

HIPPOS - SUSSITA OF THE DECAPOLIS

THE FIRST TWELVE
SEASONS OF EXCAVATIONS
2000 - 2011

Volume II

MICHAEL EISENBERG



THE ZINMAN INSTITUTE OF ARCHAEOLOGY
UNIVERSITY OF HAIFA, MOUNT CARMEL, ISRAEL



Hippos-Sussita of the Decapolis

The First Twelve Seasons of Excavations

2000 - 2011

Volume II

Michael Eisenberg



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*This volume is dedicated to Prof. Arthur Segal
who initiated and headed The Hippos-Sussita Excavation Project
for the first twelve seasons (2000-2011).*



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TABLE OF CONTENTS

LIST OF FIGURES.....	5
CHAPTER 1. INTRODUCTION..... <i>Michael Eisenberg</i>	10
CHAPTER 2. HISTORICAL EARTHQUAKES AROUND THE SEA OF GALILEE <i>Neta Wechsler, Shmuel Marco, Klaus-G. Hinzen and Hector Hinojosa-Prieto</i>	16
CHAPTER 3. THE NECROPOLEIS..... <i>Oren Zingboym</i>	24
CHAPTER 4. THE WATER SUPPLY SYSTEM..... <i>Tsvika Tsuk</i>	44
CHAPTER 5. THE HIPPOS WINERY COMPLEX..... <i>Rafael Frankel and Michael Eisenberg</i>	56
CHAPTER 6. HUMAN SKELETAL REMAINS..... <i>Emilia Jastrzębska</i>	74
CHAPTER 7. FINAL POTTERY REPORT OF THE 2010-2011 EXCAVATION SEASONS <i>Lev-Arie Kapitaikin</i>	88
CHAPTER 8. SUMMARY OF THE POTTERY FINDS <i>Meachael Osband and Michael Eisenberg</i>	210
CHAPTER 9. THE GLASS VESSELS OF THE ROMAN, BYZANTINE AND EARLY ISLAMIC PERIODS..... <i>Mariusz Burdajewicz</i>	276
CHAPTER 10. STUCCO RELIEF DEPICTING MYTHOLOGICAL FIGURES..... <i>Adi Erlich</i>	320
CHAPTER 11. WALL PAINTING AND STUCCO FRAGMENTS <i>Silvia Rozenberg</i>	328
CHAPTER 12. POLLEN ANALYSIS <i>Patrick Scott-Geyer</i>	370
CHAPTER 13. THE PIG DEPOSIT IN EARLY ISLAMIC HIPPOS <i>Rachel Hesse</i>	378

LIST OF FIGURES

CHAPTER 1. INTRODUCTION

- 1.1 Mount Sussita, with the Ein-Gev stream flowing below it and the Sea of Galilee to its west (photo. M. Eisenberg).
- 1.2 Contour map of Sussita Mountain and its saddle-ridge with the main excavation areas marked (computer graphics by A. Regev-Gisis, based on Israel National Mapping Agency—SOI).
- 1.3 A. Segal (right) and M. Eisenberg during an off-season winter excavation (photo. E. Dan).
- 1.4 A panorama view from Sussita saddle-ridge towards the Sea of Galilee (photo. M. Eisenberg).
- 1.5 K. Stammerman, aka “the veteran” (right), one of the regular participants from the US as from the beginning of the project, and A. Chocron, a student from the University of Haifa, while excavating in the southern bathhouse (photo. M. Eisenberg).
- 1.6 R. Kaftory, a student from the University of Haifa, while excavating in the southern bathhouse (photo. M. Eisenberg).
- 1.7 Hippos survey team, D. Steinberg (left), A. Iermolin (center) and Y. Vitkalov, observing from the Kavarothe cliff (fortress) towards the Haruv spring which served as one of the early water sources for Hippos (photo. M. Eisenberg).
- 1.8 A. Iermolin overlooking the Ein-Gev stream (April) which flows all year round to the north of Sussita (photo. M. Eisenberg).

CHAPTER 2. HISTORICAL EARTHQUAKES AROUND THE SEA OF GALILEE

- 2.1 a) Generalized tectonic framework of the Dead-Sea Fault (DSF) and other major structures in the area. Legend: (1) Collision zones. (2) Cenozoic volcanic. (3) Early Miocene dykes. (4) Plate boundary main faults. (5) Syrian arc folds (after Garfunkel, 1989). The black rectangle marks the extent of Fig. 2.1b. b). Location of major and minor faults of the DST in the vicinity of Hula Basin and the Sea of Galilee. JGF—Jordan Gorge Fault. JVF—Jordan Valley fault. RaF—Rachaya Fault. RoF—Roum Fault. SF—Serghaya Fault. YF—Yammouneh fault. Below each fault name, the relevant earthquakes known to have ruptured it are mentioned. The black rectangle marks the extent of the map in Fig. 2. Topography from ASTER GDEM (ASTER GDEM is a product of Ministry of Economy, Trade, and Industry and National Aeronautics and Space Administration).
- 2.2 Geological map of Sussita and vicinity, an excerpt from the geological map of Tiberias (GSI, 2008). The grid is in ITM coordinates.
- 2.3 Photo of the cathedral with the fallen columns, looking west (photo. S. Marco).

- 2.4 Perspective clear view to a 3D laser scan model of the Cathedral of Hippos with a view from the northeast (LiDAR. scanning by K. Hinzen and S. Marco).
- 2.5 Simplified north-south trending geological profile through the saddle-like structure of the Sussita hill. On top of the profile, a frequency-dependent seismic amplification is shown which was derived for ten one-dimensional linear elastic models of the subsurface. Abbreviations for the geologic units are given at the bottom of the figure (model by K. Hinzen).

CHAPTER 3. THE NECROPOLEIS

- 3.1 Orthophotograph of Sussita Mountain and its environs with the cemeteries marked (O. Zingboym, Computer processing by A. Shapiro).
- 3.2 The western cemetery (Gps by O. Zingboym, Computer processing by A. Shapiro).
- 3.3 Cave No. 6—Plan (O. Zingboym, Computer processing by H. Tahan).
- 3.4 Cave No. 6—Standing pit (photo. O. Zingboym).
- 3.5 Cave No. 6—Shelf (photo. O. Zingboym).
- 3.6 Cave No. 7—Plan (O. Zingboym, Computer processing by H. Tahan).
- 3.7 Cave No. 7—Narrow and wide niches (photo. O. Zingboym).
- 3.8 Cave No. 12—Plan and façade (O. Zingboym, Computer processing by H. Tahan).
- 3.9 Cave No. 13—Plan (O. Zingboym, Computer processing by H. Tahan).
- 3.10 Cave No. 13—Façade (photo. O. Zingboym).
- 3.11 Cave No. 13—Left side (photo. O. Zingboym).
- 3.12 Cave No. 13—Front side, interior of the cave (photo. O. Zingboym).
- 3.13 Cave No. 14—Plan (O. Zingboym, Computer processing by H. Tahan).
- 3.14 Cave No. 17—Plan (O. Zingboym, Computer processing by H. Tahan).
- 3.15 Stone door (photo. O. Zingboym).
- 3.16 Stone door (photo. O. Zingboym).
- 3.17 Stone door (photo. O. Zingboym).
- 3.18 Basalt items (photo. O. Zingboym).
- 3.19 Basalt items (photo. O. Zingboym).
- 3.20 Pit graves (photo. O. Zingboym).
- 3.21 Pit graves (photo. O. Zingboym).
- 3.22 Quarried grave under Cave No. 45 (photo. O. Zingboym).
- 3.23 Mausoleum 1 (photo. O. Zingboym).
- 3.24 Mausoleum 4 (photo. O. Zingboym).
- 3.25 Mausoleum 4 (photo. O. Zingboym).

- 3.26 Mausoleum 2 (photo. O. Zingboym).
- 3.27 Coffins and covers (photo. O. Zingboym).
- 3.28 Limestone coffin (photo. O. Zingboym).
- 3.29 Limestone coffin (photo. O. Zingboym).
- 3.30 Basalt coffin (photo. O. Zingboym).
- 3.31 Coffin in situ (photo. O. Zingboym).
- 3.32 Coffin in situ and robbed (photo. O. Zingboym).
- 3.33 Quarried graves (photo. O. Zingboym).
- 3.34 Quarried graves (photo. O. Zingboym).
- 3.35 Eastern cemetery (photo. O. Zingboym).
- 3.36 View of the city from the eastern cemetery (photo. O. Zingboym).

CHAPTER 4. THE WATER SUPPLY SYSTEM

- 4.1 Map of the aqueducts to Hippos (drawing by A. Orgad).
- 4.2 The aqueduct on the southeastern hill to Sussita (from Z. Meshel, Ts. Tsuk, H. Fahlbusch, Y. Peleg, The Water-Supply System of Susita, Tel Aviv, 1996).
- 4.3 Sussita Saddle-Ridge as viewed from the aqueduct on the southern hill. View towards north (photo. M. Eisenberg).
- 4.4 The southern hill, Sussita saddle-ridge and the crest, as viewed towards west (photo. M. Eisenberg).
- 4.5 A solid wall that carried the Upper Aqueduct, Nahal El-A. south bank (photo. T. Tsuk).
- 4.6 Kfar Charuv aqueduct (photo. T. Tsuk).
- 4.7 The Upper Aqueduct near Mitspe Ofir (photo. T. Tsuk).
- 4.8 The header tank on the mountain opposite Hippos (photo. T. Tsuk).
- 4.9 A settling basin below Mitspe Ofir (photo. A. Graicer).
- 4.10 The stone pipeline inside the city near the eastern gate (photo. T. Tsuk).
- 4.11 The pipeline beneath the well-cut flagstones (photo. T. Tsuk).
- 4.12 The original cover above one of the holes (photo. T. Tsuk).
- 4.13 The end of the stone pipeline (photo. T. Tsuk).
- 4.14 The channel in the city below a manhole (photo. M. Eisenberg).
- 4.15 A narrow lead pipe inserted into the central apsis of the baptisterium (photo. M. Eisenberg).
- 4.16 The main reservoir beneath the forum paving (photo. M. Eisenberg).
- 4.17 A few of the stone pipeline drums in a secondary use, Sussita saddle ridge (photo. M. Eisenberg).
- 5.2 The Temenos. Aerial view towards southwest (photo. M. Eisenberg).
- 5.3 The southern winery. A plan (drawn by M. Ralbag).
- 5.4 The southern winery. A section (drawn by V. Pirsky and D. Porotski).
- 5.5 A fragment of the temple courtyard and the remains of the stairway leading towards the Early Roman temple (photo. M. Eisenberg).
- 5.6 The temple courtyard, photographed from the SE treading floor of the southern winery towards southwest. Note the olive press at the leftmost part of the photograph (photo. M. Eisenberg).
- 5.7 The southern winery complex and the olive press (upper left). Aerial view (photo. SkyView Photography Ltd.).
- 5.8 The olive press (photo. M. Eisenberg).
- 5.9 The southern winery photographed from the southeastern treading floor towards west (photo. M. Eisenberg).
- 5.10 The six installations at the western part of the southern winery (photo. SkyView Photography Ltd.).
- 5.11 The six installations at western part of the southern winery, a plan (drawn by M. Ralbag).
- 5.12 The northern winery, looking towards west (photo. M. Eisenberg).
- 5.13 The two vats of the southern winery. Looking towards south (photo. M. Eisenberg).
- 5.14 The SE vat. Note the replastering of the staircase and the round sump. Looking towards southwest (photo. M. Eisenberg).
- 5.15 The SW vat, looking towards east (photo. M. Eisenberg).
- 5.16 The SE winery (photo. SkyView Photography Ltd.).
- 5.17 The SW winery (photo. SkyView Photography Ltd.).
- 5.18 The upper eastern wall of the SW vat. Note the replastering (after conservation work) (photo. M. Eisenberg).
- 5.19 The staircase of the SW vat. Note the multiple replastering (photo. M. Eisenberg).
- 5.20 A detail of the plastering of the upper northern wall of the SE vat (photo. M. Eisenberg).
- 5.21 The SW treading floor (photo. M. Eisenberg).
- 5.22 The SE treading floor (photo. M. Eisenberg).
- 5.23 Sieving intermediate vats and a feet washing basin (?) built to the western wall of the SW vat (photo. M. Eisenberg).
- 5.24 A staircase leading to the SE vat and a sieving intermediate vat built to its eastern wall (photo. M. Eisenberg).
- 5.25 The northern auxiliary mosaic floor of the six SW installations (photo. M. Eisenberg).
- 5.26 The northwestern six SW installations (photo. M. Eisenberg).
- 5.27 The Northwest Church, a twin tomb that was reused as a wine cellar (photo. M. Eisenberg).

CHAPTER 5. THE HIPPOS WINERY COMPLEX

- 5.1 The Temenos (Hellenistic Compound). Aerial view (photo. SkyView Photography Ltd.).

- 5.28 A rectangular mosaic hall at the northern winery on the Northwest Church (photo. M. Eisenberg).
- 5.29 The NE screw mortice (photo. M. Eisenberg).
- 5.30 The NE screw mortice, a plan and sections (drawn by A. Regev-Gisis).
- 5.31 The SE screw mortice (photo. M. Eisenberg).
- 5.32 The SE screw mortice, a plan and sections (drawn by A. Regev-Gisis).
- 5.33 The SW screw mortice (photo. M. Eisenberg).
- 5.34 The SW screw mortice, a plan and sections (drawn by A. Regev-Gisis).
- 5.35 A suggested reconstruction of a single fixed screw winepress found in all three wineries at Hippos. A press operation above a round mortice using a wound rope (drawn by V. Damov).
- 5.36 Ground-penetrating radar results at the SE treading floor. Small reflection hyperbola caused by a pipe for grape juice to flow into a vat (L. B. Conyers).
- 5.37 A suggested reconstruction for the operation of the northern winery of the Northwest Church Complex (drawn by V. Damov).

CHAPTER 6. HUMAN SKELETAL REMAINS

- 6.1 Fusion of processes of thoracic vertebrae found in a tomb underneath the Funerary Chapel at the Odeion (photo. E. Jastrzębska).
- 6.2 Arthritic changes to foot phalanges found in the Crypt (photo. E. Jastrzębska).
- 6.3 Proximal phalanges with a thickening on the shaft (photo. E. Jastrzębska).
- 6.4 Intermediate cuneiform bones with bony protrusions on their sides (photo. E. Jastrzębska).
- 6.5 Arthritis of the hip joint (right femoral head) of one of the individuals buried in the Crypt (photo. E. Jastrzębska).
- 6.6 Ossified ligaments on proximal end of right ulna (photo. E. Jastrzębska).
- 6.7 Head of 1st rib fused to the manubrium of an adult individual (photo. E. Jastrzębska).
- 6.8 Incisors in this mandible have been missing for a considerable time before the death of the individual (photo. E. Jastrzębska).
- 6.9 Metatarsals of two individuals found in L1652 (photo. E. Jastrzębska).
- 6.10 Bones of the skull of ind. 1 from L1652 (photo. E. Jastrzębska).
- 6.11 Preserved parts of the skull of individual 1652.1 (illustration by E. Jastrzębska).
- 6.12 Mild case of spina bifida of ind. 1652.1 (photo. E. Jastrzębska).
- 6.13 Signs of post depositional animal activity in the southern of the twin tombs found at the Odeion (photo. E. Jastrzębska).

- 6.14 Pathological condition of a 2nd right metatarsal found in southern tomb at the Odeion (photo. E. Jastrzębska).

CHAPTER 7. POTTERY REPORT OF 2010-2011 SEASONS

- 7.1 Southern Bathhouse, the 3rd Century CE ceramic deposit L1973.
- 7.2 A high-necked jar and a North-Syrian mortarium, from the Cubiculum and the Peristyle Court at the House of Tyche (1-2); cooking-ware pots, bowls, jugs and a ribbed-ware juglet, from the 3rd century CE ceramic deposit L1973 at the Southern Bathhouse (3).

CHAPTER 10. STUCCO RELIEF DEPICTING MYTHOLOGICAL FIGURES

- 10.1 Stucco relief head (photo. M. Eisenberg).
- 10.2 Stucco relief chest (photo. M. Eisenberg).
- 10.3 Stucco relief hand (photo. M. Eisenberg).
- 10.4 The stucco relief from Hippos after restoration (photo. M. Eisenberg).

CHAPTER 11. WALL PAINTING AND STUCCO FRAGMENTS

- 11.1 Basilica, L2016, B6401—yellow-ochre fragment with a dark red band, with brush marks (photo. M. Eisenberg).
- 11.2 Basilica, L2031, B6419—light yellow-ochre fragment (photo. M. Eisenberg).
- 11.3 Basilica, L2018, B6404—Type A plaster (photo. S. Rozenberg).
- 11.4 Basilica, L2031, B6419—Type C plaster (photo. S. Rozenberg).
- 11.5 Basilica, L2066, B6494—Type D plaster (photo. S. Rozenberg).
- 11.6 Basilica, L2082, B6651—porous plaster of stucco moldings (photo. S. Rozenberg).
- 11.7 Basilica, L2066, B5494—green fragments (photo. M. Eisenberg).
- 11.8 Southern Bathhouse, L1973, B2909—mass of fibrous gypsum (photo. M. Eisenberg).
- 11.9 Basilica, L2018, B6404 and B6408—red, white, and yellow-ochre fragments, some with rectilinear patterns (photo. M. Eisenberg).
- 11.10 Basilica, L2020, B6405—red and yellow-ochre fragments, and a stucco molding (photo. S. Rozenberg).
- 11.11 Basilica, unclear locus—yellow, red, and red and white fragments (photo. M. Eisenberg).
- 11.12 Basilica, L2018, B6404—stucco moldings with torus and fasciae and egg-and-dart (photo. M. Eisenberg).
- 11.13 Basilica, L2020, B6405—stucco moldings, some painted yellow-ochre (photo. M. Eisenberg).
- 11.14 Basilica, L2049,—curved stucco molding, perhaps part of a palmette (photo. M. Eisenberg).

- 11.15** Basilica, L2066, B6494—stucco moldings with fascia, egg-and-dart, and a fragment with incisions, part of a floral design (photo. M. Eisenberg).
- 11.16** Basilica, L2066, B6494—white, yellow-ochre, green, red painted fragments, and stucco moldings with remains of red and yellow borders (photo. M. Eisenberg).
- 11.17** Basilica, L2018, B6408—stucco molding of a large flower probably part of an architectonic ornament (photo. M. Eisenberg).
- 11.18** Basilica, L2066, B6492—stucco molding with egg-and-dart (photo. M. Eisenberg).
- 11.19** Basilica, L2066, B6494—stucco molding with design reminiscent of tongue or leaf patterns (photo. M. Eisenberg).
- 11.20** Basilica, southern wall W1190, northern face, stucco decorations in lower wall, circle, lozenge in situ (photo. M. Eisenberg).
- 11.21** Basilica, L2075, B6625—stucco pilaster flutes (photo. M. Eisenberg).
- 11.22** Basilica, L2075, B6625—stucco moldings with egg-and-dart and ribbon (photo. M. Eisenberg).
- 11.23** Basilica, eastern wall, stucco fragments of anthropomorphic relief (photo. A. Iermolin).
- 11.24** Basilica, stucco moldings with egg-and-dart, fillet and fascia (photo. M. Eisenberg).
- 11.25** Basilica, curved stucco molding with fillet (1) probably part of a door frame (photo. M. Eisenberg).
- 11.26** Basilica, L2082, B6651—stucco moldings with incised ribbons and egg-and-dart (photo. M. Eisenberg).
- 11.27** Basilica, stucco fragments of corner volutes from a Corinthian capital found in the 2010 excavations (photo. M. Eisenberg).
- 11.28** Basilica, L2045, B6456—curved stucco molding, probably part of a capital (photo. M. Eisenberg).
- 11.29** Odeion, L1745, B4571—red, and red and white fragments (photo. M. Eisenberg).
- 11.30** Odeion, L1745, B4573—fragments with marble or alabaster imitation patterns (photo. M. Eisenberg).
- 11.31** Odeion, L1747, B4589—fragments with marble or alabaster imitation patterns (photo. M. Eisenberg).
- 11.32** Odeion, L1747, B4574—fragments with marble or alabaster imitation patterns (photo. M. Eisenberg).
- 11.33** Odeion, L1747, B4583—fragments with marble or alabaster imitation patterns (photo. M. Eisenberg).
- 11.34** Odeion, L1747, B4588—fragments with marble or alabaster imitation patterns (photo. M. Eisenberg).
- 11.35** Odeion, L1749, B4577—red, yellow-ochre, green fragments, and two fragments with rectilinear and curvilinear patterns (photo. M. Eisenberg).
- 11.36** Odeion, L1749, B4580—fragments with marble or alabaster imitation patterns (photo. M. Eisenberg).
- 11.37** Odeion, L3158, B6090—white fragments with red and green design, and a green and black fragment (photo. M. Eisenberg).
- 11.38** Odeion, L3163, B6092—white fragment with red and black curvilinear bands, and green fragment with red and black bands (photo. M. Eisenberg).
- 11.39** Odeion, L3170, B6505—fragments with rectilinear and marble or alabaster imitation patterns (photo. M. Eisenberg).
- 11.40** South to the Odeion, white and green fragments with black bands, some with a guilloche pattern (photo. M. Eisenberg).
- 11.41** South to the Odeion, fragments with rectilinear and curvilinear patterns (photo. M. Eisenberg).
- 11.42** South to the Odeion, fragments with floral patterns (photo. M. Eisenberg).
- 11.43** Southern Bathhouse, L1973, B2680, B2904—stucco moldings with egg-and-dart and fillet designs, and green, red, and yellow painted fragments (photo. M. Eisenberg).
- 11.44** Southern Bathhouse, stucco fragments from the palaestra (photo. M. Eisenberg).
- CHAPTER 12. POLLEN ANALYSIS**
- 12.1** Hippos, The Hellenistic Compound, the industrial area and the southern winery complex, a plan with the location of pollen samples (drawn by M. Ralbag).
- 12.2** Hippos, the Roman Basilica, a plan with the location of pollen samples (drawn by T. Meltsen).
- CHAPTER 13. THE PIG DEPOSIT IN EARLY ISLAMIC HIPPOS**
- 13.1** Pig Skeletal Element Distribution from the ‘Pig Dump’ in Early Islamic Hippos.
- 13.2** Pig Teeth, Mandible, and Maxillae Fragments from the ‘Pig Dump’ in Early Islamic Hippos (photo. R. Hesse).
- 13.3** Pig Mandibles from the ‘Pig Dump’ in Early Islamic Hippos (photo. R. Hesse).
- 13.4** Pig Bones from the ‘Pig Dump’ in Early Islamic Hippos (photo. R. Hesse).
- 13.5** Pig Mandibles from the ‘Pig Dump’ in Early Islamic Hippos (photo. R. Hesse).
- 13.6** A butchered vertebral fragment from the ‘Pig Dump’ in Early Islamic Hippos (photo. R. Hesse).
- 13.7** A butchered partial skull from the ‘Pig Dump’ in Early Islamic Hippos (photo. R. Hesse).
- CHAPTER OPENING PHOTOGRAPHS**
- p. 10 Sussita Mountain as seen from the Sea of Galilee (1945, courtesy of Kibbutz Ein-Gev Archive).
- p. 16 Partially reconstructed southern and western colonnades of the Basilica at night time. View from the southeast (photo M. Eisenberg).

- p. 24 The southern part of the Sea of Galilee as seen from Hippos (photo M. Eisenberg).
- p. 44 The Sea of Galilee and Sussita Stream as seen from Sussita saddle ridge. View towards west (photo M. Eisenberg).
- p. 56 A part of an Ionic basalt corner capital of a pilaster (photo M. Eisenberg).
- p. 74 Ein-Gev Stream. View towards east (photo M. Eisenberg).
- p. 88 The southern basalt cliffs of Sussita Mountain (photo M. Eisenberg).
- P. 210 Guy Yuval-Baharav, a volunteer at the dig, after finding a complete Hellenistic lamp in the Hellenistic Compound (photo M. Eisenberg).
- p. 276 Sussita Mountain and its environs as seen from Afik during a thunderstorm. View towards west (photo M. Eisenberg).
- p. 320 The Decumanus Maximus. View from the Forum towards east (photo M. Eisenberg).
- p. 328 A horse and his rider descending from Sussita Mountain to the saddle ridge (photo M. Eisenberg).
- p. 370 A White Stork in take-off from Sussita mountain (photo M. Eisenberg).
- p. 378 Fragment of Roman Period basalt cornice decorated with floral and geometric patterns (photo M. Eisenberg).

Introduction

Michael Eisenberg

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Fig. 1.2 Mount Sussita, with the Ein-Gev stream flowing below it and the Sea of Galilee to its west.

This second, and last, volume to summarize the first twelve years (2000–2011) of research at Hippos (Sussita) of the Decapolis is published four years after the publication of the first volume in early 2014 (Fig. 1.1).¹

I am dedicating this volume to Professor Arthur Segal who initiated the Hippos excavation project in 2000, and who has passed on the reins to me after a wonderful and fruitful twelve years of mutual work in the field and in the Zinman Institute of Archaeology. I am greatly indebted to Arthur for his enlightening and enthusiastic teaching and for his professional guidance throughout the period of our mutual work.

The first volume concentrated on the remains exposed so far in the field, comprising the main building complexes, the urban plan, as well as the historical and geographical introductions (Fig. 1.2).² The second volume is devoted mainly to laboratory research, small finds, stucco and wall paintings, the water supply system, the main

necropoleis, the winery and the various historical earthquakes that have occurred around the Sea of Galilee. The current articles are aimed at filling the gaps of the research presented in the first volume.

The Hippos excavations were directed by Arthur Segal and Michael Eisenberg from 2000 to 2011. As from 2012, the dig is directed by M. Eisenberg. The excavations are affiliated with the Zinman Institute of Archaeology at the University of Haifa, Israel. Two academic teams joined the expedition. The first was headed by Jolanta Młynarczyk of the Research Centre for Mediterranean Archaeology at the Polish Academy of Sciences in Warsaw and by Dr. Mariusz Burdajewicz of the National Museum in Warsaw, with a team from Poland which conducted excavations at Hippos from 2000 to 2008. The second was headed by Mark Schuler with a team from Concordia University, St. Paul, Minnesota, USA that has been excavating in Hippos since the year 2002. M. Schuler and his team from the United States continued digging and unearthing

¹ *Hippos-Sussita of the Decapolis: The First Twelve Seasons of Excavations* (hereafter *Hippos Summary Vol I*) was first published at the end of 2013. The volume was reprinted in early 2014. The current second volume (hereafter *Hippos Summary Vol II*) was published with the support of the Israel Science Foundation, Grant 62/16.

² For the full introduction, see Segal and Eisenberg, “Introduction” in *Hippos Summary Vol I*, p. 4–11.

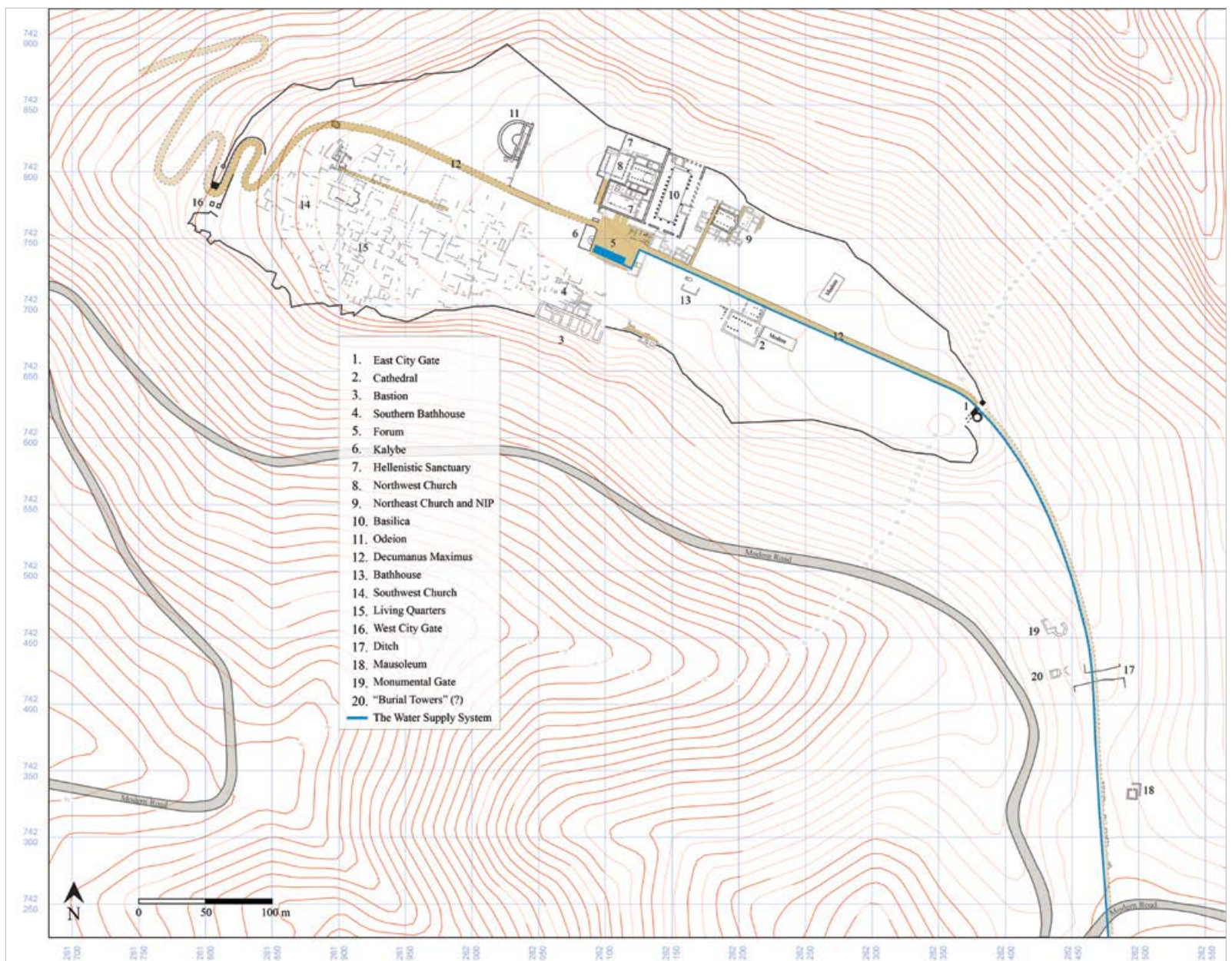


Fig. 1.2 Contour map of Sussita Mountain and its saddle-ridge with the main excavation areas marked.

the Northeast Insula until 2016. We are greatly in debt to Schuler and his team for their long-lasting and successful cooperation.

As with volume I, this volume deals only with the information gathered in the field until the end of 2011. Although some references may be made to later publications, we have tried not to discuss any new insights revealed after 2011.

The publication of this volume and the scholarly research presented here would not have been possible without the immense assistance of the Zinman Institute of Archaeology and its team, the expedition researchers in the field and in the laboratories, and last but not least the hundreds of volunteers from Israel and mainly from around the globe that contributed their enthusiasm, time and finance in order to unearth one of the most exciting and scarcely known poleis in the Decapolis.

I wish to thank the readers of the various chapters in this volume. Their remarks and evaluation contributed immensely to the quality of the presented scholarships.



Fig. 1.3 A. Segal (right) and M. Eisenberg during an off-season winter excavation.



Fig. 1.4 A panorama view from Sussita saddle-ridge towards the Sea of Galilee.



Fig. 1.5 K. Stammerman, aka “the veteran” (right), one of the regular participants from the US as from the beginning of the project, and A. Chocron, a student from the University of Haifa, while excavating in the southern bathhouse.

The prehistoric and protohistoric periods were almost absent from the Hippos publications but today, as we have a wider and deeper understanding of these local phenomena, we should fully publish them in a separate publication. Architectural and small find remains of the Pottery Neolithic period were unearthed only south of the odeion.³ Remains of the Chalcolithic period can be found all around the center crest of the Sussita mountain once you reach the stratum above the basalt bedrock. We realize now that there was once a significant Chalcolithic settlement on the Sussita mountain though no architectural remains have been found so far.⁴

A new session of excavations was initiated in 2012, and the excavation teams keep unearthing parts of Hippos. Among the sites currently under excavation are the residential quarters, military



Fig. 1.6 R. Kaftory, a student from the University of Haifa, while excavating in the southern bathhouse.

³ For the Pottery Neolithic see Segal 2009, p. 51.

⁴ See mainly Segal and Eisenberg 2004, p. 32–35.



Fig. 1.7 Hippos survey team, D. Steinberg (left), A. Iermolin (center) and Y. Vitkalov, observing from the Kavarothe cliff (fortress) towards the Haruv spring which served as one of the early water sources for Hippos.

architecture, the Roman basilica, the southern bathhouse, segments of the decumanus maximus, the northeast insula, a sanctuary along the Sussita saddle-ridge, and the saddle-ridge necropolis.⁵ As from 2017 the research on Hippos no longer concentrates on Sussita Mountain and its environs, but also tries to tackle the Hippos hinterland (territorium) which extended to the center and south of the Golan Heights during its peak in the Roman and Byzantine periods (Figs. 1.7–1.8).⁶

Hippos is located within the Sussita National Park under the management of The Israel Nature and Parks Authority. Although the site is officially open to the public, it has not yet been sufficiently

prepared to receive large numbers of visitors. The Nature and Parks Authority has recently been granted the necessary funds to develop the site and open it for regular public visits and tour groups.

The first exhibition to expose Hippos to the public was opened at the Hecht Museum in the University of Haifa: *Before the Earth Shook—The Ancient City of Hippos-Sussita Emerges*.⁷ The exhibition portrays a general view of the city while concentrating on the pagan Roman world and the early Christianity of the Byzantine world as they shift and reflect in Hippos. Simultaneously with the exhibition opening, a special issue of the *Michmanim* journal was dedicated to Hippos and its research.⁸

5 Within this volume, the Aramaic name Sussita is used mainly to describe the mountain on the crest of which the city was built, and the Greek name Hippos is used when referring to the city itself.

6 The new regional research project is conducted by M. Eisenberg and M. Osband: *An Archaeological Study of the Roman Period Territorium of Hippos: Urban and Rural Settlement Relationships*.

7 The exhibition, curated by M. Eisenberg, was opened in December 2017 and will be open for several years.

8 M. Eisenberg (ed.), *Hippos of the Decapolis and its Region: 18 years of Research*, *Michmanim* 27, 2017.



Fig. 1.8 A. Iermolin overlooking the Ein-Gev stream (April) which flows all year round to the north of Sussita.

Bibliography

- Eisenberg, M. (ed.),
2017 *Hippos of the Decapolis and its Region: 18 years of Research*, Michmanim 27. Hecht Museum, Haifa.
- Segal, A.
2009 “The Odeion (BLT)” in Segal, A., Młynarczyk, J., Burdajewicz, M., Schuler M. and Eisenberg, M. *Hippos-Sussita Tenth Season of Excavations (July and September 2009)*, Haifa: The Zinman Institute of Archaeology, p. 33–52.
- Segal, A. and Eisenberg, M.
2004 “Remains from the Chalcolithic Period” in Segal, A., Młynarczyk, J., Burdajewicz, M., Schuler M. and Eisenberg, M., *Hippos-Sussita: Fifth Season of Excavations (September—October 2004) and Summary of All Five Seasons (2000–2004)*, Haifa: The Zinman Institute of Archaeology, p. 32–35.
- 2014 “Introduction” in Segal, A., Eisenberg, M., Młynarczyk, J., Burdajewicz, M. and Schuler, M. *Hippos-Sussita of the Decapolis, The First Twelve Seasons of Excavations: 2000–2011, Vol. I*, Haifa: The Zinman Institute of Archaeology, University of Haifa, p. 4–11.
- Segal, A., Eisenberg, M., Młynarczyk, J., Burdajewicz, M. and Schuler, M.
2014 *Hippos-Sussita of the Decapolis, The First Twelve Seasons of Excavations: 2000–2011, Vol. I*, Haifa: The Zinman Institute of Archaeology, University of Haifa.





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