

Zeidan A. Kafafi
Independent Researcher, Amman, Jordan
zeidan.kafafi@gmail.com

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The Origins of the Ammonites

Introduction

It seems that in the beginning of the 1st millennium BC, ideas of nationhood, statehood, and political and cultural development had materialized in the land of Jordan with the establishment of the Ammonite, Moabite, and Edomite kingdoms. This stage existed already during the Bronze Age, which was characterized by the establishment of the city-state regime as a political system. It is well understood and agreed upon by scholars that the three kingdoms (Ammon, Moab, and Edom) existed from the end of the 2nd millennium and flourished during most of the 1st millennium BC.

It is only during recent decades that scholars started conducting thorough and detailed studies of the land and peoples of the Ammonites, Moabites, and Edomites (Bennett 1982; Timm 1989; Hübner 1992; Bienkowski 1992; MacDonald 2000; 1994; MacDonald and

Yunker 1999). The subject the “Origins of the Ammonites” has been under discussion for a long period of time by archaeologists, biblical archaeologists, and historians. One of those detailed studies is presented by Ulrich Hübner, who published in 1992 his book entitled *Die Ammoniter. Untersuchungen zur Geschichte, Kultur und Religion Eines Transjordanischen Volkes im I. Jahrtausend v. Chr* and stated that we should find the Ammonites in the Late Bronze Age but added that, at that time, published remains had come only from tombs. In other words, there were no settlements in the Ammon region during the Late Bronze Age. He stated the following: “Die Ammonitis der Spätbronzzeit ist bisher archäologisch nur unzureichend erforscht. Ihre materielle Kultur stand, wie vor allem die verschiedenen (früh), mittel- und spätbronzzeitlichen Grabanlagen z. B. in ‘Amman, Sahab und der Buqāa zeigen, in

einer deutlichen Tradition und Kontinuität mit der Bronzezeit” (Hübner 1992: 159). This was published almost thirty years ago, and this information is no longer accurate due to the fact that many excavations have been conducted during the last decades at several Bronze–Iron Age sites that threw light on those periods, such as at Tall Al ‘Umayrī, Jalūl, and Umm Ad Danānīr. For this reason, the author decided to go through published reports discussing the results of the surveys and excavations in the region extending from Wādī Az Zarqā’ in the north to Wādī Al Mūjib in the south.

The Ammonites are mentioned in the historical and biblical literary sources as the people who inhabited the area located to the east of the Jordan River between Wādī Al Mūjib in the south and Wādī Az Zarqā’ in the north (FIG. 1). It should be understood that the Ammonite Kingdom boundaries were unstable and changed from the earlier dates of the foundation of this political state, at the end of the 2nd millennium BC, to the first half of the 1st millennium BC. For the most part scholars agree upon the northern (Wādī Az Zarqā’), western (Jordan River) and eastern (desert) borders, but the southern boundaries are debatable. Based on a parallel study of the excavated archaeological material encountered at sites in the ‘Ammān area and its adjacent regions, several scholars (Yunker 2014; Herr 1999; Daviau 1997) assumed that the southern boundaries extended south to the Wādī Al Wālah/Wādī Ath Thamad drainage system. Moreover, Bruce Routledge (2004: 46–47), who is excavating Dhībān in the present, has argued that there are several problematic matters with the definition of this boundary identification. In addition, Margreet Steiner (2014: 772) says that pottery assemblages and political

borders must not necessarily coincide. Burton MacDonald (2000: 87; 2020: 7–8), based on the biblical texts, claimed that the Hisbān area, Nebo/Mādabā, and the fertile region east of the Jordan River across from Jericho belonged to Moab, but he did not decide when (FIG. 1).

L. Herr proposed a line representing the southern borders of Ammon, claiming that it extended into the Mādabā–Jalūl region. He supported his claim by the absence of the typical Ammonite pottery from the Iron Age tombs excavated at Mount Nebo (Saller 1966). Also, the presence of Ammonite pottery at both Tall Dyr ‘Allā and Tall Al Mazār caused Herr to propose that the Ammonite northern border never extended past the Wādī Az Zarqā’ (Herr 1982: 175). No fixed eastern and western Ammon borders are given by Herr.

The country Ammon, with its capital Rabbath-Ammon, was known in the period ranging from the latest part of the 2nd millennium until the middle of the 1st millennium BC. According to Herr, the terms Ammon and Ammonite “may be applied to an ethnic entity of central Transjordan that is best defined during the late Iron II period” (Herr 1982: 175). According to Genesis 19:38, the word Ammon is derived from the name of the ancestors of the Ammonites, *Ben-’ammi*, which was explained by some of the scholars as *son of my people* or *son of my paternal father* (Yunker 1996: 295). Moreover, scholars argue that the prefixed *bn* or *bny* was a part of the full name. If this is so, it would be similar to the name *Ben-jamin*. Therefore, it has been proposed that the name of the land of the Ammonites was *Bene-’ammon* (Yunker 1996: 295).

The emergence of the Ammonites is under discussion by several scholars, such as MacDonald and Yunker (1999).

They studied the process of settlement in the land of Jordan during the transitional period from the Late Bronze Age to the Iron Age. Younker concluded that study of the change from the city-states to the state political system was concentrated around the following models: “conquest, peaceful infiltration, some sort of an indigenous social transformation and the anthropological approach” (Younker 1999: 189–190). The author agrees completely with Younker by saying that our interpretations of the emergence of the Ammonites should rely more heavily on the archaeological record than on the few extra biblical references.

L. Herr (1997) argues that toward the end of the Late Bronze Age or the beginning of the Iron Age I (*ca.* 1300 BC), they started to settle in the ‘Amman region at sites such as ‘Ammān, Al Baq‘ah Valley, Al ‘Umayrī, Tall Jāwah, Hīsbān, and Mādabā. This central part of modern Jordan played an important role during that time by controlling the caravan routes that connected the Arabian Peninsula with the major cultural centers of the Levant.

Sources of Study

The information included in the discussion below is derived from the literary sources (Egyptian, Mesopotamian, and local); less importantly, the biblical narratives are included, and finally the archaeological excavations and surveys. Below we present a brief discussion of each source.

The Literary Sources

We have three different literary sources to present, and they are as follows:

The Egyptian Sources

Around 1550 BC, the Egyptian Pharaoh Ahmose (*ca.* 1570–1545 BC) expelled the *Hyksos* from Egypt. After

this, Egyptian authority spread over the Syria-Palestine area. Thus, in addition to the Egyptians’ records, some Egyptian documents that we will discuss in the local sources were found in Jordan. Yohanan Aharoni (1967: 84) published that the Egyptian literary sources can be classified into seven categories: “expedition journals” (“annals”), bas reliefs, topographical lists, literary papyri, administrative papyri, execration texts, and correspondence archives. The main aim of this study is to present information about the Jordanian sites mentioned in those sources. A few Jordanian sites were mentioned in the Egyptian sources, such as Tabaqat Fahl (P-ḥ-r) which was listed in Thutmose III’s list I a, b, c No. 33 between the cities (ḥ-d-r) identified as *Hazor* (Tall Waqqās/Tall Al Qadah) in northern Palestine, and No. 34 (K-n-n-r-t) Tall Al ‘Uraymah (Al-‘Orimih) (Aharoni 1967: 148).

In addition, and in the same list I a, c No. 87 (Simon 1937:118) the name of the city Rehob (r-ḥ-b) appears between the cities (‘-n-y) ‘Anatha? as it was identified by Aharoni and (i-q-r) Iqrit. A third site namely (Y-N-<W>-‘-M) is mentioned in one of the six lists (List XVI a No. 2) dated to the time of the pharaoh Seti I (*ca.* 1309–1291 BC), a possible identification with the site *Ya‘mūn* town An Nu‘ayyimah/Irbid north of Jordan (Kafafi 2005: 63–64). Those three sites are located outside Ammon, but yielded archaeological material dated to the Late Bronze Age period (Kafafi 2005).

There are two other sites listed in the Thutmose III’s lists, Rabbah (r-b-t) and Tapnith (t-p-n), that we assume were located in the Ammonite territory. The name of the city (r-b-t) Rabbah occurs in List I a, b, c No. 105 (Simon 1937:118). Albright suggested that it may be Rabbath Ammon (Albright 1926: 19). List I a, b No. 98 of Thutmose III’s

(Simon 1937: 118) preserves the city name (t-p-n). Several decipherments have been given for this name. Aharoni considered it to be the biblical site “Tapnith”, modern “Tibnin” (Aharoni 1967: 151), while Albright associated it with Tall Dibbīn north of Marj ‘Uyūn (Albright 1926: 19). Simon (1937: 219) wrote it in Hebrew as “דִּיכּוֹן” as if he indicated Dibon in Moab.

Two names from Jordan were written on reliefs at Luxor from the time of Ramses II (*ca.* 1290–1224 BC), representing a city in Moab as well as (Dhibān)/Dhibon, as follows: (B-<w>-t-r-t) in (the) land of Moab (m-w-i-b) and (Dhibān)/Dhibon (Aharoni 1967: 170).

A document that was written on papyrus for the *Šasū* tribes of Edom by an Egyptian frontier official during the time of the pharaoh Merenptah (*ca.* 1224–1214 BC) permitted them to cross into Egypt. This is the earliest reference to the name “Edom” in the Egyptian sources (Pritchard 1969: 259).

The Amarna Letters represent royal archives reflecting the political situation in the Levant during the period *ca.* 1400–1350 BC (Albright 1969: 4). One of those letters was sent by Mut-ba’lu, the prince of Pella (Tabaqat Fah), to Yaḥamu, who was the Egyptian commissioner of Syria and Palestine at the beginning of the reign of Akhenaton (Pritchard 1969: 486, footnote 11).

As a result of the above discussion of Late Bronze Age Egyptian literary sources, it might be deduced that there is no mention of Ammon or the Ammonites, but the names Moab and Edom are present. Apparently, the Egyptian literary sources kept silent and never mentioned the Levant during the Iron Age I (*ca.* 1200–923 BC). It is obvious that the Egyptian literary sources are the first amongst these to provide informa-

tion about the three kingdoms: Ammon, Moab, and Edom. The Egyptian topographical lists from the time of the New Kingdom (Late Bronze Age) mention places (*puhr/pella*) and people (*Shasu*) in the land to the east of the Jordan River.

The Mesopotamian Sources

After the collapse of the New Kingdom in Egypt (first half of the 12th century BC), the influence of Egypt in the Levant was replaced by the Neo-Assyrians. It has been said that the Neo-Assyrian king Shalmanaser III (*ca.* 858–824 BC) was the first king who attacked people in central and southern Syria. For example, in 853 BC Shalmanaser III marched against the state of Hamath on the Orontes in central Syria at the city of Qaqara. Based on an inscription that he left behind, he listed that he was confronted by Syrian and Phoenician states supported with Arab alliances. The Jordanian states (Ammon, Moab, and Edom) are not mentioned in this inscription. Manfred Weippert argued that this is due to the fact that those states were too involved with their internal problems between 853 and 837 BC (Weippert 1987: 98).

With regard to the Neo-Assyrian relationship with the existing kingdoms in the southern part of the Levant, it is obvious that Assyrian occupation did not go south beyond Tall Rumith, Tall Irbid, Tall Abū Al KHaraz, Tall As Sa’īdiyyah, and Tall Dayr ‘Allā. The defeat of the Aramaean and Israelite kingdoms by the Assyrians in the north and west gave the Ammonites, the Moabites, and the Edomites the opportunity to build their kingdoms and to live in prosperity, paying tribute to the Assyrians notwithstanding. It seems that the Neo-Assyrian kings left the Ammonites, Moabites, and Edomites in peace till the year 728BC, during the reign of Tiglath-pileser III,

when they were obliged to pay tribute to this king.

To sum up, by the time that Ammon, Moab, and Edom had started to be established, the Neo-Assyrian Empire in Mesopotamia was flourishing. Unfortunately, the written documents dealing with Jordan from the Neo-Assyrian, Neo-Babylonian, and Persian periods are few in number and begin only as late as the middle of the ninth century BC (Pritchard 1969). Due to the fact that the Neo-Assyrian interference in Jordan happened later than the Late Bronze Age and the beginning of the Iron Age period, Neo-Assyrian literary sources from those periods are not useful for our study.

The Local Sources

Since early in the 19th century, a number of scholars have visited the East Bank of Jordan, conducted surveys, and made excavations (*cf.* later in this chapter). They discovered and published some source materials from the Late Bronze Age and the beginning of the Iron Age. These local sources show the degree of influence upon this area from the surrounding cultural centers, especially Egypt, Mesopotamia, and Anatolia. Egyptian scarabs and Mesopotamian cylinder seals were unearthed at many Jordanian archaeological sites. In addition, artistic carved stele were encountered at Al Bālū' and SHihān in Moab. Moreover, an Egyptian faience jar bearing part of an Egyptian hieroglyph that belonged to the Queen Taousert (who reigned from 1199 to 1191 BC) was encountered in a Late Bronze/Iron Age temple located on the northern slope of Tall Dayr 'Allā (Yoyotte 1968: 465). Associated with this faience jar, and moreover, in another building dug at the southern slope of the *tall* also dated to the LB/Iron Age, more

inscribed tablets were found. Unfortunately, there is a disagreement among scholars about the decipherment of the script of those tablets (Kafafi 1977: 39), but the content of these tablets according to the readings suggested by van den Branden (1965: 148), Mendenhall (1973:161), and Albright (1966: 20) did not include any information either about Ammon nor the Ammonites. It should be mentioned here that at the Tall Dayr 'Allā an inscription, namely Bala'am, was found, but it dates to the 9th century BC and has been identified as an Aramaic inscription (Hoftijzer and van der Kooij 1991, 1976).

The Ammonite written documents are found inscribed on material such as stones, semiprecious stones, metal, and pottery (Israel 1997: 105–107). Apparently, the largest numbers of inscriptions are on seals that have been dated to the period ranging from the 8th to the 6th centuries BC (Hübner 1993: 154–155). Unfortunately, only very few of them were obtained from well stratified archaeological contexts (Bordreuil 1992: 13–38). No Ammonite inscribed materials nor written documents dated to earlier than the 9th century BC are available up to present.

Biblical Narratives

The Ammonites are introduced in Genesis 19:30–38. The story says that Lot was scared to stay in *Zoar* after the destruction of *Sodom* and *Gomorrah* (Genesis 19:12–29) and he and his two daughters settled in a cave in the hill country. The two daughters were afraid that since there were no men available in their region, except their father, they might not have offspring. Thus, they decided to ply their father with wine and slept with him and became pregnant. Both gave birth to sons, and the elder daughter named her son *Moab*

and the younger gave her son the name *Ben-Ammi*. It might be argued that this biblical narration is no longer acceptable.

According to biblical sources (Deuteronomy 2:20–21) the Ammonites replaced an ancient group of people, namely the Rephaim (known as the Zamzummim by the Ammonites) (MacDonald 1999: 31). However, biblical archaeologists have claimed that biblical texts about the Ammonite territory were introduced in the context of Israelite interests located east of the Jordan River (MacDonald 2000: 17). For example, the books of Numbers 21:24, Deuteronomy 3:16, and Joshua 12:2 mention that the Ammonites' boundary is in the upper region of the Wādī Az Zarqā'. In the meantime, Deuteronomy 2:18–19 and Numbers 21:13 and 22:36 indicate that the territory of the Ammonites was situated to the north of Wādī Al Mūjib (Arnon).

Archaeological Field Studies

To understand and discuss the available evidence, the author decided to present a discussion of the surveys and excavations published either as reports or monographs. The explorations and surveys are presented in detail along with a very brief study of the archaeological excavations available.

Exploration and Surveys in Ammon Nineteenth Century Explorers' and Travelers' Reports

Archaeological fieldwork started in Ammon as early as the beginning of the 20th century. For example, H.C. Butler of Princeton University surveyed the area of modern Amman and provided a detailed study of 'Irāq Al Amīr in 1904 and 1907. During the 19th century and the earliest part of the 20th century, several explorers and surveyors visited the

eastern side of the Jordan River and registered the results of their visits in their publications. Among these we may recall Ulrich Seetzen (1806), Johann Burkhart (1812), James Buckingham (1816), Henry Tristram (1863–1864), Charles Warren (1867), Claude R. Conder (1881), and Howard Butler (1907).

First Half of the 20th Century

The surveys conducted by N. Glueck (1934; 1939; 1951) may be described as the most extensive and intensive because they included almost all parts of the east side of the Jordan River. He published many Ammonite sites but related them to the Iron I and II periods. Glueck conducted an intensive survey that covered most, if not all, of Jordan and parts of Palestine. The results of his surveys have been published in four volumes by the American Schools of Oriental Research (Glueck 1951; 1939; 1934). During his surveys, Glueck visited 155 sites belonging to the Late Bronze and Iron Age periods, but the majority, if not all, were assigned by him to the period that he named as EI I–II. This date indicates that Glueck saw only the Iron Age pottery sherds and thus considered just two possibilities, either Iron I or II. Actually, based on the results of the other excavations conducted in the areas surveyed by Glueck, the majority of the sites belonged to the Iron II (the Ammonite period).

During his survey, Glueck registered 23 sites in the area extending from the Wādī Az Zarqā' to the Dead Sea distributed as following: 9 dated to the LB–Iron I–II, 13 Iron I–II and 1 Iron II. In addition, he mentioned that he did not register any LB–Iron I–II sites in the Greater 'Amman and Wādī Az Zarqā' region, although it was heavily occupied during the Iron I–II (94 sites), and one single site has been identified as an Iron

Table 1. Summary of sites found by 20th-century surveys.

Surveys	No. of Sites	No. of Settlements	No. of Towers, Fortresses, <i>Rujms</i>	Others/Presence
LB and Iron Age I–II sites from Nelson Glueck's surveys	155	93	36 all on the plateau	26
Hartmut Gese Survey sites	148 (all periods)	64 (3 LB)	2?	33 (3 LB)
Ḥisbān Survey Iron Age I sites	148 (all periods)	64 (3 LB)	2?	33 (3 LB)
The Archaeological Survey of Greater Ḥammān sites	222 (all periods)	27 (3 LB)	33	0
Saḥāb Survey sites	131 (all periods)	32 (5 LB)	10	1
Az Zarqā' Reservoir Survey sites	14	14	0	0
Umm Ad Danānīr Region Explorations sites	19 Survey + Ummad-Dananr	3 Iron II	3 <i>Rujms</i> + 2 towers Rujm Al Ḥinū, Rujm 'Ayn Umm Ad Danānīr, and Rujm Al Ḥawī	0
Ar Rummān Survey sites	42 (all periods) 4= Late Bronze Age 20= Iron Age	24 4 LB sites: 3 settlements	Rujm SḤubayl: (LB+ Iron Age)	1 LB presence 10 Iron Age presence
'Ayn GHazāl Survey sites	81 (all periods) 11 sites dated to the Iron Age	1 - Only one settlement.	7 - 2 tower types - 4 multiple structure (towers and structures) - One <i>rujm</i>	3 - Two ceramic scatters - One stone ring site
Wādī Az Zarqā'/Wādī Ad Ḍulayl Archaeological Survey sites	450 sites (all periods) 1 site LBII 10 sites Iron Age	5 (1 LBII?)	1	5
Dayr 'Allā Regional Project Survey sites	18	18	0	0

Age II. Altogether, Glueck registered 155 sites belonging to the Late Bronze, Iron Age I–II periods as represented in TABLE 1.

To sum up, unfortunately the published results of the Explorations in Eastern Palestine never helped us in building an opinion concerning whether there was a continuation from the Late Bronze Age to the beginning of the Iron Age. This is due to the fact that all of what Glueck published has been assigned to

the Early Iron Age I–II period, which is an ambiguous period. However, it is helpful in studying the distribution of the Ammonite sites during the 1st millennium BC.

Second Half of the 20th Century

During the second half of the 20th century several archaeological surveys were conducted in Amman and its vicinity.

1. Hartmut Gese Survey 1957 (Gese 1958)

Hartmut Gese, a German biblical archaeologist, argued that Nelson Glueck did not cover the area located to the south of Wādī Shu'ayb, Wādī As Sīr, and 'Ammān to Wādī Ḥisbān (Gese 1958: 55). For this reason, in 1957 he started an archaeological survey in which he registered 11 Iron Age sites consisting of 5 towers (or fortresses/*qasr/rujms*) and 6 medium settlements. Those sites are the following: Sahl Al Buqay'ah, where he recorded Iron Age rectangular buildings and towers dated to the Iron I-II period, Tall Sāfūt, Rujm Al Jubayhah, Qasr Khaldā Al Janūbī, Al Quṣayr, KHirbat Al Kursī (a well-fortified site with a watchtower and settlement), Qasr As Sār (Sārah) (settlement), Al Malfūf (Early Iron Age, assigned to the Ammonite period), KHirbat Adh DHirā' (Early Iron Age settlement), Quṣayr At Tabaqah (*Ḳesēr et-Ṭabaqa*) (dated to the Early Iron Age and belonging to the Ammonite period), and *Wādī Ash Shitā'*, which consists of a tower rectangular in shape and dated to the Early Iron Age (Gese 1958: 56–61). Gese did not record any Late Bronze Age sites, and it seems that all the recorded Iron Age sites are belonging to the Iron Age II period.

2. Hisbān Survey

The Hisbān Survey aimed at covering an area in a 10-kilometer radius of Tall Ḥisbān where 148 archaeological sites were visited (Ibach 1987: 5, 9). Sherds of Late Bronze Age date were found only at six sites, some of which read as MB/LB and the evidence for which is notably weak (Ibach 1987: 157–158). The surveyors published that, as a result of their work, it has been remarked that the sharp decline in occupation in the Middle Bronze Age

continued into the Late Bronze Age. They added that only three sites (Jalūl, Iktānū, and Al 'Umayrī) hold promise of having archaeological evidence of the Late Bronze Age.

Thirty sites yielded Iron Age I (*ca.* 1200–900 BC) pottery sherds, but only eight of them may be described as significance population centers: Tall Ar Rāmāh (Site 95), and Tall Iktānū (Site 97), both in the Jordan Valley; Al 'Umayrī (Site 149), Umm Al Ḥanāfish (Site 103), KHirbat Al 'Āl (Site 7), Umm Al 'Amad (Site 102), and Jalūl (Site 26), all on the plateau; and Umm Al Qanāfidh (Site 29), in the *wadi* system (Ibach 1987: 160). TABLE 1 presents information about the location and the archaeological evidence registered at each of the Iron Age I surveyed sites.

During this survey, pottery sherds assigned to the Iron II/Persian period (*ca.* 900–500 BC) were collected at 63 sites, though only 16 of them were attributed to the Iron Age II (*ca.* 900–850/800 BC). This invited the surveyors to claim that the Iron Age II period witnessed a time of low population and the period from *ca.* 800–500 showed an increase of people and settlements (Ibach 1987: 163). In addition, it has been deduced that the “significant population centers” of Iron Age I continue to hold that status in the Iron II/Persian period. The eleven significant sites are: KHirbat Al 'Āl (Site 7), Jalūl (Site 26), Umm Al Qanāfidh (Site 29), Tall Ar Ramā (Site 9), Tall Al Kafrayn (Site 96), Tall Iktānū (Site 97), Massūh (Site 100), Umm Al 'Amad (Site 102), Umm Al Basātīn (Site 103), Al Yādūdāh (Site 143), and Tall Al 'Umayrī (Site 149) (Ibach 1987: 168).

To sum up, the published results of the Hisbān Survey helped a great deal in reconstructing the settlement patterns in the area a 10-kilometer radius around

Tall *Hisbān* where 148 archaeological sites were visited. It shows that only 6 possible sites dated to the Late Bronze Age period. However, the archaeological excavations conducted at *Jalūl* and Tall Al 'Umayrī proved that there was a continuation of settlement from the Late Bronze Age to the Iron Age I.

3. Madaba Plains Project Survey, 1984

The Madaba Plains Project Survey started in 1984 with the aim of investigating the region within a 5km radius of Tall Al 'Umayrī. The Survey team recorded and described 55 archaeological sites distributed as follows: 32 agricultural sites, 15 road sites, 17 funerary sites, and one prehistoric site (Geraty *et al.* 1989: 165). The following sites include Iron Age occupation remains: Site 60 yielded some Iron Age pottery body sherds; in addition, the surface-collected Byzantine sherds were dominant, and Early and Late Roman sherds were registered. Moreover, caves and a cistern were visible at the site (Geraty *et al.* 1989: 167). Site 61 produced few Iron Age body sherds, as well as Byzantine and Roman ones. Late Roman and Iron Age II pottery sherds were found Site 64, which is surrounded at present by a wheat field.

The Mādabā Plains Project Survey proved that the Tall Al 'Umayrī region was used for agricultural purposes all through periods. Towers were used as a part of agricultural complexes, cisterns for collecting rainwater, and caves perhaps used for living were also recorded (Geraty *et al.* 1989: 174).

4. The Archaeological Survey of Greater 'Ammān (ASGA)

ASGA began in 1988 with the aim of collecting information about the settlement system in the vicinity of *Rabboth Ammon/Philadelphia* and to put together an inventory of archaeological

sites located in this area. The surveyed area covered approximately 570 sq km, extending from *Shafā Badrān* in the north to *Al Yādūdah* in the south and from *Wādī As Sīr* in the west to beyond *Mārkā* in the east (Abu Dayyah *et al.* 1991: 361). The survey team registered and documented 222 archaeological sites, of which three sites belonged to the Late Bronze Age: *Rujm Bidīr* (Settlement, LB/IA), *KHirbat 'Uthmān* (Settlement LB), and *KHaldā* (site 7, a rectangular tower). Unfortunately, not a single site was established during the Iron Age I period. Those dated to this period and registered in this survey were founded during the Late Bronze Age and continued to be occupied during the Iron Age I.

In contrast, and during the Iron Age II, the 'Amman region was densely occupied, with twenty-four settlements, thirty-one towers, two *rujms*, tombs, caves, cisterns, and cup-marks having been registered and documented during this survey. This indicates that Ammon prospered only during the Iron Age II period, but it was founded sometime later than the Late Bronze Age. This assumption the argument that the Ammonites were the descendants of the Late Bronze Age local community.

Based on the above study, it should be deduced that due to the absence of Iron Age I settlements in the Greater 'Amman Area, the published results should be revised. This is due to the fact that excavations at major Late Bronze Age and Iron Age sites, such as the Amman Citadel, Tall Al 'Umayrī, and Al Baq'ah Basin, yielded archaeological remains belonging to this period. Thus, we may assume that the hinterlands of those sites were populated by unsettled groups (transhumant) that never left any material behind them.

5. Sahāb Survey, 1983

In 1983 Mo'āwiyah Ibrahim directed a survey in the area of the modern city Sahāb with the aim of investigating the relationship between the Sahāb archaeological site with its vicinity during the Iron Age (Ibrahim and Kafafi 2023). The survey region measured 15 by 13 kilometers, with Tall Sahāb located in the center.

Moreover, the major aim was to shed light on the correlation between the various periods presented in this region. One hundred and thirty-one sites were visited, ranging in occupation from pre-history to modern times, though here our main focus is on the archaeological sites dated to the Late Bronze and Iron Ages (see TABLE 1 for site numbers).

The above discussion indicates that the Sahāb region was heavily occupied during the Iron Age and there was a weak presence during the Late Bronze Age. Indeed, the sites Rujm Ash SHāmī South, Industrial City 1, Zamlat Al 'Alyā, Ṣalihiyyat Al 'Ābid E, and Huwayṭān Abū Sunaysilah E. yielded Late Bronze Age together with Iron Age pottery. Unfortunately, the pottery reading shows no distinguishment between the Iron I and the Iron II. Despite this fact, it may indicate that there was a continuation of occupation in the Sahāb area from the Late Bronze Age to the Iron Age periods.

6. Az Zarqā' Reservoir Survey, 1978

K. Yassine, T. M. Kerestes, B. G. Wood, and J. M. Lundquist conducted an archaeological salvage survey in the Yarmouk, Wādī Arabah, and Az Zarqā' valleys from January 14 to March 15, 1978 (Kerestes *et al.* 1977–1978). Fourteen archaeological sites were registered in the Wādī Az Zarqā', and only one site (Tall Ar Raḥl, Site 13) is dated to the Late Bronze Age; three date to the Iron

Age and one of them has been assigned to the Iron II. Unfortunately, the surveyors did not say whether the collected pottery sherds dated to both periods (LB and IA) or if they belong to the sub-periods (LBI, II, and III, or I1 and I2) (Yassine *et al.* 1988: 228).

To study the origins of the Ammonites the author decided to go through all the published reports of the archaeological surveys conducted in the Ammonite territories and present statistics of site numbers and types related to periods ranging from the Late Bronze Age to the end of the Iron Age II period (see TABLE 1). This survey shows that the area of Wādī Az Zarqā' Basin was poorly settled during the Late Bronze Age and the beginning of the Iron Age. These results confirm the conclusions deduced from the other surveys.

7. Umm Ad Danānīr Region Explorations, 1977–1978

In June 1977, Patrick E. McGovern (1980) sounded caves on Jabal Al Hawwayah in the Umm Ad Danānīr region of the northwestern Baqa'h Valley, about 20 km to the northwest of the capital city, 'Ammān. He hoped that the Cave A sounding would produce an undisturbed stratigraphic sequence of Late Bronze Age pottery and other archaeological material. The excavation operation inside the cave yielded remarkable results: a very rich assemblage of local and imported Mycenaean IIIB, Cypriot-on-white, and bichrome vessels, along with other objects (scarabs, cylinder seals, toggle-pins, and beads were found). Those finds suggest strongly that Late Bronze Age settlement/s existed in this area. It has been suggested that those caves relate to a Late Bronze Age occupation, and a prime candidate is the Rujm Al Hinū (McGovern 1980: 55).

In October–November 1978 a geophysical survey (cesium magnetometer and resistivity survey) was conducted to get more information about this region in antiquity. The survey team documented 23 surface sherds, of which 19 were LB in date (5 MB IIC/LB IA, 3 LB IA, 3 LBII, 7 LB, and LBII/Iron IA) (McGovern 1980: 61). In addition to these sites, KHirbat Umm Ad Danānīr (Site 3) is a large Late Bronze Age settlement that is located on the northern side of Jabal Al Qaṣīr. McGovern stated that the site KHirbat Umm Ad Danānīr is important as a transitional site from the LB II to the Iron IA (McGovern 1980: 62).

The other Late Bronze Age site is Rujm Al Hīnū, located approximately 650 m southeast of the Jabal Al Hawwayah burial caves. The *rujm* consists of two buildings dated by Glueck (1939: 194) to the Iron Age. Nevertheless, the plan of the structure is similar to the ‘Ammān Airport Late Bronze Age Temple plan. McGovern (1980: 64) argued that the Rujm Al Hānu building was first erected during the Late Bronze Age.

The Iron Age II period is represented in the area by three sites: Rujm ‘Ayn Umm Ad Danānīr (Site 6), Al Qaṣīr (Site 7) dated to the Iron Age IIB–C, and Rujm Al Hāwī (Site 5), a very large construction measuring 50m by 30m on a small *tall ca.* 5 m high. Two circular towers (Rujm Al Malfūf) were built to the south of Rujm Al-Hawī dated to the Iron IIC (McGovern 1980: 64). The results of the Umm Ad Danānīr Region Explorations proved that there was a continuation of occupation at the Al Baq’ah Basin from the Late Bronze Age II to the Iron Age IA.

8. Ar Rummān Suvey, 1985

Within the framework of the Jabal Abū THawwāb excavation project, a survey of the regions adjacent to the site was undertaken in summer 1985. The

survey team visited 42 sites ranging in date from the Palaeolithic to modern periods. Four sites were attributed to the Late Bronze age: ‘Ayn Ra Al Mayita (houses), Rujm SHubayl (presence), Hawd Abū Ballānah 1 (village continuing into the Iron Age), and Abū Zibnī (houses). In addition, twenty sites were dated to the Iron Age: Jabal Abū THawwāb (presence), Ar Rummān North(?), KHirbat Abū THawwāb (presence), Rujm Shubayl (v), Jabal Shubayl I (presence), 6-Al Mastābah(?), ‘Ayn Al Karam (presence), Wādī az Zarqā’ (bridge)(?), Hawd Umm Al Jihāsh I(?) 10, Al ‘Adhmah (presence), ‘Ayn Safsafī (presence), Hawd Umm KHarrūbah (village continuation from LB to Iron), Hawd Abū Ballān II (presence), Wādī Ar Rummān West (presence), Umm Al Basātīn I(?), Wādī Dulānī Tal’at Ar Ruzz (presence from Iron Age and extends to the following periods), Abū Zibnī (houses), Hawd Umm Ṣahrīj I(?), Al Mashhūdiyyah(?) + Persian, and Abū ‘Udayy (Persian).

The results of the Ar Rummān survey proved the presence of four Late Bronze Age sites, one of which (Hawd Abū Ballānah 1) continued in occupation into the Iron Age. In addition, the survey showed that the area located between the Baq’ah Basin and the Wādī Az Zarqā’ was heavily occupied during the Iron Age (probably II rather than I) (see TABLE 1).

9. The ‘Ayn GHazāl Survey 1987

The Neolithic site ‘Ayn GHazāl is a major settlement located in the Wādī Az Zarqā’ Basin. During summer 1987 a survey was conducted in the vicinity of the site with the aim of correlating the Neolithic village with its surroundings and to document the range of human activities in this area. The surveyors visited six separate zones, four of which

were located very close to each other and the other two were situated to the north and east of the survey area. The survey team visited 81 sites, eleven of which were assigned to the Iron Age I and II. The Iron Age sites were well represented and showed a variety of types, such as towers and ceramic scatters. The complete absence of the Middle and Late Bronze Age sites is surprising.

Even though the surveyors published that pottery sherds belonging to the Iron Age I and II were found, they did not attribute those sherds to either sub-period. Thus, due to the lack of the Late Bronze Age and Iron Age I information, the author is not able to form an opinion concerning a transitional period of occupation between the end of the Late Bronze and the beginning of the Iron Age periods.

10. The Wādī Az Zarqā'/Wādī Ad Dulayl Archaeological Survey 1996–2001:

The Wādī Az Zarqā'/Wādī Ad Dulayl Archaeological Survey aimed at understanding the type and existence of human occupation and site distribution in the area under study which covers 144sq km. The surveying team registered 450 sites belonging to all periods ranging from the Lower Palaeolithic to the present.

One single site, namely Tuwayfriyya LB II settlement Site 87, has been assigned to the Late Bronze Age II. In addition, 10 more sites were identified either as Iron Age or Iron Age II. A number of new sites were founded in the Iron Age period such as Tall Al Bīrah (Site 5) “possible Ammonite”, KHirbat Al Jāmūs (Site 2) “an enclosure surrounding a central tower”, Site 45 “an agriculture settlement, lacking fortification”, KHirbat Ar Ruḥayl, and KHirbat Makhūl (Site 4). The results of the Wādī Az Zarqā'/Wādī Ad Dulayl Archaeolog-

ical Survey confirmed the deduction of the surveys conducted in the Ammon region which says that it witnessed fewer settlements during the LB and the Iron Age I compared to the Late Iron Age II period.

The First Half of the 21st Century

The Dayr 'Alla Regional Project Survey conducted in 2004 and 2005 is the only example that will be presented here. The research area covers 72 sq km in area and extends between Wādī Rājib in the north and the Wādī Az Zarqā' with Tall Dāmyā in the south. During the survey work the team visited eighteen sites located in the vicinity of the main Bronze–Iron Age site, Tall Dayr 'Allā (Kaptijin *et al.* 2005: 90–91). They recorded twelve LB sites: Tall Al Himmah; Tall 'Ammatā; Tall Al Qaws; KHirbat Al Buwayb; Tall Dayr 'Allā; Tall Qa'dān, Tall Abū Nijrah(s); Tall Al Mazār; Tall GHazālah, Tall KHArabah; Tall An Nukhayl South; and Katarat As Samrā I, III; and three were assigned to the Iron Age I: Tall Dayr 'Allā, Tall Al Mazār, and Tall Al 'Adiliyyah. Many LB sites continued to be settled into the Iron Age I.

These explorations and surveys were followed by several excavations conducted at Ammonite sites such as the 'Amman Citadel excavations in 1927, directed by G. Guidi and continued in 1929 to 1933 by R. Bartoccini (Yunker 1996: 294). Moreover, and during the 20th century, more excavations were continued on the 'Ammān Citadel such as by C. Bennett (1979), F. Zayadine (1973), and R. Dornemann (1983).

In addition to the 'Ammān Citadel, many other salvage and rescue excavations were conducted in other parts of modern 'Amman such as Jabal An Nuzhah, Al Jawfah, and Umm Udhaynah. Much other fieldwork was

conducted within the Ammonite Kingdom borders, e.g., Umm Ad Danānīr, Tall Sāfūt, Tall Sīrān, Tall Saḥāb, Tall Al ‘Umayrī, Tall Jāwā South, Tall Hīsbān, Junaynah, Abū Sayyah, Tall Dayr ‘Allā, and Tall Al Mazār.

Late Bronze Age archaeological remains, architecture, and objects were excavated at several settlements in the ‘Ammon region: the ‘Ammān Citadel, ‘Ammān Airport Temple, Saḥāb, Tall Al ‘Umayrī, and Al Baq‘ah Basin. In addition, nine Late Bronze Age sites were registered in the northeastern region of the Hīsbān/Madaba Plains Project, which included Tall Al ‘Umayrī West, Umm As Sarab, Jalāl, and Iktānū (Geraty *et al.* 1986: 125–126).

Excavations and Settlement Patterns in Ammon During the Late Bronze II/III and Iron Ages I–II (ca. 1400–539 BC)

During the 4th International Conference on the History and Archaeology of Jordan, held in 1989 at the Université Lumière-Lyon 2-France, Patrick E. McGovern argued that any reconstructions of the Late Bronze and Iron Age settlement patterns in Greater ‘Amman were full of obstacles and furthermore hypothetical. He added that the database at that time was limited and based on the published information from tomb groups and single period sites. Moreover, he mentioned that the Iron Age IB–C and IIA–B are problematic for the ‘Ammān region (McGovern 1989: 179). This assertion is no longer valid due to the fact that since then archaeological excavations have been conducted at several large settlements in the vicinity of ‘Ammān, such as Tall Al ‘Umayrī, Saḥāb, Al Lāhūn, and Al Baq‘ah Basin, which McGovern considered to be outside greater ‘Ammān. However, it has been published that Late Bronze Age/

early Iron Age pottery sherds were found at Rujm Al Hīnū East in the Al Baq‘ah Basin (McGovern 1980, 1983, 1986: 11–13).

The archaeological excavations conducted in 1972 at the site KHirbat Al Hajjār revealed that it was first occupied during the Iron Age I, 11–12th century BC. The excavator, Henry Thompson, argued that after the Iron Age I, the site witnessed a gap of occupation of around 400 hundred years and was then reoccupied in the Iron II period, the 6th–7th centuries BC (Thompson 1972: 62). Moreover, he claimed KHirbat Al Hajjār was one of a series of Ammonite fortresses guarding the capital city Rabbat-Ammon. TABLE 2 presents the major Late Bronze Age excavated sites in Ammon. This table shows that the sites KHirbat Umm Ad Danānīr, Al Lāhūn, Mādabā, Sāfūt, Saḥāb, and Tall Al ‘Umayrī yielded archaeological material that indicated there was a continuation of settlement in the ‘Ammān region from the end of the Late Bronze to the beginning of the Iron Age. In fact, it is only the sites Al Lāhūn and Tall Al ‘Umayrī and very probably Sāfūt that should be considered settlements, and Mādabā and Saḥāb were tombs.

In discussing the transitional period from the Late Bronze to the beginning of the Iron Age two factors should be studied. First, newcomers (the Sea People) migrated and settled in the southernmost part of the Palestinian coast. Second, it has been argued that during the second half of the 13th century BC, the Hebrews entered Jordan on their way to Palestine. In addition, the great civilizations of the Late Bronze Age began to fall in the ancient Near East towards the end of the 13th century BC (Albright 1975). The Hittite Empire declined, and the Nineteenth Egyptian Dynasty tottered to its

Table 2. Major Late Bronze Age excavated sites in 'Ammon.

Site Name	MB III	LB I	LB IIA	LB IIB	LB II/I1	I1	Remarks
'Ammān Airport				Temple (Cremation) Myc. Pottery			Harding 1958: 10–12; Hankey 1974; Hennessy 1989; Herr 1983 <i>Rescue excavations</i>
'Ammān Citadel	Chocolate on white	Chocolate on white			LBII B/ Iron 1		Bennett 1978; Dornemann 1983 <i>Excavations</i>
Al Baq'ah Caves + Umm Ad Danānīr Survey	5 MB IIC/ LBI A	Cave A 2. 3 LBI A,	Cave B3 Bichrome, 3 LBII	KHirbat Umm Ad Danānīr + Survey 7 LB,	Rujm Al-Hīnū East LBII/ Iron I A	Cave A4	McGovern 1980; 1983; McGovern et al. 1986; Kafafi 1977
Jabal Al Jawfah Al GHarbī/'Ammān		Tomb					Harding and Isserlin 1953 <i>Rescue excavation</i>
Jabal An Nuzhah/'Ammān				Tomb 2			Dajani 1966 <i>Rescue excavation</i>
Al Lāhūn				Houses and pottery	Houses Settlement with case-mate wall and a fortress	available	Homès-FredERICQ 1989 <i>Excavation</i>
Mādabā Tomb					Tomb	Tomb	Harding 1953; Harding and Isserlin 1953 <i>Rescue excavation</i>
Safūt					Pottery	?	Wimmer 1987: 281
Saḥāb		Pottery, Thutmose III	Pottery	Mycenaean Pottery	Tomb (Cave C)		Ibrahim 2016, vol. 2; Ibrahim 1974, 1975, 1987; Dajani 1970 <i>Excavation</i>
Tall Al 'Umayrī	Chocolate on White Glacis	Hiatus/ Gap?	Unoccupied (Geraty and others denied this and published that it was occupied from 1400 to 1225 BC) (Herr <i>et al.</i> 2000: 33).	Unoccupied until late in the LBII B ca. 1250 BC	Settlement and fortification Amorites?	Major house alterations	Herr 2000 <i>Excavation</i>

end. Therefore, some scholars assume that there was a flood of immigrants by the beginning of the 12th century BC to the Levant, including Jordan (Albright 1961: 113). To absorb this influx of migrants, we assume this must increase the number of settlements.

The information presented above shows that the published Late Bronze Age archaeological evidence from both excavations and surveys is limited, and, in many cases, the evidence does not correspond to permanent settlements. This invited the author to raise the following question: did those Late Bronze Age isolated temples, tombs, and *rujms* belong to a “nomadic” or “pastoral population”?

To answer, it might be argued that there are many similarities between the archaeological contents of the ‘Ammān burial assemblages and those uncovered at burials elsewhere in Jordan (Pella) and Palestine (e.g., Tall Ad Duwayr/Lachish and Megiddo/Tall Al Mutasallim) that were associated with large cities. This example could be also applied to the Ammon region where major Late Bronze Age–Early Iron Age sites were excavated such as Saḥāb, Tall Al ‘Umayrī, and Umm Ad Danānīr. In other words, the Late Bronze Age isolated buildings were associated with well-established urban centers. Furthermore, McGovern (1992: 180) proposed that small sedentary Late Bronze Age communities were established in the greater ‘Amman area and built around a larger city-state on the citadel.

As a matter of fact, the Saḥāb and Umm Ad Danānīr excavations produced the best examples of continuous sedentary occupation from the Late Bronze into the Iron Age (Ibrahim 2016). The Iron Age I remains are quite representative and include houses and storage caves. It has been mentioned that the Iron Age I towns were destroyed and

as a result the town witnessed a gap of occupation after which a smaller but well-planned settlement with a complex of pillared houses with rectangular rooms were built in the Iron IIC/Persian period (McGovern 1992: 181). The same story was repeated at other sites, such as Umm Ad Danānīr (McGovern 1989).

With regard to the Iron Age I settlement patterns in Ammon, information is also obtained from tomb groups. Iron Age burial caves were visible and inspected at Saḥāb (Dajani 1970; Ibrahim 1972; 1975) and in the Baq‘ah Valley (McGovern 1986). Nevertheless, the Iron Age II period towers, tombs, and *rujms* were encountered at the ‘Ammān Citadel, Jabal Al Jawfah, Jabal ‘Ammān, Al Muqabalayn, KHaldā, Umm Udhaynah, Abū Nuṣayr, and Saḥāb (McGovern 1992: 180) and many other sites in the Ammon region (Simmons and Kafafi 1992). Some were rectangular and others were rounded in plan. The rectangular ones remind us of the *Quadratbau* Late Bronze Age temples such as the ‘Ammān Airport/Mārkā and Al Mabrak temples. This means that there was a continuation in the type and technique of constructing those installations from the Late Bronze to the Iron Age. Moreover, it may be assumed that those functioned as installations belonging primarily to farming communities.

The archaeological excavations conducted at KHirbat Al Ḥajjār unearthed archaeological remains belonging to the Iron Age I and IIC/Persian. Three phases of occupation were assigned to the Iron Age I (Thompson 1977, 1972). A tower dated to the Iron IIC/Persian period has also been excavated.

To discuss the Late Bronze Age II–III settlement pattern, signs of the Iron Age are best shown by a few urban centers such as Saḥāb and Tall Al ‘Umayrī with

a large number of small, scattered villages correlated to them. The archaeological excavations and surveys proved that there was a retreat of the Iron II A–B settlements in certain sectors of Ammon which might be due to the poorly pottery chronology. The excavators of Tall Al ‘Umayrī (Herr *et al.* 2000: 34) argued based on the biblical narratives that the Amorites preceded the Ammonites in settling at Tall Al ‘Umayrī and its region during the Late Bronze Age Period II (*ca.* 1400–1225 BC), which needs more scientific proof.

The excavations at Tall Al ‘Umayrī yielded archaeological remains belonging to four phases and dated from the 13th century through the 11th century BC, thus belonging to the Late Bronze Age III and Iron Age I period (Herr *et al.* 2000). Herr (2001: 275) published that the LB III pottery vessel forms such as cooking pots and biconical jugs continued through the Iron Age I. Moreover, he argued that the main evidence of the Iron Age IA (Phase 2) is a new rampart which was built after the destruction of the earlier MB III one.

Therefore, although several LB III/Iron I sites have been excavated in the eastern side of the Jordan Valley, very little evidence has found on the Jordanian plateau. Herr considered the Iron Age I pottery assemblage excavated at Saḥāb to be typologically more advanced rather than Tall Al ‘Umayrī Phase 3 and that it should be dated later than this period. Thus, he claimed that the finds dated to the transitional period LB III/Iron Age I excavated at Tall Al ‘Umayrī must be considered as the first extensively excavated archaeological remains in this region of Jordan (Herr 2001: 280).

Conclusions

Over the past few decades, the archaeology and history of the Late Bronze Age and the beginning of the

early periods of the Iron Age of Ammon have been intensively enlightened by new discoveries. This resulted from several excavations such as ‘Amman Citadel, Al Lāhūn, Jāwah, Jalūl, Saḥāb, Tall Al ‘Umayrī, and Al Baq‘ah Valley in addition to many archaeological surveys conducted in the Mādabā Plains, Wādī Az Zarqā’ Basin, and greater ‘Ammān. As a result of a detailed scientific analysis of the conducted archaeological excavations and surveys we came to the conclusions below:

1. There is a continuation or an overlapping sequence between the Late Bronze and the early Iron Age periods. This is completely obvious at the major settlements (city-states) such as at Saḥāb, Tall Al ‘Umayrī, and the ‘Ammān Citadel.
2. It might be argued, despite the appearance of new pottery vessel types, that many of the Late Bronze Age forms continued in use during the Iron Age I. In addition, cultural continuity is also evident in the uninterrupted use of the same cemeteries (Tall As Sa‘īdiyyah) and settlement sites that did not produce any signs of destruction in the last phase of occupation of the Late Bronze Age (Dayr ‘Allā).
3. It has been published that towards the end of the Late Bronze Age there is evidence for a decline in precipitation (Horowitz 1978). This means that the Late Bronze Age city-state culture was hardly affected by this climatic change.
4. During the Late Bronze Age, Egyptian literary sources mention that the south of Jordan was occupied during this period by a group of nomadic people, namely the *Shasu*. Thus, it might be assumed that this transhumant pastoralist population had

- economic and even family ties to the Late Bronze Age/Early Iron Age urban centers in Jordan. In addition, there was another group of people moving all over the country during the 14th century BC, and mentioned in the Amarna letters, namely the *'Ap/biru*.
5. One of the Late Bronze Age city-states in Ammon was mentioned in the Amarna letters. The only Jordanian site mentioned in those letters is "Pella". This fact may indicate that the LB cities in central Jordan were always in peace together, first, and second, that they were completely subjugated under Egyptian control during the Late Bronze Age.
 6. The Late Bronze Age and the Iron I–IIA–B sites/settlements in Ammon are very low in number compared with the large number of the preceding period, the Iron Age IIC/Persian period.
 7. It might be deduced that, due to the climatic change, economic pressure threatened the delicate relationship between the urban centers and the transhumant pastoralists, resulting in a conflict between both. It is possible that this was followed by a movement of people from south to central Jordan (Ammon) (McGovern 1987: 268). This is only a hypothesis; it is of great probability that during the transitional period from the Late Bronze to the Iron Age the semi-nomads peacefully infiltrated into the urban centers.
 8. As is known, the Levant was subjugated by Egypt during the Late Bronze Age period (*ca.* 1550–1200), but after the collapse of the New Kingdom in Egypt this domination stopped, which gave the local communities the freedom to build their own states.
 9. As a result of merging between the people of the urban centers in the region located south of the Az Zarqā' River and the transhumant people of south Jordan, new political units known as the Ammonites, Moabites, and Edomites started to take over the power and political roles from the Egyptians.
 10. Based on the archaeological and literary evidence it took those political units a few centuries after the 12th century BC, perhaps until the 9th century BC, to build up solid sovereignties that were separated one from each other by natural borders (Wādī Az Zarqā', Wādī Al Mūjib, and Wādī Al Ḥasā).
 11. The Iron Age is defined by the use of iron for manufacturing tools and vessels. The earliest evidence of iron smelting in Jordan was encountered at Tall Al Ḥimmaḥ, 2km east of the Bronze–Iron Age site Tall Dayr 'Allā in the Jordan Valley. The obtained ¹⁴C dates and excavated pottery vessels at the site point to the 10th–9th centuries BC.
 12. It has been argued that the textual evidence about Ammon is minimal, which reflects its independence from foreign domination (Weippert 1979).

TABLES 3 and 4 help to present an idea concerning the origin of the Ammonites. Based upon the archaeological surveys and excavations the author deduces the following argument, which is that after the destruction of the Egyptian New Kingdom in *ca.* 1200 BC, climatic change took place in the south of the Levant. Those two factors influenced the economic, social, and political situation in this region. First of all, new immigrants arrived, and the local communities found themselves obliged to

Table 3. The cultural development in Jordan during the Bronze Age and Iron Age.

	LB III (ca. 1300–1200 BC)	Iron Age I (ca. 1200–1000 BC)	Iron II A-B ca. 1000–722 BC)	Iron III (ca. 722–586 BC)
Society	City-states	Rural (semi-nomads) villages	National states	National states
Governance	Egyptian domination	Chiefdoms + newcomers	Independent political units (vassal states of Assyria)	Independent political kingdoms (vassal states of Assyria)
Trade	Long-distance trade relationships (Egypt, Cyprus, and the Aegean Sea countries)	Local trade; no more sea trade Farming and nomadic communities	Trade + trade routes with the Arabian Peninsula Iron industry Agriculture	Flourishing local kingdoms
Written sources	Egyptian literary sources Local literary sources (Dayr 'Alla tablets)	Biblical texts	Assyrian literary sources Local literary sources (Bela'am, stamps)	Assyrian and Egyptian literary sources Local literary sources (Ammān citadel inscriptions, Sirān bottle and others)

Table 4. Iron Age settlement patterns and climatic changes in Jordan during the Iron Age.

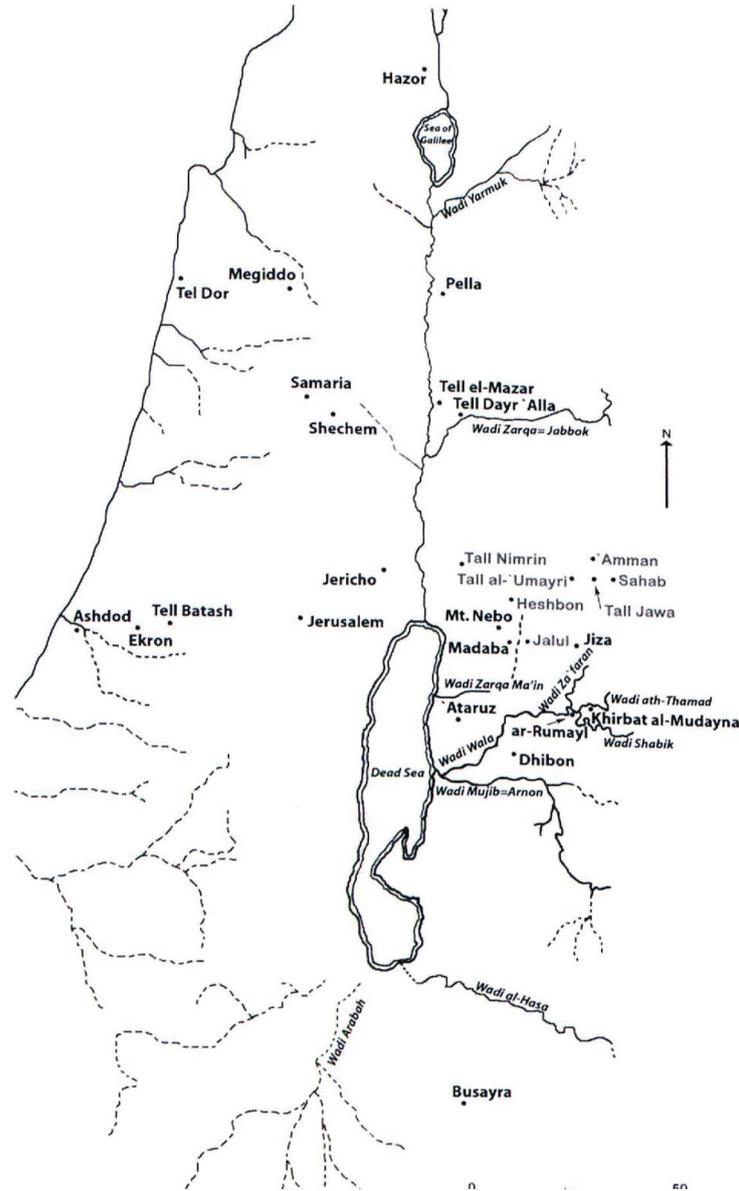
	LB III (ca. 1300–1200 BC)	Iron Age I (ca. 1200–1000 BC)	Iron Age II A-B ca. 1000–722 BC)	Iron III (ca. 722–586 BC)
Jordan Valley	Cities + towns (<i>Talls</i>) + temples + tombs	Continuation of LB III–Iron Age I cities	Cities + towns + villages	Cities + towns + villages
Plateau	Few cities + towns + temples + tombs <i>Shasu</i> (nomads)	Continuation of LB III–Iron I villages Anthropoid coffins	Cities + farming communities dominant (towers + <i>rujms</i>) + tombs	Cities + farming communities dominant (towers + <i>rujms</i>) + several <i>khirbahs</i>
Climate	Climate change	Stable climate	Stable climate	Stable climate

seek sources for living. Thus, some of them stayed as nomads and others converted their lifestyle, especially in the Jordanian plateau, by leaving their cities and founding villages in *wadis* or very close to main water sources. This climatic and economic shift led to a social change during the Iron Age I period. In addition, by the beginning of the 1st millennium the people of Jordan (Jordan Valley, Tall Al Himmah) started mining iron ore, which added value to the economy of this region. As a result, and

during the first half of the 1st millennium BC, the Ammonites became capable of establishing their independent political unit ruled by kings whose names were written on several inscriptions.

Acknowledgment

The author wants to present his sincere thanks to Katharina Schmidt for her encouragement and help in discussing the scientific opinions offered in this article.



1. Map showing the natural borders of the three kingdoms (adapted from Bienkowski 1992: fig. 1).

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