Preface

Our ever-expanding synthetic knowledge of human evolution comes from the integration of data sets from contemporary, actualistic, paleontological, archaeological, and geological contexts. The evidence of the prehistoric record represents a major concrete basis for testing hypotheses, predictions, speculations, and conjectures about the human past. This prehistoric evidence is always partial, but often profoundly important. It is evidence that accumulates through time, and is continuously subjected to critical inquiry. The presentation of such evidence in detail sufficient to underpin that inquiry is fundamentally important in modern paleoanthropology.

The Daka Member of Ethiopia's Bouri Formation dates to the early Pleistocene, about one million years ago. Several *Homo erectus* fossils, hundreds of vertebrate remains from diverse taxa, and abundant archaeology have all been recovered from spatiotemporally controlled contexts within sediments exposed by tectonics and erosion along the Bouri Peninsula.

This volume presents the geological and paleontological evidence from the Daka Member. This evidence has been amassed by the research of the Middle Awash project since 1981. The archaeological context of these deposits is presented in the 2000 Belgian monograph entitled *The Acheulean and the Plio-Pleistocene Deposits of the Middle Awash Valley, Ethiopia*, edited by J. Desmond Clark, Jean de Heinzelin, Kathy Schick, and Henry Gilbert.

Of particular focus in the present volume is a very well-preserved *Homo erectus* calvaria, BOU-VP-2/66. This is one of only a few hominid remains of this antiquity from Africa. It is described and compared here in detail; analyzed metrically, morphologically, and tomographically; and interpreted in an evolutionary context. Hominid postcranial elements from the Daka Member, including three femora, are also described and compared here.

The relatively few hominid fossils from the Daka Member are spatially and stratigraphically associated with a fossil vertebrate fauna that is unique in its quality and abundance. This rich and diverse assemblage provides data on paleoecology, evolutionary patterns,

and paleoclimate in early Pleistocene Africa. The acquisition and presentation of all this evidence from the Daka Member allows the emergence of an unparalleled composite diorama of the natural history of *Homo erectus* in Pleistocene Africa.

Berhane Asfaw

W. Henry Gilbert

Addis Ababa and Berkeley

February 2007