



Preface

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PREFACE

MATTHEW A. BROWN  and KEVIN PADIAN

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The giant azhdarchid pterodactyloid pterosaur *Quetzalcoatlus* Lawson, 1975, is undoubtedly one of the most spectacular fossil discoveries of the 20th century. In fact, it was two discoveries: a giant pterosaur known from only a few bones and a smaller one eventually known from hundreds. Comparisons soon made it clear that the disparately sized animals could be assigned to the same genus, and it remained possible that the smaller form was a juvenile of the larger (although it now appears that the smaller form is a different species, named in this memoir). The smaller form appeared to have a wingspan of 5–6 meters (16–20 feet), and the relatively similar proportions of the limited material of the larger form, *Q. northropi*, suggested a size approximately twice as large, or 10–12 meters (33–40 feet). Although some estimates have differed, and limited material of other giant azhdarchids has been discovered, this is certainly the largest known flying animal ever to have existed. How (and even if) it flew, how it walked, what it ate, and how it avoided predation are only a few of the questions raised by this remarkable and bizarre animal.

Quetzalcoatlus has sparked the imagination of scientists, engineers, artists, science fiction authors, filmmakers, children's book writers, journalists, and of course the public. But public interest has outstripped published scientific study of the very complex remains of the animal—until now.

In this memoir, our group of colleagues explores a variety of aspects of *Quetzalcoatlus*, trying to reconstruct its anatomy, functional morphology, paleoenvironment, paleobiology, and phylogeny, as well as the history of collecting and curating its known remains. Many aspects remain to be studied; here, we try to provide at least some basic information that may be useful to future work.

Acknowledgments of help and contributions to the research in this memoir can be found in the individual papers. More

generally, we would like to thank, first of all, the Society of Vertebrate Paleontology's (SVP) Publications Committee for accepting our proposed memoir and seeing it through the press. We thank the editors and the reviewers of each manuscript, and the many colleagues who provided readings, advice, information, illustrations, and support. In individual papers, we outline the contributions to collection, preparation, curation, casting, and modeling, but we must acknowledge the greatest debt of all to the late Wann Langston Jr., the main impetus of the study of *Quetzalcoatlus* for four decades. We regret that he did not live to see this memoir.

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