

## ARCHAEOLOGY

## **Excavating Uruk**

A richly illustrated volume reveals what life was like in the world's first city

## By Andrew Robinson

• he world's oldest known mathematical problem appears on a cuneiform tablet dated to the late 4th millennium BCE. It was discovered in Uruk, the world's first city, located

on the Euphrates River between Ur and Babylon. The calculation concerns the surface area of a roughly rectangular field and uses a sexagesimal system comparable to our present-day system for measuring time (60 min in an hour) and angle (360° in a circle).

Excavation at Uruk began in

1912-1913, conducted by a schol-

arly society based in Germany

known as the Deutsche Orient-

Gesellschaft. It continued un-

political troubles.

der German archaeologists until its dis-

ruption in the 1980s by Iraq's wars and

search, the Vorderasiatisches Museum staged

an exhibition, Uruk: 5,000 Years of the Mega-

city-the first devoted exclusively to Uruk.

Its accompanying book (written in German)

The reviewer is the author of The Story of Writing: Alphabets,

Hieroglyphs and Pictograms (Thames & Hudson, 1995)

In 2013, to mark the centenary of this re-

4th millenred in Uruk, pri ed euea am

> Uruk: First City of the Ancient World *Timothy Potts, editor* J. Paul Getty Museum, 2019. 404 pp.

contained more than 60 essays on subjects ranging from satellite maps and geoarchaeology to laborers' ration bowls and state administration to cuneiform and religious thought.

This new book is an English translation of that 2013 volume, edited by Timothy Potts, an archaeologist of the ancient Near East who is now director of the J. Paul Getty Museum. It is lavishly illustrated with objects from collections in Berlin, Dresden, and Heidelberg, as well as Brussels, London, Oxford, and Paris, and includes fascinating reconstructions of life in Uruk generated using scientific data.

One such illustration shows a cult scene in Uruk's Eanna Sanctuary with the king and priests from the shrine celebrating a festival

in honor of the goddess Inanna, or Ishtar. In the distance, one sees the impressive brick wall surrounding the city—9 km long with roughly 900 semicircular bastions—built by the legendary king Gilgamesh. Margarete van Ess, one of two directors of research on Uruk at the Deutsches Archäologisches Institut and an editor of the original book, estimates that its construction would have required a thousand laborers working 6 months a year for 13.5 years.

As Potts acknowledges, Uruk is neither the most famous nor the most spectacular of ancient Mesopotamian cities. "But Uruk has a unique and in many ways wider significance," he writes. First, it is "the 'mother city' of ancient Sumer...the earliest site where the key social, cultural, economic, and technological elements that come to characterize Mesopotamian civilization for the next three millennia appear." Second, it is "the key point of reference for understanding the origins and dynamics of early urbanization around the world." Furthermore, Uruk has long been beA virtual reconstruction depicts a festival honoring the goddess Inanna/Ishtar in Uruk's Eanna Sanctuary.

lieved to be the site where writing originated, as cuneiform script, although this longstanding claim has been challenged by recent Egyptian finds, as Egyptologist Jochem Kahl discusses in his essay.

The area within Uruk's city wall is 5.5 km<sup>2</sup>, yet less than 5% has been dug—and only 0.1% of the ancient levels. In the center, some 35 layers of building lie on top of one another, spanning more than 4500 years of urban history and a depth of 25 m. Given this degree of complexity, "It would not be sensible, either scientifically or from the point of view of international standards for the preservation of archaeological heritage, to excavate the entire city," argue van Ess and geophysicists Helmut Becker and Jörg Fassbinder.

Such layering has created difficulties in dating objects from Uruk, notes archaeologist Hans Nissen, especially cuneiform tablets, which have been found in layers of rubble and fill between building phases, making it impossible to determine their age before disposal. Still, from various discoveries it is clear that the oldest Uruk cuneiform—and writing's appearance in Mesopotamia—dates to around 3300 BCE.

With so many contributors (some four dozen) and so much uncertainty about Uruk, there is inevitably considerable overlap in the book's essays, especially those concerning cuneiform. They are also universally academic in tone, with only occasional attempts to appeal to nonspecialists. That said, this book is a worthy and welcome expansion of the literature on Uruk in English, with a cornucopia of images—including a cuneiform tablet listing 58 different names for pigs—sure to intrigue almost any 21st-century city dweller. 10.1126/science.aaz7969