

ALEXANDRIA'S HINTERLAND

ARCHAEOLOGY OF
THE WESTERN NILE DELTA, EGYPT

Mohamed Kenawi

Archaeopress Archaeology

Archaeopress

Gordon House
276 Banbury Road
Oxford OX2 7ED

www.archaeopress.com

ISBN 978 1 78491 014 3

ISBN 978 1 78491 015 0 (e-Pdf)

© Archaeopress and M Kenawi 2014

Front cover: Baths, Kom al-Ahmer (Mohamed Kenawi); Kom Wasit, Aerial photo 2014 (copyright Italian Mission in Beheira, photographer Henrik Brahe. <http://www.caiecentroarcheologico.org/> and <http://www.komahmer.com/>).

All rights reserved. No part of this book may be reproduced, stored in retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying or otherwise, without the prior written permission of the copyright owners.

Printed in England by CMP (UK) Ltd

This book is available direct from Archaeopress or from our website www.archaeopress.com

This work is dedicated
to
Mariette de Vos Raaijmakers
Emanuele Papi

Contents

List of Figures	iii
List of Plates	viii
List of Maps.....	viii
List of Tables.....	viii
Acknowledgements	ix
Preface.....	xi
List of abbreviations	xii
Introduction and methodology.....	1
1.1. Introduction: organization of the research.....	1
1.2. Survey method.....	1
1.3. Terminology	3
1.4. Research questions	3
1.5. History of research	4
1.6. Documentation of the past.....	6
1.7. Rescue survey: emergency research and rapid documentation.....	6
1.8. History and geography of the Delta	7
The construction of the Delta.....	7
1.9. Brief introduction to the past of the Western Delta.....	7
The prehistoric era	8
The historic era	8
The period of decline: turning a rich and fertile land into swamps and desert.....	9
1.10. Land reclamation projects in the Western Delta of Egypt: the economic history of cultivated land	9
New reclamation: Mohamed Ali	11
The Late Roman period and the Arab sources	12
2.1. Battles in the Western Delta of Egypt.....	12
The struggles between Heraclius and Phocas; the Persian Invasion	12
The Arab arrival in Egypt	13
Recapture of Alexandria and Nikiou: the battle of AD 646.....	13
Battles and disorder in the Western Delta between the 7th century and 1805.....	13
2.2. Administrative changes from the Late Roman period until today	15
Houf Ramsis.....	15
2.3. Arab sources: agriculture, routes, and notes on the Western Delta	19
Ibn Khordazhbeh (AD 820 – 912).....	19
Al-Masudi (AD 896 –956)	19
Al-Maqaddasi (c. AD 945/946 – 1000).....	20
Ibn Mammati (d. AD 1209).....	20
Al-Maqrizi (AD 1364 – 1442).....	21
2.4. Transport in the Western Delta	22
Commercial routes (ancient canals – modern canals).....	22
2.5. The Egyptian village	24
Survey 2008-2011: Introduction and Site Gazetteer	26
3.1 Wine production centres.....	28
3.2 (Ancient Psenamosis)	73
3.3 (Nakhla – Kedwet Hasan – Aziza – Difshuo - Sabba).....	82
3.4 (Ancient Metelis) (Kom al-Ghoraf – Kom Wasit – Kom al-Ahmer).....	97
3.5 Prehistoric sites	114

3.6 Other sites.....	120
3.7 Minor sites	166
Surface finds, analysis, plates and tables	175
Pottery selection and fabrics	175
Pottery collection and analysis	177
Discussion	180
Pottery Catalogue	180
PLATES.....	192
Discussion and conclusions.....	223
Maps.....	227
Bibliography	237

List of Figures

All figures and maps are by the author, unless otherwise indicated

Figure 1: The Western Delta in the 10th and 11th centuries AD (after Guest 1912) with modifications.	2
Figure 2: Hermopolis Parva, Schedia, Kom Firin, and Kom Abqaeen, Beheira, 2011.	5
Figure 3: New Kingdom forts in the Western Delta on the edges of the desert.	8
Figure 4: The Delta in the medieval period.	9
Figure 5: Alexandria's hinterland in 1820, <i>Description of Egypt</i> map series (Printed in 1826).	10
Figure 6: Egypt in the Byzantine period.	14
Figure 7: Beheira, Western Delta sites surveyed between 2007-2011.	28
Figure 8: Mareotis: wine production centres (after Brun 2004, 151).	29
Figure 9: Mareotis and the Western Delta: wine production centres	29
Figure 10: Kedwet Saadan, remains of the wine presses between houses, 2009.	30
Figure 11: Kedwet Saadan, remains of the two wine production units, 2008.	31
Figure 12: Kedwet Saadan, wine structure 1, 2008.	31
Figure 13: Kedwet Saadan, wine structure 1, 2009. Illegal excavations are visible in the middle of the structure's foundation.	32
Figure 14: Kedwet Saadan, wine structure 1, 2008.	32
Figure 15: Kedwet Saadan, partly destroyed pavement of wine structure 1.	32
Figure 16: Kedwet Saadan, high pavement with a channel for liquids leading to the buried basin.	33
Figure 17: Kedwet Saadan, wine production unit 2, partly destroyed.	33
Figure 18: Kedwet Saadan, wine production unit 2, partly destroyed.	33
Figure 19: Kedwet Saadan, wine production unit 2, higher pavement is used to wash car engines with oil, 2009.	34
Figure 20: Kedwet Saadan, wine production unit 2, higher pavement is used to wash car engines with oil, 2009.	34
Figure 21: Kedwet Saadan, drawing section of unit 1.	35
Figure 22: Kom al-Nighili, location of the wine press, 2009.	36
Figure 23: Kom al-Nighili, a rare photo of the tholos bath, 1923	36
Figure 24: Kom al-Nighili, tholos bath and three basins	37
Figure 25: Kom al-Nighili The Greco-Roman Museum, one of the basin seats of a tholos	37
Figure 26: Kom al-Nighili, a water cistern, 1923	38
Figure 27: Kom al-Nighili, wine production unit; high pavement and lower basin, before cleaning 2008.	38
Figure 28: Kom al-Nighili, view of the wine complex and the destroyed section on the left side in 2008.	38
Figure 29: Kom al-Nighili, high pavement after cleaning, 2008.	39
Figure 30: Kom al-Nighili, lower basin while cleaning, 2009.	39
Figure 31: Kom al-Nighili, lower basin after cleaning, 2009.	39
Figure 32: Kom al-Nighili, wine production structure, the foundation of the high pavement.	40
Figure 33: Kom al-Nighili, foundation and a protective mudbrick wall of the structure.	40
Figure 34: Kom al-Nighili appears with its second name Aowlad el Cheik on the <i>Description of Egypt</i> map series	41
Figure 35: Kom Radwan (North), and the located wine structures.	42
Figure 36: Kom Radwan, the northern and southern mounds, 2010.	43
Figure 37: Kom Radwan, wine pavement 1.	43
Figure 38: Kom Radwan, wine pavement 2.	43
Figure 39: Kom Radwan, wine pavement 3.	44
Figure 40: Kom Radwan, wine pavement 4.	44
Figure 41: Kom Radwan, a complete wine production unit (high pavement and a lower basin).	44
Figure 42: Kom Radwan, a complete wine production unit (high pavement and a lower basin).	44
Figure 43: Kom al-Farag, with the two wine basins and the remains of walls are presented marked by arrows.	45
Figure 44: Kom al-Farag, remains of the huge wine basin, 2009.	46
Figure 45: Kom al-Farag, school playground.	47
Figure 46: Kom al-Farag, the hole excavated in front of the school	47
Figure 47: Kom al-Farag, wine structure and underground half-covered basin.	47
Figure 48: Kom al-Farag, the second wine basin, a higher part and underground small basin.	48
Figure 49: AE3 and a fragment of marble column.	48
Figure 50: AE3, height 115 cm. Capacity: 32 lit.	48
Figure 51a–b: Kom al-Farag, traces of probable wine basins in state school playground.	49
Figure 52: Kom al-Gella 2009.	50
Figure 53: Kom al-Gella, main mound, empty area.	51
Figure 54: Kom al-Gella, a view from the main mound to the small mound and modern houses.	51
Figure 55: Kom al-Gella, remains of a white pavement in calcite stones.	51
Figure 56: Kom al-Gella, buried structure in 2008, impossible to clean because of cultivation.	52
Figure 57: Kom al-Gella, unidentified buried structure in red brick, partly cleaned in 2009.	52
Figure 58: Kom al-Gella, the buried structure and the remains of the white pavement.	52
Figures 59–60: Kom al-Gella, granite grindstone (1) before and after cleaning.	53
Figures 61: Kom al-Gella, granite grindstone (2) after cleaning.	53
Figure 62: Kom al-Gella, granite grindstone (3) after cleaning.	54
Figure 63: Kom al-Gella, granite grindstone (4).	54

Figure 64: Kom al-Gella, granite block with a decorative horizontal line.	54
Figure 65: Kom al-Qadi 2008.	55
Figure 66: Kom al-Qadi, remains of a wine complex (1), Area 1, 2008.....	56
Figure 67: Kom al-Qadi, the high pavement and the main basin in Area 1, 2009.	57
Figure 68: Kom al-Qadi, remains of a white calcite pavement	57
Figure 69: Kom al-Qadi, the main basin (in front) and remains of a quadrate red brick room, Area 1.	57
Figure 70: Kom al-Qadi, traces of buried walls in mud and sandy bricks SW of the wine complex.	58
Figure 71: Kom al-Qadi, a cut section of Area 2.	58
Figure 72: Kom al-Qadi, undated tomb, Area 3.	59
Figure 73: Kom al-Qadi, removed section of Area 3, calcite tomb stelai appear in section, 2010.	59
Figure 74: Kom al-Qadi, remains of different structures' layers in section of the tell, Area 3.....	59
Figure 75: Kom al-Qadi, Wine (?) complex 2, 2008.	60
Figures 76–77: Kom al-Qadi, high pavement of complex 4, Area 3, 2008.	60
Figure 78: Kom al-Qadi, two wine units on the right side of complex 3 with two different basins, Area 3.	61
Figure 79: Kom Truga, <i>sebakh</i> organized work and the original height of the site	62
Figure 80: Kom Truga	63
Figure 81: Kom Truga, remains of structures and the original height of the site.	63
Figure 82: Kom Truga, Medusa mosaic	64
Figure 83: Kom Truga, a mosaic found by El-Khashab	64
Figure 84: Antioch, mosaic bearing the words: and you	64
Figure 85: Antioch, House of the Evil Eye, mosaic from.....	64
Figure 86: Kom Truga archaeological area, remains of baths, a temple, and granite grindstones.	65
Figure 87: Kom Truga, wine production unit.	65
Figure 88: Kom Truga, plan of the wine complex	66
Figure 89: Kom Truga, granite grindstone 1.	66
Figure 90: Kom Truga, granite grindstones 2,3.	66
Figure 91: Kom Truga, granite grindstone 4.	66
Figure 92: Kom Truga, granite block	66
Figure 93: Kom Truga, granite grindstone 5.	66
Figure 94: Kom Truga, granite grindstone 6.	66
Figure 95: Kom Truga, granite grindstones 7, 8.	67
Figure 96: Kom Truga, granite grindstone 9	67
Figure 97: Kom Truga, granite grindstone 10.	67
Figure 98: Kom Truga, pavement no. 6.....	67
Figure 99: Kom Truga, pavement no. 6.....	68
Figure 100: Kom Truga, pavement no. 6.....	68
Figure 101: Kom Truga, pavement no. 7.....	68
Figures 102 – 103: Kom Truga, the Ptolemaic temple and the modern cemetery appear in background.	69
Figure 104: Kom Ganady 2009.	70
Figure 105: Kom Ganady, Ptolemaic bath	71
Figure 106: Kom Ganady, a noted structure before cleaning.	71
Figure 107: Kom Ganady, wine basin during cleaning the surface.	71
Figure 108: Kom Ganady, wine basin covered by rose mortar. The higher part of the unit is probably buried to the right side.....	71
Figure 109: Kom Ganady, wine basin.....	72
Figure 110: Kom Ganady, wine basin.....	72
Figure 111: Kom Tukala, head of Zeus/Serapis,.....	73
Figure 112: Kom Tukala, Greek inscription	74
Figure 113: Kom Tukala, satellite image 2009.	75
Figure 114: Kom Barsiq and Kom Awad 2009.....	77
Figure 115: Kom Barsiq, a view of the site from the track leading to it.....	78
Figure 116: Kom Barsiq, a cut section from the lower part of the site where traces of mud bricks appear.....	78
Figure 117: Kom Barsiq, a view of Area 1.	78
Figure 118: Kom Barsiq, a plan of the cleaned pottery coffin.	78
Figure 119: Kom Barsiq, area of a pottery coffin before cleaning.	78
Figure 120: A view of Area 2 with Kom Awad appearing to the right.	79
Figure 121: Kom Barsiq, a view from Area 2 to the fields	79
Figure 122: Kom Barsiq, southern limits of the site and visible cuts.	79
Figures 123-124: Kom Barsiq, quartzite grinder for oil production.	80
Figure 125: Kom Barsiq, Kom Awad, Kom Ganady, and Kom Tukala	80
Figure 126: Kom al-Nakhla and Kedwet Hasan.....	82
Figure 127: Kom al-Nakhla, part of Area 1.	83
Figure 128: Kom al-Nakhla, Area 2; modern houses on the remains of the site.....	83
Figure 129: Kedwet Hasan, the remains of the Kom and a recent leveled area, 2009.....	84
Figure 130: Kedwet Hasan, the top of the site is used as a football playground, 2009.....	84
Figure 131: Kedwet Hasan, thousands of amphorae sherds.	85
Figure 132: Kedwet Hasan, kiln waste.....	85
Figure 133: Kedwet Hasan, destroyed part of the site, 2010.	85
Figure 134: Kom Aziza, satellite image	86
Figure 135: Kom Aziza, amphora cover of the coffin.....	87
Figure 136: Kom Aziza, location of the tombs found inside the state school.	87
Figure 137: Kom Aziza, a view from the top of the school over the village.	87

Figure 138: Kom Aziza, a view from the top of the school over the remains of the site.....	87
Figure 139: Kom Aziza, pottery coffin inside the school playground.....	88
Figure 140: Modern local pottery market at Kom Aziza.....	88
Figure 141: Kom al-Debba, map of the southern and northern mounds.....	89
Figure 142: Kom al-Debba, southern mound and the main site.....	90
Figure 143: Kom al-Debba, pottery and red brick fragments on the southern mound.....	90
Figure 144: Kom al-Debba, ten illegible bronze coins found at the site.....	90
Figure 145: Kom al-Debba, a view of the fish farms.....	90
Figure 146: Kom Difshuo, 2009.....	92
Figure 147: Kom Difshuo, sandy southern area of the site, the Roman cemetery.....	92
Figure 148: Kom Difshuo, remains of a calcite floor on the southwest side of the mound.....	93
Figure 149: Kom Difshuo, remains of mud brick walls at the northwest top of the mound.....	93
Figure 150: Kom Difshuo, remains of mud brick walls, and calcite floor in section.....	93
Figure 151: Kom Difshuo, unexcavated Roman tomb of uncommon typology; we were not allowed to clean the area.....	94
Figure 152: Kom al-Saba'a, 2009.....	95
Figure 153: Kom al-Saba'a, houses and cotton trees on the remains of the archaeological site.....	96
Figure 154: Kom al-Saba'a, part of a fluted granite column.....	96
Figure 155: Kom al-Ghoraf, satellite image, 2009.....	97
Figure 156: Kom al-Ghoraf, one of the possible water cisterns.....	98
Figure 157: Kom al-Ghoraf, a possible water cistern, 2008.....	98
Figure 158: Kom al-Ghoraf, wine or oil cistern, 2008.....	99
Figure 159: Kom Wasit, 2008.....	100
Figure 160: Kom Wasit, tholos bath is located in the low southern area of the site.....	100
Figure 161: Kom Wasit, remains of mud brick buried walls, 2008.....	101
Figure 162: Kom Wasit, central part of the site which was removed by the sebakheen.....	101
Figure 163: Kom Wasit 2008, limestone mortar bowl.....	102
Figure 164: Kom Wasit, plan of the tholos bath.....	102
Figure 165: Kom Wasit, partly cleaned tholos bath.....	103
Figure 166: Kom Wasit, remains of the seats around the basin.....	103
Figure 167: Kom Wasit, tholos, 2008.....	103
Figure 168: Kom al-Giza, tholoi.....	104
Figure 169: Dionysias – Qasr Qaroun (tholos bath during cleaning), 2011.....	104
Figure 170: Kom Wasit, pottery sherds.....	105
Figure 171: Kom al-Ahmer I, head of marble sculpture found by Adriani 1935.....	106
Figure 172: Kom al-Ahmer, 2011.....	107
Figure 173: Kom al-Ahmer I, Area 1, occupied by a modern cemetery.....	108
Figure 174: Kom al-Ahmer I, Area 2: remains of a large structure in section, 2011.....	108
Figure 175: Kom al-Ahmer I, remains of an unidentified buried structure, Area 2, 2008.....	108
Figure 176: Kom al-Ahmer I, Area 4, leveled and remains of buried structures.....	109
Figure 177: Kom al-Ahmer I, Area 4, leveled and remains of two granite columns.....	109
Figures 178–179: Kom al-Ahmer I, granite oil grindstones which were moved by locals.....	109
Figure 180: Kom al-Ahmer I, Area 5, excavated by the SCA in 2008.....	110
Figure 181: Kom al-Ahmer I, Area 5, remains of unidentified Ptolemaic structures.....	110
Figure 182: Kom al-Ahmer, the bath complex, 2009.....	110
Figure 183: Kom al-Ahmer I, the underground water channel of the bath complex.....	110
Figures 184-185: Kom al-Ahmer I, building techniques of the bath's vault.....	111
Figure 186: Kom al-Ahmer I, dozens of plaster layers of one of the bath pavements.....	111
Figure 187: Kom al-Ahmer I, remains of the suggested monumental tomb.....	111
Figure 188: From N to S: Kom al-Ghoraf, Kom Wasit, and Kom Al-Ahmer I.....	113
Figure 189: The Western Delta in the early Arab period. Based on Zaiton 1962.....	114
Figure 190: Kom al-Qanater, Kom Sawan in 2009.....	115
Figure 191: Knife in grey stone with a handle (20 cm).....	115
Figure 192: Fragment of a blade.....	115
Figure 193: (70 x 15 mm.) Kom al-Qanater, thirty pieces of this kind were found.....	115
Figure 194: One of the pots found by Breccia.....	115
Figure 195: Kom al-Qanater, the site is built over with modern houses.....	116
Figure 196: Kom Sawan, old cemetery area; on top the tomb of a sheikh.....	117
Figure 197: Kom Sawan, part of the actual cemetery.....	117
Figures 198 – 199: Kom Sawan, calcite bowl grinder.....	117
Figure 200: Kom Sawan, old cemetery area in section: Remains of mudbrick structure.....	118
Figure 201: Kom Qarnin, 2010.....	119
Figure 202: Kom Qarnin, Area 3.....	120
Figure 203: Kom Abu Ismail, 2009.....	121
Figure 204: Kom Abu Ismail.....	121
Figure 205: Kom Abu Ismail, modern tombs on the remains of the site.....	121
Figure 206: Tel Abu al-Godour, a satellite image.....	122
Figure 207: Abu al-Godour.....	122
Figure 208: Abu al-Godour, surface pottery sherds.....	122
Figure 209: Abu Afrita, 2009.....	123
Figure 210: Greek dedication.....	124
Figure 211: Abu Afrita, modern tombs and pottery sherds appear after digging.....	124

Figure 212: Abu Afrita, leveled area	124
Figure 213: A probable synagogue dedication	125
Figure 214: Kom al-Akhdar, satellite image, from the north: Area 1, 2, 3	126
Figure 215: Kom al-Akhdar, Area 2, a vast sandy area with some modern tombs.	126
Figure 216: Kom al-Akhdar, an unidentified structure covered by hundreds of pottery sherds.	126
Figure 217: Kom al-Bakara, 2010.....	127
Figure 218: Kom al-Bakara, 2009.....	128
Figure 219: Kom al-Bakara, 2009.....	128
Figure 220: Kom al-Bakara, signs of illegal excavation.....	128
Figure 221: Original and modern limits of Kom Shimoli – distribution of pottery sherds.....	129
Figure 222: Kom Shimoli, a modern farmer making mudbricks.	129
Figure 223: Kom Hamrit, 2009.	130
Figure 224: Kom Hamrit, 2009.	130
Figure 225: Kom Tubol, 2012.....	131
Figure 226: Kom Tubol, remains of a Roman structure amidst the <i>halfa</i>	132
Figure 227: Kom Tubol, remains of a white calcite pavement.	132
Figure 228: Abu Ali, 2010.	133
Figure 229: Abu Ali, the western side of the site in front of the main canal.	133
Figure 230: Abu Ali, remains of a structure on the top of the site.	133
Figure 231: Abu Ali, pottery sherds at the northern part of the site.....	133
Figure 232: Kom Kamha, 2010.....	134
Figure 233: Kom Kamha, 2009.....	134
Figure 234: Kom Kamha, 2009.....	135
Figure 235: Pottery sherds collected from the surrounding fields by farmers.	135
Figure 236: Kom al-Baroud and the located remains of structures (2009).....	135
Figure 237: Kom al-Baroud, structure 1 after cleaning.....	136
Figure 238: Uncleaned pavement found a few meters west of ST1.	136
Figure 239: Kom al-Baroud, destroyed high quality pavement and mosaic.	136
Figure 240: Kom al-Baroud, hundreds of pottery sherds lie in the same area	137
Figure 241: Kom al-Baroud, remains of a bath complex.	138
Figure 242: Kom al-Baroud, remains of a bath complex, 2009.....	138
Figure 243: Silvagou, 2009.....	139
Figure 244: Kom Firin, Silvagou, and Kedwet al-Dahab, scale 1:600 m, 2009.	139
Figure 245: Silvagou, pottery coffin I.	140
Figure 246: Silvagou, pottery coffin II.....	140
Figure 247: Silvagou, pottery coffin IV while cleaning.....	140
Figure 248: Silvagou, pottery coffin IV after cleaning, bones appear in situ.	140
Figure 249: Silvagou, pottery coffin IV, scale 50 cm.	140
Figure 250: Silvagou, pottery coffin V with white plaster inside.	141
Figure 251: Silvagou, Roman tomb (illegal excavation).	141
Figure 252: Silvagou, pottery sherd from the Necropolis with titulus pictus of two letters.....	142
Figure 253: Found amphora kiln at Kedwet al-Dahab	143
Figure 254: Kedwet al-Dahab, plan of the found kiln	143
Figure 255: Kedwet al-Dahab, 2009.	143
Figure 256: Kom Kortas, 2010.	144
Figure 257: Kom Kortas, remains of the found wall (Thanks to Ashraf Abdel Rahman for providing the unpublished report).	144
Figure 258: Kom Kortas, a water well.....	145
Figure 259: Kom Kortas, a rectangular room in redbrick.....	145
Figure 260: Kom Kortas, 2009.	145
Figure 261: Dinshal, 2010.....	146
Figure 262: Kom Abu Homar, 2009.....	147
Figure 263: Kom Abu Homar, modern mudbrick house.	148
Figure 264: Abu Homar, surface of the site.	148
Figure 265: Kom al-Ahmer III, 2009.....	149
Figure 266: Kom al-Ahmer III, pottery, glass, and faience sherds in section.	149
Figure 267: Kom al-Ahmer III, granite grindstone.	149
Figure 268: Kom al-Ahmer III, remains of a mud brick wall.....	149
Figure 269: Kom Umm al-Laban, 2010.	150
Figure 270: Umm al-Laban, pottery sherds on the top of the mound	151
Figure 271: Umm al-Laban, one of the modern tombs covered by dozens of Roman amphora sherds.	151
Figure 272: al-Barnugi, 2009.	152
Figure 273: al-Barnugi, a Greek dedication of a probable synagogue	153
Figure 274: al-Barnugi, an empty area in the north of the site where the remains of a structure were found	153
Figure 275: al-Barnugi, remains of a rectangular and a circular room.	154
Figure 276: al-Barnugi, remains of the rectangular and circular rooms	154
Figure 277: al-Barnugi al-Qibli, rooms found during the survey, 2009.....	154
Figure 278: al-Barnugi, rooms found during the survey.	154
Figure 279: al-Barnugi, plan of the remains of the found rooms.	154
Figures 280-281: al-Barnugi, remains of granite columns.....	155
Figure 282: al-Barnugi, granite block.....	155
Figure 283: al-Barnugi, granite grindstone	155

Figure 284: al-Barnugi, bath complex, 2009.....	156
Figure 285: Kom al-Nawam, 2009.	157
Figure 286: al-Nawam, a view of Area 1. The tomb of Sidi Hassan	158
Figure 287: Kom al-Nawam, two granite blocks in the middle of Area 2.	158
Figure 288: Kom al-Nawam, a Late Roman structure, probably a water cistern.	159
Figure 289: Kom al-Nawam, the probable water cistern, the second room.....	159
Figure 290: al-Nawam, Area 3, holes from the excavations.	160
Figure 291: al-Nawam, example of pottery sherds.....	160
Figure 292: Kom al-Mahar, 2009.	161
Figure 293: Kom al-Mahar, 2009.	162
Figure 294: Kom al-Mahar, shells appear everywhere on the surface.	162
Figure 295: Kom al-Mahar, amphora and calcite fragments appear in section due to illegal excavations by the locals.	162
Figure 296: Kom al-Mahar, illegal excavation	162
Figure 297: Kom Nagi, 2010.	163
Figure 298: Kom Nagi, room excavated by the SCA, unidentified structure extending under the cemetery.	164
Figure 299: Kom Nagi, wall <i>in situ</i> , probably extends under the modern cemetery.	164
Figure 300: Kom Nagi, remains of pavement 1,	164
Figure 301: Kom Nagi, remains of Pavement 1, 2009.....	165
Figure 302: Kom Nagi, remains of the second pavement in calcite blocks.....	165
Figure 303: Kom Nagi, quartz grindstone and the remains of the pavements.....	165
Figure 304: Rekowyia 2009.....	166
Figure 305: Ramadanyia, 2009.	166
Figure 306: Ramadanyia, 2009.....	166
Figure 307: Konas, pottery, plaster fragments.	166
Figure 308: Tell Kanayes, empty part of the site, 2009.	167
Figure 309: Tell Kanayes, A Greek inscription	167
Figure 310: Kom al-Madina, 2009.	167
Figure 311: Maqbuora, 2009.	167
Figure 312: Maqbuora, illegal digs, unidentified structure.	168
Figures 313–314: Kom Abu Agora and the area leveled by the <i>sebakheen</i>	168
Figure 315: Kom al-Guzz, the remains of the site and a new leveled area.....	168
Figure 316: Kom al-Guzz, the original limits.....	169
Figure 317: Kom al-Buhaiera, leveled and a state building is settled on a large area.	169
Figures 318–319: Khatimi, 2009.	169
Figure 320: Kom al-Tebn, 2008.....	170
Figure 321: Ghasoli, 2008.....	170
Figure 322: Kom al-Shoka, 2009.	170
Figure 323: Kom al-Shoka, a view from the top of the site.	170
Figure 324: Kom Ashrin 'leveled'.	171
Figure 325: Kom al-Ahmer II, salt appears on surface. The site is leveled.....	171
Figure 326: Kom al-Ahmer II, small calcite grinder.	171
Figure 327: Kom Abu Mandour, a Greek text	172
Figure 328: Kom Abu Mandour.....	172
Figure 329: Kom Abu Mandour.....	172
Figure 330: Abu Hummus (BS 63), general view of the site, 1960	173
Figure 331: Abu Hummus (BS 63), necks of amphorae planted in earth, 1960.....	173
Figure 332: Abu Hummus (BS 63), amphorae planted in earth, 1960	173
Figure 333: Abu Hummus (BS 63), a plan of the site by H. Riad, 1964 (ed. J. McKenzie).	174

List of Plates

Plate 1: AE2 after Coulson and Wilkie, 1986, p 73, fig. 20)	178
Plate 2: AE3 Drawing from www.amphoralex.org	178
Plate 3: AE4 (www.amphoralex.org)	178
Plate 4: LR7 – Egloff 1977	179
Plate 5: Drawing after Egloff 1977- Photo: 173 by author – Kom al-Ahmer I	179
Plate 6: Kom Radwan, pottery	192
Plate 7: Kom al-Gella, pottery	193
Plate 8: Kom al-Qadi, pottery	194
Plate 9: Kom Barsiq, pottery	195
Plate 10: Kom Barsiq, pottery	196
Plate 11: Kedwet Hasan, pottery	197
Plate 12: Kom Aziza, pottery	198
Plate 14: Debba, pottery	199
Plate 13: Debba, pottery	199
Plate 14: Debba, pottery	200
Plate 15: Kom Wasit, pottery	201
Plate 16: Kom Wasit, pottery	202
Plate 17: Kom al-Ahmer I, pottery	203
Plate 18: Kom Qarnin, pottery	204
Plate 19: Abu al-Gudour, pottery	205
Plate 20: Kom Abu Afrita, pottery	206
Plate 21: Kom al-Bakara, pottery	207
Plate 22: Hamrit, pottery	208
Plate 23: Abu Ali, pottery	209
Plate 24: Kom al-Baroud, pottery	210
Plate 25: Kom Kortas, pottery	211
Plate 26: Abu Homar, pottery	212
Plate 27: Abu Homar, pottery	213
Plate 28: Kom al-Ahmer III, pottery	214
Plate 29: Kom al-Ahmer III, pottery	215
Plate 30: Barnugi, pottery	216
Plate 31: Barnugi, pottery	217
Plate 32: Kom al-Nawan, pottery	218
Plate 33: Kom al-Mahar, pottery	219
Plate 34: Kom al-Mahar, pottery	220
Plate 35: Kom Konas, pottery	221
Plate 36: Kom al-Ahmer II, pottery	222

List of Maps

1. Beheira 2011: Surveyed sites between 2008-2011.	227
2. Beheira 2011: Prehistoric, New Kingdom, and Late Dynastic sites	228
3. Beheira 2011: Sites with early Greek presence	229
4. Beheira 2011: Hellenistic sites	230
5. Beheira 2011: Roman and Late Roman sites	231
6. Beheira 2011: Early Arab sites	232
7. Beheira 2011: Wine production centres	233
8. Kom al-Ahmer and surroundings	234
9. Beheira 2011: Sites along the course of al-Hager Canal (ancient Dragon Canal)	235
10. Beheira 2011: Rural and urban sites	236

List of Tables

Table 1: List of towns and villages in the Western Delta of Egypt	18
Table 2: List of surveyed sites	27
Table 3: Pottery presence in percentage and in sites	175
Table 4: Sites chronology: black is a secure date, grey is uncertain or suggested	176
Table 5: Pottery surface finds and dates, in order of the pottery plates	184

Acknowledgements

While I have many people to thank since I started this work, I am equally grateful to the many who gave me help even before I began. I start by thanking Sheenagh Daly, who helped me indirectly, Flavio Multineddu, and Luigi Giovinazzi from the Italian General Consulate at Alexandria (2003 – 2008). In the same Consulate I thank Mr. Reda and Mr. Magdy for their unlimited support.

Regarding the fieldwork and the facilities I appreciate Mr. Ashraf Abdel Rahman, the inspector from Abu al-Matamir, and the director of the SCA office in Beheira: Mrs. Nemma, and later Mr. Mustafa Rushdy. In Cairo, I must thank Mr. Magdy al-Ghandour, Mr. Hany Abu al-Azem, Dr. Mohamed Ismail, and the director of the SCA Dr. Zahi Hawass. From the Italian Archaeological Center in Cairo, Mrs. Cecil Safwat and Dr. Rossana Pirelli for all their assistance and support. I also thank the taxi driver Saeid and all the *ghafirs* I met at the sites.

In Italy I am grateful to Flora Silvano of Pisa University, director of Breccia's Archive for giving permission for the publication of some figures. From the UK and US I offer my great respect and thanks to Judith McKenzie, Elizabeth Macaulay Lewis, and Linda Hulin for all their support and for reading proofs of this work in different phases. I am grateful to Tiffany Chezum for editing the final draft of this work, and to Maggy Sasanow of the Center for the Study of Ancient Documents, Oxford for providing permission to publish the Fraser photos of Abu Hummus. I am also grateful to James Howard-Johnston for revising the historical sections.

I thank my friends who got tired of correcting my Italian and discussing the origin of some pottery sherds or the function of a specific structure. I start with Archer Martin who taught me a great deal and Irene Cestari for her unlimited help, as well as Alexandra Konstantinidou, Alessandra Marchi, Bérangère Redon, and Neal Spencer. I am also grateful to Archer Martin and Penelope Wilson for reading a draft of this work and providing many useful comments, and to Sarah Norodom, Andres Reyes and Judith McKenzie for help with proof-reading.

Financial support was a major factor in completing this survey. I have benefited from the University of Siena and University of Trento PhD school, the Minister of Italian Foreign Affairs (MAE), and more indirectly Oxford University, École Normale Supérieure, and RCRF trustee.

I am very grateful for the grants from the Oxford Centre for Byzantine Research and the Friends of Manar al-Athar which made possible the inclusion of colour photographs, to Dr Peter Frankopan for his support and to Dr Rajka Makjanić at Archaeopress for her patience and efficiency.

Finally, I am grateful to Professor Emanuele Papi from the University of Siena for all his help and unlimited support, and to Professor Mariette de Vos Raaijmakers from the University of Trento, for trusting me and providing me with everything I needed to transform a dream into reality.

Preface

Andre Bernand undertook the first detailed study of Greek material from the western Egyptian Delta in 1971, when he collected together Greek inscriptions as well as archaeological and topographical information dating to the first millennium BC. Bernand had shown how vital the Western Delta had been as the hinterland of the Saite kingdom, the focus for trade and business at Naukratis and Meletis and, perhaps, above all that the area was a key strategic area for the sustainability of the Hellenistic capital of Egypt and centre of the Ptolemaic Empire, Alexandria. Archaeological sites in the Delta have not been as regularly investigated as those in Upper Egypt, partly because of the difficult, damper conditions, but also because of the relatively late, post-Pharaonic date of many of the sites. This has failed to capture the interest of Classical and Egyptological scholars. The archaeological potential of the Western Delta was shown by W. Coulson and A. Leonard at Naukratis and its surrounds in the 1970s, but the problem remains that basic information about where and what is left at sites is required before any larger synthesis or understanding can be achieved. Survey work by Penelope Wilson, Dimitris Grigoropoulos, Joanne Rowland and Joshua Trampier began the collection of data from sites with dating information retrieved from surface collections of pottery in the early 21st Century.

Mohamed Kenawi has shown how these early collections can be further supplemented by wider collections of surface material but also small, targeted intensive collections that answer questions about site functions quickly and effectively. This volume contains detailed information about 63 sites and shows, amongst other things, that the viticulture of the Western Delta was significant in Ptolemaic and Roman periods, as well as a network of interlocking sites, which connected with the rest of Egypt, Alexandria, North Africa and the Eastern Mediterranean and Aegean. Far from being a border area — as perhaps it had been in the Pharaonic period — the west Delta network exerted an important economic production influence over a very wide area. In addition, with access to medieval and later Arabic sources, Kenawi's discussion of the sites has an added dimension not found in the work of western scholars. Mohamed Kenawi's meticulous and determined work has resulted in an improved set of data for the Delta and shown how its potential can be tapped. There still remains much work to do, but as land, including archaeological sites is lost to agriculture and urbanisation, published survey work such as this will provide a precious comparative corpus of pottery and source archaeological material for the future.

Penelope Wilson
Durham University

List of abbreviations

Common Abbreviations

BS	Beheira Survey.
SCA	Supreme Council of Antiquities.

Journal Abbreviations

<i>AASOR</i>	<i>Annual of the American Schools of Oriental Research, Ann Arbor, Michigan; Boston.</i>
<i>ASAE</i>	<i>Annales du service des antiquités de l'Égypte, Cairo.</i>
<i>AAALiv</i>	<i>Annals of Archaeology and Anthropology, Liverpool.</i>
<i>BASOR</i>	<i>Bulletin of the American Schools of Oriental Research, New Haven.</i>
<i>BAR</i>	<i>British Archaeological Reports, Oxford.</i>
<i>BCH Suppl</i>	<i>Bulletin de correspondance hellénique supplémente, Paris.</i>
<i>BGArab</i>	<i>Bibliotheca geographorum arabicorum, Leiden.</i>
<i>BSAA</i>	<i>Bulletin de la société archéologique d'Alexandrie, Alexandria.</i>
<i>CCE</i>	<i>Cahiers de la céramique égyptienne. Institut Français d'archéologie orientale, Cairo</i>
<i>GrAr</i>	<i>Graeco-Arabica, Athens.</i>
<i>HASB</i>	<i>Hefte des Deutschen Archäologischen Instituts der Universität Bern.</i>
<i>IFAO</i>	<i>Institut français d'archéologie orientale, Cairo.</i>
<i>IFAO EtUrb</i>	<i>Institut français d'archéologie orientale. Études urbaines, Cairo.</i>
<i>JAC</i>	<i>Jahrbuch für Antike und Christentum, Münster.</i>
<i>JHS</i>	<i>Journal of Hellenic Studies, London.</i>
<i>JRA</i>	<i>Journal of Roman Archaeology, Portsmouth.</i>
<i>JRAS</i>	<i>Journal of the Royal Asiatic Society, London.</i>
<i>OLA</i>	<i>Orientalia Lovaniensia Analecta, Leuven.</i>
<i>RCRF acta</i>	<i>Rei Cretariae Romanae Fautorum acta, Bonn.</i>
<i>RISE</i>	<i>Ricerche Italiane e Scavi in Egitto, Cairo</i>
<i>REgA</i>	<i>Revue de l'Égypte ancienne, Paris.</i>

Chapter 1

Introduction and methodology

The province of Beheira in the Western Delta of Egypt has not previously been subject to intensive archaeological study, nor has its rich history, as documented in the Arab sources been studied beyond the recent P. Wilson survey. Having become interested in this region and its place in Egypt's history from the Hellenistic era to the invasion of the Arabs, I decided to focus on Beheira as the subject of my doctoral thesis and to conduct an archaeological survey of the region. As the hinterland of Alexandria with major Mediterranean contacts, this region is of a particular interest as an interface of desert and Delta that has witnessed many long-term cultural changes and historical events. Most relevant studies, papyrologists, and even historians consider Alexandria as separate from Egypt. Yet, although distinguished from the rest of the country by the name *Alexandria ad Aegyptum*, the city was strongly affected by its hinterland. From the time of its foundation until today, Alexandria has been dependent on both its chora and the rest of Egypt, and its economy has rested on the export of agricultural goods and natural resources. Alexandria's role as a vital economic power in the Mediterranean relied upon the excavated canals that once ran into the city from the Nile. Recent studies have focused on Lake Mareotis and the role of the western region on Alexandrian history. In my doctoral thesis, I focused on the role of the southern and eastern regions that once formed the city's hinterland. This monograph, which is based on that thesis, details the aims and results of that survey.

The first chapter focuses on methodology and goals, as well as summarizing the natural history of the region. The second chapter discusses the Late Roman period and Arab sources which have hardly ever been used, as well as the history of the Western Delta from the Arab invasions onwards. Chapter Three explains the survey methodology and includes a site gazetteer containing entries for each site studied in this survey. Chapter Four is an analysis of the surface pottery finds, and Chapter Five presents my conclusions.

I began my research of the Western Delta in late 2007, in an area that approximately covers the Beheira Province. A well-known province in Egyptian history, the area was especially renowned for Naucratis and Hermopolis Parva, two thriving commercial centres in the Greco-Roman period. Another important town, Schedia, has recently been found in the region along with its old canal (the canal of Alexandria). Ancient sources mentioned these three towns as being particularly important for the production and export of grain, oil, wine, and papyrus. However, the renown of these three main cities has largely overshadowed the small towns and villages that supplied the large cities

with agricultural produce and where the actual production activities took place daily. Little information is therefore available about the rest of the region (Fig. 1).

1.1. Introduction: organization of the research

Six seasons of survey in the Western Delta of Egypt were planned for the summer and autumn of 2008, 2009, and 2010, when the dry weather allows easy access to the sites.

The work involved:

- A comprehensive study of the literature regarding the Western Delta, including old maps with traces of ancient canals in order to compare them with modern canals.
- Collection of materials. The initial aim was to collect all surface materials at each of the 63 sites in an area that approximately covers the Province of Beheira. However, due to the huge quantity of material to be collected, and the nature of the sites themselves, a 20 m x 20 m sample area was later selected to gain a general view of each site. In some cases, extra materials were collected outside the selected area due to their relevance. The sites were surveyed using a grid system and the concentrations of materials were mapped using GPS.
- Mapping and drawing architectural and topographic features of the surveyed sites, using photogrammetry.
- Drawing and photographing surface finds.
- Studying the surface pottery.
- Reconstructing the regional and interregional commerce routes, based on the study of the pottery.
- Creating a master plan of the Hellenistic Roman sites that have been negatively impacted by the increase in the local population.
- Conducting a statistical analysis of the database.

Data from the survey has increased our knowledge of the economy of the region. The area produced grain, oil, and wine until the 9th century AD. After this, the entire region went into decline until 1805. The reasons for this are investigated in this monograph.

1.2. Survey method

While many different methods have been used to survey areas around the Mediterranean in the last thirty years,¹ the basic techniques of field survey are now well-established and are unlikely to change significantly. This

¹ For example Alcock and Cherry 2004, Barker and Lloyd 1991.

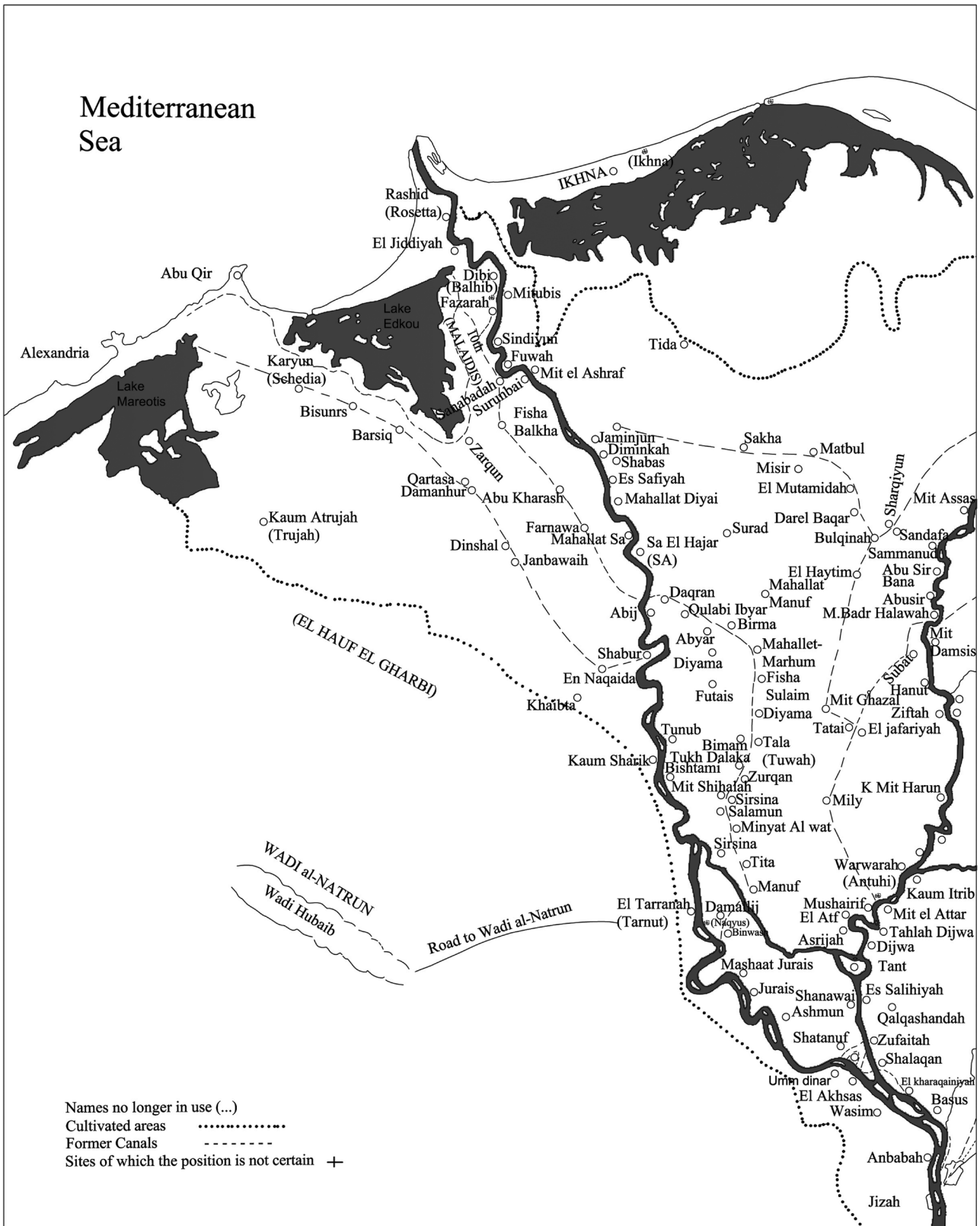


FIGURE 1: THE WESTERN DELTA IN THE 10TH AND 11TH CENTURIES AD (AFTER GUEST 1912) WITH MODIFICATIONS.

does not mean that future technology will not allow better interpretation of the data. Scientific survey in Egypt began with the Napoleonic military campaign, but the bulk of archaeological work has focused on excavation. There is no single method suitable for use in all areas or on all sites. This is because each area or region has its own geographical, geological, hydrological, and demographic elements that force the archaeologist either to adopt a certain method or to apply a new one. Surveying in the desert is not like surveying in the Delta, nor is it like surveying in a highly populated area. Although the types of sites that can be found determine the method, it is very important to use only one method for all sites in the region being studied in order to have a systematic survey and consistent results. Random surveys and collections of sherds cannot give us scientific results when sites are compared with each other.

The intention of the Beheira Survey at the beginning was to collect all surface materials. Later, it was found that this would be impossible for some sites due to the huge quantity of pottery sherds. In order to not apply two different methods to the same region, it was decided to create a single 20 x 20 m square at each site, to locate this square by GPS, and to collect all the surface material in it, counting and drawing the diagnostic sherds. Areas that had good sherd coverage have been selected to determine their function (domestic and production areas, necropoleis etc.). The reason for choosing the 20 x 20 m size was to give the best possible view of the materials at each site. The choice of 20 x 20 m as an area follows the same system used at Dionysias in collecting surface finds.² The square is large enough to give a clear view of these and can be compared with the other 20 x 20 m area squares at other sites. Each 20 x 20 m area was located on the map to prevent any future mistakes and to allow others to continue the survey or to start an excavation on a systematic basis. In addition, horizontal grids (lines) were created on each site with a distance of 10 m between each line in order to be able to note all materials and/or hidden structures. These grid lines were walked along and all important evidence, such as coins or glass, was collected. The collection of such extra materials was mentioned in the database.³

One of the goals of this project was to add to our understanding of the lesser known sites in the region. The survey also went beyond fieldwork to search for forgotten sites and news of old finds from the region. Some of these sites were difficult to locate, but thanks to discussions with local inhabitants, all were located and mapped, using GPS, e.g., Kom Dinshal (BS 37), Kafla, Ahmer III (BS 39), and the plant nursery near Abu Hummus (BS 63). All types of information found on these sites were added to the database, although in some cases nothing remained.

The survey includes a study of the inhabited area/sites in Beheira and the history of the regional movements from all

available maps, both old and new. A comparison of the use of the land and its boundaries was also made.

1.3. Terminology

The term '*site*' is not used here to indicate only a concentration of material in a certain cultivated field, because in some cases pottery sherds are not found in their original location but have been moved from their original context by the *sebakheen*.⁴ However, where surface materials seem to be *in situ*, the location is called a site. *Site* in this work is used to refer to a high mound called a *Kom*⁵ or *Tell* where surface pottery or surface structures are found. In some cases, however, a site presents ancient surface material but does not have the typical shape of a *kom*, despite being locally known as a *kom*. In this case, it is still called a *site*. The term '*settlement*' is used to refer to man's presence evidenced by materials found *in situ* in an area which does not have a *kom*. The term '*Roman Villa*' is used to indicate an inhabited settlement which was probably used by the Roman administration. A 'production unit' will be used to define a wine or oil producing location, when remains of the structure survive.⁶

1.4. Research questions

This research has several specific goals, which are outlined here.

1. To increase our overall knowledge of Beheira. A great deal is known about the ancient cities, but almost nothing is known about the countryside and the small villages that were the backbone of the economy and the actual source of Egypt's wealth.
2. To increase knowledge about land use and the ancient agrarian economy, as well as about the ancient regional and interregional trade systems and routes. The ceramic database provides valuable information on transport and export of local produce.
3. To increase knowledge about the transformation of the landscape in the Western Delta due to land cultivation and the digging of canals, which linked the small villages and the cities of the Delta, and connected them to Alexandria and then Rome, as trading activity across the Delta testifies.

This survey also aims to understand the following key points.

⁴ *Sebakh* is an Aramaic word meaning dry land; this term is used to describe decomposed organic materials that can be employed as soil fertilizer. In the late 19th century, it became common practice in Egypt to cut and move away the dry land from ancient villages and towns where the houses had been built of mud brick. Because of such activity many important papyri were discovered in the Fayoum (some farmers still do such activity in the Delta). This activity destroyed many ancient villages and leveled mudbrick structures.

⁵ The term may be connected with the Greek word *kumi*, meaning *village*.

⁶ Site terminology was discussed in Trampier 2010.

² Papi et al 2010, pp. 239-255.

³ Copies of this in Filemaker and xls will appear online.

1. The topography of the Western Delta in the late Hellenistic, Roman, and early Byzantine periods until the arrival of the Arabs.
2. The daily life activities of the local inhabitants from material culture.
3. The chronology of the process of decline and abandonment of each site or region, as much as is possible from the archaeological evidence.
4. The area's position during Arab and Mamluke rule and the reasons which led Beheira to be defined as a very small, narrow area along the Rosetta branch of the Nile.
5. A view of the actual situation of the ancient sites and problems from which they suffer today, and to try to find a solution to protect them, or at least to record as much information as we can before their total destruction.

1.5. History of research

By the end of the 19th century and beginning of the 20th some scholars were attracted to the Delta in spite of the difficulties. Amelia Edwards wrote

Those ruins are buried under the rubbish of ages, thus forming those gigantic mounds which are so striking a feature of the scenery between Alexandria and Cairo. Nothing in Egypt so excites the curiosity of the newly landed traveller as these gigantic graves, some of which are identified with cities famous in the history of the ancient world, while others are problems only to be solved at the edge of the spade.⁷

She also described the difficulty of reaching sites in the Delta like San al-Hagar:

Not many tourists care to encounter a dreary railway trip followed by eight or ten hours in a small row-boat, with no inn and no prospect of anything but salt fish to eat at the end of the journey.⁸

Hogarth and Daressy⁹ visited some sites, including Naucratis.¹⁰ Between 1944 and 1947 an excavation took place at Kom al-Ahmer I (BS 19) in a limited area leading to the discovery of a great Roman bath by El-Khashab,¹¹ but these important discoveries did not attract the attention of archaeologists until recent times. Ptolemaic, Roman, and early Arab coins were found which date the site from the 3rd century BC until the late 8th century AD.

In 1966 and 1976 emergency excavations took place in Silvagou (BS 34) to release the site for land reclamation. The area of a huge necropolis that was found was released, but the primary report remains unpublished. No plans

or scientific description were given. The site was partly excavated and later leveled during land reclamation.¹²

In 1971 André Bernard published a complete list of all Greek texts which were found in the Delta or mentioned the Delta.¹³ He added the descriptions of some French travelers who visited Egypt in the last 250 years. The work is not archaeological, but it covers an important part of the written sources, despite not including any texts later than the 6th century AD. Bernard's work focused on texts from Naucratis and Hermopolis Parva (Volume IV contains a copy of the topographic maps of Egypt of 1910-1916).

By the end of 1978 the first major scientific archaeological investigation had begun at Naucratis, directed by William D. E. Coulson. It has been well published in the following volumes:

1. *Cities of the Delta, part I, Naucratis*, by D. E. Coulson and A. Leonard, 1981.
2. *Cities of the Delta, part II, Mendes*, Preliminary Report on the 1979 and 1980 seasons, by K. L. Wilson, 1982.
3. *Cities of the Delta, part III, Tell el-Maskhuta*, Preliminary Report on the Wadi Tumilat Project 1978-1979 (Eastern Delta), by John Holladay, 1982.

Excavations of other sites in the Western Delta followed. In 1995 the University of Liverpool started an excavation at Kom al-Abqaen, which focused on the fort of Ramses II.¹⁴ Between 2001 and 2007 the British Museum conducted six years of scientific excavation at Kom Firin, a well-noted Pharaonic site with a temple and fort of Ramses II.¹⁵ The only scientific archaeological investigation of a Hellenistic and Roman site in the Western Delta was at Kom el-Giza – Kom el-Hamam (ancient Schedia), which was conducted between 2003 and 2005.¹⁶ Not far from Kom el-Giza – Kom el-Hamam, another Italian mission started working at Kom al-Ghoraf (BS 17). The site has Roman and Late Roman cisterns.

However, no Hellenistic or Roman city has been excavated beyond a small part of its area, while villages were rarely visited and often ignored.¹⁷

In the last few years, Egyptologists began to carry out basic surveys in the Delta and in the Eastern Delta in particular. While excavating sites such as *Tell Basta* and *Sais*, researchers visited the surrounding areas. The idea of creating a database for all sites in the Delta was introduced by the SCA in 1992. The Supreme Council of Antiquities (SCA) is the highest state organization for archaeological sites, museums, and any other activity relating to antiquity in Egypt. Its *Atlas of Archaeological Sites in Egypt* was

⁷ Edwards 1891, p. 40.

⁸ Edwards 1891, p. 51.

⁹ These travelers include G. Daressy, C.C. Edgar, and A.R. Guest.

¹⁰ Hogarth 1904, pp. 1-19.

¹¹ El-Khashab 1949, pp. 28-65.

¹² El-Wakil 1986, p. 279.

¹³ Bernard 1970.

¹⁴ <http://pcwww.liv.ac.uk/~zan/abqain/HOME.HTM>.

¹⁵ Spencer 2009, pp. 36-57.

¹⁶ <http://www.schedia.de/>.

¹⁷ Bagnall 1993-6, p. 6; Butzer 1976, p. 71.

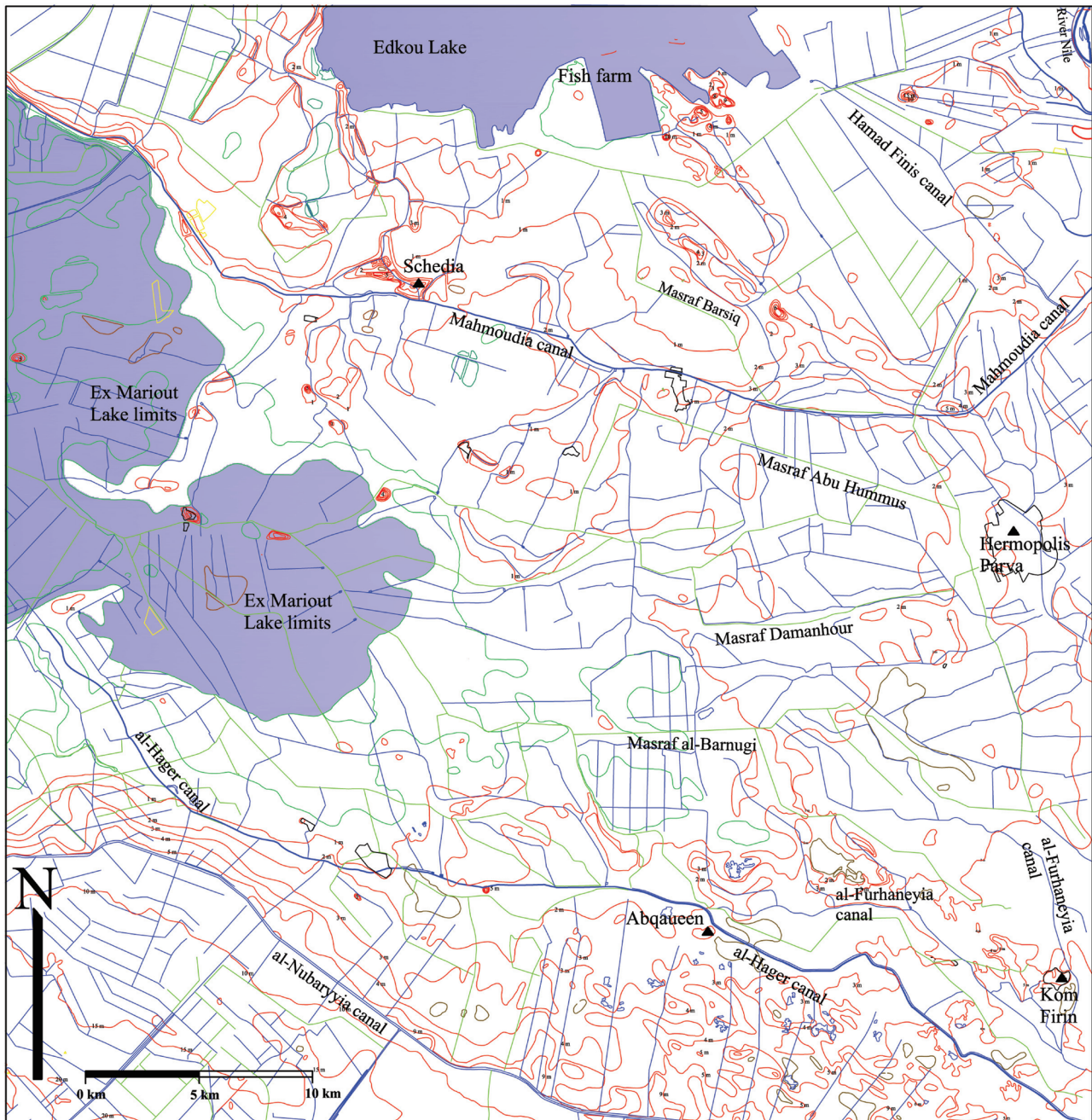


FIGURE 2: HERMOPOLIS PARVA, SCHEDIA, KOM FIRIN, AND KOM ABQAEEN, BEHEIRA, 2011.

published in 2001. This Atlas gave only a list of the names of sites in each governorate and their approximate location without providing any further information about them. Researchers working in the Eastern Delta began by visiting the sites that were recorded in the Atlas and giving a description of each site along with a sketch map.

The same kind of work was done for some sites in Beheira (Western Delta) and in Kafr al-Shikh (Northern Delta).¹⁸ Recently, Penelope Wilson conducted a survey of over fifty-two sites in Beheira. I have done sixty-three sites. Of these, we have twenty-five sites in common where I

have re-surveyed to gather more information, leading to the discovery of different structures in some of these sites. Some structural plans were added and a detailed historical background of each site was completed. In addition, research was conducted on the Arab sources concerning the Western Delta sites and water canals. Finally, a historical background of all archaeological activities or finds from each site was added to the gazetteer beside the location of the site on the different survey maps of Egypt. The survey focused on the economic aspects of the region through the various wine production sites, two amphora kiln sites and different olive oil production sites, as well as the location of the first identified plant nursery. The survey aimed to locate the ancient capital of Metelis, which is probably

¹⁸ Wilson and Grigoropoulos 2009, pp. 43-260.

Kom Wasit and Kom al-Ahmer. The study has focused on linking the sites together in order to give a complete view on the region.

The Beheira Survey includes sixty-three sites, excluding Naucratis, Hermopolis, Kom Firin, Kom Abqaqueen, Kom el-Giza, and Kom el-Hamam due to the intensive work already done in those sites. As the aim of this survey is to focus on the unknown and less studied sites, the sites above will only be used to compare the locations of others and to gauge the importance of the commercial activities in the area (Fig. 2).

In 2012, a new archaeological mission of the University of Siena, the Italian-Egyptian Archaeological Center (CAIE), and Padova University started working at Kom al-Ahmer and Kom Wasit, with a projected duration of ten years.¹⁹

1.6. Documentation of the past

The situation in the Delta today, especially in the Western and Northern Delta, is not very different from that of the archaeological area in Nubia forty years ago after it was flooded due to the construction of the High Dam, also known as the Aswan Dam. To avoid damage to the Nubian temples there, UNESCO launched an international preservation project. Thirteen temples were dismantled and relocated to nearby high ground; others were taken to Europe, while some, along with ancient houses and tombs, still lie under the waters of Lake Nasser. If a preservation project is not begun in the Delta region as soon as possible, an invaluable opportunity to record daily life in the villages and villas, excavate wine production units, baths, and urban systems, and investigate burial remains will be lost forever.

With the construction of the High Dam in 1971, the age-old recurrent Nile inundations of the Delta region came to a halt. The water level was controlled, allowing four harvests per year, instead of the customary two. Reclamation of the swamp areas near the ancient sites started, and farmers began to spot ancient settlements which had remained hidden for ages because of the annual deposits of the Nile. Gradually, local people noticed the mounds and started digging in search of gold, which they called *kenz*. Local authorities and archaeologists have yet to realize that the construction of the High Dam has offered a prime opportunity to investigate the whole Delta area, and consequently little archaeological activity has occurred in the Delta area.

1.7. Rescue survey: emergency research and rapid documentation

The landscape of the Western Delta has barely changed over the past 2300 years, except for a few geographical developments such as the formation of the new basins of Lake Mareotis and Lake Edkou, and the disappearance of the Canopic branch of the Nile between the 9th and 12th

centuries. Life also continued pretty much unchanged, even during the period of decline from the 9th century AD until 1805. Age-old agricultural systems continued to be used and houses were mainly constructed in the traditional style, with their dovecotes nearby.

There were certainly waves of destruction: the first that we can document took place in the late 19th and early 20th centuries with the massive disturbance of sites like Kom Truga and Naukratis. The Official Journal of the Egyptian government in 1912 mentioned the names of eighty-three sites in Beheira province where *sebakh* could be taken, and the sites were consequently plundered.²⁰ Over the last forty years since the Aswan Dam was constructed, a massive demographic change has occurred, as a result of the more efficient irrigation system introduced in the Delta region after the construction of the High Dam. A remarkable increase in the Delta population has had a significant impact on the archaeological sites of the Delta. It has caused a sharp demand for new spaces to build new modern houses and to bury the dead. In many cases, the locations chosen have been ancient sites on high mounds.

However, the devastation of the sites started even before the advent of television and the High Dam. In fact, on visiting a few ancient sites in the Delta in 1945, H.W. Fairman complained that 'the continuous rise of the water level and the unchecked activity of robbers will mean the almost total loss of practically every Delta site'.²¹

Television, especially soap operas showing farmers who become rich after digging, has influenced the mentality of the farmers, encouraging them indirectly to dig in search for hidden treasures. Emboldened by weak government control, farmers have also started building on the sites. *Sebakheen* have dramatically altered the countryside and their modern agricultural machines have damaged, and in some cases devastated, most of the ancient *koms*.

The first meeting about the need for immediate archaeological work in the Delta took place in 1985, with the Archaeology of the Nile Delta Congress in Cairo. On that occasion, 189 sites were recorded in Beheira province. Archaeological activity, mainly in the Eastern Delta, started a few years later. In 1992-1996 an atlas with the names and approximate locations of ancient sites was published by the SCA. However, the atlas only listed 152 sites in Beheira.

At the moment, new rural villages have been built on most of those 152 sites. Only a few are not built up. However, even these may be endangered by a number of other adverse circumstances. One example of this can be seen in the fate of a mosaic found in a Roman villa excavated in Kom el-Giza in late 1980s. The mosaic was found restored *in situ* in 2005; however, in 2008 some pieces

¹⁹ www.komahmer.com.

²⁰ *Journal officiel du gouvernement Égyptien*, Samedi 12 Février 1910, n.18, pp. 313-319.

²¹ Cottrell 1950, p. 236.

of the mosaic were destroyed and in 2009 the mosaic was completely destroyed by local inhabitants.

Businessmen are another threat to the sites as they ask for the release of the sites for development, as in the case of Kom al-Ahmer, al-Barnugi, etc.

Thus, the need for rapid documentation of these sites is necessary. Thanks to Penelope Wilson who documented fifty-two sites in Beheira and to this survey that documents sixty-three sites, the total number of documented sites in Beheira at the moment has reached ninety. Yet more work is still needed before many of these sites disappear.

1.8. History and geography of the Delta

At Cairo the Nile divides into two branches (seven branches in ancient times) and begins to deposit silt, thus creating the Delta. The Nile Delta extends over approximately 22,000 square kilometers. The Damietta branch is 240 kilometers long, and the Rosetta branch is 235 kilometers long. A network of drainage and irrigation canals supplements the remaining outlets. In the north, the Delta embraces a series of salt marshes and lakes of which the most notable are Mareotis, Edkou, al-Burullus, and Manzilah. Today the Delta comprises nearly 54,000 miles of canals.

Egypt is divided into three great agricultural zones: the Nile Valley, the Fayoum and the Delta. The last is divided by the branches of the Nile into many different sectors and today it contains five main areas: North, South, Middle, East and the Western Delta. The basic unit of Egyptian agricultural life is the village, of which there have been always a large number. Diodorus Siculus counted 30,000 settlements during the period of the Ptolemaic kings²² comparing them with Pharaonic antiquity when Egypt had 18,000 villages. The number compares well with Herodotus' count of 20,000 inhabited cities in the time of Amasis.²³ Diodorus Siculus also mentions manmade canals in the Delta and describes its land as 'the best land in Egypt'.²⁴

The construction of the Delta

The Delta formed from the south and moved towards the north expanding into the Mediterranean. As the sea-waves competed with the inflow of the Nile, the length and width of the Delta changed several times.

Sub-Deltaic deposits

While we do not fully know the depth of the deposits under the Delta, we do know that it starts at 8.5 m below the surface in Menouf, 15 m in Shebin el-Kom and Tanta, 35 m in Amiut, 42 m in Elshamarka, and 43 m in Rosetta.

The lowest and thus earliest deposits consist of sand and small pieces of stone.²⁵ Above this, the first Nile silt was deposited to a depth of 35 or 36 m. It is divided between old silt, which called *diluvial*, or Upper Paleolithic Silt, and the new Sebilian silt known as *alluvium*. The old silt is heavier and harder than the new silt. It is clearer and less black in color. It can be seen on the surface from North Sudan to middle Egypt.²⁶

In Wadi Halfa it is 30 m above the valley level, while in Luxor it is only 6m. It then starts to disappear under the new silt going north but still can be seen on the borders of the desert. Its depth in the Delta is 27 m while in the valley it only measures between 2 and 7 m.

The new silt – alluvium

The ancient Egyptians called the silt that starts from the first cataract near Aswan 'black earth'. Its depth along the valley is not more than 9 m.²⁷ From the only systematic excavation, which took place in the last few years 30 km from the sea, it was clear that the depth of the new silt at this point of the Delta is more than 9 m. Roman materials were being found at a depth of 13 m, and the excavation could not continue further to reach the Hellenistic level due to the high level of ground water. We can imagine how many settlements are still buried under the silt because of the annual inundation.

Diodorus Siculus wrote, 'Thanks to the new silt, the land of Egypt is better than any other as the place where mankind came into being because of the well-tempered nature of its soil'.²⁸ The annual inundation brought the rich silt that created the Delta and attracted the tribes to settle there.

The changes in the Nile branches

The main maker of the Delta was the Nile and its branches. Historians and archaeologists have made many different maps of the Delta and its branches, based mainly on the descriptions of ancient sources. The sources give various names for each branch and different courses for them. Herodotus, Strabo, Claudius Ptolemy, Greek papyri, al-Idrisi, al-Maqrizi, and Abu al-Fida were the main sources used by S.A. Omar Tousson, Ball,²⁹ Butzer, and Bietak³⁰ to create maps for the Delta during different periods of Egyptian history. The most complete set of maps are those by Omar Tousson and Bietak, which cover the period from Pharaonic times until the 9th century AD.

1.9. Brief introduction to the past of the Western Delta

The Delta region is very different from the Nile valley, and agriculture in the Delta is much more challenging due to the presence of swamps and small salty lakes nearby. Over

²² Diodorus I 31.3-8.

²³ Herodotus II, 177.

²⁴ Diodorus I 34.1.

²⁵ Stanley and Landau 2010, pp. 35-51.

²⁶ Warne and Stanley 1993, pp. 26-64.

²⁷ Lyons 1906, p. 339.

²⁸ Diodorus I 9.6-10.

²⁹ Ball 1942, pp. 24-32.

³⁰ Bietak 1976, pp. 123-176.

the last 200 years, land reclamation has been extensive. The area of land in the Delta available today after the reclamation projects is twice as much as in the Nile valley. The proximity of the Eastern Delta to the Near East meant that it also played a vital role in later Egyptian history.

As ancient sites in the Delta are far less accessible than those in the valley, it is not surprising that there are less archaeological remains in the Delta than in Upper Egypt. However, this does not reflect the true importance of the area.

The prehistoric era

In prehistoric times the decreasing rainfall drove the inhabitants of the present-day Western Desert towards the Mediterranean coast and into the Western Delta, near the Canopic branch. As De Cosson observed, 'It is clear that the restriction of grassland in the great interior tracts, owing to the gradual falling off of the rainfall, led to the concentration of the population in restricted rain and Nile water fed areas, making cultivation of crops a necessity'.³¹ However, there was thought to be no archaeological evidence for the presence of prehistoric tribes in the Western Delta because of the lack of scientific excavation and the high level of ground water (only two sites are recorded by E. Breccia).³² In earlier times, the Western Delta and the eastern part of Lake Mareotis were collectively called *tehemu*, i.e. 'olive land'. Some of the earliest archaeological evidence for settlement in Egypt was found there and around Lake Moreis in the Fayoum.³³ Wild olive trees still grow in that area today.

Tribal settlements, which later developed into villages and towns, were located on high ground areas called turtle backs by geologists, or *gezira*, i.e. island in Arabic. These high grounds, or mounds currently called *koms*, provided a perfect location for human settlement. However, in the Pharaonic, Ptolemaic, Roman, and Arab periods, the Nile inundations sometimes posed a serious threat to people's health, cultivated land, and the economy. In some cases recorded by historians, the level of the Nile reached 4 m above the level of cultivated land and the canals were not able to shed the extra Nile water. One of the latest high floods was in 1863.³⁴

The historic era

In historic times, the first mention of the area is recorded by the most ancient surviving document in Egyptian history, the slate Palette of Narmer or Mena, which depicts the founder of the first Pharaonic dynasty defeating the king of Harpoon,³⁵ the district that encompasses the Western Delta and Eastern Lake Mareotis. As a result of this victory, Egypt was united, and Harpoon was annexed to

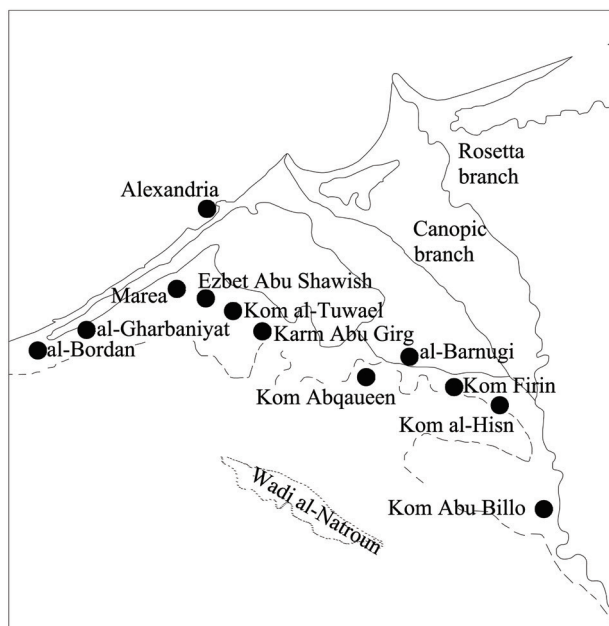


FIGURE 3: NEW KINGDOM FORTS IN THE WESTERN DELTA ON THE EDGES OF THE DESERT.

Pharaonic Egypt. However, records show that the area was re-conquered twice by desert tribes in the 5th dynasty and during the Middle Kingdom, when the kings of Egypt took booty of goats and sheep after the tribes were defeated.³⁶

Repeated raids by the nomadic Libyan tribes of the Western Desert into the Egyptian Delta became a serious threat to the kings of Egypt during the New Kingdom, when Seti I (1313–1292 BC) attacked and defeated them in two battles in the Western Delta. Later on, Ramses II, the son of Seti I, succeeded in moving them away from the margin of the Delta.³⁷ Nevertheless, the Libyans had not been vanquished. Ramses II defeated them again and built various fortifications along the Western Delta borders (Fig. 3). The fortresses efficiently protected the borders; nevertheless, wars against the Libyans still occurred during the reign of Ramses III. By the end of the 21st Dynasty, the Libyans had defeated Egypt, seizing power and ruling the Delta for 200 years as pharaohs of the 22nd dynasty of Meshwesh in 945 BC. In Upper Egypt another new power conquered Thebes and ruled as the Nubian Dynasty. In the Delta, Egyptians successfully revolted against the Libyans; however the leader Amasis seized power in 570 BC, after which he ruled for 44 years until 526 BC.

Good relations with the Greeks started under Psamtik II (595-589 BC), and with the foundation of the town of Naukratis in the Western Delta, strong contacts with Greek civilization developed. Amasis encouraged Greek merchants to come to Egypt and settle, and a friendship treaty was signed between Amasis and the tyrant of Samos, Polycrates. However, during the rule of the Persians, which began in 526 BC and continued for the next two centuries, cultivation

³¹ De Cosson 1935, p. 16.

³² Kom al-Qanater (BS 20) and Kom Qarnin (BS 22).

³³ Thompson 1929, pp. 20-60.

³⁴ Willcocks 1904, pp. 70-72.

³⁵ Newberry 1908, pp. 17-22.

³⁶ De Cosson 1935, p. 21.

³⁷ Breasted 1907, p. 491, p. 457.

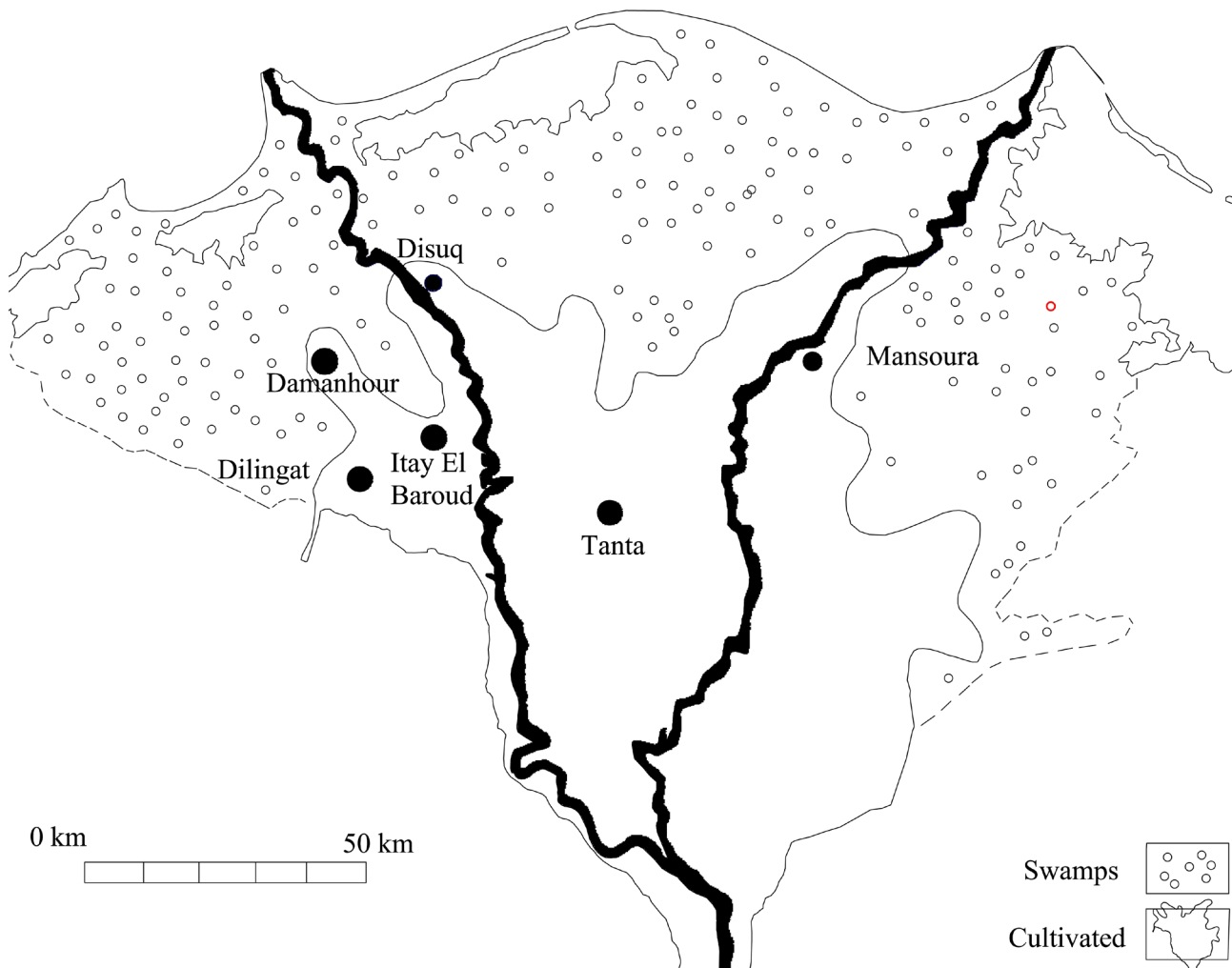


FIGURE 4: THE DELTA IN THE MEDIEVAL PERIOD.

in many areas of Egypt was neglected and corruption in the administration was widespread. This continued until the arrival of Alexander the Great in 332 BC.³⁸ The history of the Western Delta in the Hellenistic era and later periods is detailed in Chapter Two and the history of individual sites is considered in Chapter Three, the site gazetteer.

The period of decline: turning a rich and fertile land into swamps and desert

In the 4th and 6th centuries AD, Egypt suffered devastating earthquakes, which may have destroyed many great buildings in Alexandria, Memphis, and the Delta.³⁹ The people of the Delta most likely abandoned their destroyed dwellings and production units and moved to the nearest large town. At the same time, raids by the Libyans from the west and the invasions from the east by the Persians and later the Arabs in AD 641 deeply upset the daily life of the small Delta villages.⁴⁰

However, to a certain extent, life there went on as before, with the new government in al-Fustat (later Cairo) holding

political rather than administrative control. For example, the site/village of Barnugi, or Nitrai, started to decline in the 4th century, but was only fully abandoned in the 8th century. Arab civilization, with its nomadic, desert lifestyle, did not immediately recognize the need to clean and excavate canals. Thus, canal maintenance and cleaning was fatally neglected and fresh water was no longer supplied. The land must have suffered progressively: farms and villages on the edge of the desert would have been deserted first while low-lands would have turned into swamps.⁴¹ Low Nile levels for many years and the later disappearance of the Canopic branch between the 9th and 12th centuries, which cut off the supply of fresh water to many canals in the Western Delta and to Lake Mareotis, combined with internal disorder, provided the final blow to the region, which eventually fell into total abandonment.

1.10. Land reclamation projects in the Western Delta of Egypt: the economic history of cultivated land

At the turn of the 18th century AD, the western area of the Rosetta branch (i.e. Beheira province) was regarded mostly

³⁸ Pfeiffer 2010, pp. 15-24.

³⁹ Ramzy 1994, vol.i, p. 13.

⁴⁰ Sijpesteijn 2007, p. 441.

⁴¹ Himdan n.d., p. 263.



FIGURE 5: ALEXANDRIA'S HINTERLAND IN 1820, DESCRIPTION OF EGYPT MAP SERIES (PRINTED IN 1826).

as a barren land due to the swamps, the surrounding lakes, and the close proximity of desert. The only exception was the narrow line of cultivated land along the course of Rosetta branch. This is in striking contrast with the picture of the area in the late Pharaonic period and the Ptolemaic and Roman periods (Fig. 4).

The rise and fall of civilization in the Western Delta was primarily shaped by water. In the Ptolemaic and Roman periods, a number of canals were excavated and ran from the Canopic branch and, to a lesser extent, from the Rosetta branch to supply the land with fresh water. It is highly likely that the extension of cultivated land and number of villages was much greater than it is today, even after the recent land reclamation. For example, it is unlikely that the fortresses built in the Western Delta in the time of Ramses II were originally located in the desert.

New reclamation: Mohamed Ali⁴²

In 1801-4 and 1807-8, Lake Mareotis was flooded with seawater for strategic military reasons.⁴³ As a result of this, when the lake was full of seawater, the water level of the lake and the sea became equal. Lake Mareotis was thus turned into a salty lake. Likewise, most of the lowlands in the Western Delta region were soon flooded by seawater and agriculture was no longer possible there (Fig. 5). Salt is still visible today on the surface of the archaeological sites of Kom al-Ahmer II (BS 59) and Khatmi (BS 54). The area was last flooded in 1890, but with fresh water, when the irrigation system in the Beheira province was redesigned and newly excavated drainage canals started to flow into the lake.⁴⁴

The destruction of some villages in 1801 is confirmed by Ewald Falls,⁴⁵ Karl Baedeker,⁴⁶ as well as M. Combe who wrote '*quelques villages d'Arabes et des champs de céréales sont, dit-on, détruits. On mentionne le chiffre de 20 villages, même de 150 et plus de mille acres de bons terrains* (citing G. Le Père), *ont déjà détruit 16 villages* (citing Whitman).⁴⁷ Anthony De Cosson disagreed with Ewald Falls' number of 150 for the devastated villages. Rather, De Cosson examined the *Atlas Géographique de la Description de l'Égypte* and named only 14 villages as having been destroyed. Some of them lay in the present-day Beheira province: Tell el-Genan, Koum el-Arab, Dedoar, Berdeleh, Korbani, Basligoun, Sanhour, Tell el-Ahmer, el-

Kazi, el-Nemirieh, Gamma, Batoures, Terougeh, and el-Gawazi.

By 1810, Mohamed Ali Pasha, governor of Egypt from 1805 to 1849 and known as the architect of modern Egypt and its development, had started a great project to supply Alexandria and the Western Delta with fresh water. The excavation of the great canals of Mahmudya, Nubaryia, and al-Hager were planned, and al-Qanater al-Khairya was completed in 1832. By 1880 (after the death of Mohamed Ali Pasha in 1849), all his planned canals were functioning and, for the first time since the 12th century AD, Nile water reached the Western Delta. The newly excavated canals followed the course of ancient canals as can be seen from the course of al-Hager Canal which has seventeen Hellenistic and Roman sites beside it.⁴⁸ By excavating those canals, new villages were built all over the Western Delta, mainly near or on ancient sites. Some were totally covered by the silt and became an agricultural field (Kafla), others were built over, and some still survive.

This brief introduction has summarized the geological formation of the Delta prehistory and history of the Western Delta from the Pharaohs to modern times.

In the next chapter, I will consider the Late Roman period and how the events of this chaotic and difficult historical era impacted the Western Delta and Egypt. It is also important to consider the great changes that occurred after the Arab conquest and the situation in the Delta during the Middle Ages. Arab historians who provide rich information about the Delta will also be discussed here for the first time. Lastly, I will also give an overview of the main waterways in the Western Delta and the relationship between the modern and ancient canals.

⁴² Mohamed Ali founded the royal dynasty in Egypt from 1805 to 1952. He originally came from a small town in Macedonia. I personally think of his dynasty as a Ptolemaic recall because of their similar origin and their efforts in conducting the same projects in the same areas of Egypt.

⁴³ General John Hely Hutchinson cut off the fresh water supply of the besieged French garrison in Alexandria and destroyed the dyke in Abu Kir where the sea water let in on April 12th, 1801. After one month of flooding into the lake, it was possible for the gunboats to sail from the sea into the lake. The lake level increased so much as to equal the sea level. In 1807 General Fraser did the same when fighting Mohamed Ali.

⁴⁴ De Cosson 1935, p. 91.

⁴⁵ Falls 1913; De Cosson 1935, p. 91.

⁴⁶ Baedeker, *Egypt* 1929.

⁴⁷ De Cosson 1935, p. 92.

⁴⁸ Mosséri 1920, pp. 97-103.