Göbekli Tepe was an important impetus for the emergence of settled and food-producing communities in the early Holocene in Upper Mesopotamia.

See also Carvings/Carved Representations of Food; Feasting; Food and Ritual; Food Production and the Formation of Complex Societies; Plant Processing

### **Further Reading**

Schmidt, Klaus. 2011. Göbekli Tepe: A Neolithic Site in Southeastern Anatolia. In Oxford Handbook of Ancient Anatolia, 10,000–323 BCE, edited by Sharon R. Steadman and Gregory McMahon, 918–33. Oxford: Oxford University Press.

——. 2012. Late Pleistocene and Early Holocene Hunters and Gatherers: Anatolia. In A Companion to the Archaeology of the Ancient Near East, vol. 1, edited by D. T. Potts, 144–60. Chichester, UK: Wiley-Blackwell.

**■** KLAUS SCHMIDT

## GORDION (TURKEY)

Gordion was nearly continuously occupied between 2300 BC and the 14th century AD. It was the home of King Midas of Phrygia (ca. 800 BC) and the place where Alexander the Great cut the Gordian Knot. Over one hundred Phrygian tumuli (burial mounds) dot the landscape. The largest, Tumulus MM, provides insight into the cuisine of that time. (Once thought to be the tomb of King Midas, it is more likely that of his predecessor.)

The primary evidence for food comes from plant and animal remains, including chemical residues from vessels. In addition to actual food remains, features and artifacts provide further insight into diet and cuisine. Excavations directed by Mary Voigt took special care to systematically retrieve plant and animal remains through flotation and sieving. Plant remains from the earlier Rodney Young excavations were collected as encountered.

The material mostly comes from occupation debris, providing only indirect evidence for human consumption. Two burnt houses with in situ stored crop remains confirm some of the plants grown for food. The animal remains, primarily bone, represent food processing remains. Excavation has uncovered an array of storage pits, bins, ovens (closed), and hearths (open) in domestic contexts. Ceramic storage, cooking, and serving vessels have been found, including sieved beer-drinking vessels and wine amphorae. Metal items associated with food are fewer because metal was usually recycled in antiquity. Particularly valuable evidence comes from the remains of a funerary feast deposited with the royal burial in Tumulus MM: cauldrons, serving vessels, dinnerware, serving buckets, and drinking bowls.

Free-threshing wheat (*Triticum aestivum* and *T. durum*) and barley (*Hordeum vulgare*) are the most common food plants throughout the Gordion sequence. An Early Iron Age burnt structure yielded concentrations of barley, free-threshing wheat, and bitter vetch (*Vicia ervilia*). Seeds of those plants, along with lentils (*Lens culinaris*), flax (*Linum usitatissimum*), and hazelnut (*Corylus avellana*), were found in the Early Phrygian destruction level. All but flax and hazelnut occur throughout the sequence.

In addition to the major crop plants, einkorn (Triticum monococcum) and emmer wheat (Triticum dicoccum), chickpea (Cicer arietinum), grape (Vitis vinifera), millet (Setaria italica

and Panicum miliaceum), and rice (Oryza sativa) were grown at various times. Wild bitter almond (Prunus sp.), terebinth (Pistacia cf. terebinthus, a wild pistachio), and fig (Ficus carica) occur in small numbers and would have been collected locally. Hazelnut, found in the service buildings of the elite quarter at the site, would have been imported from the Black Sea region. The seeds of other edible plants, wild and possibly domesticated, were recovered in small quantities, for example, single seeds of fenugreek (Trigonella foenum-graecum) and coriander (Coriandrum cf. sativum); in the absence of persuasive contextual evidence, it is safest to assume they were at best minor contributors to the diet.

The primary food animals at Gordion are all domesticates: sheep (Ovis aries), goats (Capra hircus), cattle (Bos taurus), and pigs (Sus scrofa). In each phase, they account for at least 92 percent of the bone count (NISP). Three kinds of deer (red deer [Cervus elaphus], fallow deer [Dama cf. dama], and roe deer [Capreolus capreolus]), hares (Lepus cf. capensis), fish, reptiles (mostly tortoises [Testudo sp.]), and birds complete the faunal inventory. In addition to bones and horn cores, fish scales and eggshell were also found. Domestic fowl increase over time. Caprines (sheep and goats) and cattle presumably supplied dairy products as well as meat, but dairy residues and processing equipment have not been recognized yet.

Remains of the ceremonial feast accompanying the burial in Tumulus MM provide evidence of food and drink. Residues found in several containers were characterized by tartaric acid (from grape), calcium oxalate (from barley beer fermentation), and traces of beeswax (honey), indicating a mixed fermented beverage of wine, beer, and mead was served. Residues in pottery jars suggest that a stew of lentil and barbecued sheep or goat meat was the main course.

Gordion has one of the longest and largest post-Neolithic sequences of archaeobiological remains from the Near East. We infer that most food was sourced locally from an agropastoral system based on the cultivation of several varieties of wheat, barley, lentil, and bitter vetch and the herding of sheep and goats (caprines), with some cattle and pigs. Caprine herding and hunting were usually associated with low-intensity cultivation of dryfarmed cereals. Deviations from this basic pattern occurred at several points. An increase in einkorn and the introduction of millet were coincident with the presumed arrival (ca. 1200 BC) of Phrygian migrants from the Balkans, where those two crops were common. During the time of Midas and his successors, increased cattle and pig production were associated with irrigation cultivation. During the medieval period, caprine herding was accompanied by intensification of land use: summer-irrigated rice and millet.

The Gordion region is marginally suited for agriculture; the traditional agropastoral subsistence system that developed there permits a flexible response to the erratic rainfall regime. The Gordion seed and bone assemblages allow us to trace long-term human responses to an agriculturally marginal environment.

See also Animal Husbandry and Herding; Archaeobotany; Barley; Beer; Cattle; Cereals; Feasting; Honey and Nectar; Mead; Neolithic Package; Offerings and Grave Goods; Pig; Residue Analysis, Tartaric Acid; Secondary Products Revolution; Sheep/Goat; Wheat

## **Further Reading**

Kealhofer, Lisa, ed. 2005. The Archaeology of Midas and the Phrygians. Philadelphia: University of Pennsylvania Museum.

Marston, John M. 2011. Archaeological Markers of Agricultural Risk Management. *Journal of Anthropological Archaeology* 30(2):190–205.

McGovern, Patrick E., Donald L. Glusker, Robert A. Moreau, et al. 1999. A Funerary Feast Fit for King Midas. *Nature* 402(6764):863–64.

Miller, Naomi F. 2010. Botanical Aspects of Environment and Economy at Gordion, Turkey. Gordion Special Studies 5. Philadelphia: University of Pennsylvania Museum of Archaeology and Anthropology.

Miller, Naomi F., Melinda A. Zeder, and Susan R. Arter. 2009. From Food and Fuel to Farms and Flocks: The Integration of Plant and Animal Remains in the Study of Ancient Agropastoral Economies at Gordion, Turkey. *Current Anthropology* 50(6):915–24.

Rose, C. Brian, and Gareth Darbyshire, eds. 2011. *The New Chronology of Iron Age Gordion*. Philadelphia: University of Pennsylvania Museum of Archaeology and Anthropology.

Zeder, M. A., and S. R. Arter. 1994. Changing Patterns of Animal Utilization at Ancient Gordion. *Paléorient* 20(2):105–18.

■ NAOMI F. MILLER

#### GOURDS

See BOTTLE GOURD; SQUASH/GOURDS

# GRAN DOLINA (SPAIN)

The Gran Dolina (TD) cave site is located in Sierra de Atapuerca, near the city of Burgos, in northern Spain. TD is one of the most important sites in Europe because its deposits cover the transition from the Early to Middle Pleistocene. The lower levels have provided human fossil remains and lithic tools dated to the Matuyama Chron (1.78–0.78 MYA) and probably from the period between the Jaramillo event (1.0 MYA) and the Brunhes/Matuyama reversal (780 KYA). The site also contains significant evidence of human subsistence during the Pleistocene and reveals exploitation of a variety of animal species, as well as evidence of cannibalism. The sediments accumulated in the cave were cut and exposed by the construction of a railway trench at the end of the 19th century. The stratigraphic section (18 meters deep) has been divided into eleven geological levels, TD1 to TD11, from bottom to top, although a more detailed study of the stratigraphy is in progress. The dimensions of the cave and the extent of the infilling are unknown. A summary of the main dates and dating methods is presented in figure 30.

Excavations have revealed considerable variation in the cave deposits, indicating different uses. Some levels (TD1 and TD2) have neither fossils nor lithic tools (cave closed). Other levels contain only vertebrate fossil remains (TD7, TD8, and TD11). Five levels preserve vertebrate remains with evidence of anthropic activities and lithic tools (TD10, TD6, TD5, and TD4/TD3). TD6 has also yielded human fossil remains. The thin TD9 level contains only artifacts. In both TD10 and TD6–2 levels, there is clear evidence of intense anthropic activities, whereas hominins seem to have been only occasional visitors to the cave during the deposition of levels TD5, TD6–3, and TD4/TD3.

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EDITED BY

KAREN BESCHERER METHENY

AND

MARY C. BEAUDRY

ROWMAN & LITTLEFIELD Lanham • Boulder • New York • London