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THE MARITIME LANDSCAPES OF MALTA
FROM THE ROMAN PERIOD TO THE MIDDLE AGES

VOLUME II

TIMOTHY GAMBIN

"A dissertation submitted to the University of Bristol in accordance with the requirements of the degree of PhD in the Faculty of Arts, Department of Archaeology and Anthropology (March 2005)".

Notes on the illustrations

All the illustrations in this volume have been prepared for the thesis and form an integral part of the text in volume one. Images scanned from original publications have been formatted so as to fit on A4 paper. All credits are in the 'list of illustrations' as well as on the page where the figure has been used. Unless otherwise stated, the contours on the maps of the Maltese Islands are at 10 metre intervals. The base maps of Malta were provided by Datatrak IT Ltd. All base maps of the Mediterranean have been downloaded from the website of the *The Ancient World Mapping Center* http://www.unc.edu/awmc/

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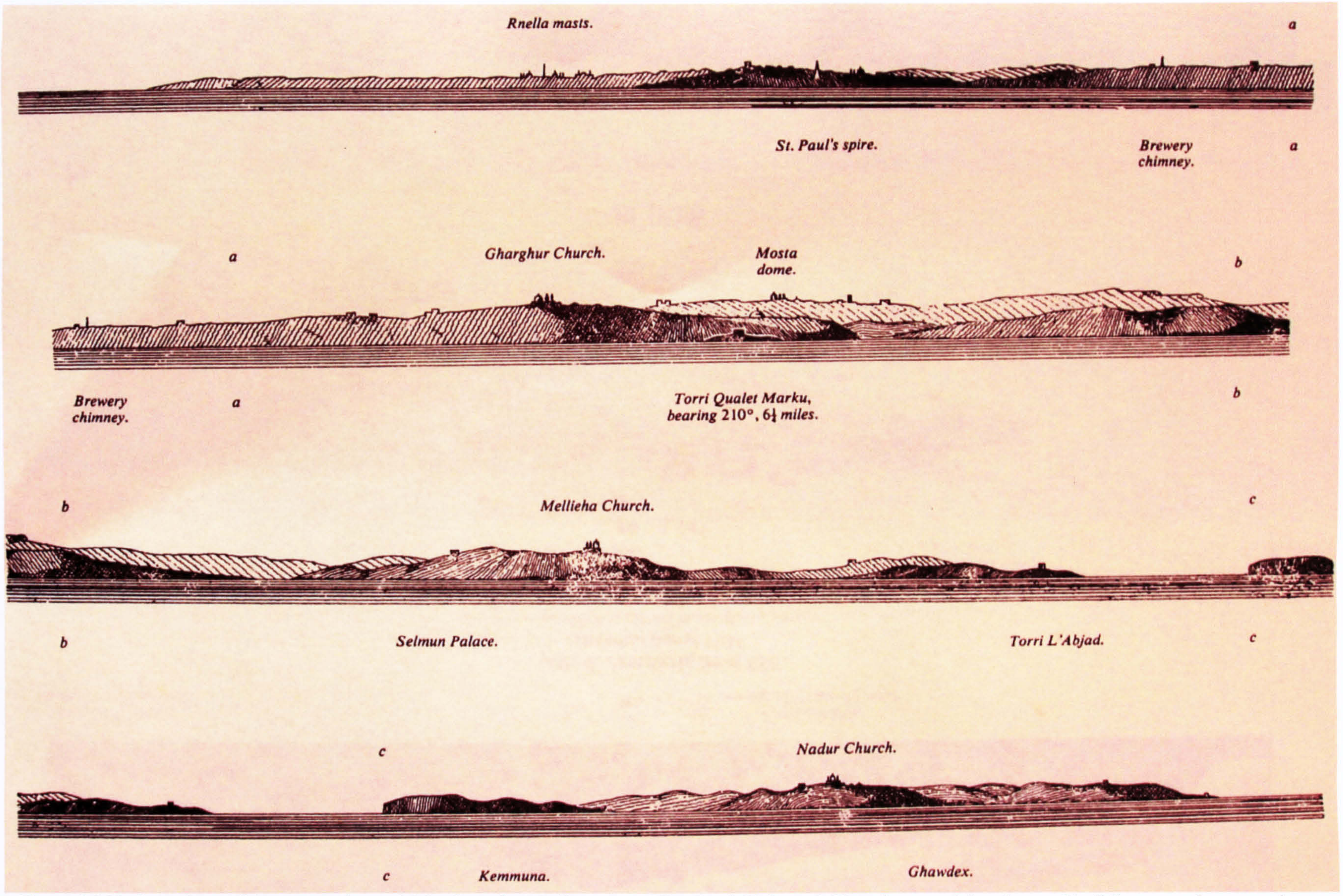


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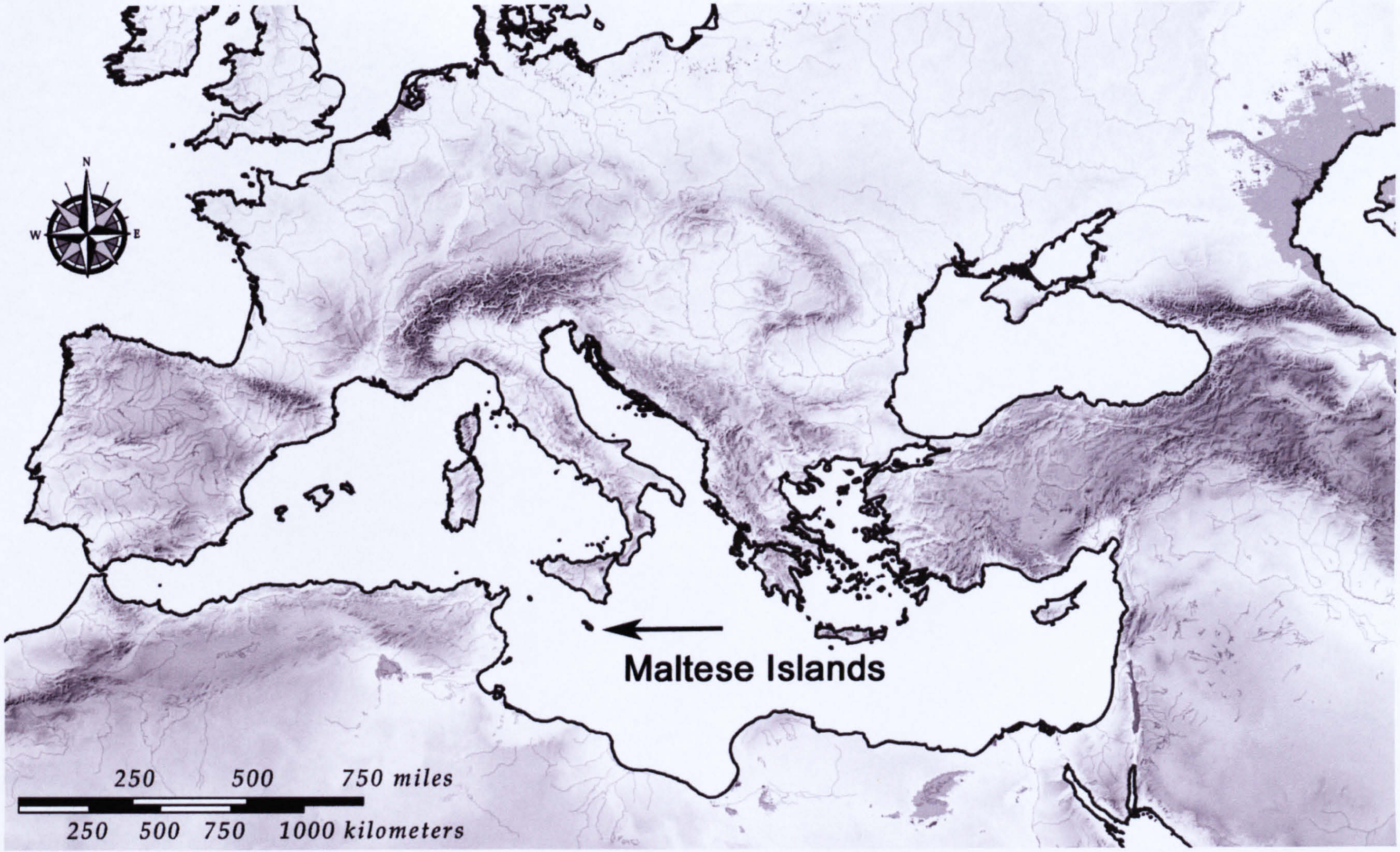


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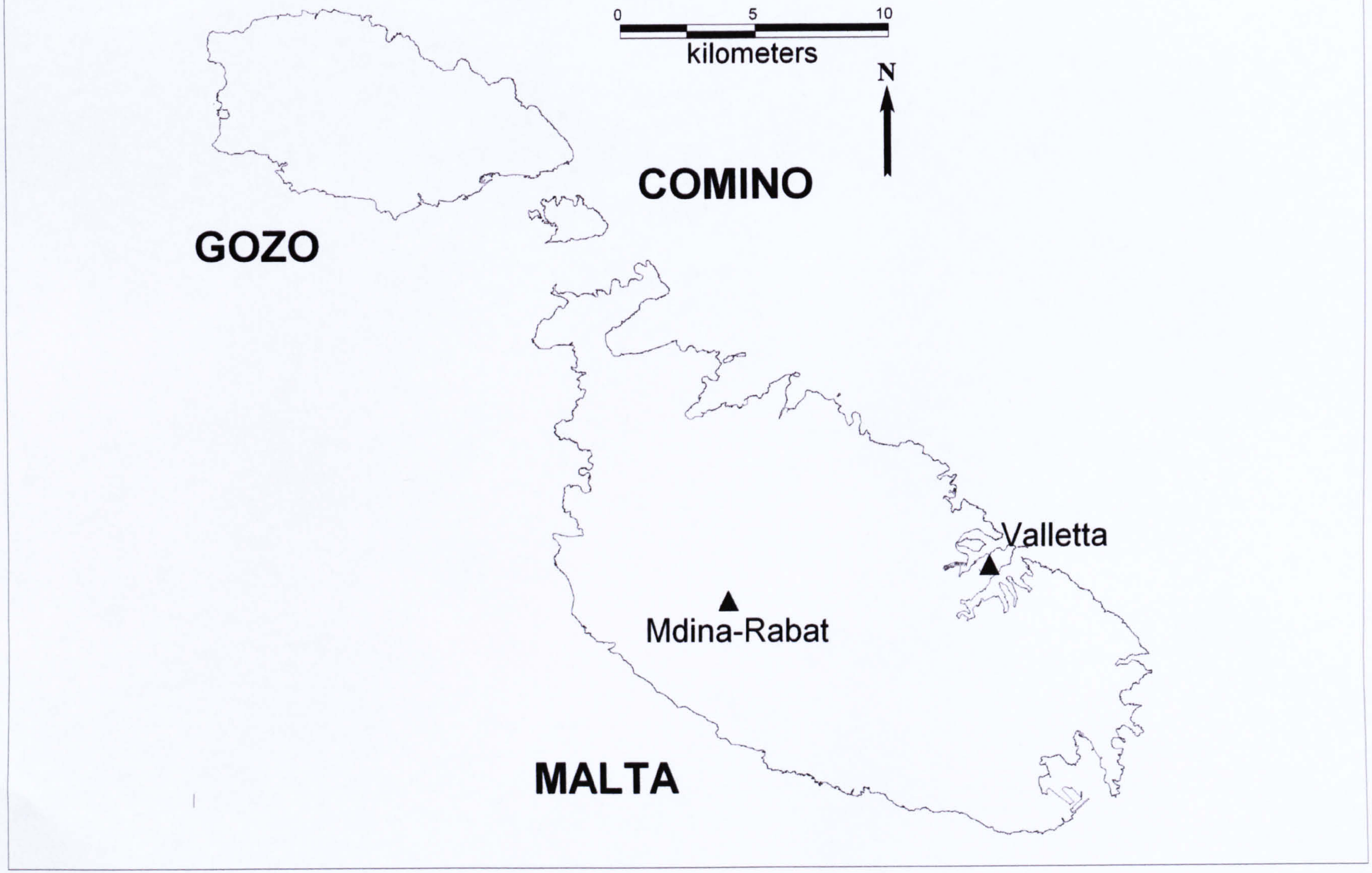


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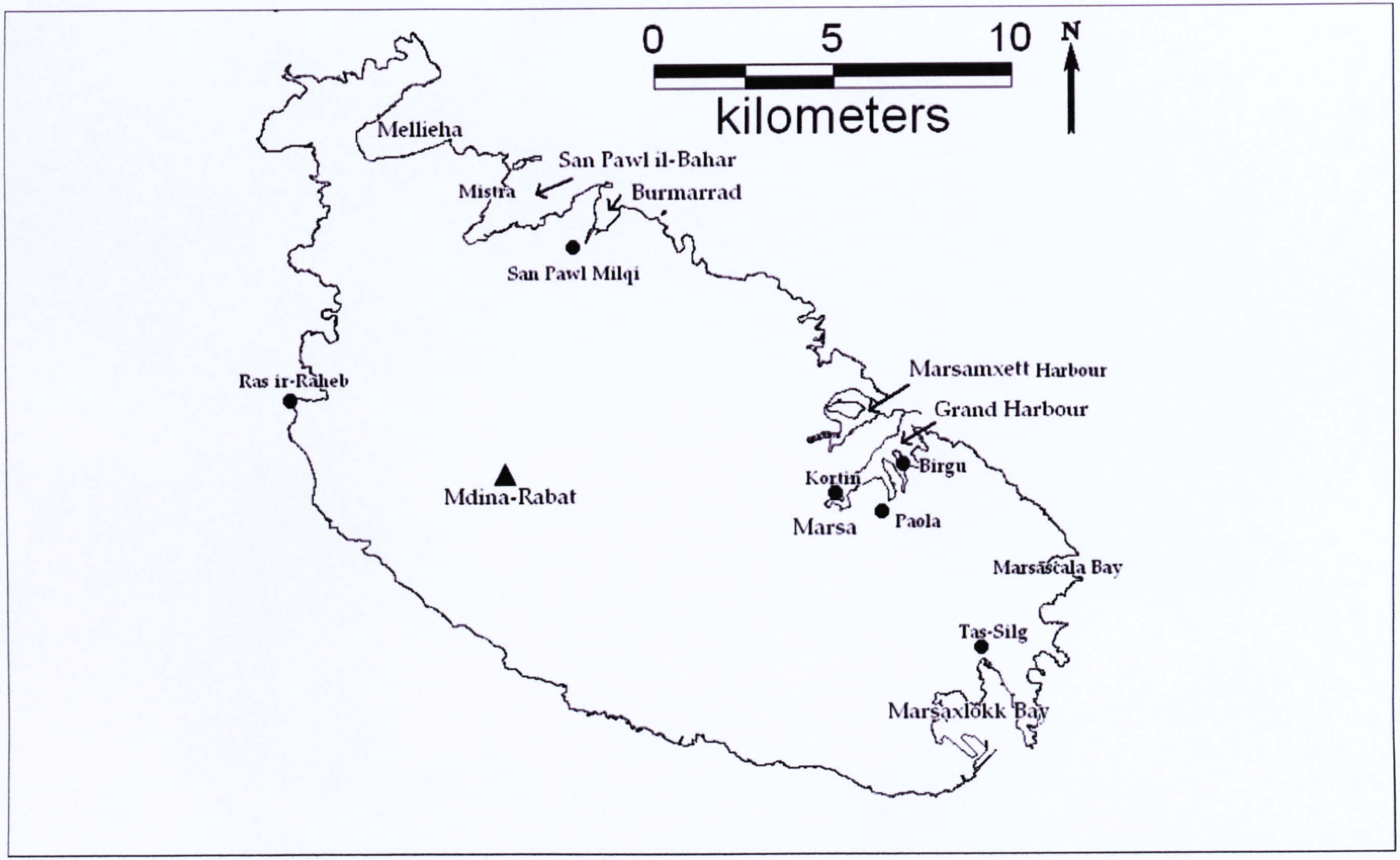


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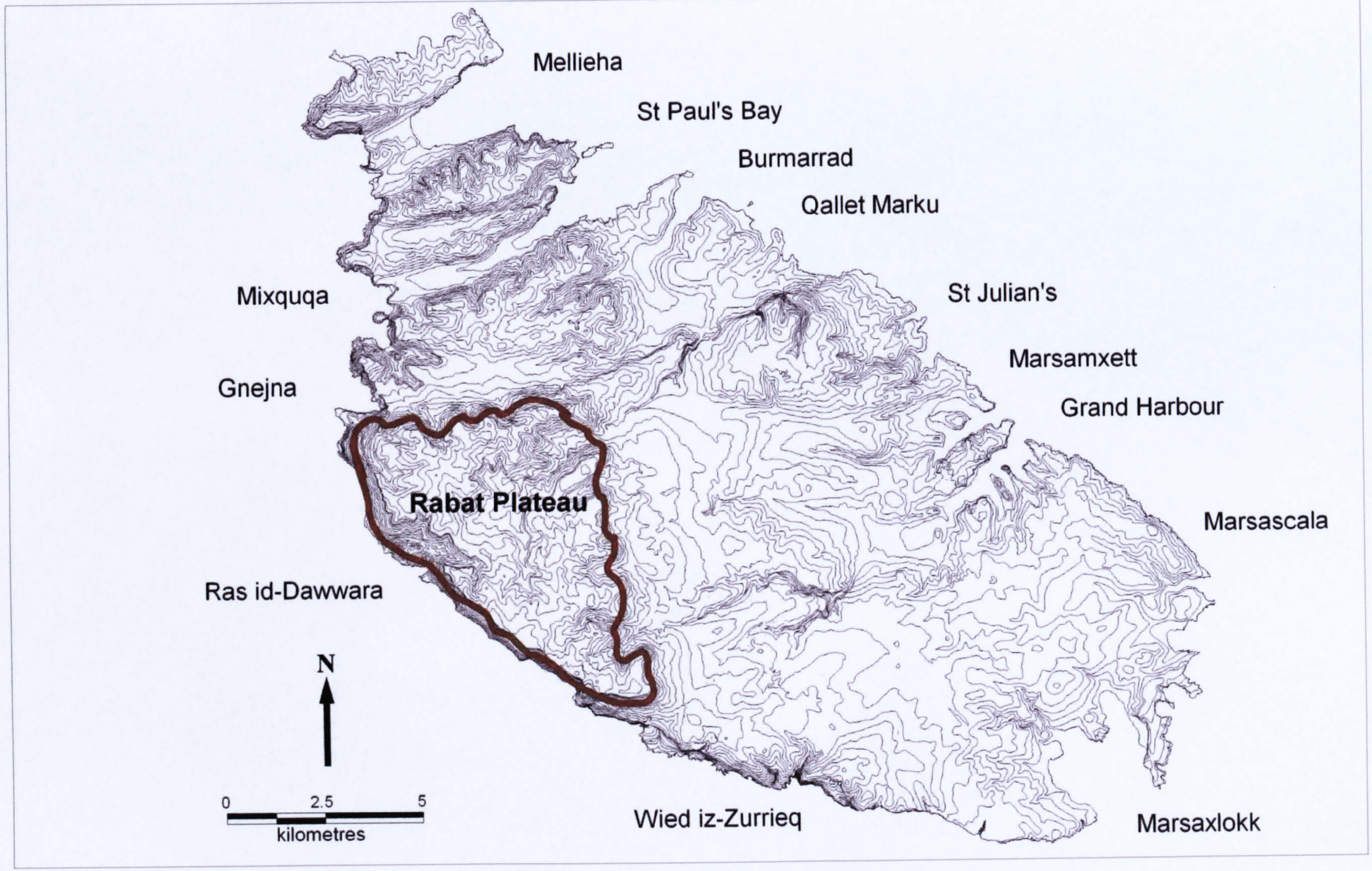


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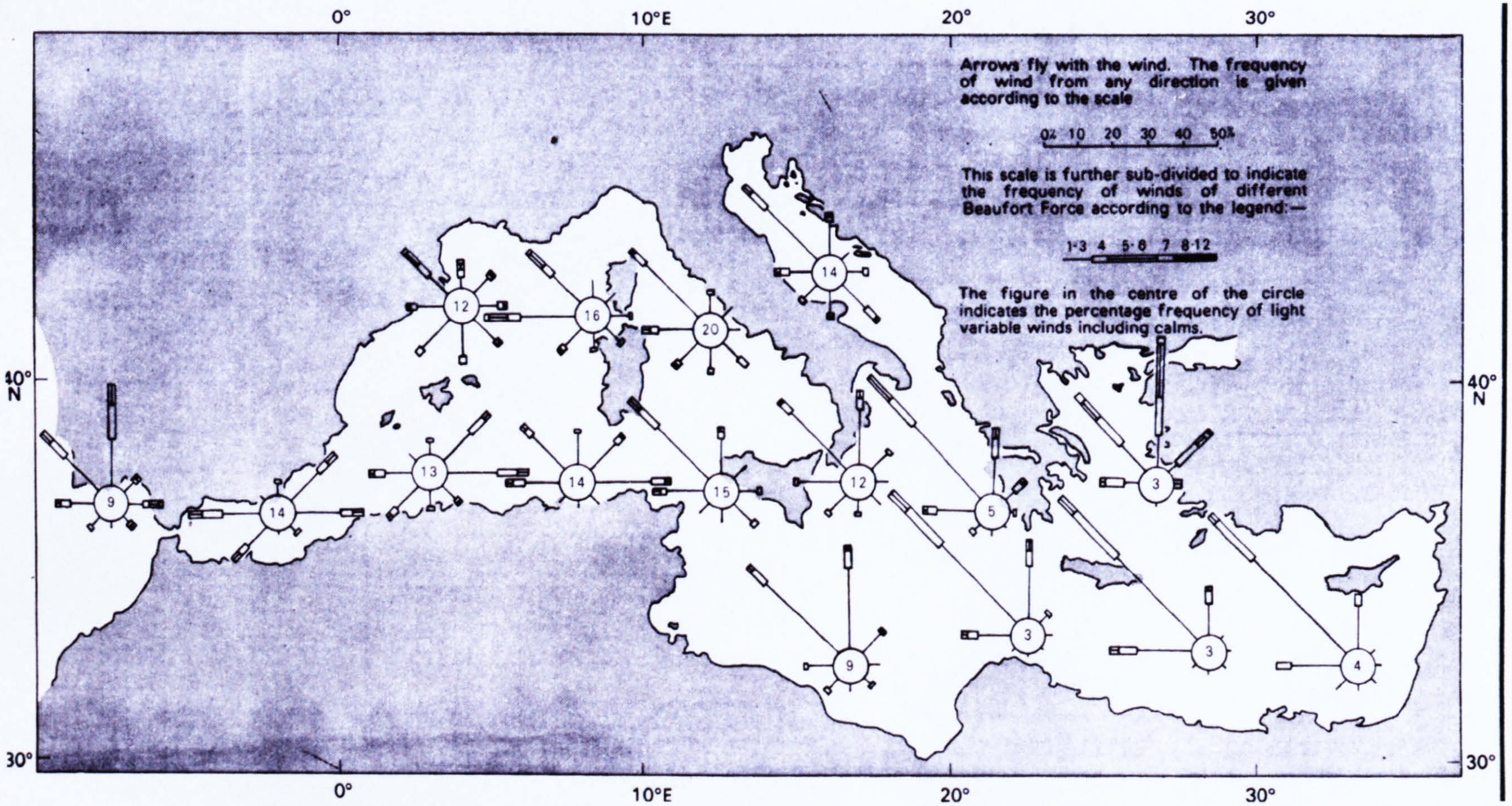


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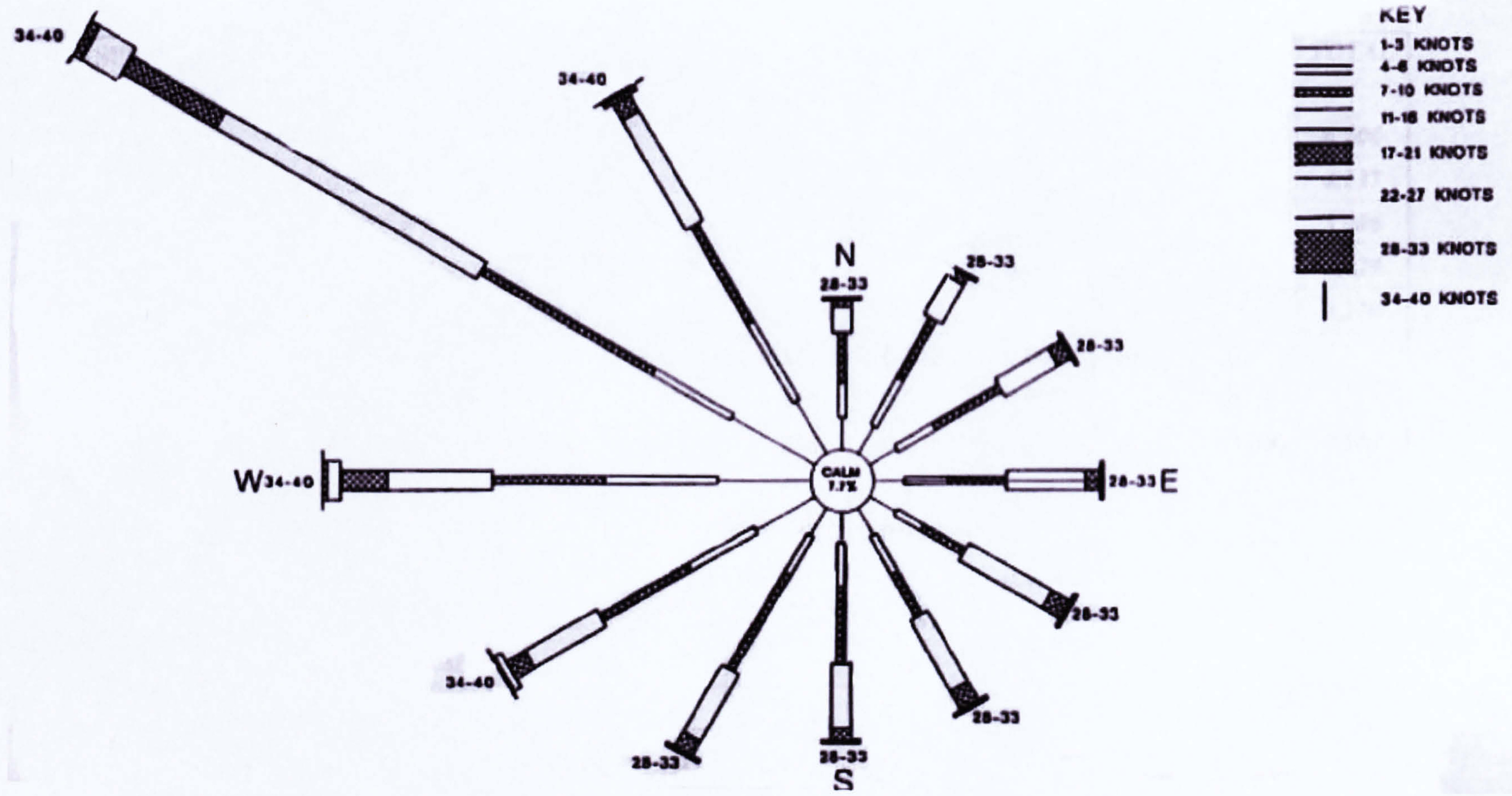


Figure 2.2 Wind rose for the Maltese Islands Metrological Office, Malta).

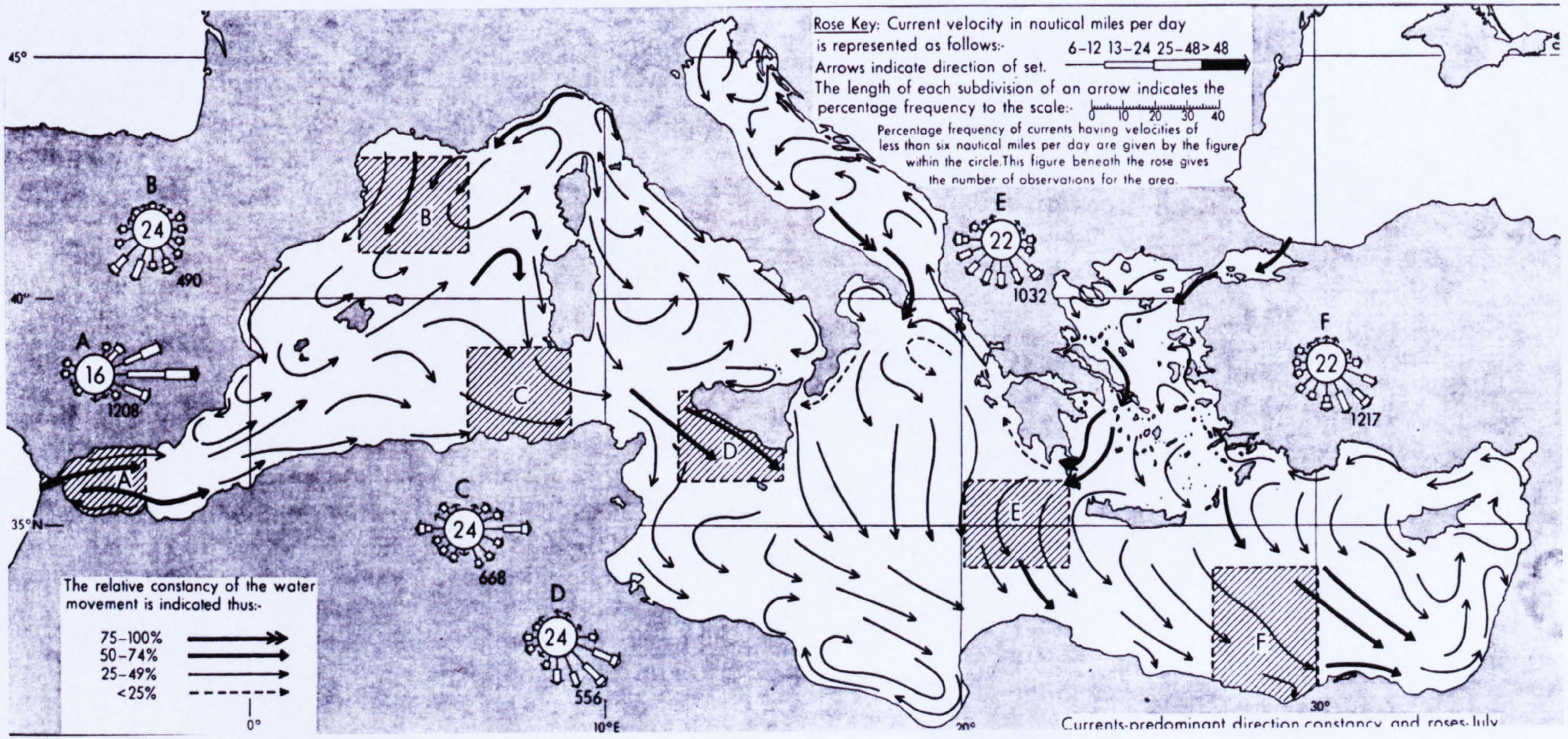


Figure 2.3 Prevailing currents in the Mediterranean (Mediterranean Pilot, Hydrographic Office, London: 12).

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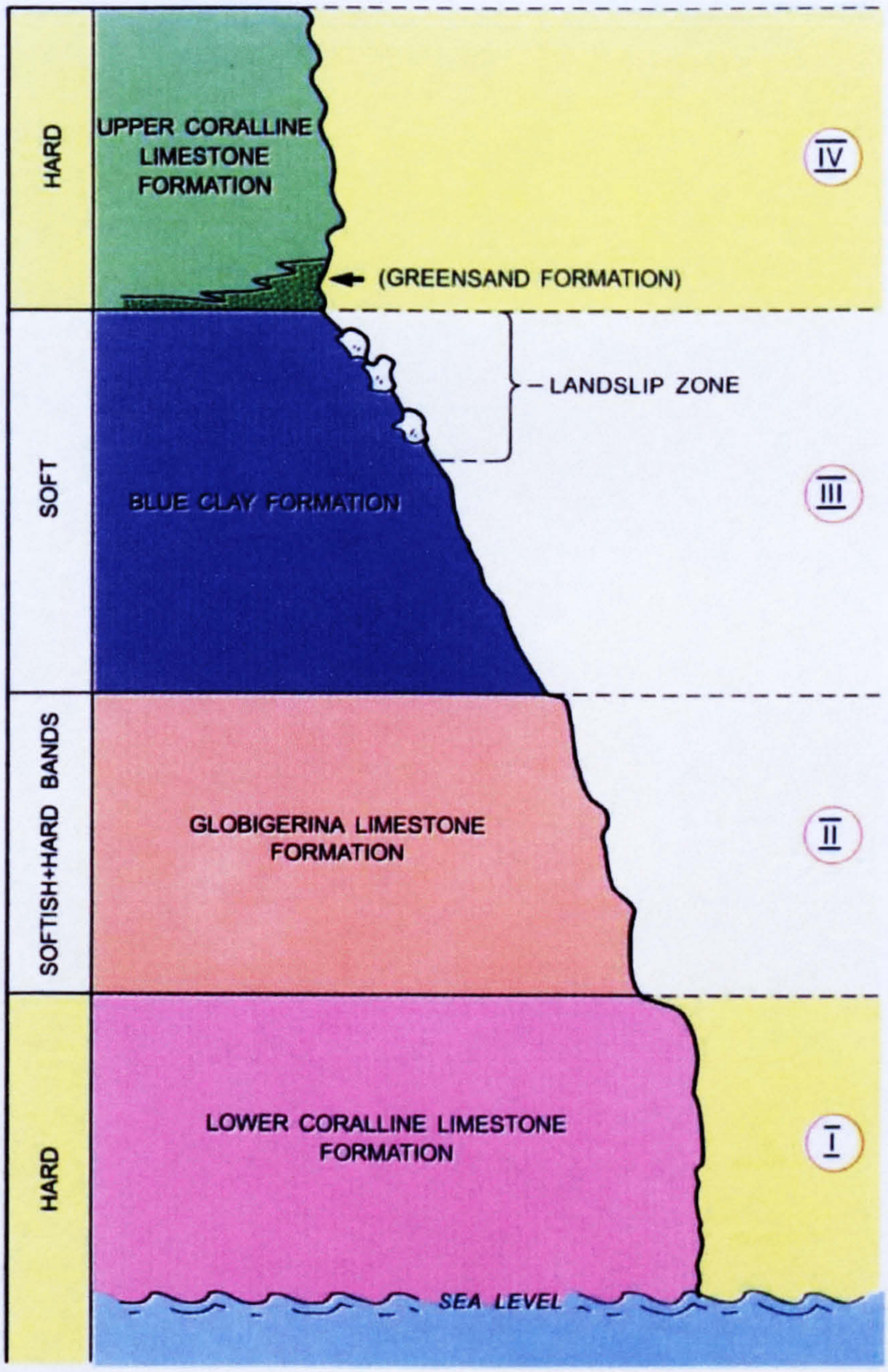


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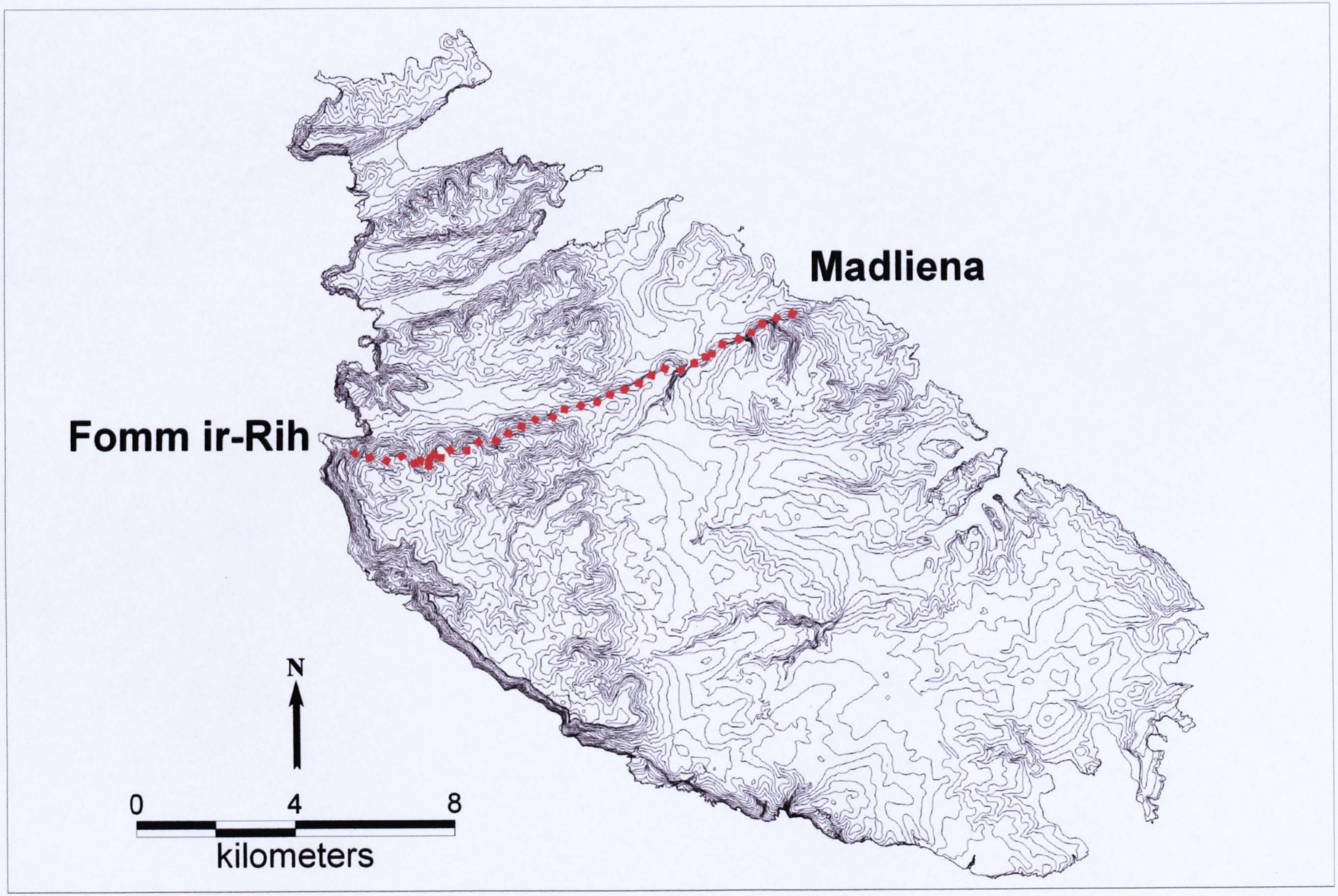


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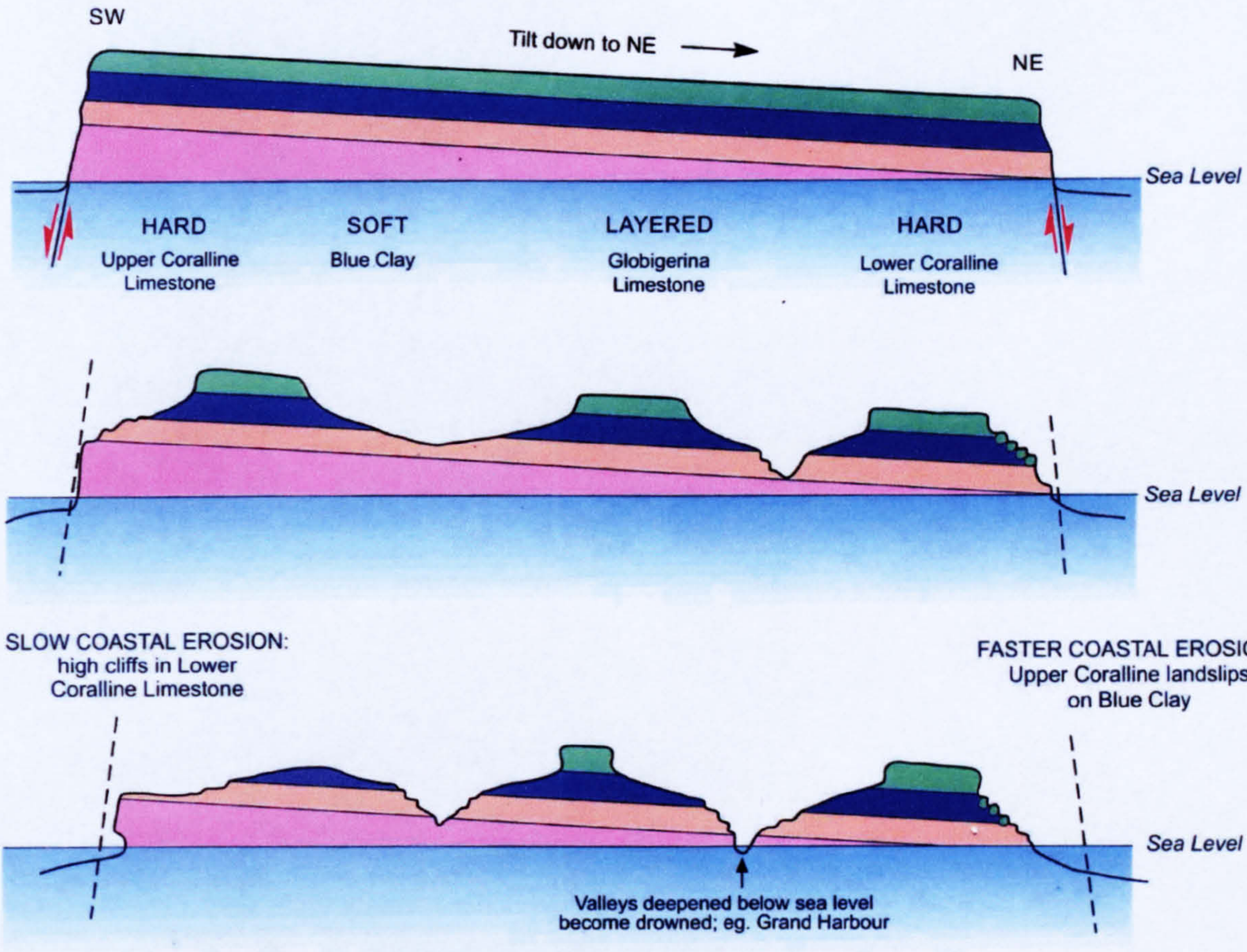


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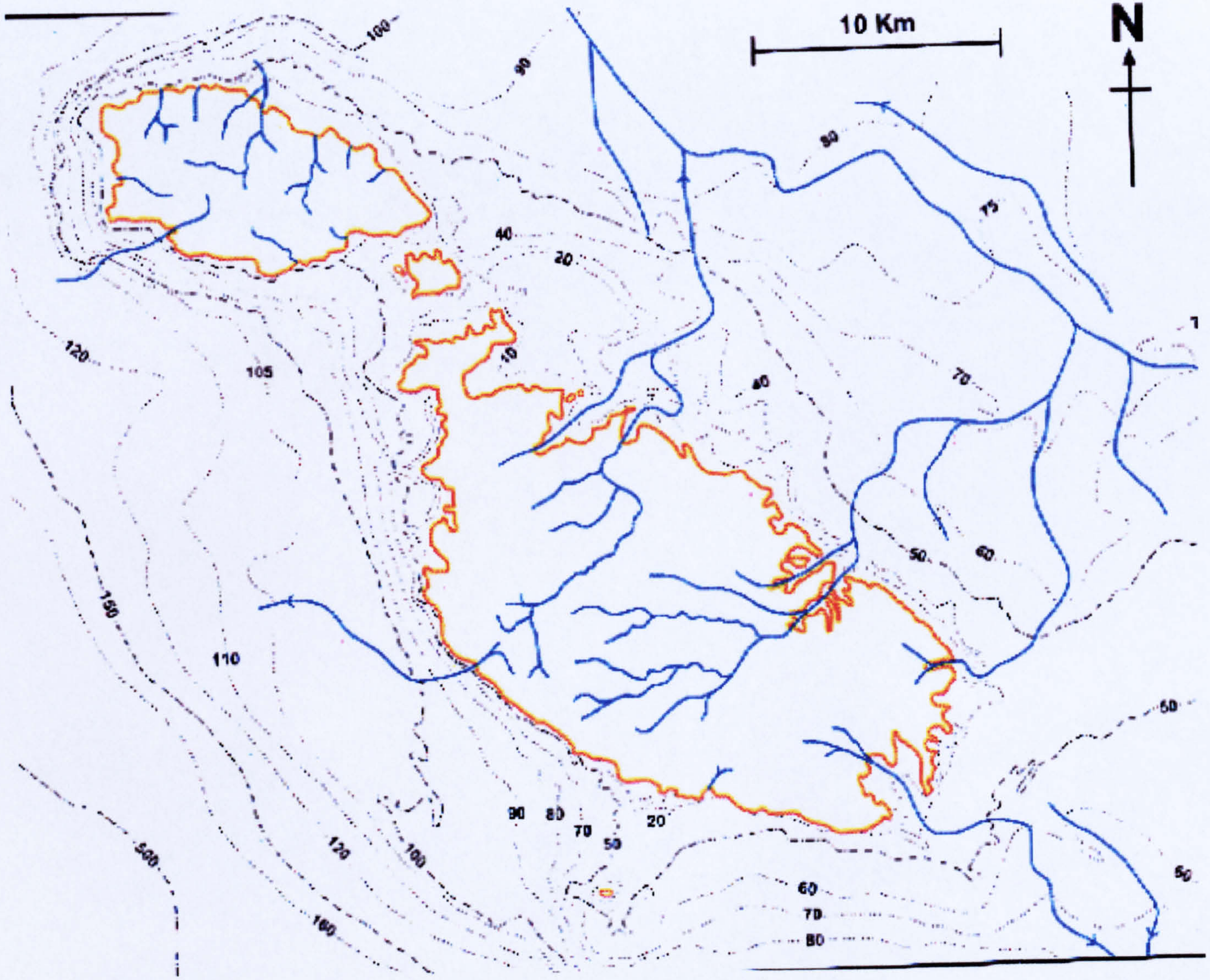


Figure 2.7 Map illustrating the valley system before the end of the last ice age (Pedley et al 2002: 95).

Dockyard Creek - Malta
Thickness of Recent Sediment

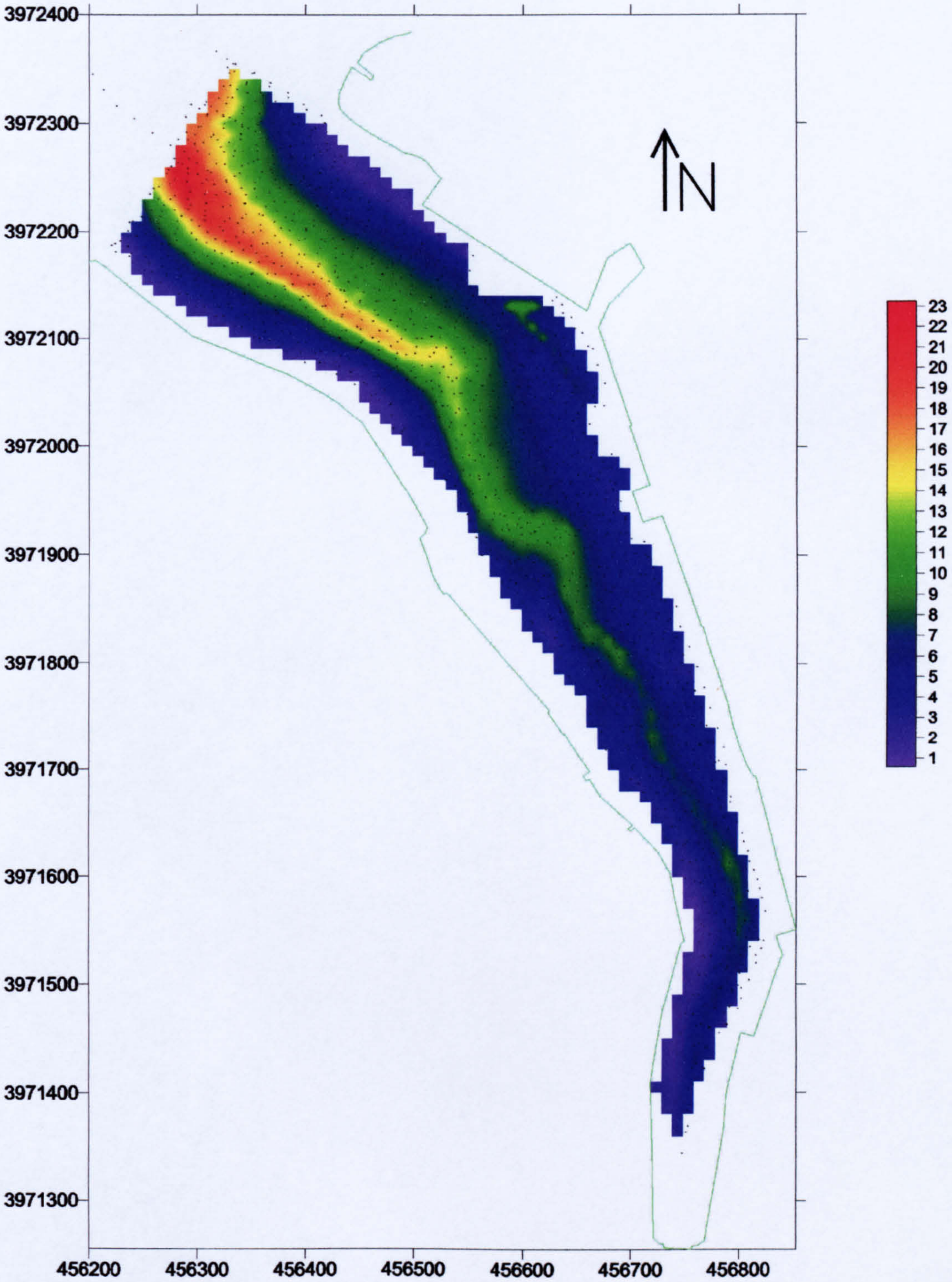


Figure 2.8 Map illustrating the sediment depths at Dockyard Creek (from the 2002 Dockyard Creek survey, J. Smith and T. Gambin).

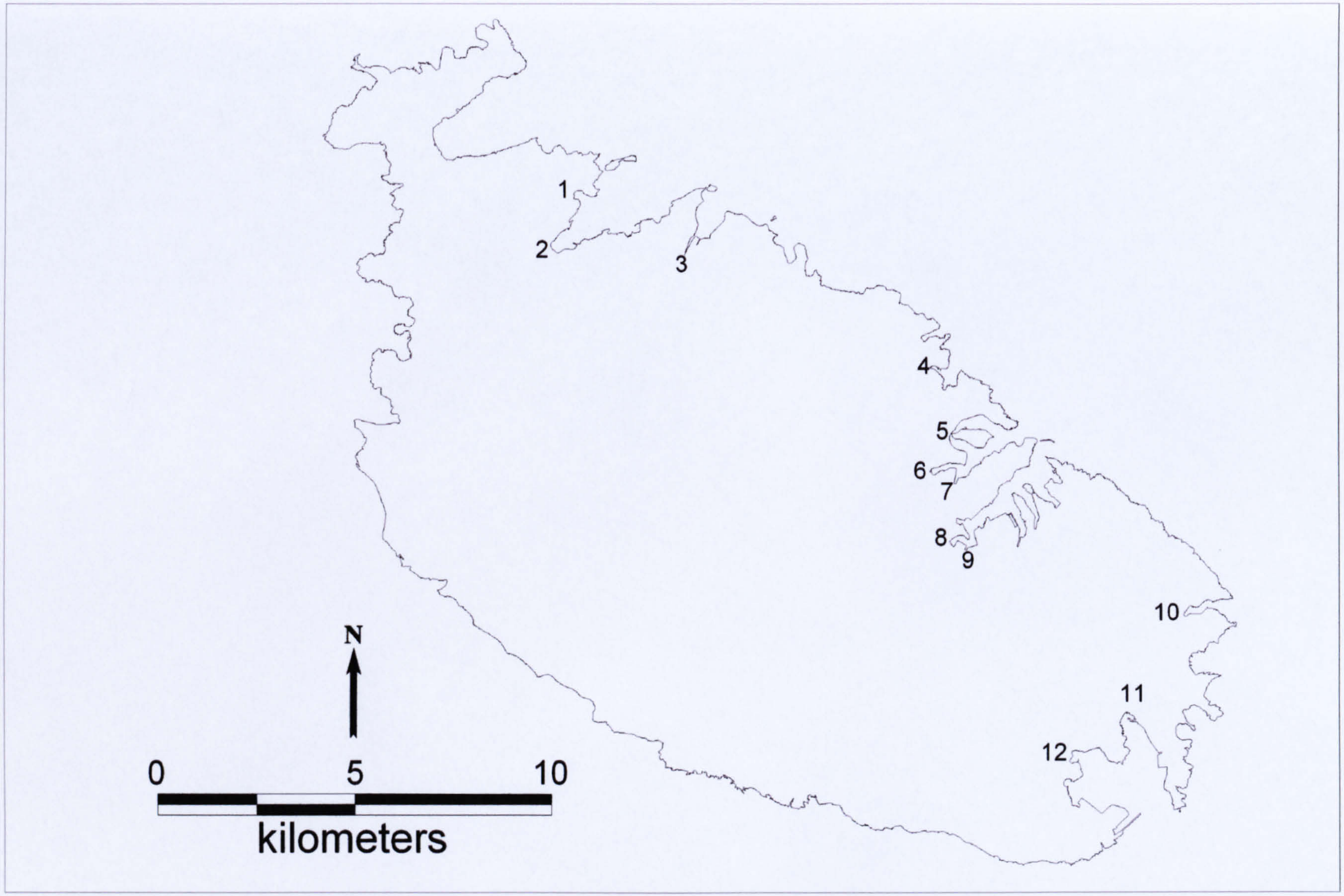


Figure 2.9 Map indicating the location of various silted bays mentioned in the text.1) Mistra; 2) San Pawl; 3) Burmarrad; 4) Spinola; 5) Gzira; 6) Msida; 7) Pieta'; 8) Marsa; 9) Little Marsa; 10) Marsascala; 11) Marsaxlokk; and 12) Birzebbuga (T. Gambin).



Figure 2.10 Wied iz-Zurrieq, a drowned valley on the south-western coast of the island (T. Gambin)

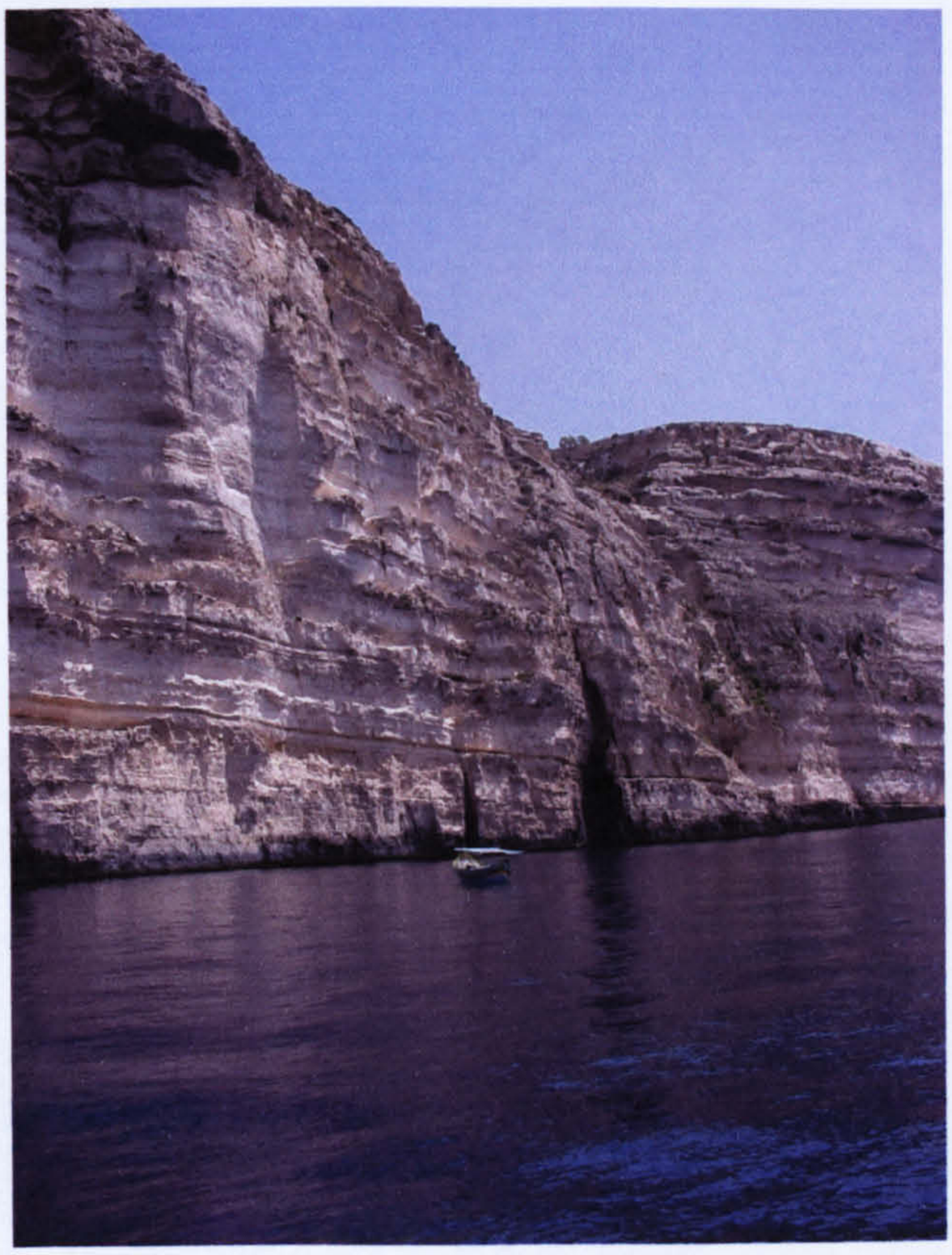


Figure 2.11 Steep cliffs along the western coast of the Maltese Islands (T. Gambin).



Figure 2.12 A bay formed by wave action on the north-western coast of Malta (T. Gambin).



Figure 3.1 An aerial view of one of the temples at Mnajdra (c. 3000 BC) (Heritage Malta collection).

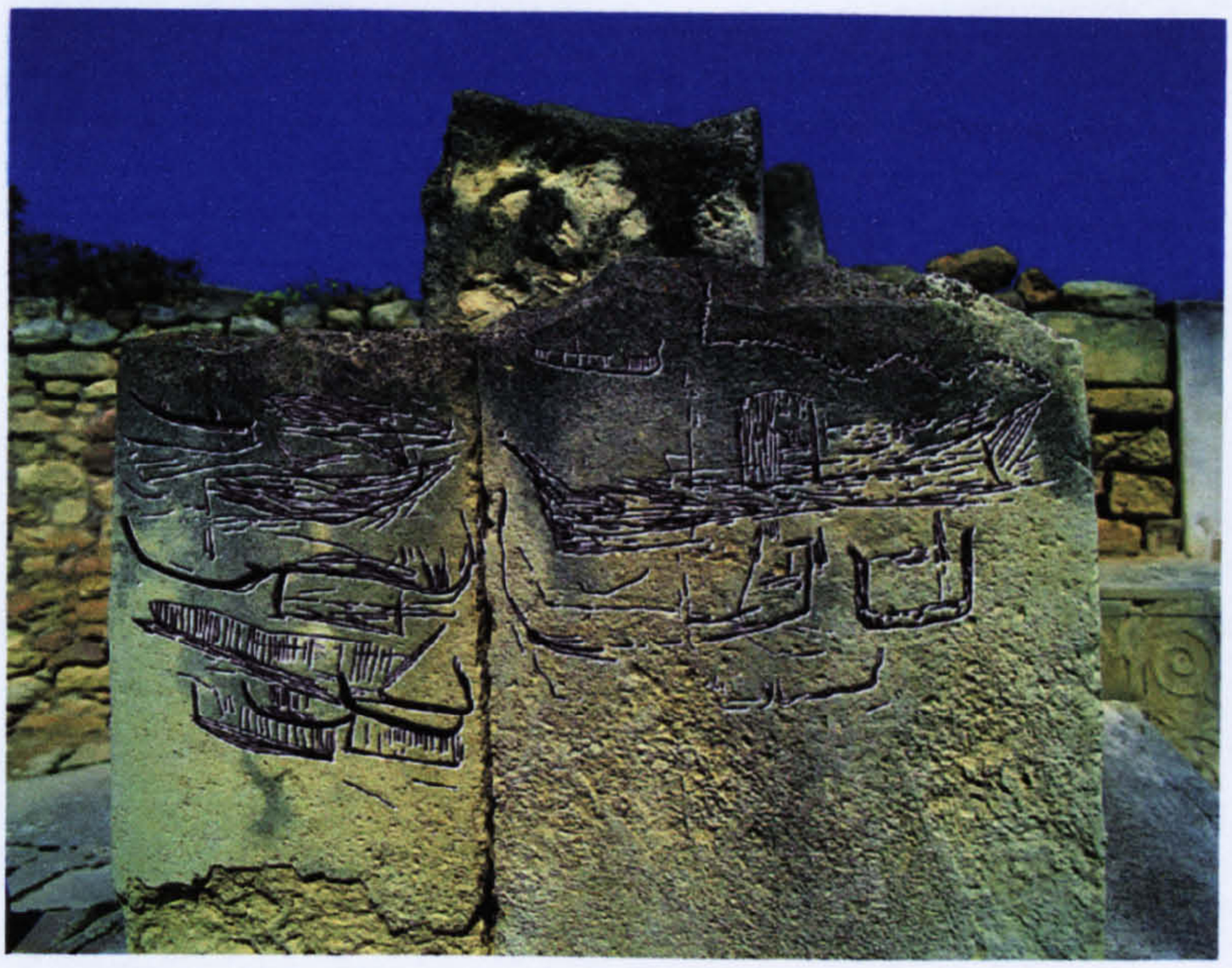


Figure 3.2 Ship graffiti at Tarxien Temple (Heritage Malta collection).

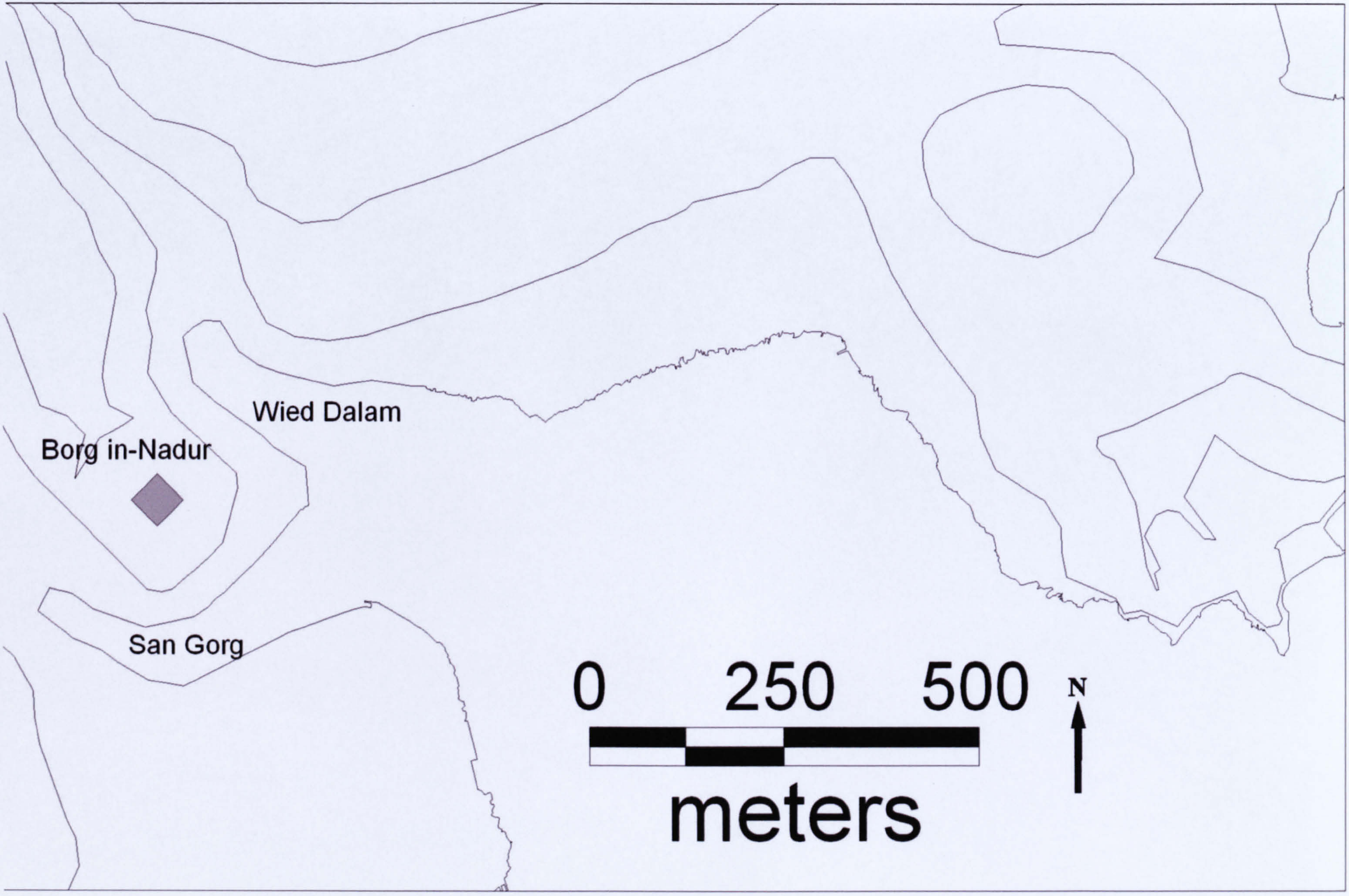


Figure 3.3 The Bronze Age settlement of Borg in-Nadur situated on a promontory overlooking the bay of San Gorg (T. Gambin).

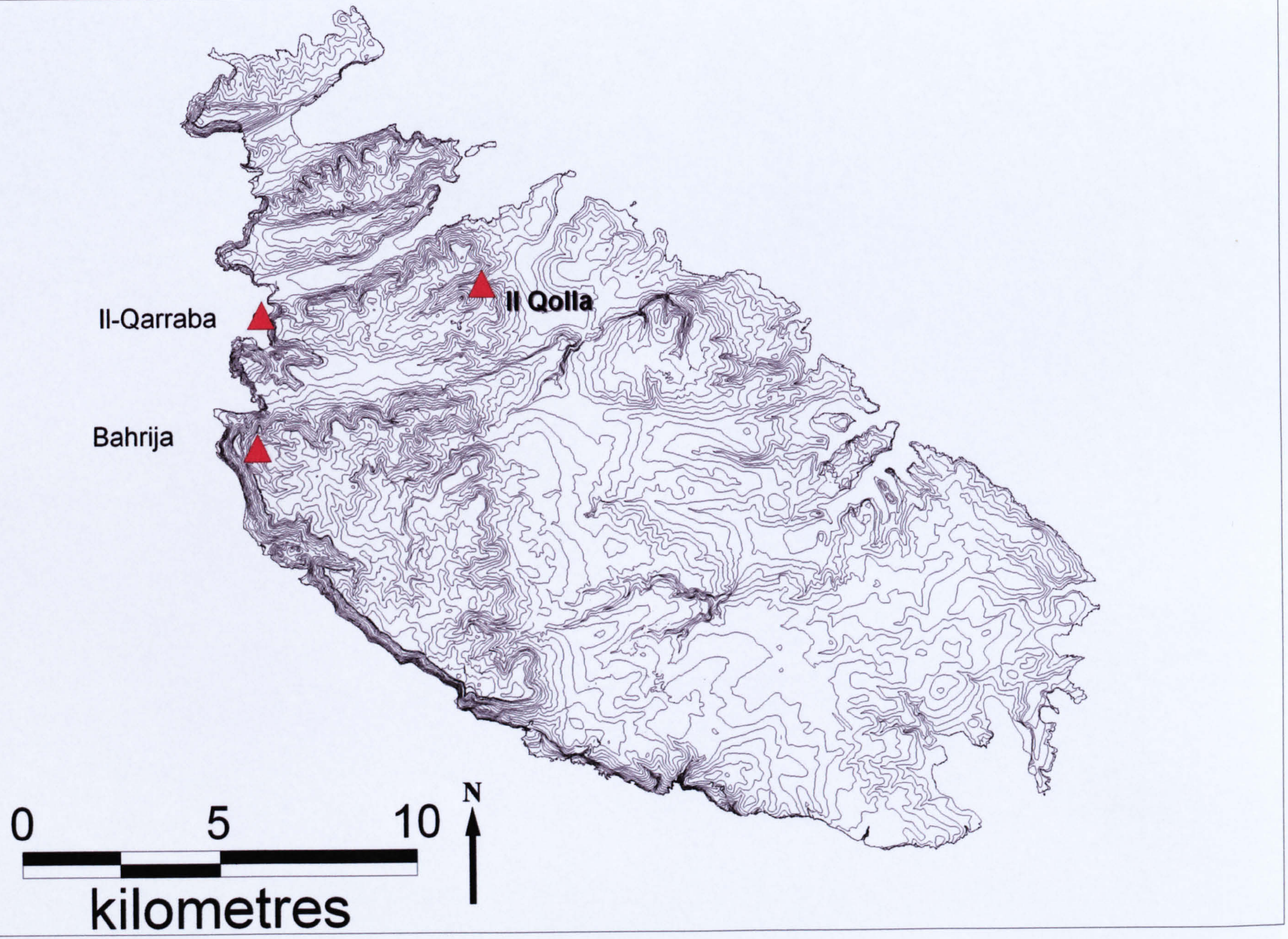


Figure 3.4 The location of other Bronze Age settlement sites on Malta (T. Gambin).

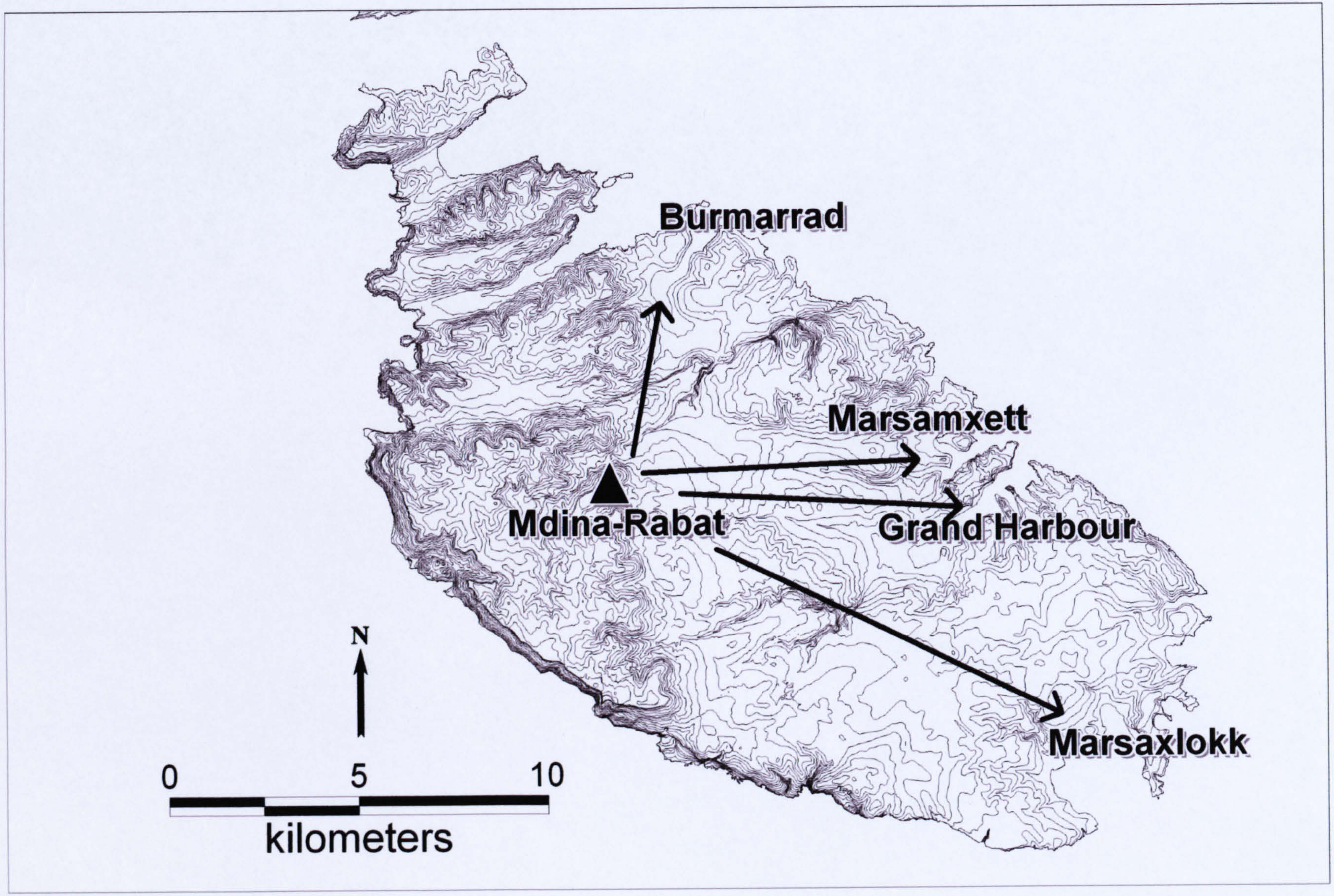


Figure 3.5 Mdina-Rabat and the main harbours of the island (T. Gambin).



Figure 3.6 The entrance to Burmarrad/Salina Bay as seen from Mdina (N. Cardona).

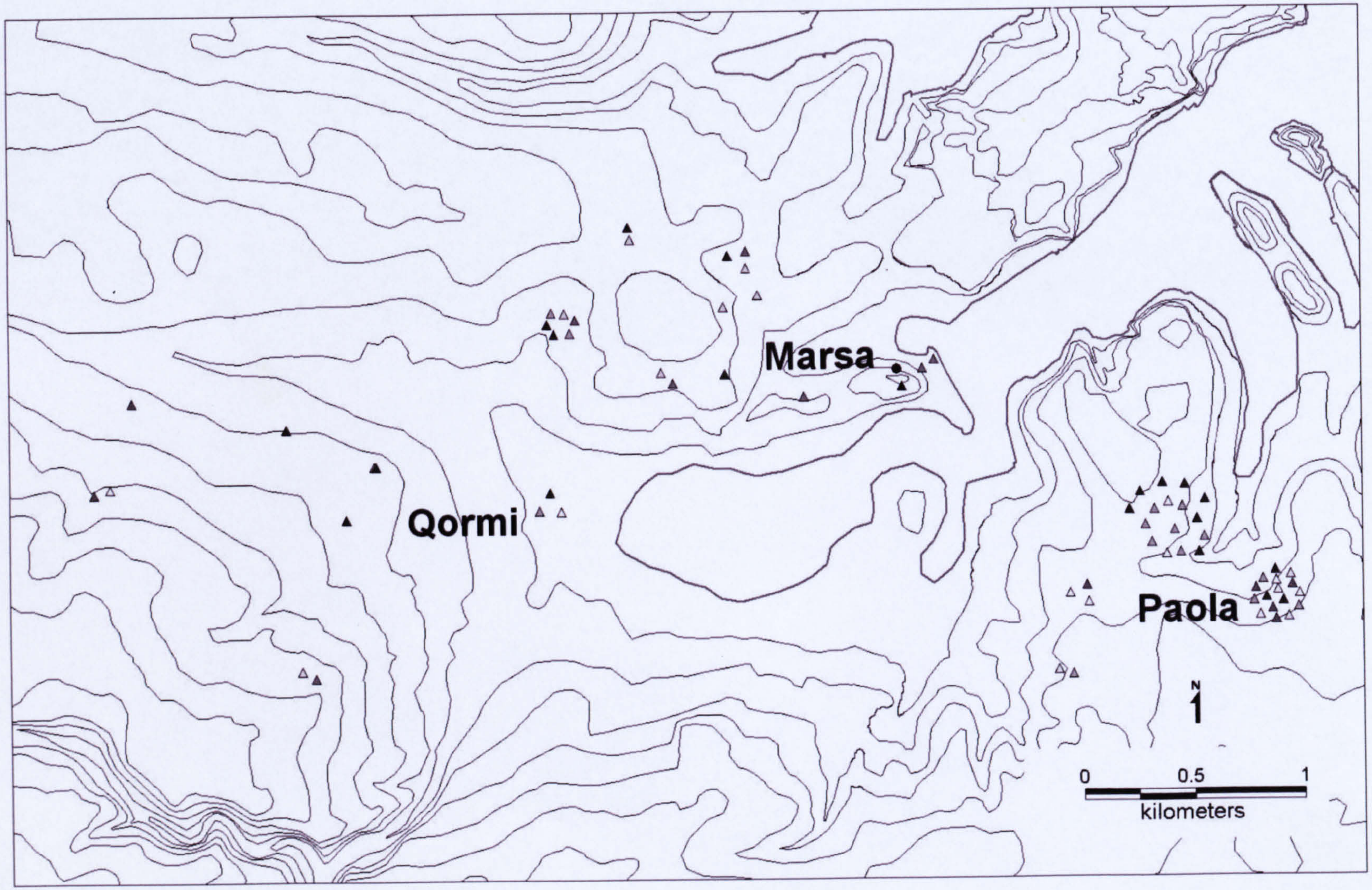


Figure 3.7 Map of the Grand Harbour area illustrating the location of tombs around the three settlements in the area (T. Gambin).

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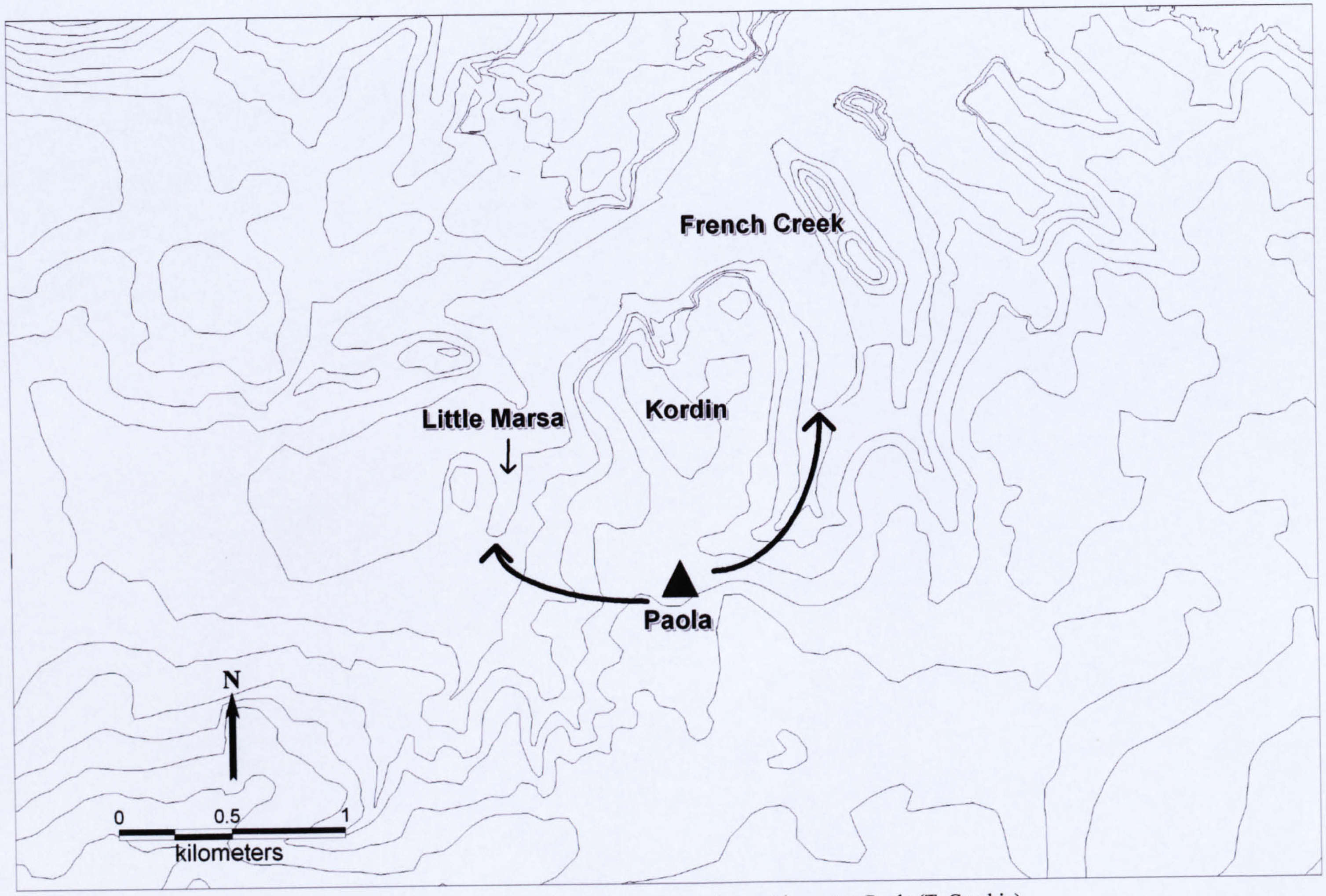


Figure 3.8 Map illustrating access points to the sea from the ancient settlement at Paola (T. Gambin).

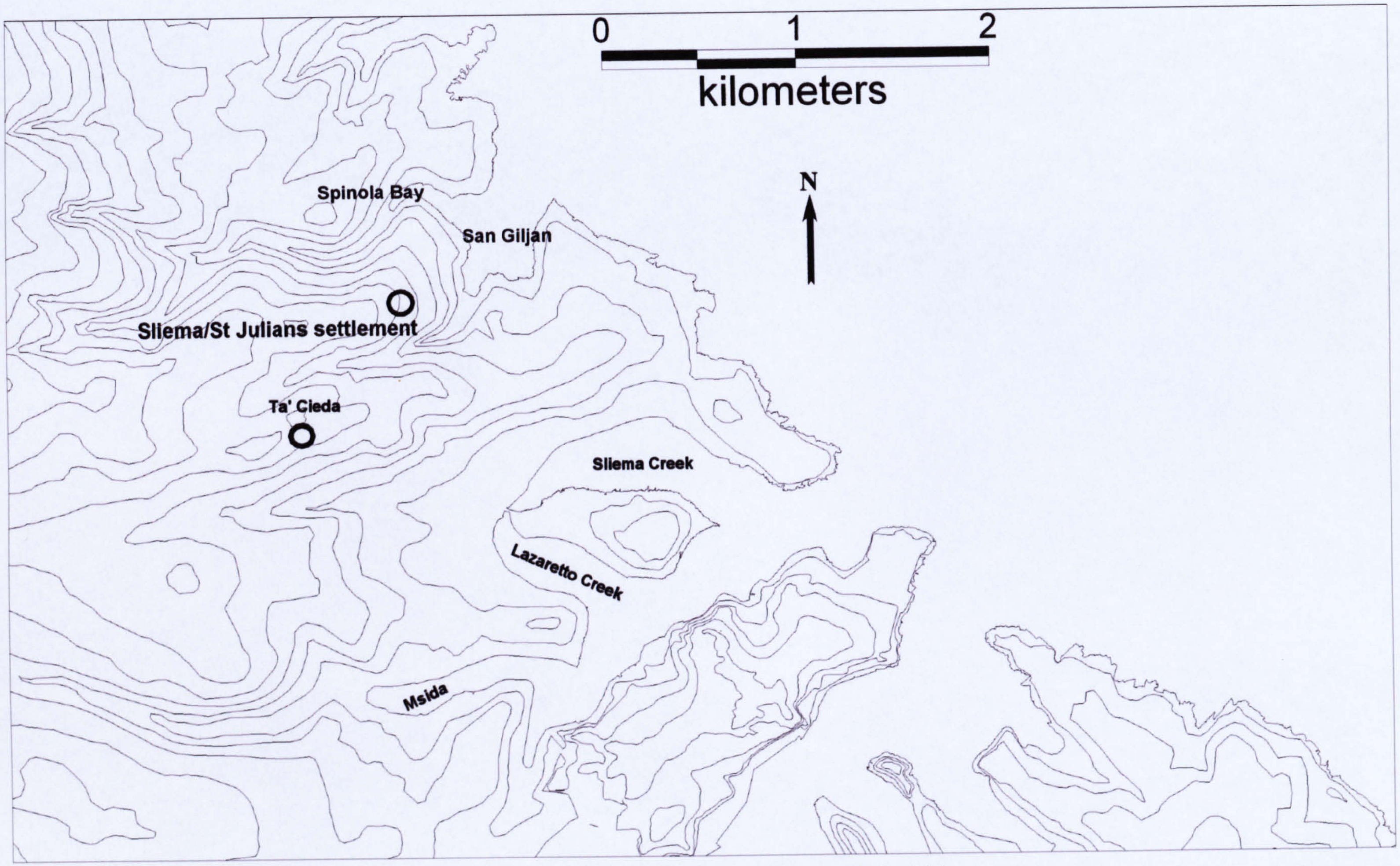


Figure 3.9 Location of the Sliema/St Julians and Ta'Cieda settlements (T. Gambin).

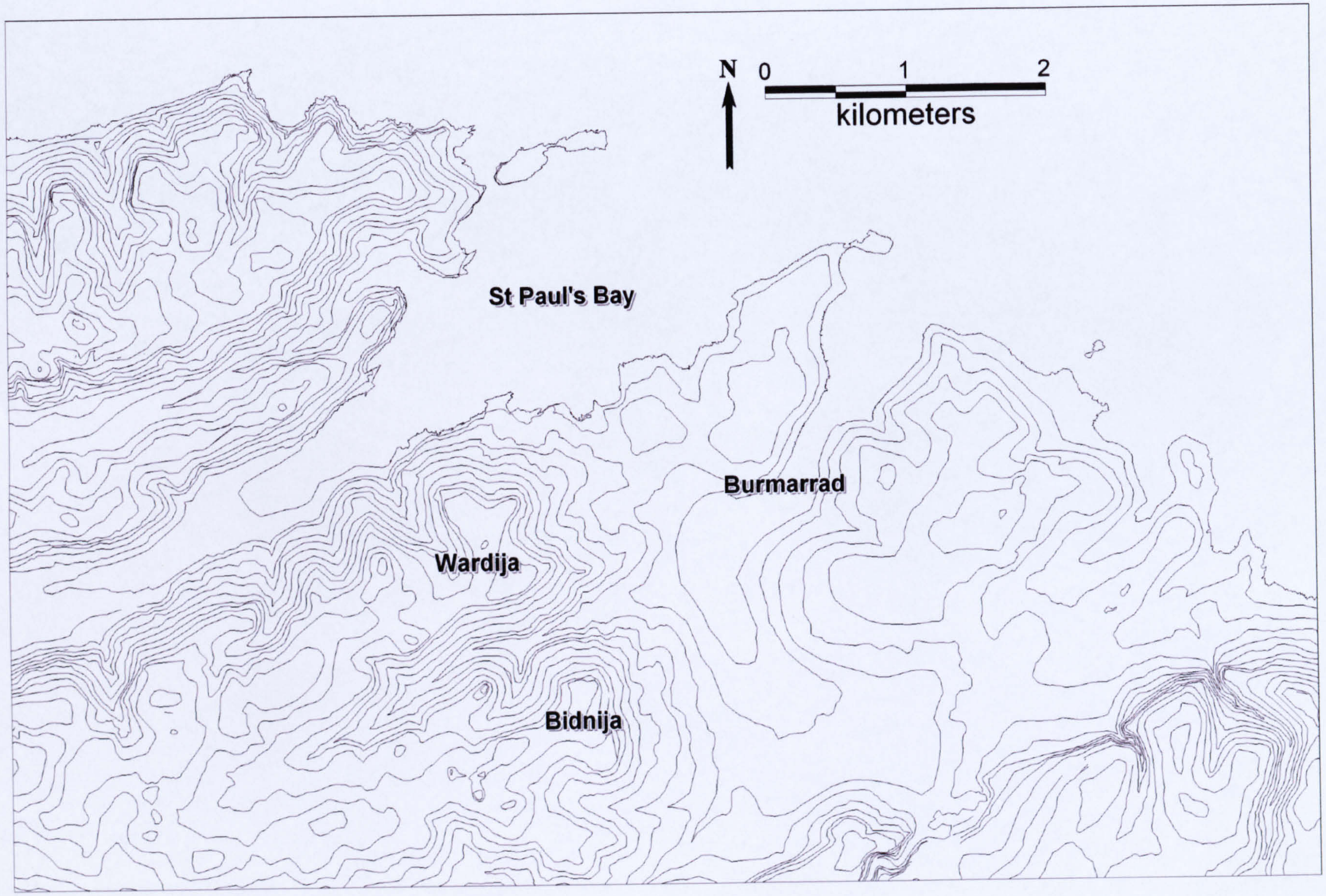


Figure 3.10 The Wardija and Bidnija hills (T. Gambin).

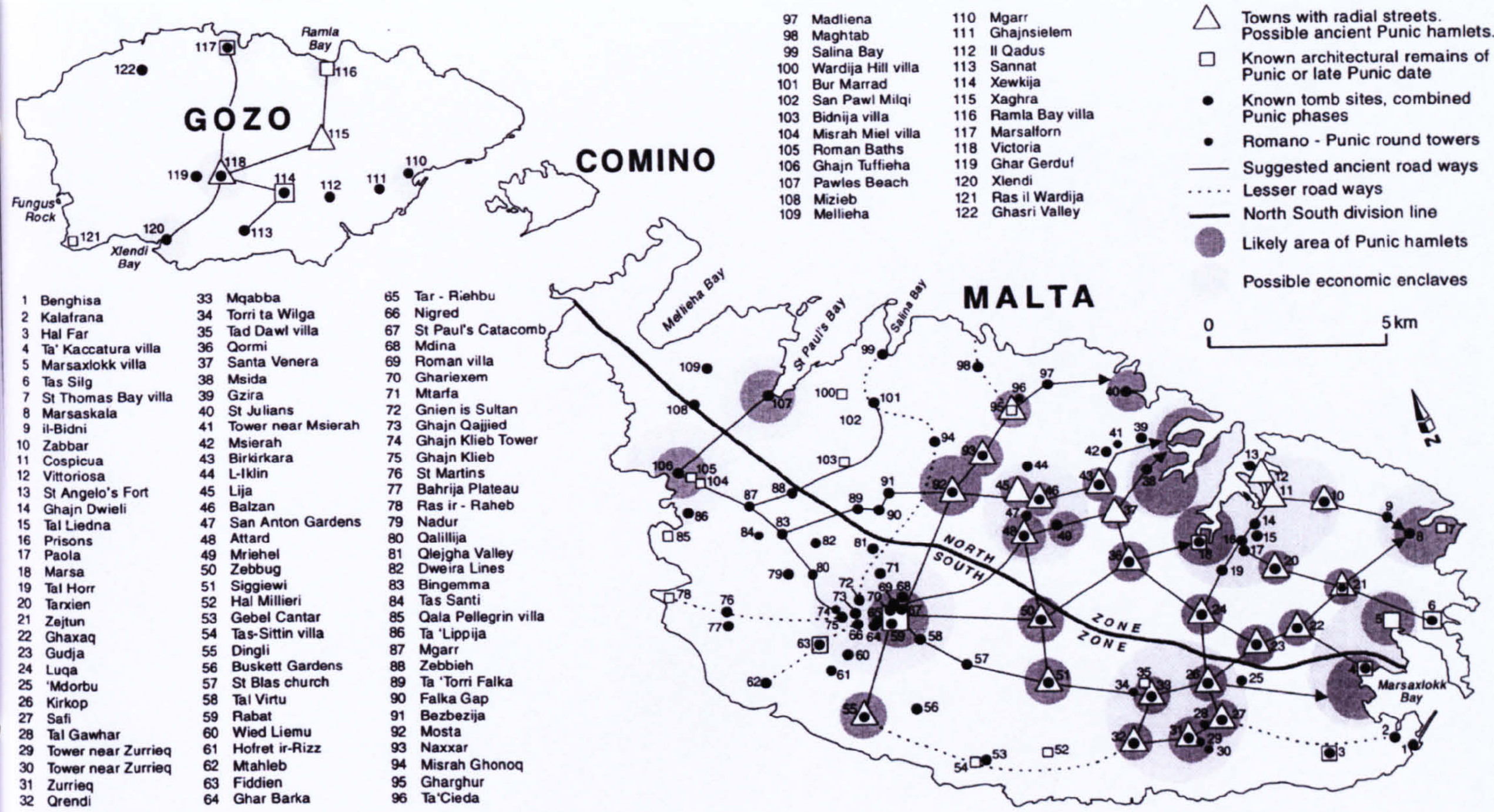


Figure 3.11 Sagona's theoretical road network (Sagona 2002: 681).



Figure 3.12 Detail of early 19th century map showing roads crossing valleys and flood-plains (The Albert Ganado collection).



Figure 3.13 A typical (large) valley close to Mosta with a clear footpath visible on the left hand side of the valley bottom (T. Gambin).



Figure 3.14 Silos subsiding into the sea at the Bay of San Gorg (T. Gambin).

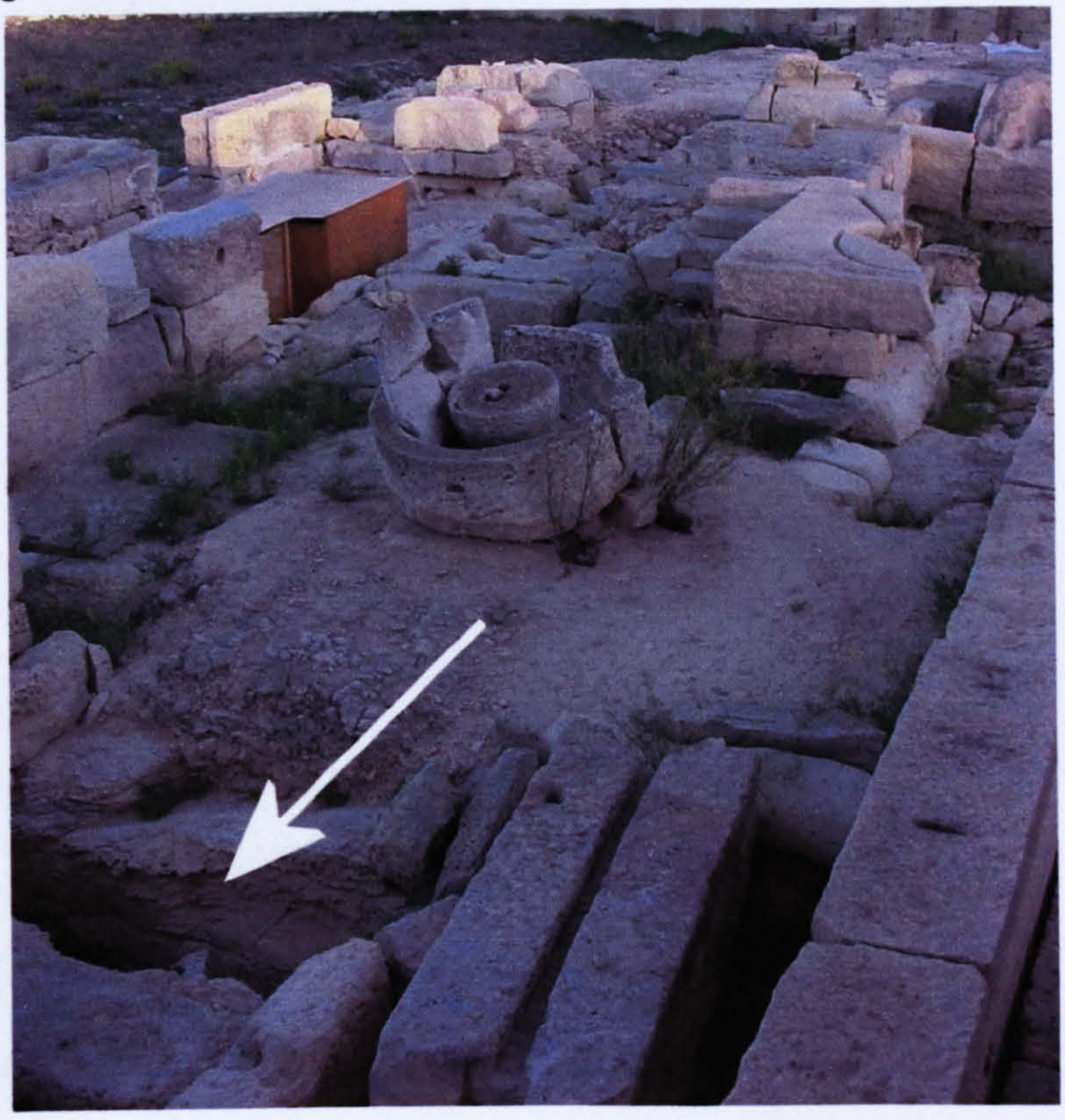


Figure 3.15 Channel under the later Roman farm at San Pawl Milqi (T. Gambin).



Figure 3.16 Silo at the Punico-Roman 'industrial' site at Burmarrad (T.Gambin).

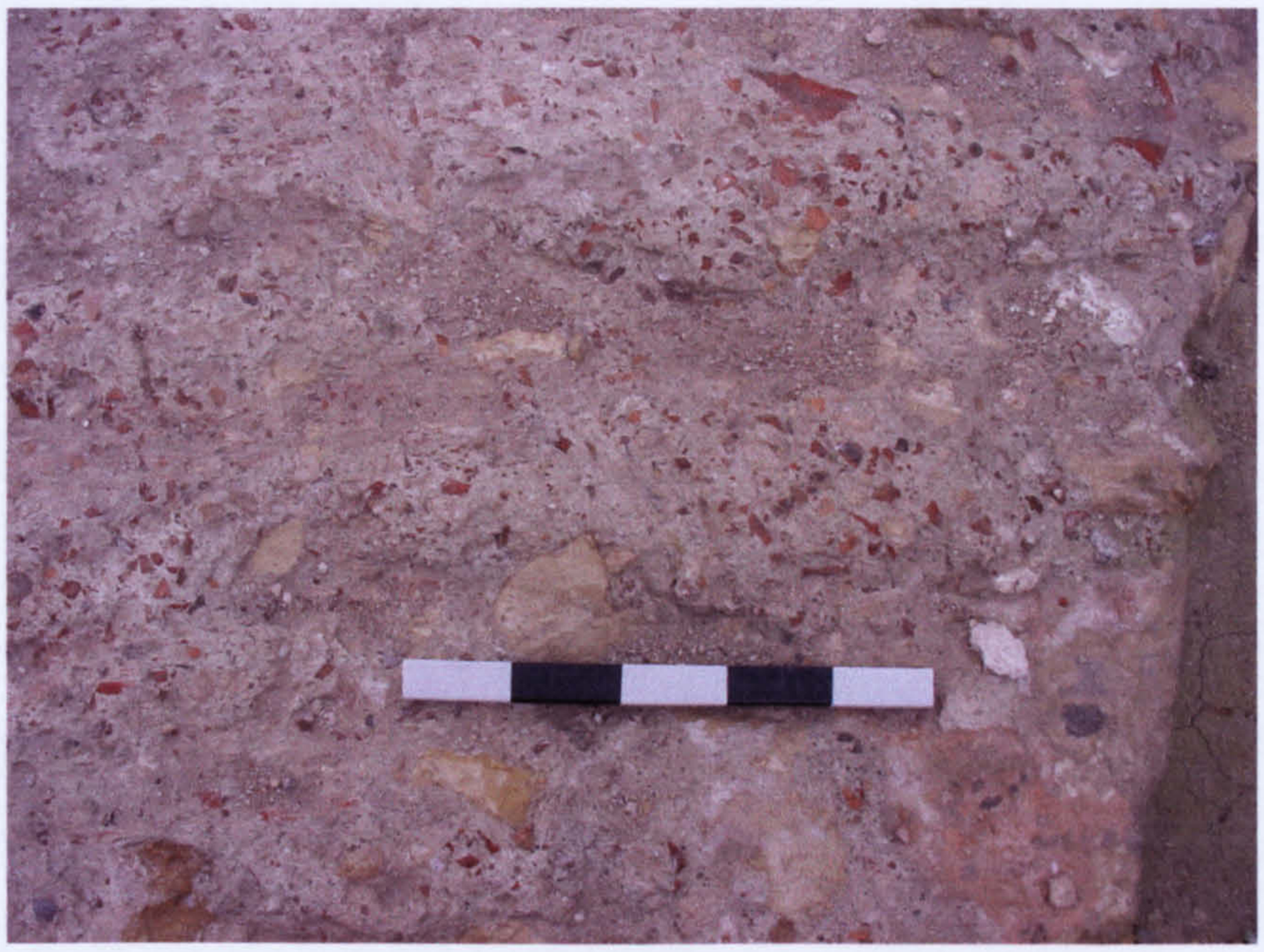


Figure 3.17 Cocciopesto floor at the above-mentioned site. Scale 50cm in both pictures (T. Gambin).



Figure 3.18 Early Mãná form B (Heritage Malta collection, photo by T. Gambin).



Figure 3.19 Local Punico-Roman amphora circa 3rd-4th century BC (Heritage Malta photo collection).



Figure 3.20 Local Punico-Roman amphora circa 3rd-4th century BC (Heritage Malta photo collection).



Figure 3.21 Amphora from wreck site at Xlendi, Gozo (T. Gambin).

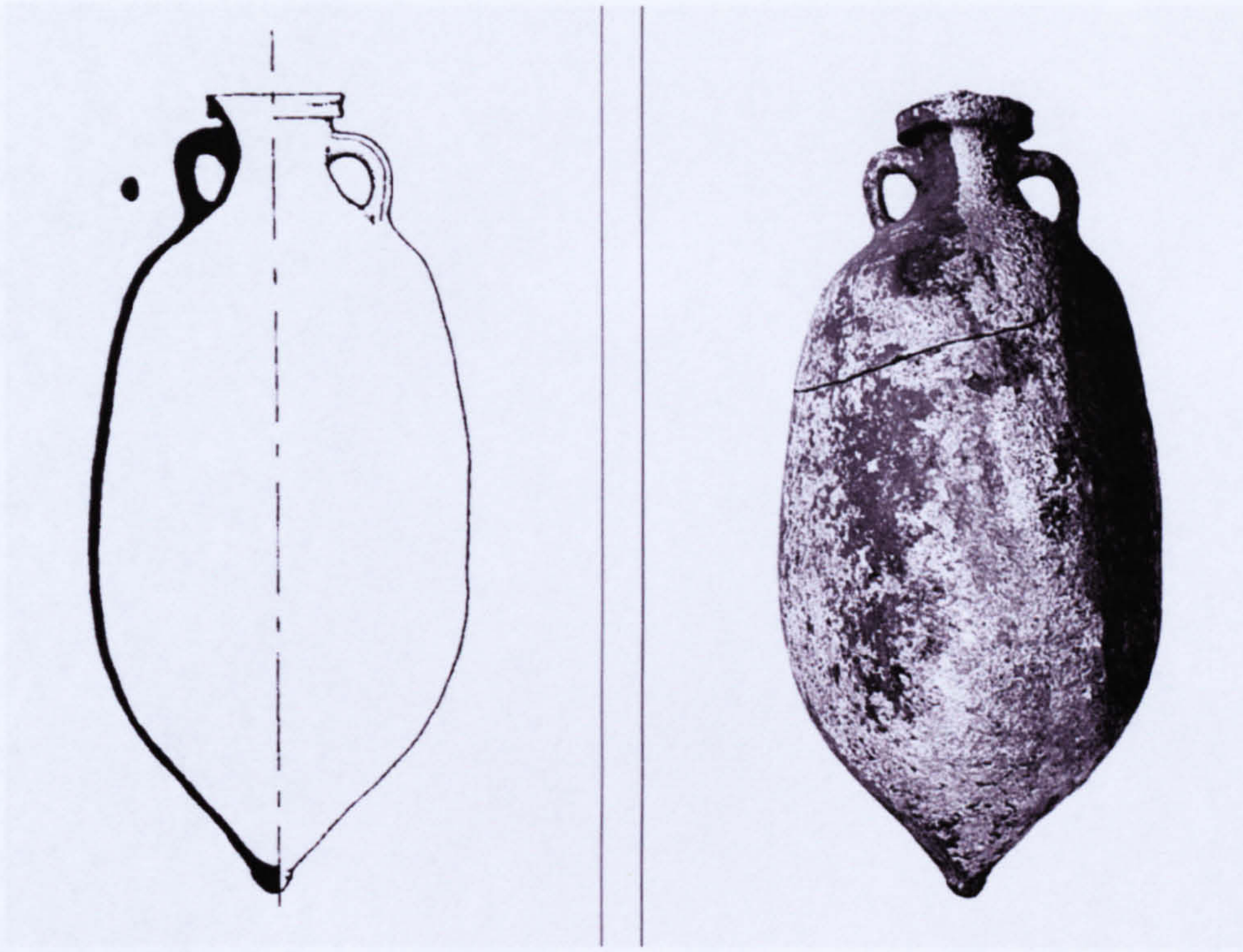


Figure 3.22 Early Tripolitanian amphora from the Camarat Wreck (first century BC) (Scialliano and Sibella 1991: 78).



Figure 3.23 Amphora from the Xlendi wreck site displayed at the Gozo Museum of Archaeology (T. Gambin).

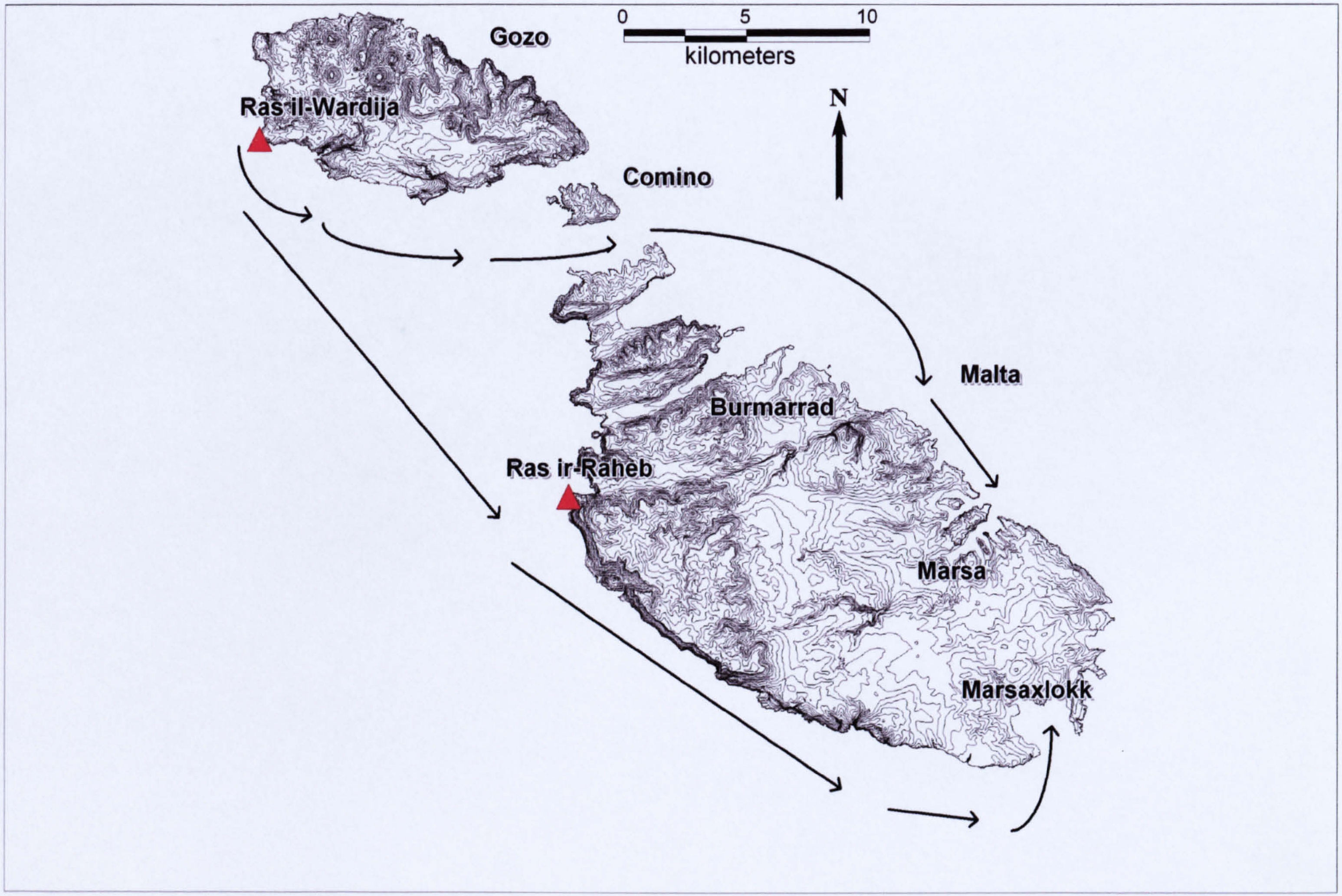


Figure 3.24 The two sailing routes to Malta from Gozo. Note the location of the coastal sanctuaries (T. Gambin).



Figure 3.25 The headland of Ras ir-Raheb seen from seaward (N. Vella).

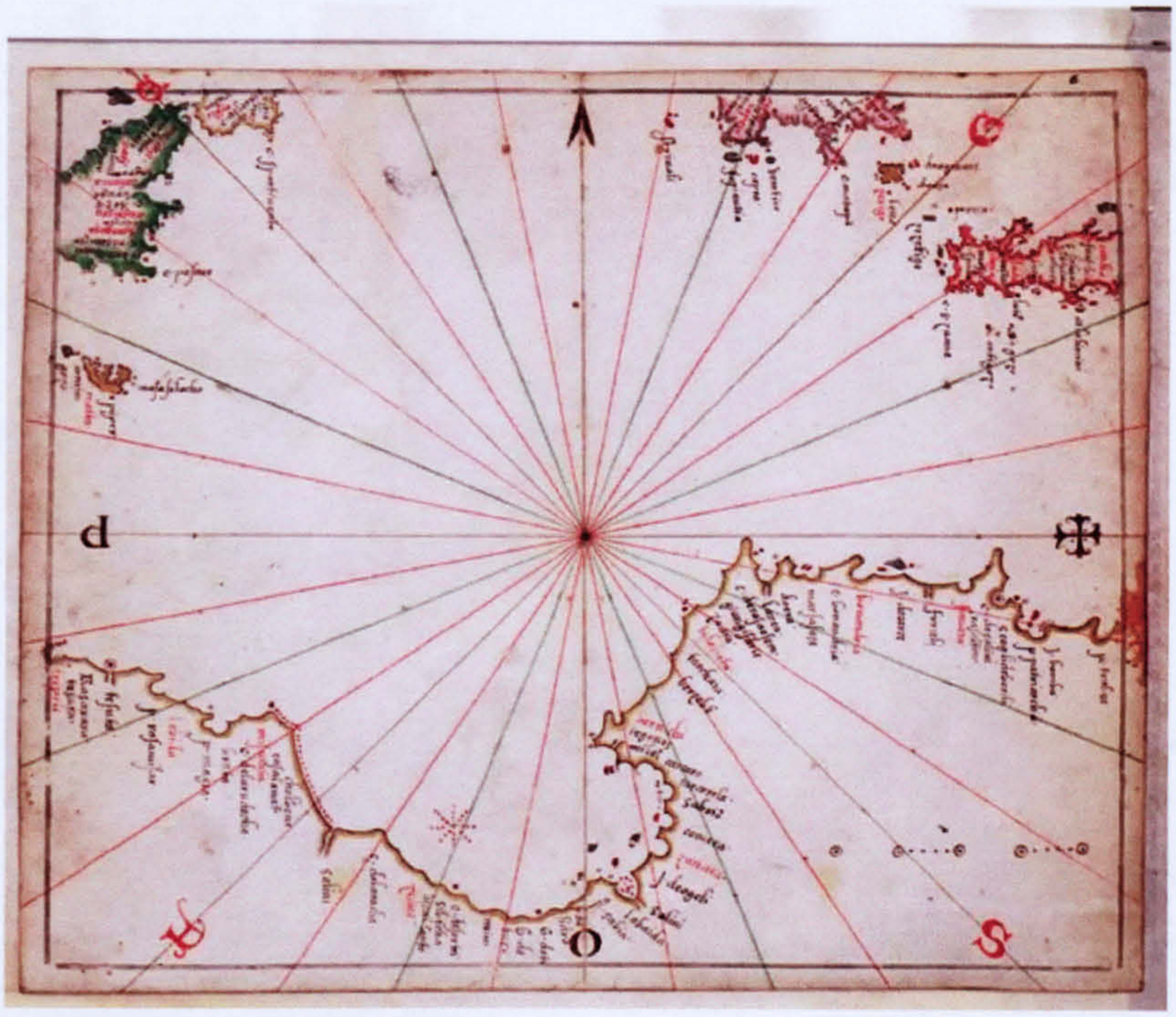


Figure 3.26 Mid-sixteenth century map showing the approaches to the central Mediterranean from the south and the east (National Maritime Museum (Greenwich) collection).

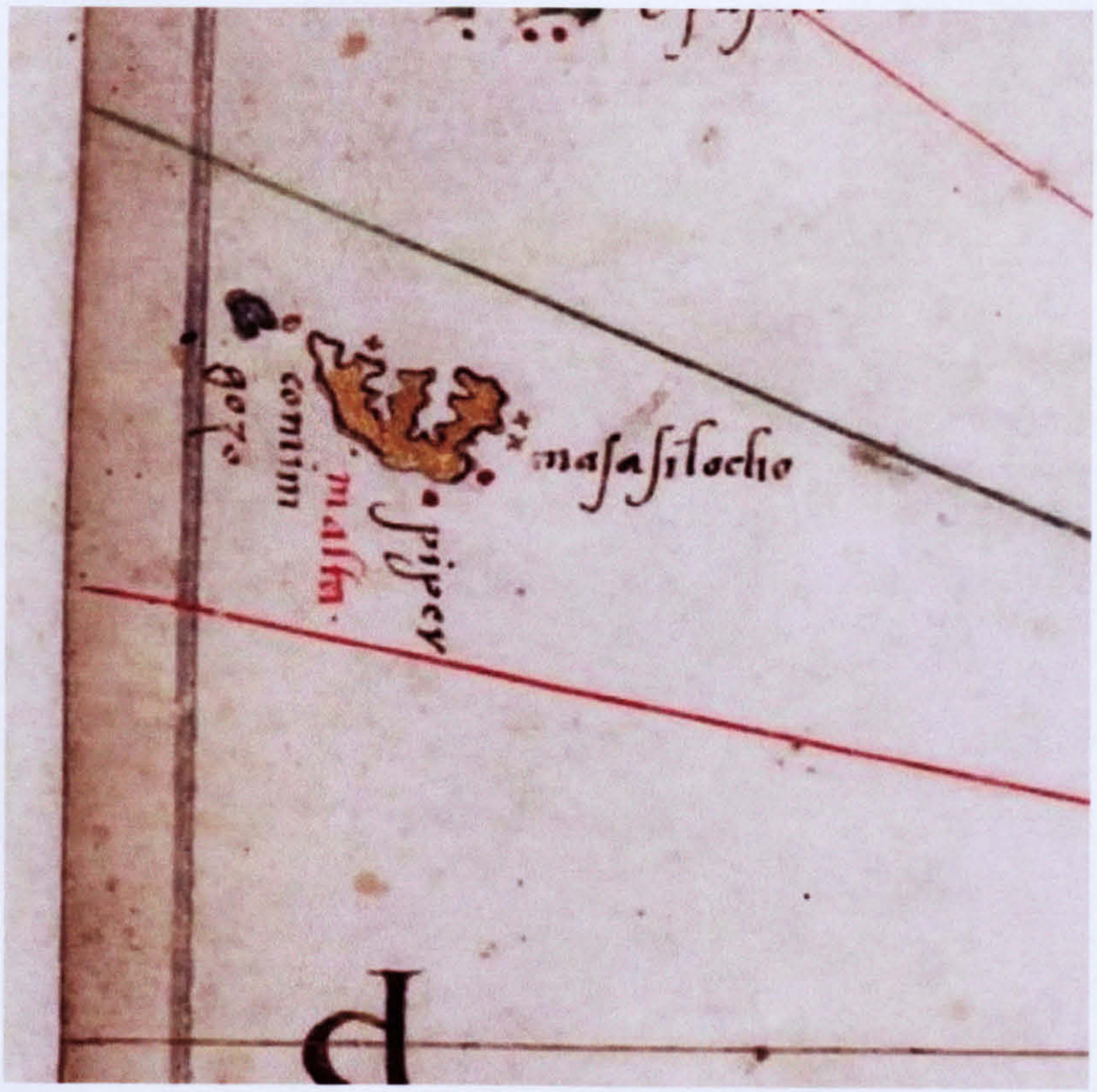


Figure 3.27 Detail of the above map showing the harbour of Marsaxlokk as the only one marked on the islands, highlighting its importance to vessels on this approach.



Figure 3.28 Orographic cloud over Malta as seen on an approach from Sicily (N. Vella).



Figure 3.29 French Creek in the 1800s (Heritage Malta photo collection).

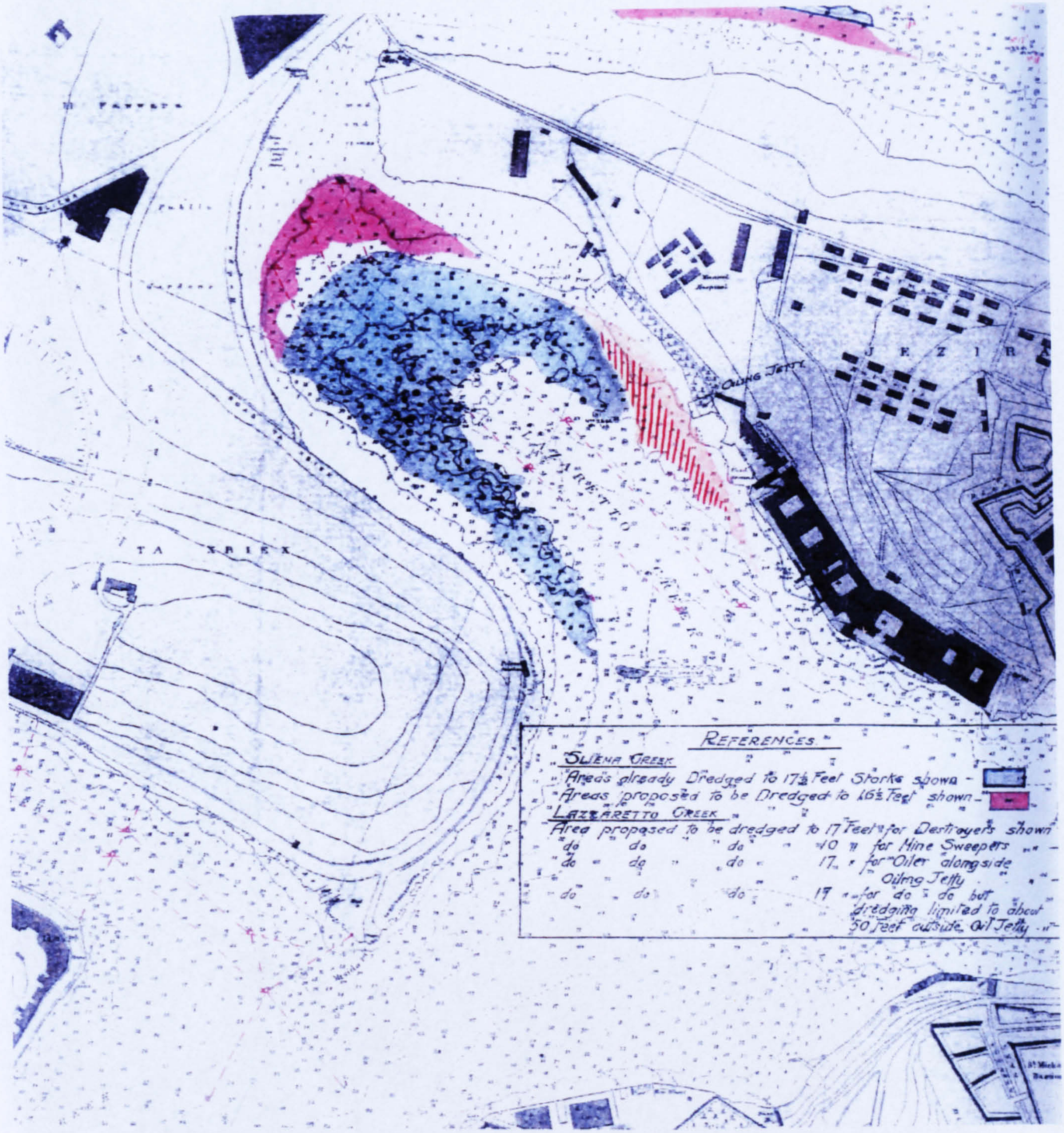


Figure 3.30 Detail of early 20th century map produced by the Admiralty for the purpose of marking areas that were dredged (or were about to be dredged) (collection of the National Museum of Archaeology, Malta).



Figure 3.31 Neck of Lamboglia II amphora from Lazaretto Creek (T. Gambin).



Figure 3.32 Base of ceramic vessel probably from the Punico-Roman period found on the seabed of Lazaretto Creek (T. Gambin).



Figure 3.33 Aerial view of Marsaxlokk fish ponds prior to being demolished. The straight underwater feature is situated to the right of the ponds (MEPA).

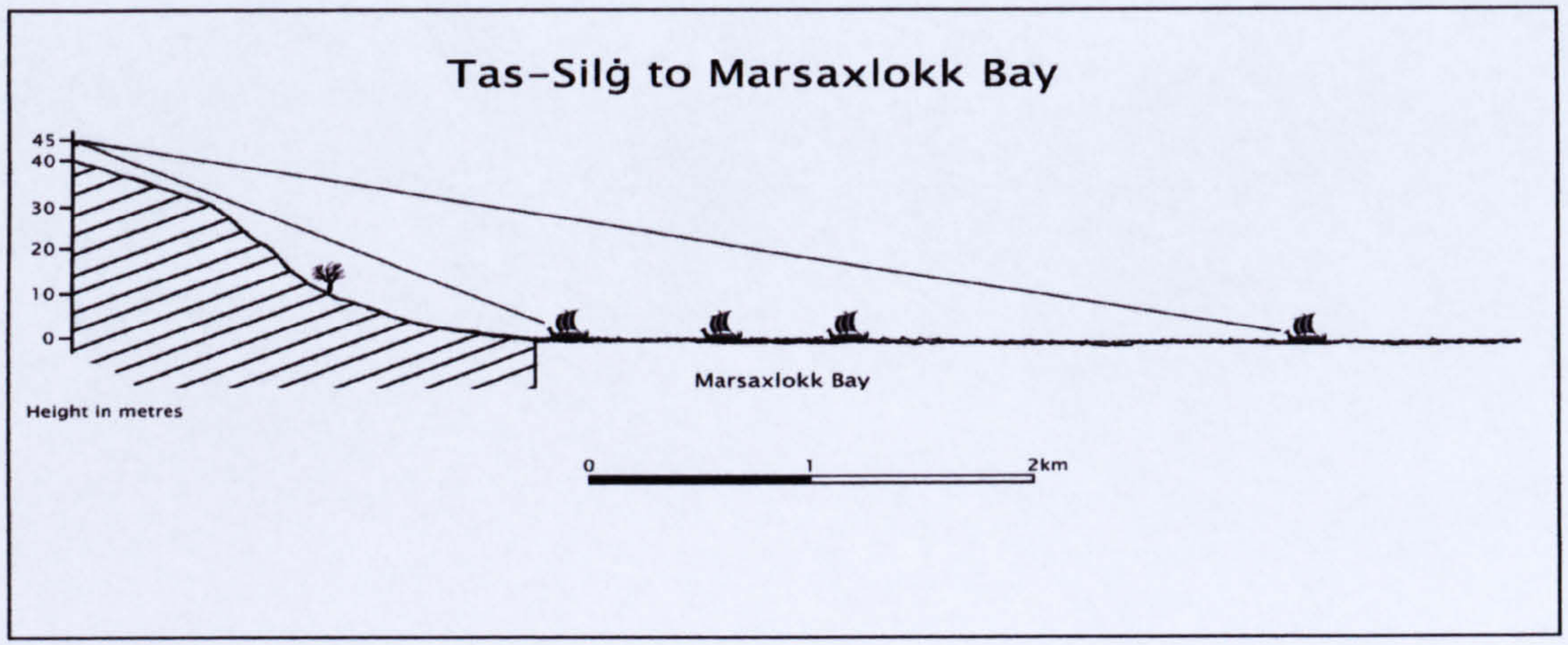


Figure 3.34 'Lines of sight' for the sanctuary at Tas-Silg (T. Gambin).

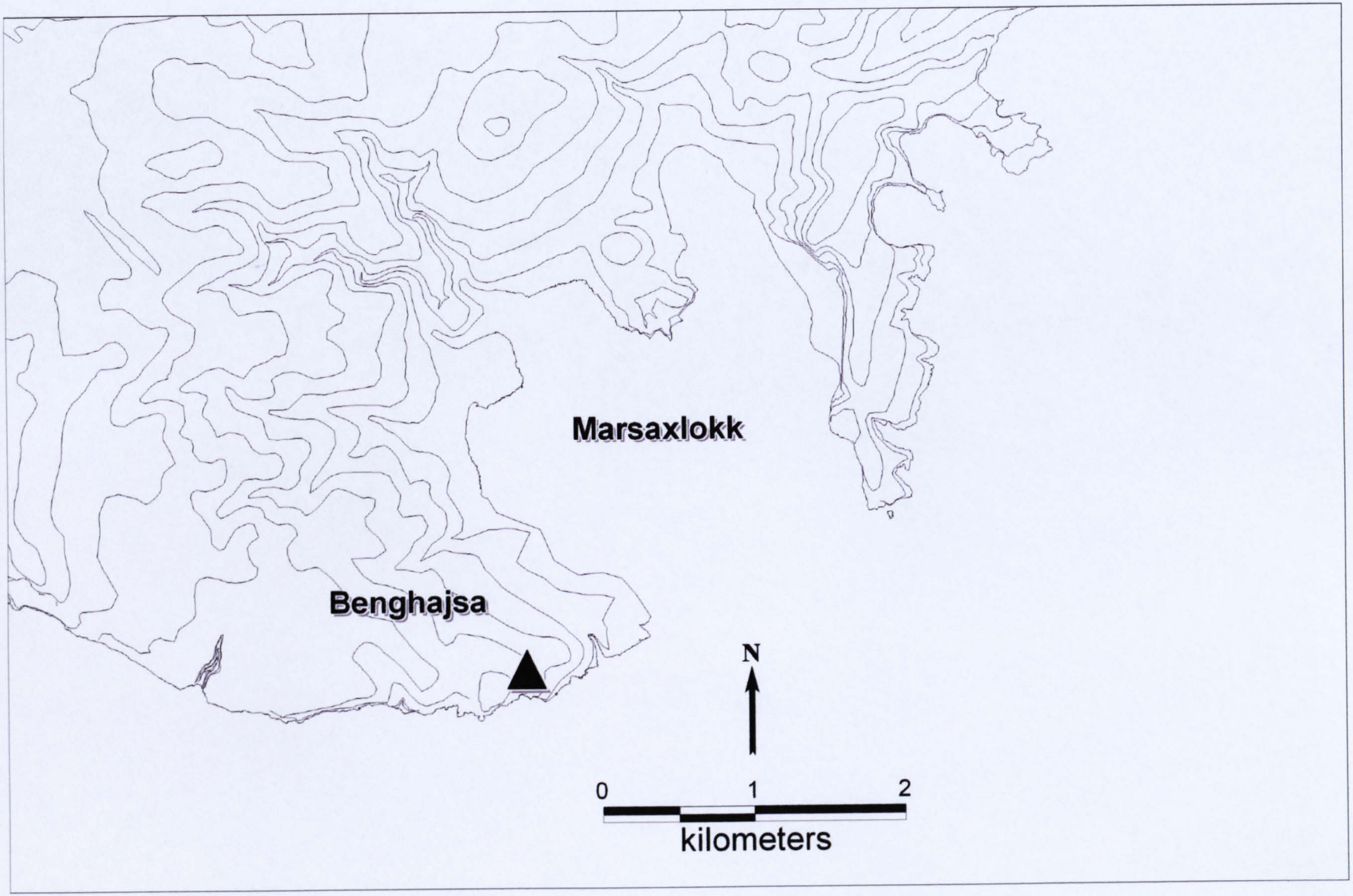


Figure 3.35 The 'tower' at Benghajsa close to the entrance to the harbour complex of Marsaxlokk (T. Gambin).



Figure 3.36 Mosiac from Tunisia with typical Mediterranean fish in the background (Bardo museum collection, photo by T. Gambin).

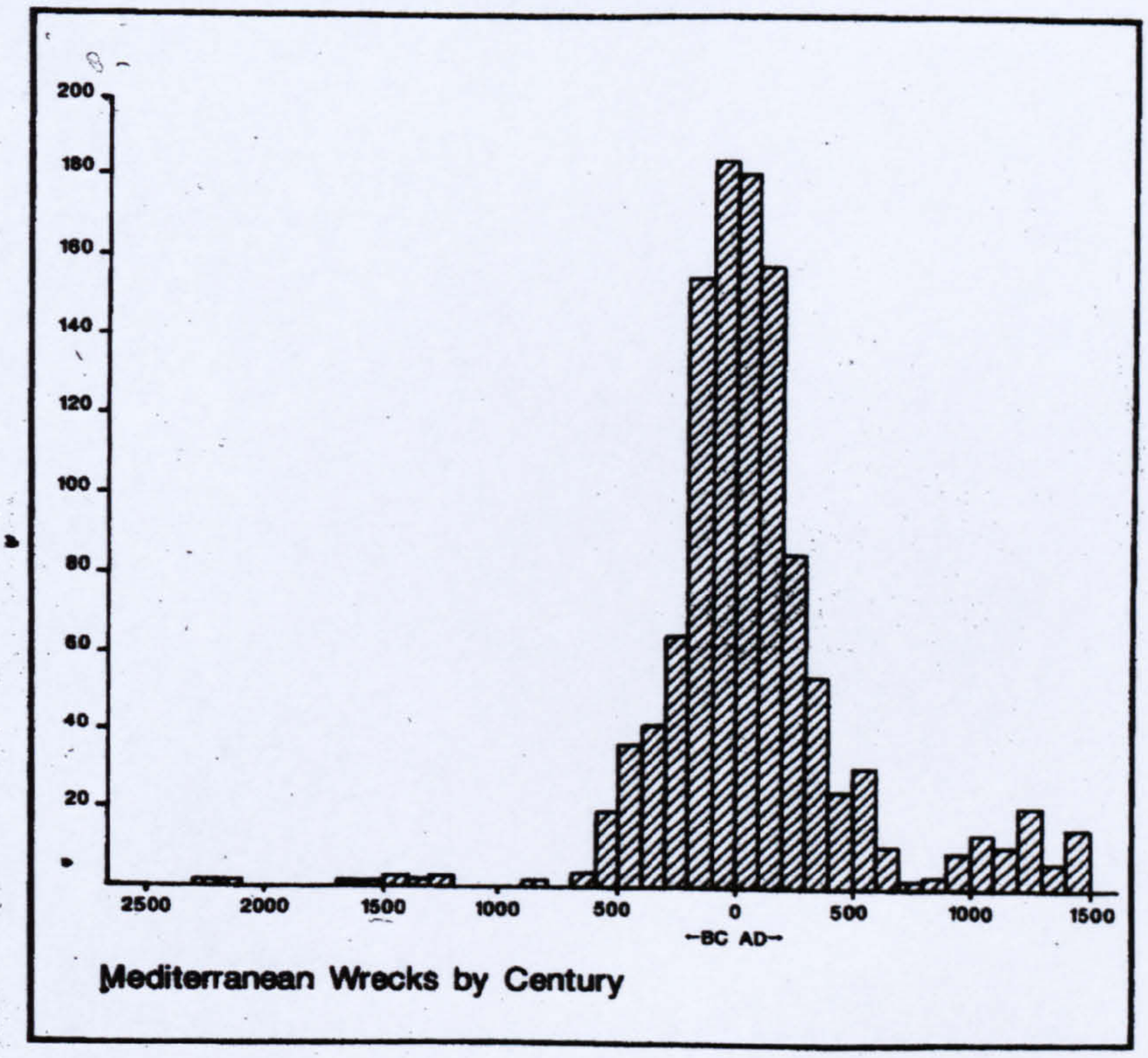


Figure 3.37 Parker's graph illustrating the number of wrecks in the Mediterranean through time (Parker 1992).



Figure 6.38 Amphorae placed to form an 'insulation' level under a Roman *domus* at Rabat (the Heritage Malta photo collection).

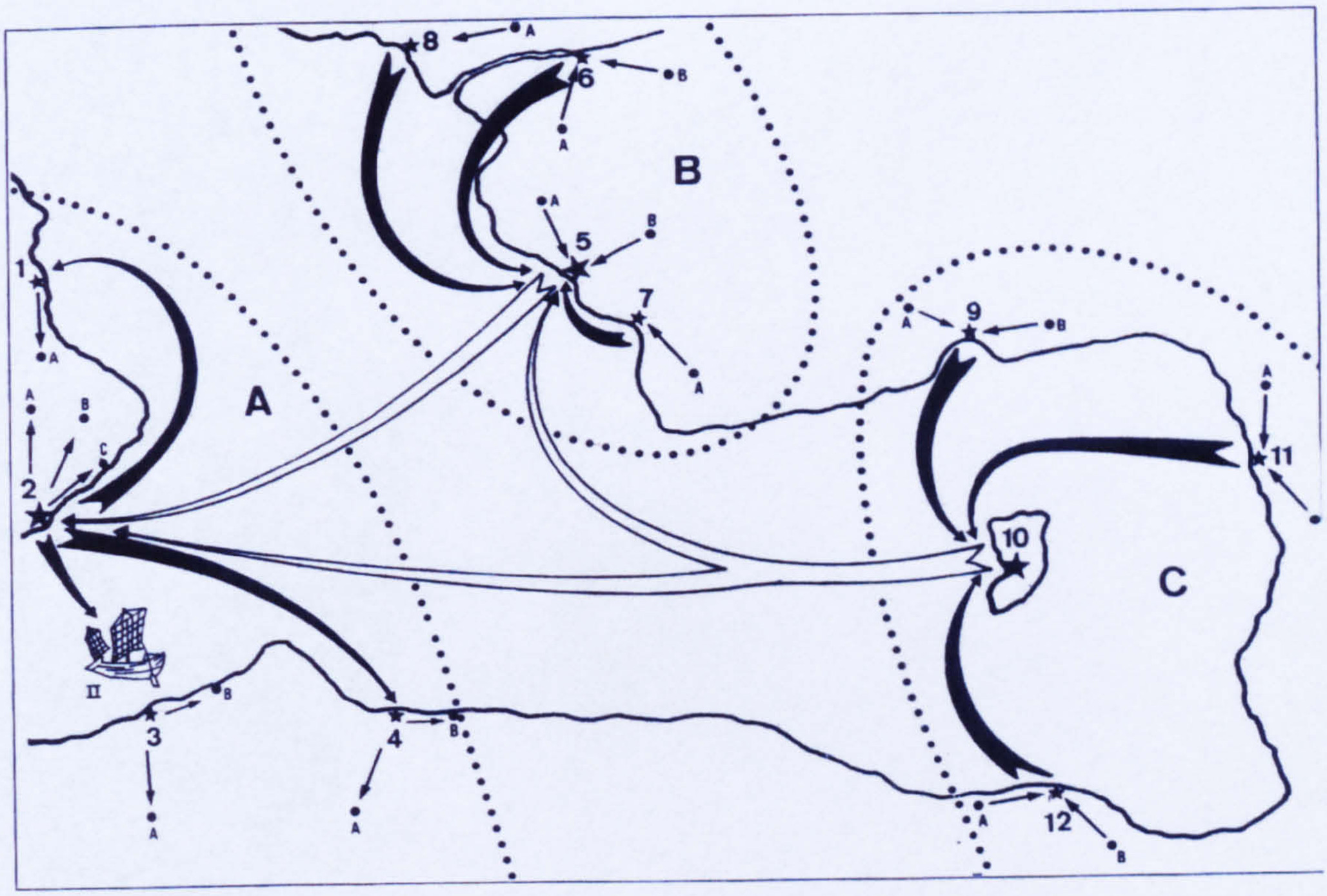


Figure 3.39 Nieto's thematic representation of transshipment zones (Nieto 1997).

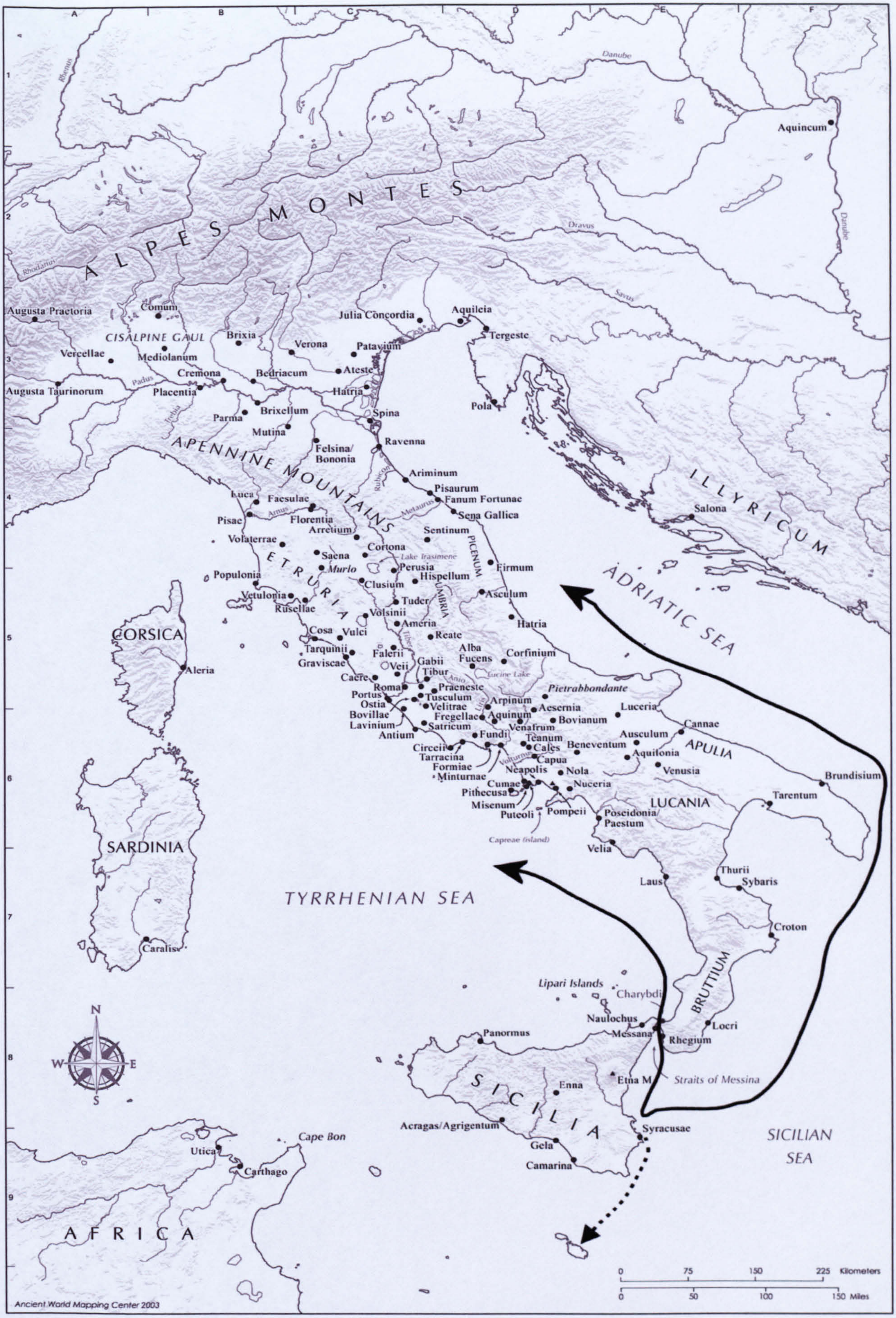


Figure 3.40 A possible route for the transshipment of goods to Malta from the Adriatic and the western coast of Italy (T. Gambin).

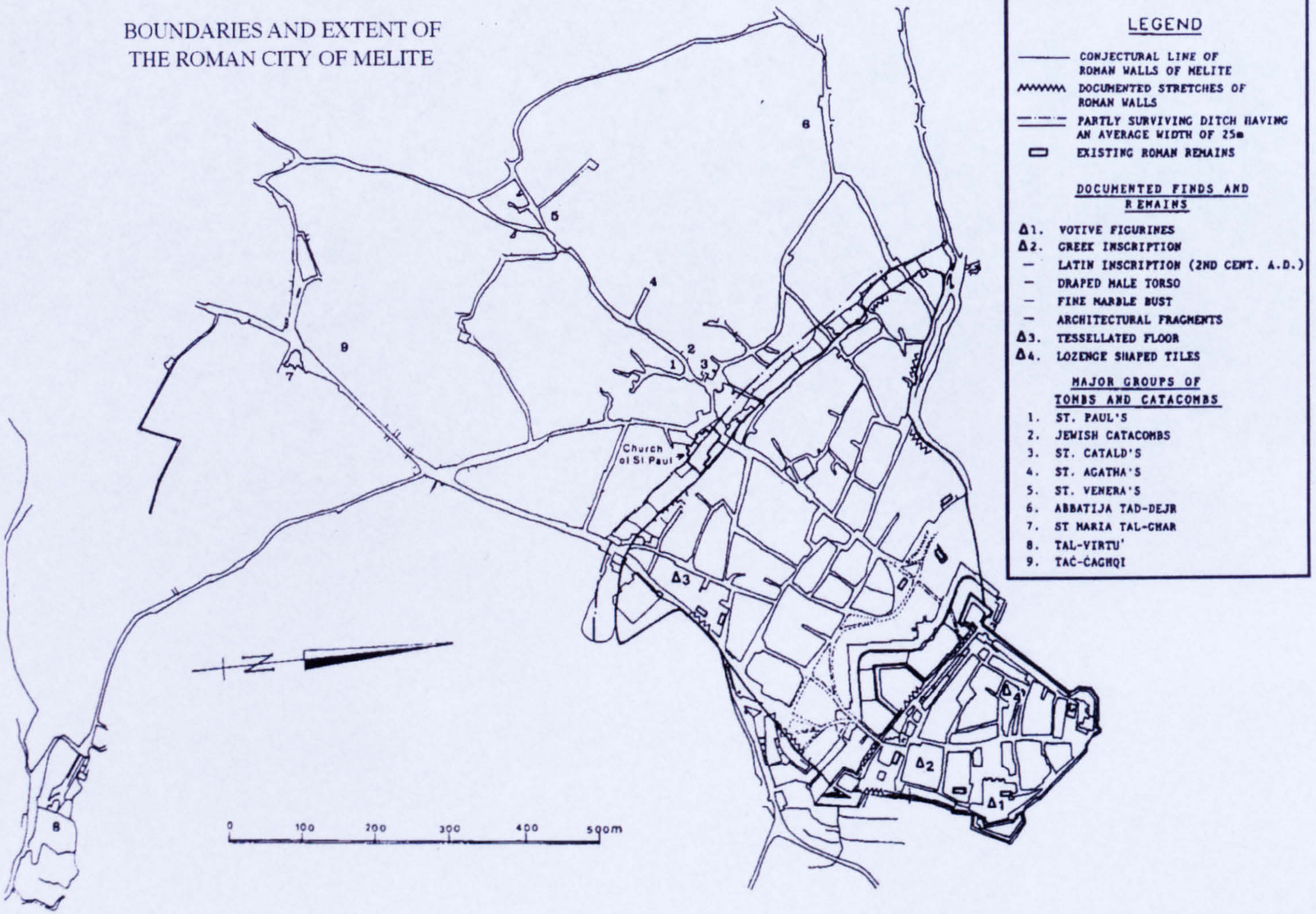
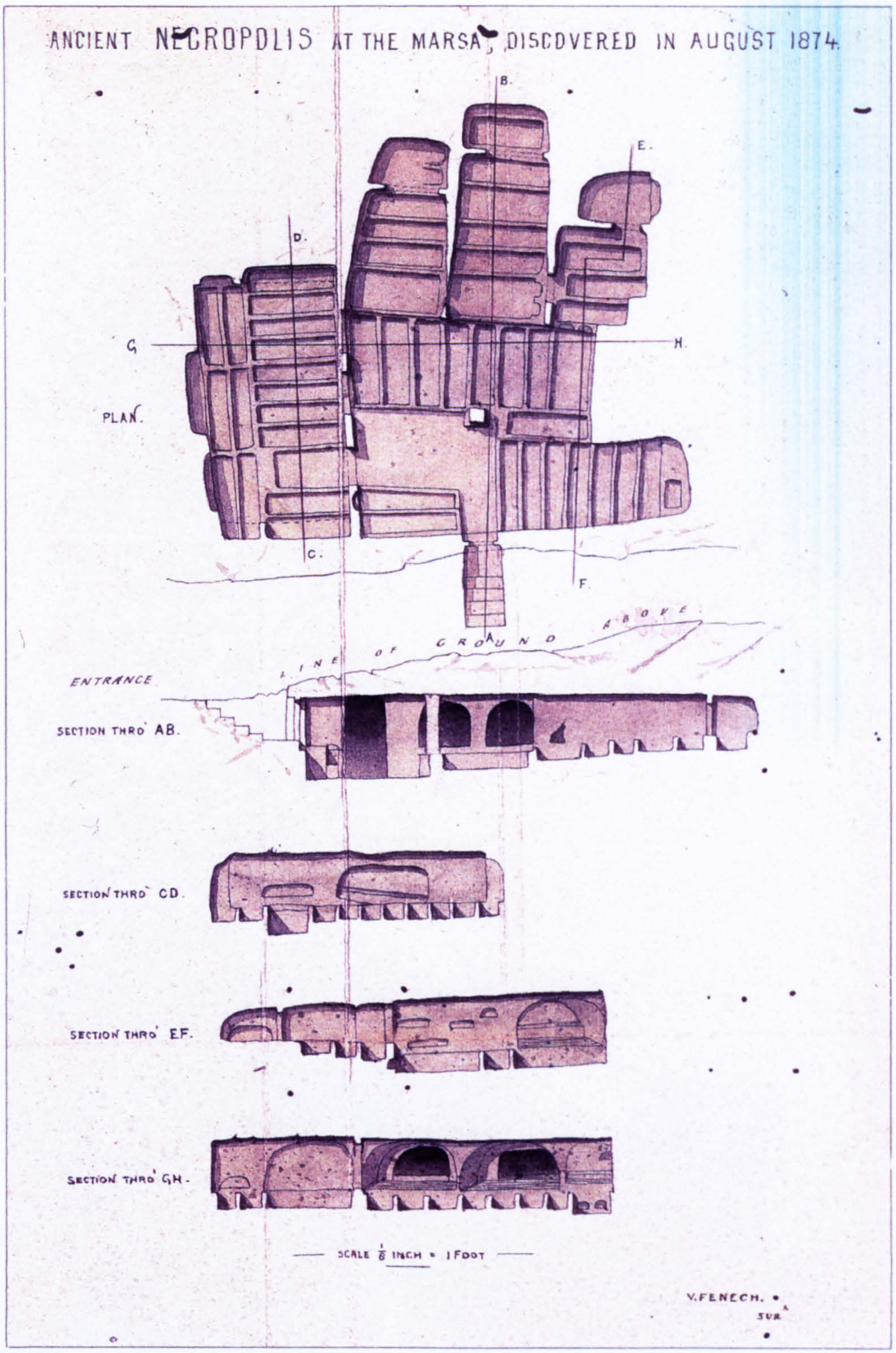


Plate 1.2 *Roman Melite. Plan drawn by Paul C. Saliba. Amended after Bonanno 1995.*

Figure 4.1 An outline of ancient Melite with various archaeological sites in the environs (after Buhagiar and Fiorini 1996).



Drawing of a late Roman hypogeum discovered on the side of Jesuits' hill, Marsa, in 1874. After C. A. Wright, Discovery of an ancient necropolis at the Marsa. *The Malta Times and United Services Gazette*, 5 Sept. 1874.

Disegno di un ipogeo tardoromano scoperto su un lato del Colle dei Gesuiti a Marsa nel 1874. Da C.A. Wright, "Discovery of an ancient necropolis at the Marsa", in The Malta Times and United Services Gazette, *5 settembre 1*

Figure 4.2 Roman burial complex discovered in Kortin, Marsa (The Malta Times and United Gazette, September 1874).



Figure 4.3 One of the tombs in the Salina hypogea (Heritage Malta photo collection).



Figure 4.4 Dates inscribed outside the Burmarrad hypogea (T. Gambin).



Figure 4.5 The entrance of one of the tombs within the Burmmarrad hypogea (T. Gambin).



Figure 4.6 A tomb within the Burmarrad hypogea, probably excavated into an existing decorative feature (T. Gambin).

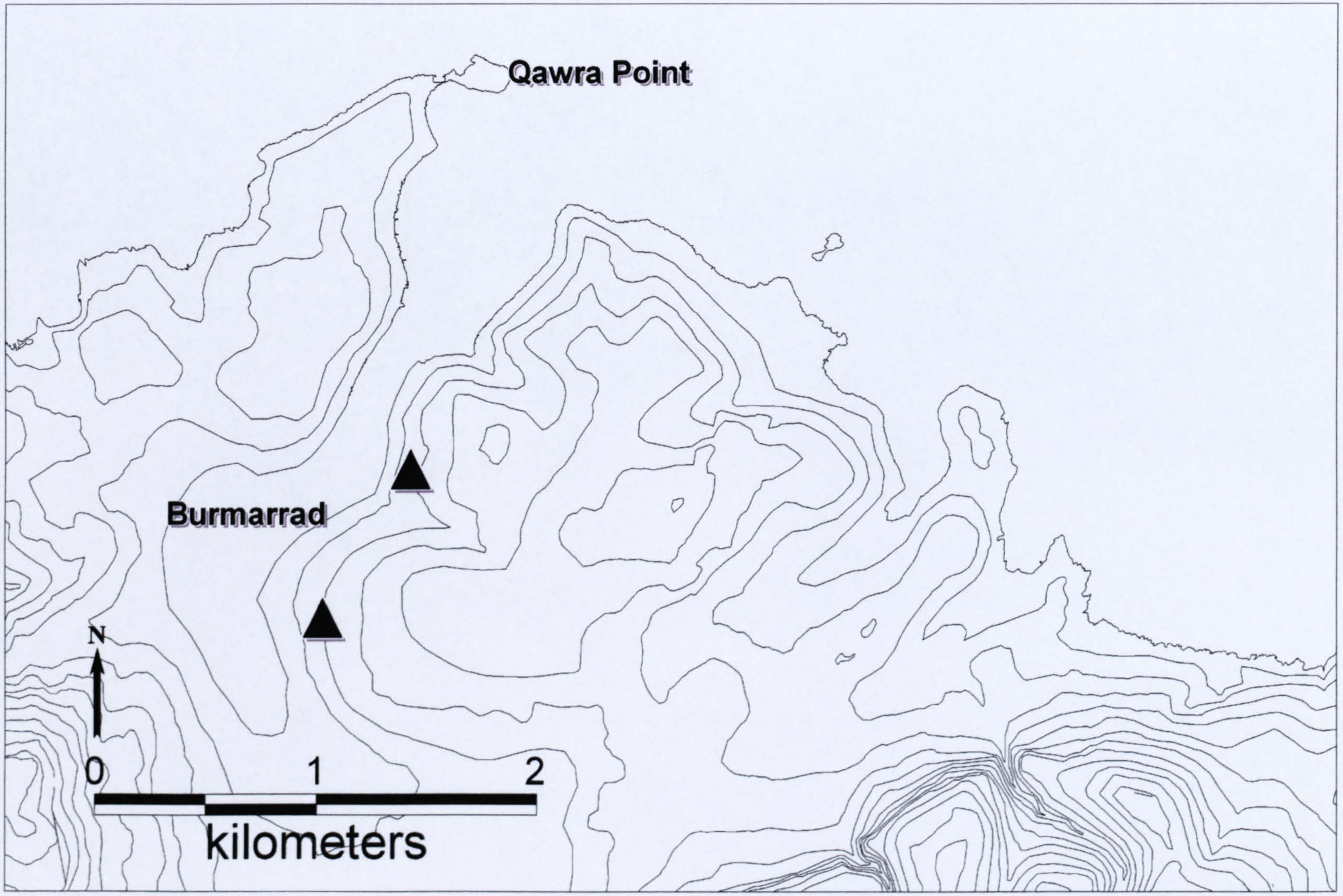


Figure 4.7 The location of the Salina (triangle to the north) and Burmarrad hypogea (triangle to the south) around the Burmarrad harbour (T. Gambin).



Figure 4.8 General view of the excavations at the 'villa marittima' at Marsaxlokk (Heritage Malta photo collection).



Figure 4.9 Another view of the excavations at the same site (Heritage Malta photo collection).



Figure 4.10 A vat visible in the undergrowth of an unexcavated Roman farm at Bidnija (T. Gambin).

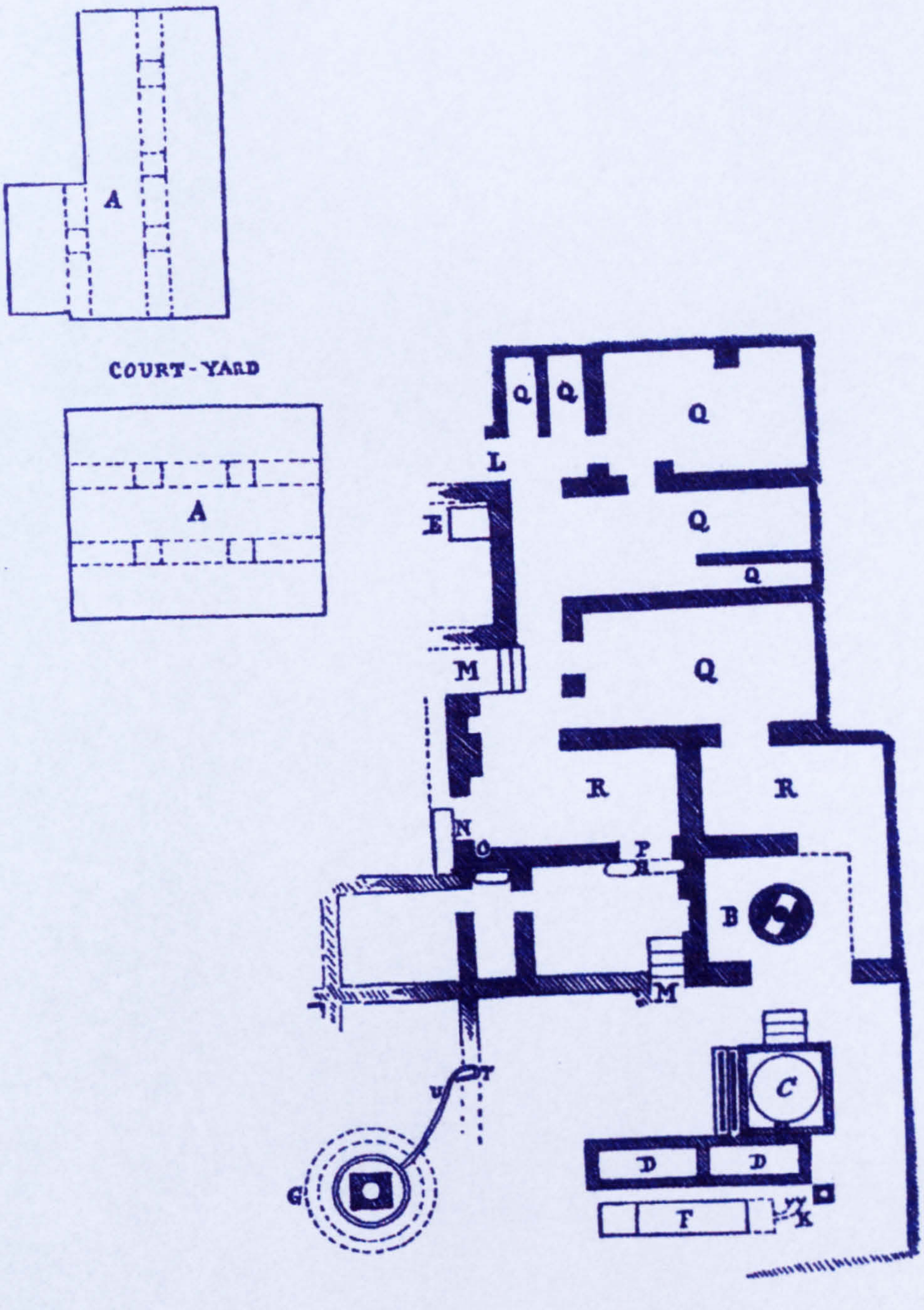


Figure 4.11 Plan of a Roman farm at Tad-Dawl excavated in the late nineteenth century (after Caruana 1888).

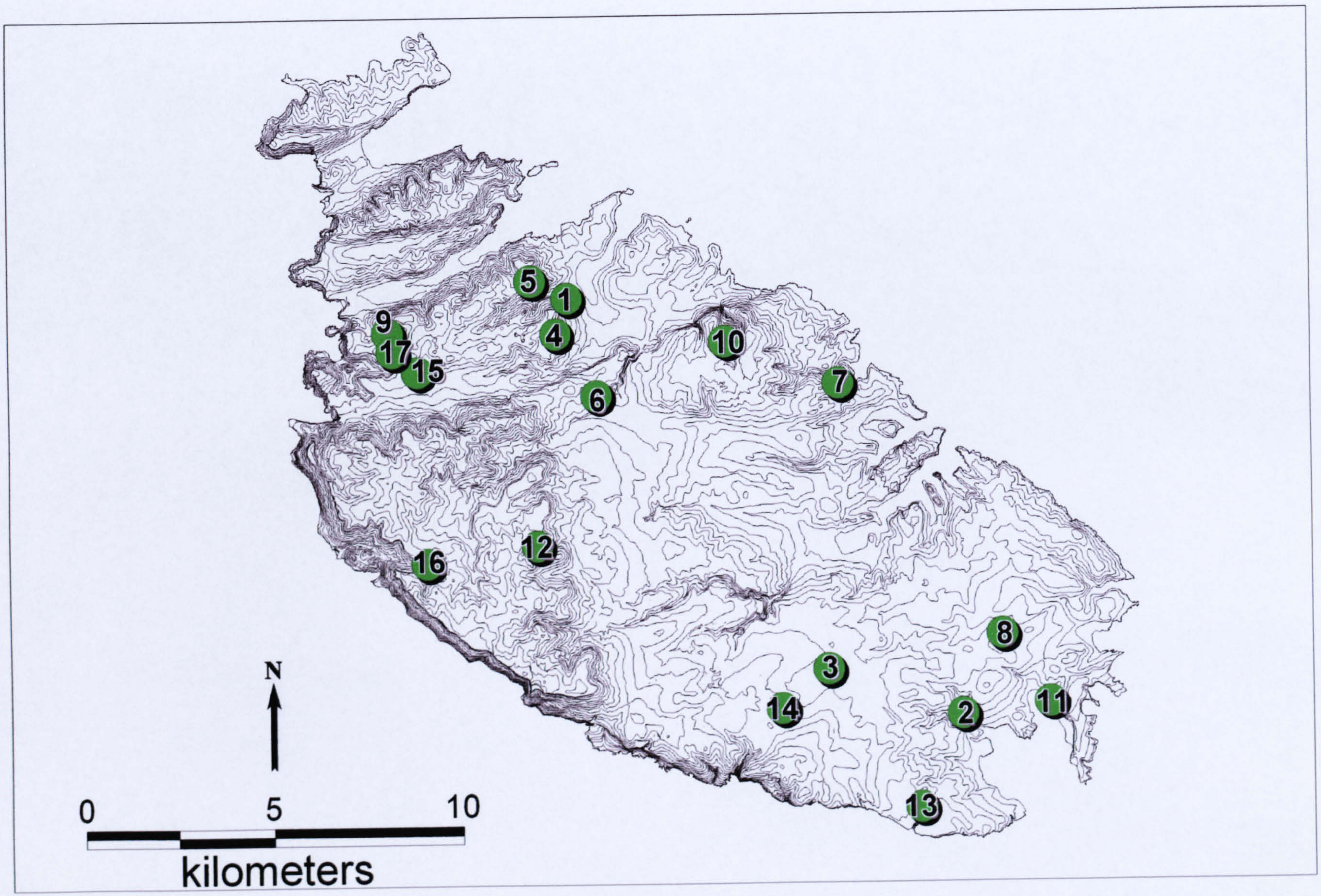


Figure 4.12 Map illustrating the location of olive oil farms on Malta. Numbers correspond to those on **Table 7.1** (T. Gambin).

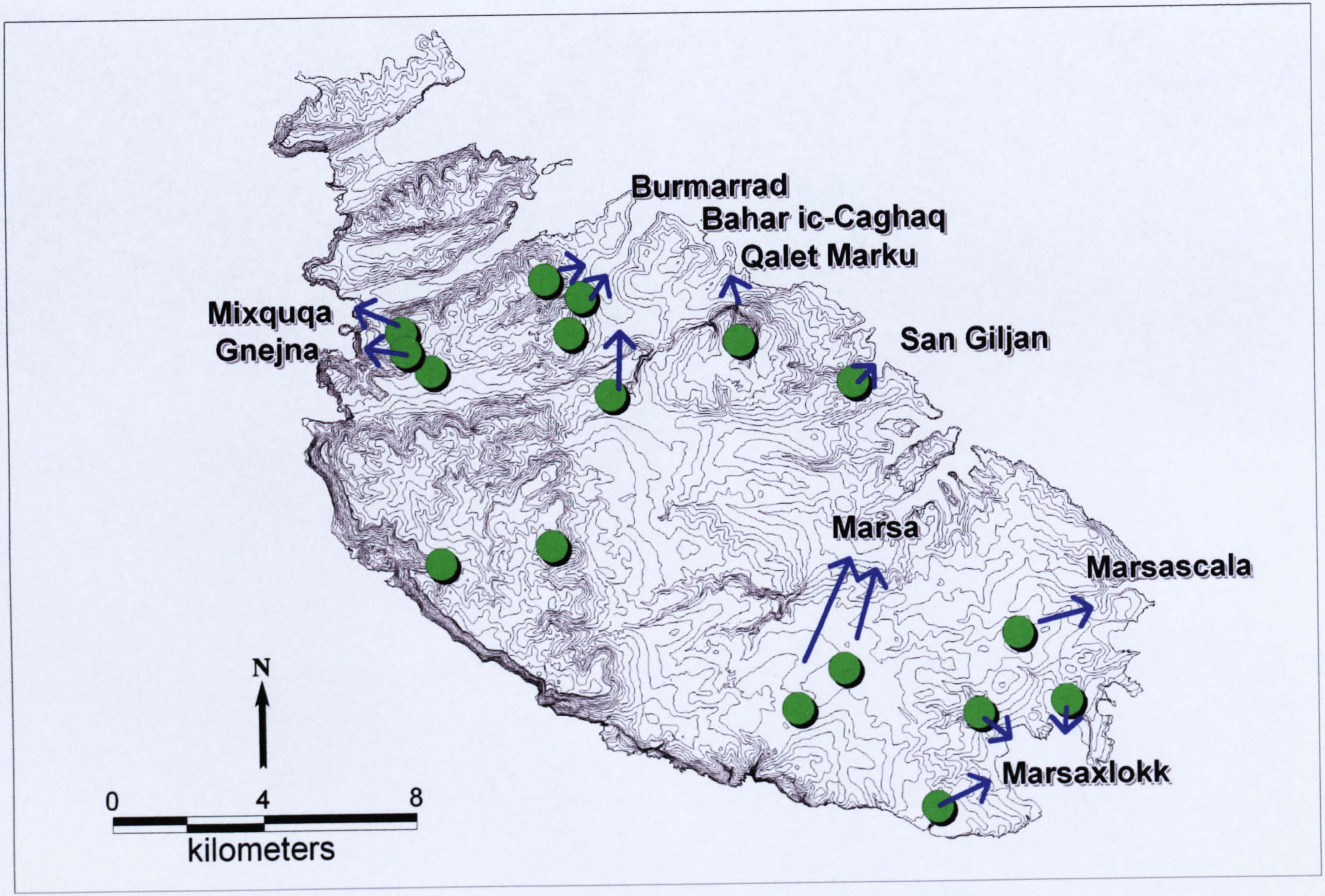


Figure 4.13 Satellite harbours and/or anchorages for the various olive farms (T. Gambin).



Figure 4.14 Old olive trees growing near the site of the unexcavated villa at Bidnija (T. Gambin).

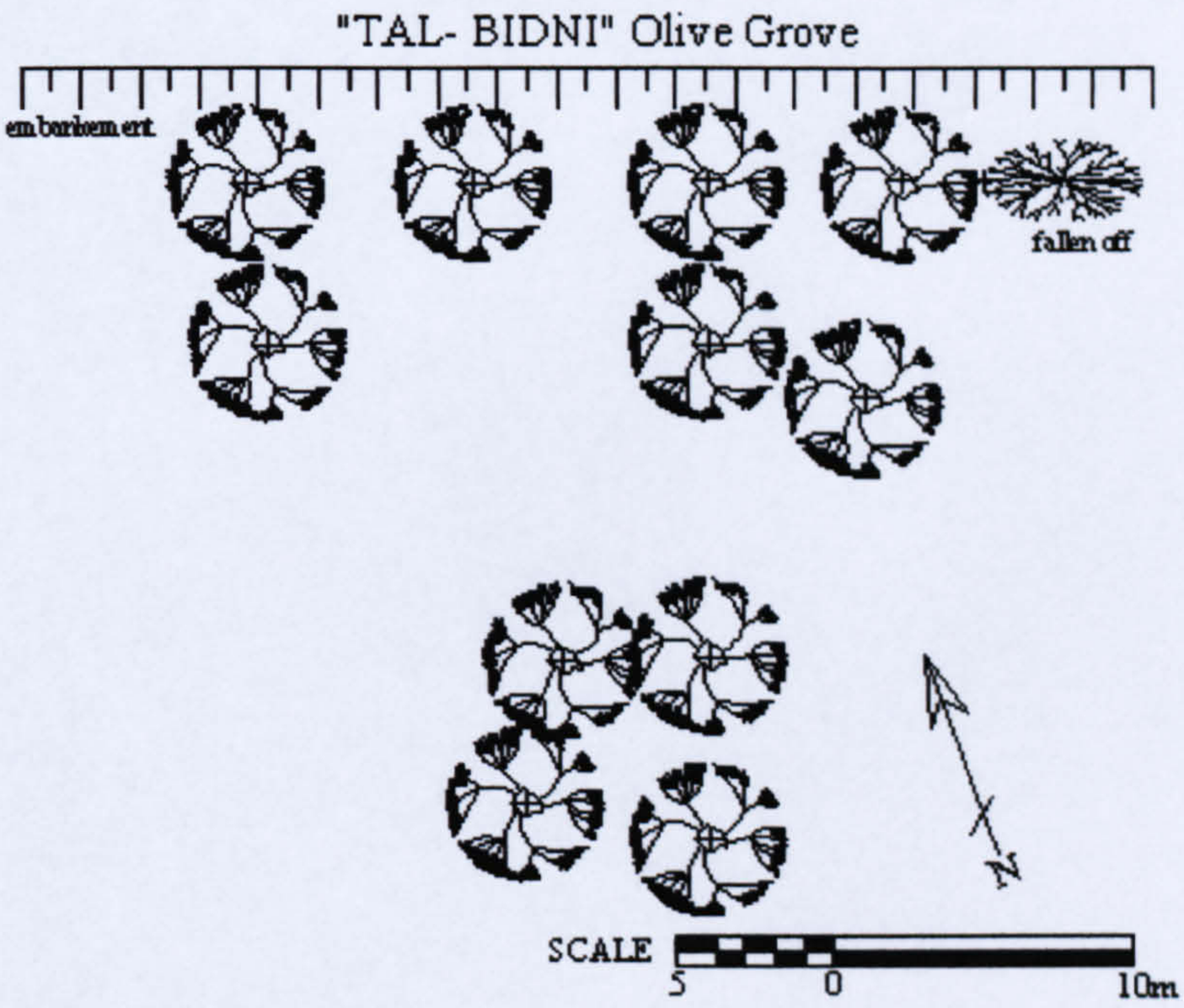


Figure 4.15 Plan of grove at Bidnija (T. Gambin and N. Vella).

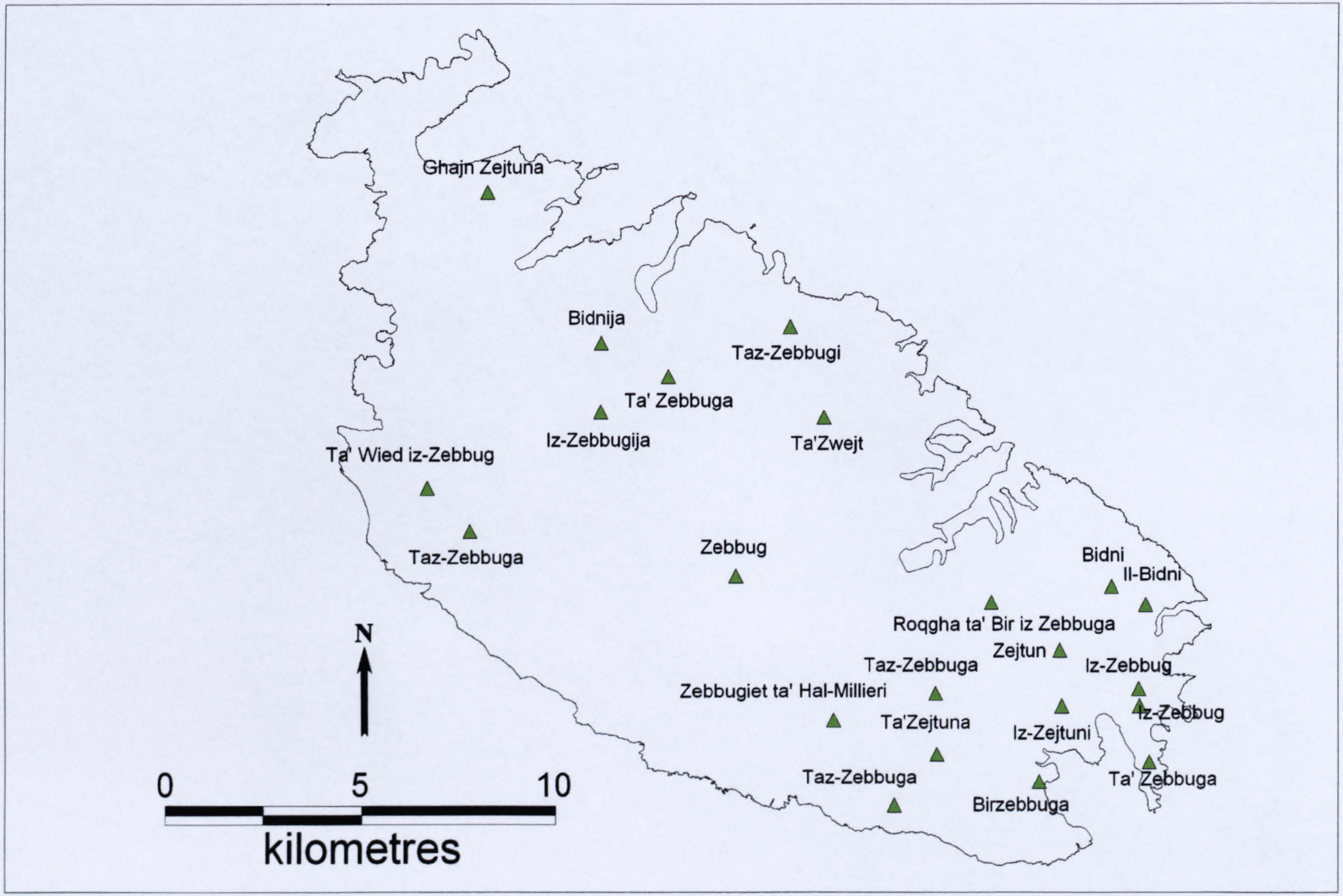


Figure 4.16 Olive-related place names on Malta (T. Gambin).

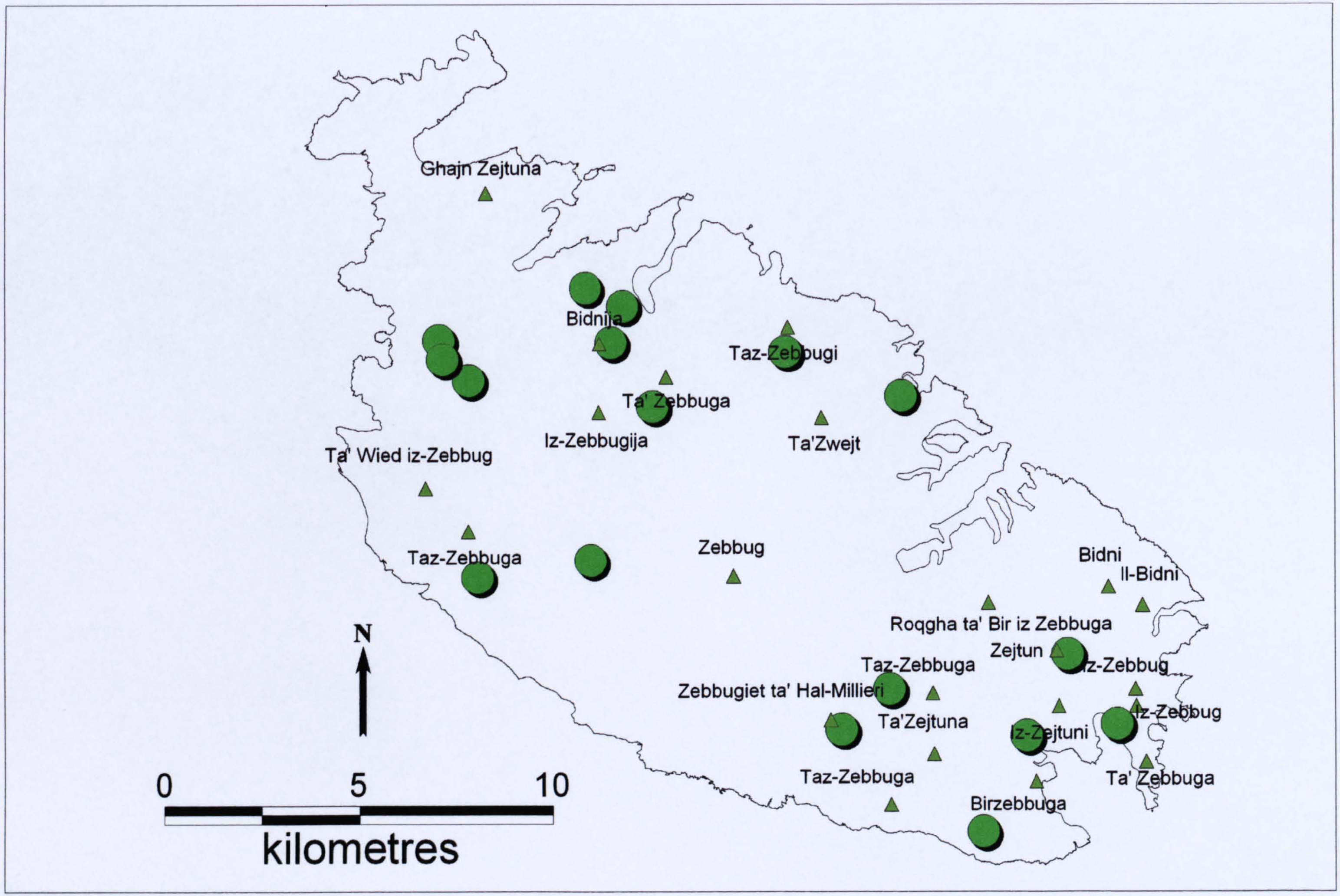


Figure 4.17 Olive-related place names plotted alongside sites where Roman oil producing equipment was found (T. Gambin)

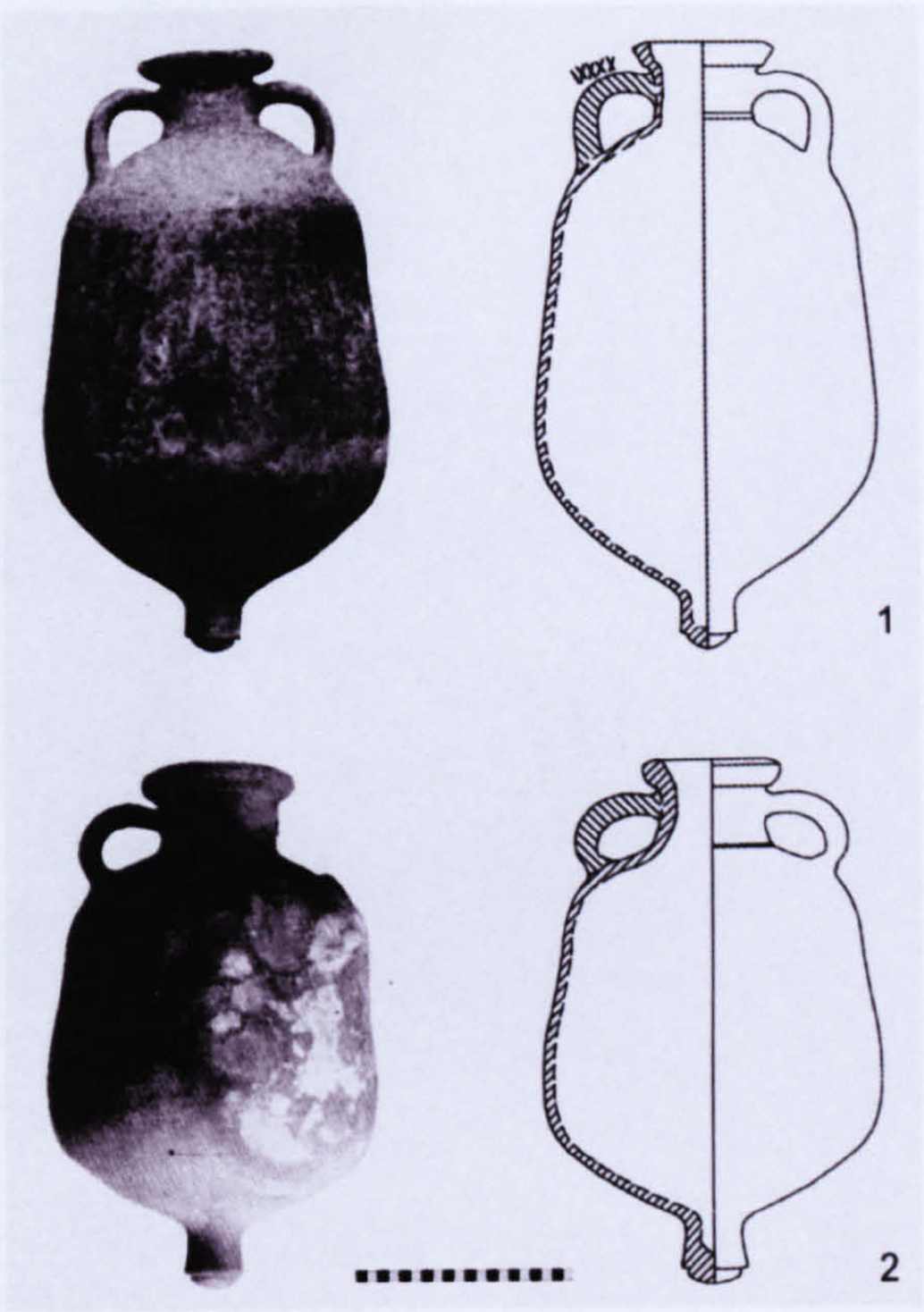


Figure 4.18 Amphorae from San Pawl Milqi identified as Malta type 2 by Bruno (after Bruno 2004)



Figure 4.19 A similar amphora
from a burial context
(after Caruana 1899)

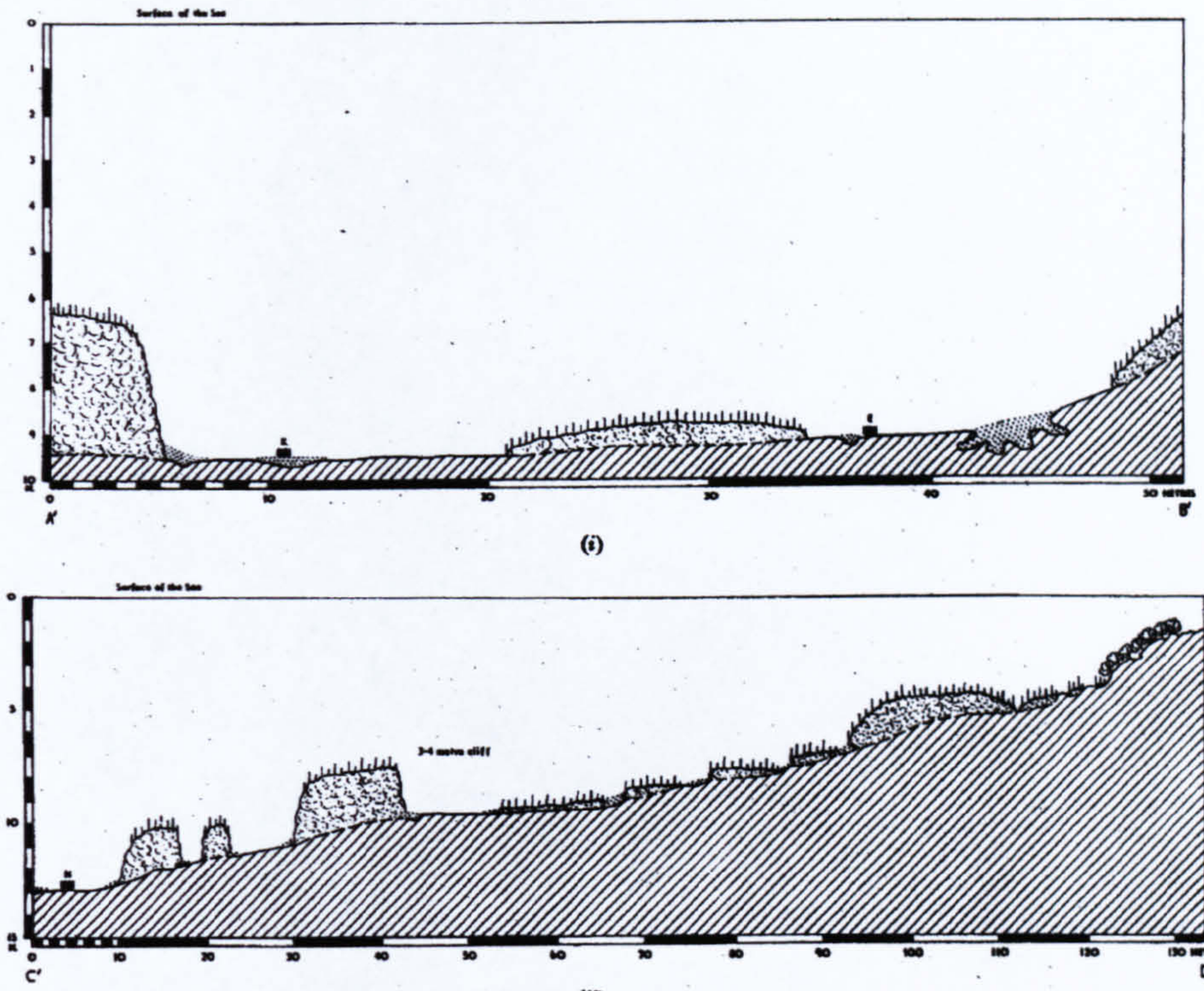


Fig. 3 (i) Section A'-B' through 'Haddow's Valley'. (ii) Section C'-D' through wreck-area in an easterly direction from area-marker 'N' to Rocks Awash (drawing by F. S. Mallia).

KEY

Dead rhizomes of Posidonia.

Live Posidonia *grass.*

Rock.

Sand.

Area-marker (dummy mine).

KEY to Fig. 2 opposite Scale: grid squares = 10m.

A–D *Half-ton concrete markers on sea-bed.*

Area-markers, lettered from 'E' to 'S'.

Rock bottom showing through sand or weed.

Depth of sand suggested by density of dots.

Unworked area, largely covered by Posidonia mattes.

Up/down.

Figure 4.20 Sections showing the depth of *Posidonia* mattes at Mellieha Bay (after Frost 1969: 7)

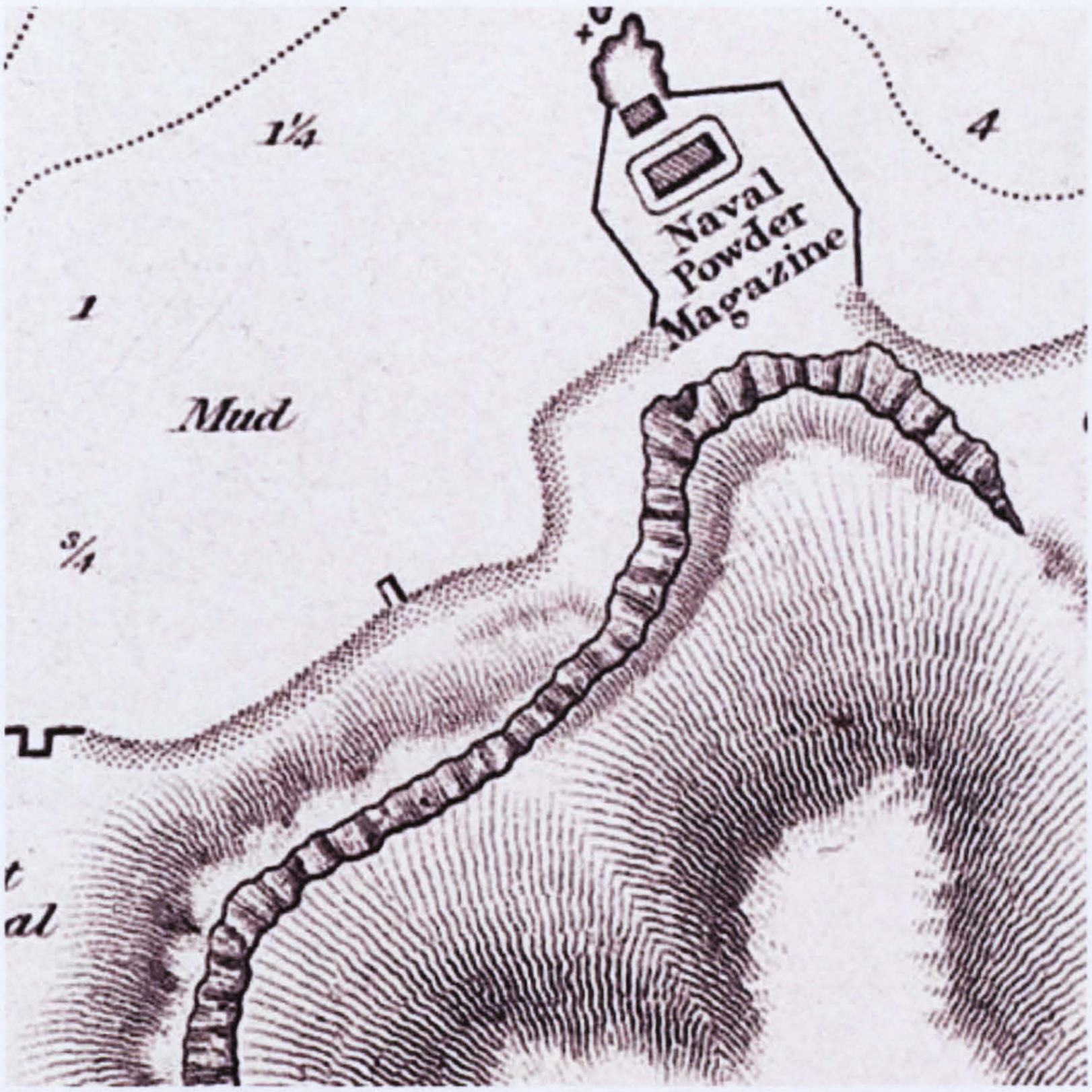


Figure 4.21 Detail of early nineteenth century survey indicating shallow areas at the foot of Kordin Hill (Smyth 1823: Hydrographic chart of Malta, National Library of Malta collection).

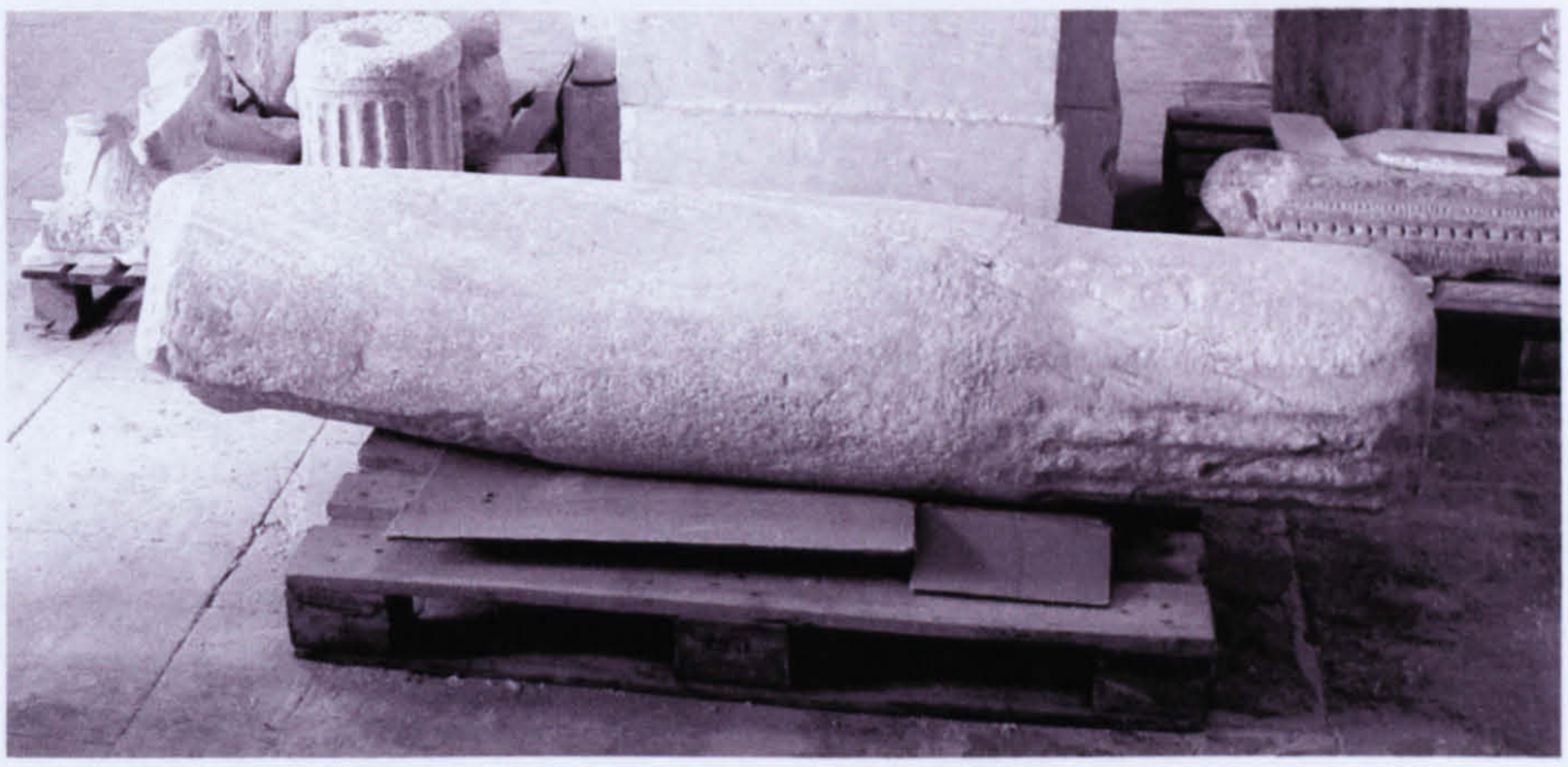


Figure 4.22 One of the marble columns dredged up from the foot of Kordin Hill (T. Gambin)

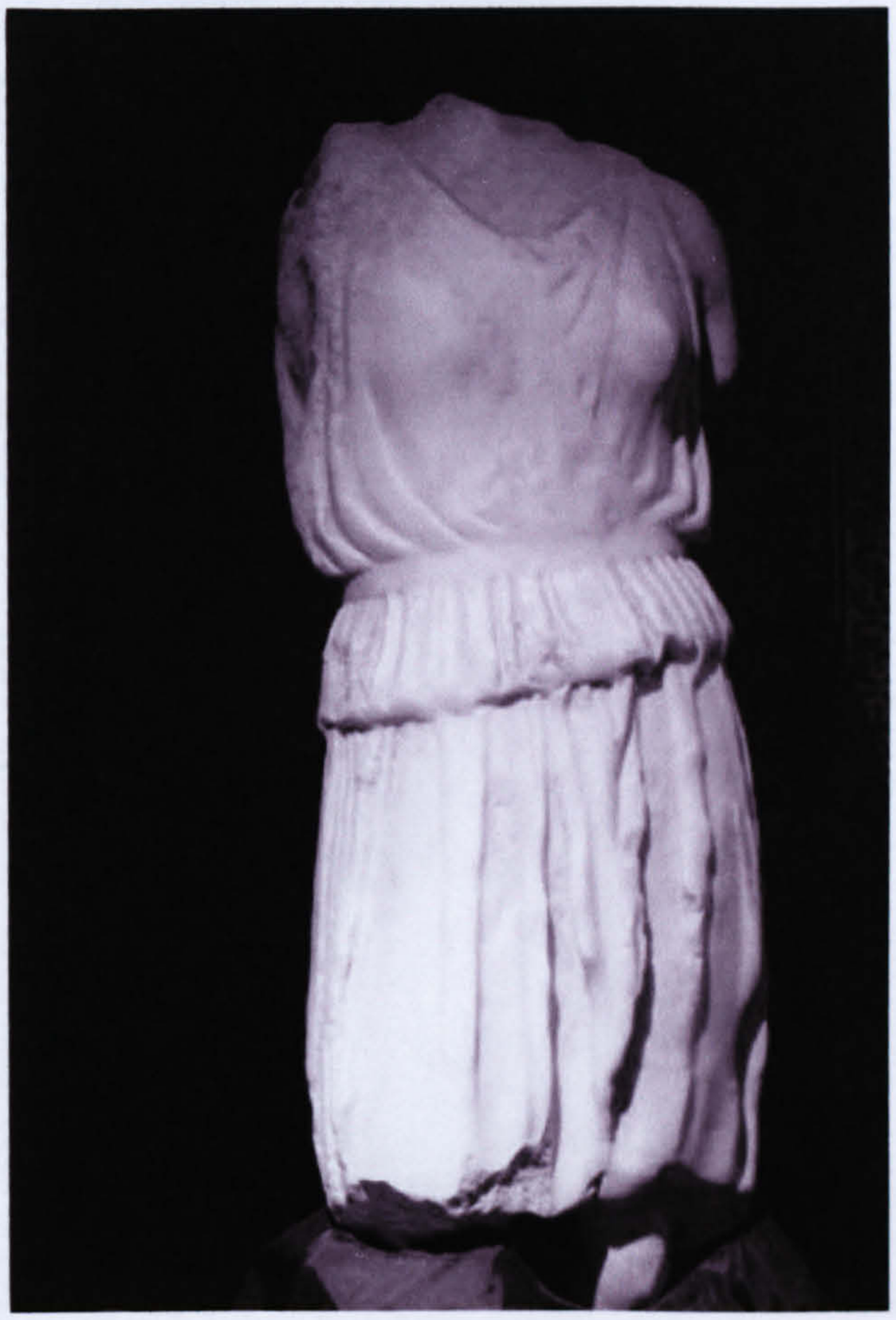


Figure 4.23 Marble torso dredged up from the foot of Kordin Hill (N. Cardona).

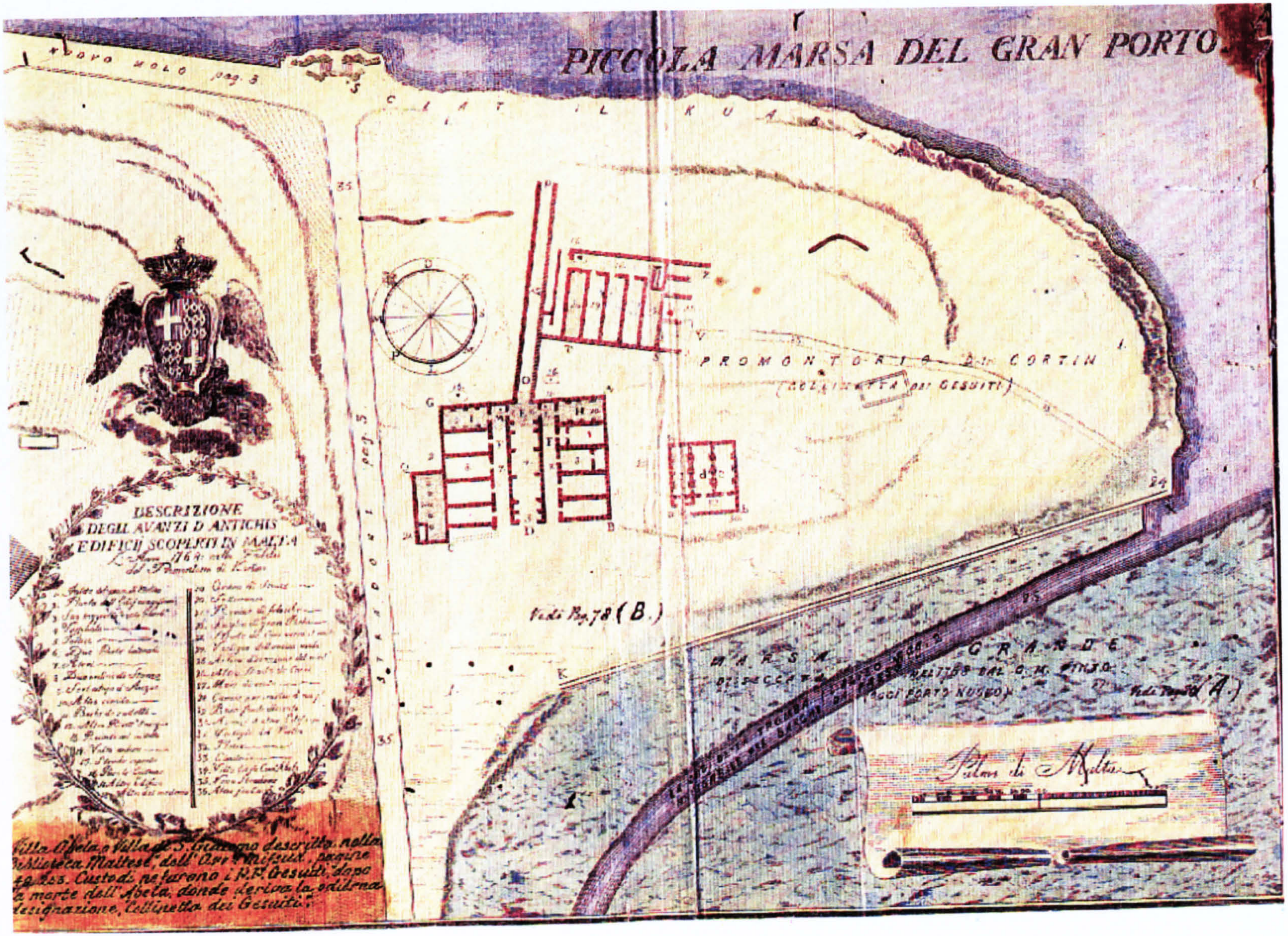


Figure 4.24 The *horrea* complex discovered in the mid-eighteenth century on Kortin (after Barbaro 1794).

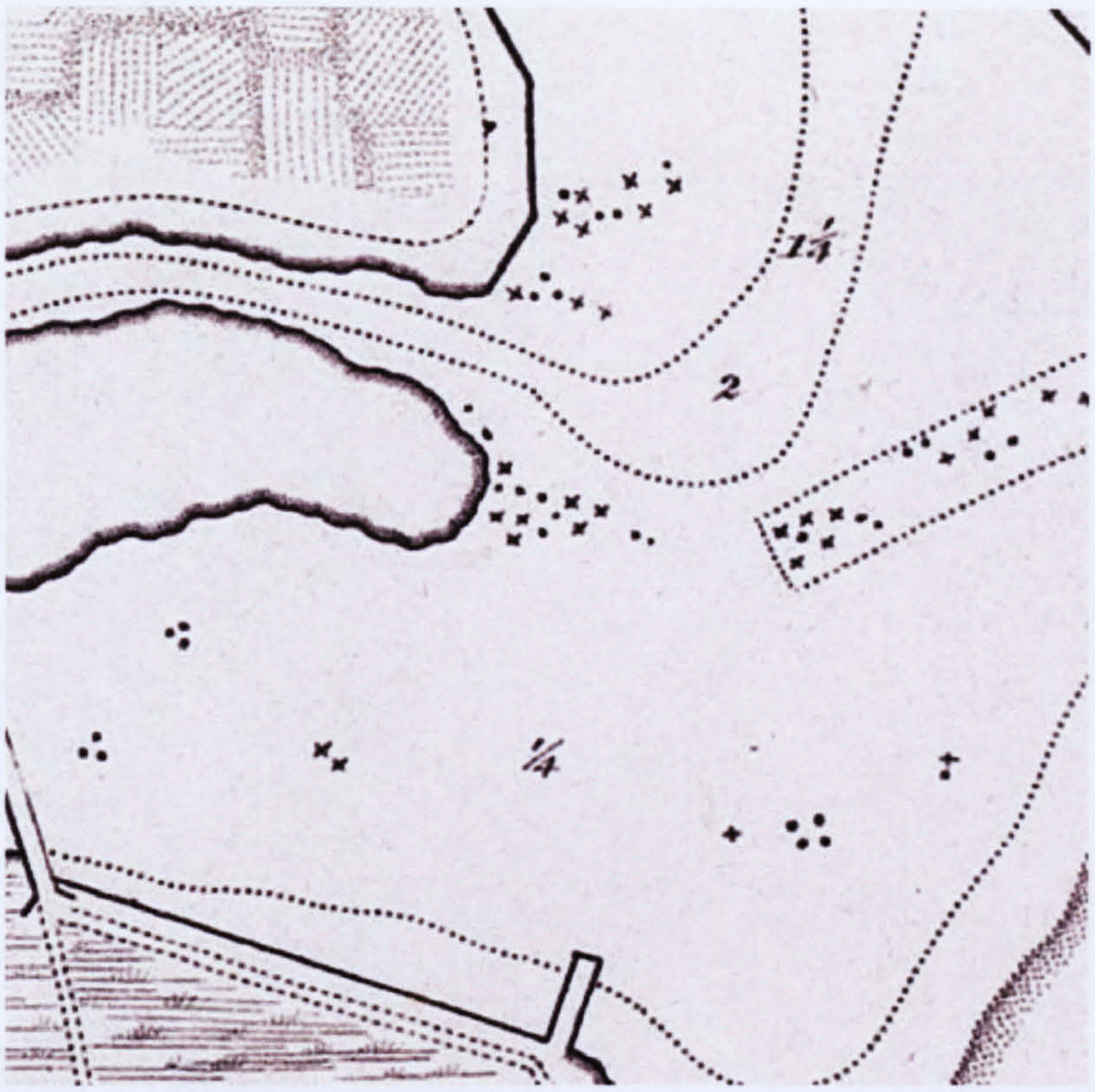


Figure 4.25 Detail from an early nineteenth century survey indicating the presence of objects fouling the seabed at the foot of Kortin Hill (Smyth 1823: Hydrographic chart of Malta, National Library of Malta collection).

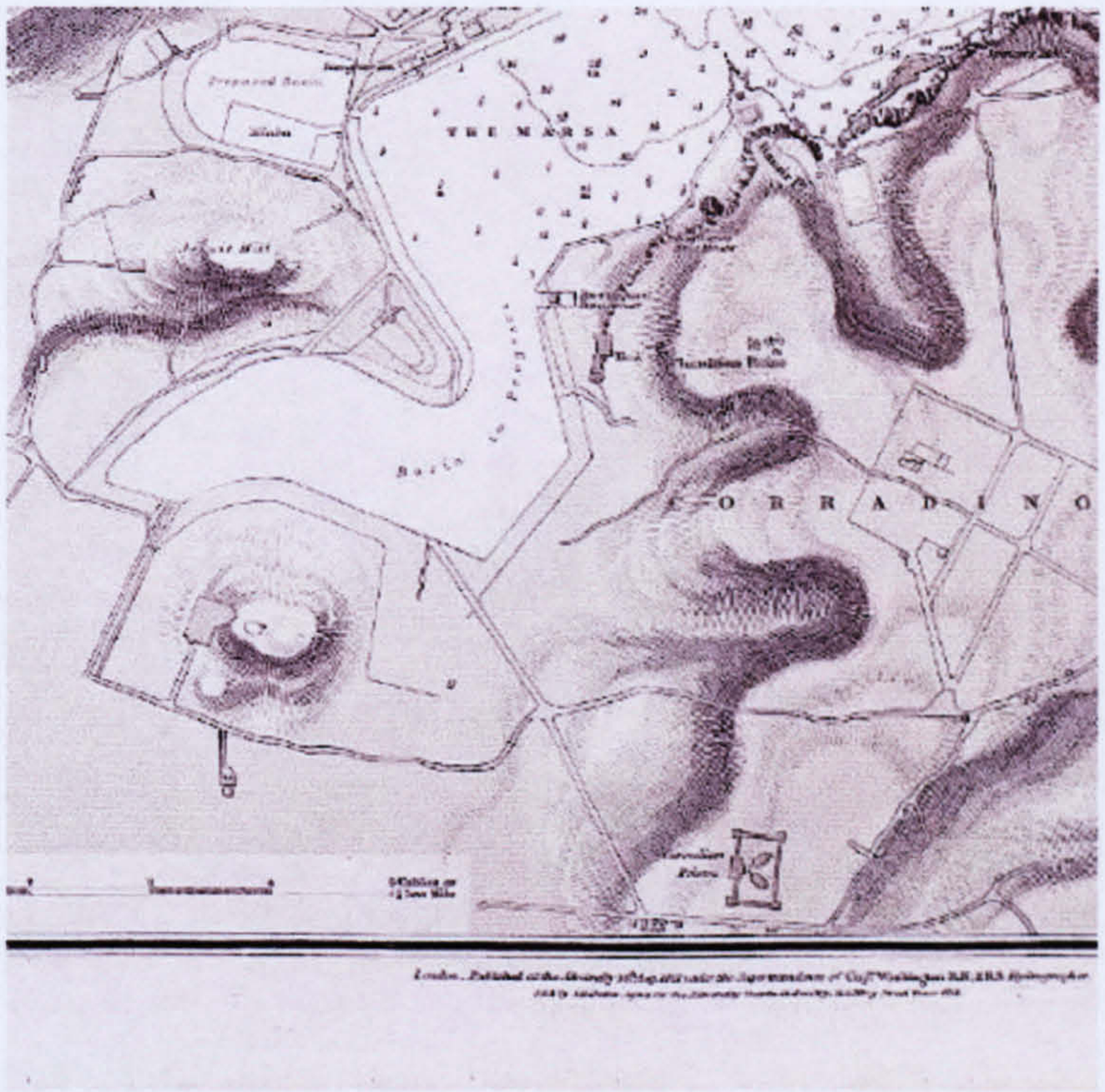


Figure 4.26 Detail from a mid-nineteenth century survey indicating the absence of objects fouling the seabed at the foot of Kortin Hill (after the dredging activity related to the harbour extension) (Graves 1861: Hydrographic chart of Malta, National Library of Malta collection).

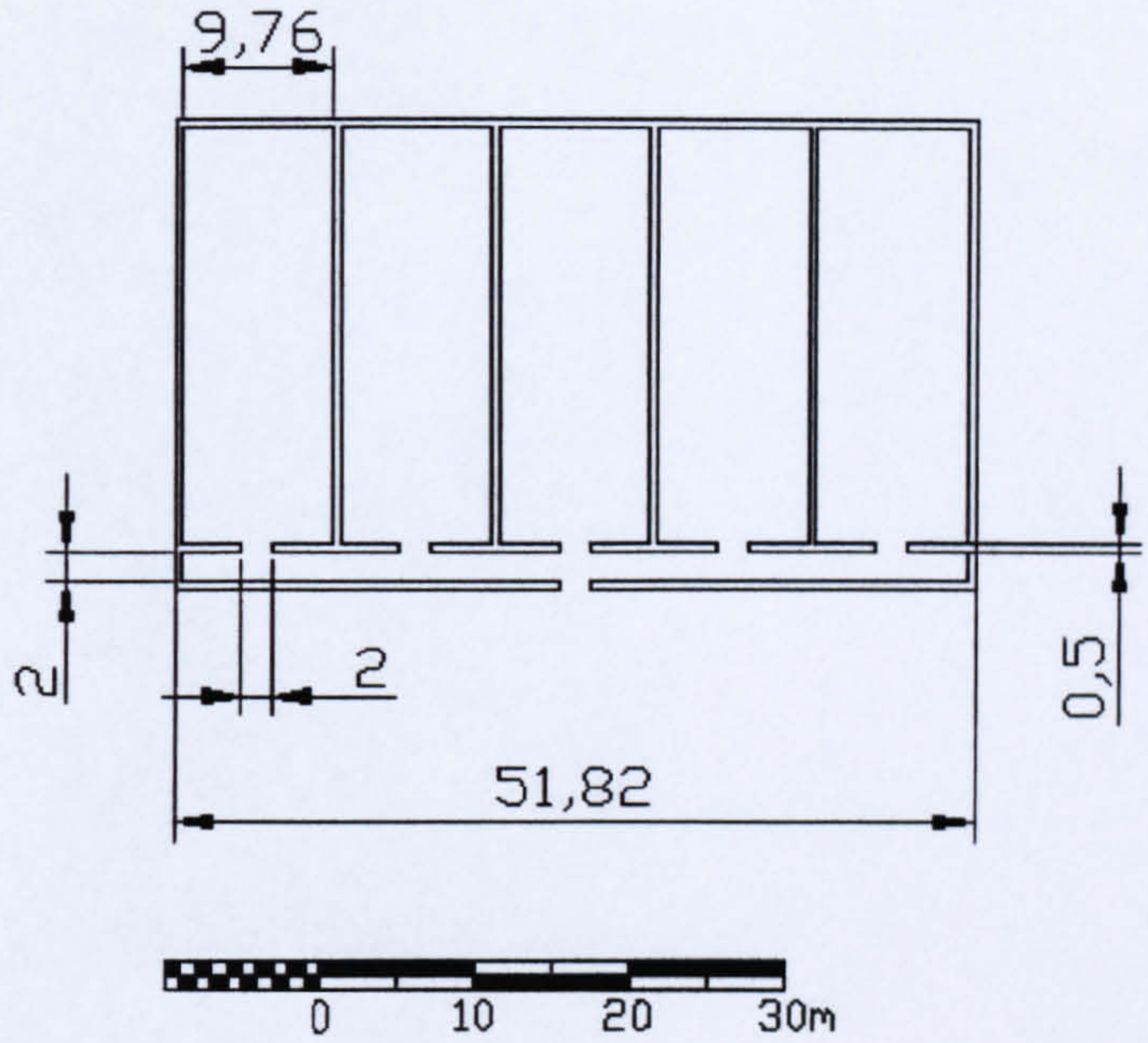


Figure 4.27 Hypothetical reconstruction of *horrea* discovered in Marsa based on available information (T. Gambin)



Figure 4.28 Features (circled) similar in dimension to the remains discovered beneath the Marsa school (rectangular buildings to the left of the circled area).(MEPA).

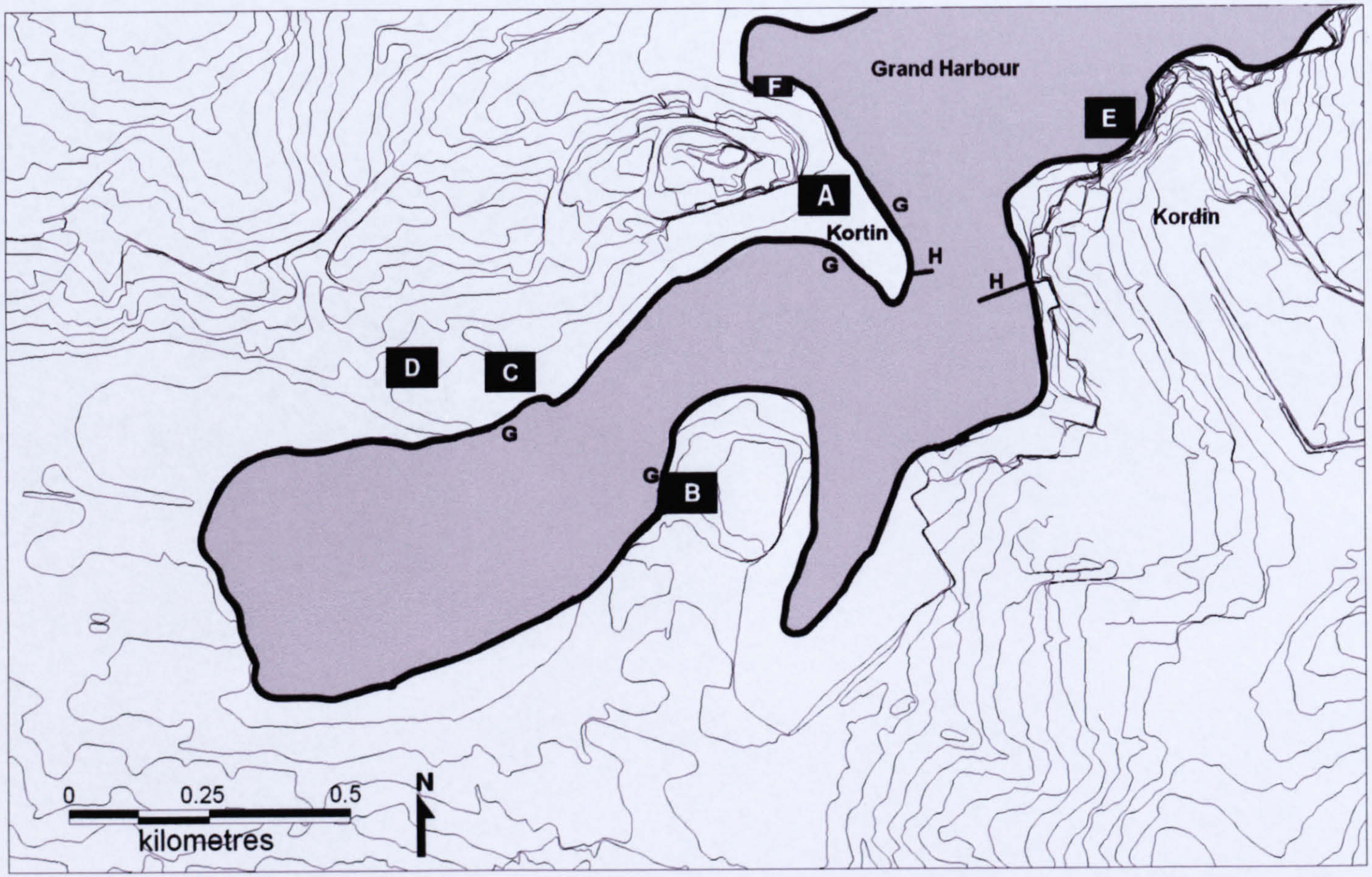


Figure 4.29 Map of the Marsa area indicating the location of sites mentioned in the text. A: Barbaro complex; B: Horrea under the Marsa school; C: Horrea at Racecourse street; D: 'Industrial site at Racecourse street; E: Site of harbour temple; F: Fishponds; G: Quaya (hypothetical); H: Moles (hypothetical) (T. Gambin).



Figure 4.30 The large anchor stock discovered off Qawra Point in the early 1960s (T. Gambin).

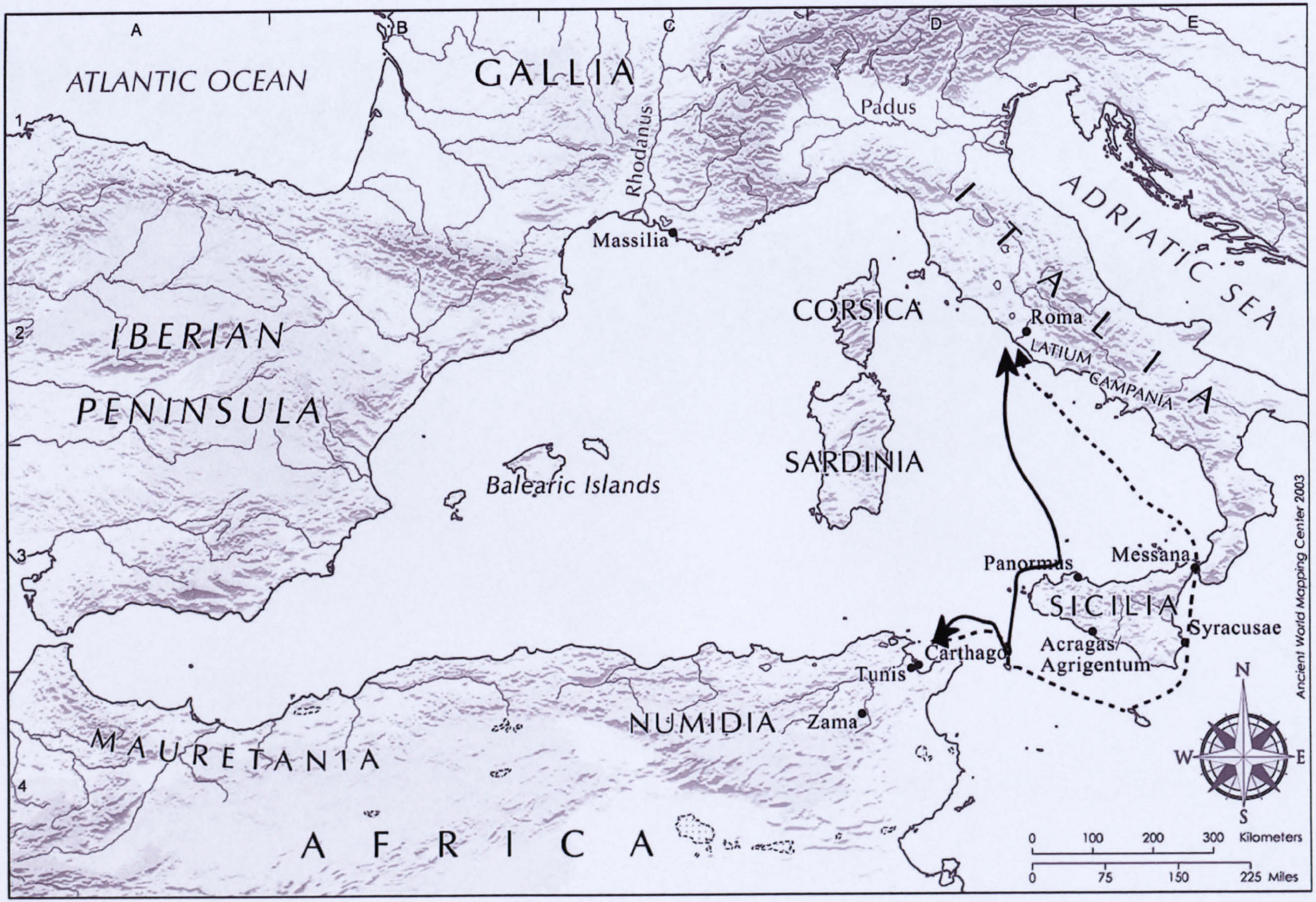


Figure 4.31 Two possible routes between Carthage and Rome (T. Gambin).



Figure 4.32 Marble statue from the Roman *Domus* in Rabat (after Bonanno 1992).



Figure 4.33 One of the Keay XXV from the Xlendi wreck on display at the Gozo Archaeology Museum (T. Gambin)



Figure 4.34 A Keay XXV (VII) and a spatheion (V) discovered at the Barbaro complex (after Barbaro 1794)



Figure 4.35 Spatheion dredged from the seabed of the Grand Harbour (E. Azzopardi)

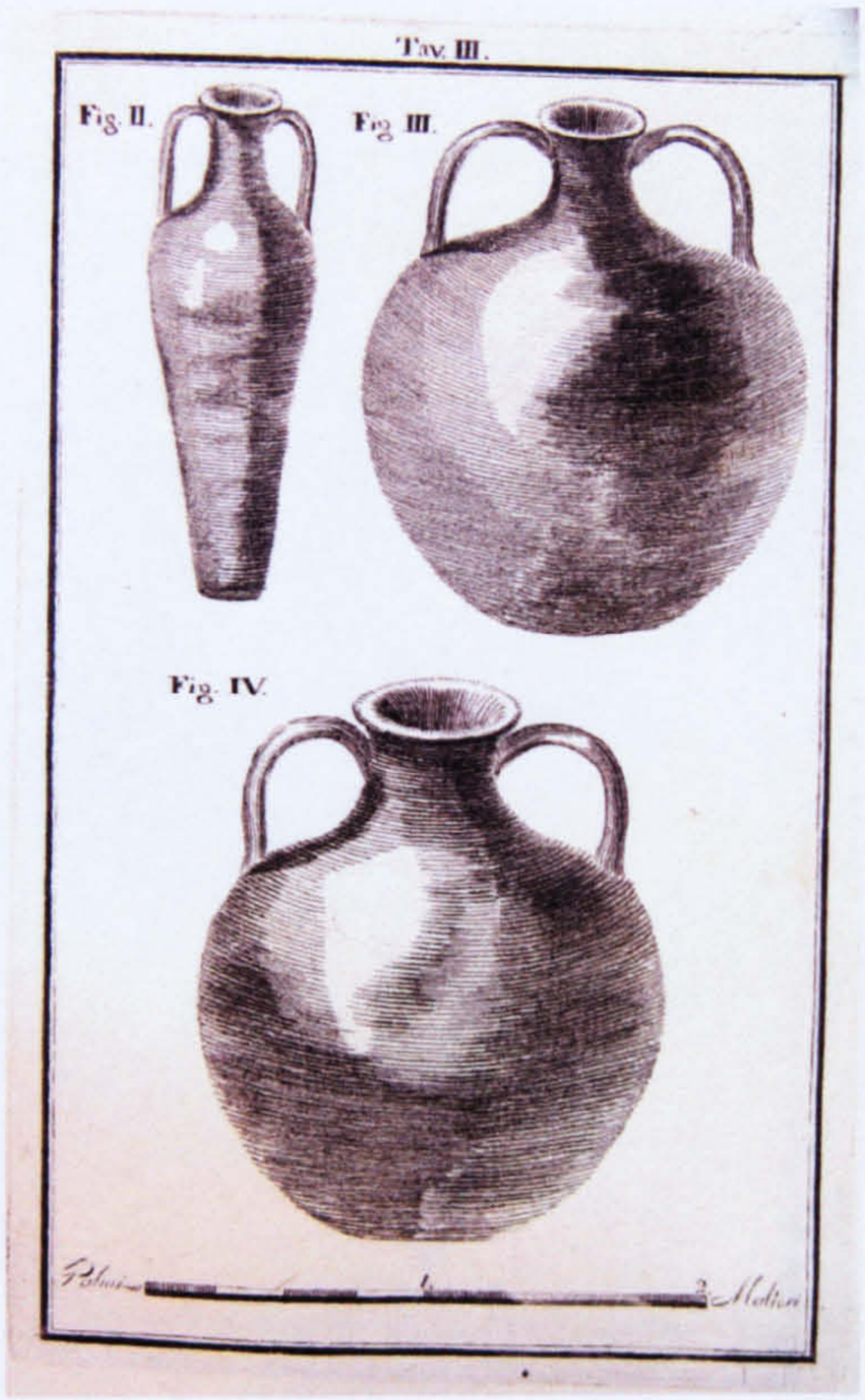


Figure 5.1 Globular amphorae from the Barbaro site (after Barbaro 1794).

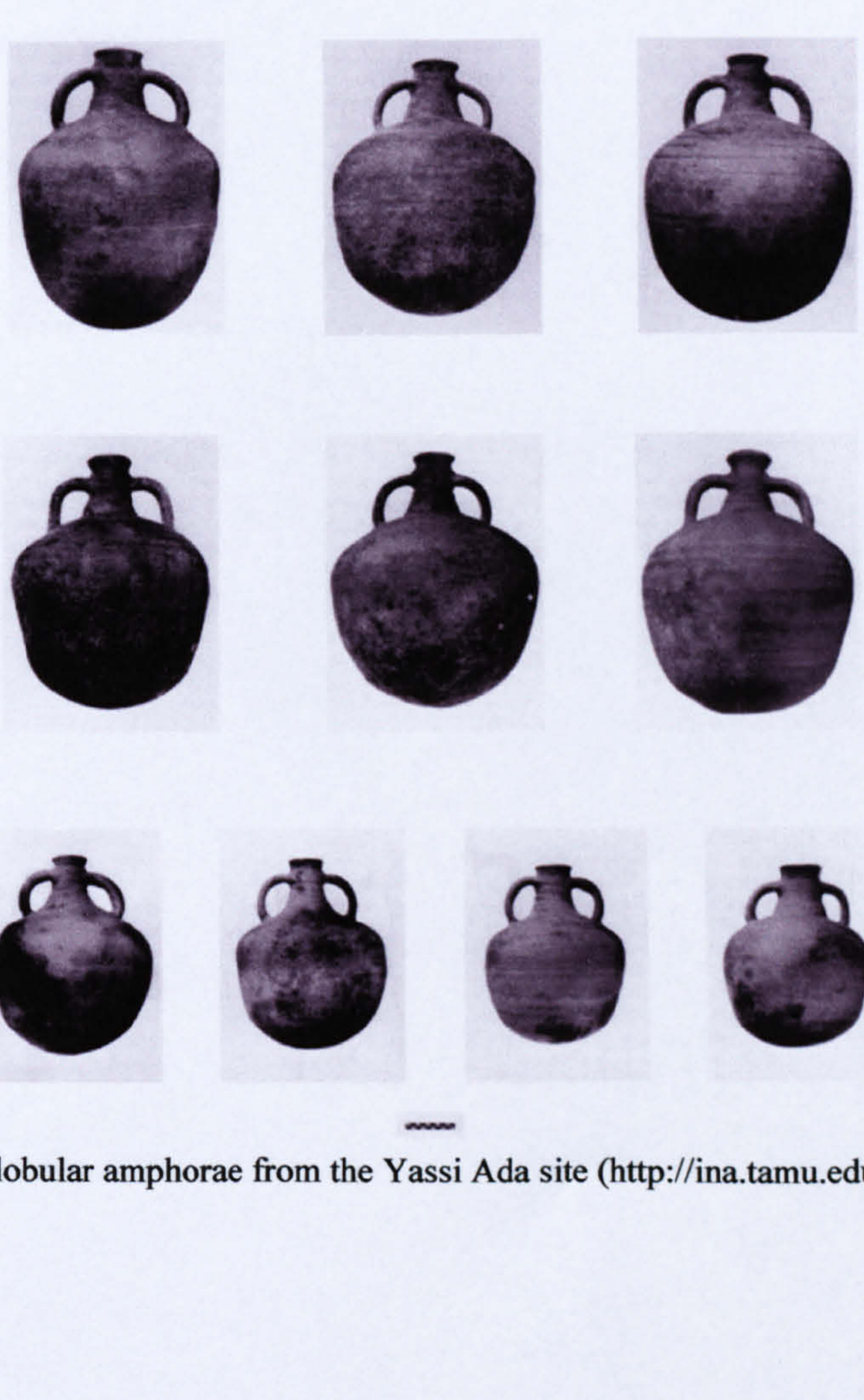


Figure 5.2 Various globular amphorae from the Yassi Ada site (http://ina.tamu.edu/YA7-amphoras.htm)



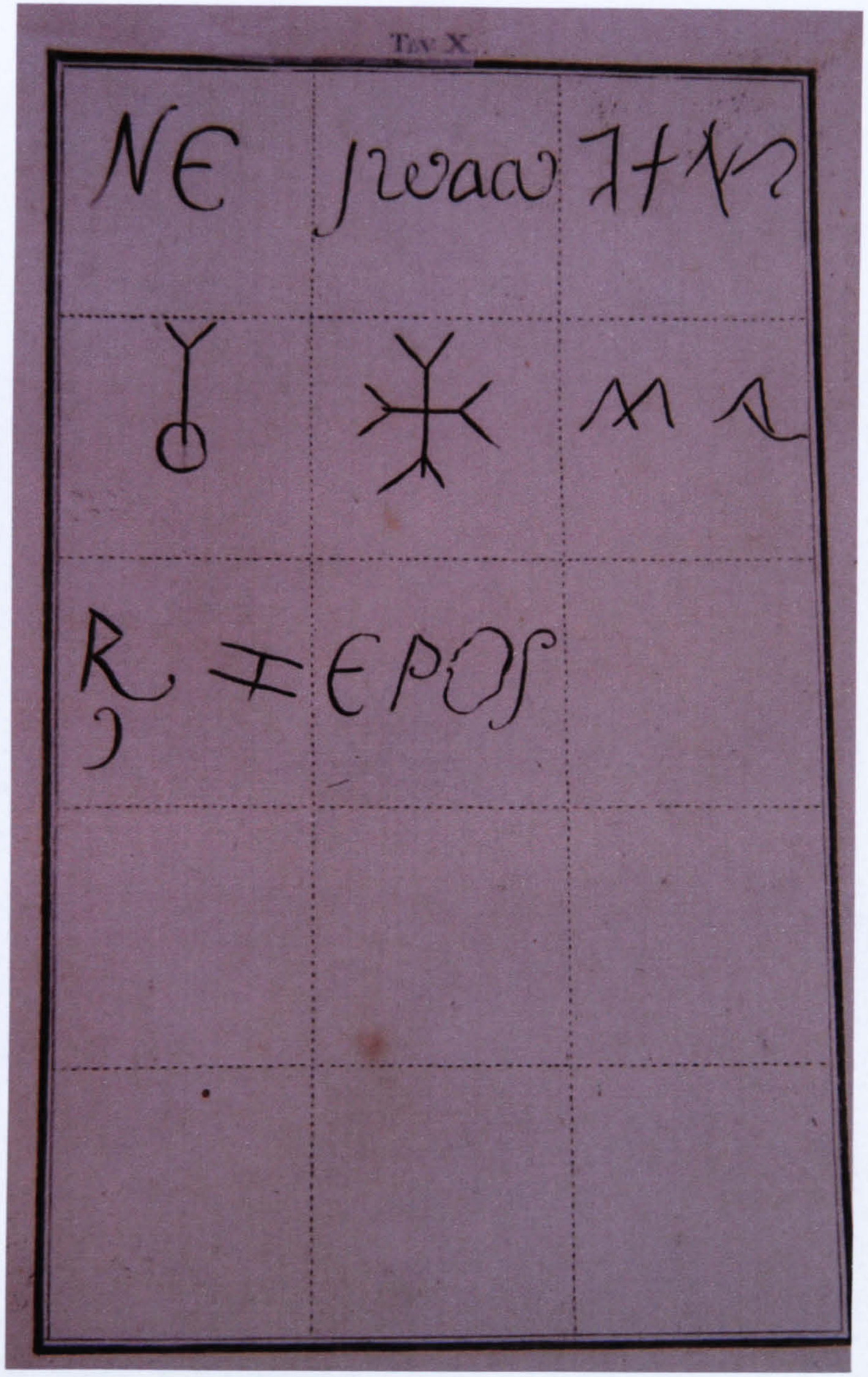


Figure 5.3 Inscriptions from the amphorae of the Barbaro complex (after Barbaro 1794).

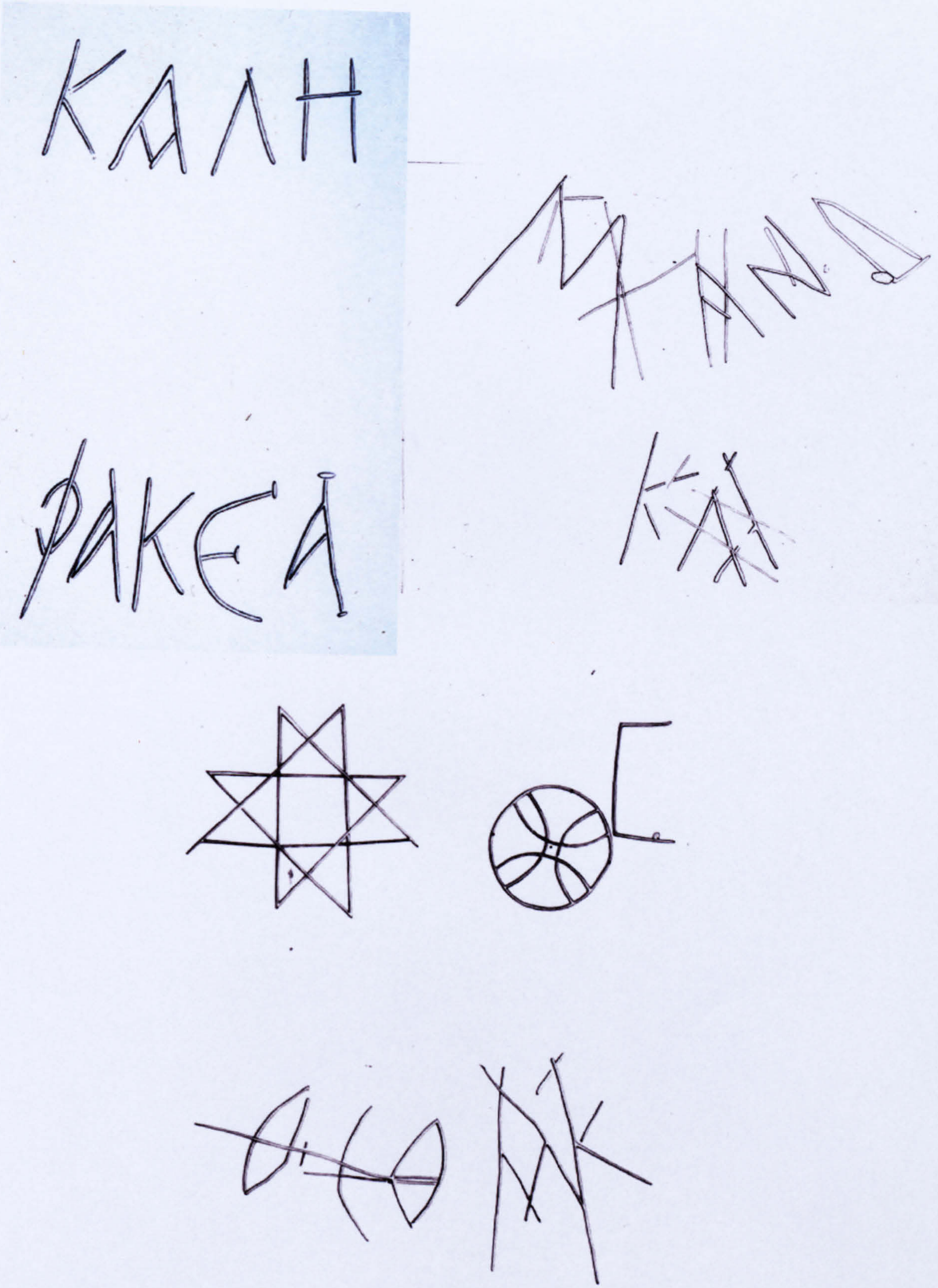


Figure 5.4a Graffiti from the Yassi Ada shipwreck (http://ina.tamu.edu/YA7-amphoras.htm)

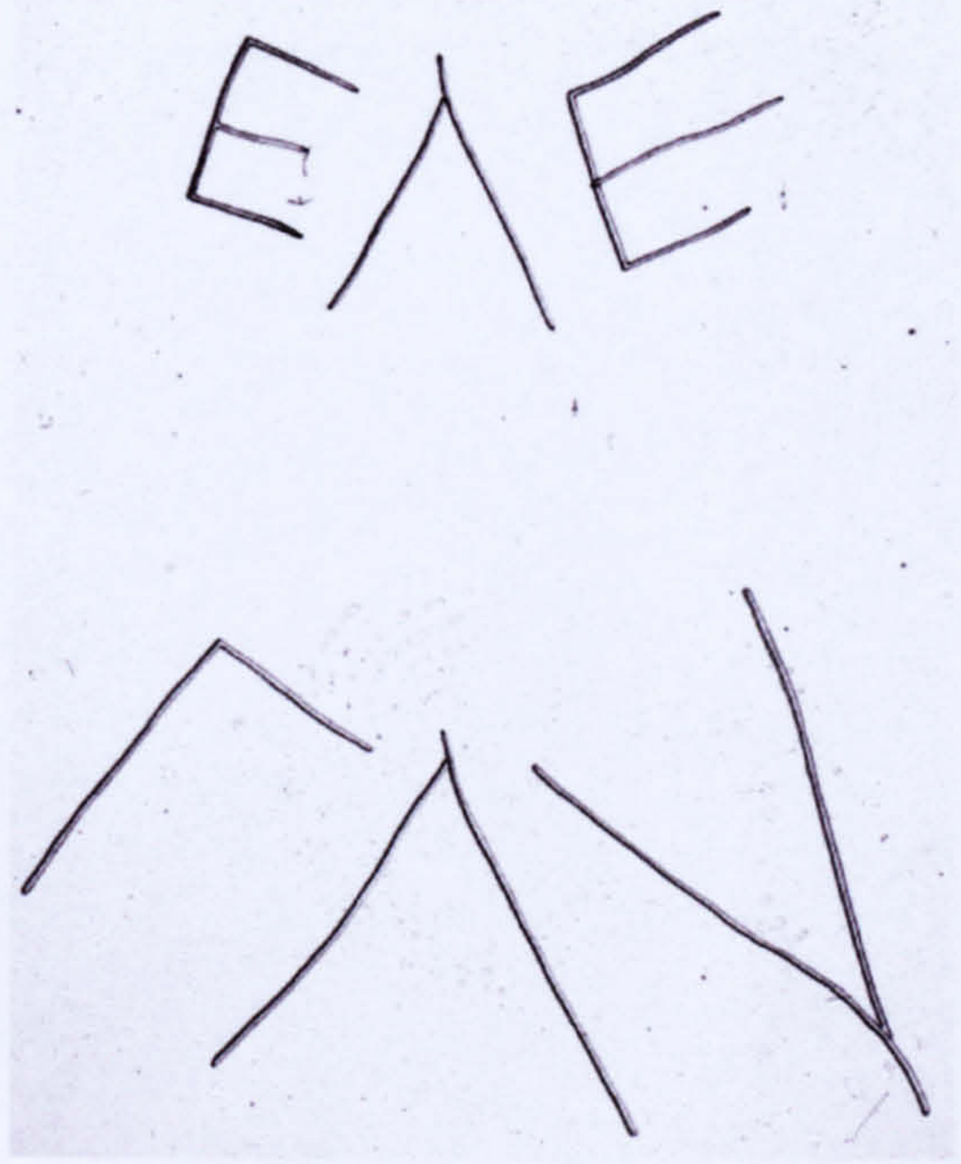


Figure 5.4b Graffiti from the Yassi Ada shipwreck (http://ina.tamu.edu/YA7-amphoras.htm).

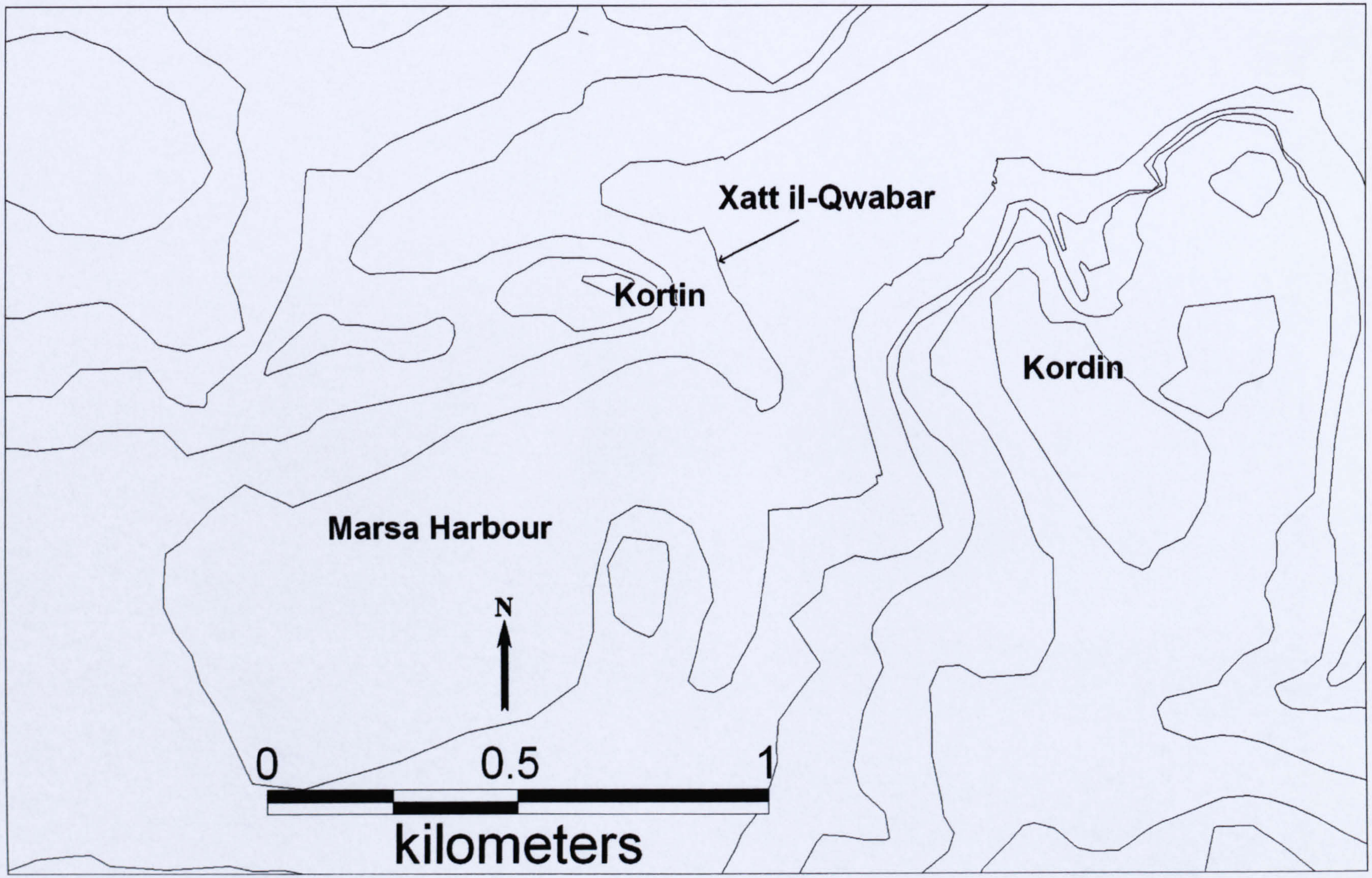


Figure 5.5 Map showing location of Xatt il-Qwabar (T. Gambin).

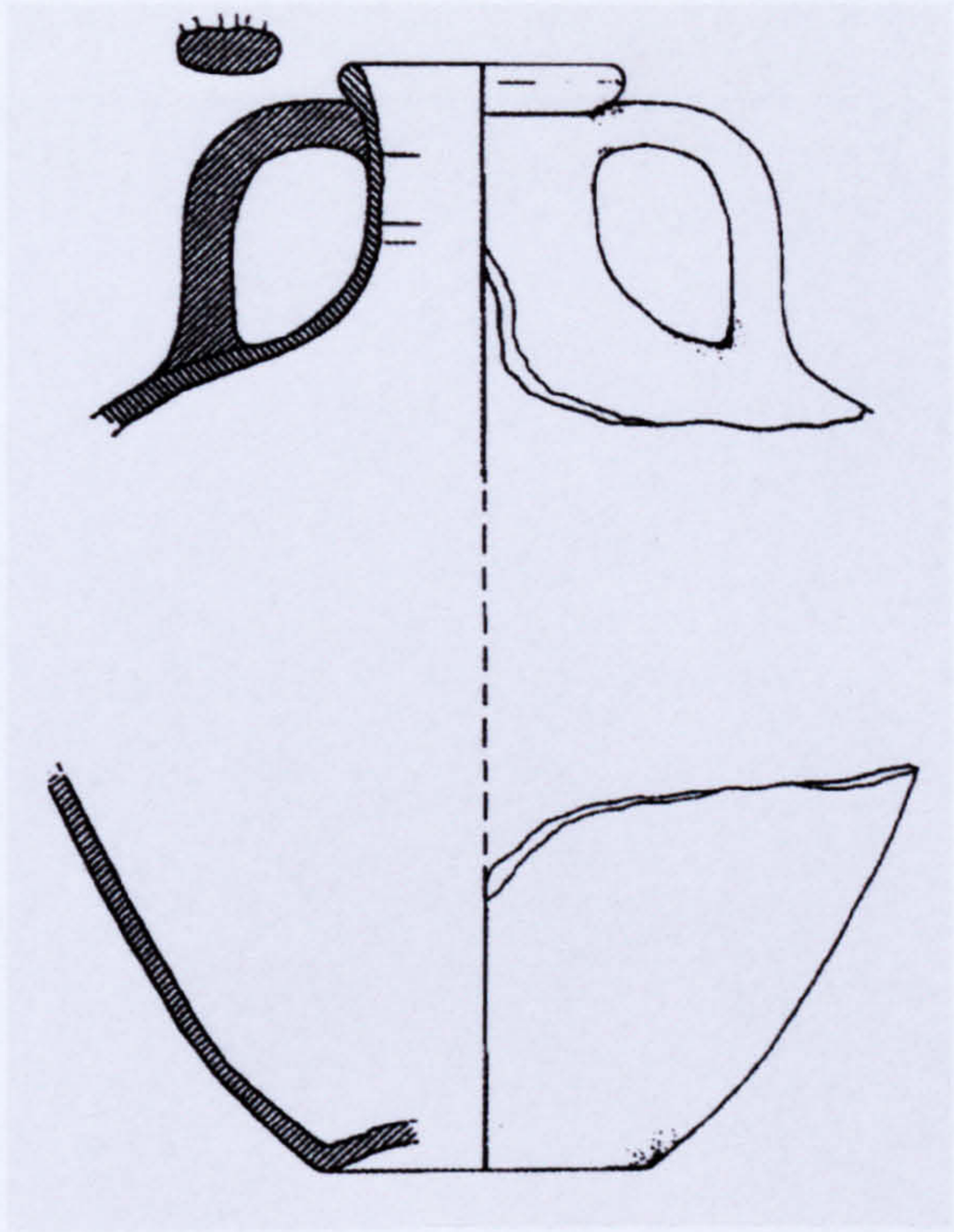


Figure 5.6 Globular amphora from Xatt il-Qwabar (after Bruno and Cutajar 2002).



Figure 5.7 Rim and handle of Byzantine amphora found at Marsamxett (The Heritage Malta collection, photo by T. Gambin).





Figures 5.8, 5.9 and 5.10 More objects from Marsamxett (The Heritage Malta collection, photos by T. Gambin).

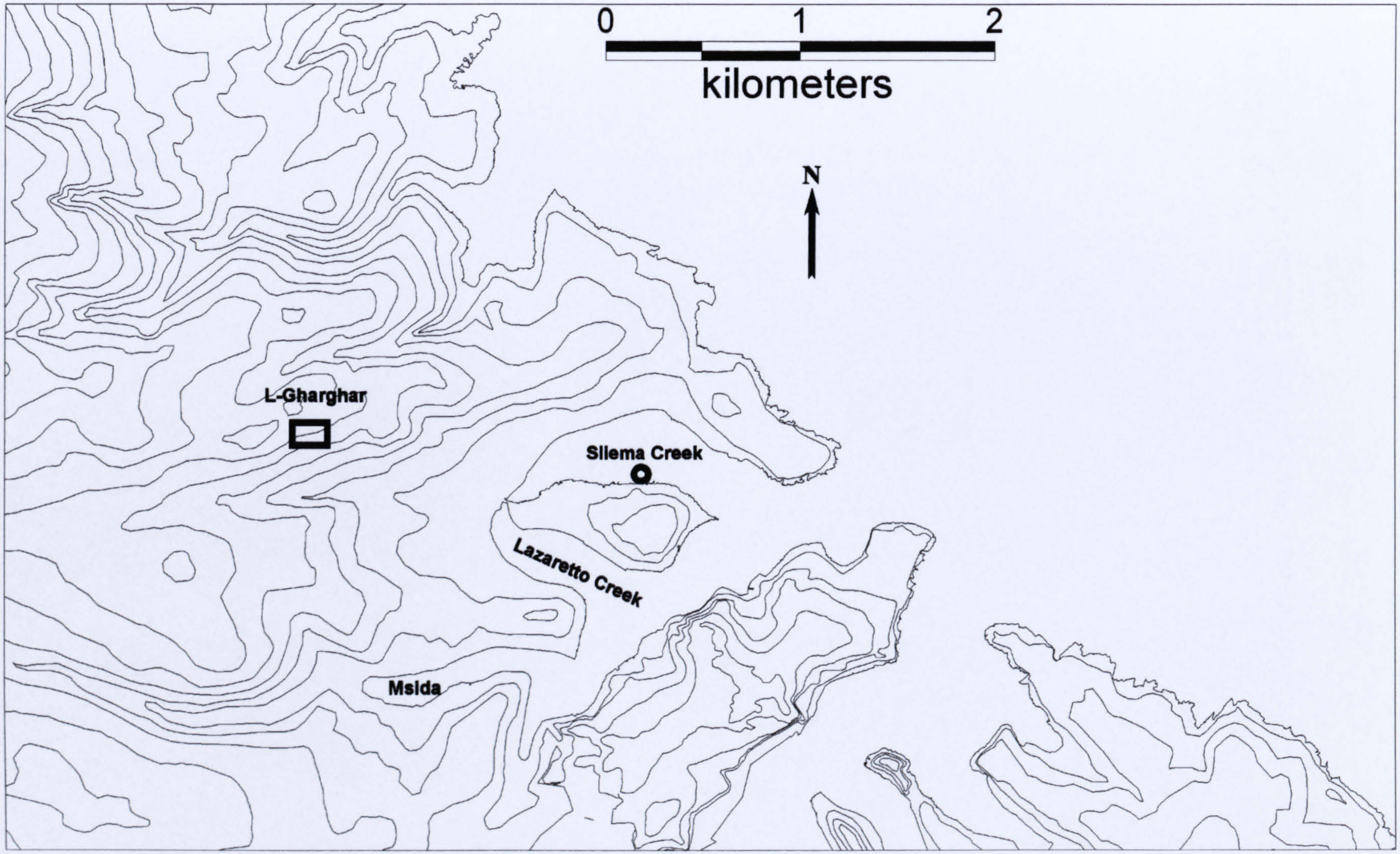
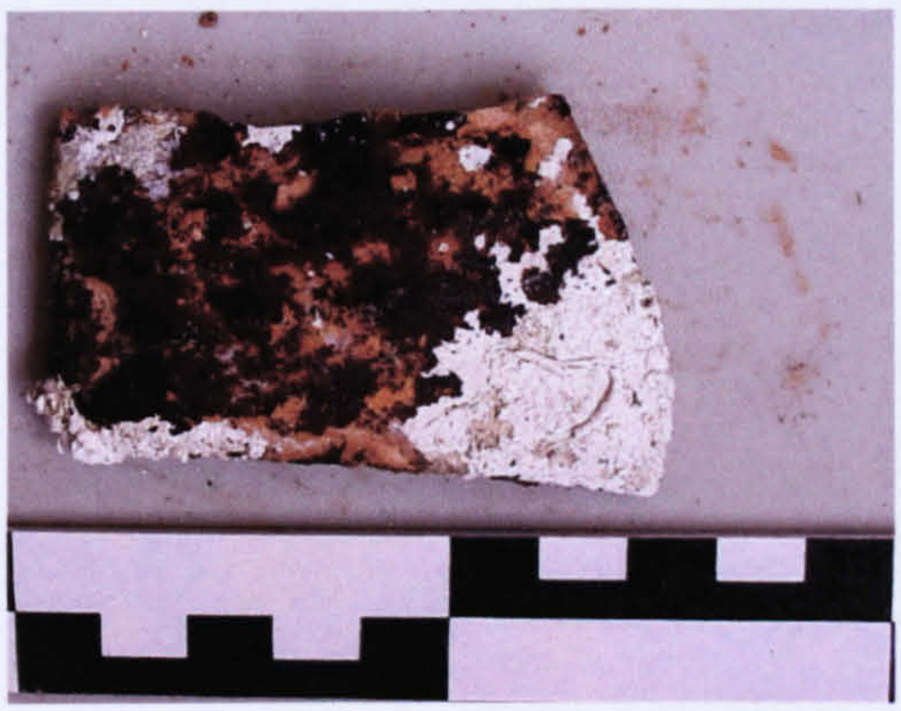


Figure 5.11 Map showing various sites mentioned in chapter 8 (T. Gambin).







Figures 5.12, 5.13 and 5.14 Objects from the site at Sliema Creek (T. Gambin).



Figure 5.15 Some of the ribbed sherds from Mistra (T. Gambin).

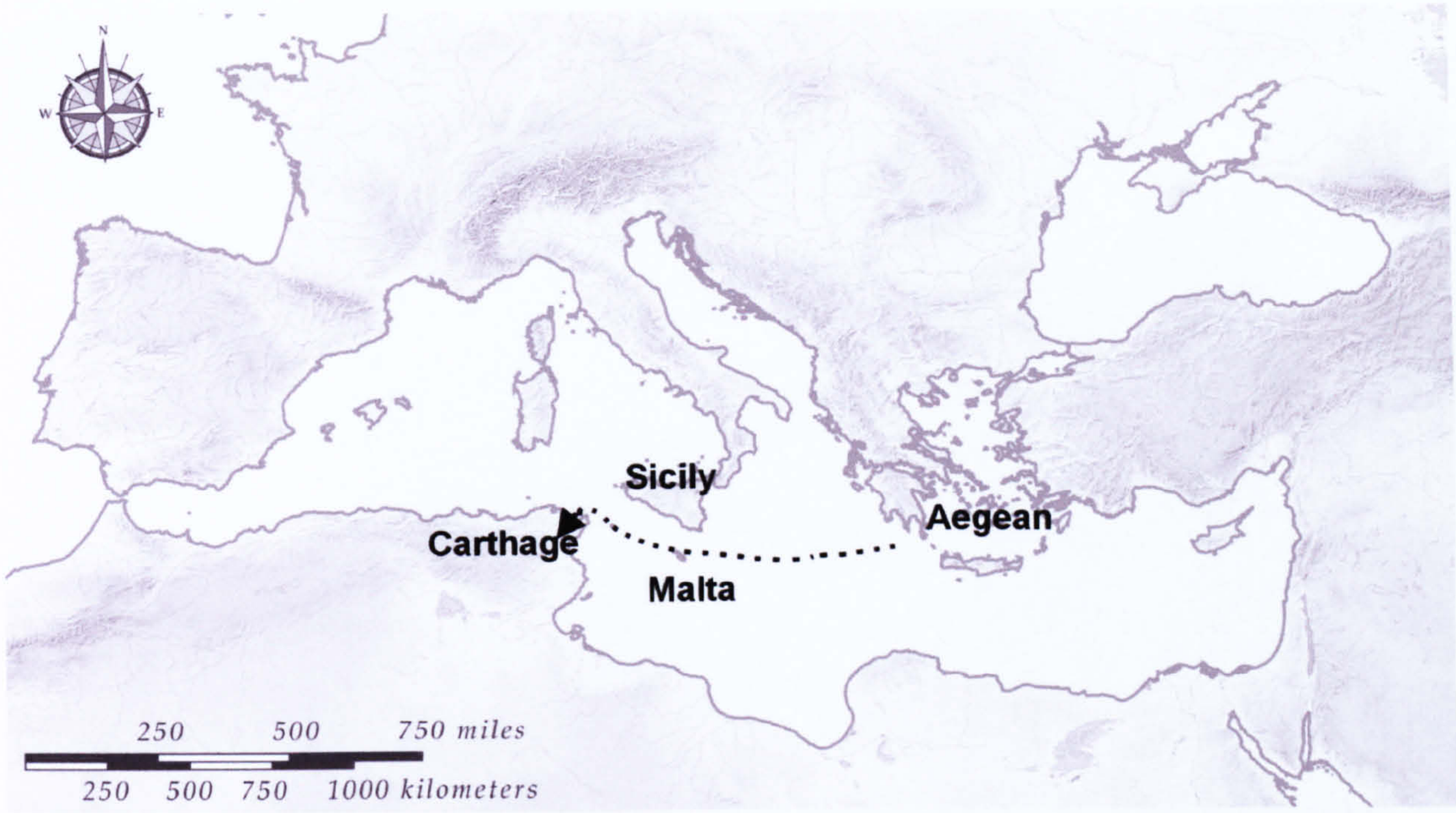


Figure 5.16 The central route between the Aegean and Carthage (T. Gambin).

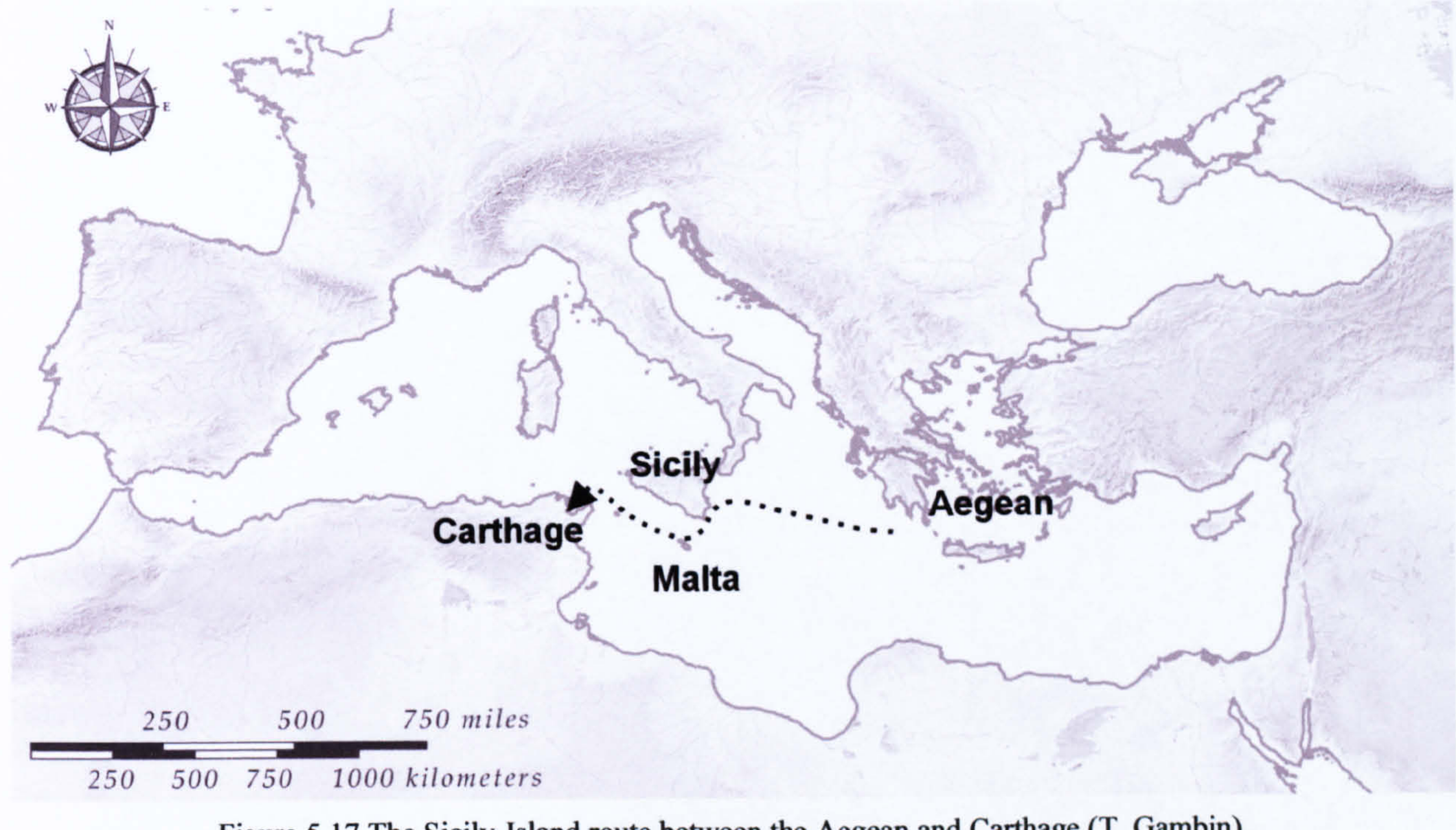


Figure 5.17 The Sicily-Island route between the Aegean and Carthage (T. Gambin).

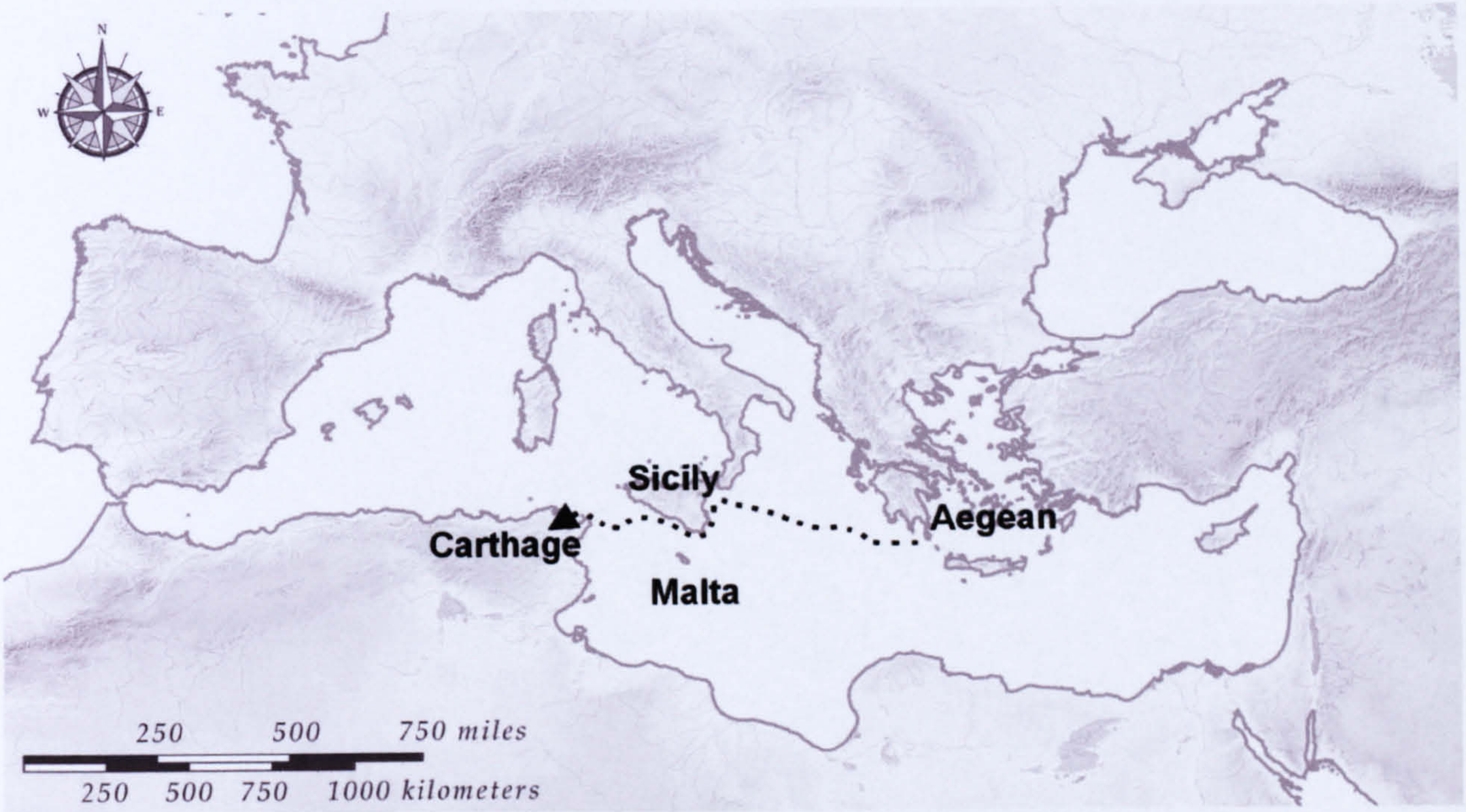


Figure 5.18 The Sicily-Pantelleria route between the Aegean and Carthage (T. Gambin).

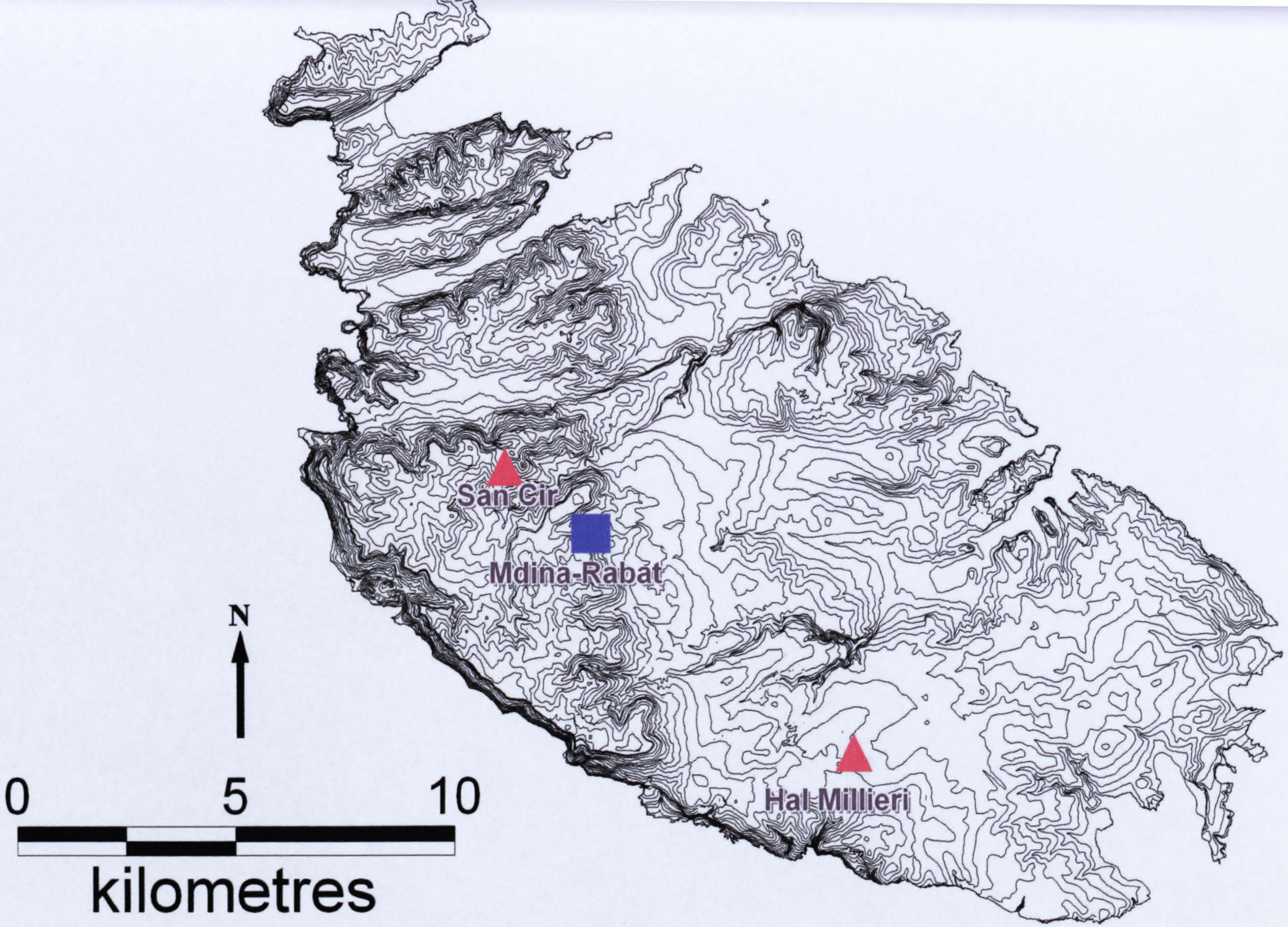


Figure 6.1 Map showing the location of two sites mentioned in chapter 9 (T. Gambin).



Figure 6.2 One of the tomb stones found in the Islamic cemetery outside Rabat (The Heritage Malta Collection, photo by N. Cardona)



Figure 6.3 The first known map of Malta (c. 1535) (the Albert Ganado collection).



Figure 6.4 Detail from figure 9.3 showing the inner reaches of the Grand Harbour

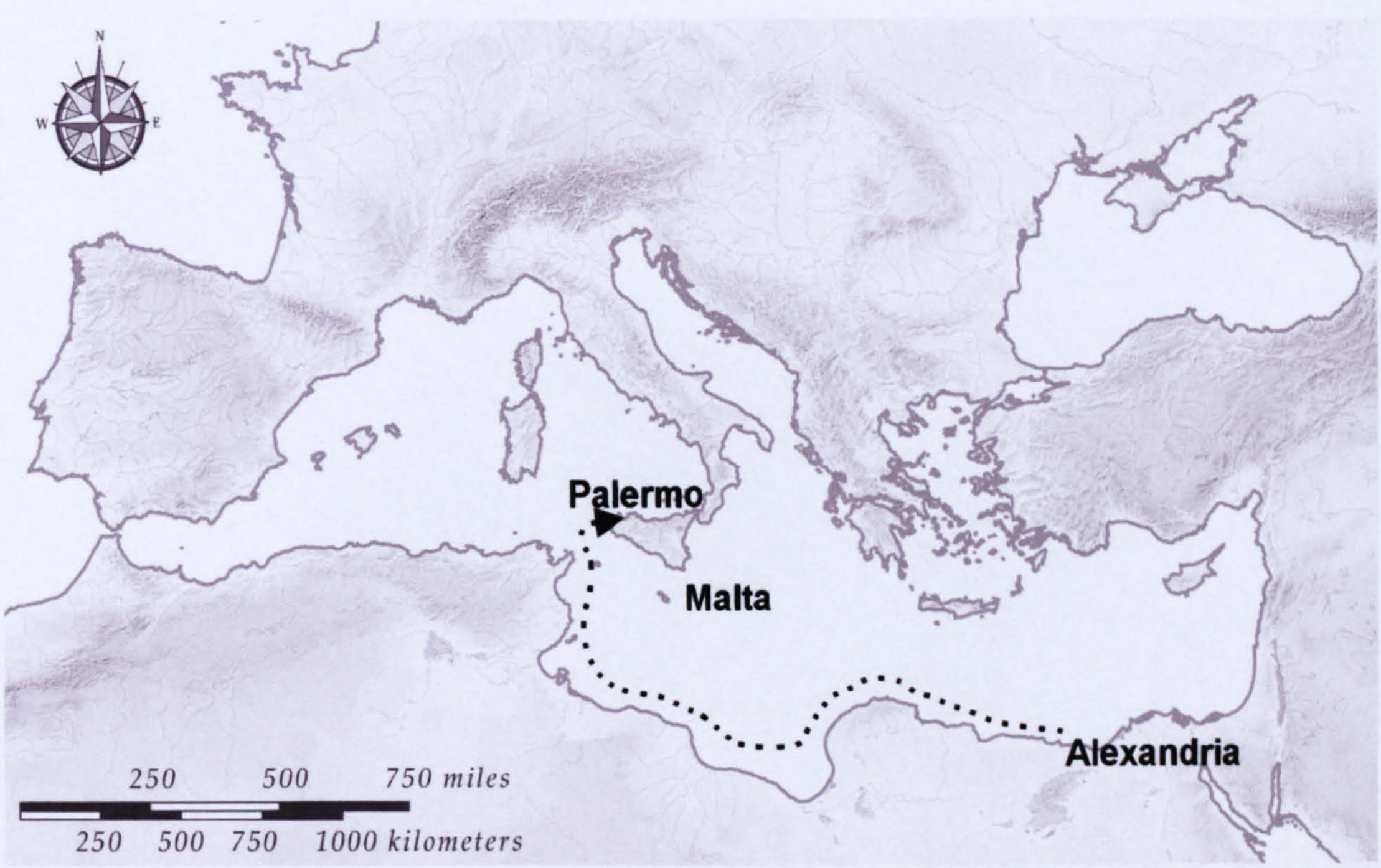


Figure 6.5 The Udovitch Alexandria-Palermo route (map by T. Gambin after Udovitch 1978).

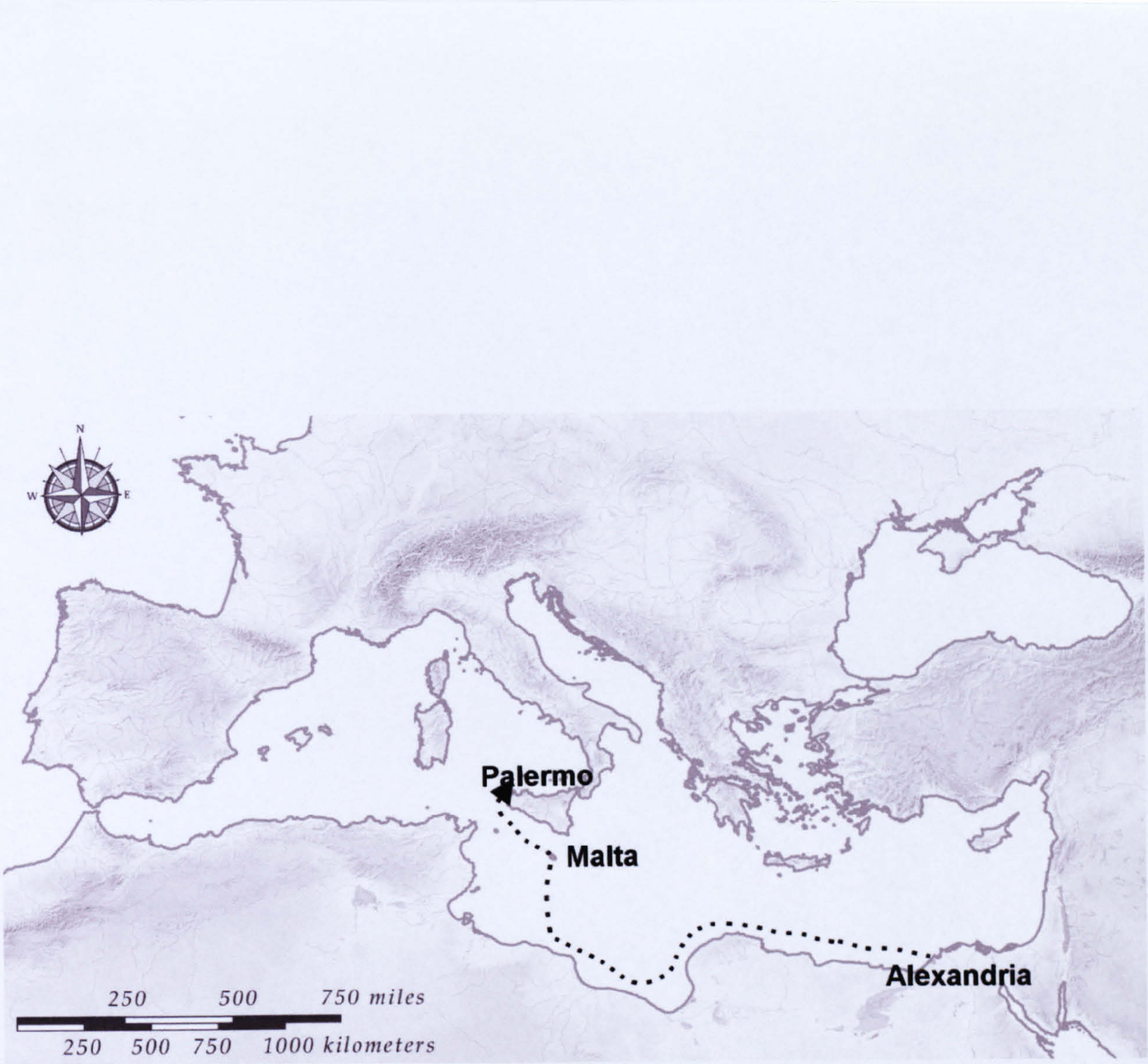


Figure 6.6 The 'Gertwagen' Alexandria-Palermo route (map by T. Gambin after Gertwagen 1996).

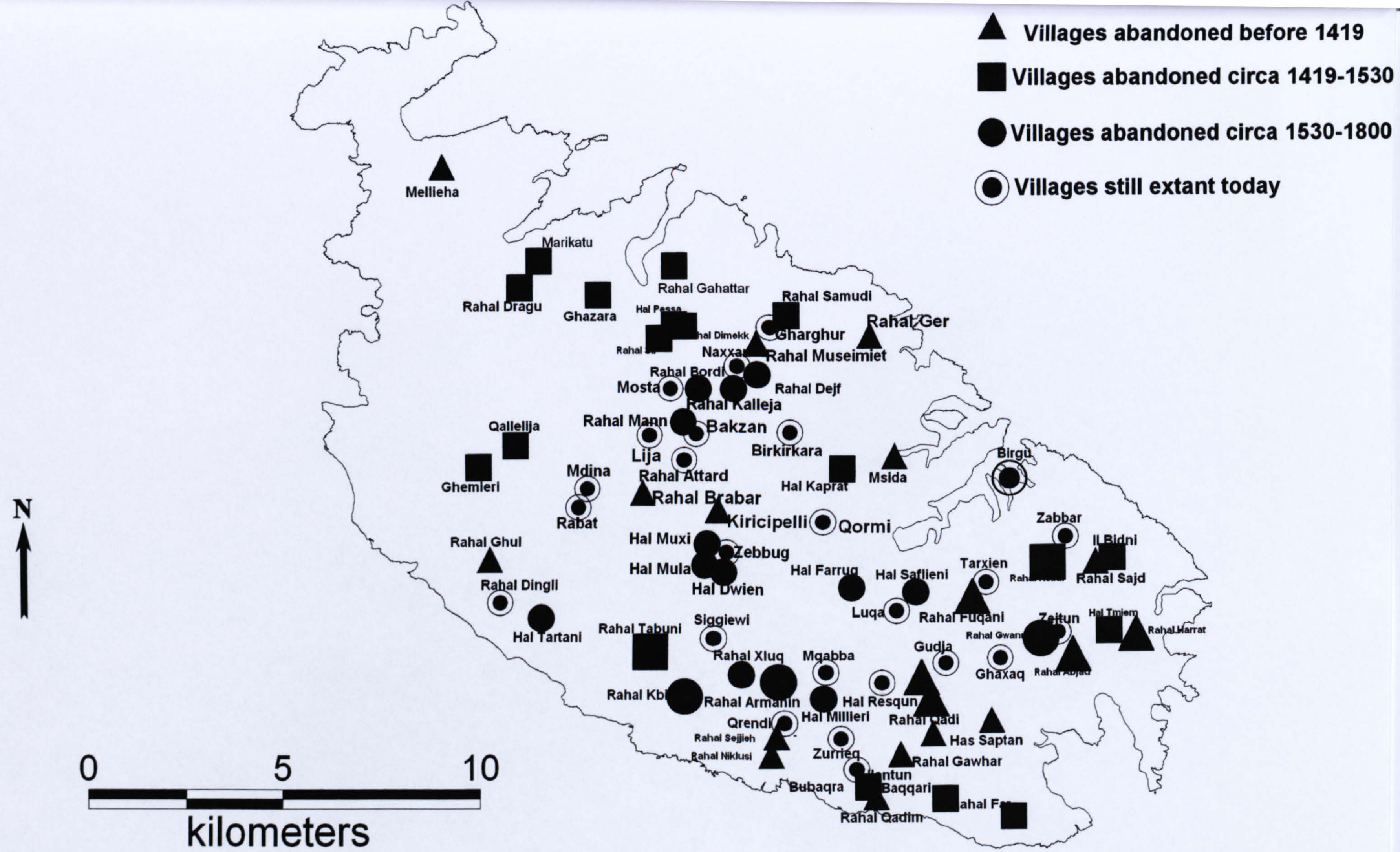


Figure 7.1 The medieval villages of Malta (map by T. Gambin after Wettinger 1975).

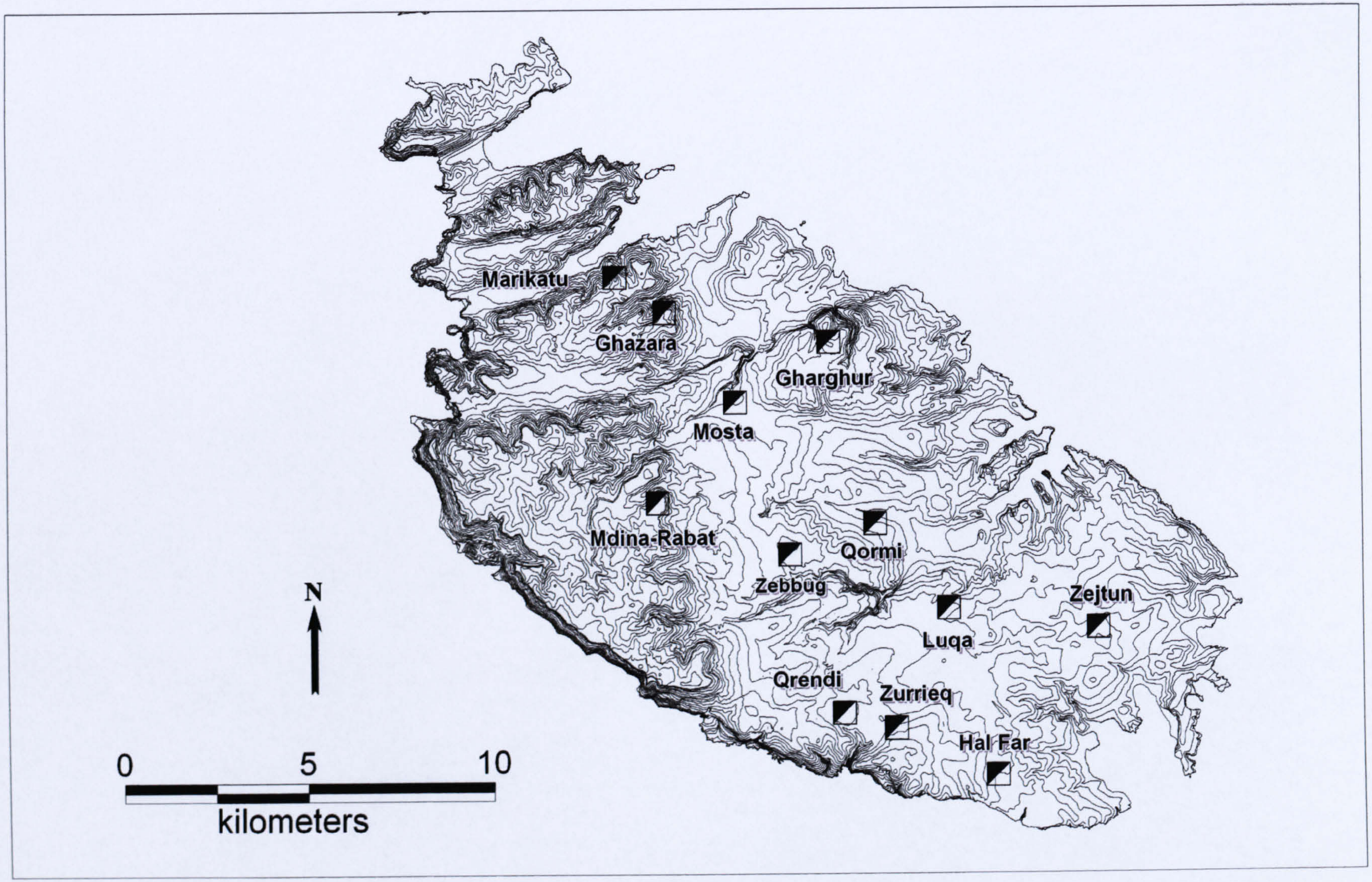


Figure 7.2 Medieval villages that developed on ancient settlement sites (T. Gambin).

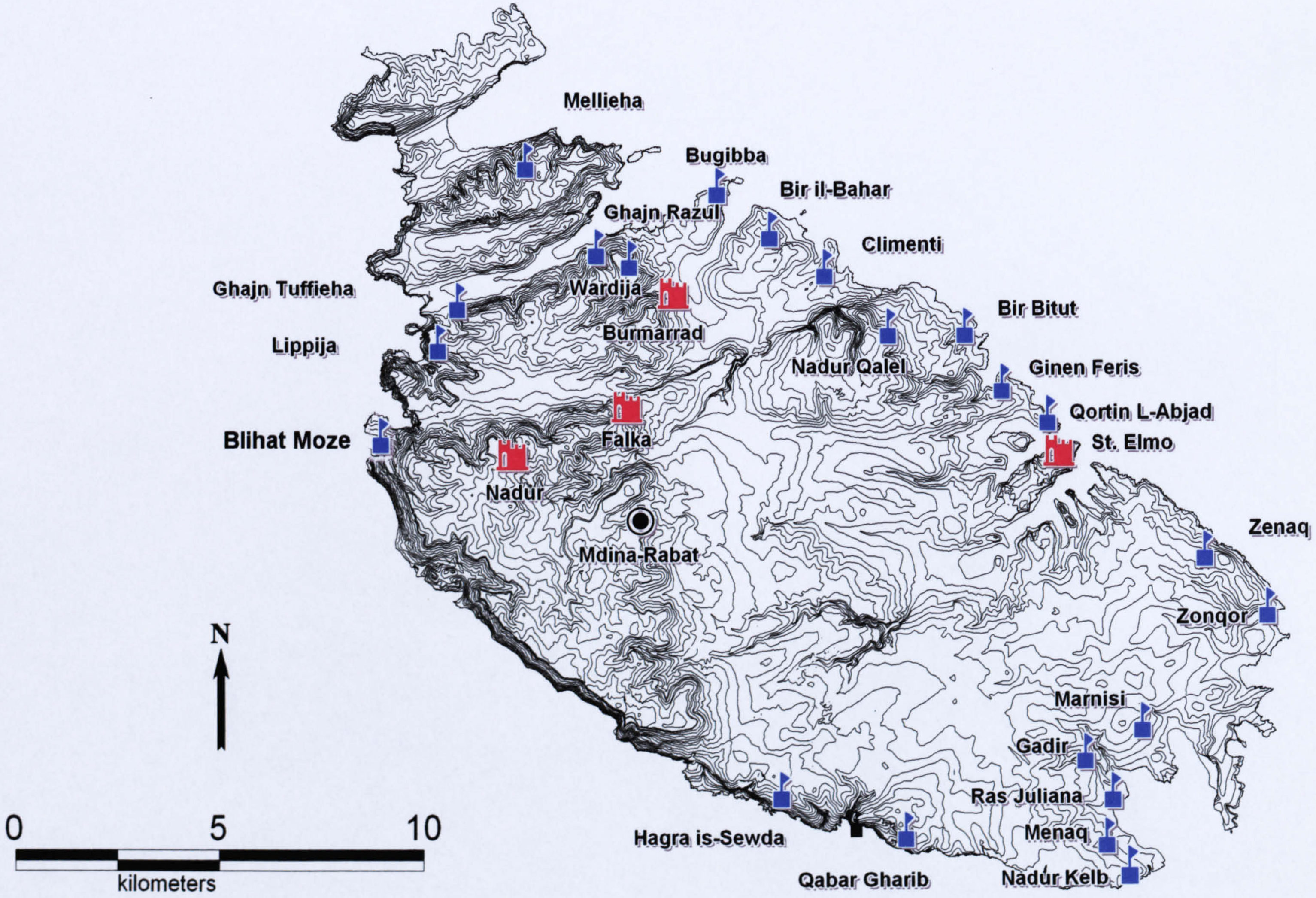


Figure 7.3 Map illustrating the location of lookout posts (flagged squares) and watch towers (red castles) (T. Gambin).

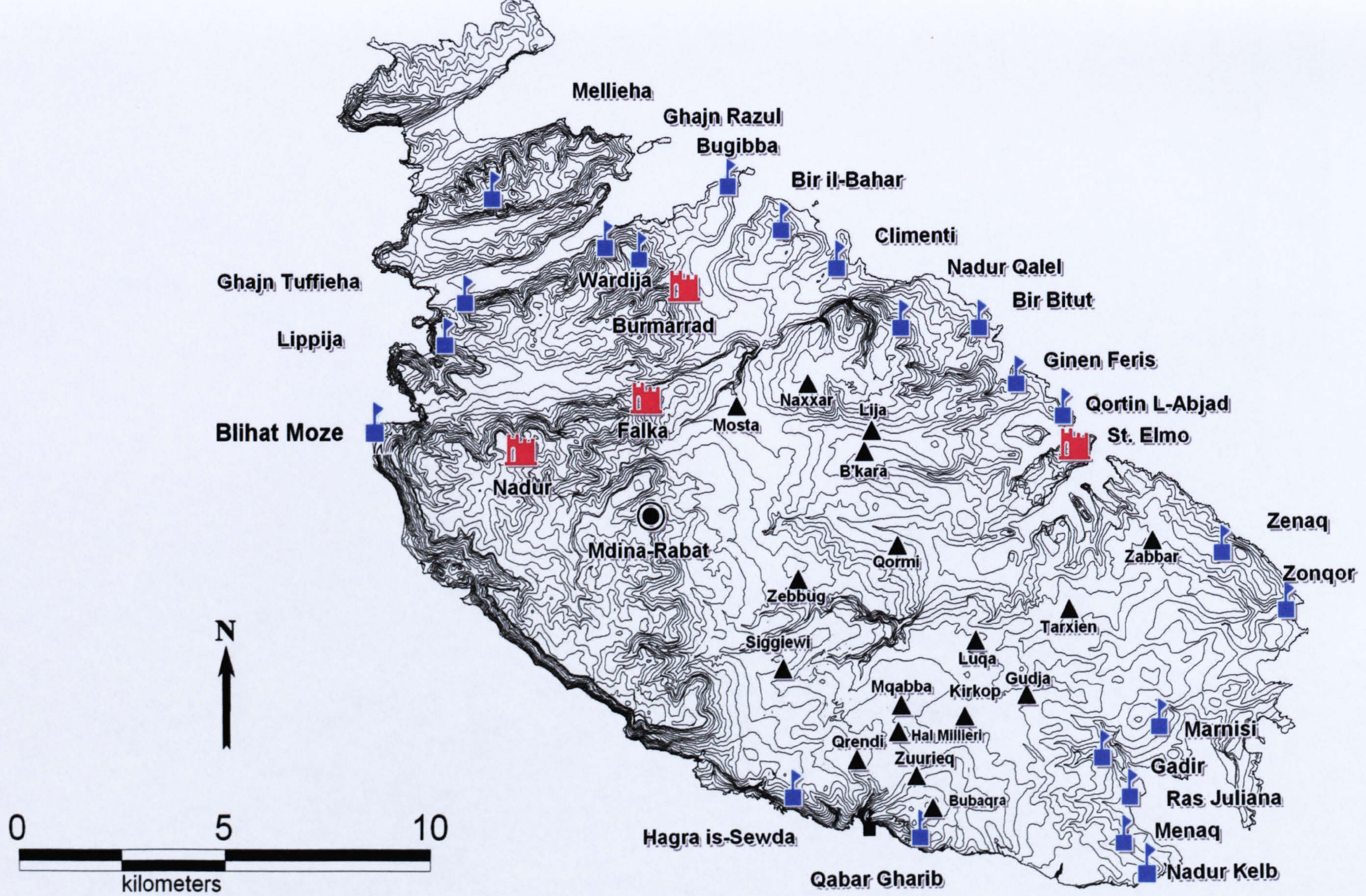


Figure 7.4 Map illustrating the lookout posts and watch towers in relation to the main medieval villages (T. Gambin).

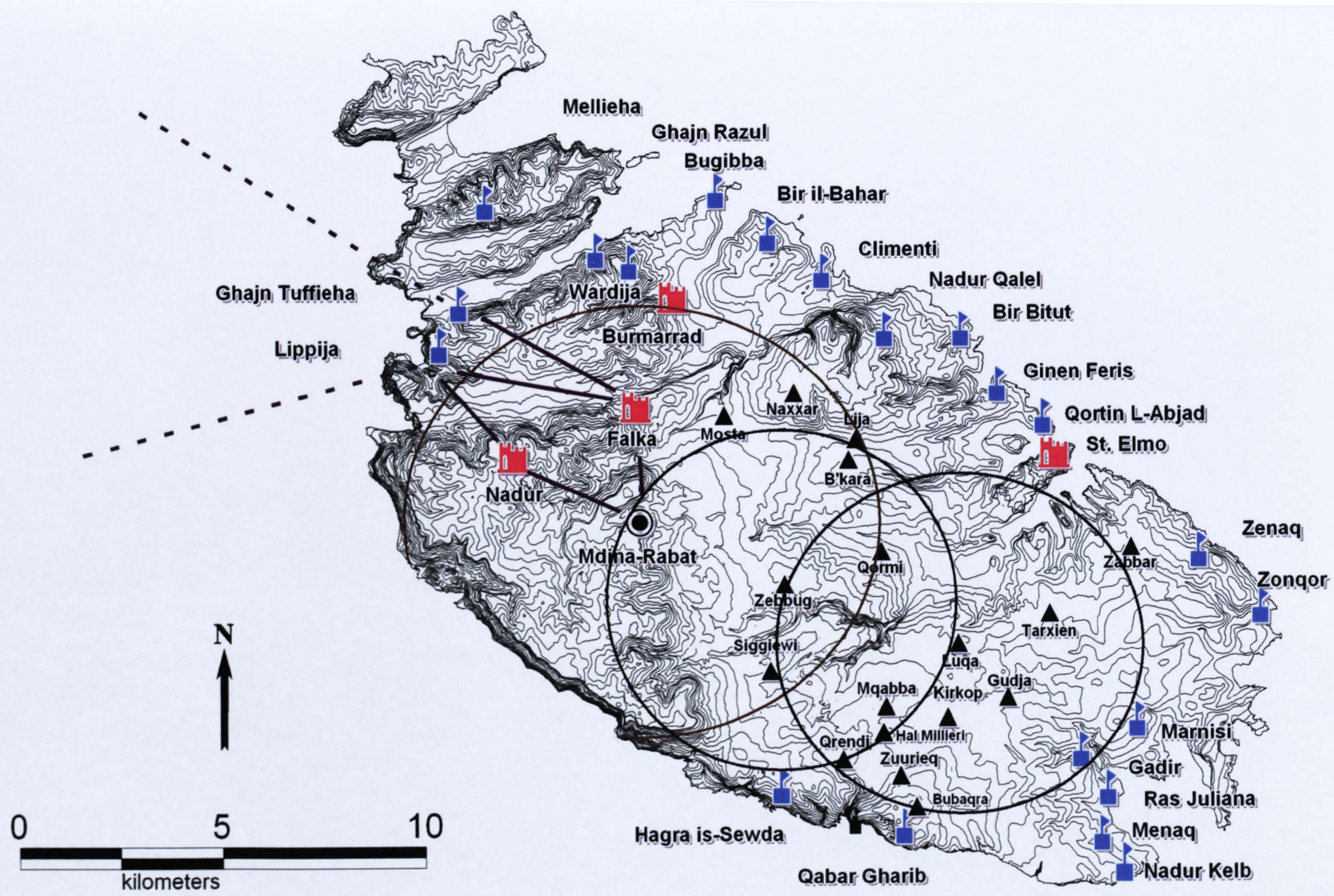


Figure 7.5 'Lines of sight-lines of sound' in Medieval Malta. Dotted lines represent 'sightings' of vessels sailing off Malta. The solid lines represent the signals sent between lookout posts, towers and the fortified town of Mdina-Rabat. The circles represent the 'sound waves' of the various church bells rung in response to the signals received (T. Gambin).

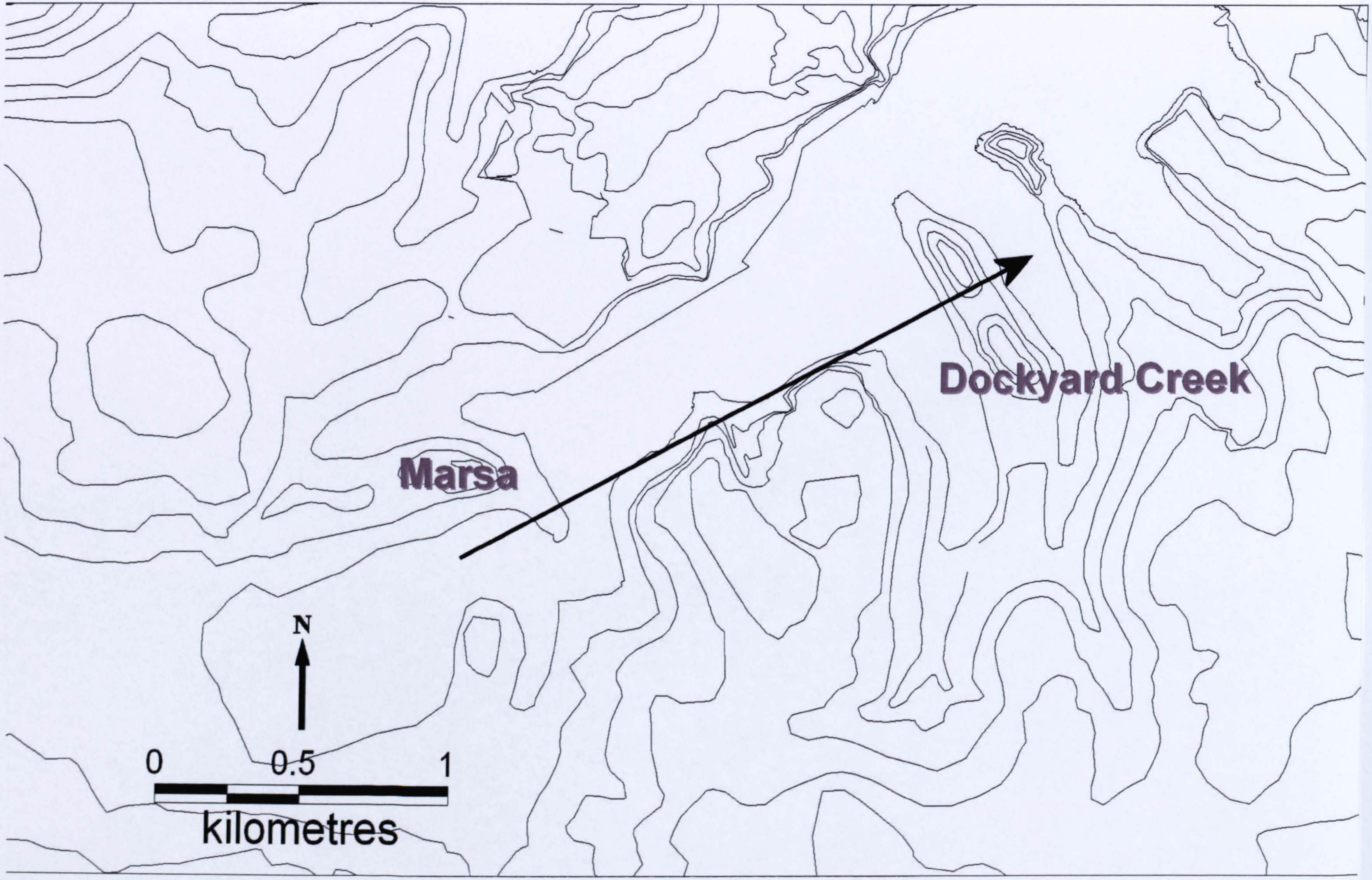


Figure 7.6 The relocation of the main harbour of Malta (T. Gambin).

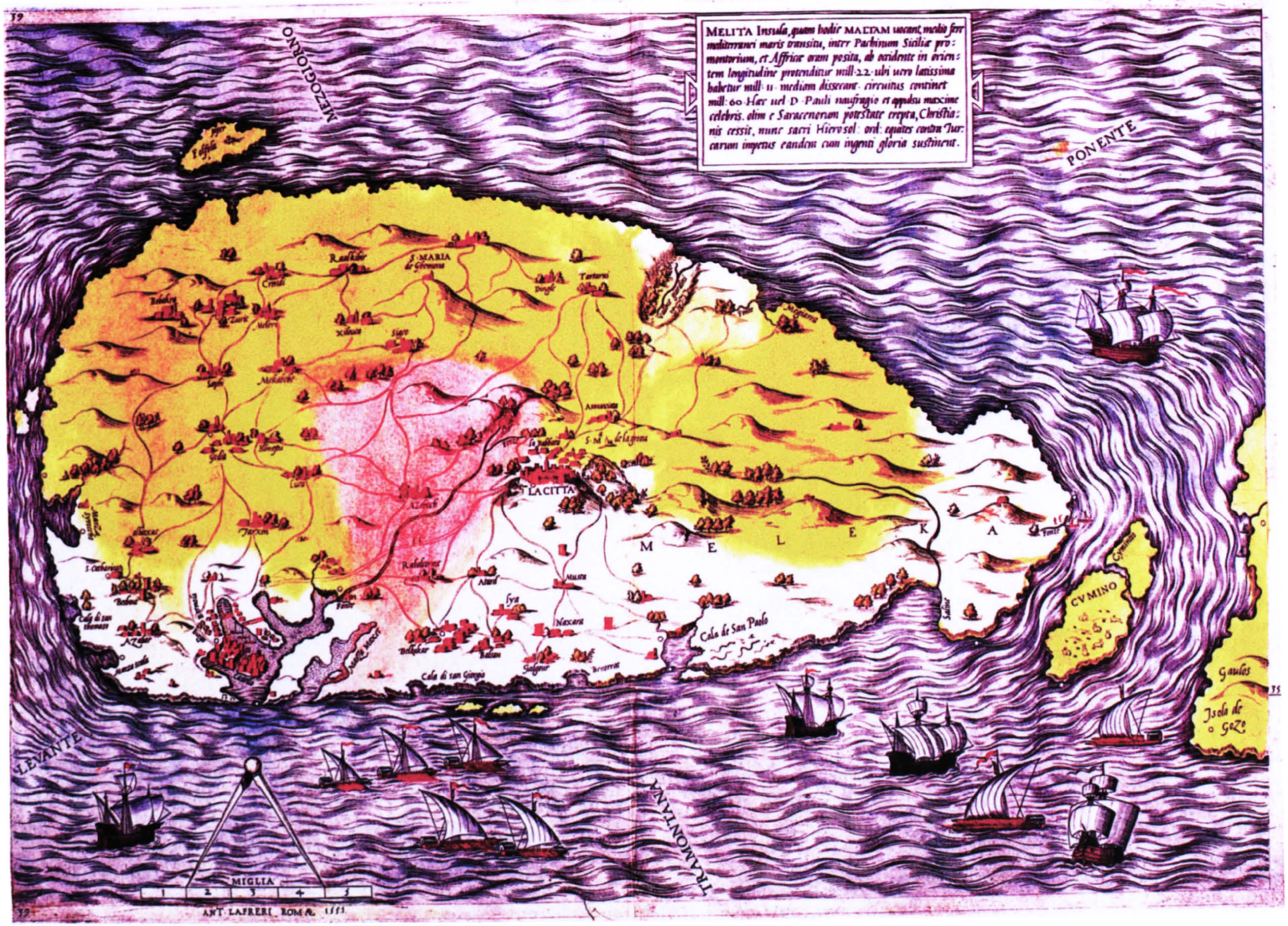


Figure 7.7 Map of Malta from 1551 (the Albert Ganado collection).



Figure 7.8 Looking out to the entrance of the Grand Harbour from on top of the *Castrum Maris* (T. Gambin).

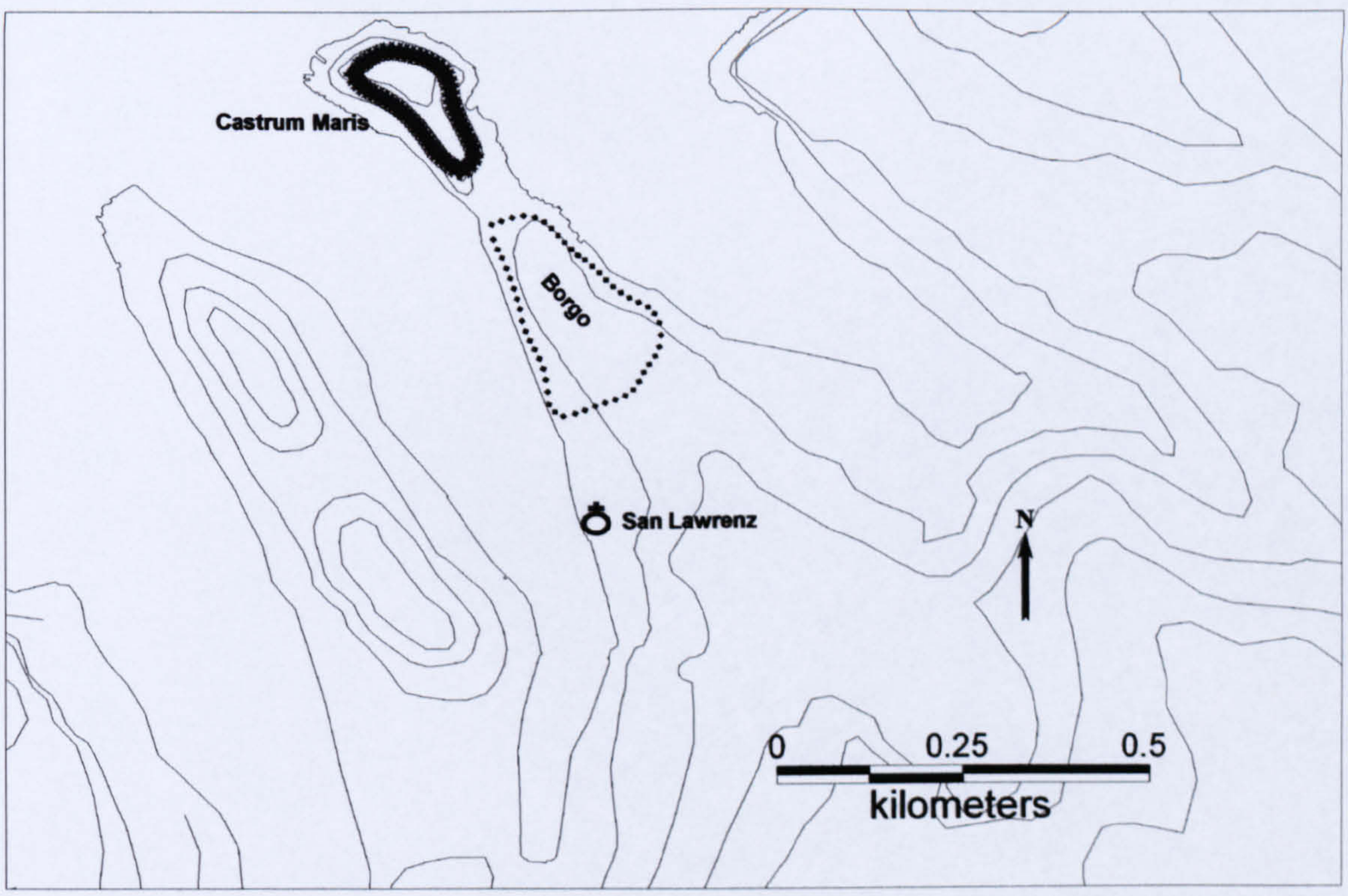


Figure 7.9 Map of the Birgu peninsula in the late Middle Ages (T. Gambin).



Figure 7.10 Paving stones from the British period along the Birgu waterfront (T. Gambin).



Figure 7.11 The demolished site of the late medieval shipyard (bottom left hand corner) as seen from St Angelo and with Dockyard Creek in the background (T. Gambin).

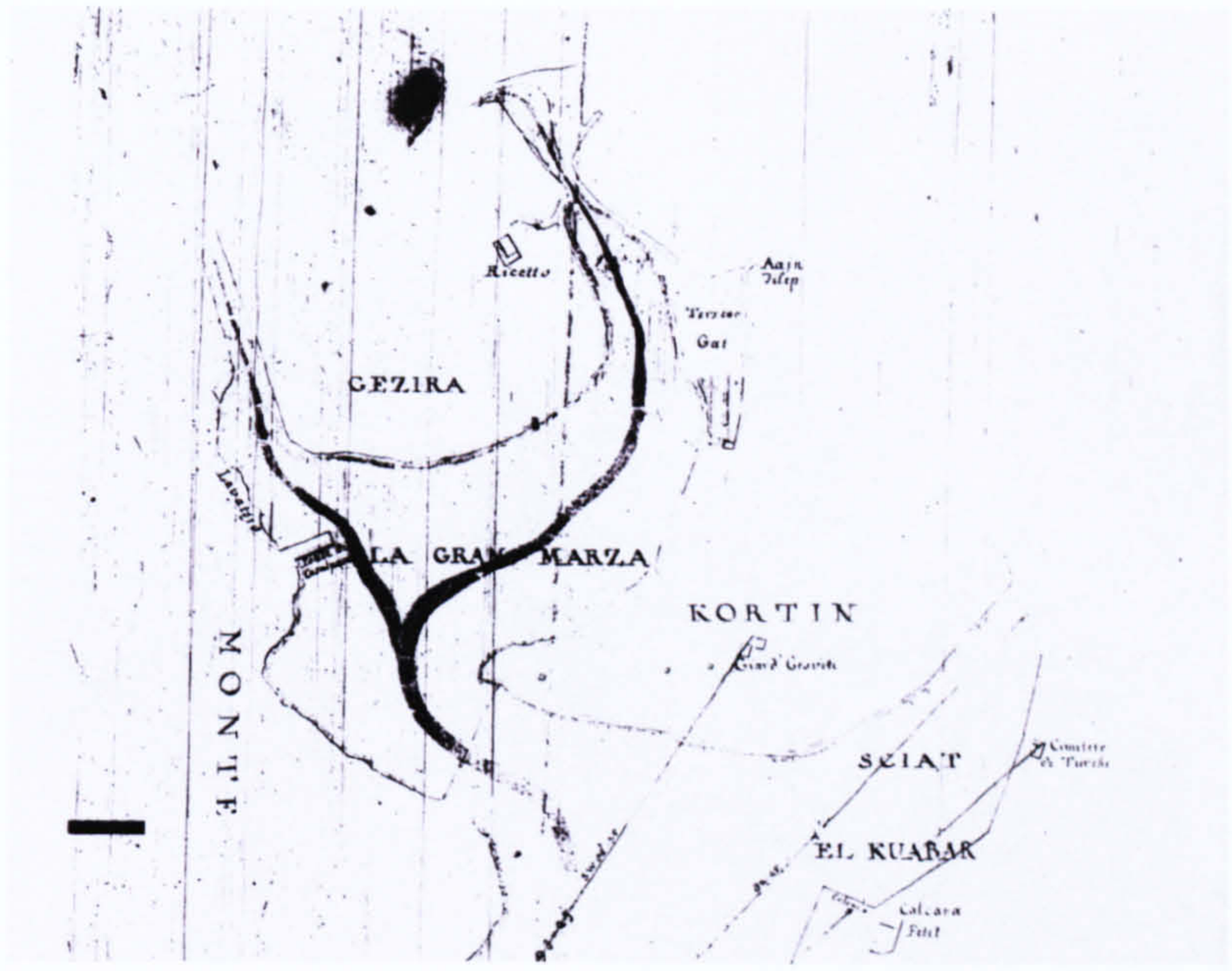


Figure 7.12 Early modern maps (c. 1700) showing 'Marsa Grande' in the inner reaches of the Grand Harbour (National Library of Malta collection).

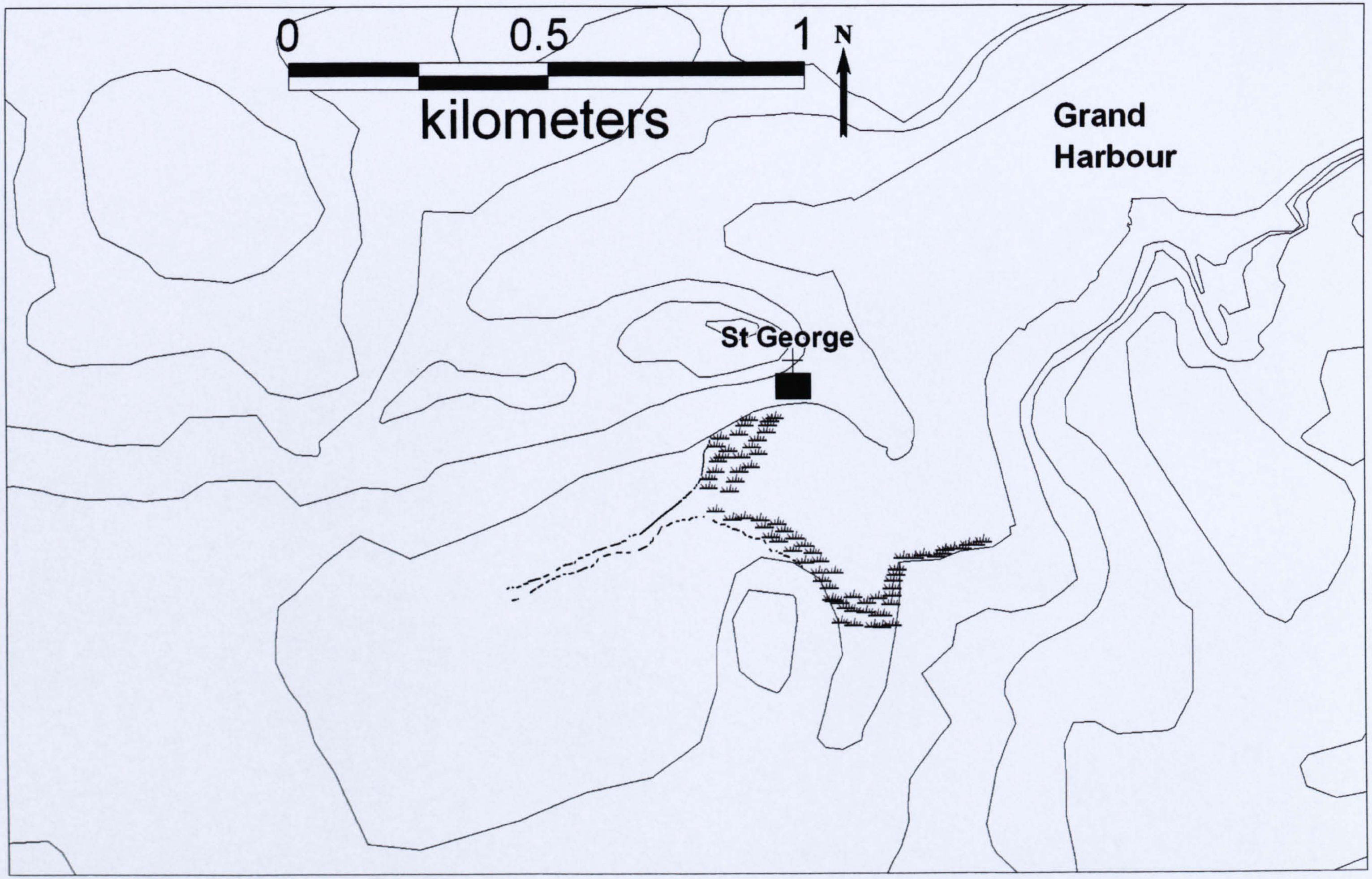


Figure 7.13 A reconstruction of the anchorage at Marsa during the late Middle Ages as per descriptions contained in medieval portolans. Note the advanced coastline with water channel and a marshy area (T. Gambin)

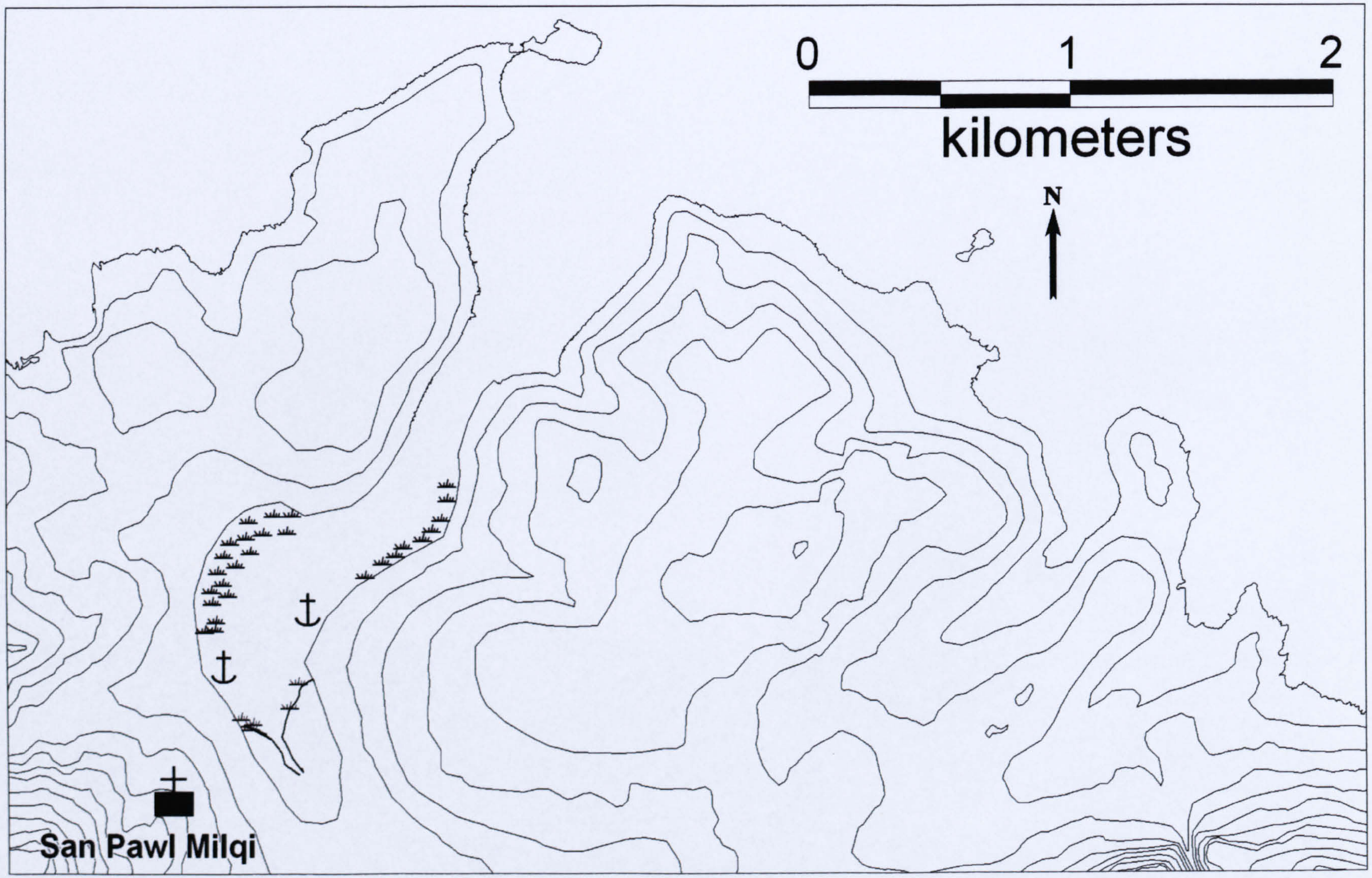


Figure 7.14 A reconstruction of the anchorage zones within the harbour of Burmarrad as described in the medieval portolans. Note the advanced coastline and marshy areas (T. Gambin).



Figure 7.15 The anchorage under the chapel of St Paul's Bay (detail from a 17th century engraving by W. Schnellinkx, Heritage Malta collection).)

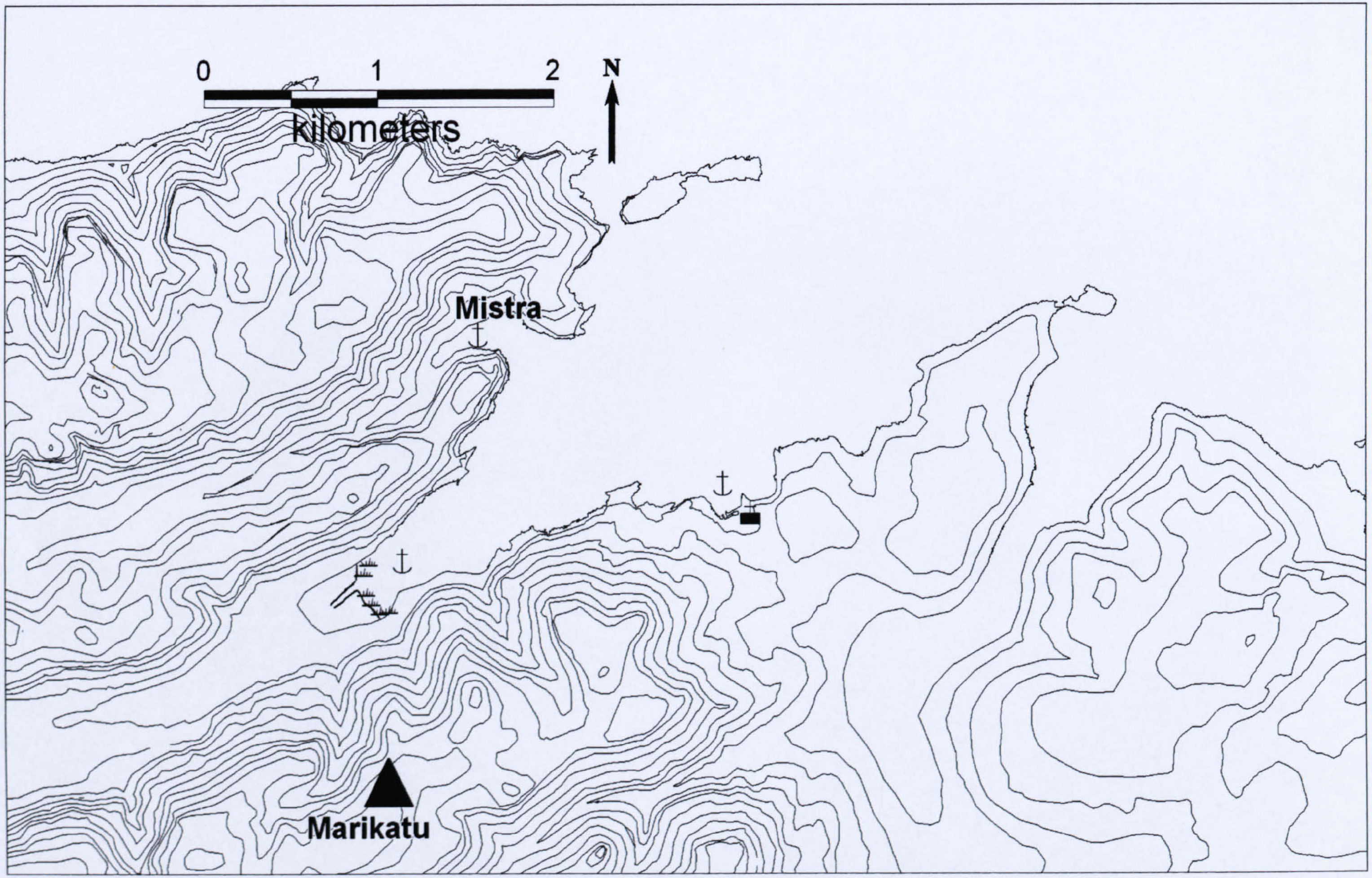


Figure 7.16 Map showing the village of Marikatu and various anchorages in St Paul's Bay which are described in medieval portolans (T. Gambin).



Figure 7.17 Neck of amphora with 'twin' handles (Heritage Malta collection, photo by E. Azzopardi).



Figure 7.18 Body of decorated amphora (Heritage Malta collection, photo by E. Azzopardi).



Figure 7.19 Ceramic jug (Heritage Malta collection, photo by E. Azzopardi).

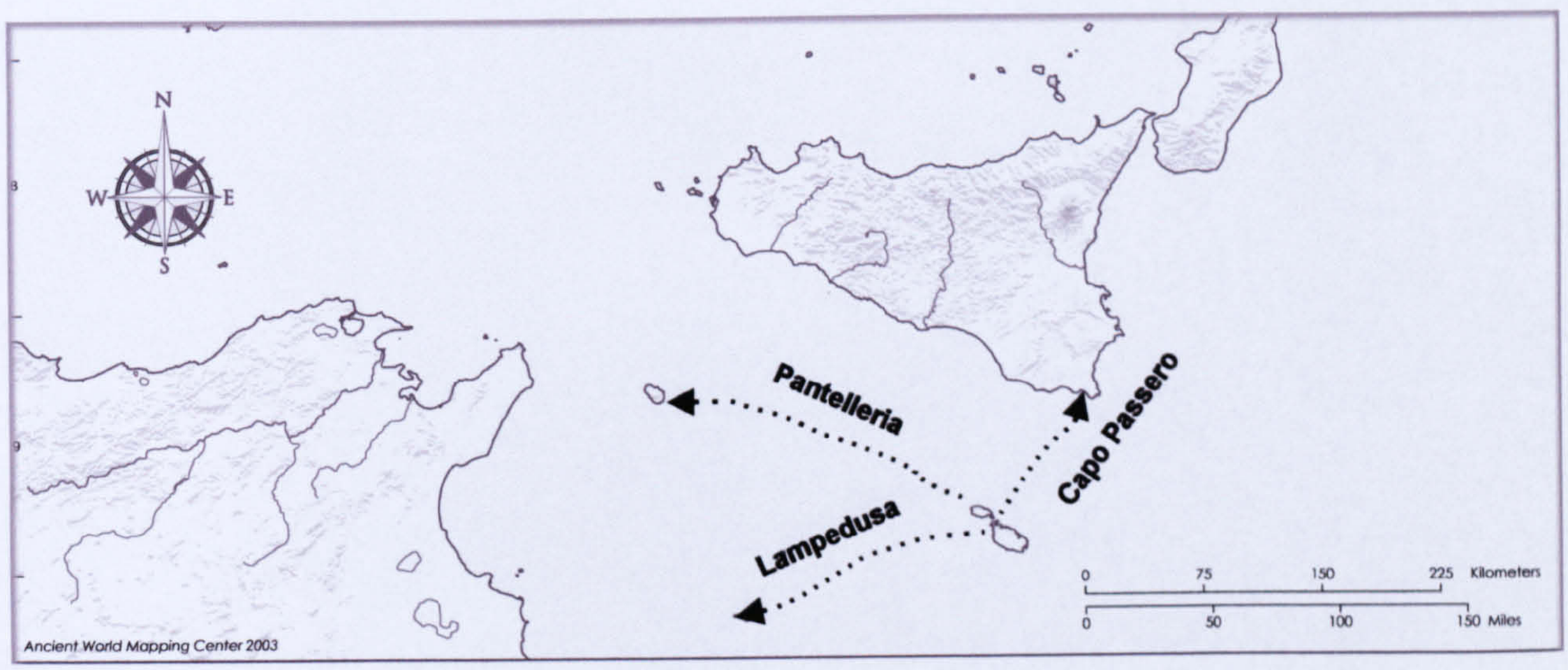


Figure 7.20 Malta and some destinations mentioned in medieval portolans (T. Gambin).

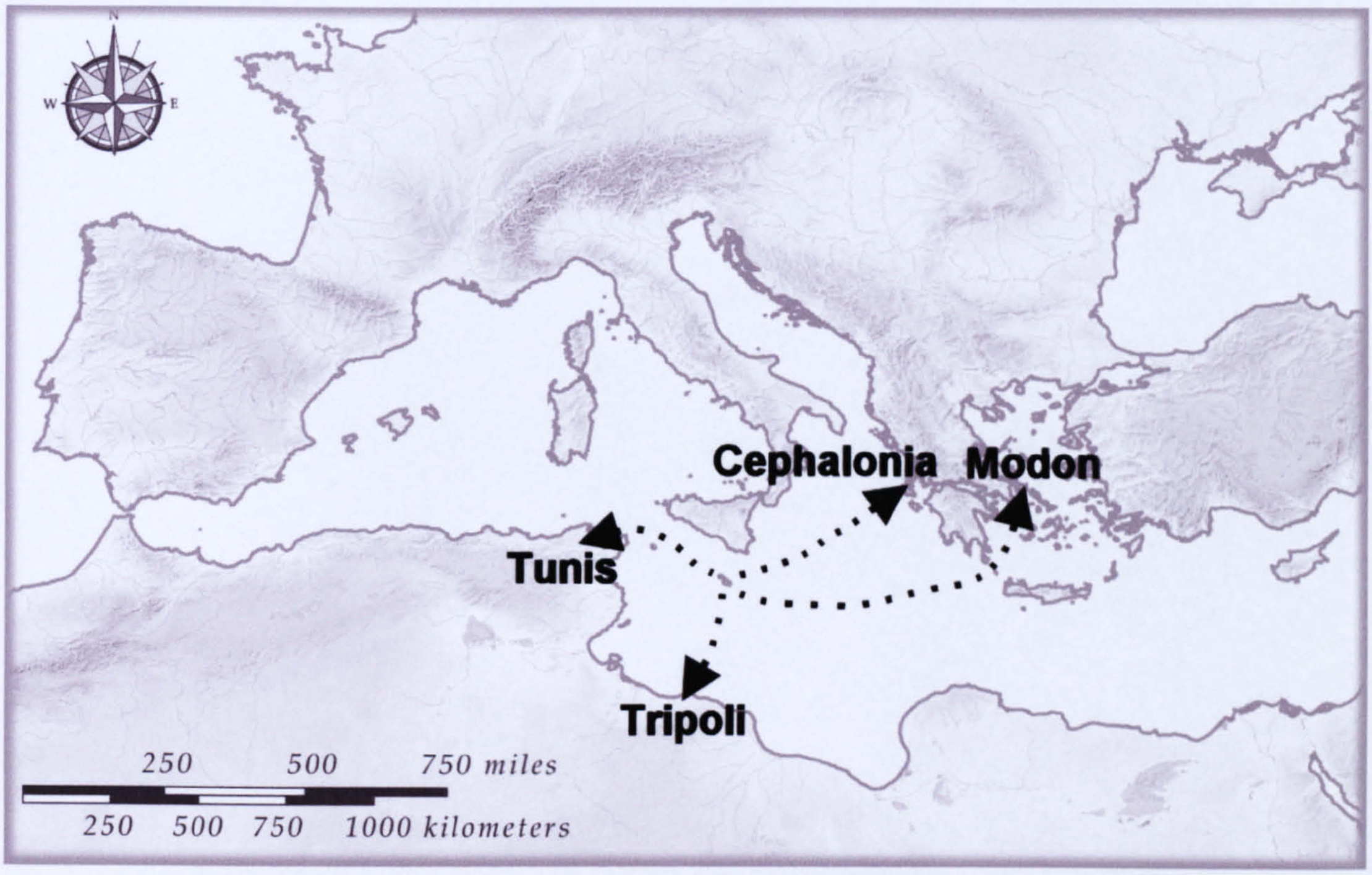


Figure 7.21 Malta and some destinations mentioned in medieval portolans (T. Gambin)

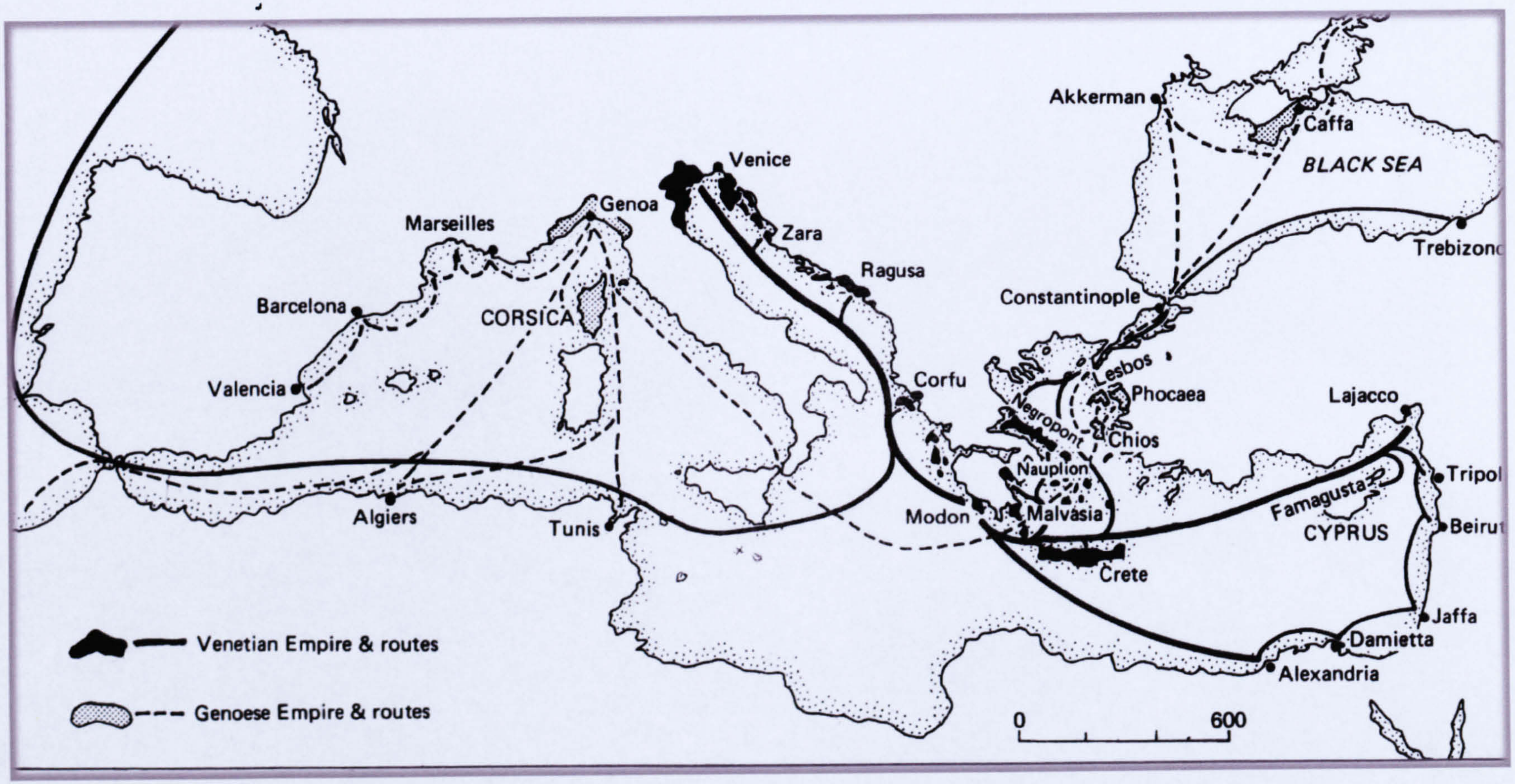


Figure 7.22 Map depicting the main trade routes of the late Middle Ages (after Pounds 1994).



Figure 7.23 The links between Malta, Sicily and Sardinia (T.Gambin)

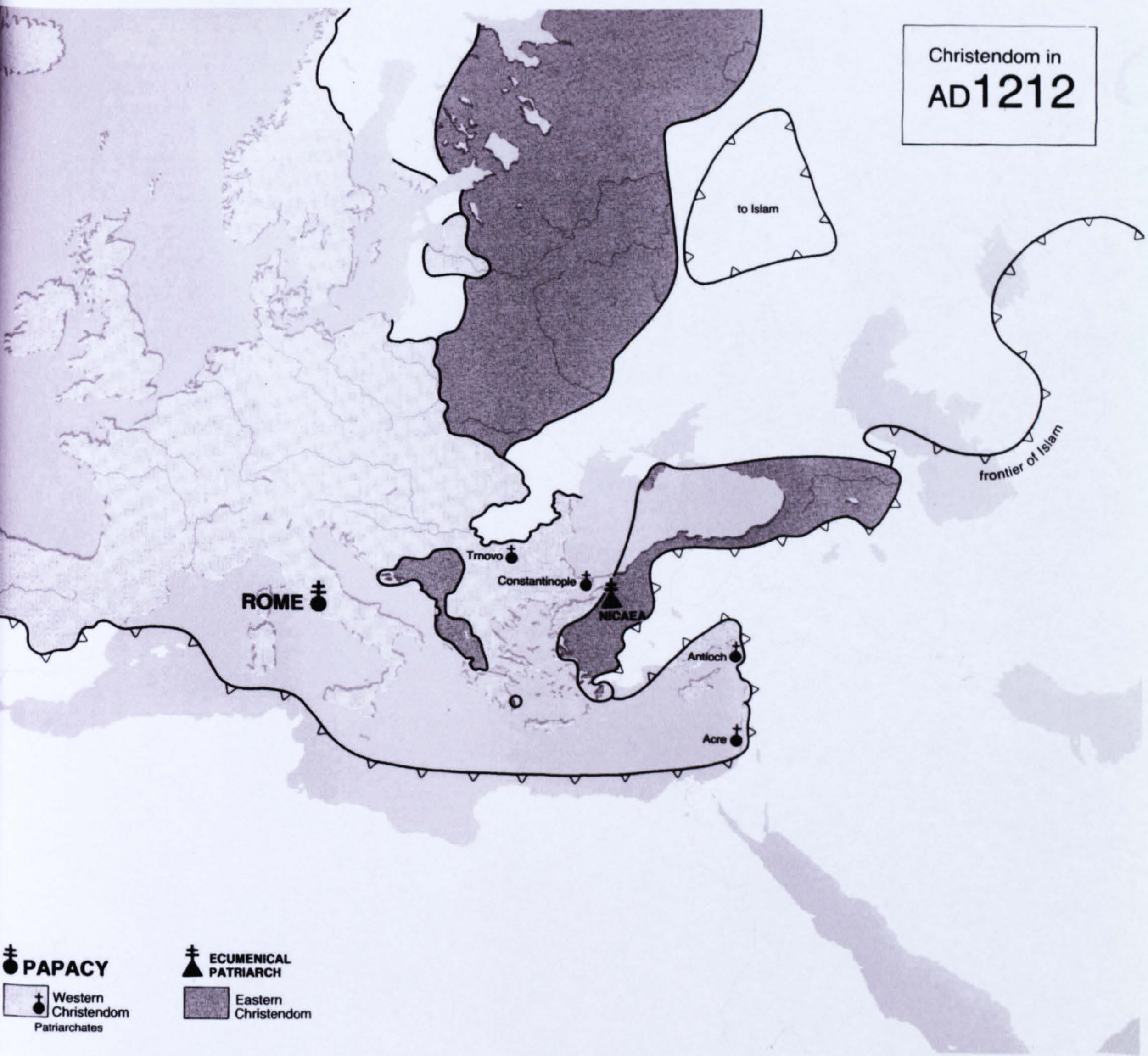


Figure 7.24 Map showing the 'border' between Christianity and Islam in the early 13th century (after McEvedy 1992).

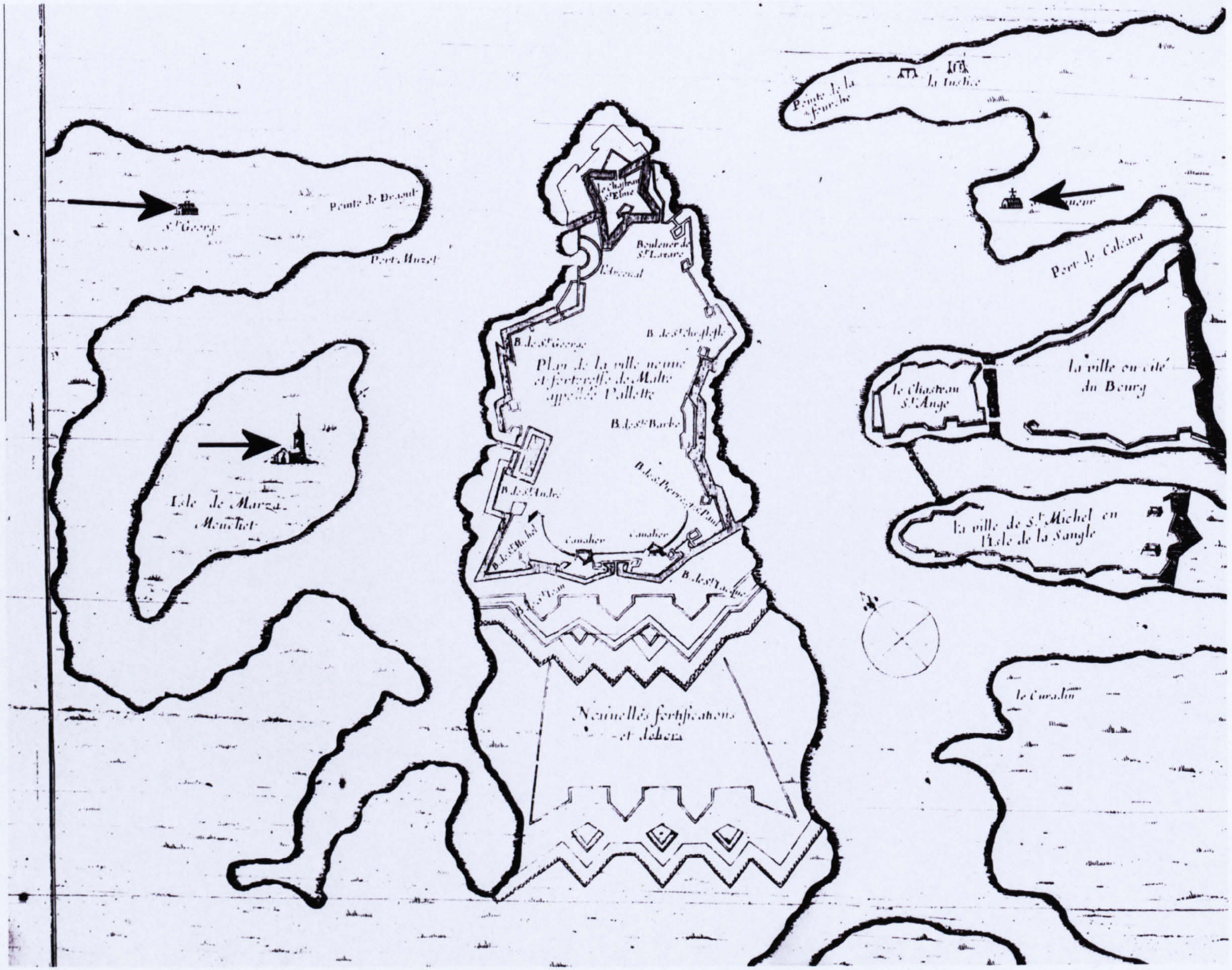


Figure 7.25 Coastal chapels marked on a 16th century map (National Library of Malta collection).



Figure 7.26 Map illustrating the location of some medieval chapels (T. Gambin).



Figure A.1 *Cerithum Vulgatum* from BUR03/12/2 (T. Gambin)



Figure A.2 Partial Punico-Roman bowl containing marine sediments and molluscs from the building site at Marsa (T. Gambin)



Figure A.3 Section at BUR02/4 that contains classical material (T. Gambin).

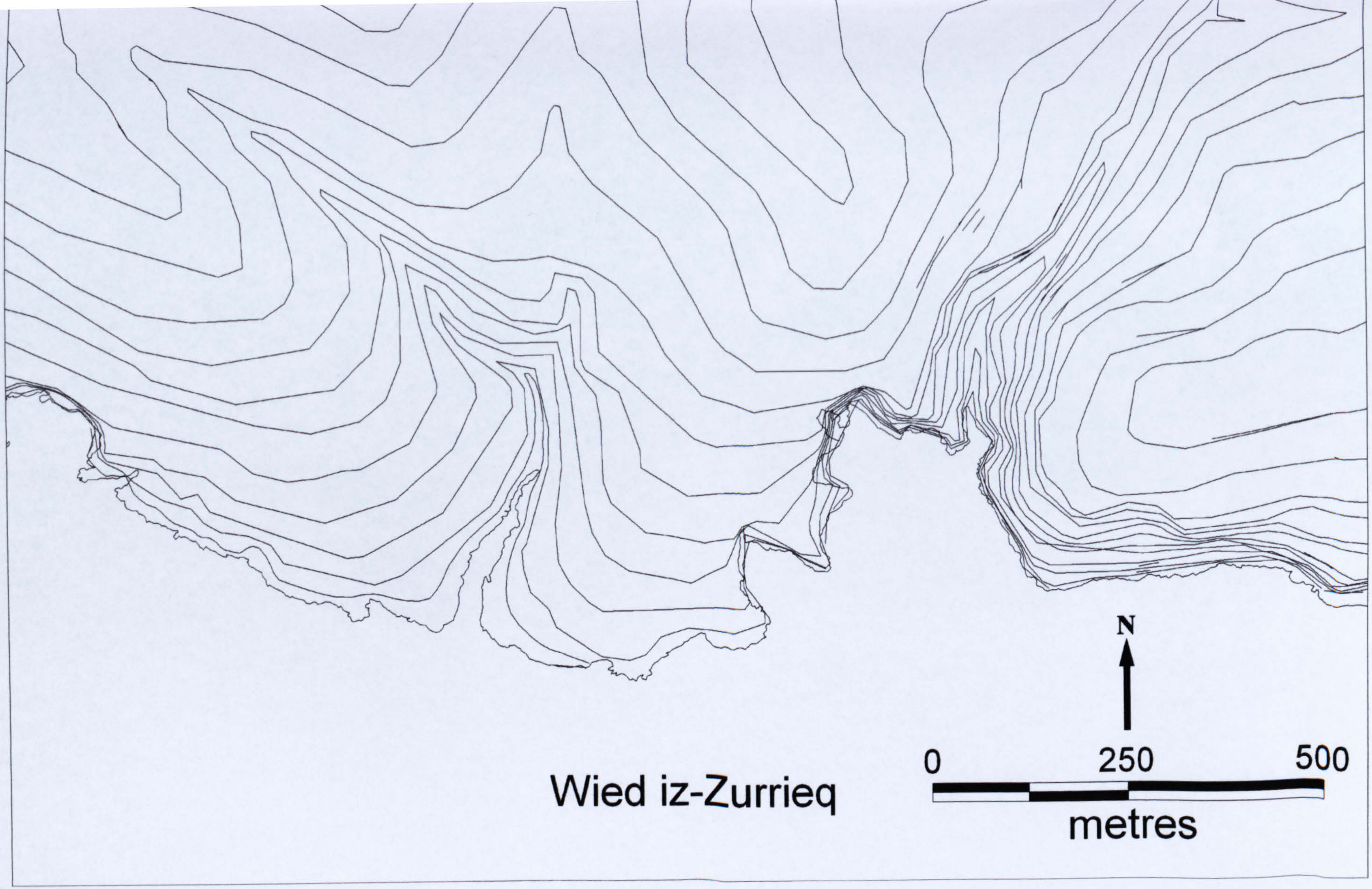


Figure B.1 Wied iz-Zurrieq (T. Gambin).

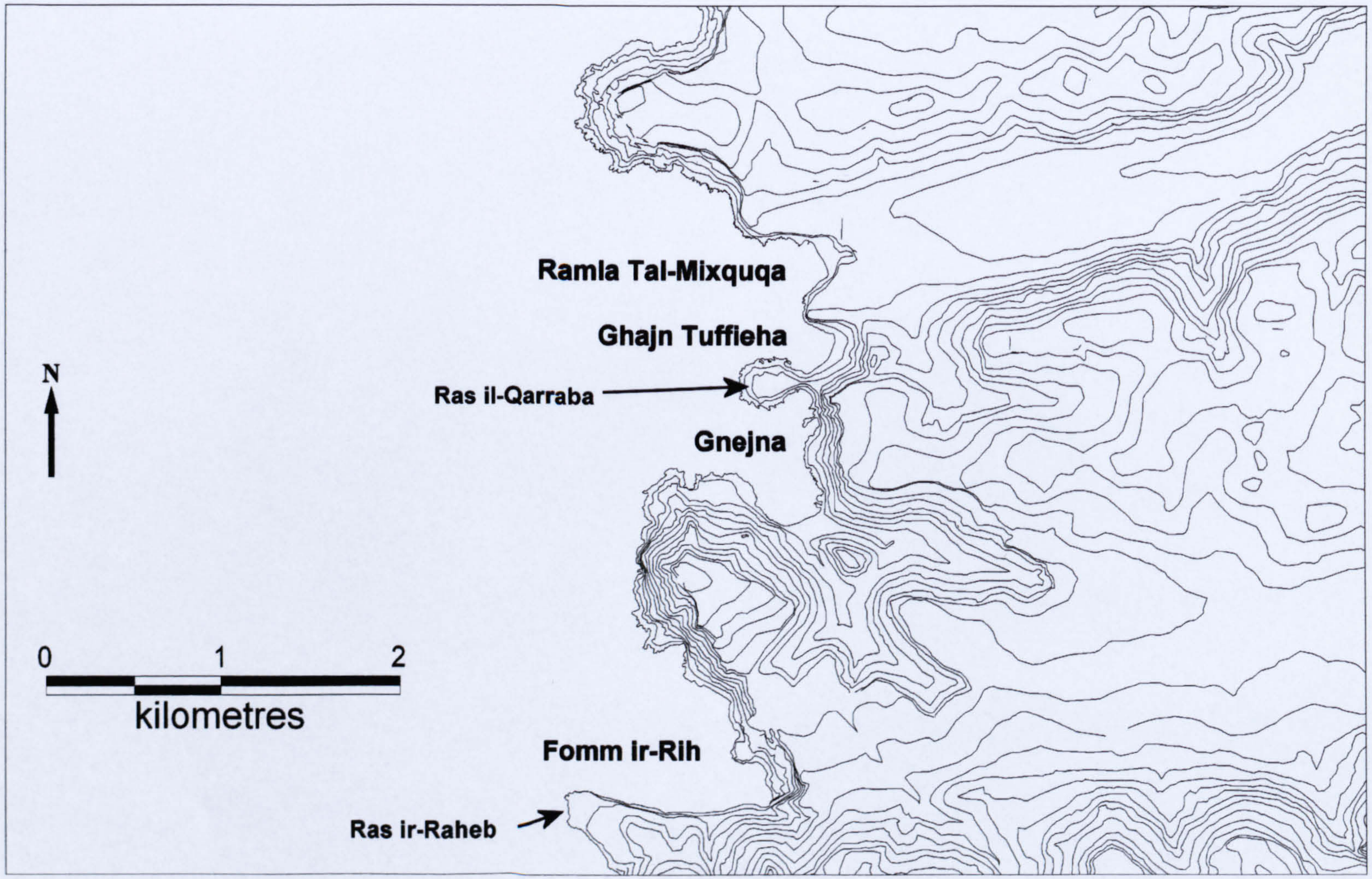


Figure B.2 Fomm ir-Rih, Gnejna, Ghajn Tuffieha and Ramla Tal-Mixquqa. (T. Gambin).

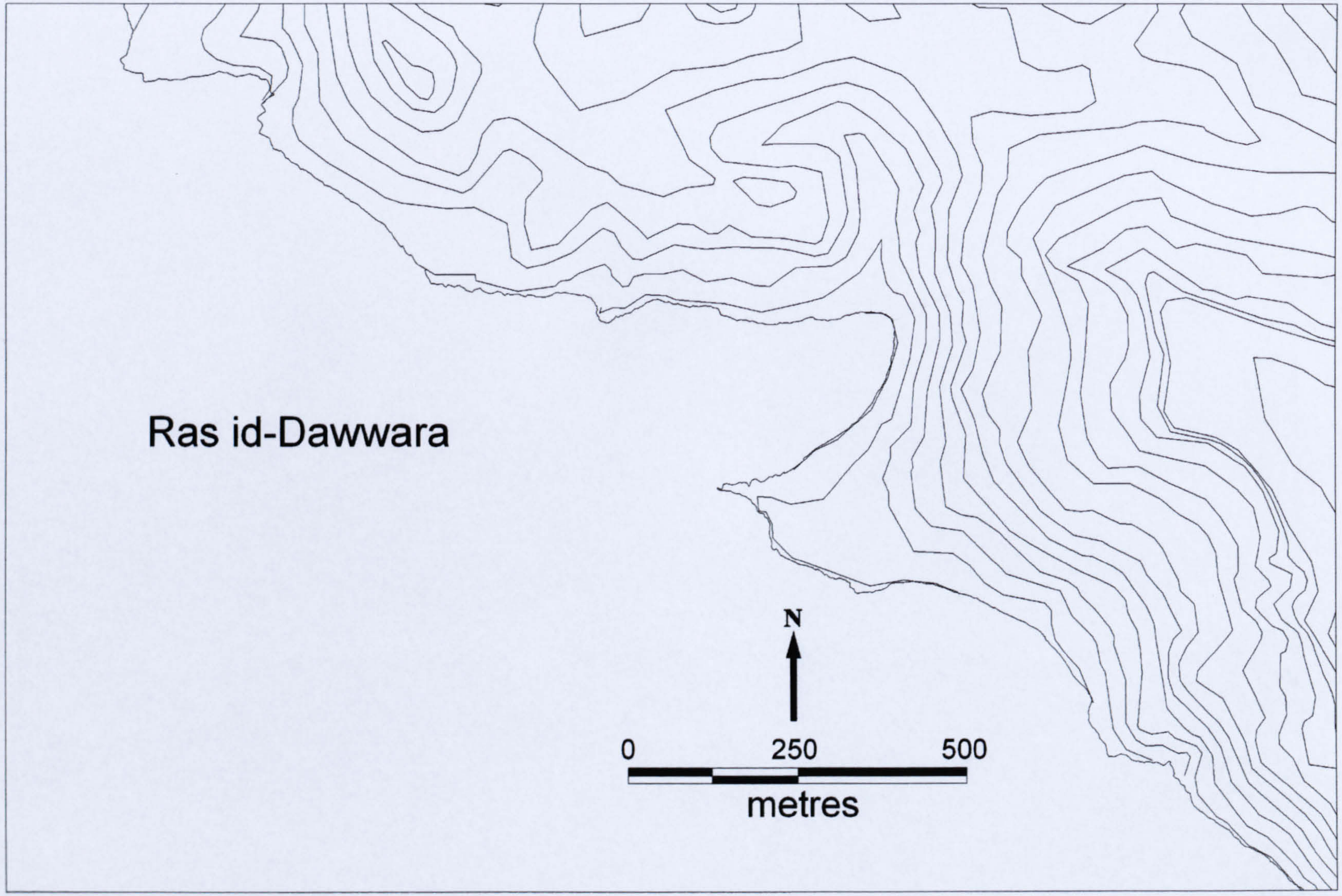


Figure B.3 The anchorage of Ras id-Dawwara (T. Gambin).

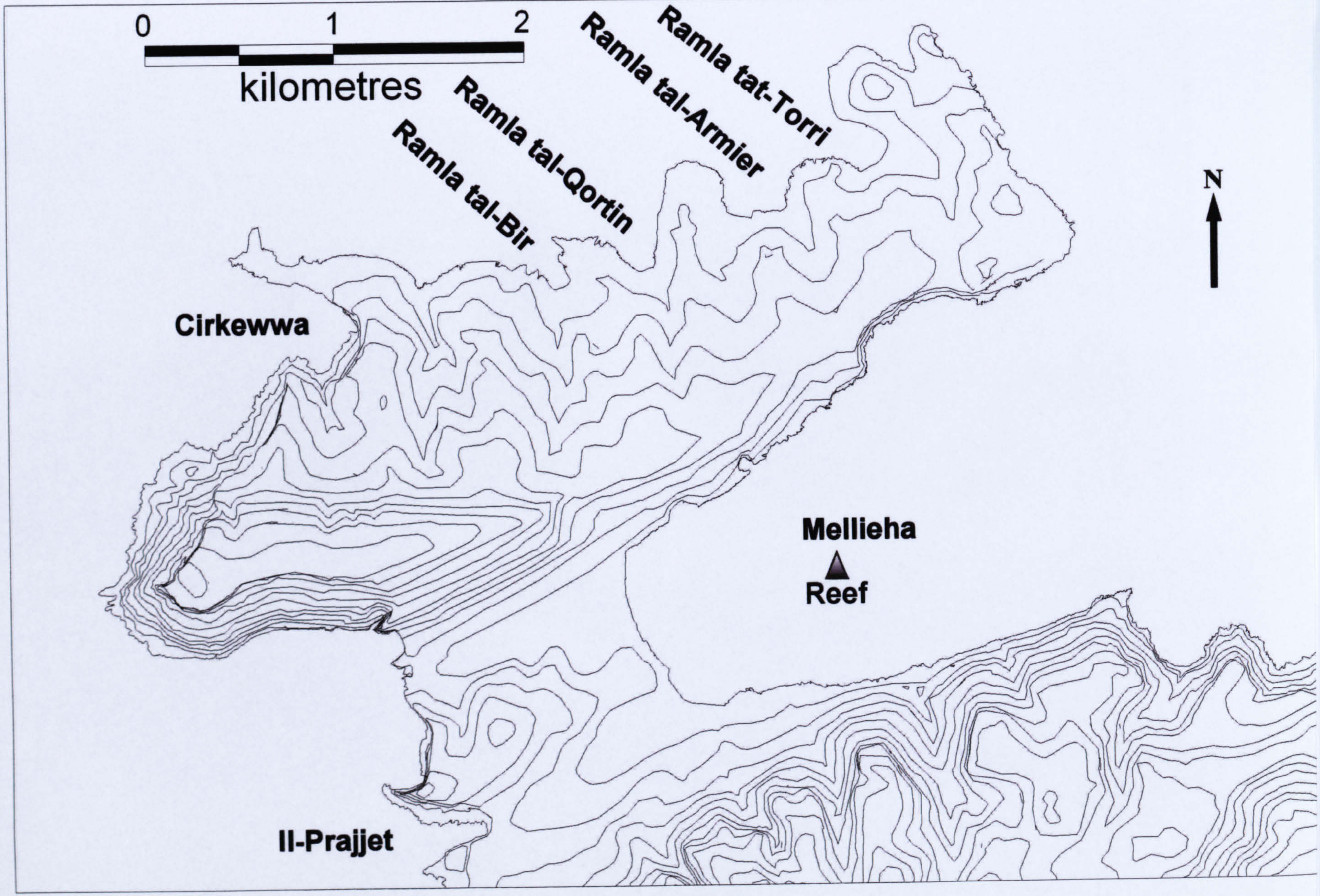


Figure B.4 Anchorages and bays on the northern coast of the island (T. Gambin).

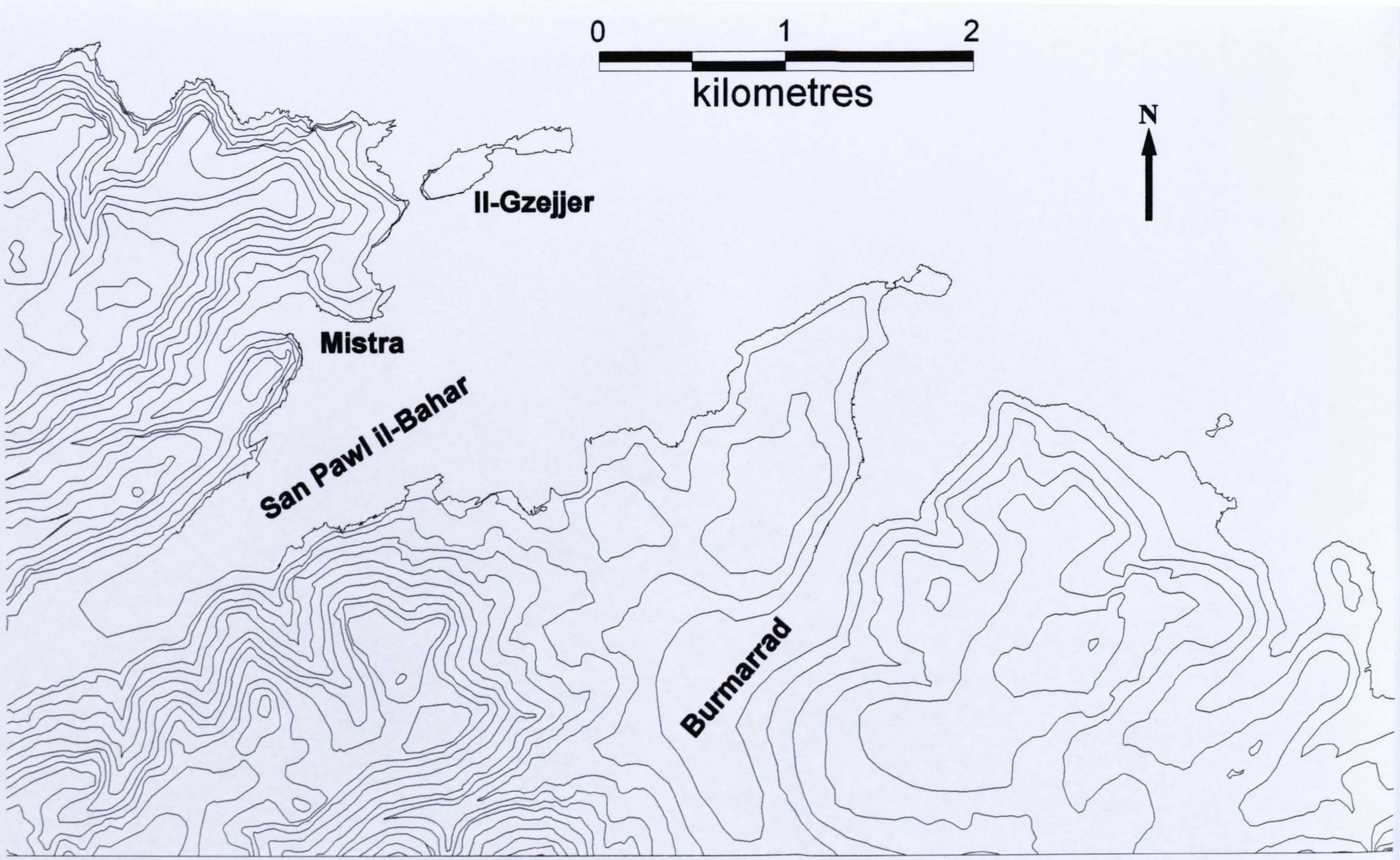


Figure B.5 San Pawl il-Bahar and Burmarrad (T. Gambin).

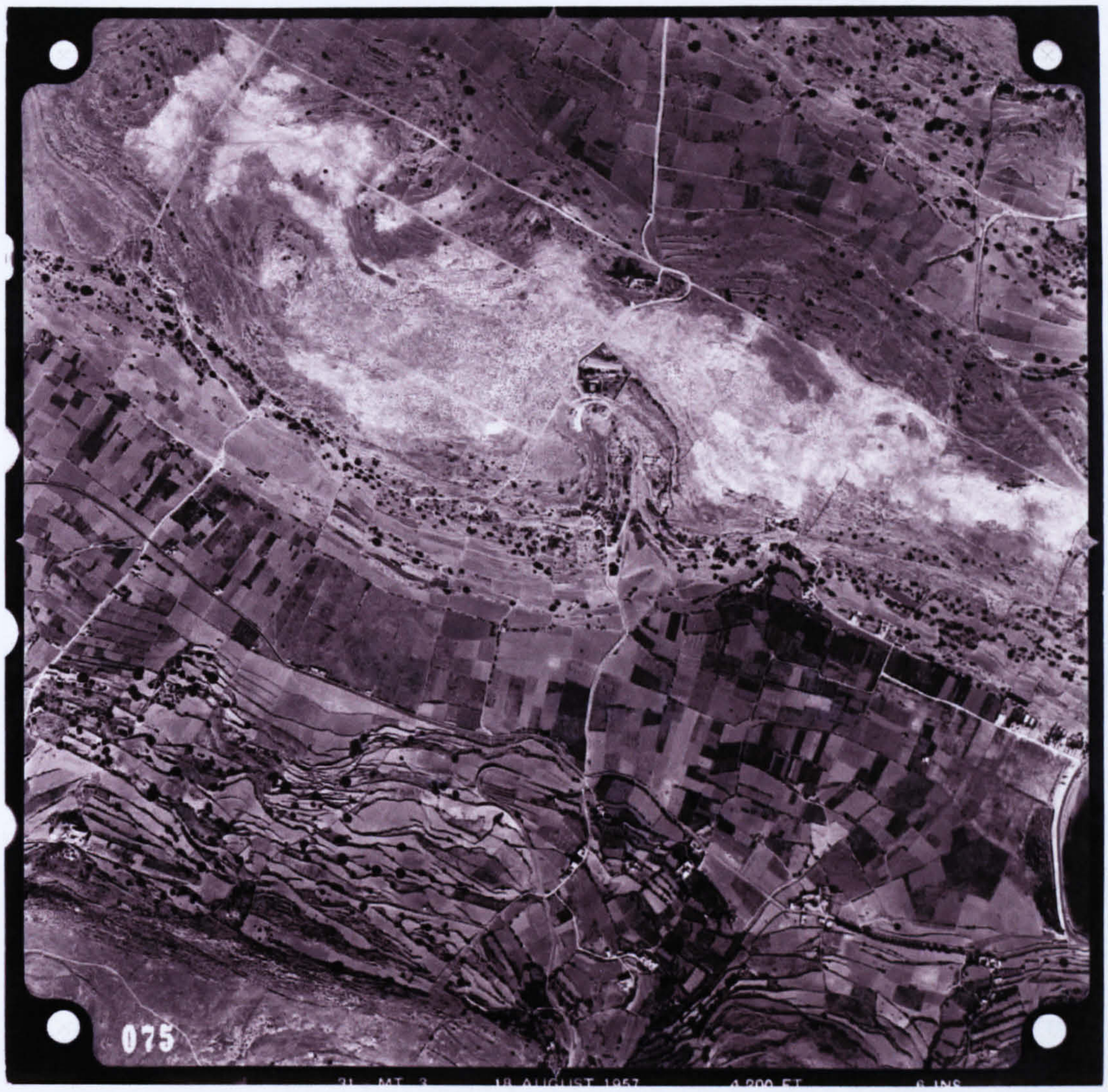


Figure B.6 Aerial view of San Pawl il-Bahar with the large floodplain to the bottom centre of the photograph (MEPA).

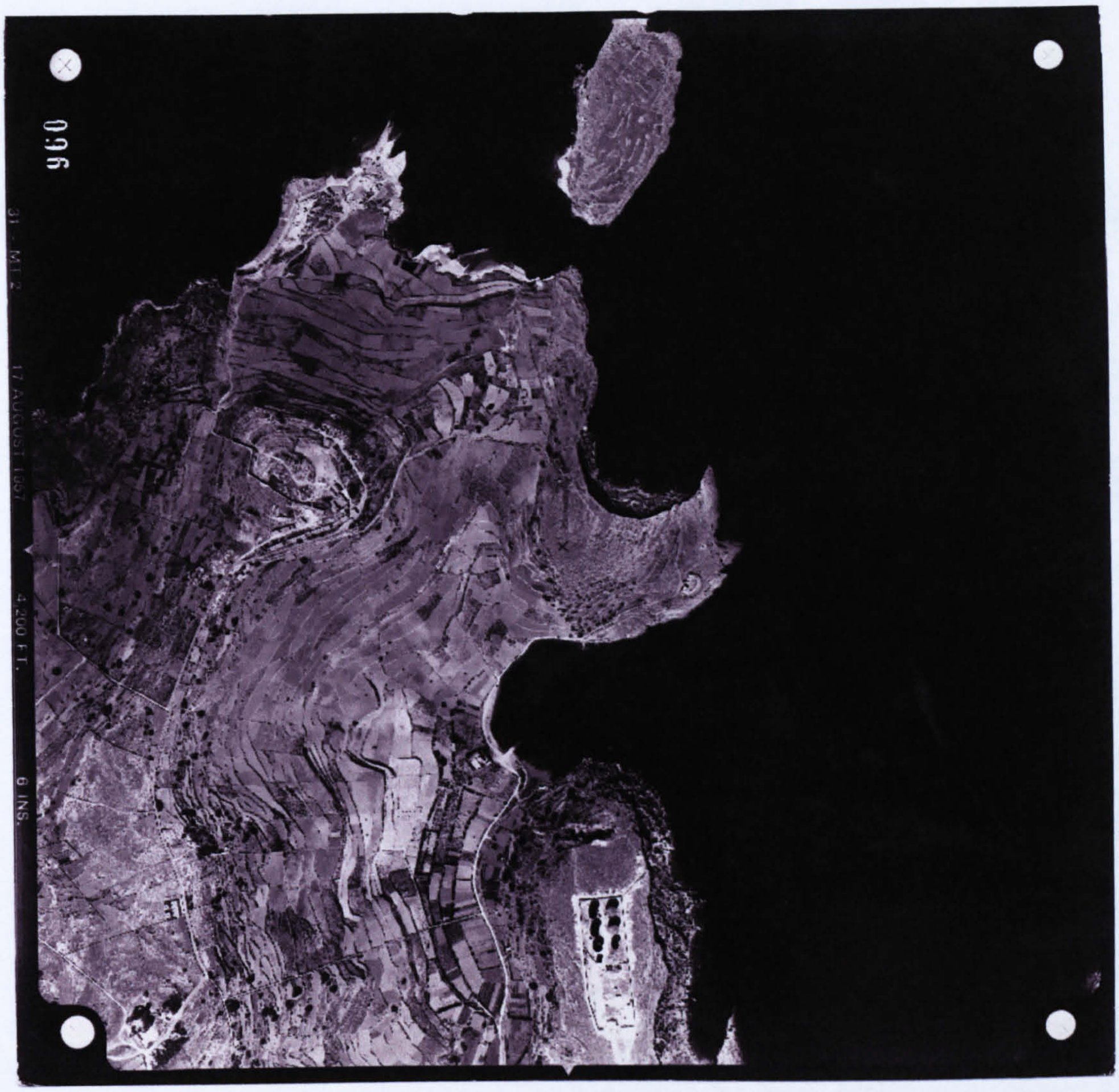


Figure B.7 Aerial view of Mistra Bay with floodplain at the bottom centre of the photograph (MEPA).

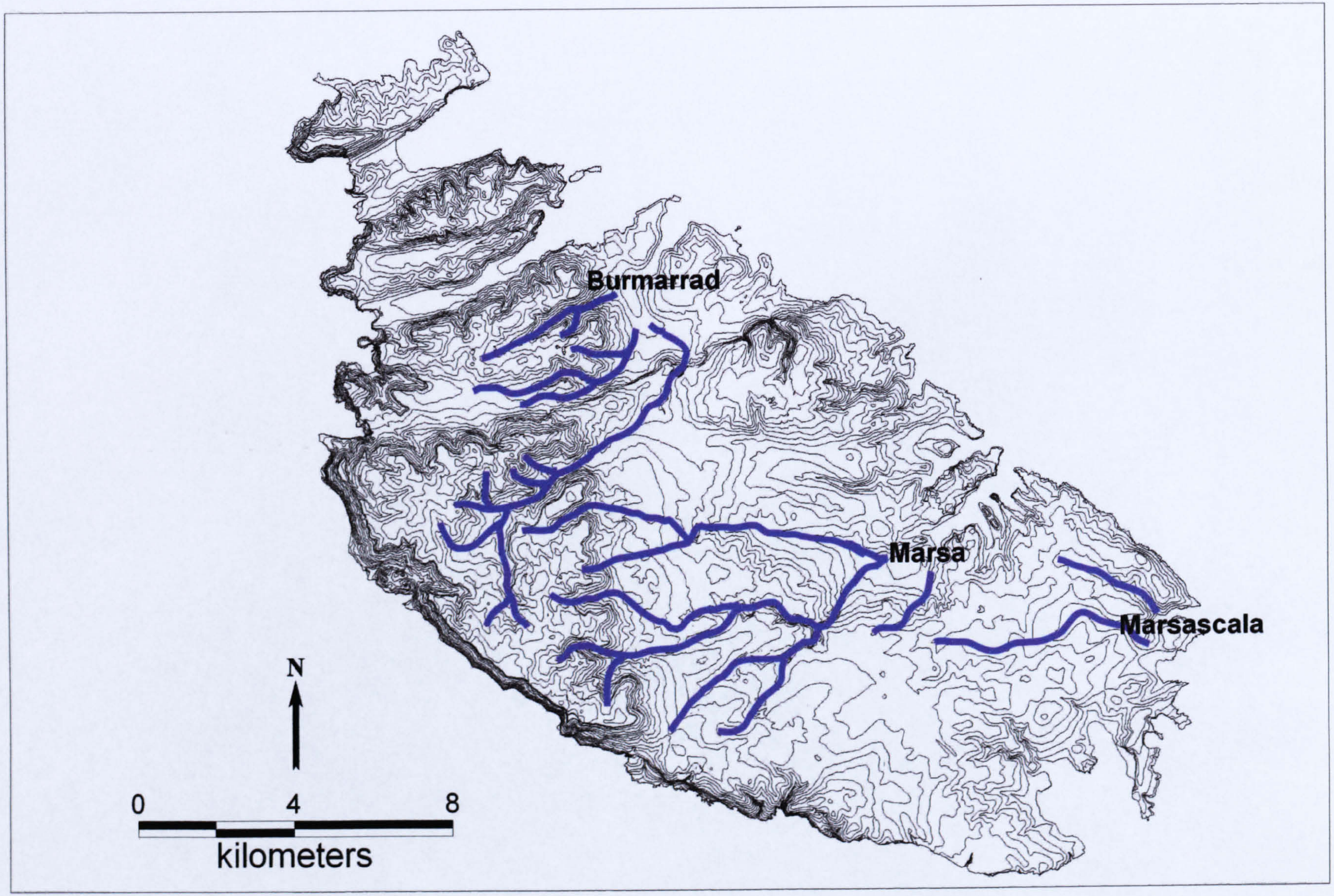


Figure B.8 The valley systems feeding Burmarrad, Marsa and Marsascala (T. Gambin).

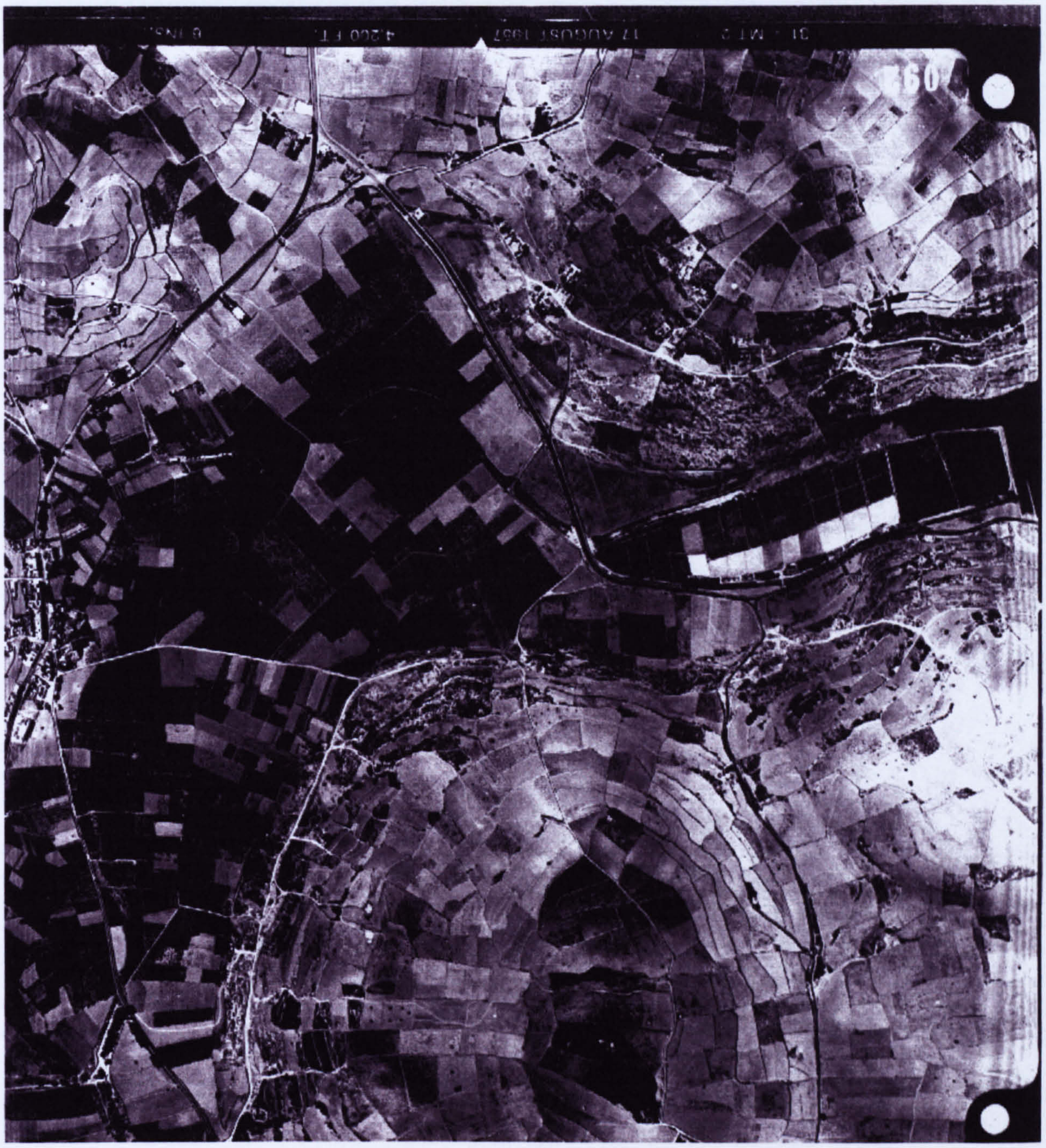


Figure B.9 An aerial view of the Burmarrad floodplain. The saltpans and a small part of Salina Bay are visible to the right of the photograph (MEPA).



Figure B.10 Layer of mud covering crops at Burmarrad (deposited after two hours of heavy rainfall in September 2003) (T. Gambin).

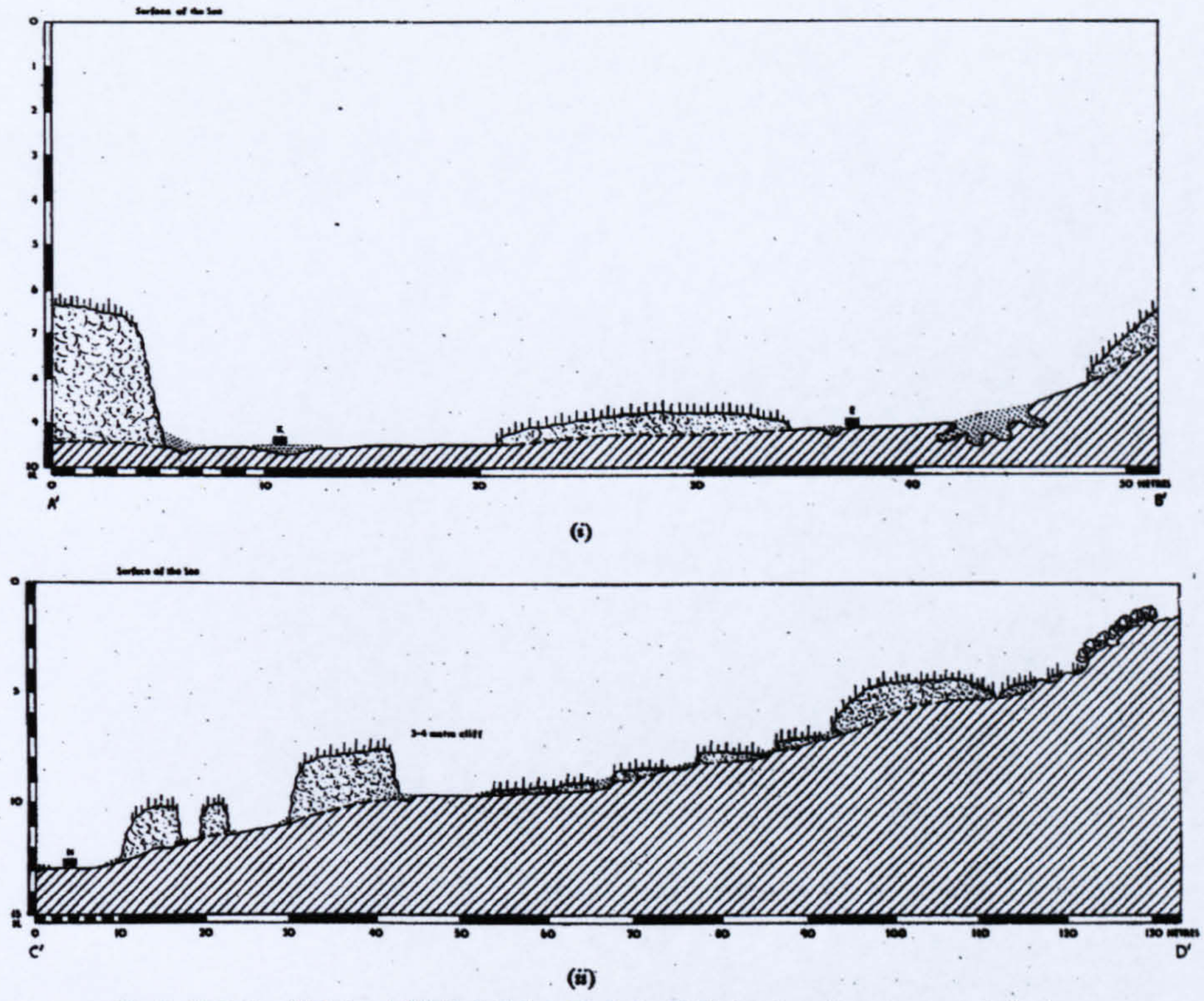


Fig. 3 (i) Section A'-B' through 'Haddow's Valley'. (ii) Section C'-D' through wreck-area in an easterly direction from area-marker 'N' to Rocks Awash (drawing by F. S. Mallia).

KEY

Dead rhizomes of Posidonia.

Live Posidonia *grass.*

Rock.

Sand.

Area-marker (dummy mine).

KEY to Fig. 2 opposite Scale: grid squares = 10m.

A-D *Half-ton concrete markers on sea-bed.*

Area-markers, lettered from 'E' to 'S'.

Rock bottom showing through sand or weed.

Depth of sand suggested by density of dots.

Unworked area, largely covered by Posidonia mattes.

Up/down.

Figure B.11 Sections showing the depth of *Posidonia* mattes at Mellieha Bay (after Frost 1969: 7)

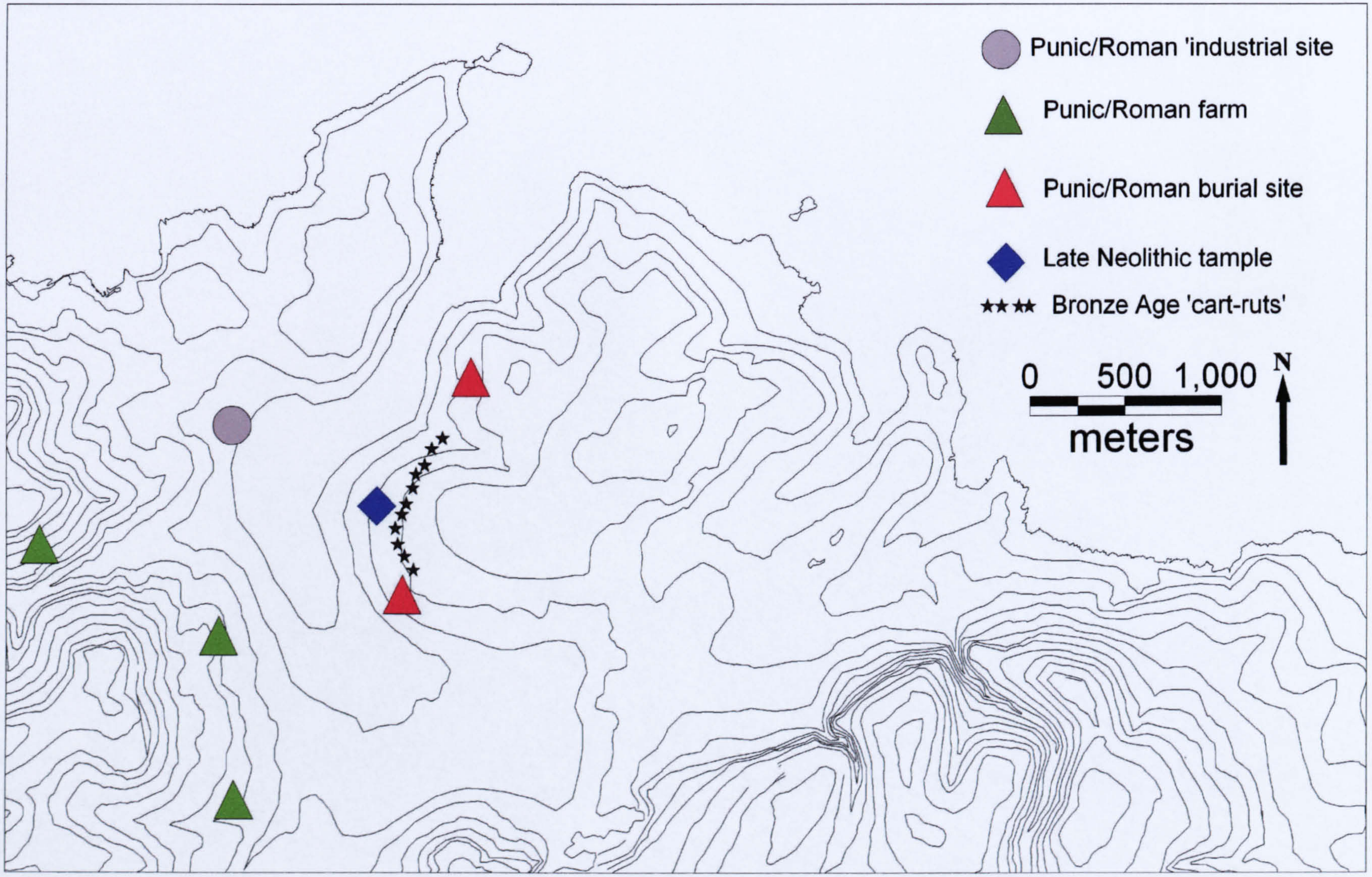


Figure B.12 Map illustrating the location of archaeological sites around the Burmarrad floodplain (T. Gambin).

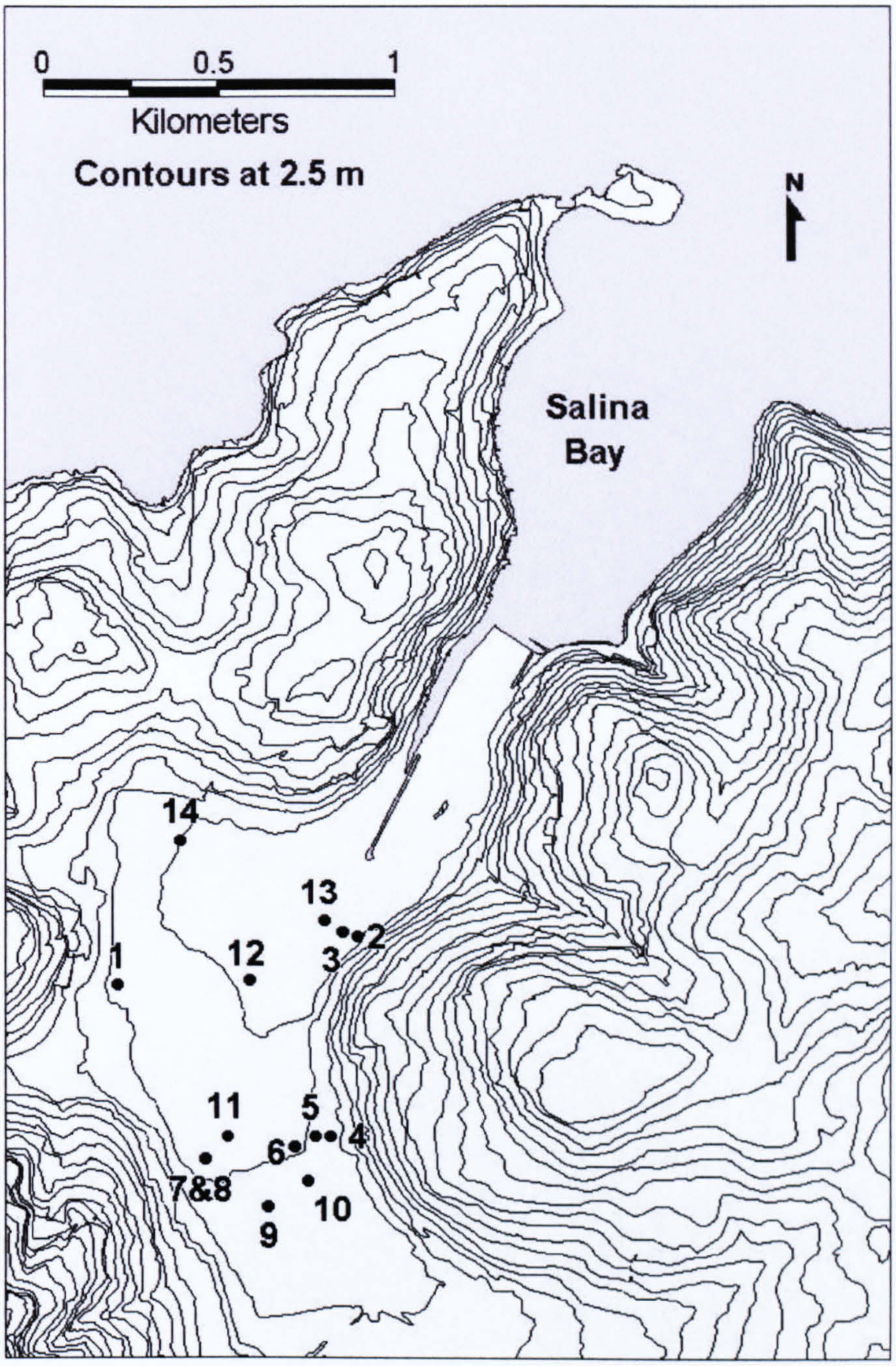


Figure B.13 Map illustrating the location of core samples retrieved from Burmarrad plain (T. Gambin).



Figure B.14 Photo illustrating fine sediments transported out to sea at Salina Bay (T. Gambin).

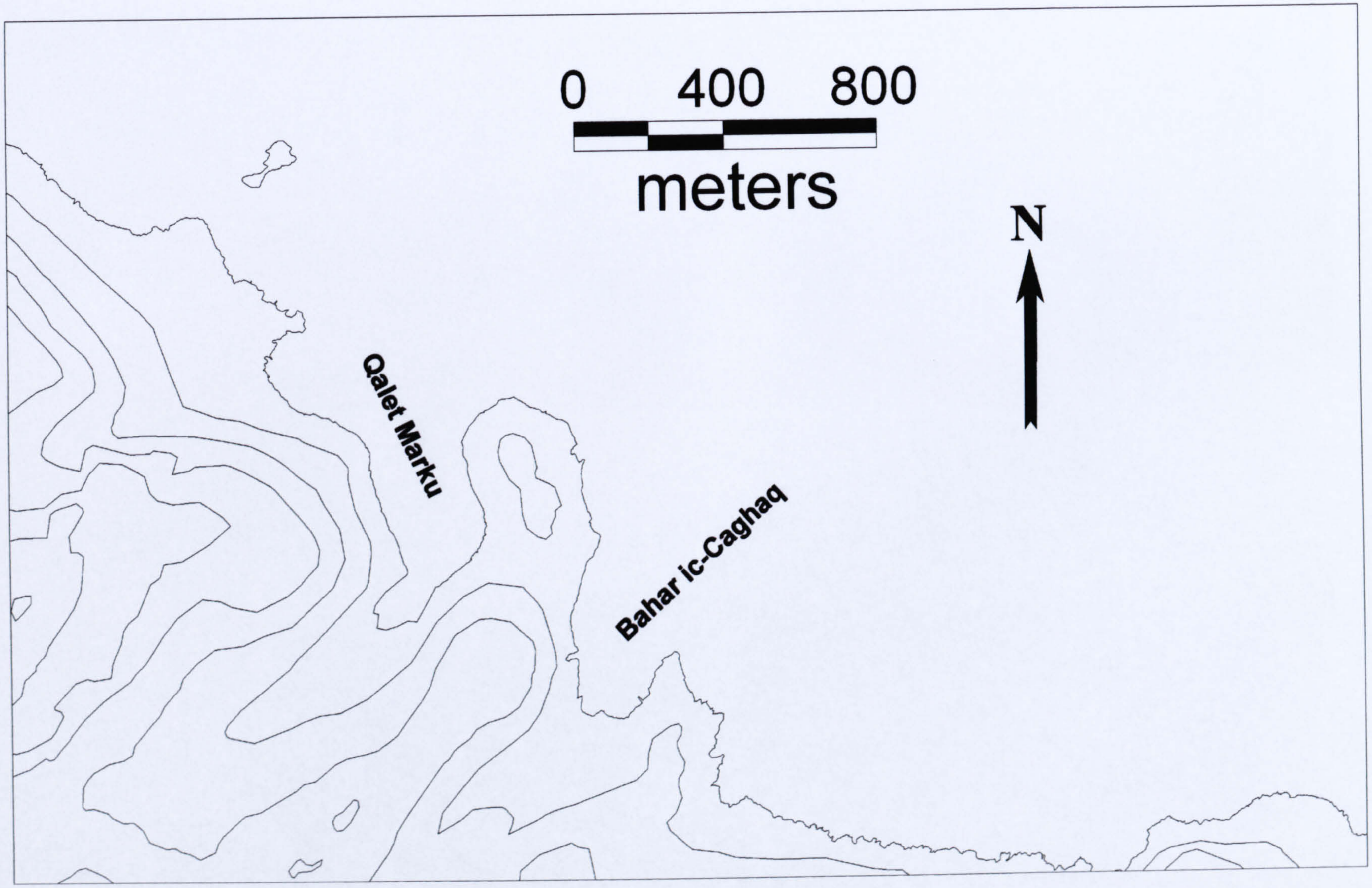


Figure B.15 The anchorages of Qalet Marku and Bahar ic-Caghaq (T. Gambin).

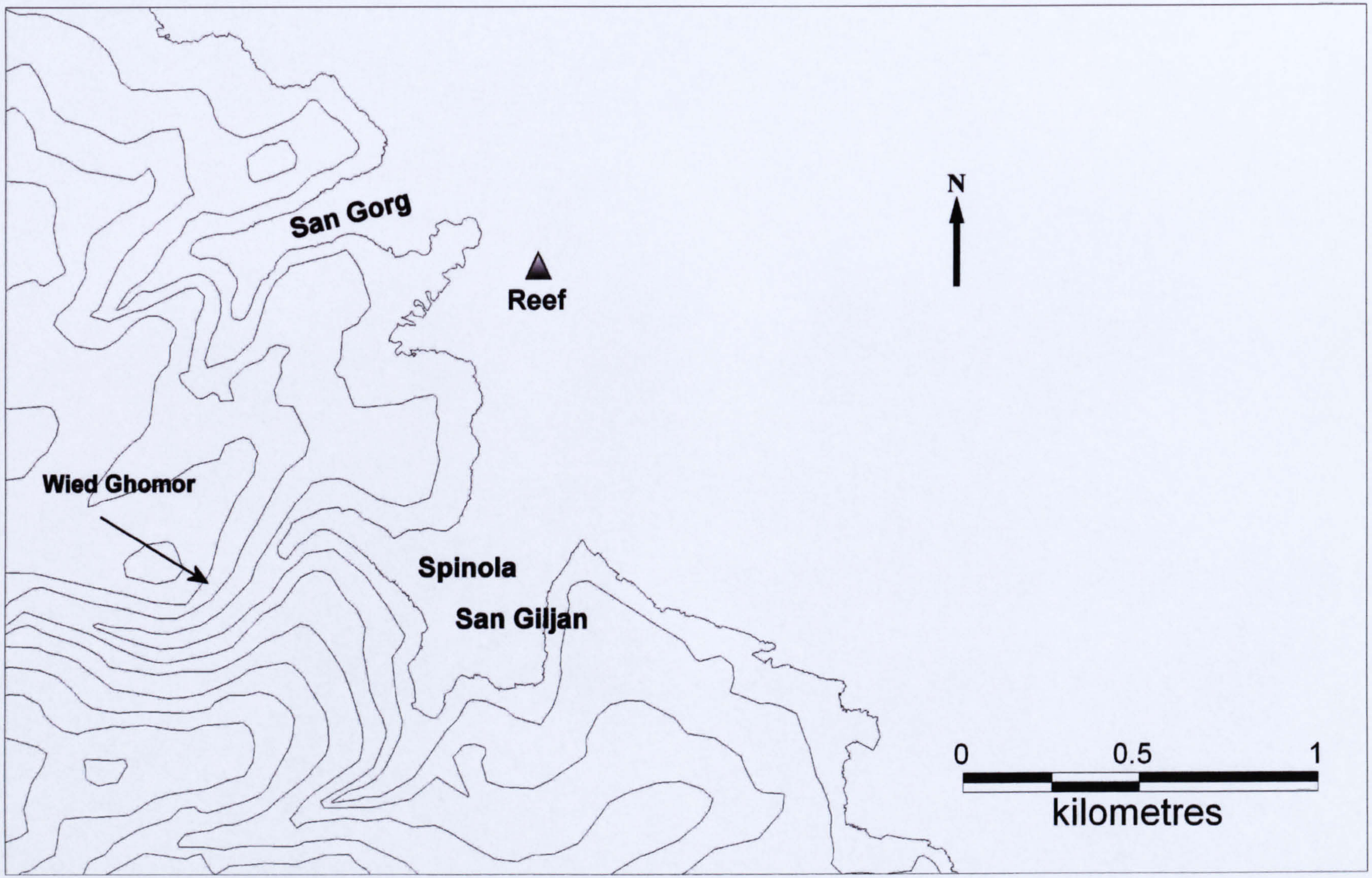


Figure B.16 The anchorages of San Gorg and San Giljan (T. Gambin).

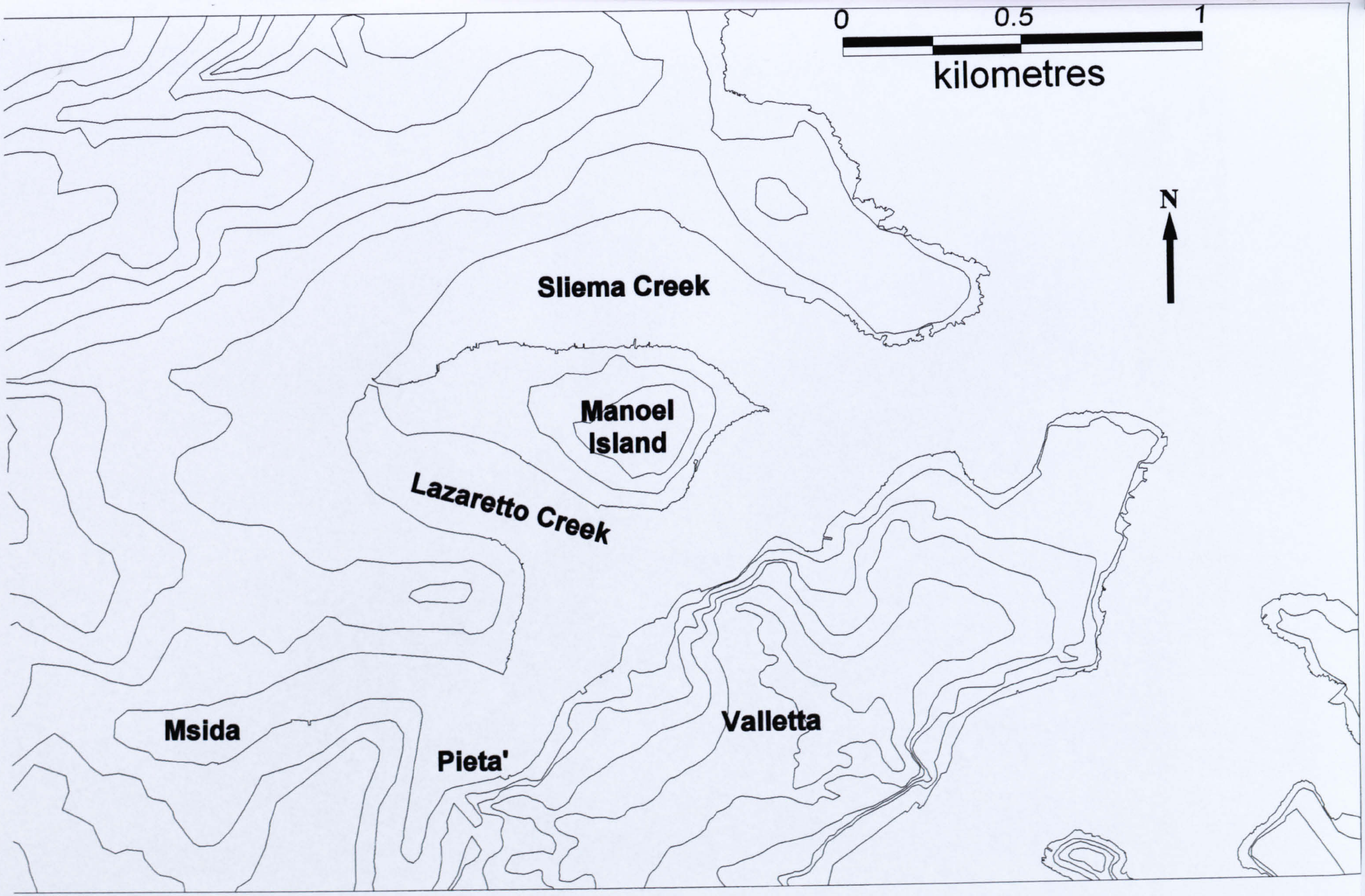


Figure B.17 The harbour complex of Marsamxett (T. Gambin).



Figure B.18 Early 19th century chart denoting marshy area at the head of Sliema and Lazaretto Creeks (Smyth 1823: Hydrographic chart of Malta, National Library of Malta collection).

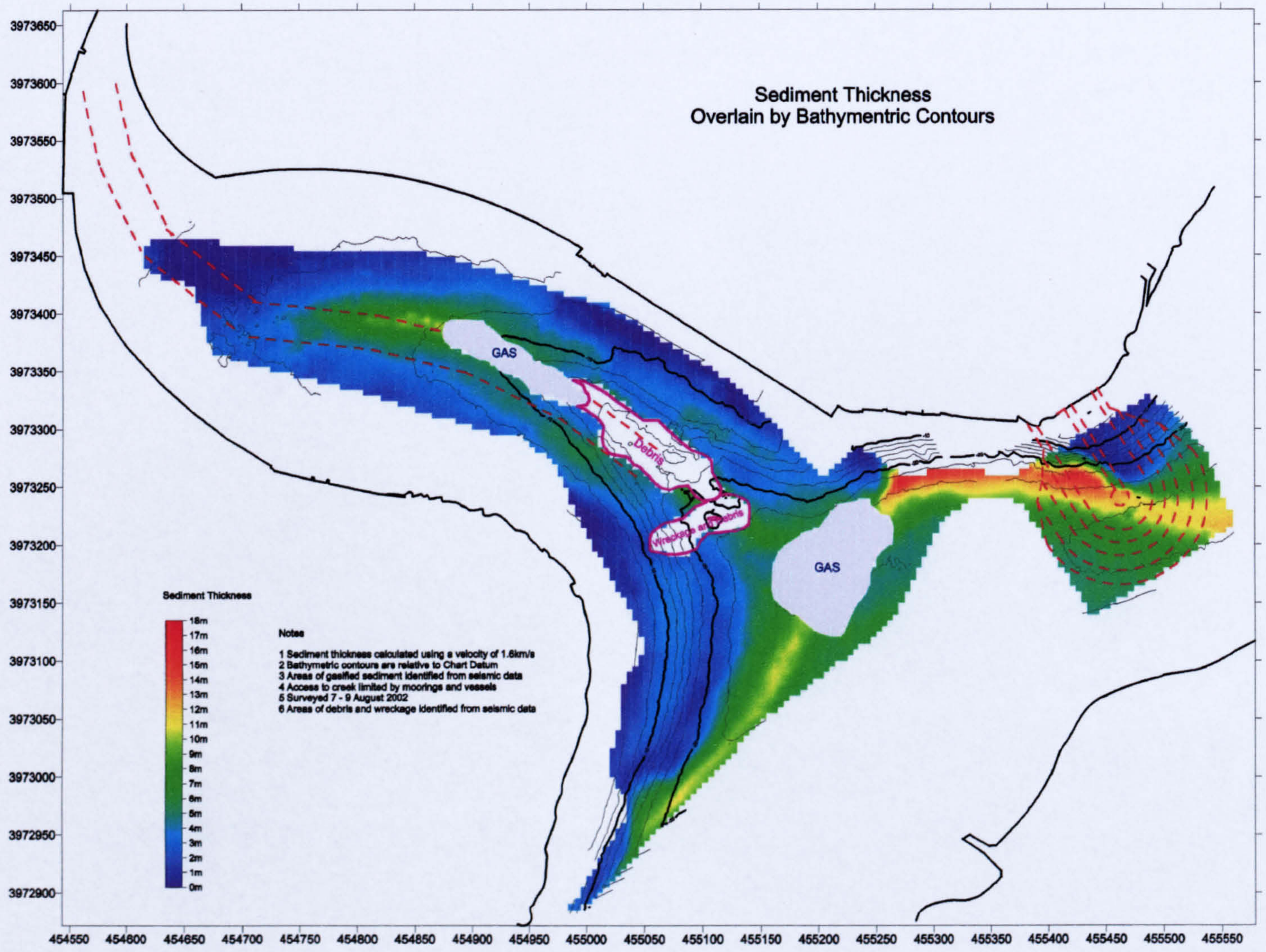


Figure B.19.12 Sediment depths in and just outside Lazaretto Creek (from the 2003 Lazaretto Creek survey, T. Gambin and J. Smith).



Figure B.20 Detail from a late sixteenth century map of the Great Siege of Malta depicting the Ottoman forces hauling their boats from Pieta' to Marsa (Albert Ganado collection).

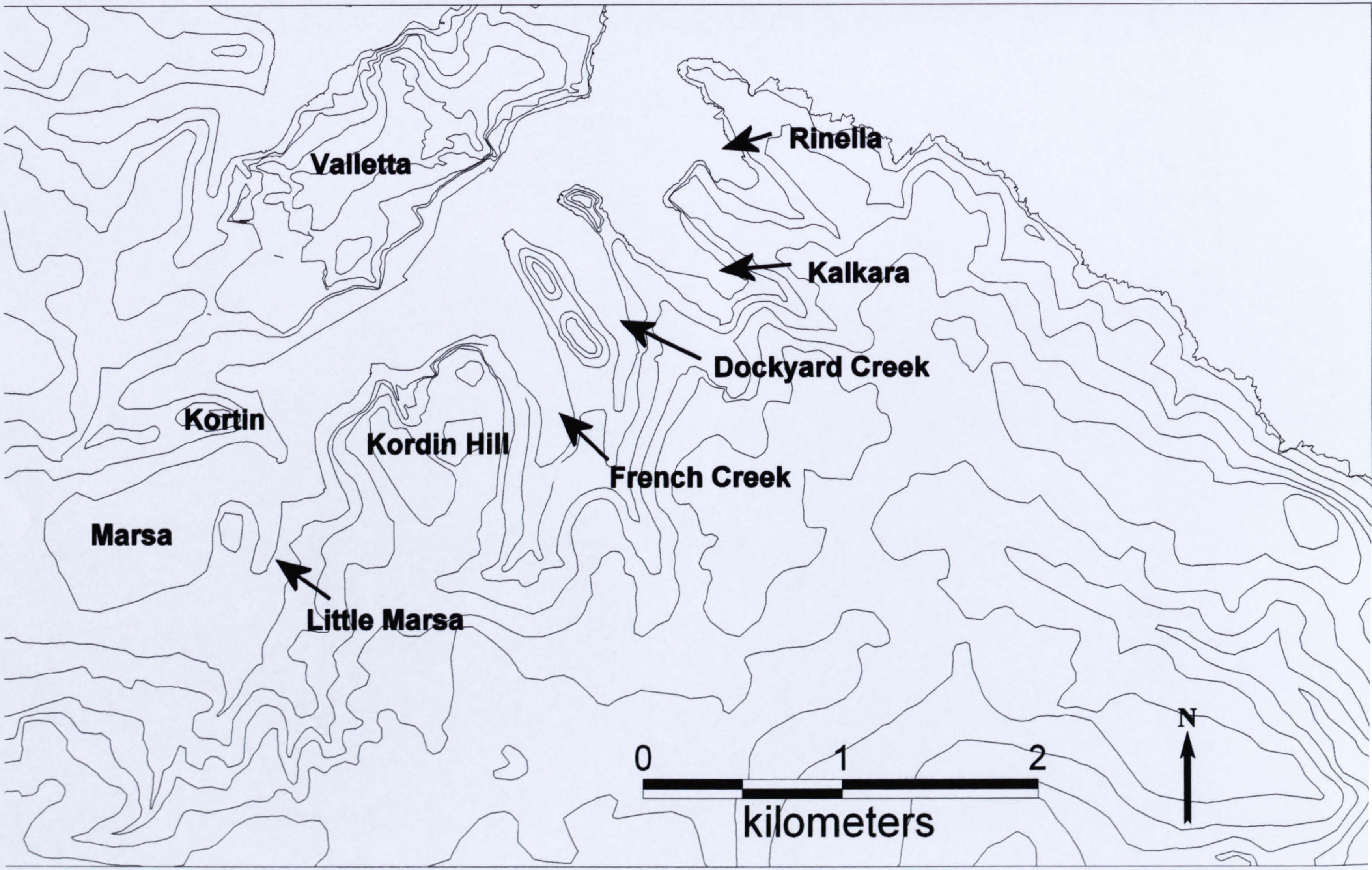


Figure B.21 The Grand Harbour complex (T. Gambin).

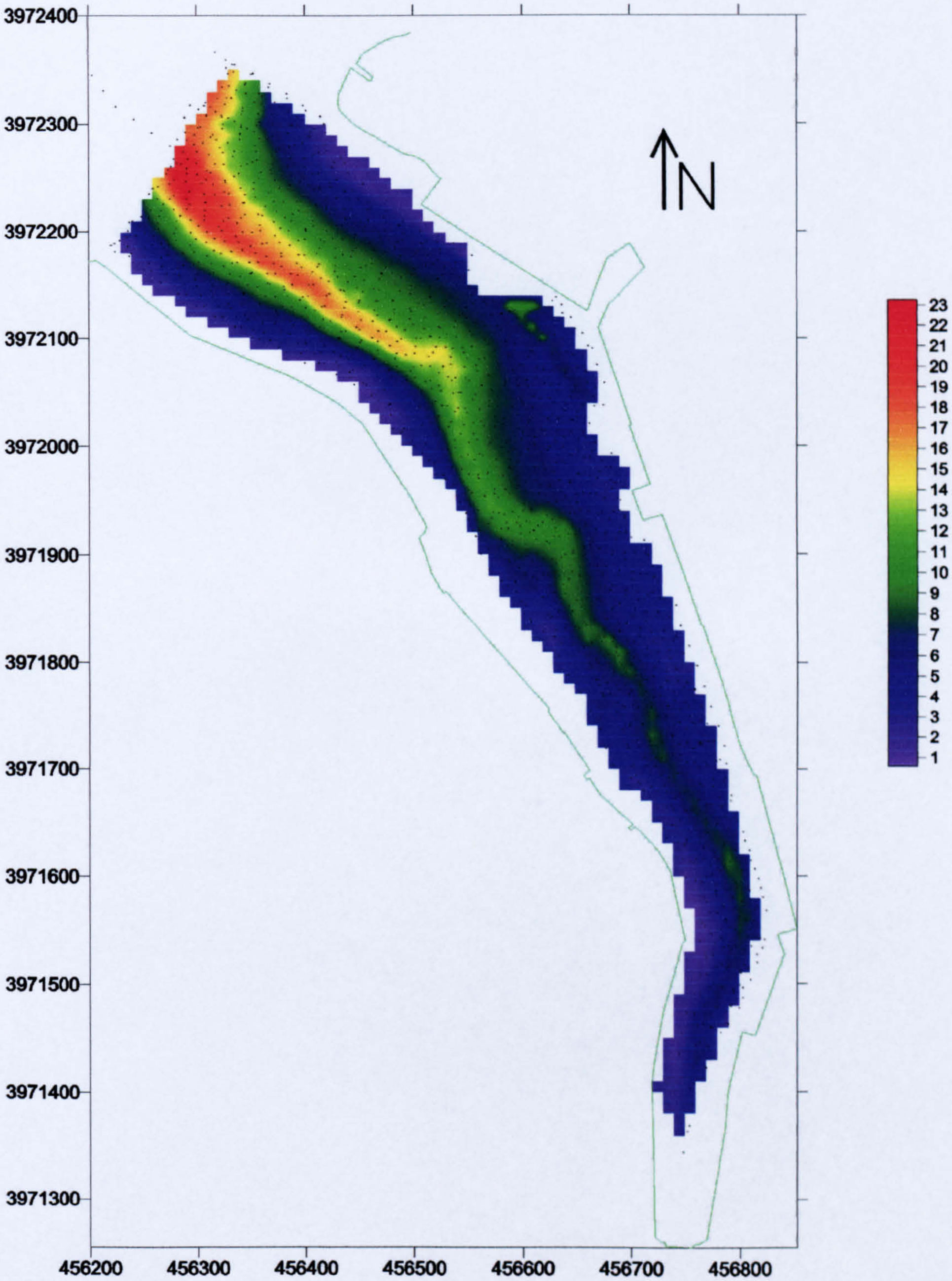


Figure B.22 Map illustrating the sediment depths at Dockyard Creek (from the 2002 Dockyard Creek survey, J. Smith and T. Gambin).

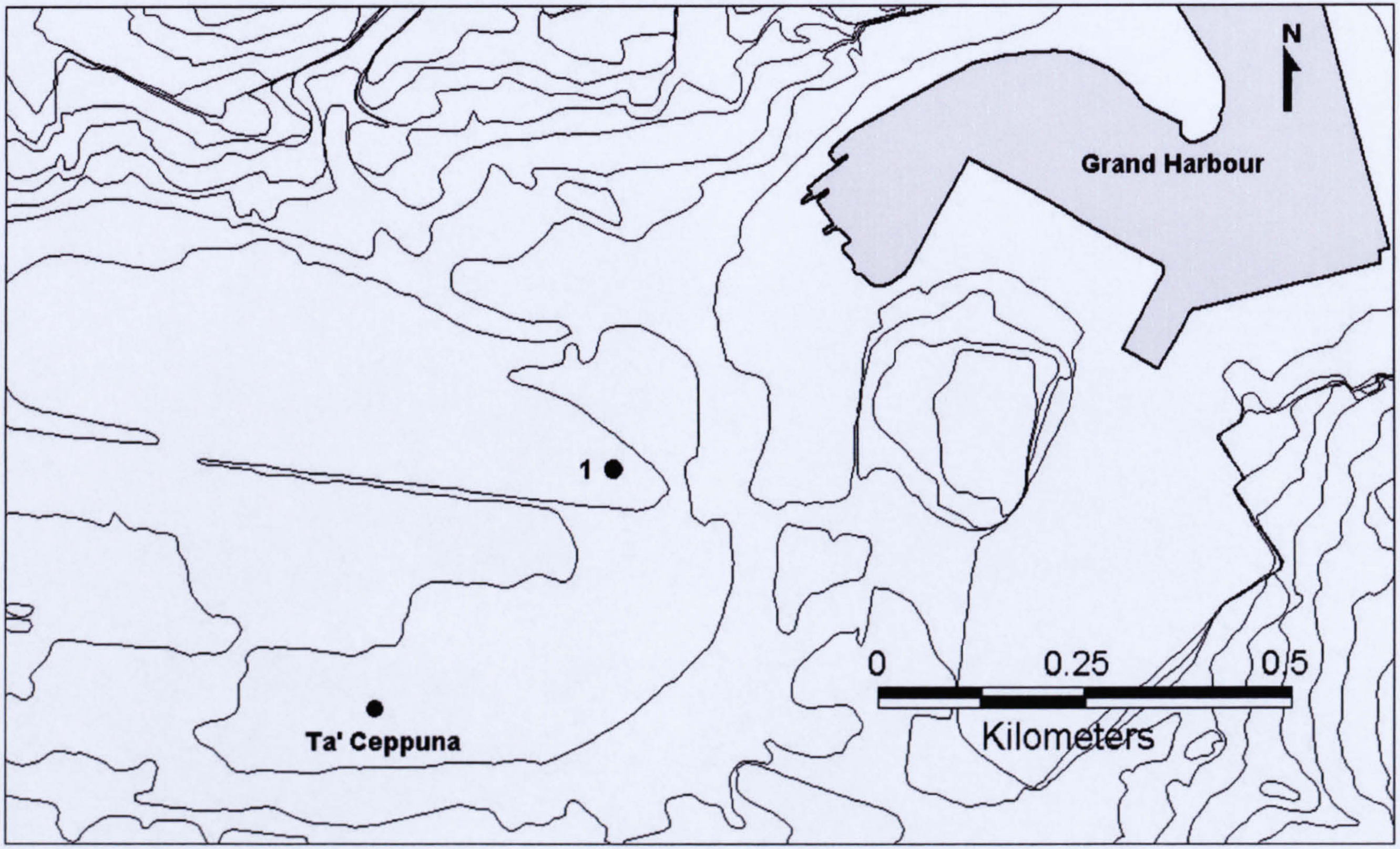


Figure B.23 Map showing the location of Ta' Ceppuna chapel and modern building site on Marsa (T. Gambin). floodplain.

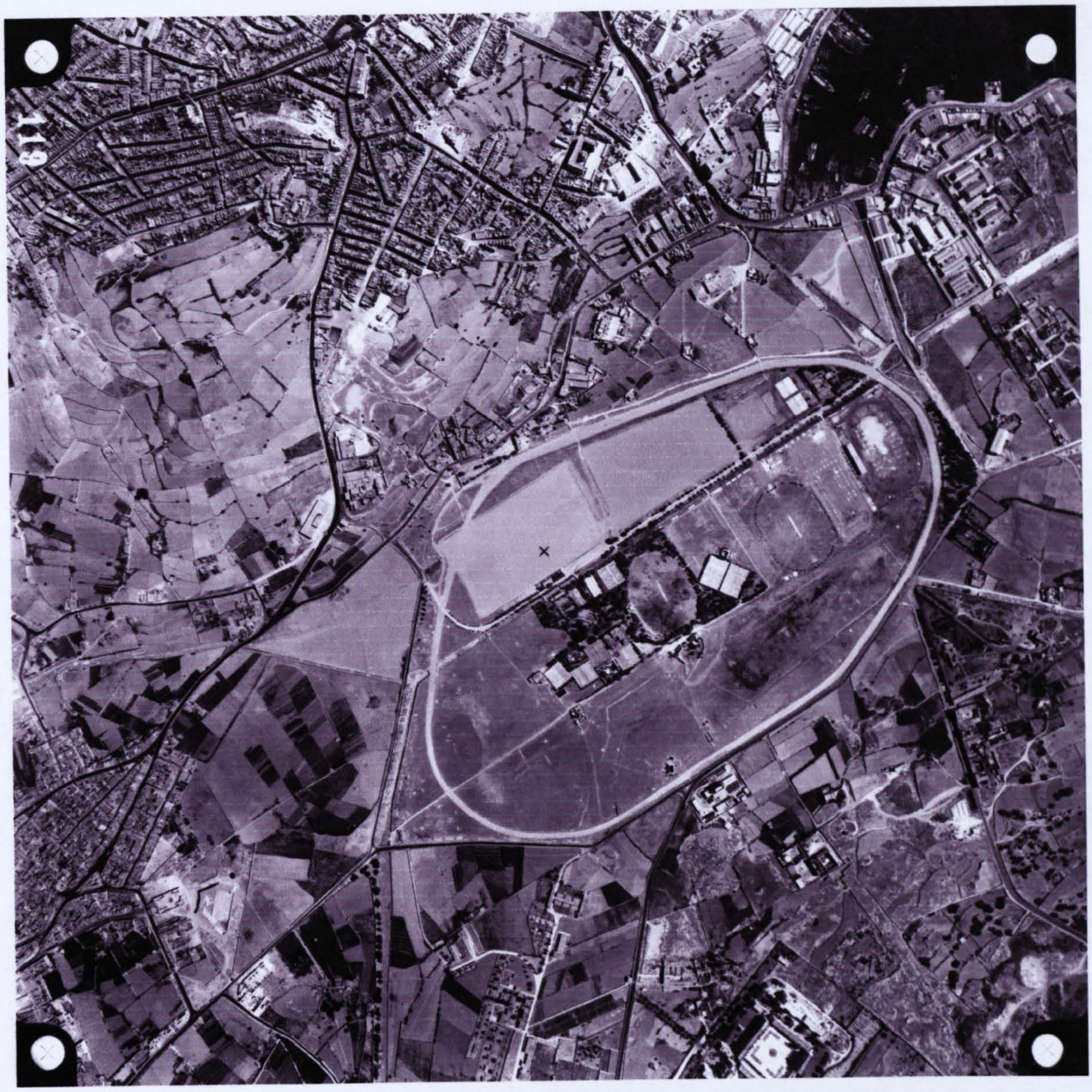


Figure B.24 Aerial view of Marsa showing the floodplain which contains a large racetrack in its centre. The inner reaches of the Grand Harbour can be seen at the top right of the photograph (MEPA).



Figure B.25 Photograph of building site with spoil heap from piles in the background (T. Gambin)

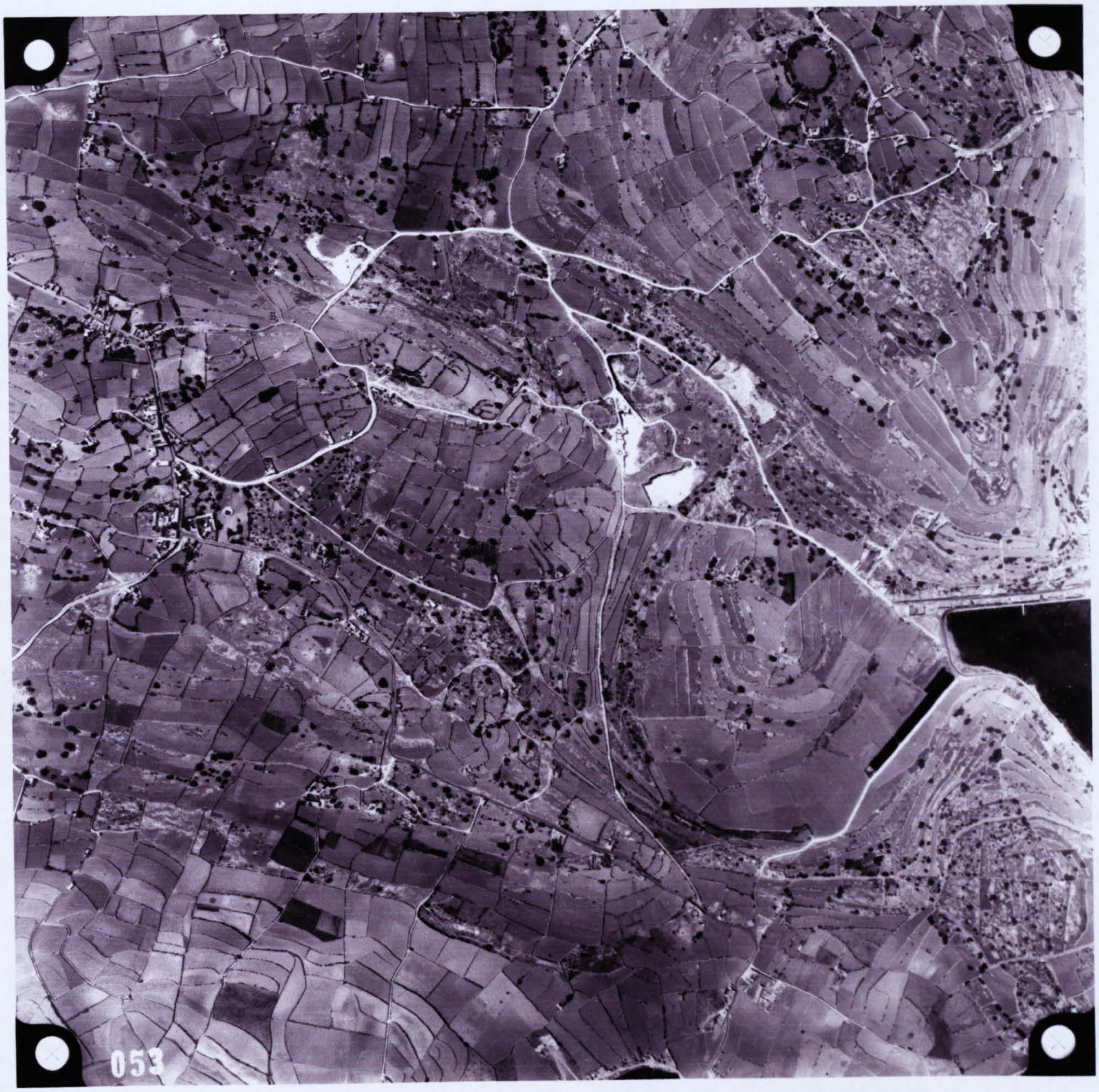


Figure B.26 Aerial view of the floodplain at Marsascala with the inner reaches of the modern bay shown on the centre right of the photograph. Il– Maghluq tal-Bahar is the narrow (and black) strip just below (MEPA).



Figure B.27 Il-Maghluq tal-Bahar at Marsascala (the remnants of the salt marsh) (T. Gambin).

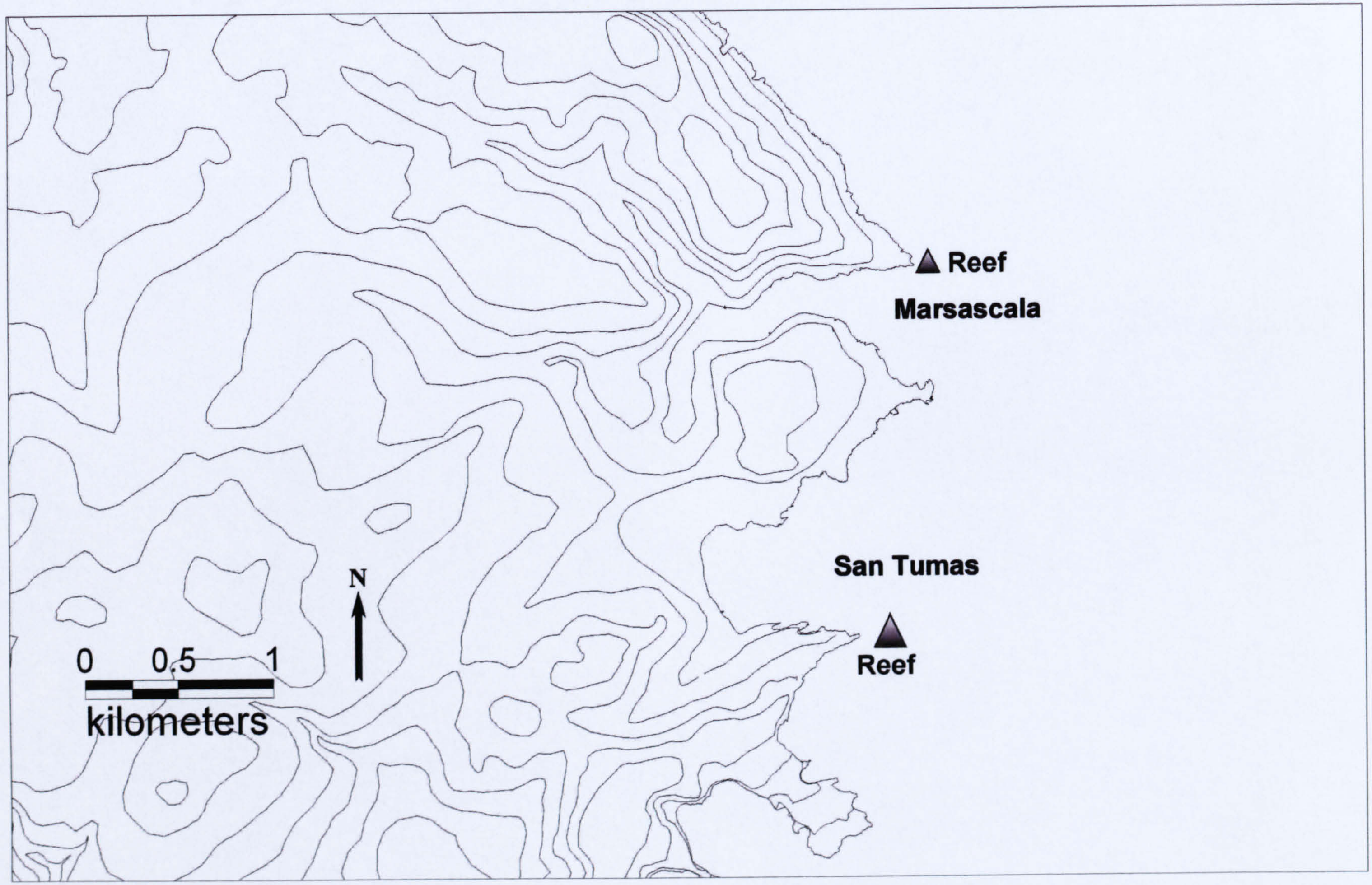


Figure B.28 Marsascala and San Tumas (T. Gambin).

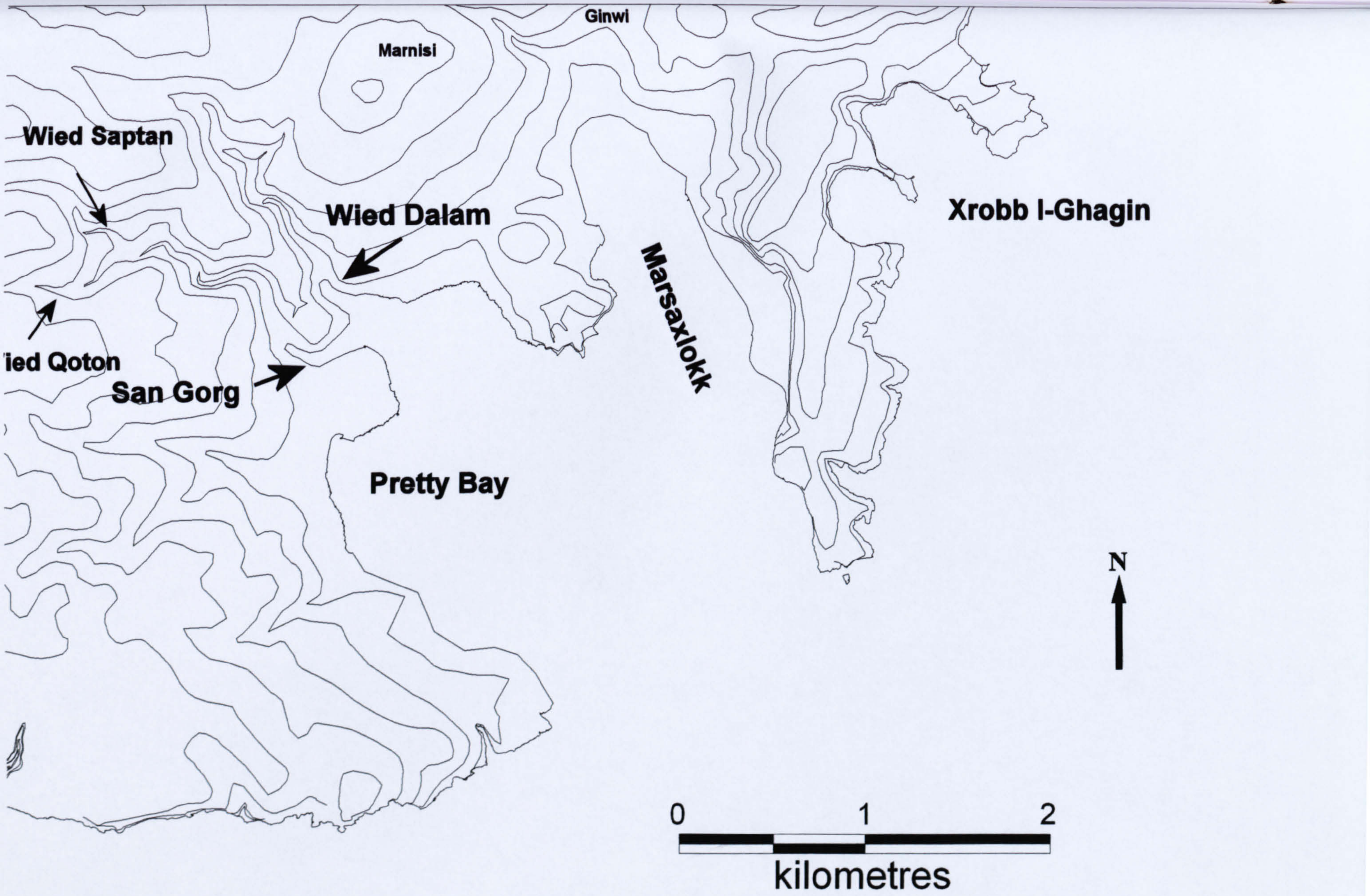


Figure B.29 The Marsaxlokk Harbour complex (T. Gambin).



Figure B.30 The Ballut marshes at the head of Marsaxlokk Bay (T. Gambin).

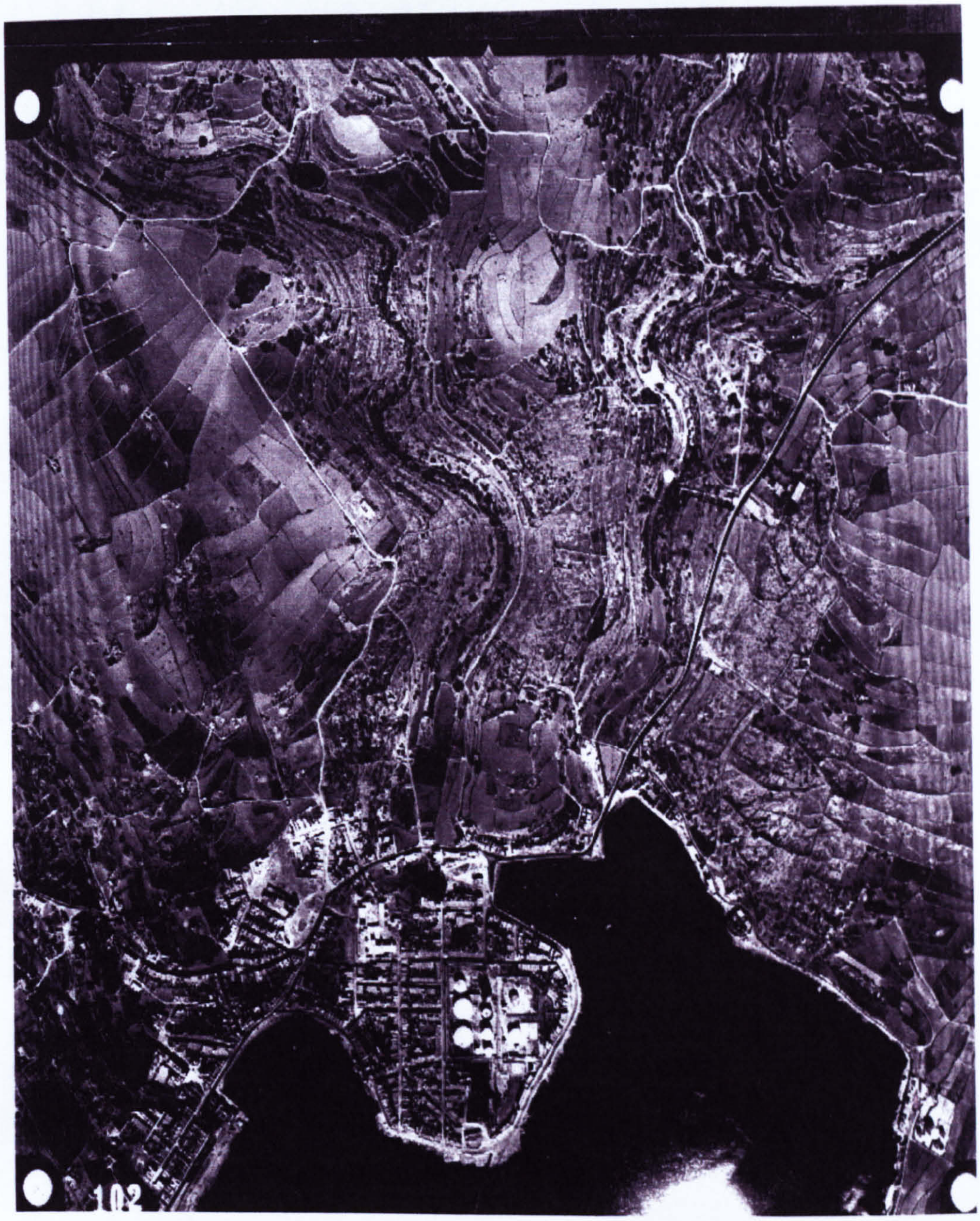


Figure B.31 Aerial view of floodplains at San Gorg and Wied Dalam that formed at the end of two valleys clearly visible in the centre of the photograph (MEPA).