

Morphological evidence on the origin of *Bison* and the Cephalophini

Jan van der Made

Museo Nacional de Ciencias Naturales-CSIC, Madrid, Spain;
mcnjv538@mncn.csic.es

Bisons are among the most abundant large mammals of the Pleistocene of Europe or even of the whole Palearctic. Their appearance in Western Europe occurred against a background of major climatic change.

West European bison are represented by three or four lineages. Important characters for distinguishing *Bison* species are horn chore and skull characteristics and the biometrics of the metapodials. These are described for the fossil and living West European *Bison* species (*B. menneri*, *B. voigtstedtensis*, *B. degiulii*, *B. schoetensacki*, *B. priscus*, *B. bonasus*, *B. priscus*). The observed morphological patterns are used for retracing the evolution of *Bison* and its biogeographical history, suggesting several dispersal events from Asia to Europe.

If truly a bison, *Bison palaeosinensis* might be the oldest bison. Its affinities and the minimum age of the *Bos-Bison* split will be discussed.

At present Cephalophini are believed to be strictly African. They have horn cores that are like short and simple spikes, which are situated well behind the orbits. In Bovini, Alcelaphini and some Caprini horn cores also moved backwards, but there tend to be extensive sinuses in this area of the skull and the horn cores are large and have more complex morphologies than in Cephalophini. Neotragini are small antelopes, that have spike-like horn cores, like the Cephalophini, but are easily differentiated, by the fact that in Cephalophini, the base of the horn core is entirely over the brain case, while in Neotragini it is partially over the orbit. This is a derived feature in the Cephalophini. Fossils having this morphology, were previously assigned to different tribes, including Neotragini, but are more likely Cephalophini and indicate a Eurasian record for this tribe that is at least as old as the African one.

Zitteliana

An International Journal
of Palaeontology and Geobiology

Series B / Reihe B
Abhandlung der Bayerischen Staatssammlung
für Paläontologie und Geologie

31

International Conference on
Ruminant Phylogenetics Munich 2013

03.–06. September 2013

Programme and Abstracts



Munich 2013

Zitteliana

An International Journal of Palaeontology and Geobiology

Series B/Reihe B

Abhandlungen der Bayerischen Staatssammlung für Paläontologie und Geologie

31

International Conference on Ruminant Phylogenetics Munich 2013



03.-06. September 2013
Programme and Abstracts



Paläontologie
& Geobiologie
LMU München



Bayerische
Staatssammlung
für Paläontologie und Geologie



GeoBio-
Center
LMU München

Munich 2013

Zitteliana	B 31	48 Seiten	München, 01.09.2013	ISSN 1612-4138
------------	------	-----------	---------------------	----------------

Editors-in-Chief: Gert Wörheide, Michael Krings
Guest-Editor: Gertrud Rössner
Production and Layout: Martine Focke
Bayerische Staatssammlung für Paläontologie und Geologie

Editorial Board

A. Altenbach, Munich, Germany
B.J. Axsmith, Mobile, AL, USA
F.T. Fürsich, Erlangen, Germany
K. Heißig, Munich, Germany
H. Kerp, Münster, Germany
J. Kriwet, Vienna, Austria
J.H. Lipps, Berkeley, CA, USA
T. Litt, Bonn, Germany
A. Nützel, Munich, Germany
O.W.M. Rauhut, Munich, Germany
B. Reichenbacher, Munich, Germany
J.W. Schopf, Los Angeles, CA, USA
G. Schweigert, Stuttgart, Germany
F. Steininger, Eggenburg, Austria

Bayerische Staatssammlung für Paläontologie und Geologie
Richard-Wagner-Str. 10, D-80333 München, Deutschland
<http://www.palmuc.de>
email: m.krings@lrz.uni-muenchen.de

Authors are solely responsible for the contents of their articles.

Copyright © 2013 Bayerische Staatssammlung für Paläontologie und Geologie, München

Articles published in Zitteliana are protected by copyright. Reprint and duplications via photochemical, electronical and other ways and production of translations or usage of the presentations for radio television broadcasting or internet remain – even in extracts – subject to the Bayerische Staatssammlung für Paläontologie und Geologie, Munich. A permission in written form is required in advance.

ISSN 1612-4138

Print: Gebr. Geiselberger GmbH, Altötting

Zitteliana

An International Journal of Palaeontology and Geobiology

Series B/Reihe B

Abhandlungen der Bayerischen Staatssammlung für Paläontologie und Geologie

CONTENTS

PREFACE, ORGANISATION AND SPONSORS	4
FLOOR PLAN	5
PROGRAMME	6
ABSTRACTS	11
LIST OF ALL AUTHORS	37
LIST OF ALL PARTICIPANTS	39

Zitteliana	B 31	48 Seiten	München, 01.09.2013	ISSN 1612-4138
------------	------	-----------	---------------------	----------------