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ORIGINAL ARTICLE

The Archaeology of the Bedouin: An Assessment from the Negev, Israel

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Abstract This analysis reviews the state of archaeological research on the Negev Bedouin. It includes an overview of historical sources that describe and illustrate Bedouin life in the southern Levant, a description of several issues that have impeded archaeological research, and a summary of seven types of Bedouin archaeological sites that the author has identified based on the published literature. Associated material culture is divided into two categories: items made by the Bedouin and artifacts that they purchased. Many Bedouin had the means to acquire the latter from itinerant merchants and towns because they were involved in agriculture. Bedouin barley was exported from Gaza to destinations in the Mediterranean basin and Western Europe. Archaeological research on these tribes generates data that are often not provided by Bedouin interlocuters and Westerners.

Resumen En este análisis se revisa el estado de la investigación arqueológica sobre los beduinos del Néguev. Incluye una descripción general de las fuentes históricas que describen e ilustran la vida beduina en el sur del Levante, una descripción de varios problemas que han impedido la investigación arqueológica y un resumen de siete tipos de sitios arqueológicos beduinos que el autor ha identificado en base a la literatura publicada. La cultura material asociada se divide en dos categorías: artículos hechos por los beduinos y artefactos que compraron. Muchos beduinos tenían los medios para adquirir estos últimos de los comerciantes y pueblos itinerantes porque estaban involucrados en la agricultura. La cebada beduina se exportaba desde Gaza a destinos en la cuenca mediterránea y Europa occidental. La investigación arqueológica sobre estas tribus genera datos que a menudo no son proporcionados por los interlocutores beduinos y los occidentales.

Résumé Cette analyse est une étude de l'état de la recherche archéologique sur le Bédouin du Negev. Elle comporte une présentation de sources historiques décrivant et illustrant la vie bédouine dans le Levant du sud, une description des nombreuses difficultés ayant entravé la recherche archéologique et un résumé des sept types de sites archéologiques bédouins identifiés par l'auteur en s'appuyant sur les travaux publiés. La culture matérielle connexe se divise en deux catégories : des objets fabriqués par les Bédouins et les artéfacts dont ils faisaient l'achat. De nombreux Bédouins avaient la possibilité d'acquérir ces derniers auprès de marchands itinérants et dans les villages parce qu'ils pratiquaient l'agriculture. L'orge bédouin était exporté au départ de Gaza vers des destinations dans le bassin méditerranéen et l'Europe occidentale. La recherche archéologique sur ces tribus génère des données qui ne sont souvent pas fournies par les interlocuteurs bédouins et les occidentaux.

Keywords archaeology · Bedouin · Negev · pastoralism

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Introduction

The Bedouin live in the Middle East and North Africa. Knowledge of these societies is usually based on three sources: 19th-century Western travel accounts, protoethnographies, and ethnographies. Admittedly, Westerners were initially smitten with Bedouin ideals of independence and self-sufficiency, and some portrayed these people as noble savages (Van der Steen 2013:28). Western travel accounts, when read critically, can provide important insights into Bedouin life in the 19th and early 20th centuries. During this period, a few explorers and colonial officials also wrote detailed treatises on Bedouin culture, which are best described as "protoethnographies" (Musil 1928; Murray 1935). In the second half of the 20th century, several cultural anthropologists embedded themselves in Bedouin society; however, by this time, most tribes were encapsulated by modern nation-states (Marx 1967:12–14,38–40; Cole 1975:11). Their fieldwork produced several classic ethnographies of Bedouin society (Marx 1967; Cole 1975; W. Lancaster 1997).

Archaeology is an untapped resource that can provide an independent and diachronic perspective on Bedouin lifeways; however, scant fieldwork has been conducted on Bedouin remains. This can be attributed to three factors: first, some believe that pastoral nomads do not merit archaeological research (Homan 2002:4); second, the belief that the mobile pastoralist can only be identified in archaeological contexts when they settle down (Finkelstein and Perevolotsky 1990:68); and third, archaeological fieldwork on subrecent and recent Bedouin was beyond the interest of mainstream archaeology as practiced in the southern Levant (Rosen 2017:241).

Since the 1980s, there has been sporadic archaeological fieldwork carried out on the Negev Bedouin. Drawing on published literature, this article summarizes the archaeological signatures of the Negev Bedouin (Fig. 1). The article begins by defining this culture and outlining key aspects of their society. This is followed by a summary of the ethnohistorical and ethnoarchaeological sources that are useful for researching those tribes that inhabited the southern Levant. In Israel, archaeological research on these peoples has been stymied by several issues that are addressed in detail. This is followed by an overview of the methods that archaeologists use to locate and excavate Bedouin remains. The article identifies seven types of Bedouin sites and summarizes the prevalent types of material culture present at these locations. Most of these artifacts were made in urban communities: they are evidence that the Negev tribes were part of a larger economic system that operated in the Mediterranean basin and Western Europe from the mid-19th through the mid-20th centuries. It is hoped that this case study will serve as a template for identifying Bedouin remains in other parts of the Middle East and North Africa.

A note on the terminology used herein: The phrase "southern Levant" refers to the following areas: Israel, Jordan, the Palestinian Authority/Gaza Strip, and the Sinai Peninsula in Egypt (Simmons 2007:30) (Fig. 1, *inset*). Steven Rosen (1994) was the first to coin the phrase "sub-recent Bedouin," and this term is used herein, although this culture is dated from the 17th century to 1948. The former date is based on the Bedouins' use of black/gray Gaza-ware pottery, and the latter marks the 1948 Israeli War of Independence, when many Bedouin left the Negev as a result of this conflict (Rosen and Goodfriend 1993; Morris 2004:446,525–527; Yahel and Kark 2015:53,55–61, figure 3). The discipline of historical archaeology originated in North America, and this term is applicable there (Orser 2002:303–306). In the Middle East, writing began in Mesopotamia in the 4th millennium B.C.E. (Rosen 2017:10n1). The term "historical archaeology" is not used in this article because its application to Near Eastern or Middle Eastern archaeology is ethnocentric. Instead, this article references specific chronological periods, either the Ottoman (1537–1918) or British Mandate (1918–1948) periods, which is common practice in the archaeology of the southern Levant.

Who Are the Bedouin?

The term "Bedouin" evokes romantic images of camel-mounted tribes roaming the deserts of Arabia and North Africa (Barfield 1993:57). Westerners in the 19th century often depicted these tribes as heroic noble savages who were the embodiment of freedom and virtue (Van der Steen 2013:28,194). The stereotype that true Bedouin live in the desert and subsist solely on camel pastoralism is a construct that individual tribes promoted to correspond with their self-interests. For instance, the Rwala's definition of

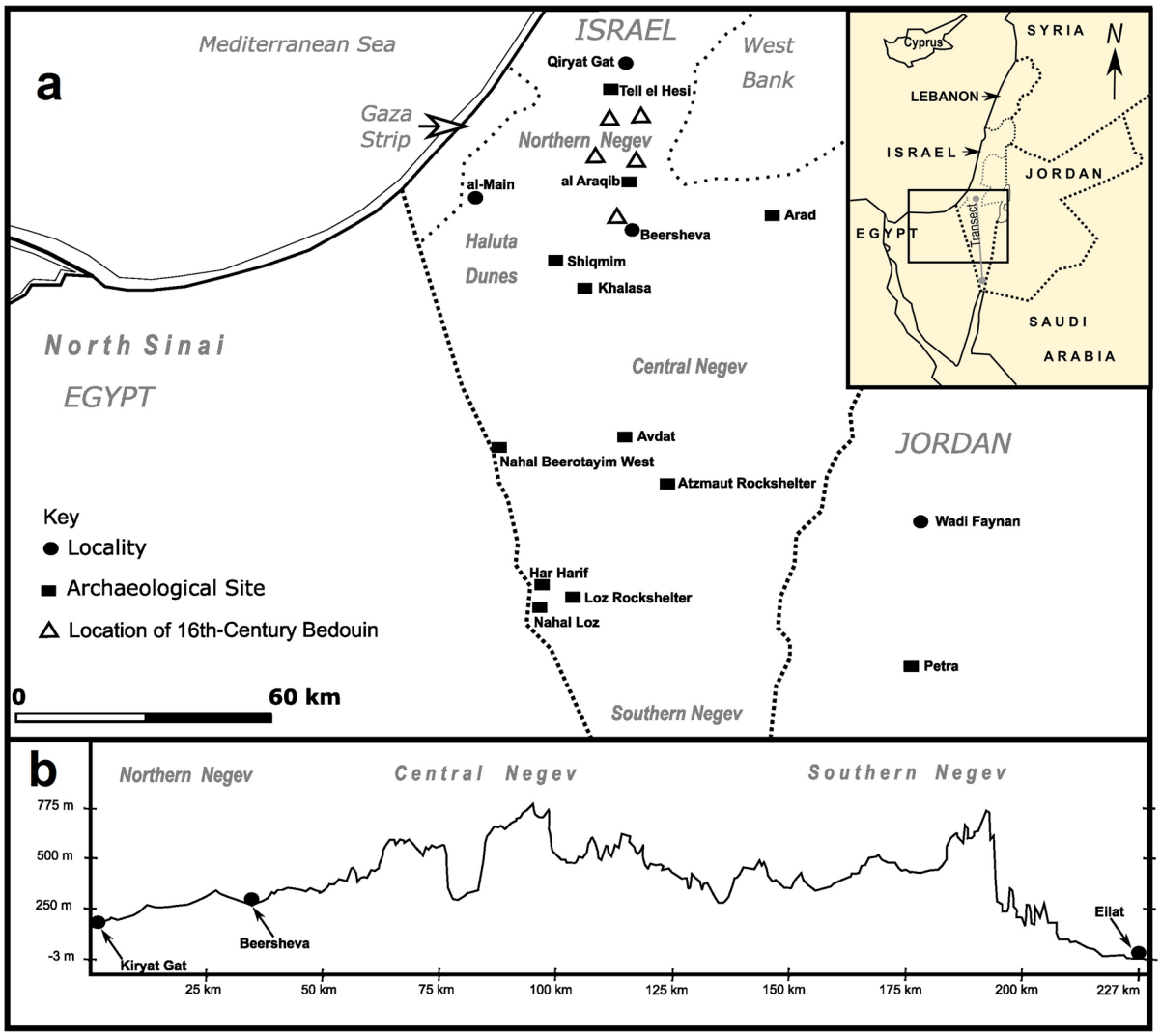

Fig. 1 Selected archaeological sites and localities in the Negev: (*a*) The triangles represent the approximate positions of those Arab tribes that are mentioned in the 16th-century Ottoman tax register. The locations of these tribes were determined by overlaying a portion of Hütteroth's and Abdulfattah's (1977) Karte 1 in Google Earth. Karte 1 was oriented by syncing the villages on this map with those in Google Earth. The inset map illustrates those countries adjacent to Israel. The square in the inset denotes the area covered by Figure 1. (*b*) A north–south elevation profile extending from Kiryat Gat in the north to Eilat in the south. (Map by author, 2021, based on data from Google Earth.)

Bedouin is self-referential: "The Bedouins are Arabs who breed camels exclusively, or at least in the main, and for ten months dwell in the interior of the desert" (Musil 1928:45). The Negev Bedouin who breed camels, sheep, and goats and engaged in agriculture do not conform to the Rwala's definition, yet they considered themselves to be Bedouin, as did their sedentary neighbors (Marx 1967:4,19,29).

Some anthropological studies of pastoral nomadism have inadvertently promoted the stereotype of "pure" Bedouin (Khazanov 1994:54). Khazanov used variations in mobility and economy to divide the Bedouin into two categories. "Pure nomads" were camel pastoralists who lived in the Arabian and Syrian deserts. In contrast, "semi-nomads" engaged in agriculture and animal husbandry, and they were not,

by and large, desert dwellers (Khazanov 1994:53–54). Khazanov's observations are correct; however, his typology does not take into consideration that both populations self-identified as Bedouin.

This article takes a different approach that focuses on identity and ethnicity. The term "Bedouin" is used to refer to those people who self-identify as Bedouin, whether they live on the Mediterranean coast or in the steppes and deserts of the Middle East and North Africa (Musil 1928; Marx 1967; Cole and Altorki 1999). These tribes are patriarchal societies that engaged in polygyny and, as a rule, practiced Islam (Jennings-Bramley 1906:23–33; Cole 1975:112–135). Distances covered during their seasonal migrations depended on the needs of their livestock and on local conditions. In the northern Negev, the Jabarat tribe would move its tents to opposite sides of the wadi on a seasonal basis (Diqs 1967:17). In the high mountain region of southern Sinai, the Bedouin practiced both horizontal and vertical migrations (Perevolotsky et al. 1989:156–158). In Arabia, the Al-Murrah tribe engaged in long horizontal migrations with camels that traveled as many as 966 km in one direction (Cole 1975:39).

Depending on local conditions, Bedouin herded a variety of livestock, including black goats, cattle, donkeys, horses, and sheep (Guérin 1869:296; Jaussen 1908:260–278; Musil 1928:371–383). Many Bedouin who did not live in the Arabian and Syrian deserts used donkeys and camels, but these equids were only capable of carrying loads that weighed up to 80 kg (Murray 1935:93–102; Rosen and Saidel 2010:73). Although "Bedouin" donkeys could travel for up to three days without water, their water requirements made them ill-suited for deep desert treks (Murray 1935:102). Dromedary camels are ideally suited for roaming the deep desert. In summer they can travel for up to four days without water, and in fall and spring they require watering once a week. In winter they can travel for longer periods without water (Cole 1975:21). This is the only animal capable of transporting the Bedouin, their tents, and their impedimenta into and out of the desert. A single-family Bedouin tent can weigh up to 500 kg. A male dromedary camel can carry up to 500 kg on short trips and 150–225 kg on longer journeys (Rosen and Saidel 2010:66–67,73,n30).

Bedouin engaged in a range of economic activities aside from animal husbandry. Before the introduction of trains and automobiles, they earned money by guiding caravans, explorers, and travelers across deserts (Rabinowitz 1985:214,218–220). Some also engaged in smuggling, which could be a lucrative enterprise (Marx 2015:99–116). Many urban abattoirs were supplied with Bedouin livestock (Doughty 1936b:371; Von Oppenheim 1939:102; Epstein 1946:345). Some tribesmen in Arabia and southern Sinai made and sold millstones in the markets of Arabia and Egypt (E. Palmer 1871:82; Doughty 1936b:200). In southern Palestine and Egypt, some tribespeople engaged in agriculture during the 19th and 20th centuries (Robinson and Smith 1841:389; Epstein 1939:plate 18; Cole and Altorki 1999:112–113).

Source Material on the Bedouin

Manners and Customs Literature

In the 19th and early 20th centuries, several explorers and government officials wrote protoethnographies of Bedouin life (Eickelman 2002:30–31). The publications of John Lewis Burckhardt (1784–1817) and Alois Musil (1868–1944) are extremely informative. Burckhardt's *Notes on the Bedouins and Wahhabis* divided the Syrian Bedouin into two groups: desert pastoralists and those mobile pastoralists who lived in agricultural areas. The former is represented by the Aeneze tribe, who spent spring and summer in the agricultural regions of Syria, and, in winter, returned to the desert (Burckhardt 1831a:1–9). The latter are exemplified by the "Ahl el Shemál" and "Arab el Kebly" tribes, who spent the entire year in eastern Syria living near agricultural villages (Burckhardt 1831a:1,10–31). Some of these tent dwellers even engaged in agriculture (Burckhardt 1831a:12). Burckhardt (1831a:1–31, 1831b:1–49) provided a gazetteer of Bedouin tribes with information on their territory, economy, and the number of tents in each community, although his coverage is uneven. Most of his first volume is devoted to "sketches" of Bedouin life and material culture that are based on the Aeneze. Burckhardt (1831a:32) focused on this tribe because he believed that they were "the only true Bedouin" in Syria. The Rwala tribe was part of the Aeneze tribe/confederation (Burckhardt 1831a:3).

Alois Musil (1868–1944) was a Czech theologian whose intermittent desert travels with the Bedouin spanned the period of 1898–1917. He traveled 21,000 km and became a detailed ethnographer and topographer (Procházka 1982:61; Harrigan 2009:10–13). His *Manners and Customs of the Rwala Bedouin* is an exhaustive study that described their clothing, hairstyles, and material culture. These accounts are supplemented

by drawings and photographs (Musil 1928:86–184). He also described the Bedouin black tent and its furnishings (Musil 1928:61–65). Besides material culture, Musil provided overviews of the following subjects: identity, hospitality, jurisprudence, poetry, and the structure of Rwala society. In his travels, Musil (1928:78–85) recognized the remains of abandoned tent camps and noted that the Rwala have a genre of poetry dedicated to this subject. Archaeologists have cited Musil's observations as evidence that the encampments of pastoral nomads can be identified in archaeological contexts (Banning and Köhler-Rollefson 1992:182; Rosen 2017:59).

Bedouin Memoirs

Most historical sources that describe Bedouin society were not written by these tribespeople. Traditionally, their mobile lifestyle hindered academic and religious education (Doughty 1936a:44; Jabbur 1995:391–393). In 1906 a 2-story, 16-room school opened in Beersheva to educate the sons of Bedouin sheikhs (Abu-Rabi'a 2001:20). Following World War I, Bedouin boys, and to a lesser extent girls, were educated in tribal schools and some continued their instruction at the Bedouin Boys School in Beersheva until the 1948 Arab-Israeli War, when the institution closed (Abu Rabi'a 2001:67–85; Saidel and Blakely 2019:24). Salman Abu Sitta and Isaak Diqs were members of the Tarabin and Jabarat tribes, respectively, and both were educated at the Bedouin Boys School in Beersheva (Diqs 1967:60,63,66; Abu Sitta 2016:19–20). Both wrote about their experiences growing up in the Negev during the 1930s and 1940s (Diqs 1967; Abu Sitta 2016). Their recollections are indicative of privileged childhoods, as their fathers and relatives held leadership positions in the Jabarat and Tarabin tribes (Diqs 1967:22,31,36,46; Abu Sitta 2016:19,25–33). Their memoirs contain a lot of information, but, like any source, they must be read critically. Diqs's (1967) *A Bedouin Boyhood* is a series of undated vignettes divided into two sections: life in the environs of Tell el-Hesi in the northern Negev (Fig. 1) prior to the 1948 Arab-Israeli War; and his life after this conflict as a refugee. Diqs (1967:112) does not provide much information on material culture, although paraffin lamps were commonly used to illuminate the tents at night.

There are three salient themes in Abu Sitta (2016) *Mapping My Return: A Palestinian Memoir*. First, in comparison to Diqs, Bedouin identity is not strongly expressed in this book. Second, members of this tribe were fully engaged in agriculture by the end of the British Mandate (Abu Sitta 2016:1–2,8). Third, Abu Sitta grew up in the "village" of Al Ma'in (Fig. 1), and many of his recollections describe life in this settlement. His descriptions of growing up in this community inadvertently highlight the rapid sedentarization of the Abu Sitta clan. Specifically, as of 1902, the Abu Sitta clan camped at this location, which was a ruin or *khirbet* (Musil 1908a:61; 1908b:34).

Ethnographies

Anthropological investigations of Middle Eastern Bedouin began in earnest following World War II. In broad strokes, these projects addressed four subjects: first, the encapsulation and sedentarization of pastoral nomads by modern nation-states (Marx 1967; Cole and Altorki 1999:111–159); second, the relationship between environment and economy (Cole 1975:26–58; Behnke 1980); third, Bedouin identity and jurisprudence (W. Lancaster and F. Lancaster 1988; Bailey 2009); and fourth, the lives of Bedouin women (Abu-Lughod 1986). Ethnographies are important, but their usefulness for archaeological research should be tempered with caution. Most ethnographies are synchronic, and the attitudes and perspectives expressed by informants are context specific. For example, Bedouin attitudes toward the British Mandate changed over time. After the 1948 Arab-Israeli War, some Negev Bedouin spoke very positively about the British administration (Marx 1967:10; Bailey 1990:332). In contrast, by the early 21st century, some tribal interlocutors highlighted Bedouin resistance, armed and unarmed, in relation to the Mandatory government (Nasasra 2011:325–335). Another shortcoming of many recent Anglo-American–trained ethnographies is that they provide little to no information on Bedouin material culture, albeit that was not the purpose of their research (Marx 1967; W. Lancaster 1997).

In contrast to cultural anthropologists who were trained in the Anglo-American tradition, Danish anthropologists concentrated on the history and material culture of Old World pastoral nomads. Data derived from these projects were published by the Carlsberg Foundation's Nomad Research Project (Nicolaisen 1993:11–14). Klaus Ferdinand's (1993) *Bedouins of Qatar* describes family life in this part of Arabia. His volume contains an illustrated catalog with the following types of material culture: clothing, household

Table 1 Tribes in the northern Negev that paid taxes to the Ottoman administration

Number of Fiscal Unit	Type of Fiscal Unit	Name of Fiscal Unit	Population Estimate	Amount in *Akçe* to be Paid in Taxes	Notes	Reference (Hütteroth and Abdulfattah)
M6	Tribe	ʾUrbān Ṭawāyif Banī ʾAṭiyya	1,000	15,000	14 subtribes	1977:143, Karte 1
M7	Tribe	Ṭawāyif ʾUrbān Banī ʾAṭā	1,000	15,000	9 subtribes	1977:143, Karte 1
M8	Tribe	ʾUrbān Banī Hutaym (Hayṯam)	500	6,000	—	1977:143, Karte 1
M9	Tribe	ʾUrbān Banī Sawālima	1,000	15,000	9 subtribes	1977:144, Karte 1
M10	Tribe	ʾUrbān Jaram	500	5,000	8 subtribes	1977:144, Karte 1
M-21	Village	Burayr/Bureir	1,000	32,000	—	1977:144, Karte 1
P276	Village	Bayt Ṭīma	500	21,200	—	1977:142, Karte 1

Note: See Figure 1 for the approximate location of the five tribes. Two villages are included for comparative purposes.

utensils, leather artifacts, textiles, and camel saddlery (Ferdinand 1993:220–340). In addition, there are detailed and well-illustrated treatments of the Bedouin black tent and the summer houses that were inhabited by the Al Na'im Bedouin (Ferdinand 1993:83–186). Ferdinand's publication represents a bridge between ethnoarchaeology (below) and the literature penned by 19th-century explorers and protoethnographers.

Historical Documents and Images

Government documents and publications provide information on mobile pastoralists; however, these sources often viewed the Bedouin as adversaries who needed a fixed address (Heyd 1960:81,83,90–101; Marx 1967:6,13–14). The 16th-century Ottoman tax register of Palestine and Transjordan demonstrates that there were five Bedouin tribes in the northern Negev (Hütteroth and Abdulfattah 1977:27–28,169,170, Karte 1) (Fig. 1) (Table 1). Four of five tribes contained several subtribes or clans; nevertheless, all were taxed as a corporate group (Table 1).

The British administration in Palestine (1918–1948) produced a variety of sources that provide information on the Bedouin. The 1922 and 1931 censuses enumerated the Negev tribes, although the accuracy of these data is suspect, since tribesmen feared conscription and taxation (Barron 1923:4; Mills 1932:preface). British area handbooks on Palestine and Transjordan, as well as on the Syrian Bedouin, also provide data on these tribes (Great Britain. Army 1942; Great Britain Naval Intelligence Division 1943). The topo-cadastral and topographic maps issued by the Survey of Palestine, at a scale of 1:20,000, are particularly useful

Fig. 2 A boy bringing water to a camp in the environs of Beersheva. The water is presumably stored in black/gray Gaza-ware jars that are mounted on the donkey and camels (American Colony [Jerusalem] Photo Department [1920–1933a]). (Courtesy of the Matson (G. Eric and Edith) Photograph Collection, Library of Congress, Washington, D.C.)

Fig. 3 Bedouin harvesting durra in the vicinity of Beersheva (1939–1945). Notice the row of what appear to be silver coins attached to the woman's veil. (Photo by Frank Hurley, 1939–1945; cropped by author, 2021; courtesy of the Hurley Negative Collection, National Library of Australia, Canberra.)

for understanding the landscapes that some Bedouin inhabited. A drawback of this series is that it only went as far south as Beersheva (Gavish 2005:180).

Aerial photographs of Palestine by the Royal Air Force, in what was called the "PS" series, were taken in the 1940s at an altitude of 15,000 ft. From these images one can determine the size, layout, and location of Bedouin encampments (Saidel and Blakely 2019:32, figure 9). The Mandate Government also used these images as an independent means of estimating the population of the Negev Bedouin (Muhsam 1966:14–36). The coverage to the south of Beersheva is spotty and these photographs were taken at a higher elevation, thus making it difficult to identify Bedouin tents.

Historical pictures of the Bedouin provide information on their material culture, tensile structures, and environmental setting (Figs. 2, 3). One important resource is the Matson (G. Eric and Edith) Photography Collection in the Library of Congress, which contains more than 23,000 images (Curtis and Alexander 2010). These photographs were snapped for commercial purposes and, therefore, should be used critically. The photographers were male, and this might have limited the subject matter that they could photograph. Some pictures show the Negev Bedouin using black/gray Gaza-ware pottery, also known as "Gaza ware" (Fig. 2). The information accompanying many of these images does not mention the month in which these photographs were taken. Hence they may not be particularly useful for addressing seasonality.

Bedouin Ethnoarchaeology

Ethnoarchaeological research on Bedouin tent camps was part of a larger research agenda aimed at documenting the archaeological signatures of contemporary Middle Eastern pastoral nomads. These projects demonstrated that modern mobile pastoralists generated archaeological remains, and, by extension, that archaeologists should be able to identify and excavate their prehistoric equivalents (Banning and Köhler-Rollefson 1986:154–157). Initially, the majority of this fieldwork was carried out in Petra, Jordan (Fig. 1). Steven Simms (1988:202,203, figures 3,4) was one of the first to document an abandoned Bedouin tent camp. His research demonstrated that Bedouin tent camps differed from the layout of hunter-gatherer campsites in terms of site structure. In the environs of Petra, Banning and Köhler-Rollefson, 1986, 1992) mapped the distribution of Bedouin encampments. Their detailed site plans of abandoned tent camps represent a major contribution to understanding the site structure of Bedouin encampments (Banning and Köhler-Rollefson 1992:189,190, figures 4,5,6).

Aside from Petra, ethnoarchaeological research was carried out in other parts of Jordan. In Wadi Faynan (Fig. 1), Carol Palmer and colleagues documented 83 Bedouin sites (C. Palmer et al. 2007). Their scale drawings of Bedouin tents and the spatial distribution of the artifacts present at these locations are extremely informative (C. Palmer et al. 2007:382–392). While excavating prehistoric sites in the eastern desert, Alison Betts and associates encountered and documented several Bedouin graveyards and abandoned tent camps (Betts et al. 2013:168). In southern Jordan, Saidel (2001:151,156) surveyed Bedouin tent camps that were located in four different environments and elevational zones.

Ethnoarchaeological research carried out in the Middle East did not directly initiate similar projects in Israel. Instead, Israeli archaeologists inadvertently encountered Bedouin archaeological sites in the course of their archaeological fieldwork (Rosen 1994). Some seized on these occasions as

opportunities to collect ethnoarchaeological data to address specific issues in archaeology. A few archaeologists recorded Bedouin tent camps to prove that these populations could be identified in archaeological contexts (Avni 1996:14–18). Others compared archaeological and ethnoarchaeological data to see if there were variations in the behavior of ancient and modern pastoral nomads (Avni 1992; Rosen 1993:445). Ethnoarchaeological fieldwork was also conducted to address specific issues, such as seasonality. Ofer Bar-Yosef directed an ethnoarchaeological project in southern Sinai that recorded 400 seasonal habitations of the Jebeliya Bedouin, which were divided into winter and summer occupations. The site structure of these contemporary Bedouin dwellings functioned as a template to determine the seasonality of prehistoric settlements in this region (Bar-Yosef 1984:148–149,157d; Goren-Inbar 1993:417).

There are two studies by Uzi Avner and Ariel Meraiot that are not strictly ethnoarchaeological in nature, but nonetheless merit mention. The former (Avner 2007) wrote a brief article on the archaeological remains of those Bedouin living in the environs of Eilat. The 33 figures in his chapter are extremely instructive. The latter (Meraiot et al. 2021) wrote his doctoral dissertation on the cultural landscape of those Bedouin living next to the Byzantine town (5th–7th centuries C.E.) of Avdat in the central Negev. Meraiot's research combines archaeological data with ethnographic interviews to shed light on Bedouin land use, sedentarization, and agriculture prior to and following 1948.

In addition to these projects, many scholars have studied the Bedouin's transition from tensile shelters to buildings made of durable materials. These studies concluded that modern Bedouin homes initially resembled the shape and internal organization of their tents (Daker 1984; Lönnqvist et al. 2011:380–381).

The Negev

The modern Negev is triangular in shape, and the northern and southern extremities are defined roughly by the cities of Qiryat Gat and Eilat, respectively (Rosen 1992b:1061). This region is subdivided into four areas: the northern, the central, and the southern Negev and the Arava. The northern Negev extends from the city of Qiryat Gat in the north to the Beersheva basin in the south and includes the Halutz dunes as well as portions of the coastal plain (Evenari et al. 1971:43; Rosen 1992b:1061). The loess plains are suitable for dry farming and they can receive 200–400 mm of precipitation per annum (Rosen 1992b:1061; Saidel and Blakely 2019:10). For this reason, Bedouin tribes vied with each other for control of these lands in the 19th century (Bailey 1980). The Halutza sand dunes extend into north Sinai and to the Gaza Strip on the Mediterranean, and precipitation here varies from 130 to 180 mm. The vegetation in the dunes is representative of a Saharo-Arabian zone, and this area is suitable for grazing sheep and goats (Gazit 2012).

The central Negev is an upland environment, and some of the ridges rise to a height of 1,000 m above sea level. Precipitation varies from 50 to 150 mm, and the landscape is characterized by Irano-Turanian steppe vegetation (Rosen 1987b:47). The southern Negev is a hyper-arid plateau that is dissected by the Nahal Paran. This subregion receives less than 50 mm of rain per annum, and the vegetation is representative of a Saharo-Arabian desert (Rosen 1992b:1061). The Arava extends from the southern end of the Dead Sea to the Gulf of Eilat/Aqaba. This depression is an extension of the African Rift Valley, and the vegetation in it is characteristic of a Sudano-Deccanian zone (Rosen 2017:76–77).

The landforms in the Negev either facilitate or hinder the identification of Bedouin remains. Stone and mud-brick buildings from the Ottoman and British Mandate periods are still relatively well-preserved in the northern Negev (Seriy 2015). Although sherd scatters of black Gaza-ware pottery are common, many have been impacted by deep plowing or development (Saidel and Blakely 2019:33). Hearths and artifact scatters are present on the surfaces of the Halutza sand dunes and in interdune basins (Gazit 2012; Saidel et al. 2019).

Hamada surfaces are present in the central and southern Negev. This type of landform is developed by wind erosion that removes sediment and, over time, forms a rocky or stone pavement. Human activity on *hamada* surfaces often leaves traces, so it is relatively easy to locate surface scatters of artifacts as well as the outlines of abandoned tent camps. Often the stones that were used to hold down the edges of tents are still in place, as are the drainage ditches that ran along the perimeter of these shelters (Avni 1996:15, figure 5; Rosen and Avni 1997:22–23,44,54–56). Archaeological sites that are on *hamada* pavements and on sand dunes tend to be

well preserved because these landforms are often not suitable for intensive agriculture and/or development.

The Archaeology of the Negev Bedouin

The preceding review highlights salient information that is useful for studying subrecent Bedouin. Historical sources provide a range of insights into these tribes. Ethnoarchaeological fieldwork demonstrates that recent Bedouin do generate archaeological remains. In Jordan, ethnoarchaeological projects documented the site structure of contemporary Bedouin tent camps and the types of artifacts that are present at these locations. Building on this research, this case study summarizes the archaeological record of the subrecent Bedouin who lived in the Negev. The data for this synthesis are drawn from salvage excavations and academic projects. The archaeological signatures of these tribes are products of multiple processes, including, but not limited to, landforms, legislation, and even the disposition of individual archaeologists. The impact of these issues is addressed in detail.

Impediments to Archaeological Research

Archaeological fieldwork on the Negev Bedouin is generally impeded by four factors: legislation, temporal constraints, blindness/disinterest, and the execution of salvage archaeology. The British-based 1978 Israel Antiquities Law protects archaeological remains that predate 1700 C.E. The Negev Emergency Survey, conducted from 1979 to 1989, covered large tracts of the central Negev (Fig. 4). Archaeologists assigned to this project were tasked with recording, in each 10 × 10 km map, all archaeological sites that predated 1700 C.E. Subrecent archaeological remains postdate this legal benchmark, hence these sites were not recorded. Haiman's (1999:12–16) survey of Map 203 is an exception. Here he described 26 Bedouin sites, but they are included in the "Introduction" and not in the archaeological gazetteer.

Several participants in the Negev Emergency Survey were inclined to document Bedouin remains but were constrained by logistical and temporal impediments. Rosen noted that the large number of subrecent remains in Map 204 made it impossible to document individual sites (Rosen 1987b:55). Nevertheless, he

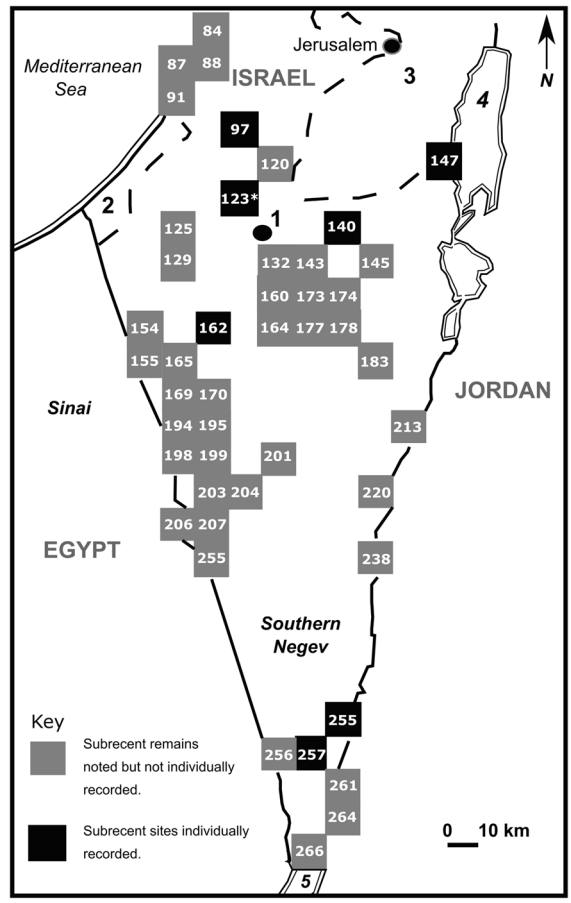

Fig. 4 Survey maps in the Negev that contain subrecent Bedouin remains. The Archaeological Survey of Israel assigned an identification number to each survey universe. Other numbers denote the locations of Beersheva (*1*), the Gaza Strip (*2*), the West Bank (*3*), the Dead Sea (*4*), and the Red Sea (*5*). The data and the map are based on the Archaeological Survey of Israel. (Map by author, 2021.)

and several colleagues provided general descriptions of Bedouin archaeological sites in the introductions to their survey reports (Haiman 1986:24, 1993:18–19; Avni 1992:21; Rosen 1994; Rosen and Golan 2016).

Others did not record subrecent sites out of blindness and/or disinterest. In the 1980s Yaakov Baumgarten (2015) surveyed Map 169, and his report does not mention Bedouin remains. In the same survey universe, William Dever and Rudolph Cohen excavated the Intermediate Bronze Age (2350–2000 B.C.E.) site of Be'er Resisim from 1978 to 1980 (Dever 2014:159). In the course of this project, Dever tasked Jerome Schaefer with conducting an intensive survey, measuring 1 km in radius, around Be'er

Resisim (Cohen and Dever 1979:41–42). Within this small area, Schaefer located 23 Bedouin sites, including campfires (n=7), cemeteries (n=2), farms (n=3), and tent camps (n=11) (Schaefer 2014:341,347, table 1). In light of Schaefer's results, Map 169 needs to be resurveyed to determine the number and types of Bedouin sites that are in it. While most published survey maps enumerate the number of sites for each chronological period, the number of subrecent sites in each map is not provided because this information was not collected. Hence, most survey maps have to be resurveyed to determine the number of subrecent Bedouin sites in each survey universe.

The execution of salvage archaeology may meet the letter of the law, but in some cases the scientific value of this work is limited. In the wake of modern developments, the Israel Antiquities Authority has excavated structures in the Negev that are dated to the Ottoman and/or British Mandate periods. In many cases the excavation reports are excellent (Nikolsky 2010; Haimi 2017; Eisenberg-Degen 2018). In contrast, most publications of isolated sherd scatters are scientifically uninformative. One survey in the western Negev identified seven concentrations of Gaza-ware pottery (Nahshoni and Aladjem 2009:sites 3,4/5,6,10,14,15). The report states that black/gray Gaza-ware jars were found at Site 4/5, but this information was not provided for the other sites (Nahshoni and Aladjem 2009). This missing information could provide insights into the activities conducted at these locations. In other words, are the assemblages dominated by black Gaza-ware water jars or is there evidence of a broader range of domestic vessels? The former may be indicative of shepherds, while the latter may represent mobile families.

Survey and Excavation Methods

Archaeologists have used a number of techniques to locate and excavate subrecent Bedouin remains. Most of these archaeological sites are small, and an abandoned tent camp may only measure 4 × 2.5 m (Saidel and Erickson-Gini 2014:140, figure 3; Saidel et al. 2019:104). Pedestrian surveys have located numerous subrecent sites in the Negev. Typically, these survey teams are composed of between two and six individuals, who are often separated by a distance of 20–25 m (Rosen 1992c:76; Saidel and Blakely 2019:21). Using similar methods Gazit (2012) identified numerous subrecent sites in the Halutza sand dunes composed of hearths and associated artifact scatters. Yuval Yekutieli and Mikki Gabai (1995:44,53–54) used aerial photographs from the 1940s combined with pedestrian surveys to locate the remains of abandoned encampments in the northern Negev.

Excavations of Bedouin remains have often employed prehistoric excavation methods, given the scrappy nature of the architecture and the paucity of material culture. The surfaces of these sites are gridded, and the sediments are excavated stratigraphically and/or in arbitrary levels. Usually, all sediments are sieved (Simms and Russell 1997:461–462; Saidel and Erickson-Gini 2014; Eisenberg-Degen et al. 2015:figure 2). Low-level aerial photography, by balloon or drone, is useful for identifying features that may not be recognizable even though one is standing on the site (Saidel and Erickson-Gini 2014:140).

Bedouin Sites

There are at least seven types of sites that are associated with subrecent Bedouin. These tribespeople repaired and reused Byzantine agricultural systems located in the wadis of the central Negev. Their repairs to these installations are clearly distinguishable from the original construction techniques (Rosen and Golan 2016:site 1; Meraiot et al. 2021:14–15, figure 1). At these locations it is not unusual to find concentrations of Gaza-ware pottery. In this area some Bedouin also built water conduits, circular earthen embankments, and cisterns to harvest rainwater (Canaan 1932:245; Haiman 1999:12–16).

Very few Bedouin cemeteries have been investigated. At Tell el-Hesi, excavations exposed 453 Bedouin graves that varied in date from 1400 to 1800 C.E. (Eakins 1993:76). The deceased were primarily young adult women who presumably died due to complications from childbirth (Eakins 1993:30–31,79). In the central Negev, Mordechai Haiman surveyed two burial grounds, Sites 9 and 11. Each cemetery contained 70 cairn burials, which were either circular or oval in shape (Haiman 1999:14).

Isolated sherd scatters of Gaza ware are ubiquitous in the Negev and Sinai (Rosen 1993:443; Nahshoni and Aladjem 2009). For example, this author (Saidel) located numerous sherd scatters of black/gray Gaza ware in the environs of al-Araqib in the northern Negev. At many pre-Ottoman sites there are intrusive finds of clay tobacco pipes and Gaza ware that are

indicative of Bedouin occupation (Rosen 1987a:36; Eddy 1999:135; Hirschfeld 2006:14, figure 6.1).

Bedouin impedimenta were stored in caves and structures. In the central and southern Negev, the openings of caves were walled off and accessed through either a door or porthole (Avni 1996:17, figure 7; Avner 2007:27,28,31, figures 8,26). The following types of artifacts were cached in one cave: metal containers, a metal plowshare, a wooden plow, metal sickles, and millstones (Avner 2007:31, figure 26). In the northern Negev, the Bedouin built storehouses made of fieldstones and mud brick that are known as *baika* (singular) or *baikas* (plural). Those that belonged to the Diqs family varied from 5.47 × 6.26 m to 5.35 × 9.47 m in size (Saidel and Blakely 2019:25–26, figure 3).

Rock shelters in the central Negev and in Petra, Jordan, were used for shelter and for stabling livestock. In the former area, subrecent Bedouin stabled their flocks inside the Atzmaut and Loz rock shelters (Rosen et al. 2005:318,325–326, table 1). In Petra, Bedouin inhabited the Tur Imdai rock shelter from 1650 C.E. to the present (Simms and Russell 1997:470). Prior to the late 17th century, Bedouin inhabited this rock shelter for prolonged periods; after this date, however, the occupational sequence is representative of short-term occupations (Simms and Russell 1997:462–466).

In the first half of the 20th century, many Bedouin built domestic structures in the northern Negev. In contrast, few buildings were assembled in the central Negev (Haiman 1999:13). The division of space inside these constructions resembles the plans of two- and three-room Bedouin tents (Saidel and Blakely 2019:29–31, figure 8; Saidel et al. 2019:105, structure 3, figure 7; Eisenberg-Degen and Hevroni 2021:170–171,184). The following construction materials were used to assemble these structures: fieldstones, cut stones, mud brick, and mud mortar. Black/gray Gaza-ware pottery is often associated with these buildings.

A few Bedouin tent camps have been surveyed and excavated. The perimeter of these shelters is often demarcated by a line of stones, arranged to form a straight line, right angle, or rectangle, that held down the edges of the tent (Rosen and Avni 1997:54,55, figures 5.12,5.13; Eisenberg-Degen et al. 2015:figure 2). Nahal Be'erotayim West is a good example of a partially excavated Bedouin encampment that is demarcated by a rectangular cleared space in the desert pavement (Fig. 5). The eastern and southern edges of this space are defined by low stone walls (Fig. 5, *Wall 100*, *Wall 102*). A drainage ditch was cut into the desert pavement, and it extended through a midden. Initially it was believed that this rectangular cleared space represented one Bedouin tent, but post-excavation analysis of low-level balloon photography demonstrated that multiple tents were pitched in this location (Saidel and Erickson-Gini 2014:143). Based on multiple lines of evidence, this encampment was episodically inhabited during the Ottoman and British Mandate periods.

Bedouin Material Culture

Ethnohistorical sources published prior to World War II demonstrate that the Bedouin used a range of

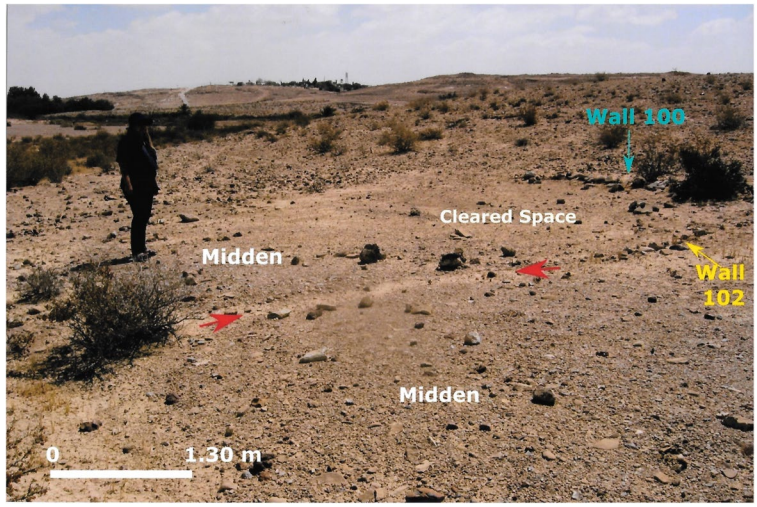

Fig. 5 The encampment of Nahal Be'erotayim West. View to the north. (Photo and annotations by author, 2007.)

Table 2 Types of durable material culture used by the Bedouin prior to 1940

Bedouin Tribe	Coffee Cups or Teacups	Equipment for Preparing Coffee	Vessels for Preparing and Serving Food	Clay and/or Stone Tobacco Pipes	Pottery	Rotary Grinding Stones	Personal Ornaments	Horseshoes	Miscellaneous Material Culture	Range of Migration	Reference
Sba'a	+	+	+	+	—	+	—	+	• Wooden mortar for crushing grain	1200 km	De Boucheman 1935:7, 23–34,69,84–96
Aenezes	—	+	+	Not specified	—	—	+	—	• Lances • Wooden bowls • Chainmail • Matchlock musket	"Almost constant motion"	Burckhardt 1831a:32,46,51,52–58
Rwala	+	+	+	+	—	+	+	+	• Wooden mortar for grinding grain • Assorted firearms and ammunition	800 km	Musil 1928:91,100,102–107,124–134,382; Rosen 2017:34
South Sinai Bedouin	—	+	—	+	—	+	+	—	• Wooden bowls	14–19 km[a]	E. Palmer 1871:79,85,92,184
Negev Bedouin	—	—	+	+	+	+	+	—	• Wooden plough, presumably with metal plowshare • Wooden chest	Variable	American Colony (Jerusalem), Photo Department [1900–1920], 1920, [1920–1933a], [1920–1933b]

Note: Most of these items have been recovered in archaeological contexts; see Table 3. Clothing, textiles, and saddlery are excluded from this table.

[a] Distance measured in Google Earth based on Perevolotsky et al. (1989:159, figure 1).

material culture for domestic chores, hospitality, and recreation (Table 2). Their material culture is divided into two categories: items made by the Bedouin and items that they acquired. Archaeological fieldwork has unearthed a limited range of artifacts that they made. These tribespeople occasionally made and used chipped- and ground-stone artifacts. In the Tur Imdai rock shelter at Petra, Bedouin knappers made strike-a-lights for starting fires and produced gunflints for use in their flintlock muskets. They also fashioned sandstone whetstones that were used to sharpen iron implements (Kuijt and Russell 1993:671; Simms and Russell 1997:466). In the Negev and Sinai, some tribespeople made, used, and sold rotary grinding stones (E. Palmer 1871:82; Avner 2007:34, figure 32; Saidel and Erickson-Gini 2014:140). Charles Doughty briefly noted that some Bedouin in Arabia crafted stone smoking pipes, and individual examples have been recovered at some subrecent sites (Doughty 1936a:288; Saidel 2014:258, figure 3c).

Most of the material culture discovered at Bedouin sites was made in towns and villages. The personal ornaments worn by Bedouin women, such as glass beads, glass bracelets, and coins, were products of urban artisans and governments (Saidel and Erickson-Gini 2014; Saidel and Blakely 2019:34–35). Coffee and the paraphernalia used to brew and consume it were purchased by the Bedouin (Table 3). The coffeepot unearthed at Nahal 'Ashan B is a type that was manufactured in Aleppo and Damascus, Syria (Lester 2018:2). The clay tobacco pipes (*chibouks*) that the Bedouin used to smoke tobacco were made by urban craftsmen who often sold their wares in shops (Rogers 1862:8, 25; De Vincenz 2016).

Black/gray Gaza ware is a coarse wheel-made pottery that was manufactured in Gaza City and in Khan Yunis from the 16th/17th centuries until the mid-1990s (Rye 1984:773; Salem 2009:31). It was also manufactured in Faluja prior to the 1948 Arab-Israeli War, but production ceased after this conflict (Israel and Saidel 2021). There is a broad range of Gaza-ware vessels that were used for a variety of domestic tasks (Israel 2006:v–vi; Salem 2009:34–36). Gaza-ware water jars are often present at subrecent sites (Rosen and Avni 1997:80, figure 7.6.1; Saidel et al. 2019:105, figure 7) (Fig. 2).

The quantities of artifacts at a site are a result of its occupational history. Short-term visits will presumably yield few artifacts, whereas campgrounds that were frequently reoccupied will have more material culture. Nahal Be'erotayim West is relatively rich in material culture because it was repeatedly reused throughout the Ottoman and British Mandate periods (Saidel and Erickson-Gini 2014). As a result of its occupational history, the following types of artifacts were recovered: black/gray Gaza-ware pottery, two discharged metallic cartridges, personal ornaments, a fragment of a rotary grinding stone, and a sardine tin and its twist key (Saidel and Erickson-Gini 2014). The sardine tin was very corroded, and its label was not preserved. The calibers of the discharged ammunition are 9 mm and .303 (Saidel and Erickson-Gini 2014:143, n7).

Faunal Remains

A limited amount of faunal material has been retrieved from subrecent sites. Bones are often poorly preserved at open-air sites such as Nahal Loz (Eisenberg-Degen et al. 2015). The faunal assemblage unearthed inside the Tur Imdai rock shelter is relatively well preserved and composed of the remains of sheep and goats. The burnt bones may be a result of "primary and secondary cooking or from post depositional charring" (Simms and Russell 1997:468). The paucity of faunal remains at many sites may be a result of cultural practices and/or postdepositional processes (Banning and Köhler-Rollefson 1992:198–200). In the Negev, many Bedouin subsisted on bread, lentils, and milk, while meat was consumed on special occasions (Musil 1989:137,145–148; Banning and Köhler-Rollefson 1992:198).

Chronology

Dating Bedouin occupations based on their assemblages is a challenge. The grinding stones and stone tobacco pipes that they made are not chronologically diagnostic, albeit this may change in light of subsequent fieldwork. These tribesmen also made gun flints for their flintlock muskets, and these artifacts are potentially useful for dating; however, they need to be used with caution (more below).

Currently, Gaza-ware pottery is not a sensitive chronological indicator, as many forms were in use from 1700 to 1948 (Israel 2006:198,207–213). When this ware is recovered from sites that do not contain chronologically diagnostic artifacts, such as coins and rifle cartridges, it is often arbitrarily attributed to one

Table 3 Types of artifacts unearthed at Bedouin habitation sites; see Figure 1

Site	Coffee or Teacups[a]	Equipment for Preparing Coffee[a]	Vessels for Preparing and Serving Food[a]	Clay Tobacco Pipes[a]	Stone Tobacco Pipes	Pottery[a]	Rotary Grinding Stones	Personal Ornaments[a]	Metal Shoes for Mounts	Varia	Reference
Nahal 'Ashan[b] Area B Bedouin structures	—	+	—	—	—	+	—	+	—	• 12 rifle cartridges and 1 pistol cartridge from World War I and the 1948 War	Eisenberg-Degen 2018:15; Peretz 2018
Nahal Be'erotayim West tent camps	+	—	—	—	—	+	+	+	—	• 1 pistol cartridge, 9 mm (1944) • 1 rifle cartridge, from 1918 or 1948	Saidel and Erickson-Gini 2014
Nahal Loz Bedouin tent camps	—	—	—	—	—	+	—	+	—	• Tin containers • Key • Razor blade	Eisenberg-Degen et al. 2015
Har Harif, Site 47, rockshelter	—	+	—	—	—	—	—	—	—	• 3• metal plowshares • 1 cartridge, 9 mm • in can	Vardi et al. 2014
Petra, Jordan/ Tur Imdai rockshelter	+	—	—	—	—	+ (Coarse handmade pottery)	—	+	—	• 1 porcelain sherd • 4 rifle cartridges • Iron tent peg • Gunflints • Stone strike-a-light • Whetstone	Kuijt and Russell 1993; Simms and Russell 1997

[a] Material culture not made by the Bedouin.

[b] Nahal 'Ashan is located within the confines of modern Beersheva.

of three periods: the Ottoman period; the late Ottoman–British Mandate period; or the British Mandate period (Nikolsky 2010; Aladjem 2014; Seriy 2015). Currently, the oldest absolute date in the Negev for the appearance of Gaza ware is 1700 C.E. (Rosen and Goodfriend 1993).

Artifacts that provide tighter chronological ranges than Gaza ware, such as porcelain coffee cups and teacups, are seldom present at subrecent sites. Occasionally a clay tobacco pipe is associated with a Bedouin occupation (Saidel 2014). Coinage is rare, even though Bedouin women often wore silver coins in their headgear and as personal ornaments (Weir 1989:174–175,188) (Fig. 3). Presumably, women curated these items to minimize loss.

Firearms and their ammunition are useful for dating purposes (Simms and Russell 1997:464–465,469–470). Gun parts from matchlock and flintlock ignition systems are potentially useful for identifying occupations from the 15th to 18th centuries (Saidel 2000:197, table 1). Some tribesmen used muzzle-loading muskets up to the early 20th century because they could make their own gunpowder (Simms and Russell 1997:470; Saidel 2000). A potential drawback is that the prolonged use of matchlock and flintlock ignition systems may mask the presence of occupations from the 19th to early 20th centuries (Simms and Russell 1997:470; Saidel 2000:203–209). Metallic pistol and rifle cartridges are useful for establishing a *terminus post quem*; however, the widespread military and civilian use of this ammunition did not begin until the second half of the 19th century (Diagram Group 1991:131–132,136).

Several subrecent sites have been radiocarbon dated. This technique is especially useful when fieldwork has failed to unearth any artifacts. In the central Negev, test excavations inside the Atzmaut and Loz rock shelters unearthed stratigraphic sequences composed of sediment, charcoal, and sheep/goat dung. Radiocarbon dates of charcoal and dung pellets demonstrated that sheep/goats were penned in these locations from the mid-17th through mid-20th centuries (Rosen et al. 2005:318,322–326, table 1; Rosen 2017:238–239).

Seasonality

Various lines of evidence have been used to address the subject of seasonality. Rosen used the presence of quail at a Byzantine pastoral site as evidence of either a spring or fall occupation (Rosen 1992a:161). This approach could be applied to subrecent remains, as some Bedouin hunted quail on a seasonal basis (Murray 1935:127). Microbotanical remains provide another avenue for investigating seasonality. The presence of lentils in the late 17th-century deposits at Tur Imdai are evidence of winter and/or spring occupations (Simms and Russell 1997:470).

Building on the research of Carol Palmer and colleagues, seasonality can be gleaned from the site structure of tent camps (C. Palmer et al. 2007). Drainage ditches running along the perimeter of a tent are indicative of winter and/or rainy season occupations (Saidel and Erickson-Gini 2014:140–141; Eisenberg-Degen et al. 2015). The arrangements of stones that were used to anchor the exterior edge of a tent are useful for distinguishing winter from non-winter occupations. Stones that line three or four sides of a tent are winter habitations (Ferdinand 1993:86,87,89, figures 5.4,5.5,5.8). In contrast, stone walls that extend along one or two sides of a tent may be representative of non-winter occupations. Those sides of a tent that were not lined with stones would presumably be open to let a breeze flow through the structure during hotter times of the year (C. Palmer et al. 2007:378). Summer occupations may be more difficult to identify, as some Bedouin slept in the open (Burckhardt 1831a:50).

Discussion

Archaeology and historical documents demonstrate that the Bedouin lived in the Negev from the 16th to the 20th centuries. The 16th-century Ottoman tax register of Palestine and Transjordan reported that there were five Arab tribes in the northern Negev (Hütteroth and Abdulfattah 1977:27–28,169,170) (Table 1) (Fig. 1). During the British Mandate, officials used aerial photographs to enumerate the number of Bedouin tents in the Negev. The results of this endeavor demonstrated that most Bedouin lived in the northern Negev. For example, in the environs of Faluja/Kiryat Gat there were 7.37 tents and/or houses per kilometer. In the Nahal Besor/Wadi Ghazzah, to the west of Beersheva, there were 12.79 tents and/or houses per kilometer (Muhsam 1966:34). How old is this settlement pattern? Does it extend back in time to the 19th century or earlier?

In the northern Negev, there is a plethora of Gaza-ware sherd scatters that most likely represent the remains of Bedouin tent camps. In the environs of Tel el-Hesi,

the Hesi Regional Survey recorded 3,095 sites that contained black/gray Gaza-ware pottery (Jeffrey Blakely 2021, pers. comm.). Most sites were bereft of architecture; hence, they are logically interpreted as evidence of Bedouin tent camps (Saidel and Blakely 2019:33,34, figure 10). Dating these sites will require significantly more fieldwork. Gaza ware was also present in storehouses (*baikas*) and in domestic structures. Taken as a whole, there is widespread archaeological evidence of subrecent Bedouin activity in the Negev (Fig. 4).

The artifacts present at these locations are divided into two categories, low- and high-visibility material culture. The former comprises those items that were made by the Bedouin, such as lithics, millstones, and stone smoking pipes. The latter is composed of those items that were purchased by the Bedouin, such as black/gray Gaza-ware pottery, clay tobacco pipes, and personal ornaments made of glass. These artifacts tend to be more recognizable to archaeologists than those that are made by the Bedouin.

Tribespeople acquired these items in urban markets and/or from itinerant merchants. Historical sources note that Bedouin frequented merchants in the towns of Beersheva, Faluja, and Gaza (Dowling 1913:85; Diqs 1967:81). At Khalasa (Fig. 1), Ellsworth Huntington (1911:120,173) dined in the tent of a Gazan merchant who presumably was selling his wares to those Bedouin who frequented the well at that site. Many Bedouin used barley to pay for their purchases (Dowling 1913:85). Barley was a cash crop, and an undetermined number of Negev Bedouin were directly and indirectly engaged in agriculture by the mid-19th century (Saidel and Blakely 2019:22–24). Western observers noted that Bedouin barley was purchased by grain merchants who exported this cereal to Algiers, Egypt, France, and Great Britain (Neale 1851:3; Dowling 1913:85). In the United Kingdom, demand for Bedouin-grown barley spiked in the late 19th century with the introduction of India pale-ale beer (Halevy 2016, 2018). Many Bedouin were engaged in agriculture until the outbreak of the 1948 Arab–Israeli War (Diqs 1967:17–18,44,66). During this conflict some Negev Bedouin asked the Israeli government to "allow them to return to their previous places—enable them to begin working the lands—ploughing and sowing for the approaching season" (Yahel and Kark 2015:65–66). Bedouin agriculture and the prevalence of barter may be one reason why coinage is scarce at subrecent sites.

Conclusion

One of archaeology's contributions to Bedouin studies is that it shatters stereotypes promulgated by tribespeople and by Westerners. Bedouin ideals that romanticize their autonomy have inadvertently conveyed the premise that these tribes were peripheral and self-contained. The material culture found at subrecent sites demonstrates that the Negev Bedouin were integrated into the economies of Ottoman and British Mandate Palestine. Ethnohistorical sources state that these tribes were indirectly linked to larger economies that operated in the Mediterranean basin and Western Europe.

Some archaeologists have inadvertently promoted the stereotype that these tribes are essentially living fossils and, therefore, appropriate analogues for prehistoric societies. Thomas Levy's reconstruction of the Chalcolithic village of Shiqmim (4500–3500 B.C.E.) in the Negev Desert unconsciously promotes this stereotype. In his reconstruction there are two rectangular tents that are identical to early 20th-century Bedouin black tents that were photographed by Alois Musil (Musil 1908b:133, figure 18; Levy 2007:52, figure 4.10). His reconstruction is flawed because it fails to consider that the layout and division of space inside the Bedouin tent were shaped by gender relations in Islam (Saidel 2008, 2009). Furthermore, archaeology demonstrates that there are substantial differences in the socioeconomic organization of ancient pastoralists and subrecent Bedouin. The former exchanged desert products with sedentary communities to acquire grain and other items (Rosen 1987a:41; Saidel 2004:444). In contrast, many of the latter grew and sold cash crops, such as barley, to acquire goods that were made and sold in urban communities.

Another stereotype is that there is little profit to be gained by conducting archaeological research on subrecent Bedouin. Michael Homan, a biblical scholar, explained why there has been little archaeological research on ancient pastoral nomads, and his comments are applicable to subrecent Bedouin (Homan 2002:4):

> Second, even when practicable, excavating tent fragments and elliptical settlement patterns is less romantic and fruitful in both publications and fundraising than digging a massive urban center. Thus, while biblical houses, palaces, and temples have been treated at length in modern scholarship, tents have for the most part been neglected.

Three themes are embedded in this statement. First, it is self-evident that cities should be excavated. Second, archaeological research should focus on the urban elite. Third, urban centers are commodities to be used as vehicles for fundraising, publication, and personal publicity. Homan's emphasis on urbanism underscores why archaeological research on pastoral nomads is wanting. Many practicing archaeologists are products of Western urban societies. Urbanism is a subject that readily bridges the present and the past, and it is familiar. His comment also underscores the commodification of archaeological sites and research subjects within Western academe, a topic that is outside the scope of this review (Lekakis, this issue).

This review demonstrates that there are various types of Bedouin sites in the Negev and that these locations can be identified through archaeological fieldwork. Much of the material culture present at these sites provides evidence that these tribespeople were integrated into the economy of Ottoman and British Mandate Palestine. Ethnohistorical sources demonstrate that these tribes were integrated into larger economies during the late 19th and early 20th centuries. In closing, the archaeological data in the Negev demonstrate that there are Bedouin remains to be recovered and these data contribute to Bedouin studies. Identifying their archaeological remains is not difficult. All it requires is time, effort, and a desire to make the most of the least.

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Declarations

Conflict of interest The author declares that he has no conflict of interest.

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