

Vertebrate Paleobiology and Paleoanthropology Series



Andreas Maier

The Central European Magdalenian

Regional Diversity and Internal Variability

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Edited by

Eric Delson

Vertebrate Paleontology, American Museum of Natural History,
New York, NY 10024, USA
delson@amnh.org

Eric J. Sargis

Anthropology, Yale University
New Haven, CT 06520, USA
eric.sargis@yale.edu

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Andreas Maier

*Institute of Prehistoric Archaeology, Friedrich-Alexander-Universität
Erlangen-Nürnberg, Erlangen, Germany*

 Springer

Andreas Maier
Institute of Prehistoric Archaeology
Friedrich-Alexander-Universität Erlangen-Nürnberg
Erlangen, Germany

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Cover illustration: Artistic depiction of Magdalenian hunter-gatherers in their environment.
Image by Florian Sauer (florian.sauer@ftsauer.de).

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Foreword

On the one hand, this book presents a well-informed comprehensive overview about all aspects of Magdalenian culture in Central Europe: the site catalogue contains all essential information from about 650 assemblages. On the other hand, this book comes up with a description of the regional and chronological structure of the Magdalenian culture: the author has identified five regional groups between the Rhone valley to the west and the Vistula valley to the east, which existed roughly between 20,000 and 14,000 years ago.

The book combines two levels of information: it contains a review of essential publications on the Central European Magdalenian culture, and, at the same time, it delivers firsthand data from the author's own studies of 26 lithic assemblages from the entire investigated area.

The volume of data concerning the Magdalenian has grown enormously, and this wealth of information has made it difficult to compile a scenario of Magdalenian demographic and cultural history. The author advocates for an initial phase of Central European resettlement after the Last Glacial Maximum fed by two distinct regional sources: both southwestern Europe and southeastern Europe may have contributed to the Magdalenian population increase, leading to the reoccupation of the vast area between the Rhine and Vistula Rivers.

The reoccupation of Central Europe after the Last Glacial Maximum constitutes a major topic of the interdisciplinary Collaborative Research Center (CRC) 806 "Our Way to Europe—Culture-Environment Interaction and Human Mobility in the Late Quaternary," funded by the German Research Foundation. This dissertation had been included within the 2009–2014 CRC program. In parallel, Andreas Maier won a University of Cologne A.R.T.E.S. graduate fellowship which gave him independent funding as an associate member of the CRC. Consequently, a second CRC dissertation project has been focusing on a demographic model of Magdalenian population history.

Cologne
June 2014

Jürgen Richter

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Andreas Maier

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Abbreviations

5to15	Butt size between 5.1 and 15 mm ²
A	Antler
A7	Striking angle $\leq 70^\circ$
A7t8	Striking angle between 70° and 80°
A80	Striking angle $\geq 80^\circ$
AC	Accuracy
Al	<i>Alces</i>
App	Appendix
Ar	Artiodactyla
ARMD	Average distance traveled during a residential move
Art	Artemisia
AS	Ability to separate
AT	Austria
Ax	<i>Alopex</i>
b	Bone
B/B	<i>Bos/Bison</i>
Bal	Balcarca Cave
BB	Backed bladelet
Bb	Bulb present
bb	Burnt bone
BBC	Rectangular backed bladelet
Bbd	Diffuse bulb
BBD	Double backed bladelet
BBDe	Denticulated backed bladelet
BBDT	Double backed truncated bladelet
BBP	Pointed backed bladelet
BBT	Truncated backed bladelet
BBTT	Bitruncated bladelet
BDR	<i>Baguettes demi-rondes</i>
BE	Belgium
Bet	<i>Betula</i>
BFr	Backed fragment
Blw	Brillenhöhle, lower layer
Bo	Borer
Boi	Bois Laiterie
BP	Before present (uncalibrated ¹⁴ C-date)
BSc	Bulbar scar present
Bu	Burin
Bup	Brillenhöhle, upper layer
c	Charcoal
C	Classification of the assemblage
Ca	<i>Capreolus</i>

CA	Correspondence Analysis
cal BP	Calibrated ¹⁴ C-date before present
Ce	<i>Cervus</i>
CEM	Central European Magdalenian
CF	Confidence
CFvec	Confidence for each (true) group
CH	Switzerland
Che	Chênélaz
Cl	<i>Coelodonta</i>
Cn	<i>Canis</i>
Co	Country
COR	Correlation values
CR	Correctness rate
Cr	<i>Crocota</i>
Cs	Castor
CTR	Contribution
Cv	<i>Cervid</i>
CZ	Czech Republic
DE	Germany
DR	Dorsal reduction
DRh	Dorsal reduction, hinged negatives
DRhp	DR, hinged and pointed negatives
DRn	No dorsal reduction
DRp	Dorsal reduction, pointed negatives
E	East
E	Spain
E	<i>Equus</i>
EE	<i>En éperon</i> preparation present
F	Faunal Grouping (1–5)
F	France
FBU	Flat-faced burin
G	Assigned regional group
GI	Greenland Interstadial
GISP	Greenland Ice Sheet Project
Gra	Grappin (Arlay)
GS	Greenland Stadial
Gu	<i>Gulo</i>
h	Horn
h	Höhle
Ho	<i>Homo</i>
Hos	Hostim
Hra	Hranice
i	Ivory
Ib	Ibex
ID	Identification number
In	Indeterminate
INR	Inertia
Ipt	Impact point present
Jun	<i>Juniperus</i>
Kas	Kastelhöhle Nord
Kl8	Klementowice-Kolonia, 80ties
Kln	Klementowice-Kolonie, new
Klw	Kaufertsberg, lower layer

Kup	Kaufertsberg, upper layer
L	Local
La	<i>Lagopus</i>
Lab.-Nr.	Laboratory number
Lat	Laterally retouched piece
Lat	Latitude in decimal degrees
LBO	Long borer
LBU	Long burin
Le	<i>Lepus</i>
LGM	Last Glacial Maximum
Lho	Lhota
Lil	Lip laterally present
Lip	Lip present
Long	Longitude in decimal degrees
LU	Luxembourg
lw	Lower
M	Material
M level	Magdalenian level
Ma	<i>Mammuthus</i>
Mi	Microfauna
Mo	Mollusk
Mok	Mokra V
Mon	Neuchâtel-Monruz
n	Not determined
N	North
n Tr.	Number of Triangles
NADW	North Atlantic Deep Water
NAP	Non-arboreal pollen
NASP	North Atlantic Seabord Programme
NDP	Notched and denticulated pieces
NGRIP	North Greenland Ice Core Project
NL	The Netherlands
NW	Northwest
o	Organic
Oel	Oelknitz
OeO	Oelknitz, old
OeY	Oelknitz, young
OLUP	Older Late Upper Paleolithic
Ori. Tr.	Origin of Triangles
Ov	OvibOs
ov15	Butt size $\geq 15.1 \text{ mm}^2$
p	Peat
Pa	<i>Panthera</i>
PB	Pointed blade
Pfs	Straight profile
Pin	<i>Pinus</i>
PL	Poland
Poa	Poaceae
QLT	Quality
R	<i>Rangifer</i>
Ris	Rislisberghöhle
RSC	Laterally retouched scraper
Ryd	Rydno II/57

S	South
Sa	Salix
Sc	End scraper
Sc	Impact scar present
Sdr	Triangular striking-platform remnant
Sfc	Facetted striking-platform remnant
Sg	<i>Saiga</i>
sh	Shell
ShP	Shouldered point
Sir	Irregular striking-platform remnant
Sln	Linear striking-platform remnant
sm	Small mammals
so	Soil
Sov	Oval striking-platform remnant
Sp	Species
SpP	Splintered pieces
SPR	Striking-platform remnant
Spt	Punctiform striking-platform remnant
Src	Rectangular striking-platform remnant
SSC	Short scraper
Ssm	Smooth striking-platform remnant
SST	Sea surface temperature
Std	Standard deviation
Sus	Striking-platform remnant “chapeau de gendarme”
t	Tooth
Te3	Teufelsbrücke, level 3
Te4	Teufelsbrücke, level 4
to5	Butt size $\leq 5 \text{ mm}^2$
Tri	Triangle
Tru	Truncated piece
up	Upper
Ur	<i>Ursus</i>
Vu	<i>Vulpes</i>
W	West
w	Wood
Will	Wilczyce
Zi	Zinken

Chapter 1

Introduction to the Central European Magdalenian: Area, Corpus, and Major Questions

Among the many disciplines in the humanities, Paleolithic archaeology is a comparatively young branch of research. In 1874, R. Virchow was of the opinion that “prehistory is not a discipline and will probably not become one” (Virchow 1874: VII). However, 140 years later, Paleolithic archaeology is a well-established subject at many universities worldwide and arouses interest in large parts of the general public. Nevertheless, at a time when economic efficiency holds primary importance in both society and in science and the curation of the world’s cultural heritage and achievements is regarded rather a cost-intensive minority hobby than an indispensable necessity for the identity formation of the global community, Paleolithic research undoubtedly seems to many people to be the ultimate waste of public funds. To be sure, the immediate contribution of this subject to social questions currently affecting the larger global community is not always obvious. If it were true that Paleolithic investigations amounted to nothing more than a chronological succession of changing artifact quantities and inaccurately dated events, then it would generate observations which are at best interesting only to the researchers themselves, and its *raison d’être* might indeed be questionable. However, the study of past societies is much more than the establishment of a simple sequence of isolated observations; it allows each person to contextualize himself or herself against the background of the history of our species. It makes a difference, for example, if a person conceives himself as the summit of God’s creation, a member of the “master race,” or one element in the long and interlinked chain of human evolution. Here, the discovery of the first Neanderthal skeleton or the development of the “Out of Africa” theory are clear instances where contributions made by prehistoric archaeology influenced humankind’s perception of itself in substantial ways.

It is often claimed that archaeological data, unlike the data of any other anthropological discipline, potentially holds information on all scales in the temporal, spatial, and social dimensions. Observations may stretch from individual activities at a particular time and place to the development of

continent-wide populations over hundreds of millennia. It is this unique quality that yields the potential to reveal and understand the basic and long-term processes—normally unnoticed during everyday activities—that structure human ways of life. Nonetheless, despite this general potential, the attempt of gaining knowledge of the nature of human societies that exceeds the quality of commonplace statements from Paleolithic data has proven itself a difficult task. As a matter of fact, it is more often the case that knowledge from other disciplines of the social science, particularly ethnography, is used to interpret the Paleolithic record than it is the other way round (cf. Wobst 1978). Thus, the question remains as to in how far prehistoric archaeology is capable to contribute to social and cultural debates?

More than 40 years ago, Fritz and Plog already suspected that “unless archaeologists find ways to make their research increasingly relevant to the modern world, the modern world will find itself increasingly capable of getting along without archaeologists” (Fritz and Plog 1970: 412). However, many studies in Paleolithic archaeology are still purely descriptive and characterized by what Wylie described as the “paralyzing cautiousness” of “narrow empiricism” (Wylie 1985: 69). A simple positivistic gathering of empirical “facts” does not constitute in and of itself a meaningful arrangement of data. Neither can mere tallies of artifacts give deeper insight into the nature of past societies, because “percentage frequency of stone tool types is not an appropriate analytical measure for the investigation of something as complex as social organization” (Stiles et al. 1979: 3). If archaeologists wish to make a relevant contribution to current debates in the social sciences, they must go beyond pure description and find ways to produce meaningful interpretations of the excavated remains. Therefore, productive archaeological research always depends on hermeneutics. It is important to emphasize that hermeneutic reasoning does not mean to indulge in free speculation (see Seiffert 1991: 104f.); on the contrary, it is “based on extensive verification of sources and has an indirectly but markedly data-oriented component” (Bernbeck 1997: 279).