

# **Janaab' Pakal of Palenque**

Reconstructing the Life and Death of a Maya Ruler

Edited by Vera Tiesler and Andrea Cucina

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*Frontispiece: Sarcophagus lid (redrawn by  
Mirna Sánchez from Greene 1983 : Fig. 99).*

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## Discussion

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The decades that have passed since the discovery of the tomb of Janaab' Pakal have witnessed major advances in our knowledge of the ancient Maya. Significant developments in epigraphic decipherment and a rapidly growing corpus of new archaeological and bioanthropological data have restructured the playing field upon which debates about the ancient Maya are enacted. Whether or not Pakal would have wished for such attention, he has become a central figure in debates over the interpretation of Maya epigraphy and history. The identity of the skeletal remains in the sarcophagus in Palenque is not at issue, but Pakal's age at death continues to be a subject of debate among Maya specialists.

The chapters in this volume grew out of a multidisciplinary research project directed by Vera Tiesler and a symposium organized by Vera Tiesler and Andrea Cucina for the Sixty-eighth Annual Meeting of the Society of American Archaeology in Milwaukee, Wisconsin, in April 2003. They provide new and important data on Janaab' Pakal's life and death, drawing upon a reexamination of his skeletal remains *in situ*, new laboratory analyses of associated skeletal material, and comparative data from other archaeological and bioanthropological studies and from recent advances in Maya epigraphy. Although a consensus on Pakal's age at death has not been reached, the research and analyses presented here demonstrate the value of interdisciplinary approaches to reconstructing the lives of ancient Maya rulers.

### The Central Issue

Multiple questions have emerged from both the previous and recent studies of materials in Pakal's tomb, such as the presence of possible congenital defects in his skeleton and the interpretation of additional skeletal

remains found within it, but the key point of contention remains his age at death. Contributors to this volume take different approaches to this question, drawing on decades of fieldwork, laboratory analysis, and epigraphic research, as well as employing new analytical methods to revisit the question. Before reviewing these contributions individually, I briefly address some general issues and underlying problems inherent in any attempt to resolve the debate.

### **Pakal's Remains**

The condition of Pakal's skeletal remains constitutes one of the principal problems in estimating his age at death, and one for which little can be done other than recognizing the limitations inherent in the analysis of fragmentary and poorly preserved skeletal material. Poor skeletal preservation is characteristic of the Maya area, as most contributors to this volume note, and Pakal's remains are no exception to the rule. Vera Tiesler's recent examination of the skeleton indicates that it is only about 75 percent complete and poorly preserved. Taphonomic changes were noted at both the macroscopic and microscopic level, making both age determination and other analyses problematic, and DNA extraction not possible. Despite these limitations, however, some observations were possible on degenerative changes in the vertebral column and joint surfaces of the appendicular skeleton. Also, Pakal's pubic symphyses and portions of his auricular surfaces were sufficiently preserved to allow for morphological observations. Preservation of a rib also was sufficient to attempt age assessment using histological methods.

Even disregarding the fragmentary condition of his remains, Pakal presents special challenges precisely because of the general age range that he falls into, whether one accepts the low (40–50 years) or the high estimate (80 years) of his age at death. Skeletal specialists are well aware of the great difficulty involved in estimating skeletal age in adults, particularly in those beyond 50 years. Few techniques attempt to enter this territory because of the great variability and idiosyncratic nature of age changes beyond the 50-year threshold. Some paleodemographers have developed mathematical approaches to simulate mortality profiles extending into older age classes. Although these models may be useful for predicting gen-

eral tendencies, they are on less firm ground when applied to a single individual who may show atypical or inconsistent age indicators. Attempts to age Pakal by comparing his skeletal age indicators to those of other elite burials at Palenque face the same problem of imprecision. Despite these major challenges, contributors to this volume attempt to resolve this and other issues surrounding the life and death of Pakal by employing some novel approaches.

### Individual Contributions

In chapter 2, Vera Tiesler reports on new findings made during a reexamination of Pakal's skeleton in 1999, including important new information on cranial modification, childhood health (no evidence of anemia, healed periostitis, or enamel hypoplasias), and mortuary treatment of Pakal's body. Her examination of the king's remains provides evidence that might be used to support either a younger or older age. A younger age might be argued based on a lack of pronounced osteoarthritis on the major and minor joints of the appendicular skeleton or based on an absence of visible enthesiopathies. The lack of pronounced occlusal wear on the teeth can also be used to argue for a younger age, although Tiesler notes that the remains of Maya elite typically show only moderate tooth wear, presumably due to a soft, protein-rich diet. Caution must be used, therefore, in estimating Pakal's age at death based on dental attrition. Evidence for an older age comes primarily from the finding of generalized osteopenia, mainly in the axial skeleton. Barring some metabolic disease, osteopenia generally should not be expected in a male younger than 70 years of age. Tiesler notes also that Pakal has a "remarkably low mandible," which she suggests is an indication of degenerative changes associated with age.

Chapters 3 and 4 present the results of new osteological aging techniques that were applied to Pakal's remains in an attempt to reevaluate the conclusions of Dávalos and Romano's original study. Both analyses produce results suggesting a more advanced age at death for Pakal. Jane Buikstra, George Milner, and Jesper Boldsen employ a newly developed aging method known as Transition Analysis, which combines observations on standard skeletal indicators such as the pubic symphysis and auricular surface with mathematical modeling of mortality profiles in an attempt to

especially in the case of the Red Queen. Given the small size of this sample, however, analyses of additional Palenque burials and of faunal remains from the site would be useful for confirming these results.

In chapter 8, Andrea Cucina and Vera Tiesler present the results of recent laboratory studies of other human skeletal remains from the tomb of Pakal and from the nearby tomb of the high-status female known as the “Red Queen.” Using multiple lines of evidence, including data on burial position, patterns of articulation, and evidence of sharp-force trauma, they effectively argue that these other remains are of sacrificial victims placed in these tombs as companions or retainers to the principal interment. They use the location of cut marks on vertebrae and ribs to document perimortem and possible postmortem trauma on several of these skeletons. Position and articulation are offered as supportive evidence to argue that these interments were not secondary or sequential, but that they appear to represent single sacrificial events. The careful analysis of these remains provides important new data on retainer sacrifices in elite Maya tombs.

In chapter 9, Patricia Hernández and Lourdes Márquez take a comparative approach to the controversy over Pakal’s age at death, comparing biological age as estimated from skeletal analysis with ages recorded in monuments for Maya rulers at Yaxchilán. They find multiple cases where epigraphic data provide ages at death that are substantially higher than those estimated from examination of the skeletal remains. For example, Bird Jaguar IV’s age at death is estimated from skeletal data at 30–35 years, whereas monumental inscriptions suggest an age in excess of 59 years. Likewise, a 30-year gap is claimed between skeletal and epigraphic age for Shield Jaguar.

In interpreting their findings, Hernández and Márquez highlight the challenges involved in aging poorly preserved skeletons, in particular individuals older than 50 years of age, and they question aging techniques that attempt to push much beyond this range. In the case of Pakal, the authors appear to accept Dávalos and Romano’s original age estimate and support the position of scholars such as Joyce Marcus (1992) who argue that Maya dynastic histories inscribed on monuments should be read with caution (but see Nikolai Grube’s chapter and my concluding comments).

In chapter 10, Nikolai Grube makes a strong argument in support of the veracity of Pakal’s life history as recorded in stone. He demonstrates that Pakal’s long life, although unusual, was not unique among Maya rul-

ers. Grube assembles a large body of data from inscriptions marking rulers' birth, accession to the throne, and death and examines issues such as length of reign, age at accession, primogeniture, and biases in the record with respect to short reigns for which no monuments were erected. Within his sample, a small group of rulers stands out for their unusually long reigns—Pakal being the foremost. Grube argues forcefully for the legitimacy of Pakal's long reign, noting that "any modification of the dates would involve an implausible and impossible rearrangement of the entire epigraphic basis of Palenque's history." In discussing the credibility of a Maya ruler living to 80, he notes examples of similarly long rulerships and life spans documented in other preindustrial societies such as ancient Egypt.

### Conclusion

The purpose of the papers collected in this volume and of the field project that stimulated it was to conduct new research on the life of Janaab' Pakal. Reaching a consensus on his age at death was not its primary objective, and a careful reading of these chapters reveals continuing differences of opinion. Such is to be expected given the diverse data sets and analytical techniques employed, and given the complexities involved in both epigraphic interpretation and the determination of skeletal age in ancient and poorly preserved remains. The editors of this volume are to be commended for bringing together a group of scholars of such distinction, and Vera Tiesler in particular is to be praised for her vision and dedication in organizing the reexamination and conservation of Pakal's remains. Not only has this study produced important new information on Pakal's tomb and its contents, but it has also stimulated scholars to reevaluate previous research and to test new analytical methods. It shifts the debate over Pakal's age away from the simple "epigraphy versus biological anthropology" argument to a more nuanced discussion drawing on multiple lines of evidence.

In this volume, Nikolai Grube's chapter provides the primary defense for the veracity of Pakal's inscribed biography, but his chapter goes far beyond this in contextualizing Pakal within the larger world of Maya rulers and dynastic history. From the biological anthropology perspective, the new studies of Pakal's skeleton reach similar conclusions using differ-

ent observations and techniques, although not all skeletal observations are consistent, and some analytical methods are new and relatively untested at the time of this writing. Some contributors to this volume continue to support Dávalos and Romano's original age assessment of Pakal, but the weight of new evidence suggests overall that there is indeed a correspondence between Pakal's biographic and biological age.

There may not be consensus on all issues, but this volume constitutes a new and important contribution to our understanding of the life and times of Maya ruler Janaab' Pakal.