1 is a fragment of a Roman lamp disc[49] that should be no later than the second century A.D. Significantly, no examples of the corrugated wares that constitute such a notable feature of the nearby pit fill were associated with the walls.

The 2.1/2.2 dark brown sand rises only to the top of the footings of S105a and b; its lower level, 4.1/4.2, continues well below the wall footings, in places to a considerable depth. The dark brown sand therefore predates S105, and its builders must have used it to backfill their rubble foundations. Consequently, according to our preliminary evidence, S105 was built sometime during the first two centuries of the present era and was demolished by stone robbers between the second and fifth centuries A.D.

Roman Period Rubble Wall Under Bates's House

The short north-south length of scrappy rubble wall found in 4.1/4.2 fill in G5-IV running north from under the south wall of Bates's House (S101) has already been noted.[50] Its period appears to be Roman imperial.

Miscellaneous Roman (?) Period Wall Remains

Three separate sets of wall features were observed but not excavated during the 1985 season; these may belong to the island's Roman period. The first has to do with a 2.5 m long section of ashlar wall (S111), discovered, as reported above,[51] submerged at a depth of ca. 1.30 m, 10 m due east of the northeast tip of the island in gridsquare K10 (fig. 9). During the season's one calm day when S111 was visible, at least four blocks of its length could be traced in the soft sandy bottom of the lagoon. Their roughly ashlar shape suggests a fairly advanced date.

The second set refers to two roughly parallel lines of wall plaster (S109 and S110) located in gridsquares J8 and J9 in the island's northeast corner (fig. 9). Protruding above the level of the surrounding sand, these features consist of several layers of rough, unpainted wall stucco built up to a thickness of nearly 0.10 m. Separated from each other by an interval of ca. 6 m, both "walls" run in a north-northwesterly direction. No trace of a stone backing of any kind is visible but presumably must exist below ground. In appearance the plaster here resembles the chunks of broken plaster that turn up in association with the S105 walls ca. 15 m to their south.

The third set of walls consists of four blocks of irregularly cut ashlar blocks (S104) located southeast of trench I8-III/S where they overlap gridsquares G8 and G9 (fig. 9). The blocks run east-west approximately parallel to wall S105a. As in the case with S111 no evidence is available for their period, other than shape and surface position, which together suggest that they may be late.

The Hellenistic Period

While little, if no obviously Hellenistic material was recovered from the island's surface, a certain number of random Hellenistic sherds were excavated from later stratified contexts, including examples from the area of Bates's House[52] and the interior of S105.[53]

In addition to these miscellaneous sherds, one context brought to light traces of two sets of possibly Hellenistic walls, namely the low ground

[49] 85I-P-74. Preserves part of rim with moldmade ovulo design and heart-shaped nozzle.

[50] Supra, p. 67.

[51] Supra, p. 60.

[52] 5I-P-96, an open black glazed bowl fragment, 11 × 4.8 × 0.9 cm. A streaky metallic black paint of greenish-grey tint and pale orange fabric. Later fourth to second century B.C. From G5-IV, SW, 4.2.

[53] 85I-P-100, echinus bowl, 4.4 × 12 cm. Fragment of hemispherical bowl with faintly lustrous black slip on interior and upper half of exterior. Hard buff fabric. From I8-III/S, 2.1/4.1. Second century B.C.

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near the island's northeast corner whose Roman period walls, S105a and b, were discussed in the previous section.

Hellenistic Walls (S106 and S108, Area I8-III/S)

Based on what can be gathered from the restricted amount exposed of both, S106 and S108 appear to belong to two independent structures, laid out parallel to one another and separated by a ca. 0.40 m space (figs. 20–21). The northern continuation of both features is broken off by the robbers' pit occupying the northwest corner of I8-III/S.

The better preserved set, S106a and b, occupies the lower eastern two-thirds of the trench and forms the southwest corner of a rubble masonry room, oriented 25 degrees northeast of the position of the S105 structure that overrides it. Both walls are ca. 0.50 m wide. 3.10 m survive of the S106a east-west leg and ca. 2.10 m of the S106b north-south leg. Their foundations consist of a single layer of flattish rubble stones. A maximum of two courses of rubble superstructure survive above foundation level. The remainder of the superstructure was presumably removed at the time of the construction of the S105 chamber.

S108 extends northeast for a distance of ca. 2.25 m from the southwest corner of the trench before its line is interrupted by the robbers' pit in its northwest corner. Its width is ca. 0.45 m. Two ragged courses of rubble stone masonry survive of its elevation.

No datable artifacts were recovered in what can be interpreted as construction deposits associated with either S106 or S108. Instead, S106 is built on top of a ca. 0.30 m thick layer of muddy argillaceous sand fill, 6.1/6.3 (fig. 22), that contained several Archaic period Greek black glazed sherds.[54] Above this was deposited a conspicuous ca. 0.10 m deep burnt layer (5.1/5.2/5.3) made up of a heavy concentration of ashes mixed with sand. While the burnt layer appears to lie against the interior face of S108, additional excavation south of S108a will be required to determine if it represents an occupation or a destruction layer. It did, however, contain two fragments of undecorated ostrich eggs and a Hellenistic echinus bowl rim. In other words, based on the limited information presently available, both S106 and S108 could have been constructed anywhere from Archaic to Hellenistic times. The absence of any significant accumulation of fill between the preserved tops of their walls and the Roman-period construction S105 perhaps adds some small weight to the lower date.

The Archaic/Classical Period

It has been generally held that Marsa Matruh's history cannot be traced earlier than the time of Alexander's visit, although Bates clearly foresaw the possibility of fresh evidence modifying this view.[55] While the 1985 season brought to light a small assemblage of Archaic Greek pottery from a variety of contexts on the island, taken by themselves the sherds hardly prove the discovery of a Greek foundation. The greater likelihood is that the island and nearby shore area retained a predominantly Libyan character until perhaps as late as the fourth century. The value of the ceramic evidence, however, lies in its supplying reliable evidence for trading contacts. Whether the wares originated from Naucratis to the east, the Cyrenaican plateau, or the Greek world at large can only be answered if future excavation succeeds in enlarging the present sample.

The greatest concentration of early Iron Age sherds came from the disturbed interior of Bates's House and the surface sand covering its walls, in other words from unstratified contexts. Amongst the pieces found here were an Attic (?) cup rim,[56] an East Greek (?) fragment decorated with a

[54] These include 85I-P-85, a low stemmed cup base, with traces of black glaze on its exterior. A fine reddish-brown fabric.

[55] See *RE* supra n. 3, 1183. Bates, *Pottery*, 201. Also Bates, *African Studies*, 128–29; 132: "This does not mean that previous to Alexander's visit there was no settlement at the port; just as Rhacotis antedated Alexandria, so probably some hamlet marked the advantageous site on which the Macedonian conqueror . . . erected the trade-town of Paraetonium."

[56] 85I-P-18, excavated from 1.1 fill along exterior of S101's south wall. Rim of open black glaze vessel, 2.45 × 2.8 × 0.3 cm. Flaring rim with rounded lip. Glaze much worn. Reddish fabric.

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swastika,[57] and a piece of a kotyle rim[58] that is evidently part of the same cup originally discovered by Bates, today in the Peabody Museum.[59] In addition something less than a score of miscellaneous imported black glaze sherds were recovered from the same area.

The 4 m^2 *sondage* F4-III, located ca. 7 m south of Bates's house along the island's central sandstone spine (fig. 8) is mainly important for its pre-Iron Age remains. However, its 2.2 fill contained a fragmentary Attic (?) lamp[60] and a jar neck with graffito "—MAN,"[61] along with a mixture of later finds disassociated from any walls. Trench E4-IV at the south end of the sandstone spine (fig. 8), whose WW2 interment has already been discussed,[62] produced a single Red Figure sherd[63] in what was again a stratigraphically mixed, wall-free 2.1 deposit.

Archaic (?) Period Wall (S112, I8-III/S)

At a level well beneath the robbers' pit that obliterated most of the wall remains running across the northern half of this trench, a short, ca. 1 m long, stretch of rubble wall (S112) came to light at the end of the 1985 season in the northeast corner (figs. 21, 22). Its continuation northeast is blocked by the trench's east balk, while its southwest end disappears beneath unexcavated fill whose proximity to the lagoon's water level will complicate future investigation. From what can thus far be seen of this wall, its width is ca. 0.30 m. Its rubble stones are moderately large and laid together dry. No evidence for separate coursing is observable.

S112 is associated with a brown muddy argillaceous fill (8.1) of wet, pasty consistency. While 8.1 contained no datable artifacts, the gray sand layer, 7.1, directly above it, which is stratigraphically disassociated from and therefore later than S112, contained an apparently Archaic Greek dish base.[64]

Late Bronze Age Period

Our overriding consideration for reopening the examination of Bates's Island was to confirm its discoverer's contention that the island was the site of a Late Bronze Age settlement. This has been accomplished to a remarkable degree. In addition to a vastly expanded range of ceramic wares, including the White Slip originally identified by Bates, as well as a respectably broad range of other contemporary LBA imported pottery types, supplemented by a narrower selection of what may be locally produced (Libyan?) ceramics, there also were brought to light a variety of artifacts manufactured from other materials, including terracotta, stone, faience, and metal. Excavation also produced stratified LBA concentrations of animal, bird and fish bones, land and marine shells (fig. 25),[65] and a select number of

[57] 85I-P-46, excavated from 1.1 fill along exterior of S101's south wall. Body sherd, 2.55 × 2.45 × 0.45 cm, with dark brown paint on a light brown-buff slip. Part of hooked design (swastika?) preserved. Pale brown to slightly orange fabric.

[58] 85I-P-17. Excavated from 1.1 fill along exterior of S101's east wall. Rim sherd, 2.2 × 1.8 × 0.3 cm, with thin rounded lip. Exterior: band at lip and below lip. Interior: solid brown slip, with deep purple band below lip. Fine brownish beige fabric.

[59] Peabody Acc. No. 46-4-40/5917. Rim sherd, 2.7 × 2.0 × 0.25 cm with thin rounded lip. Exterior: dark bands at and below lip; interior: solid dark brown slip, with deep purple band below lip. Fine brownish beige fabric. For the assemblage of Bates's pottery now in the Peabody Museum see supra n. 7.

[60] 85I-P-92. Two joining rim fragments, one non-joining rim fragment, one base fragment of Attic (?) lamp. Ht. 1.5 cm. Restored diam. ca. 8.5 cm. Shallow lamp with flat base and convex body profile. Bottom of interior rises to small point. Hard fine orange fabric.

[61] 85I-P-95. Fragment of neck of coarse ware jar, 12.4 × 15 × 0.9 cm. Tall cylindrical neck with convex rim. Single incised groove below rim. Orange buff slip, pale orange fabric with many inclusions. Graffito scratched on neck after firing in tall, spindly letters.

[62] Supra, p. 63.

[63] 85I-P-47. Fragment of open black glaze vessel, 2.1 × 1.35 × 0.5 cm. Small reserve area framed by black relief line. Hard fine orange fabric.

[64] 85I-P-111. Fragment, 1.0 × 6.0 × 0.35 cm, of flat disc base, with beginning of almost horizontal lower body wall. Black glaze on exterior of base; glossy red slip on upper part of base and exterior of walls. Interior is red-slipped with a black circle at bottom. Hard, very fine orange-buff fabric.

[65] Dr. David Reese has identified fourteen of the most commonly encountered shells from all levels of the island including the LBA and has kindly supplied the following preliminary observations. All come from the Mediterranean except for the *Melanopsis praemorsa* (no. 13), which is a

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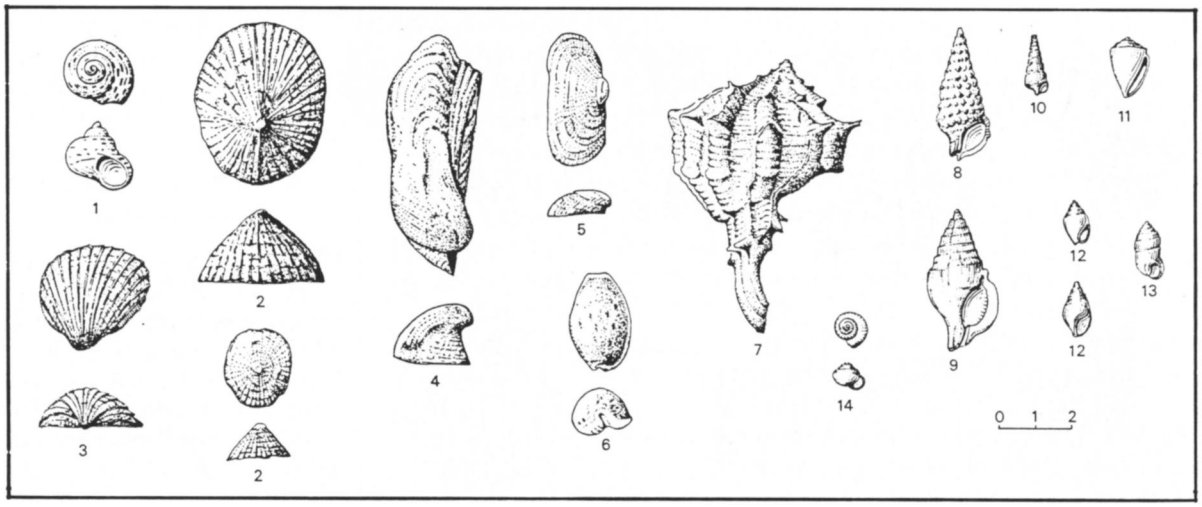

Fig. 25. Drawing by J. Thorn of the fourteen most commonly encountered shells in all levels of Bates's Island. See n. 65.

ostrich egg fragments. In addition to these man-made and natural products, two sets of LBA wall remains came to light, which confirm both Bates's and our own belief that the island's settlement represents something more than the chance recovery of an isolated shipment of foreign goods.

A more complete publication of the above-mentioned classes of objects will be undertaken after the competion of fieldwork. In the meantime their broad outlines can be summarized as follows.

LBA Pottery

Cypriot White Slip Ware: Approximately one hundred and fifty WS sherds were recovered from all contexts, including a significant number from the various disturbed contexts associated with Bates's House,[66] which must have been set up over an LBA feature of considerable importance. Other surface zones as well as stratified deposits containing chronologically mixed materials[67] yielded additional WS. Undisturbed LBA deposits contained a total of forty-one WS sherds.

The great majority of the WS sherds are tentatively attributed by Russell to style types ranging from WS II Early to WS II Normal (figs. 26–27), dating from LC IIA to LC IIB times. The earliest example from the assemblage is a single later fifteenth century B.C. WS I–II sherd found by Bates and today in the Peabody Museum (fig. 28).[68] The latest sherds belong to the end of the WS II Normal style, which may bring the site just into the LC IIc period or the last decades of the fourteenth century.

Cypriot Base Ring: In addition to examples found in surface and chronologically mixed contexts forty Cypriot BR I and II sherds (fig. 29) were excavated from undisturbed LBA deposits, leaving Base Ring as the island's second most numerous class of imported LBA ware.

Cypriot White Shaved flasks: Four examples from undisturbed LBA contexts (fig. 30).

Cypriot Red Lustrous: While represented by about a dozen sherds from later deposits (fig. 31),

fresh-water gastropod, and the land snail (no. 14). The *Cerastoderma edule glaucum* or common cockle-shell (no. 3), and *Cerithium vulgatum* or needle shell (no. 8) are both typical for water of decreased salinity and chlorinity, such as a lagoon. *Murex brandaris* (no. 7) was one of the species used in shell purple-dye production. At least eight (nos. 1–5, 7, 8, 14) out of the fourteen were edible.

[66] This included surface cleaning of the house's interior and walls, the two test trenches G5-IV and H4-III, and a reexcavation of Bates's dump, which lay outside the house's northwest corner.

[67] But not the low-lying northeastern saddle and adjacent sandbar. See supra, p. 62.

[68] Peabody Museum Acc. No. 46-4-40/5917. WS bowl rim, 7.3 × 8.1 × 0.35 cm.

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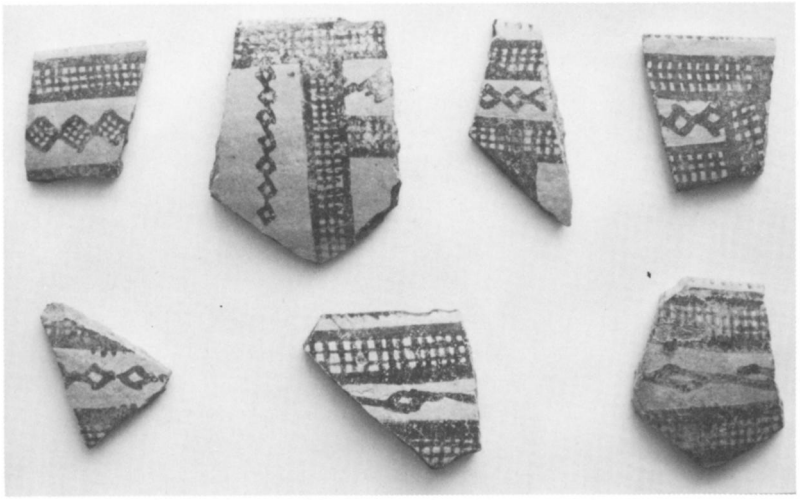

Fig. 26. Cypriot White Slip II hemispherical bowl fragments decorated with lozenge patterns. The bowls range from WS II Early (top row) to WS II Normal (bottom row), which, according to conventional dating, were manufactured from 1425/15 to 1320 B.C.

Fig. 27. Cypriot White Slip II Normal bowl, 85I-P-15, LC IIB period.

Fig. 28. Cypriot White Slip I–II bowl rim, 46-4-40/5917, found by Bates and now in Harvard University's Peabody Museum.

only a single Red Lustrous sherd was recovered from an undisturbed LBA context.

Other LBA Cypriot imports occurring in undisturbed LBA contexts are tentatively identified as *Plain White*, *Pithos*, and *Monochrome wares*.

In addition to the above-listed Cypriot wares, which collectively represent the island's largest regional class of imports, fragments of a Levantine transport amphora, a Canaanite jar, and a standard LBA Levantine lamp (fig. 32) were also found. In addition, broadening the geographic breadth of the island's imports, two Minoan and three Mycenaean sherds have been identified by Russell, including the base of a Minoan closed vessel, perhaps a stirrup jar (fig. 33) belonging to perhaps LM IIIA, and a Mycenaean bowl rim (fig. 34), belonging to LH IIIA.

Finally, three types of unidentified wares, whose study is still in its infancy, have also been retrieved from what we take to be undisturbed

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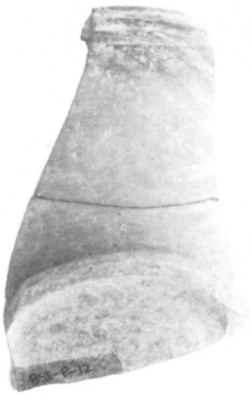

Fig. 29. Cypriot Base Ring II bowl, 85I-P-12, LC IIA-IIB.

Fig. 30. Cypriot White Shaved flask, 85I-P-104, LCIIA-IIB.

Fig. 31. Shoulder and neck of Cypriot Red Lustrous Ware spindle bottle, 85I-P-60, LCIIA-IIB.

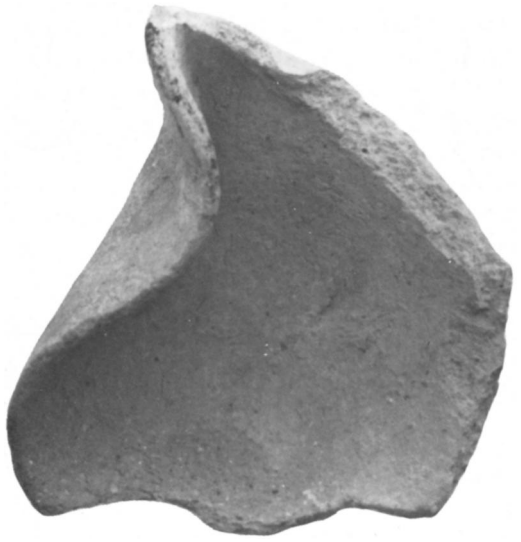

Fig. 32. LBA Levantine lamp, 85I-P-49.

Fig. 33. Base of LM IIIA stirrup jar, 85I-P-76.

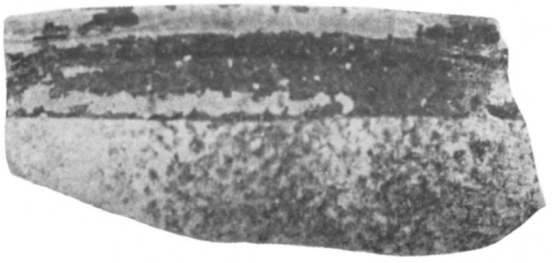

Fig. 34. Rim of LH IIIA bowl, 85I-P-68.

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LBA deposits. The first is a *White Grit Ware*, characterized by a deep red fabric with numerous white inclusions. The sherds, all of which belong to hemispherical bowls, are slipped with a matt pale pink slip with pitted surface; some show traces of a bright red wash applied over the slip. *Painted Amphoras* represent the second type: a wheelmade shape treated with linear decoration. Finally there is an unidentified *Coarse Ware*, represented by a single crude jar with horizontal handle and a large bowl with burnished surface; they are at present the site's best candidates for local Libyan products, although the attribution is by no means certain.

Fig. 35. Bronze chisel, 85I-M-42, from LBA level F4-III, 3.1.

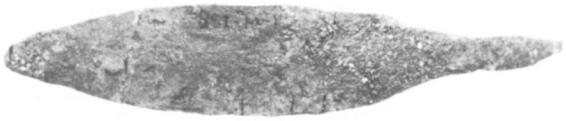

Fig. 36. Bronze point, 85I-M-1, from E4-III, 2.3.

LBA Bronze

Purely LBA contexts have yielded a small quantity of bronze artifacts as well as lumps of slag. While the slag has yet to be analyzed, it has been possible to determine that the metal adhering to the surface of one specimen of the half-dozen or so crucible fragments excavated from the island's surface as well as several of its chronologically mixed deposits is a straightforward alloy of copper and tin, which at least raises the possibility that some form of metallurgic activity took place on the island during the LBA. The artifacts include five bronze pins, a point, and a chisel (fig. 35).[69] Perhaps the single most interesting bronze artifact from 1985 is a spear (?) head (fig. 36) from a deposit containing LBA and later material, associated with S102.[70]

Other LBA Materials

Only three worked stone artifacts were recovered from purely LBA deposits. These were a pounder, a hammerstone, and a quern. However, a number of chert and obsidian tools from later mixed contexts may in time be identified as pre-Iron Age in origin. An equally sparse number of faience beads came from a purely LBA context. Lastly, five fragments of plain, undecorated ostrich eggshells were found in LBA levels. The significance of the ostrich shells lies in the fact that they were in all probability brought to the island by mainlanders, which can only mean here the Berber Libyans.[71]

Late Bronze Age Architecture

It remains to describe briefly the two areas that have brought to light traces of early architecture.

LBA Room (S102, E4-III)

Area E4-III (figs. 38–40) in the vicinity of Bates's "Tomb of the Jew" contained an extensive rock tumble across the upper levels of its western two-thirds. After preliminary clearance it became

[69] M85I-M-42. F4-III, 3.1. Narrow bronze chisel with flat, pointed end, 8.3 × 0.9 cm. Shaft rectangular in section.

[70] 85I-M-1. E4-III, 2.3. Narrow, leaf-shaped point, 8.4 × 1.5 cm, tapers to tang, square in section.

[71] Ostrich eggshells were recovered from all periods of the island's occupation and were found both in association with Bates's house and on the island's surface. None of the fragments show signs of painted or incised decoration, nor do they appear to have been cut or otherwise shaped. Whatever their uses may have been in the later period, their function in LBA contexts can be perhaps most easily explained as discarded portable water containers. Lucian, *De dipsadibus* 7, says that the Libyans made "cups of them; for as there was nothing but sand as material they had no pottery," quoted by Bates, *The Eastern Libyans* (London, 1914), 153. For Libyan ostrich-skin shields see ibid., 148. And for ostrich plumes as signs of rank and worn in Libyan headdresses see ibid., 116, n. 1; 149, n. 1. Also see S. Stucchi, "Il giardino delle Esperidi," *QAL* 8 (1976), 33. A recent exhibition of crafts from modern Somalia at the University of Pennsylvania's Arthur Ross Gallery included an undecorated, empty ostrich shell (fig. 37), suspended in leather straps with its top cut off for filling. It evidently is used as a flask by contemporary desert nomads. Would their BA counterparts have traveled with whole (cooked?) eggs for emergency eating?

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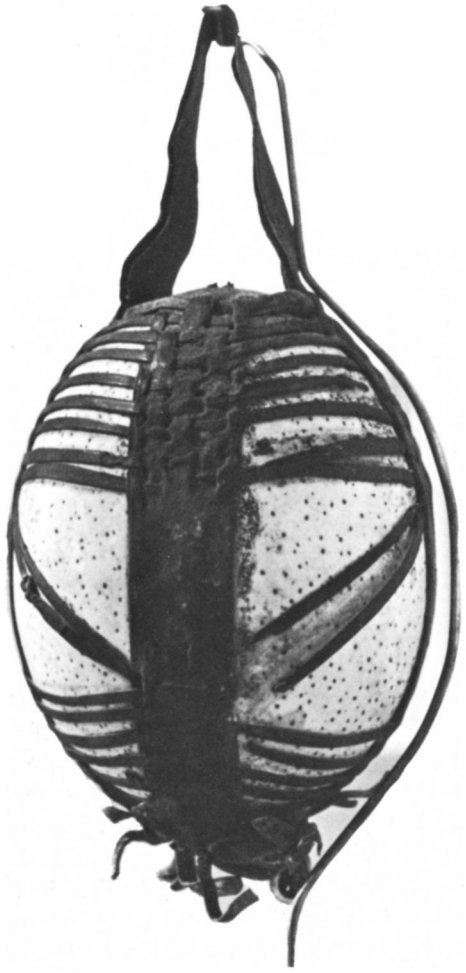

Fig. 37. Contemporary ostrich eggshell container from Somalia, on exhibit in the University of Pennsylvania's Arthur Ross Gallery, February 1986. See n. 71.

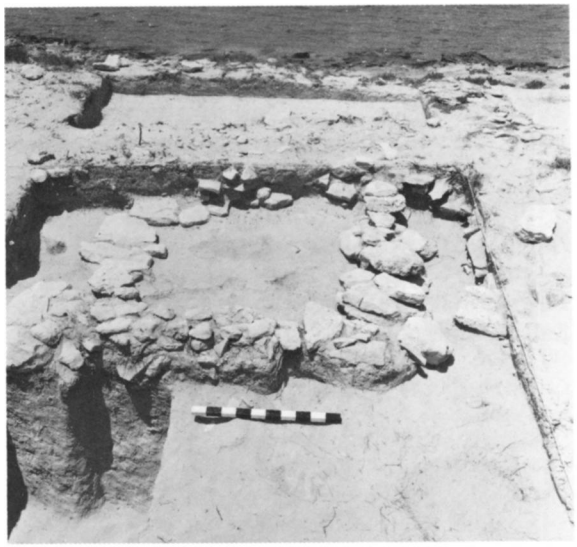

Fig. 38. Trench E4-III, showing S102 from the east.

apparent that the eastern edge of the tumble was in fact a wall (S102a). In time a north (S102b) and south wall (S102c) emerged; the resulting plan was of a small room, measuring ca. 2 m north-south and 2.5 m east-west. Averaging ca. 0.55 m in width, the walls are constructed of undressed rubble stones, ranging from fist-sized to moderately large and laid up with at least some rudimentary semblance of rough coursing. Several flat stones in its south wall may represent a threshold. South of the same wall was a small pit (3.4), which had red and green clay adhering to its upper surface. The room had a hard, trodden orange sand floor (3.1), itself sterile but set off by a number of LBA sherds lying flat over its surface. The sherds themselves are sealed by an ashy deposit (3.3), containing more LBA material (fig. 40).

LBA Compartment and Oven (S107, F4-III)

A short distance to the north lies area F4-III (figs. 41–43). Its principal feature is a second small compartment (S107) that measures 2.5 m north-to-south and 1.90 m east-to-west. Traces of six rough courses made from flat undressed stones are preserved in the west wall; no more than three remain elsewhere. S107's walls are substantially thinner than those of S102, measuring a mere 0.20 m. An unrefined sandy mud was used to bind the individual stones together in a technique that is unparalleled elsewhere on the island. Perhaps the mud was used to cement in place the ends of wooden saplings which continued up the wall in a form of wattled brush construction. But, while this would account for the unusual thinness of the stone footings, no negative imprint of the ends of branches was recorded in the mud at the time of excavation. A coarse white plaster was used to coat the interior wall faces.

An oven, made from flat stones set on edge and then lined with terracotta, was set in the northwest corner. It measures 0.60 × 0.70 m in plan. On the analogy with present-day Bedouin bread

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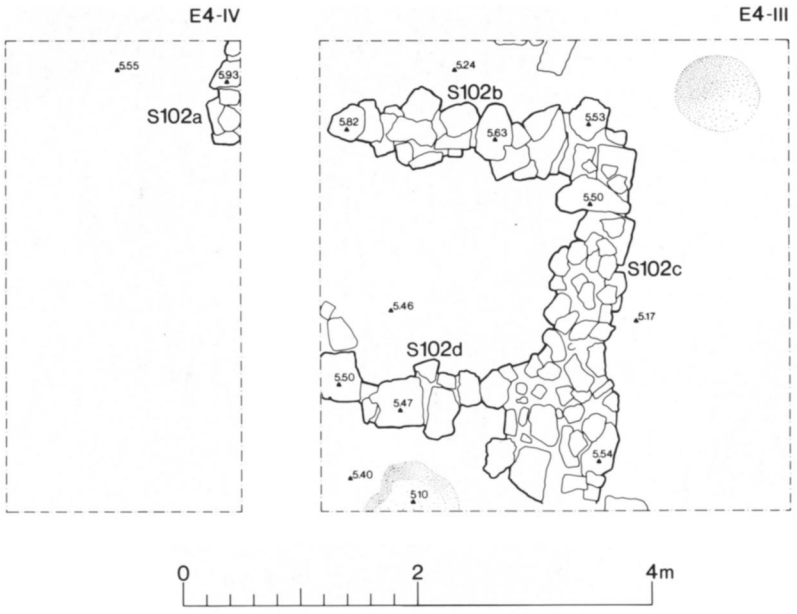

Fig. 39. Plan of Area E4-III and E4-IV.

ovens, which rather closely resemble the present example, a terracotta dome would have covered its walls to form the receptacle for its coals. A deposit of fine black ash (4.4) was recovered from the center of S107, which may have resulted from cleaning the oven. Next to the oven were the remains of a low stone shelf that supported a Cypriot Plain White Ware bowl at the time of the structure's collapse. The collapse level (3.2) lying over S107 contains a broad selection of LBA pottery.

To the north and west of S107 were found traces of a stone paving. Whether a kitchen or something else, the likelihood is that further excavation will show S107 to be part of a larger complex of rooms.

Conclusion

Based on the pottery sample thus far assembled from all contexts, the island's foreign LBA occupation appears to have been restricted mainly to the fourteenth century. While pottery studies currently in progress could have the effect of pushing the date for the island's abandonment earlier than ca. 1320 B.C., it is equally possible that future excavation will broaden its occupation period and depress the abandonment into the thirteenth century. In pharaonic terms the foreigners must have left their island base sometime between the reigns of Horemheb and Ramesses II.[72] The latter began his rule late in the fourteenth century. He, his successor Merneptah, and finally Ramesses III were each forced to deal with waves of foreign invasions, including those from the west.[73] What is of present interest is that the Egyptians were already clashing with the Berber Libyans inhabiting the Marmaric region as early as the reign of Ramesses II. Specifically, Ramesses's efforts to drive the easternmost branch of the Libyans, the Tjehenu, out of the western Delta have been recorded by inscriptions cut into the gateway of the Temple-Fortress at Apis, or Umm El Rakham,[74] some 20 km west of Marsa Matruh. This introduces the possibility that the Egyptians had repelled the Libyans, at least temporarily, as

[72] *CAH* II.2 (3rd ed., Cambridge, 1975), 1038: Horemheb 1348–20 B.C., Ramesses II 1304–1237 B.C.

[73] A. Rowe, "A Contribution to the Archaeology of the Western Desert: II," *Bull. John Reylands Lib.* 37 (1954), 484–500. See A. Leahy, "The Libyan Period in Egypt," *LAR* 16 (1985), 53–54; relevant passages in J. Breasted, *Records of Egypt: the Historical Documents*, cited by Leahy, p. 53. O'Connor in B. Trigger, B. Kemp, D. O'Connor and A. Lloyd, *Ancient Egypt, A Social History* (Cambridge, 1985), 276, followed by Leahy, 53, has suggested ecological setbacks or drastic population shifts as possible explanations for the mass eastward movement of Libyans.

[74] Rowe (supra, n. 73), 485, 498. Habachi (supra, n. 2), 13–30, pl. V, A and O'Connor (supra, n. 73), 274–75.

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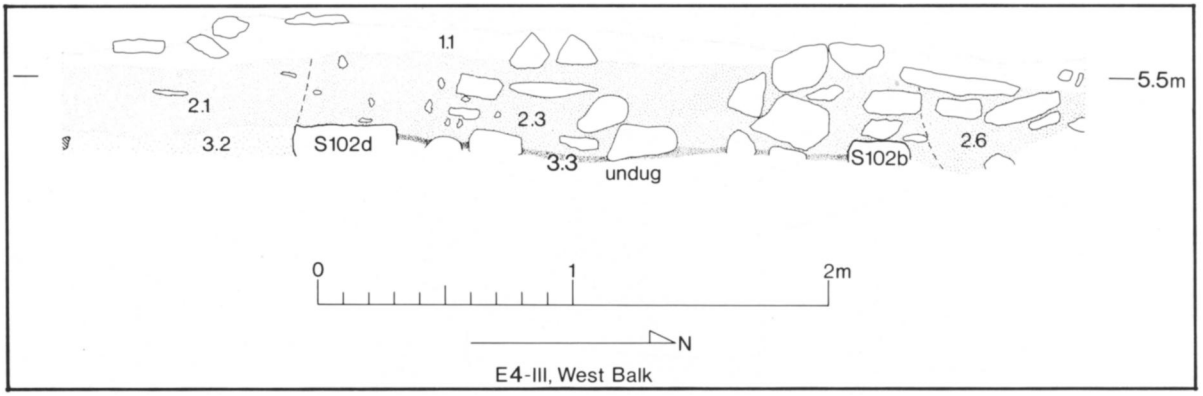

Fig. 40. Cross-section of west balk of E4-III.

far west as the region around Marsa Matruh by as early as the end of the fourteenth century.

After a season's work it has become reasonably clear that the LBA island occupants must have been in contact with the native Libyan element, which, by practicing seasonal transhumance, would have tended to use the better watered coastal strip during the hot summer months and to move south during the stormy winter season. While as yet not abundant, some material proof of their presence may be seen in the ostrich egg fragments and apparently indigenous pottery excavated from LBA levels on the island as well as from Bates's hypothetical early Libyan cemetery on the mainland to the southeast.[75] Conversely, not a single identifiable pharaonic Egyptian object appeared on the island in 1985. This would seem strange in light of their known subsequent interest in the territory around Umm El Rakham, if it were not for the fact that the Libyans were the enemies of the Egyptians; and almost certainly it was the Libyans with whom the islanders were trading.

Future excavation may someday succeed in providing a link between the abandonment of the island and Ramesses's campaign, if other, more strictly local considerations, such as rapid change in water level, do not turn out to be responsible. In any event, during the reign of Merneptah toward the end of the thirteenth century, some kind of alliance of Libu and Mashwash, the tribal Libyans occupying Marmarica

Fig. 41. Trench F4-III, showing S107 from the east.

and Cyrenaica, with northern Sea Peoples was firmly in place. When the Egyptian forces overran the Libyan king, they recovered a large quantity of copper swords on the battlefield, along with silver drinking vessels and other metal containers captured from Meryey's personal camp.[76]

The reference to copper weapons, silver cups, and other metal implements in the possession of

[75] Supra, p. 56.

[76] J. Breasted, *A History of Egypt* (New York, 1919), 469: "the booty was enormous; some nine thousand copper

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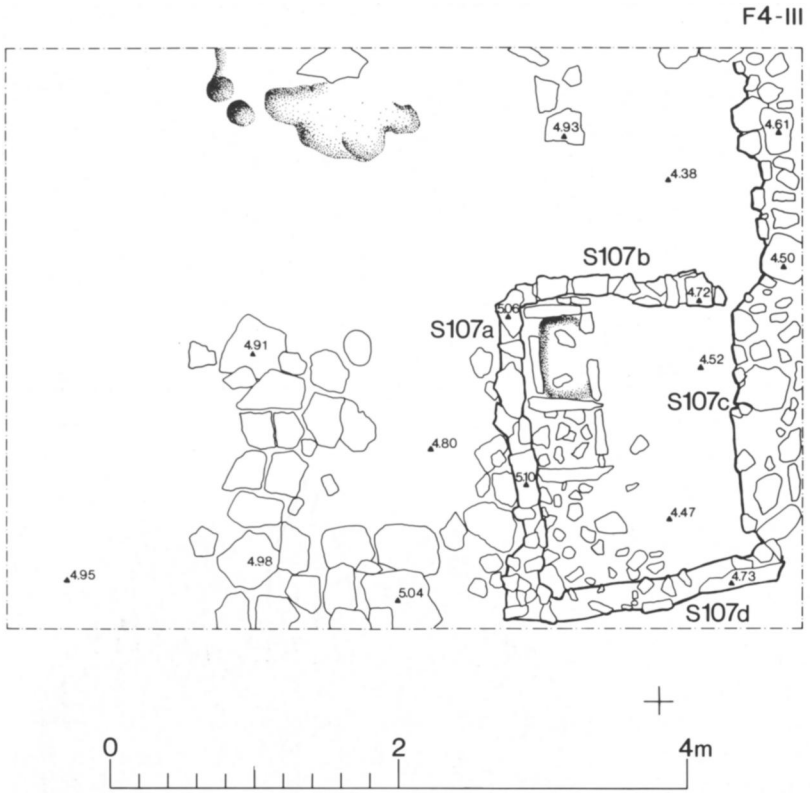

Fig. 42. Plan of Area F4-III.

the Libyans a bare century after the abandonment of our island is thought-provoking. With no archaeological documentation for the LBA Eastern Libyans at our disposal, it is clearly premature to speculate on what they were or were not capable of making; but an advanced metallurgical technology is generally thought to be beyond their capabilities at this time.[77] But is it possible that their metal weapons and various *objets de vertu* came to them through their northern allies?[78]

At this stage in our investigation the evidence will not support a direct association between the island's foreign occupants and the Sea Peoples of the thirteenth century. Just who the islanders were cannot as yet be definitely said; but to judge from the heavy preponderance of Cypriot artifacts found in their occupation levels, they obviously had close associations with Cyprus.[79] Their primary motivation for seeking out this remote port-of-call cannot have been exclusively economic profit. Instead, the explanation should be sought within the wider framework of LBA trade. Ship-borne LBA Cypriot products have been discovered throughout much of the Eastern Mediterranean, including Crete, the eastern Nile Delta, and along the Levantine coast. Moreover, Crete, which lies ca. 420 km northwest of Matruh, was perhaps the final point west for eastern Mediterranean traders on the outward leg of their journey, assuming that they traveled in a counterclockwise fashion. Given the strong northwesterly

swords. . . . Besides these there were the fine weapons and vessels in precious metal taken from the camp of the Libyan king's household and chiefs, comprising over three thousand pieces." W. Hölscher, "Libyer und Ägypter," *Ägyptologische Forschungen* (1937), no. 4, 61–63. A. Rowe (supra, n. 73), 486.

[77] O. Bates (supra, n. 71), 143.

[78] A. Rowe (supra, n. 73), 486. D. O'Connor (supra, n. 73), 276.

[79] As a note of caution against drawing any facile connections between our island, Cyprus, and the Sea Peoples, see J. Muhly, "The Role of the Sea Peoples in Cyprus during the LC III Period," *Cyprus at the Close of the Bronze Age* (Nicosia, 1984), 39–56.

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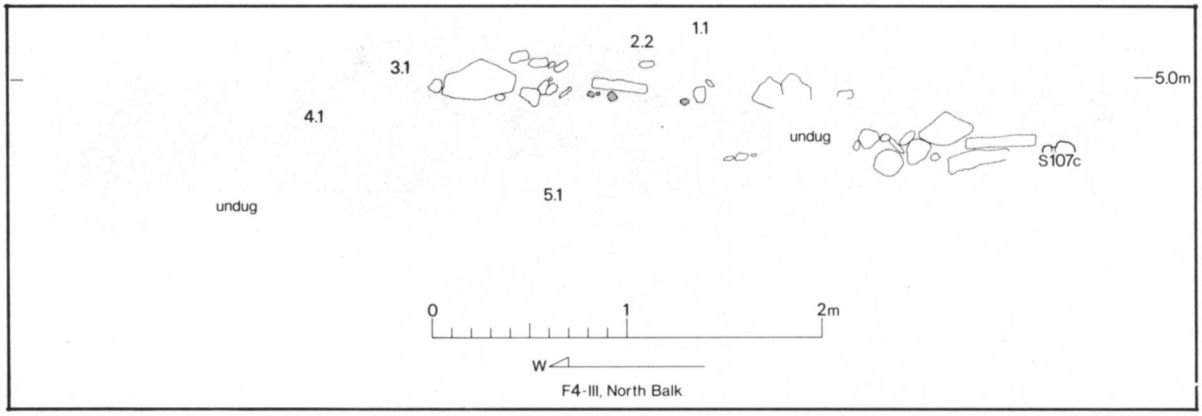

Fig. 43. Cross-section of north balk of F4-III.

prevailing winds, once a ship had left Crete, Matruh represented the closest as well as the best protected landfall available to voyagers sailing toward the Delta, the Syro-Palestinian coast, and back to Cyprus. Apart from the security of its landlocked anchorage, Matruh must have provided eastern Mediterranean mariners with fresh stocks of food and water, supplied to them by the Libyans during the summer months in exchange for bronze tools as well as the standard items of trade routinely transported in LBA ships. According to this reconstruction Bates's Island was shunned during the dangerously stormy winter months when the Libyans had moved their flocks south but was otherwise used throughout the fourteenth century B.C. as a revictualizing station for its foreign occupants. Whether it subsequently ever marked a major point of entry for the foreign raiders known to us as the Sea Peoples seems unlikely at this time of writing because of its small size and apparently restricted occupation. On the other hand, the district around Marsa Matruh should probably from now on be regarded as playing a potentially more important role in the migrations and invasions of the thirteenth century than had been suspected before the rediscovery of Bates's Island.

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