Did King David do battle with the Edomites? The Bible says he did. It would be unlikely, however, if Edom was not yet a sufficiently complex society to organize and field an army, if Edom was just some nomadic Bedouin tribes roaming around looking for pastures and water for their sheep and goats.

Until recently, many scholars took this position: In David’s time Edom was at most a simple pastoral society.1 This gave fuel to those scholars who insisted that ancient Israel (or rather, Judah) likewise did not develop into a state until a century or more
after David's time. Ancient Israel, they argued, was just like the situation east of the Jordan—no complex societies in Ammon, Moab or Edom.

According to this school of thought, David was not really a king, but a chieftain of a few simple tribes. And of course Judah was not really a state because it never reached the level of social complexity that is the hallmark of a state.

The land of Edom figures largely in the Hebrew Bible; it is mentioned no fewer than 99 times. But just how much reliable history is embedded in these Biblical references?

This is rapidly becoming a contentious issue among archaeologists. Much of the debate centers on our recent excavations at Khirbat en-Nahas in the lowland region of Edom in southern Jordan, around 50 kilometers (30 miles) southeast of the Dead Sea. Our project represents the first attempt to apply radiocarbon dating methods on a large scale to Edomite sites relevant to debates in Biblical archaeology.

We have discovered a degree of social complexity in the land of Edom that demonstrates the weakness reed on the basis of which a number of scholars have scoffed at the idea of a state or complex chiefdom in Edom at this early period—and, by extension, a state in Judah.

When we decided to work in the lowlands of Edom (in what is referred to as the Faynan district) back in 1997, we had no idea—or intention—of getting involved in the minefields that characterize controversies in Biblical archaeology. This was to be an anthropological archaeology expedition to explore the role of early mining and metallurgy on social evolution from the beginnings of agriculture and sedentary village life from the Pre-pottery Neolithic period (c. 8500 B.C.E.) to the Iron Age (1200–500 B.C.E.) in Jordan. But archaeologists don't always find what they are looking for, and what we have found has certainly thrown us into the deep waters of Biblical history.

By 2002 we had surveyed and sampled metallurgical sites in the area. In the cool of fall that year, we decided to mount a major archaeological expedition at the largest Iron Age site in the region: Khirbat en-Nahas (“ruins of copper,” in Arabic).

Khirbat en-Nahas is located along Jordan’s Wadi al-Guwayb (wađī is Arabic for a dry stream valley; the Hebrew equivalent is nahal). The Wadi al-Guwayb drains into the Wadi Arabah (Nahal Arava, in Hebrew), which today separates modern Jordan and Israel south of the Dead Sea. The Wadi Arabah, in turn, is part of the greater African Rift that extends from Tanzania and Olduvai Gorge in Africa, home of some of the earliest fossil evidence for early humans, up through the Red Sea and Gulf of Aqaba, to the Jordan Valley and beyond.

Edom occupies the territory of southern Jordan (south of the adjacent ancient kingdoms of Ammon and Moab). As early as Genesis we learn that Esau, Jacob’s twin brother, is the ancestor of the Edomites; the text adds that Edom is in the hill country of EDOM AND COPPER

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Edom is a Semitic term for “red.” According to the Bible (Genesis 25:25), Esau emerged red from Rebekah’s womb, presumably, this is how the Edomites got their name. They are, literally, the “red ones.” The name might also have something to do with the sun’s rays or the color of the desert sand. The name Edom is also connected to the Edomites’ wealth in copper.

The Edomites were formidable people. According to the Biblical chronology, several centuries before the Exodus, Saul, David and Solomon all fought the Edomites (1 Samuel 14:47; 2 Samuel 8:13-14; 1 Kings 11:14), as did later kings. The major military action, however, was between David and the Edomites. He campaigned there early and often—supposedly during the early tenth century B.C.E. Is all this entirely fictional?

The earliest mention of Edom appears not in the Bible, but in Egyptian records from the time of Pharaoh Merneptah (c. 1224-1214 B.C.E.). Though this earliest mention of Edom in the Papyrus Anastasi might suggest that the Edomites were only a nomadic people at that time, Biblical references and recent archaeological evidence indicate that the Edomites developed into a relatively sophisticated culture in the early Iron Age, beginning in the 12th century B.C.E. The fact that the ancient Egyptians took the trouble to even mention these nomads means they were no doubt a formidable people.

The Edomite answer was a peremptory “no.” “And Edom went out against them in heavy force, strongly armed. So Edom would not let Israel cross their territory, and Israel turned away from them” (Numbers 20:20–21). A standard Bible dictionary, however, states that “No archaeological evidence of a fortified and organized [Edomite] settlement in this time has yet been found.” This statement may now have to be modified.

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“The Bedouin tribes of Edom pass the Fortress of Mer-ne-ptah Hotep-hir-Maat ... to keep them alive and to keep their cattle alive.”

One of the reasons that Edom has been archaeologically misunderstood even by scholars is because of what we refer to as a “highland bias.” Geographically, Edom can be divided into three parts. The first two parts are in southern Jordan, mostly southeast of the Dead Sea: (1) the highlands, and (2) the lowlands. The third part is west of the highlands. The Edomites were a mountainous people that includes such well-known sites as Petra and its Lesser-known ones linked to the Edomites. The king of Edom:

“The horror you inspire has deceived you, and I will bring you down from there. I will bring down your young men as eagles, I will bring you down from there.”

The prophet Jeremiah, who is generally thought to have lived during the last half-century of Israel’s nationhood (c. 640-587 B.C.E.), provides a graphic portrait of an Edomite highland settlement.

“Where have you gone from your可用于居住的Elephant country, from the height of the hill. Though you make your nest as high as the eagle’s, I will bring you down from there.”

(Jeremiah 49:16)

Much of this plateau is covered with relatively rich, reddish-brown Mediterranean soils with 200 to 600 millimeters (about 8–24 inches) of average annual rainfall, making it highly desirable land for agriculture. The Edomites grew a variety of crops, including various grains, vegetables, and fruits. They also raised livestock, including sheep and goats. The Edomites were skilled farmers and traders, and they traded their agricultural products with other region's residents.
A student of William Foxwell Albright, American archaeologist Nelson Glueck (photo, below left) conducted extensive surveys and technical studies of Ammon, Moab and Edom in the 1930s and 1940s, which are still required reading for anyone wishing to do archaeological work in Jordan. Glueck correctly identified Khirbat en-Nahas as the central Iron Age mining and smelting site in the region, and, based on pottery sherds collected from the surface, he dated the major period of activity to the tenth century B.C.E.—a date finding new support from the recent excavations and carbon dating at the site.

Beginning of the 20th century, the Czech orientalist Alois Musil (1868–1944) rode over 20,000 kilometers (12,000 miles) by camel, carrying out, among other things, a topographic and historical survey of Edom in the early 20th century, which included identification of the massive fortress at Khirbat en-Nahas (see photo, p. 26). A student of William Foxwell Albright, American archaeologist Nelson Glueck (1903–1976)—who had studied under William Foxwell Albright (1891–1976), one of the founding fathers of scientific archaeology in the region—carried out a series of remarkable and extensive archaeological surveys in Ammon, Moab and Edom between 1932 and 1947. Traveling by camel, donkey and on foot, Glueck discovered more than 1,500 of the most important archaeological sites in Jordan. Glueck made some serious errors, but his technical studies and surveys were of the highest quality in those days and are still essential reference works for any archaeologist working in Jordan today.

As Glueck was getting started with his survey, a German engineer and explorer name Fritz Frank had already visited a number of important sites including Khirbat en-Nahas, as well as numerous copper mines around the Wadi Arabah. By the 1980s, technical studies of metallurgy at this and other sites in the region were carried out under Andreas Hauptmann of the German Mining Museum in Bochum.

Since the 1960s, Edomite archaeology has been dominated by the work of British archaeologist Crystal Bennett. She worked exclusively on the highland plateau, however. Bennett’s surveys and excavations at highland sites have established a benchmark for understanding Edomite history. However, her work is deeply flawed in two respects. First, the dating of these highland sites is based on the relative chronology afforded solely by pottery. Second, pottery fragments and other sherds are used in the process of dating.

Given credit where credit is due, Nelson Glueck, although examining only the larger Iron Age sites in the area, suggested that Khirbat en-Nahas was the center of mining and smelting sites in the vicinity. Based on the pottery sherds he collected, he suggested that the most important periods of activity were during and shortly after the reign of King Solomon. Glueck’s observations in the 1930s were based solely on the relative chronology afforded by pottery.
The Jordan Department of Antiquities allowed us to export the charcoal samples to the Oxford Radio-carbon Accelerator Unit in England. Working in the shadow of the major Iron Age excavations up on the high plateau, we assumed that the dates might be late in the Iron Age—in the eighth, seventh and perhaps sixth centuries B.C.E. However, the rest-ful support to Glueck’s original dating of the early period of the site to the tenth century B.C.E., the time of the kingdoms of David and Solomon, in bib- lical terms. The lowest stratum (our A4a), resting on bedrock before the gate was founded, was dated by carbon-14 to the late-11th or early-10th century B.C.E. Above this surface area, we found no stratified contexts of pottery assemblages from the gatehouse and other structures at the site, which, fortunately, included large amounts of charcoal, or an organic substance that can be carbon-14 tested. The Jordan Department of Antiquities allowed us to export the charcoal samples to the Oxford Radio-carbon Accelerator Unit in England. Working in the shadow of the major Iron Age excavations up on the high plateau, we assumed that the dates might be late in the Iron Age—in the eighth, seventh and perhaps sixth centuries B.C.E. However, the rest-ful support to Glueck’s original dating of the early period of the site to the tenth century B.C.E., the time of the kingdoms of David and Solomon, in biblical terms. The lowest stratum (our A4a), resting on bedrock before the gate was founded, was dated by carbon-14 to the late-11th or early-10th century B.C.E. Above this surface area, we found no stratified contexts of pottery assemblages from excavated sites in Jordan at that time. Now our excavations at Khirbat en-Nahas are providing support for many of Glueck’s insights.

The most important structure we excavated at Khirbat en-Nahas was a large fortress 73 by 73 meters (about 240 x 240 feet) with existing walls up to 1.2 meters (4 feet) high, already identified by Glueck and, before him, Musil. This makes Khirbat en-Nahas one of the largest Iron Age fortresses in the deserts of Jordan, Israel and Sinai. We sunk our first probe into the area that Glueck long ago sug-gested was the gateway to the fortress. Again, Glueck proved correct; the gateway indeed lay buried there. In our excavation of the gate complex, we identified seven separate strata. The gatehouse initially com-prised a typical four-chamber gate, like those found at many Iron Age sites such as Megiddo, Beersheva and Ashdod in modern Israel. We excavated only a fill of rubble and sealed in place by well-con-structed and Ashdod in modern Israel. We excavated only a fill of rubble and sealed in place by well-con-structed...
to suppose that the Iron Age in Edom began in the 8th or possibly 7th centuries B.C.E. Our surveys and excavations have now pushed that date back to the 12th to 9th centuries B.C.E., suggesting that Edomologists’ discussions of more than 60 years ago of early Edomite interaction with neighboring polities such as Israel.

Can we say definitively that the kingdom of Edom had its origins in the lowlands of Edom and that control of copper was the chief catalyst for the rise of social complexity? Not yet. However, the excavations and radiocarbon dates from Behul en-Nahas have drawn the lowlands into the center of the debate.

We may look with new eyes at the reference to Edom in Genesis 36.31. “These are the kings who reigned in the land of Edom, before any king reigned over the Edomites.” This indicates that, for the Biblical author, Edom was a state with kings (or very-high-ranking chiefs) even before ancient Israel. Historical reality can often be found in the Bible’s snippets, in its minor classes that are almost footnotes. This statement does not support a particular point of view. There is no advocacy behind it or many of the other statements concerning Edom, such as the revolt mentioned earlier. On the contrary: It gives Edom a “state” or complex society with a “king” even before the writer’s own country. There is therefore no reason to doubt the historicity of this almost off-hand Biblical remark. It most probably reflects a historical process—namely that a complex society or an archaic state of some kind evolved in Edom before there was one in ancient Israel. The Bible is telling us that Edom may have developed a complex society bordering on statehood as early as the Late Bronze Age (c. 1400–1200 B.C.E.).

Anthropologists, archaeologists and historians have struggled mightily to define and identify from archaeologic remains what makes a state-level society. They are doggedly looking for the linchpin test that will distinguish a state from a chiefdom. When the Bible mentions a king, we tend to assume we know how he ruled, how much territory he controlled and whether he could field an army. However, it isn’t so simple. In fact, the anthropological record teaches us that societies in which “chiefs” and “kings” functioned fell along a continuum of complexity that cannot be easily divided into neat categories. Thus, the dividing line between a complex chiefdom and a petty kingdom is unclear. And trying to make this distinction on the basis of a mute archaeological record is even harder.

With regard to the Edomites that the Bible says David fought and interacted with, as well as David’s role as king of ancient Israel, the question is not whether Edom was a state or a chiefdom, but whether, based on the archaeological evidence, these societies had levels of social complexity needed to field armies, construct monumental buildings and carry out technologically intensive industrial activities. In these terms, whether a society is a super chiefdom or a petty kingdom is relatively unimportant.

What seems clear is that, at least by the beginning of the Iron Age, Edom was a complex society with the ability to construct major buildings, defend itself with strong fortifications and create a technologically sophisticated organization to draw copper from ore and thereafter to manufacture objects with it. If it could do this, there is no reason to doubt that it could also field an army. Edom was always a kind of tribal society, even at its most advanced period, when highland sites like Busayya and Untum el-Biyara were occupied in the eighth to sixth centuries B.C.E. But it was also a complex society quite early in the Iron Age, if not toward the end of the Late Bronze Age. Looking at a broader canvas, when the center of eastern-Mediterranean copper production in Cyprus collapsed, along with the rest of civilization at the end of the Late Bronze Age (c. 1400–1200 B.C.E.), Edom’s copper production—which had flourished previously during the Early Bronze Age (c. 3600–2000 B.C.E.)—was restored. Control of lowland-Edom copper production at the beginning of the Iron Age provided a catalyst for the emergence of Edom as a “super chiefdom,” if not as a state supported by a complex copper-mining and processing apparatus.

In this context, the biblical references to the Edomites, especially their conflicts with David and subsequent Judahite kings, garner a new plausibility.


For an outstanding guidebook to all the biblical Biblical, Moab and Ammon, see L. Harris, Trekking and Canyoning in the Jordanian Dead Sea Rift (Israel: Jordanian School Atlas (Amman: Royal Jordanian Geographical Centre, 2000).

While strongly indicating the potential of Edom as the “land of copper,” the Bible states that the Edomites conducted significant metallurgical activities in the lowlands, for hundreds, if not thousands, of years before they resettled in the highlands.

A CHARIOT OR HUNTING SCENE is depicted on this Egyptian scarab found at Khirbat en-Nahas. Scarabs provide important chronological links to Egyptian history. Although the date of this particular scarab is relatively broad (150 years), its connection to the 20th–21st Dynasties in Egypt (c. 1150–1000 B.C.E.) provides additional evidence that the lowlands of Edom were already occupied during the early Iron Age.
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Edom and Copper
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Archaeology Project. We are grateful to Dr. Feruz al-Dhibi, director general of the Department of Antiquities of Jordan, for his support, the Royal Society for the Conservation of Nature in Jordan for permitting us to work in the Dana Nature reserve where Kbreh en-Nahas is located, Dr. Pierre Blik, then director of the American Center of Oriental Research (ACOR) in Amman for his logistical support. The senior principal investigator of the project was Professor Thomas E. Levy (UCSD), co-principal investigator and ceramic specialist, Dr. Russell B. Adams (Ithaca College); Dr. Pierre Bikai, then director of the American Center of Oriental Research (ACOR) in Amman for his logistical support. The senior principal investigator of the project was Professor Thomas E. Levy (UCSD), co-principal investigator and ceramic specialist, Dr. Russell B. Adams (Ithaca College); architect, Dr. Caroline Herder (UC); Marion Riebschläger, photography (San Diego), adladi Madi, camp manager (Jordan); Dr. Caroline Herder (UC); Marion Riebschläger, photography (San Diego), adladi Madi, camp manager (Jordan); and both will cut glass. The color characteristics of Diamond are present in an exquisite necklace: color, clarity, cut, and carat weight all the essential components that comprise a top quality naturally mined diamond and are present in an exquisite DiamondAura. In purely scientific measurement terms, the refractive characteristics of DiamondAura are actually superior to a diamond and both will cut glass. The color and the clarity of a DiamondAura are laboratory reproduced to simulate the world's most perfect diamonds. The cut, of primary importance for any

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