

APHEK-ANTIPATRIS II

THE REMAINS ON THE ACROPOLIS

THE MOSHE KOCHAVI AND PIRHIYA BECK EXCAVATIONS

TEL AVIV UNIVERSITY
SONIA AND MARCO NADLER INSTITUTE OF ARCHAEOLOGY



MONOGRAPH SERIES
NUMBER 27

<i>Executive Editor:</i>	Israel Finkelstein
<i>Editorial Board:</i>	Moshe Fischer
	Avi Gopher
	Ze'ev Herzog
	Benjamin Sass
	Itamar Singer
<i>Manuscript & Production Editor:</i>	Shirley Gassner
<i>Volume Editor:</i>	Eliot Braun

APHEK-ANTIPATRIS II
THE REMAINS ON THE ACROPOLIS

THE MOSHE KOCHAVI AND PIRHIYA BECK EXCAVATIONS

YUVAL GADOT AND ESTHER YADIN

With contributions by

Gabriella Bachi, David Ben-Shlomo, Elisabetta Boaretto, Eyal Bozaglo, Assaf Yasur-Landau,
Rafael Frankel, Ayelet Gilboa, Yuval Goren, Marta Guzowska, Liora Kolska Horwitz,
Mordechai E. Kislev, Nir Lalkin, Omri Lernau, Nili Liphschitz, Yael Mahler-Slasky, Mario A.S. Martin,
Henk K. Mienis, Nadav Na'aman, Ilan Sharon, Sarel Shalev, Itamar Singer, Na'ama Yahalom-Mack



EMERY AND CLAIRE YASS PUBLICATIONS IN ARCHAEOLOGY
INSTITUTE OF ARCHAEOLOGY, TEL AVIV UNIVERSITY
TEL AVIV 2009

Under the auspices of the
Friends of the Institute of Archaeology of Tel Aviv University

Published by the Emery and Claire Yass Publications in Archaeology
(Bequeathed by the Yass Estate, Sydney, Australia)
of the Institute of Archaeology, Tel Aviv University

ISBN 965-266-025-6

©

Copyright 2009

All rights reserved

Printed in Israel by Kedem Press

CONTENTS

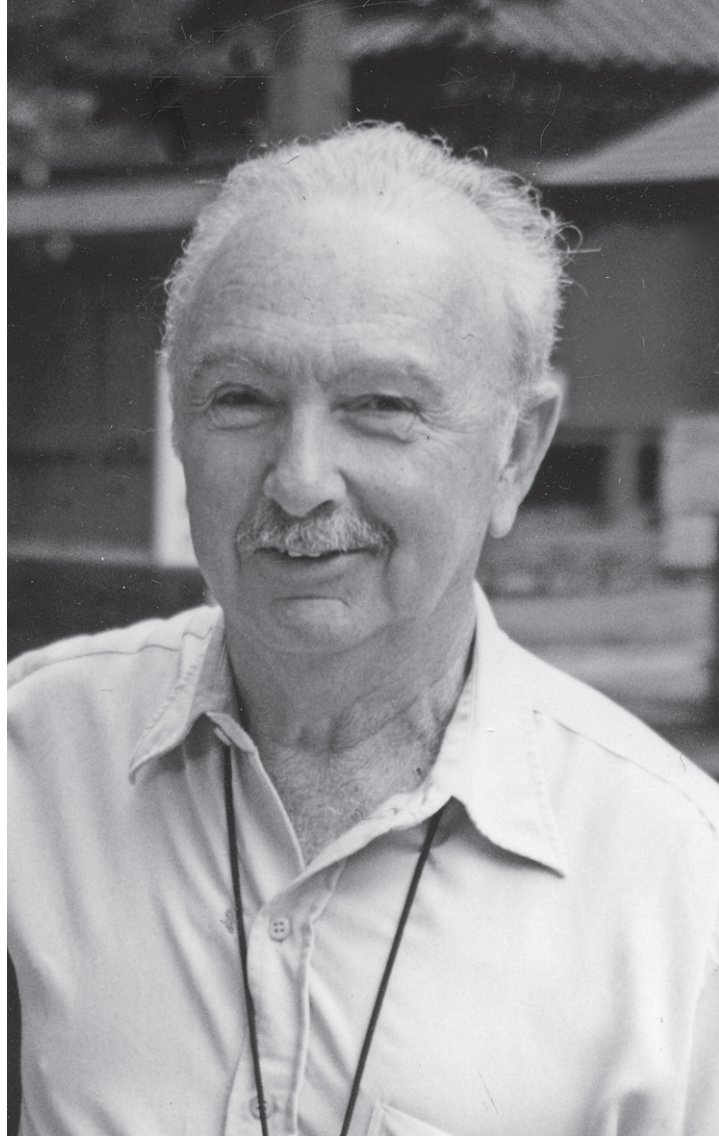
Preface		viii
Chapter 1	INTRODUCTION Moshe Kochavi	1
PART I - STRATIGRAPHY AND ARCHITECTURE		
Chapter 2	MIDDLE BRONZE AGE (STRATA X19-X15) Esther Yadin	7
Chapter 3	LATE BRONZE AGE (STRATA X14-X12) Yuval Gadot	41
Chapter 4	LATE BRONZE AGE WINEPRESSES Rafael Frankel, Yuval Gadot and Gabriella Bachi	72
Chapter 5	LATE BRONZE AGE STONE-BUILT TOMB Yuval Gadot	84
Chapter 6	IRON AGE (STRATA X11- X6) Yuval Gadot	88
PART II– THE FINDS		
Chapter 7	MIDDLE BRONZE AGE POTTERY Esther Yadin	111
Chapter 8	LATE BRONZE AND IRON AGE POTTERY Yuval Gadot	182
Chapter 9	MYCENAEAN POTTERY Marta Guzowska and Assaf Yasur-Landau	342
Chapter 10	IMPORTED EGYPTIAN AND LOCAL EGYPTIAN-STYLE POTTERY FROM LATE BRONZE AND IRON AGE STRATA Mario A.S. Martin, Yuval Gadot and Yuval Goren	362
Chapter 11	ANTHROPOMORPHIC FIGURINES Marta Guzowska and Assaf Yasur-Landau	387
Chapter 12	FIGURINES AND SMALL FINDS Marta Guzowska	396
Chapter 13	METAL OBJECTS Na'ama Yahalom-Mack and Sariel Shalev	416
Chapter 14	SCARABS AND OTHER SEAL-AMULETS Nir Lalkin	444
Chapter 15	THE INSCRIPTIONS FROM THE EGYPTIAN RESIDENCE: A REASSESSMENT Nadav Na'aman and Yuval Goren	460
Chapter 16	A FRAGMENTARY TABLET BEARING AN UNKNOWN SCRIPT Itamar Singer	472

PART III – INTERDISCIPLINARY STUDIES

Chapter 17	PETROGRAPHIC ANALYSES OF A FRAGMENTARY TABLET AND 'PHILISTINE ASSOCIATED' POTTERY OBJECTS Yuval Goren, Assaf Yasur-Landau and Eyal Bozaglo	487
Chapter 18	CHEMICAL AND PETROGRAPHIC ANALYSES OF PHILISTINE BICHROME VESSELS David Ben-Shlomo	489
Chapter 19	ARCHAEOBOTANICAL REMAINS Nili Liphshitz	493
Chapter 20	FOOD REMAINS Mordechai Kislev and Yael Mahler-Slasky	499
Chapter 21	TERRESTRIAL FAUNA Liora Kolska Horwitz	526
Chapter 22	SHELLS AND CRABS Henk K. Mienis	562
Chapter 23	FISH REMAINS Omri Lernau	569
Chapter 24	RADIOCARBON DATING Elisabetta Boaretto, Ayelet Gilboa and Ilan Sharon	575

PART IV – CONCLUSIONS

Chapter 25	THE RELATIVE AND ABSOLUTE CHRONOLOGY OF LATE BRONZE AGE AND IRON AGE TEL APHEK Yuval Gadot	581
Chapter 26	THE APHEK ACROPOLIS IN CONTEXT Moshe Kochavi	592
Index of Loci		603
Index of Walls		610



Moshe Kochavi 1928 - 2008

PREFACE

In 1972, and for twelve seasons thereafter, the late Moshe Kochavi directed the excavation of Tel Aphek-Antipatris together with the late Pirhiya Beck who was responsible for pottery registration and analysis. To our great regret and deep sorrow neither lived to see the final publication of the fruits of their labours. However, in his last year Moshe participated actively in the preparation of this volume, writing the first and closing chapters and carefully checking the others. Throughout his distinguished academic career 'Kuchbi' trained a generation of young archaeologists who followed his scholarly approach of combining field archaeology with historico-geographic research. This was put into practice as part of the Aphek research project which included a regional archaeological survey and the excavation of nearby 'Izbet Şarta. We were privileged to benefit from his guidance and are grateful for his unflinching patience and willingness to share his knowledge and experience with us at all times. A special vote of appreciation goes to the late Professor Pirhiya Beck who was an inspiration to her colleagues and students. Her attitude to the study of ancient pottery laid the foundation for our research into the ceramic material retrieved from the excavations.

The field project was set up under the aegis of the Sonia and Marco Nadler Institute of Archaeology of Tel Aviv University as an educational project combining studies through lectures and fieldwork. Over the years the Tel Aviv University team was joined by a number of foreign academic institutions each of which participated for different lengths of time, sharing the work-load and expenses. Our first partners were the New Orleans Baptist Theological Seminary (1972-1976) followed by Baylor University (1974-1976) and Allegheny College (1975-1982). Cornell University joined the consortium in 1978 as did Rice University, working with us until 1985 and 1982 respectively.

During all the years of work, the Municipality of Petach Tikvah provided unflinching support both financially and practically. Their cooperation is much appreciated.

We would like to express our appreciation to the Directors of the Sonia and Marco Nadler Institute of Archaeology of Tel Aviv University for making available the services of the institute's laboratories and staff which provided administrative and technical support. Rachel Stoller and Pnina Rodan were in charge of general administration and all matters connected with the volunteers while Esther Yadin served as Expedition Coordinator throughout. Pottery restoration was carried out by Rachel Pelta, Mira Barak, Nili Cohen and Yona Shapira. Finds were drawn by Naomi Schechter, Sheila Varon, Ada Peri and Rodica Penchas. Netta Halperin cleaned and prepared the metal objects for analysis. Photographs were taken in the field as well as in the studio by Avraham Hai, Maya and Moshe Weinberg. Maps and plans were prepared by Judith Dekel and Yura Smertenko. Our thanks to all of them.

The publication of Aphek's acropolis was accomplished with a generous grant from the Shelby White-Leon Levy Program for Archaeological Publications. Additionally, the Mediterranean Archaeological Trust/Ashmolean Museum provided a supplementary grant for its completion. We are greatly indebted to them for making it possible. We also thank the incumbent director of the Sonia and Marco Nadler Institute and the members of the Editorial Board for sponsoring this publication and for their sharp eyes in critically examining the galley proofs.

This report is based on the field diaries of the teams who excavated the areas dealt with here but mainly on a preliminary report completed by Zvi Gal. We are indebted to all of them for their contribution.

We would like to express our appreciation to the technical staff of the Institute of Archaeology who gave generously of their time and expertise, especially Ami Brauner who refined the maps and plans for publication, Yulia Gottlieb who arranged and digitalized all the finds as plates, and Pavel Shrago who scanned and prepared the photographs for publication. We thank them for their patience.

Many scholars, affiliated either with Tel Aviv University or other prestigious academic institutions, contributed to this volume. We thank them for their knowledgeable study of the finds and cooperation during the process of compiling this book.

The quality of a book as complex as this is heavily dependent on the professional skills of its editors. Theirs is also the unenviable task of nagging, bullying and encouraging the authors and welding the sometimes very different styles into a coherent whole. We gratefully acknowledge the hard work and expertise of Eliot Braun who edited the original manuscript and 'licked it into shape' for language and accuracy. The final product is the work of Shirley Gassner who meticulously completed the editing process and layout of this publication. We owe her special thanks for her constructive comments and unflagging efforts to bring this report to its present scientific and artistic form.

Yuval Gadot and Esther Yadin
Tel Aviv 2009

THE EXPEDITION TEAM (1977-1985 SEASONS)

Sixth Season - 1977

Areas Excavated: A, C, X

Directors	M. Kochavi	TAU
	P. Beck	TAU
Area Supervisors	Z. Gal	TAU
	G. Bachi	TAU
	D. Hobson	AC
Assistant Area Supervisors	S. Bunimovitz	TAU
	R. Frankel	TAU
	Z. Lederman	TAU
	I. Ziffer	TAU
Recorders	I. Aranne	TAU
	I. Ziffer	TAU
Surveyor	J. Dekel	TAU
Photographer	M. Weinberg	TAU
Pottery restorers	N. Bitter	
	N. Kochavi	
Administrator	S. Frank	TAU

Seventh Season - 1978

Areas Excavated: A, C, X

Directors	M. Kochavi	TAU
	P. Beck	TAU
Co-Directors	D. Hobson	AC
	D. Owen	CU
	W. Neidinger	RU
Area Supervisors	Z. Gal	TAU
	G. Bachi	TAU
	E. Ayalon	TAU
	S. Bunimovitz	TAU
Assistant Area Supervisors	R. Frankel	TAU
	H. Gilboa	TAU
	Z. Lederman	TAU
	I. Ziffer	TAU
Recorders	I. Aranne	TAU
	E. Yadin	TAU
Surveyor	J. Dekel	TAU
Photographer	M. Weinberg	TAU
Pottery restorers	N. Bitter	
	N. Kochavi	
Administrator	S. Frank	TAU

Eighth Season - 1979

Areas Excavated: C, X

Directors	M. Kochavi	TAU
	P. Beck	TAU
Co-Directors	D. Hobson	AC
	D. Owen	CU
	W. Neidinger	RU
Area Supervisors	Z. Gal	TAU
	E. Yadin	TAU
	E. Ayalon	TAU
Assistant Area Supervisors	S. Bunimovitz	TAU
	R. Frankel	TAU
	H. Gilboa	TAU
	Z. Lederman	TAU
Recorders	I. Aranne	TAU
	I. Ziffer	TAU
Surveyor	J. Dekel	TAU
Photographer	M. Weinberg	TAU
Pottery restorers	N. Bitter	
	N. Kochavi	
Administrator	S. Frank	TAU

Ninth Season - 1980

Areas Excavated: C, X

Directors	M. Kochavi	TAU
	P. Beck	TAU
Co-Directors	D. Hobson	AC
	D. Owen	CU
	W. Neidinger	RU
Area Supervisors	Z. Gal	TAU
	E. Ayalon	TAU
	S. Bunimovitz	TAU
Assistant Area Supervisors	R. Frankel	TAU
	H. Gilboa	TAU
	Z. Lederman	TAU
	I. Aranne	TAU
Recorders	E. Yadin	TAU
	J. Dekel	TAU
Surveyor	M. Weinberg	TAU
Photographer	N. Bitter	
Pottery restorers	N. Kochavi	
	S. Frank	TAU
Administrator	S. Frank	TAU

Tenth Season - 1982**Areas Excavated: C, D, X**

Directors	M. Kochavi	TAU
	P. Beck	TAU
Co-Directors	D. Hobson	AC
	D. Owen	CU
Area Supervisors	W. Neidinger	TFAHR
	E. Ayalon	TAU
	Z. Gal	TAU
Assistant Area Supervisors	R. Frankel	TAU
	H. Gilboa	TAU
	J. Rothman	BU
Recorders	I. Aranne	TAU
	I. Ziffer	TAU
	E. Yadin	TAU
Surveyor	J. Dekel	TAU
Photographer	M. Weinberg	TAU
Administrator	E. Paran	TAU

Eleventh Season - 1983**Areas Excavated: G, X**

Directors	M. Kochavi	TAU
	P. Beck	TAU
Co-Directors	D. Owen	CU
Area Supervisors	Z. Gal	TAU
	E. Yadin	TAU
	E. Ayalon	TAU
Assistant Area Supervisors	R. Frankel	TAU
	H. Gilboa	TAU
Recorders	I. Aranne	TAU
Surveyor	W. Kennedy	
	J. Dekel	TAU
Photographer	M. Weinberg	TAU
Pottery Restorer	Y. Shapira	TAU
Administrator	E. Paran	TAU

Twelfth Season - 1984**Areas Excavated: G, X**

Directors	M. Kochavi	TAU
	P. Beck	TAU
Co-Directors	D. Owen	CU
Area Supervisors	Z. Gal	TAU
	E. Yadin	TAU
	D. Hobson	
Assistant Area Supervisors	G. Covo	TAU
	R. Frankel	TAU
	R. Kletter	TAU
	F. Rothman	BU
	J. Rothman	
	B. Yudovitz	
Recorders	I. Aranne	TAU
Surveyor	W. Kennedy	
	J. Dekel	TAU
Photographer	M. Weinberg	TAU
Pottery Restorer	Y. Shapira	TAU
Administrator	E. Paran	TAU

Thirteenth Season - 1985**Areas Excavated: G**

Directors	M. Kochavi	TAU
	P. Beck	TAU
Co-Directors	D. Owen	CU
Area Supervisors	E. Yadin	TAU
Surveyor	J. Dekel	TAU
Photographer	M. Weinberg	TAU
Administrator	S. Frank	TAU

ABBREVIATIONS

AC	Allegheny College, Meadville, Pennsylvania
BU	Brown University, Providence, Rhode Island
CU	Cornell University, Boston, Massachusetts
RU	Rice University, Houston, Texas
TAU	Tel Aviv University, Tel Aviv
TFAHR	Texas Foundation for Archaeological and Historical Research, Houston, Texas