

MÜNCHENER ABHANDLUNGEN ZUM ALTEN ORIENT

BAND 6

Münchener Abhandlungen zum Alten Orient

herausgegeben von

Adelheid Otto

unter Mitarbeit von

Ursula Calmeyer-Seidl

Berthold Einwag

Michael Herles

Kai Kaniuth

Simone Mühl

Michael Roaf

Elisa Roßberger

Karacamirli – Tepe 5
A multi-period necropolis in Western Azerbaijan

edited by
Kai Kaniuth

with contributions by Andrei Asăndulesei, Florian Becker,
Jörg W.E. Fassbinder, Andrea Göhring, Martin Gruber, Gisela Grupe,
Stefan Hölzl, Michael Joachimski, Christoph Mayr and Michaela Schauer



PEWE-VERLAG
2020

Gedruckt mit Unterstützung der Fritz Thyssen Stiftung.

Bibliografische Information der Deutschen Nationalbibliothek

Die Deutsche Nationalbibliothek verzeichnet diese Publikation in der Deutschen Nationalbibliografie; detaillierte bibliografische Daten sind im Internet über <http://dnb.dnb.de> abrufbar.

© PeWe-Verlag – Gladbeck 2020

Alle Rechte, insbesondere das Recht der Vervielfältigung und Verbreitung sowie der Übersetzung, vorbehalten. Kein Teil des Werkes darf in irgendeiner Form durch Fotokopie, Mikrofilm usw. ohne schriftliche Genehmigung des Verlages reproduziert oder unter Verwendung elektronischer Systeme verarbeitet, vervielfältigt oder verbreitet werden.

Layout und Prepress: Martin Gruber, München/Berlin

Umschlaggestaltung: PeWe-Verlag, Gladbeck

Umschlagabbildung: Bronze Disks 0179 and 0180 from Burial 9 of Karacamirli, Tepe 5 © Martin Gruber

Druck und Verarbeitung: Memminger MedienCentrum

Gedruckt auf alterungsbeständigem Papier

Printed in Germany

ISBN: 978-3-935012-44-7

Table of Contents

List of Figures	XI
List of Tables	XIX
Preface	XXI
I. Introduction to the volume	1
KAI KANIUTH	
I.1 The site of Tepe 5	3
I.2 The organization of the present volume	5
II. The Geophysical prospection around Tepe 5	7
JÖRG W. E. FASSBINDER, FLORIAN BECKER, ANDREI ASĂNDULESEI	
II.1 Introduction	7
II.2 The Geophysical Prospection of Tepe 5	9
II.3 Conclusion	13
III. The Chalcolithic Pits	15
MARTIN GRUBER	
III.1 Pit KG-016/KG-019	15
III.2 Pit-KG-049	17
III.3 The Chalcolithic pottery in Pit-Complexes A and B	17
III.4 Dating	19
III.5 Conclusions	26
IV. The Tepe 5 Cemetery	29
MARTIN GRUBER	
IV.1 Introductory remarks	29
IV.2 Late Bronze/Early Iron Age	32
IV.2.1 A short history of research	32
IV.2.2 The Khojaly-Gadabay-Culture	33
IV.2.3 General description of burials and grave contents.....	35
IV.2.4 Radiocarbon dates	39
IV.2.5 The sequence of Late Bronze/Early Iron Age burials at Tepe 5	40
IV.3 Late Antique Period	41

Table of Contents

IV.3.1	Historical background	41
IV.3.2	Regional Context	42
IV.3.3	General description of burials and grave contents	43
IV.3.4	Radiocarbon dates	46
IV.4	Medieval Period	46
IV.4.1	Historical Background	46
IV.4.2	Regional Context	47
IV.4.3	General description of the burials	49
IV.4.4	Radiocarbon dates	51
IV.5	Undated burials	52
IV.6	Pit-Complexes	53
IV.6.1	Pit-Complex A	54
IV.6.2	Pit-Complex B	54
IV.6.3	Pit-Complex C	55
IV.7	KG-100 and KG-101	56
IV.8	Stray finds	57
IV.9	Detailed description of the burials	60
V.	Morphological and histological survey of human remains from Tepe 5	163
ANDREA GÖHRING		
V.1	Introduction	163
V.2	Methods	163
V.2.1	Morphological analysis	163
V.2.2	Histological analysis	168
V.2.3	X-ray analysis	170
V.2.4	Data analysis and software	170
V.3	Catalogue of human remains	170
V.3.1	Late Bronze Age/Early Iron Age burials	170
V.3.2	Late Antique burials	176
V.3.3	Medieval Burials	183
V.3.4	Undated burials	200
V.4	Morphological results and discussion	202
V.4.1	State of preservation	202
V.4.2	Age and sex distribution	202
V.4.3	Osteometry	204
V.4.3.1	Cranial measurements	204
V.4.3.2	Postcranial measurements	209
V.4.4	Joint status	211
V.4.5	Pathological alterations of bones and teeth	212
V.4.6	Acquired and epigenetic non-metric variants of bones	214
V.5	Summary	216

VI. Multi-isotope fingerprint of humans, animals, and environmental samples from Karacamirli	217
ANDREA GÖHRING, STEFAN HÖLZL, MICHAEL JOACHIMSKI, CHRISTOPH MAYR, GISELA GRUPE	
VI.1 Introduction	217
VI.2 Material and Methods	220
VI.2.1 Material	220
VI.2.2 Extraction of collagen and apatite and mass spectrometry	220
VI.2.2.1 Extraction and measurement of $\delta^{13}\text{C}_{\text{collagen}}$ and $\delta^{15}\text{N}_{\text{collagen}}$ of bone collagen	220
VI.2.2.2 Extraction and measurement of $\delta^{13}\text{C}_{\text{carbonate}}$ and $\delta^{18}\text{O}_{\text{carbonate}}$ of bone apatite	222
VI.2.2.3 Extraction and measurement of $\delta^{18}\text{O}_{\text{phosphate}}$ of bone apatite	222
VI.2.2.4 Extraction and measurement of $^{87}\text{Sr}/^{86}\text{Sr}$ of bones, teeth, and environmental samples	223
VI.2.3 Data analysis	223
VI.3 Results	225
VI.3.1 Diet reconstruction	225
VI.3.2 Assessment of the places of origin	230
VI.3.3 Cluster analysis	233
VI.4 Discussion	237
VI.5 Conclusion	242
VII. Portable X-ray Analysis	245
MICHAELA SCHAUER	
VII.1 Geological background	246
VII.1.1 Geology of the Caucasus and Azerbaijan	246
VII.1.2 Geology of the Ganja-Qazakh region	248
VII.1.3 The Location of Tepe 5	251
VII.1.4 Soil samples	251
VII.1.4.1 Dataset	253
VII.1.4.2 Comments on the chemistry	255
VII.2 Pottery	256
VII.2.1 The Pottery of Tepe 5	257
VII.2.1.1 Results of p-XRF analyses	257
VII.2.1.2 Chemical groups and related fabric types (MARTIN GRUBER, KAI KANIUTH)	276
VII.2.1.3 The pottery of Tepe 5 through time	278
VII.3 Obsidian	282
VII.3.1 Sources	282

Table of Contents

VII.3.2	The obsidian from Tepe 5	286
VII.4	Metal analyses	289
VII.4.1	Copper	292
VII.4.2	Arsenical Copper	292
VII.4.3	Tin Bronze	292
VII.4.4	Iron	293
VII.4.5	Silver	293
VII.4.6	Summary	293
VII.5	Conclusion	293
VIII.	Summary	295
	KAI KANIUTH	
IX.	List of contexts	299
X.	List of finds	303
XI.	Bibliography	311