ÄGYPTEN UND ALTES TESTAMENT 114

"Now These Records are Ancient"

Studies in Ancient Near Eastern and Biblical History, Language and Culture in Honor of K. Lawson Younger, Jr.

Edited by
James K. Hoffmeier, Richard E. Averbeck,
J. Caleb Howard and Wolfgang Zwickel

Zaphon

“Now These Records are Ancient”

Studies in Ancient Near Eastern and Biblical
History, Language and Culture
in Honor of K. Lawson Younger, Jr.

Edited by
James K. Hoffmeier, Richard E. Averbeck,
J. Caleb Howard and Wolfgang Zwickel

ÄGYPTEN UND ALTES TESTAMENT

Studien zu Geschichte, Kultur und Religion Ägyptens und des Alten Testaments

Band 114

Gegründet von Manfred Görg

Herausgegeben von Stefan Jakob Wimmer und Wolfgang Zwickel

“Now These Records are Ancient”

Studies in Ancient Near Eastern and Biblical History, Language and Culture in Honor of K. Lawson Younger, Jr.

Edited by
James K. Hoffmeier, Richard E. Averbeck,
J. Caleb Howard and Wolfgang Zwickel

Zaphon
Münster
2022

Illustration auf dem Einband: Relief mit Darstellung König Barrākib und seines Schreibers, Sam'al (Sendschirli), Basalt, letztes Viertel 8. Jhd. v.Chr., Vorderasiatisches Museum Berlin, VA 2817, © Staatliche Museen zu Berlin – Vorderasiatisches Museum, Foto: Olaf M. Teßmer.

Ägypten und Altes Testament, Band 114

"Now These Records are Ancient". Studies in Ancient Near Eastern and Biblical History, Language and Culture in Honor of K. Lawson Younger, Jr.

Edited by James K. Hoffmeier, Richard E. Averbeck, J. Caleb Howard and Wolfgang Zwickel

© 2022 Zaphon, Enkingweg 36, Münster (www.zaphon.de)

All rights reserved. Printed in Germany. Printed on acid-free paper.

ISBN 978-3-96327-190-8 (Buch)

ISBN 978-3-96327-191-5 (E-Book)

ISSN 0720-9061

List of Contributions

The Buck Stops Here

Deer Antlers in Iron Age I Cultic Contexts at Tel Abel Beth Maacah and Their Implications

Scott Booth, Ariel Shatil, Nava Panitz-Cohen, Naama Yahalom-Mack,
Carroll Kobs and Robert A. Mullins

Abstract

This article focuses on two deer antlers recovered from Iron Age IB cultic contexts in Area A that date to the 11th and early 10th centuries B.C.E, and the possible implications they have for understanding cult and ritual related to the human-deer relationship in antiquity. We will first describe the find contexts of the antlers, then identify their osteological characteristics and the ensuing archaeological implications, and finally touch upon their possible significance from an ancient Near Eastern historical, cultural, and ritual perspective. We are honored to offer our contribution to this well-deserved Festschrift to honor Prof. Lawson K. Younger. His encouragement to undertake the excavations at Tel Abel Beth Maacah, as well as his excellent scholarship, serve as a guiding light and inspiration to us all.

"One hopes that excavations at the site will provide much needed insight."
(Lawson Younger 2016: 214, note 354)

Background: Location and History of Tel Abel Beth Maacah

Tell Abil el-Qameḥ is an imposing 10-hectare site on the northern border of modern Israel, at the northwestern corner of the expansive Huleh Valley, south of the gateway to Marj Iyyun leading to the Lebanese Bekaa. Dan is 6 km to the east and Hazor 30 km to the south. Tyre is 35 km due west on the Lebanese coast and Kamid el-Loz (ancient Kumidi) the same distance to the north. Damascus lies 70 km to the northeast as the crow flies (Fig. 1). The tell is adjacent to the perennially flowing Iyyon River, one of the four headwaters of the Jordan River, and is surrounded by arable land and numerous springs.

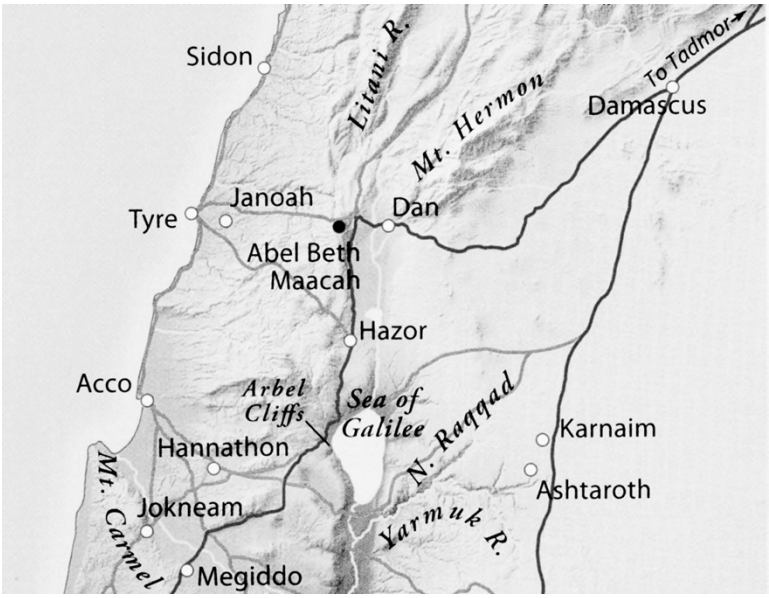

Fig. 1. Location map
(drawn by Ruhama Bonfil).

The identification of the tell with biblical Abel Beth-Maacah was largely based on two references to the site in 1 Kings 15:20 and 2 Kings 15:29. These two texts itemize cities along the north-south route of two military campaigns entering the Huleh Valley at Abel Beth-Maacah – the first by the Aramean king Ben-Hadad in the 9th century B.C.E. and the second by the Neo-Assyrian king Tiglath-pileser III in the 8th century.

Another factor in identifying the site is the preservation of "Abil" in the Arabic name of the small village of Abil el-Qameḥ that occupied the tell until 1948. A third biblical reference in 2 Samuel 20:14–22 narrates the escape of the Benjaminite Sheba ben Bichri to Abel Beth-Maacah after calling for rebellion against David. In the story, a local wise woman saved the town from destruction by declaring it loyal to Israel and having the rebel beheaded.

A few second millennium B.C.E. sources mention the site solely as "Abel". These include the late group of Execration Texts (18th century), Thutmose III's list of destroyed towns (15th century B.C.E.), and a possible reference in the Amarna letters (14th century B.C.E.) (Aharoni 1967: 131–33; Dever 1986: 211–13; Younger 2016: 213–14). We suspect that the suffix 'Beth-Maacah' was added later, most likely during Iron I when the city flourished, perhaps as the result of a takeover of the Canaanite town by a West Semitic tribal/kin-based group (Mazar 1961: 27; Dever 1986: 1; Younger 2016: 215). A 3rd century CE border stone found southwest of Ma`ayan Baruch, 2 km from the site, preserved the village name BEΘAXWN, which Kaplan (1966) identified with Abel Beth Maacah.

Fig. 2. Tel Abel Beth Maacah, looking east, with the Hermon mountain in the background (photo by Chandler Collins).

The site is comprised of a small, lofty upper tell in the north that descends gradually to a larger, more expansive lower city in the south (Fig. 2). Excavations began in 2013, and during the nine seasons so far, we have exposed rich architectural and artifactual remains from MB II to the late Persian/early Hellenistic period in five main excavation areas (Fig. 3).[1] There are also sporadic remains of the Roman-Byzantine and Early Islamic periods, as well as from the Mameluke period (Yahalom-Mack, Panitz-Cohen and Mullins 2018). An Ottoman period Arab village, Abil el-Qameḥ, occupied part of the tell until 1948. Surface surveys (Dever 1986; Panitz-Cohen, Mullins and Bonfil 2013) indicate that occupation began in EB II–III and continued, almost uninterruptedly, until modern times.[2]

The excavations also indicate how the town expanded and contracted in various periods. The MB IIB and Late Iron Age I occupations were the most robust and covered the entire mound, while the Iron IIA city (late 10th and 9th centuries B.C.E.) occupied a little more than half of the site. The latter was characterized by imposing public buildings, including a citadel complex in the north (Area B) and other well-built structures, including a large storeroom[3] (Area K) and numerous buildings and installations (Area A) in the center-east of the site (Fig. 4). No clear occupation layer or stratigraphic traces of an Assyrian destruction from the late 8th century B.C.E. have been found to date and limited remains attributed to late Iron IIC have been uncovered in the upper, northern part of the tell.

[1] The excavations are co-directed by Naama Yahalom-Mack and Nava Panitz-Cohen under the auspices of The Hebrew University of Jerusalem, and by Robert A. Mullins of Azusa Pacific University in Los Angeles. The excavations and research are supported by an Israel Science Foundation grant (2017–2020, grant no. 859/17) and by generous private donors. Licenses are granted by the Israel Antiquities Authority and the Israel Nature and Parks Authority. The supervisor of Area A was Fredrika Loew, assisted by Christin Johnson. The supervisor of the Stratum A2 cultic courtyard was Carroll Kobs, assisted by Jeff Kobs.

[2] An additional survey was carried out in December 2020 by Ido Wachtel of the Institute of Archaeology of the Hebrew University of Jerusalem.

[3] For a Hebrew inscription on one of the over-30 jars in this storehouse, see Yahalom-Mack et al. 2021.

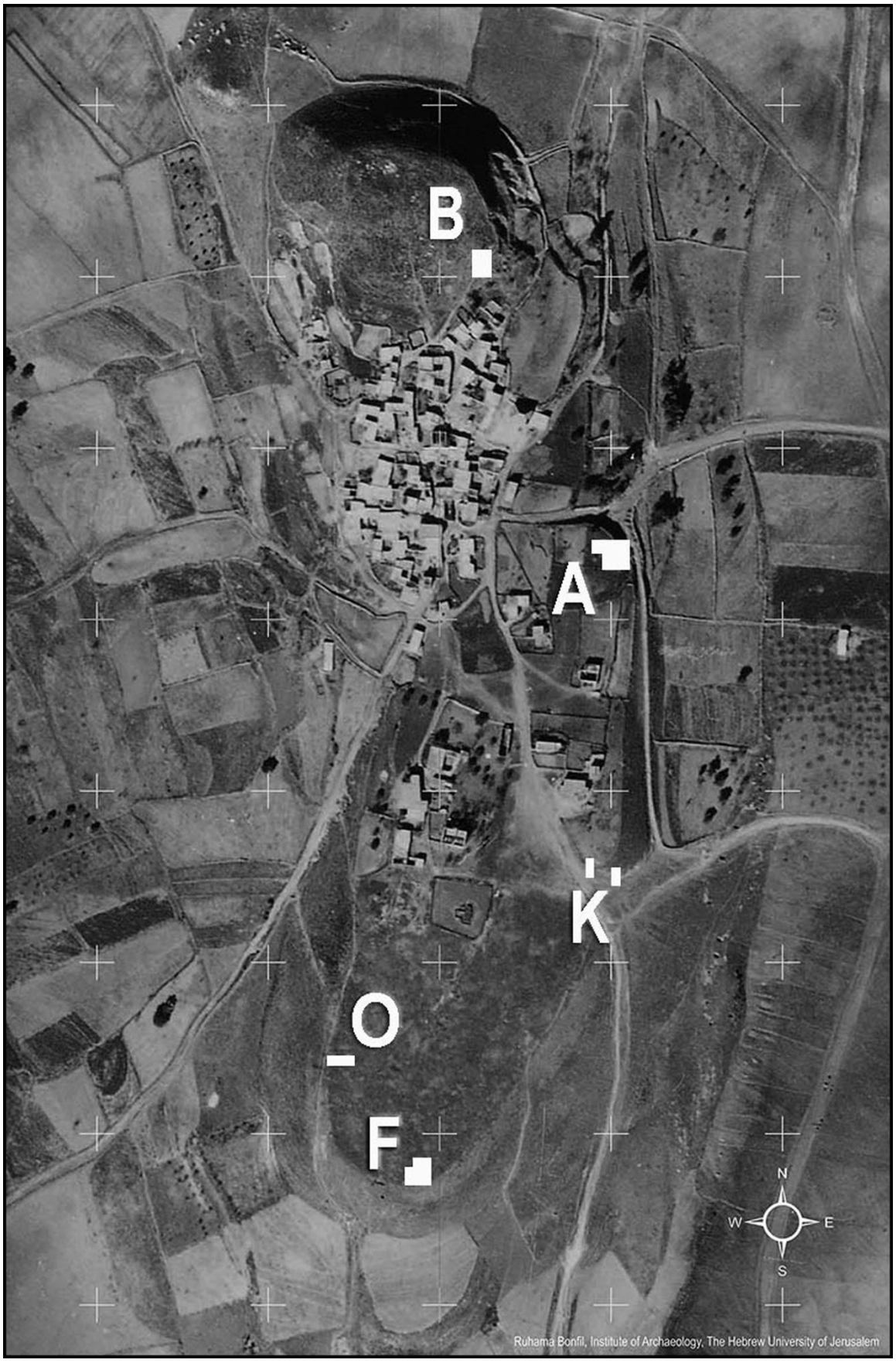

Fig. 3. The excavation areas marked on a 1945 aerial photo taken by the British Royal airforce (courtesy of the Archives of the Department of Geography, the Hebrew University of Jerusalem).

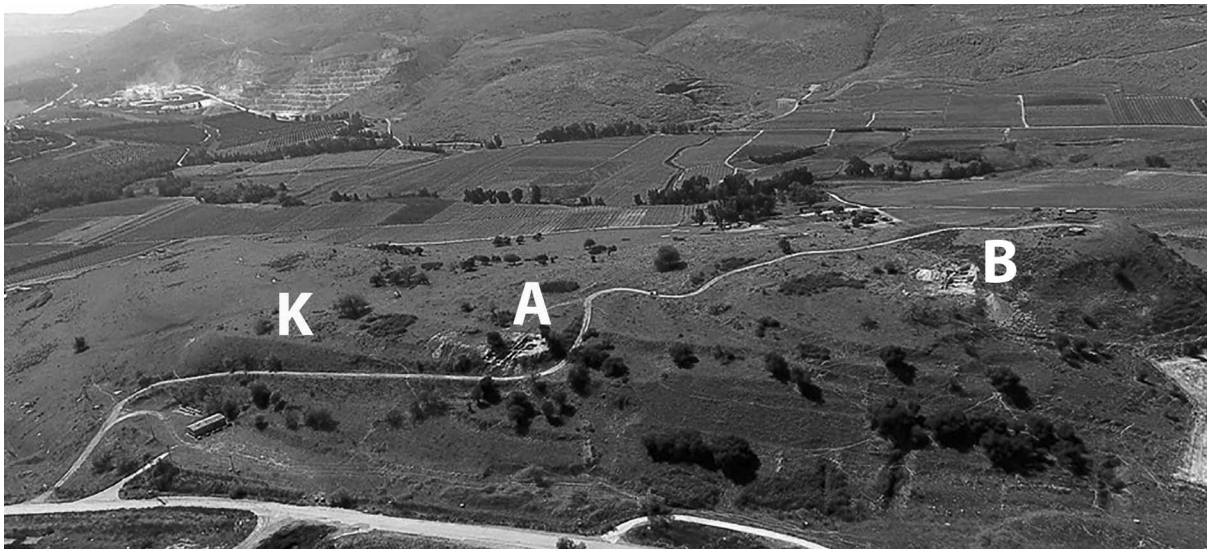

Fig. 4. View of the tell looking west, with excavation Areas A, B and K marked (photograph courtesy of: Mikraot Gedolot Haketer Project, www.mgketer.org).

Description of the Antler Find Contexts

The Stratum A4 Antler

A unique building that occupied most of the eastern part of Area A contained a number of rooms, two of which were completely excavated at the time of writing.[4] This structure was attributed to Stratum A4, the third layer of Iron I occupation which was reached only in this part of the excavation area to date. This building was violently destroyed and full of burnt debris, charcoal, ash and fallen bricks and stones; this destruction was radiocarbon dated to the 11th century B.C.E. The architecture and contents of this building led to its definition as a cultic structure (Fig. 5) (Yahalom-Mack, Panitz-Cohen and Mullins 2019). The northern space was enclosed by a wall with an extraordinary, rounded corner on the northwest, while the western wall incorporated two large monolithic stones identified as *maṣṣeboth.* Against the latter wall stood two ovens and a storage jar base containing ash, each fronted by a large flat stone (Fig. 6). In the eastern part of the space was a bench adjoining a short, wide, round-topped *maṣṣebah*. Nearby lay an equid burial in a pit, as well as the fragment of a small clay bull figurine and additional cult-related features. An opening in the southern wall that led to the next room contained an articulated dog skeleton.

The entranceway to the central room was flanked by two *maṣṣeboth*. The one on the west was a monolithic, flattened-faced limestone that was cut to an angle on one side, and in the niche formed by the cut, lay an upper grinding stone. Facing this stone, about half a meter to the south, was a semi-circular line of stones adjoined on the west by a roughly square contoured pile of stones that we deemed to be a *bamah*. The northern half of this room was paved with stones, while the southern half had a beaten-earth floor. The antler[5] was found on the earthen floor in the southeastern part of the room, just to the south of the stone semi-circle (Figs. 7–7a). Among the pottery in this building, recovered mainly from its southern part, were a collared-rim pithos, a krater in Canaanite style, cooking pots, pyxides, and flasks.

[4] The eastern part of this area is eroded down the slope and further compromised on the east and north by a modern dirt road. Yet, the eastern wall of one of the rooms was preserved so we can determine the east-west extent of the building.
[5] Reg. No. 31107, Locus 3108.

Fig. 5. Aerial view of two excavated rooms in the Stratum A4 cultic building; north is on the right (photo by R.A. Mullins).

Fig. 6. Detail of western end of northern room with masseboth in the wall and adjoining ovens and installation (photo by R.A. Mullins).

Fig. 7. Room with the semi-circle of stones facing a maṣṣebah, with a bamah adjoining them; location of antler find spot to the south of the stone semi-circle; looking west (photo by R.A. Mullins).

Fig. 7a. Antler from the Stratum A4 cultic building (after restoration) (photo by Tal Rogovski).

The Stratum A2 Antler

The latest Iron Age I occupation in Area A (Stratum A2) was characterized by a densely built, well-planned, public compound that included administrative/storage, industrial, and cultic functions (Fig. 8). These structures were destroyed in a severe fire evidenced by burnt and fallen bricks and considerable charcoal and ash; the destruction was radiocarbon dated to the 10th century B.C.E. A passageway leading into the compound from the north separated the eastern buildings from the western ones. The eastern ends of the former buildings were badly eroded (see note 4), so its preservation was partial. On the other hand, the western part of the complex was well preserved and contained rooms and courtyards with different functions. A room in the center of the excavated area contained a massive stone pavement, while the room to its west contained broken pithoi, a lamp-and-bowl foundation deposit, and an ivory seal in the burnt destruction debris. In the eastern part of the central area was a zone devoted to bronze and iron working, as evidenced by a complete pot bellows and other metallurgical remains (Yahalom-Mack, Panitz-Cohen and Mullins 2018: 152). The northeastern part contained a large space, apparently an open courtyard with a cultic function, based on its rich finds; among them was the deer antler.[6]

[6] Reg. No. 51270, Locus 5160.

This courtyard (Locus 5141) was bordered by walls on the east, west and south; the northern boundary is unknown due to the presence of an olive tree and a modern dirt road beyond it that prevented excavation here. As such, the space measures 7.5 meters from east to west and at least 5.3 meters from south to north. This broad span supports its identification as an open courtyard, since such an area could not have been easily roofed. Entrances to the space were identified in the southern and the western walls.

Fig. 8. Aerial view of Area A at the end of the 2019 excavation season (north on top) (photo by Alex Weigmann).

Fig. 9. Stratum A2 cultic courtyard 5141, note antler find spot in the upper right (photo from 3D model made by Alex Weigmann).

This open space contained a number of special features that were aligned and obviously used in tandem (Fig. 9) (Yahalom-Mack, Panitz-Cohen and Mullins 2018: 150–52; Yahalom-Mack and Panitz-Cohen 2019). Against the western wall was a unique, rectangular clay installation 70 cm high, 1 m wide, and protruding 60 cm from the wall. The clay was covered with three identifiable layers of thick mud plaster that joined seamlessly to the hard, white plaster that lined the wall itself. The top of this installation contained a shallow, sink-like basin divided into two by preset stones. There was a round drain opening in the northern

'sink', whose outlet is visible in the lower northern side. The installation, possibly to be defined as an altar, was surrounded by a low stone 'skirt' wall flanked on the north and south by two stone mortars (Fig. 10). A pottery cult stand lay near the southern mortar, found near a low brick bench along the southern wall (Fig. 11).

On a direct line to the east, approximately 1.5 meters away, were stacked stones that we identify as an offering table (see Figs. 9–10). Adjoining it on the east was a large upper basalt grinding stone. Slightly to the east of this were two elongated, roughly conical-shaped stones, one 1.8 m long and the other, with a fractured bottom, half its size; both lay prone on their flat sides, on a north-south axis. We have interpreted these two stones as *maṣṣeboth* that originally stood here or elsewhere, but were later laid down and reused to form a low partition between the western and eastern parts of the courtyard. They could have been originally positioned on their long side, especially since the base of the larger one was not straight. Alternatively, this may have been their original placement for use as work tables and/or a partition. Just to the southeast of these stones, a small bronze razor, with two small rivets located on the opposite side for its likely handle attachment, was found together with a goat horn and jawbone, as well as additional animal bones. Microscopic examination of the razor indicates that it had been covered with animal hair[7] and decorated with a delicate repousse pattern (Fig. 12).

A large mortar was set against the eastern wall of the courtyard on a direct line (east-west axis) with the mud-plastered "altar" and the stone offering table (see Fig. 9). Approximately one meter to the north of this mortar sat a large oven built on a raised step. In front of the oven was an extremely burnt area that contained an antler, found complete, yet broken, on the earthen floor (Figs. 13–15). Nearby were two hematite stones which appear to be weights, as well as a scoria scraper (Fig. 16); it has been suggested that the latter type of stone served for personal hygiene in cultic contexts (Rotem and Mazar 2020: 229).

The pottery assemblage recovered from this space included several large pithoi of the wavy-band type, found near the mud-plastered altar and cult stand, as well as cooking pots and a special spouted amphora (Figs. 17–18).

Fig. 10. Stratum A2 cultic courtyard 5141: mud-plastered altar, flanked by mortars and fronted by stone offering table; looking west (photo by R.A. Mullins).

[7] This material is currently being analyzed.

Fig. 11. Cult stand *in situ*, near the southern mortar (see Fig. 10); looking west (photo by R.A. Mullins).

Fig. 11a. Restored cult stand (restoration by Ora Mazar).

Fig. 12. Bronze razor and goat horn found in the southeastern part of the Stratum A2 cultic courtyard (photo by Tal Rogovski).

Fig. 13. The northeastern part of cultic courtyard 5141, where the antler was found (find spot marked with a circle); looking north (photo by R.A. Mullins).

Significantly, in the subsequent chronological phase, Stratum A1 dated to Iron IIA, lay a stone floor with a raised podium bearing an amphora containing 406 astragali bones (see Fig. 8, top left). Such a cache most likely played a role in the local divination practices (Susnow et al. 2021). Since the stone floor and its astragali hoard lay above and just west of the cultic courtyard containing the antler and other cultic paraphernalia, we think that there may have been continuity in the public ritual function of this area of the site from the late Iron Age I to Iron Age IIA.

Fig. 14. Close up of Stratum A2 antler *in situ* (photo by R.A. Mullins).

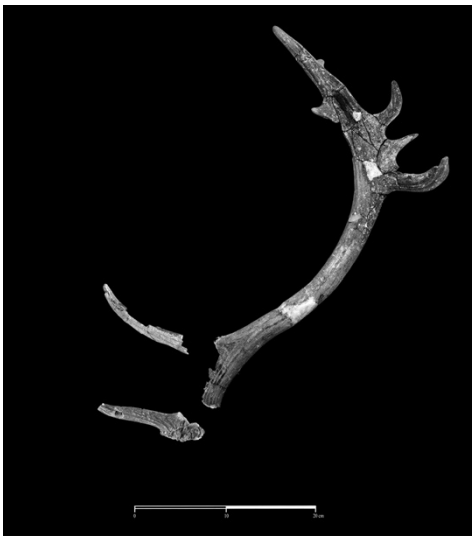

Fig. 15. Antler from the Stratum A2 cultic courtyard (after restoration) (photo by Tal Rogovski).

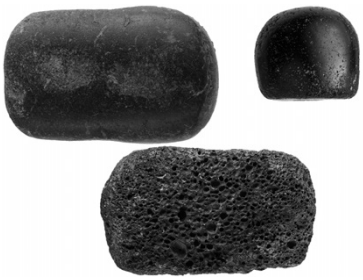

Fig. 16. Stone weights and a scoria scraper found near the Stratum A2 antler (photo by Tal Rogovski).

Fig. 17. Smashed wavy-band pithoi *in situ*, between the stone offering table and the southern mortar; looking west (photo by R.A. Mullins).

Fig. 18. Special spouted jug from the cultic courtyard (photo by Tal Rogovski).

The Antlers

What Are Antlers?

Antlers are bone outgrowths restricted to members of the deer family (Cervidae). Antlers grow only on male deer, or stags. They are objects of display and combat, and function to impress and compete for female mate choices.

Antlers grow each year from permanent protuberances on the frontal bones of the deer skull called pedicles. While growing, the antler is covered by a highly vascular skin tissue known as "velvet," which supplies the fast-growing bone with the oxygen and nutrients it requires. Once the antler reaches its full size, the blood supply is cut, causing the velvet skin to shrivel and fall, eventually "killing" the mature and fully grown antler. After the mating season, the antler finally detaches at its attachment with the pedicle, and sheds. The period it takes for antlers to fully form and then shed varies according to deer species and habitat conditions (Gilbert 2002: 24). The various parts of the antler, and the nomenclature used to describe them, are presented in Fig. 19, based on a reconstruction of the Stratum A2 antler.

A complete or nearly complete antler may provide a researcher with some data regarding the animal who once carried it. That the animal was a male deer is obvious, but the morphology of the antler can often point to a certain species. Antlers can also suggest the animal's age group. During their first 1 to 2 years, the male

fawns grow spike-like antlers. Branching of the antler usually appears at age 3, and each new set of antlers develops to become larger and more branched than the set from the previous year, that is, until after several cycles the antlers reach their maximum size and complexity. When not all of the antler is preserved, the diameter of the burr and the thickness of the bone cortex at the beam may suggest an age group.

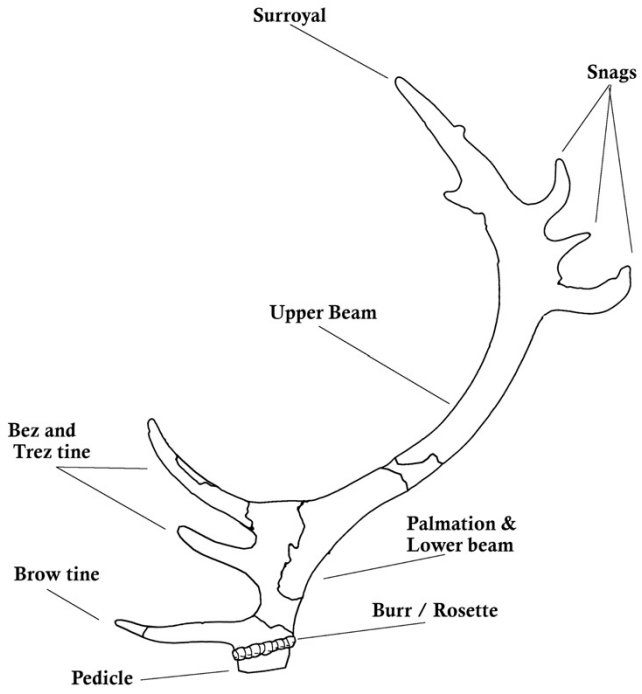

Fig. 19. Antler components.

Characteristics of the Abel Beth Maacah Antlers

The Stratum A4 antler (Fig. 7) is a large fragment of a lower beam with a marked palmation that develops to a very large and prominent bez tine. The start of what could be a trez tine or an anterior tine is visible at the top of the fragment. It seems that the base of the lower beam was chopped off just above the burr, which is missing. It is therefore not possible to say whether the antler is a shed or not. The palmation of the lower beam identifies the antler as that of the Mesopotamian fallow deer. The size and thickness of the antler's lower beam, its palmation, the very developed bez tine, possibly united with a trez tine, all point to a complex and developed antler of an adult stag.

The Stratum A2 antler was found complete *in situ* (Figs. 14–15), but removing it from the soil proved to be extremely difficult. It was painstakingly reconstructed in the Hebrew University laboratories.[8] Based on the preserved basilar fragment which consists of the burr and the brow tine, the antler is a shed. Part of the lower beam is missing, but the breakage scars are fresh, so we assume the missing parts were just too fragmentary to enable their collection from the field. The long upper beam was preserved almost whole, including three developed snags. A palmation of the lower beam is visible at the bottom of the main fragment, which identifies the antler as that of a Mesopotamian fallow deer. A single tine, which could not be connected to the rest of the antler, is probably a bez or trez tine. The size of the antler's burr, the long, rounded upper beam with its few snags, and the relatively small palmation of the lower beam suggests the antler belonged to a sub-adult stag.

The antlers do not seem weathered, but they were found extremely fragmented. Some fragments, especially of the A4 antler, were located only post-excavation in the fauna baskets. The antlers also exhibit some charred (black) and even calcinated (gray to bluish-white) surfaces. This suggest they were exposed to fire,

[8] We thank Ariel Shatil who restored the antler, Gali Beiner for her professional guidance and help in preserving the fragments, and Mimi Lavi, director of the Institute of Archaeology Conservation Lab, for completing the final stages of the restoration work.

but they do not seem to have been intentionally and evenly burnt, thus it is likely that they were only exposed to the fires when their respective complex was destroyed.[9]

The Distribution of Deer in the Ancient Near East

Three deer species formerly existed in Israel and the Near East. The Mesopotamian fallow deer (Dama *mesopotamica*) was extant throughout the Near East from Iran to Anatolia, covering the entire Fertile Crescent, including Syria and Israel. Another species of fallow deer, the European fallow deer (Dama *dama*), slightly smaller than its Mesopotamian counterpart, seems to have had its southernmost extent in southeastern Anatolia (but see Ferguson 1985 for possible evidence of its existence in northern Israel during the Late Bronze Age). Red deer (Cervus *elaphus*), the largest deer in the region, was probably always rare in Israel and more common in northern Syria and Anatolia. The smallest deer was the roe deer (Caprelus *caprelus*), whose southernmost presence also reached the southern Levant, and extended north to Syria, Anatolia and Iran. In Israel, all three deer species, which preferred a woodland habitat, had a more or less similar distribution throughout the Galilee, the coastal span, and the central hilly region of Judea and Samaria. After the Iron Age, their distribution range shrank to the wooded, northern parts of the country. While the red deer probably became extinct in the Middle Ages, the fallow and the roe survived until the introduction of firearms, which expedited their extinction in the region at the start of the 20th century (Tsahar et al. 2009).

Deer and Antlers in Archaeological Assemblages

Since the advent of animal domestication in the Pre-Pottery Neolithic period, bones of domesticated animals form the dominant portion of zooarchaeological assemblages, while the contribution of wild-game bones dwindles drastically. From the Chalcolithic to the beginning of the Classical periods, the proportion of wild ungulates in zooarchaeological assemblages (including all three deer species mentioned above) is relatively stable and ranges between 3.5% to 4% of the total number of identified specimens (NISP) (Tsahar et al. 2009: Fig. 2).

Fallow deer and gazelle (Gazella *sp.*) are the two most-common wild ungulates found in archaeological assemblages from all periods. The two other deer species occur in very small frequencies. Tsahar et al. (2009: Fig. 3) have shown that in the late prehistoric periods (Natufian, Neolithic and Chalcolithic), fallow deer comprised less than 10% of wild ungulate bone assemblages, while gazelle bones formed about 65–85% of these assemblages. In the Bronze Age, this trend began to change and fallow-deer bones comprised between 25% of wild ungulates in the Early Bronze Age, to 45% in the Iron Age, and reaching 55% in the Persian period. As the contribution of fallow deer to the bone assemblages of wild-game animals rises, that of gazelle shrinks.

An explanation for the constant increase of deer bones in the Bronze and Iron Ages assemblages of wild game could be that hunting was practiced less for subsistence and more for sport and prestige. Because of its larger size, shyness, and impressive male antlers, the deer was a more-prestigious target for the hunt then the smaller gazelle. This explanation is, in fact, the most-common interpretation for deer bones in almost any Bronze and Iron Age site. Indeed, deer bones were shown to be more common in contexts associated with the Bronze and Iron Age elites (Marom and Zuckerman 2012; Sapir-Hen et al. 2016)

Another explanation for this trend in the Bronze and Iron Age assemblages is that the gazelle had to compete with herding and agricultural expansion over its preferred habitat, namely open grasslands, which led to population decline. It is possible that, at the same time, the forested habitats preferred by deer were less harmed (Bartosiewicz and Lisk 2018: 287). A third explanation expands on the former one: the same agricultural fields and herding meadows which shrank the natural habitat of the gazelle, attracted the larger

[9] It was considered that possibly a porcupine, whose burrow can be seen in Fig. 13, just below (left of) the excavated oven, dragged the A2 antler to where it was later excavated. However, deer went extinct in Israel at the start of the 20th century, and it is extremely unlikely that a modern porcupine would have found a fresh antler to chew on. Second, the antlers from A2, as well as that from A4, do not exhibit any sign of rodent gnawing or teeth punctures. Third, the fact that the antlers are burnt suggests they were deposited in the ground when the contexts around them burnt down, a conflagration well dated by radiocarbon for both contexts.

deer who might have become an unwanted pest for the farmers. This phenomenon occurs even today, whereby some of the reintroduced wild fallow deer in Israel are drawn to cultivated fields and orchards, and will occasionally mingle with herds of cattle for safety and security in numbers. Such behavior, though, might stem from the fact that modern, reintroduced deer are not yet fully afraid of human contact.

The Problem of Deer Antlers in Archaeological Research

As noted above, since antlers are shed annually, one does not have to kill a deer to obtain its antlers. Moreover, the existence of antlers alone in an archaeological context does not necessarily imply hunting of the animal. If the archaeological antler can be shown to be a shed, and if this can be demonstrated by examining the proximal end of the specimen where the bur separates from the pedicle, then no animal was slaughtered. However, it does imply certain activities involving the antler and the stag that carried it.

When one sets out to study antlers in the archaeology of Israel and the region, we sometimes encounter a lack of knowledge and often, a limited collection of helpful data regarding this special zooarchaeological element. First, and especially in the old field reports when no zooarchaeologists were involved in research and publication, there is some confusion between horns and antlers. Phrases like "stag horns" or "deer horns" are a recurring mistake. According to the excavators at Tel Kedesh, a site no more than 20 km southwest of Abel Beth Maacah, a complete "ibex antler" was found on an Iron Age I floor (Stern and Beit Arieh 1979: 3).[10] Such phrases leave us wondering whether it was actually bovid horns or cervid antlers that were found. Objects carved out of antler may be misidentified as ivory or bone, and even when correctly identified as antler, the word "horn" may be used instead of the correct term. This can be due in part to terminology since Hebrew uses the same word for both antler and horn – *krn*.

The bones of wild animals form only a small portion of the faunal assemblages of archaeological sites, and even if a significant percentage of the wild-animal bones are of deer, their contribution to the overall fauna assemblage is still very small. In many zooarchaeological reports where deer remains are recorded separately and not grouped into the vague category of "other", there is often only numeric data which signifies the abundance of deer remains in the assemblage (e.g., Greer, Fulton and Wapnish 2019), yet it does not confirm or negate the occurrence of antlers or, in fact, of any other deer element at the site. In other cases, where body-parts distribution is recorded, antlers, if any were identified, may be grouped into the category of cranial or head elements (together with skull bones, teeth, mandibles, etc.); yet, whether antlers occur in the assemblage or not still remains an unknown. This simple lack of data leaves us wondering whether antlers were found and counted among the deer bones, or if only bones were found, and antlers are completely missing from the site. This is an important bit of data that has some importance for understanding human-deer relationship – if deer bones are found, but antlers (or skull bones with pedicles) are completely missing from the assemblage, this may be a clue that only female deer were hunted, while stags were left unharmed. Alternatively, it may suggest that the antlers were somehow processed, and hence they are missing from the zooarchaeological assemblage (but should probably appear in the worked-bones assemblages). An opposite case, of many antlers and almost no bones, may suggest an organized collection of sheds.

When antlers are specifically mentioned, often because one was found complete, or because they were the only deer element found, there is often no mention of some critical data that might provide better understanding. Is it possible to say whether the antler is a shed or from a massacred animal? What antler parts were found (bur, beam, tines?) and what is their size? All of this information can provide additional clues about hunting or gathering strategies, such as the sex and age of animals hunted or the preferred antler size of collected sheds.

A good example for better understanding human-deer relations as a result of better data collection and documentation may be gained by examining faunal data published in the Tel Reḥov excavation reports, where 35 fallow-deer elements were identified in Iron Age II contexts. The authors did not fail to mention

[10] It should be noted that while deer have antlers, bovids (cattle, goats, sheep and antelopes) have horns. Horns consist of a core sheathed by a layer of keratin and are usually never shed. The Nubian Ibex, native to Israel, lives in a rough, dry and cliffy desert environment. The horns of males can reach 1 m long. Thus, finding an "ibex antler" at Tel Kedesh in the Upper Galilee is impossible on more than one level.

that nearly half of these were, in fact, antlers, found in both domestic and cultic contexts (Areas C and E) (Tamar, Marom and Raban-Gerstel 2020: 498, Table 49.2; 511; Marom 2020: 625). Five antlers are also recorded as burnt. However, the authors failed to mention if any of these were shed or came from killed male deer. One of the present authors (A.S) examined 51 antlers from Tel Reḥov (those that figured in the above-quoted study and a few additional examples), finding that ten were basilar fragments, and all, except one of the latter, were shed antlers. Thus, the conclusion that the deer elements from Iron Age II Tel Reḥov signify access to choice hunted meaty chunks by the elite residents of Reḥov Area C, as concluded by Marom (2020: 579), although not incorrect, ignores the fact that half of the deer elements are antlers and not meat-carrying elements, and that nine of the ten basilar antler parts show that no deer was killed in order to obtain the antlers.

Another case is presented at Tel Dor in the Bronze and Iron Age phases (Area G, Phases 6–12). Nearly half of the fallow-deer remains are antler fragments but, according to the zooarchaeologists, evidence for shed fallow-deer antlers is missing (Bartosiewicz and Lisk 2018: 289, Table 27.10). The authors do not mention whether antlers still attached to the frontal skull bone do exist, but at least one can be seen in a photo of the so-called "Antler Room" (Gilboa, Sharon and Zorn 2014: Fig.14). A shed antler of a red deer was found, however, in a different area at the site (Area D); it should also be noted that all antlers were marked as possibly shed (Bartosiewicz and Lisk 2018: 296–300; Tables 27.14–27.18). Based on the paucity of proven sheds, lack of industry-related finds, and complete antler tools, and because of the palmated shape of the fallow-deer antler, which is "considered relatively poor raw material", the authors concluded that antler-tool manufacture was not popular at Tel Dor in the Iron Age (Bartosiewicz and Lisk 2018: 289), and that the antlers at the site are the remains of hunted individuals. In our opinion, it seems that the fact that 25 of the 56 identified deer remains (NISP) found at Tel Dor in Area G are antlers is enough to suppose that these elements had an economic, social, symbolic or other significance; rather than just being a "by-product" of deer hunting, they were likely sought after and collected, whether by massacring stags or by collecting sheds.

The Social and Symbolic Role of Deer and Antlers

In the following sections of this article, we aim to examine archaeological, social, and symbolical contexts in which antlers may appear or function. Before doing that, there are two basic principles that we feel the need to set and clarify. The first, regarding the archaeological context, and the second, with regards to the symbolic:

(1) Antlers in archaeological contexts are always anthropogenic. Whether they are the products of butchering a deer or are intentionally collected and carried, antlers were brought to the site by human agency because they have a value, either economic or symbolic or both. There certainly can be exceptions to that rule, for example, caves that might have been used by carnivores as burrows after humans had left them, but these contexts need to be convincingly demonstrated by taphonomic and post-depositional criteria.

(2) You can physically separate the antler from the stag with an axe, but symbolically, they are inseparable. Antlers are synecdochic to deer. Because the crown of antlers on a deer head is so majestic and impressive, everything the stag represents – its symbolic power and significance – is encapsulated in the antlers. Thus, when we look for the role of antlers in social stratification, economy, religion and ritual we should not separate it from the role of the deer.

The exact time when the antlers of a deer detach from the skull falls within a very short time frame following the rut (mating) season. This is usually in February for the Mesopotamian fallow deer, but may vary based on geography, weather, nutrition, and the general health of the animal. The shed antlers, rich in minerals and nutrients, are quickly found by wild animals such as canines, rodents, and even deer, who gnaw and chew on them. If a community's need for antlers is only sporadic, then antler collection may be left for chance finds. However, if many antlers are required and used, people must be aware of the behavior and movements of the herds that lived around them and follow the male stags closely. This would have created some level of intimacy between humans and the deer around them. The life history and behavior of herds, and most certainly the stags, could have been followed and well known.

Deer in Ancient Art

Although an exhaustive survey of deer in the art of the Levant is beyond the scope of this paper, it should be noted that together with the increase of deer in the wild-game animal bone assemblages in Bronze and Iron Age, there was also a significant rise in the appearance of these animals in artistic media. Although its appearance is relatively rare, the stag appears on painted pottery, sometimes with religious connotation of the vessel or the context it was found e.g., Tel Dan (Biran 1986: Fig. 3), the famous Lachish ewer (Tufnell, Inge and Harding 1940: Pl. 60:3), a stand from Tel Afis (Venturi 1998: Fig.4:7), and a cult stand from Shiloh (Finkelstein et. al. 1985: Pl.19:1). Rare and exceptional are prestigious gold or silver items, with the stag taking a prominent place in the composition, such as a diadem with a stag protome from the Hyksos period (Arnold 1995: 15). Rows of recumbent stags was a common motif on Middle Bronze Age seals of the green-jasper workshop style (e.g., Kopetzky and Bietak 2016: Figs. 3, 9, 13), and the stag was one of the most-common motifs on the Mitannian seals of the Late Bronze Age (e.g., Ornan and Peri 2017: Figs. 9.2., 9.5–9.6, 9.10–9.11, 9.16–9.20). It also appears quite often on Early Iron Age seals, especially in the north (e.g., Meyer 2008: 258–62, Abb. 124–25), and was a well-known and recurring motif among the Iron Age ivories of the ancient Near East (e.g., Barnett 1982: Pl. 87:e–f).

The human-deer relationship, as the relationship between humans and any other animal, is not all about hunting and herding. The social and symbolic values of animals in general and, of course, of deer, may often be of equal or even greater value than their worth as staple food. In the Hebrew bible, the leaping deer is a metaphor for love (Proverbs 5:18–19; Songs 3:5), agility and grace, and the beauty of nature (Gen 49:21; Songs 2:8–9; Isa 35:6). It is not surprising, then, that the leaping deer and the grazing/drinking deer (Psalms 42:2) also find their way into various media of art (e.g., inter alia, Riede 2002: Abb. 5–6). Outside the Hebrew Bible, from at least Ur III to Neo-Assyrian times, Enki was associated with the "Stag of the Abzu" (e.g., "Enki and the World Order" lines 107, 115, 152, 170 [https://etcsl.orinst.ox.ac.uk/section1/c113.htm]; a Neo-Assyrian incantation against a ghost [Scurlock 2006: 226, no. 21]). Similarly, an Old Babylonian incantation refers to "Ea the stag" (*é-a lu-li-mu-um*; George 2016: 117, no.51 obv 6). And "Aššurbanipal's Hymn to Ištar of Nineveh" opens by referring to her as "O palm tree, daughter of Nineveh, stag of the lands" (*a-a-li* KUR.KUR.MEŠ; Livingstone 1983: 18).

Yet, the relationship between art and animals is complex. People depict animals because they are food for thought, rather than just food (Russell 2012: 14). What exactly motivated the artists and their consumers to depict the deer or stag? As we have shown above, the deer's symbolic value was probably not tied to its subsistence role, which was always minor, but more likely to other attributes bestowed upon them by humans: swiftness, agility, grace and the beauty of the wilderness have already been mentioned above, but other attributes might have been granted to stags by their physical features, their power, and the danger they may pose. Deer, being one of the largest wild-game animals in the region, would have been a high-prestige hunt, the main dish at feasts, and possibly, a prestigious sacrificial victim. Hunting in the Bronze and Iron Age was a prestigious activity, limited to the elite of society and thus, access to deer and to their symbolic power might have been restricted and, by exclusion, helped to form the social division between common and elite. Lam 1:6 may show the metaphorical connection of deer and nobility by an antithesis, comparing the princes deported from Judea to powerless stags who lost their pastures. The Akkadian texts mentioned above support this.

Selected Archaeological Contexts with Deer Antlers

Domestic Contexts

Complete antlers in what appear to be domestic contexts are known from early periods, such as the Pottery Neolithic Stratum IX at Tell Te'o, where two fallow-deer antlers, one nearly complete, the other a large fragment, were recovered in a pit (Eisenberg, Gopher and Greenberg 2001: 20–23, Fig. 3.5; Kolska Horwitz 2001a: 182, Fig. 13.5; based on this figure, the complete antler was from a massacred deer), or the EB II broad-room building 115-152 at Tel Dalit Stratum II, where a complete fallow-deer antler was found on the floor (Gophna 1996: 39–41, Figs. 18–19; based on the photographs, it was possibly a shed antler).

The Hebrew University of Jerusalem excavations at Yoqne‘am revealed fortification systems and dwellings from the Middle and Late Bronze Ages. On a Middle Bronze Age floor in one of these dwellings, a nearly complete shed antler of an adult fallow deer was found (Kolska Horwitz et al. 2005: 396; Livneh and Ben-Tor 2005: Fig.II.13). Antler fragments were also found in dwellings of the Late Bronze and Iron Ages. Altogether, 20 antler fragments were recorded in Bronze and Iron Age Yoqne‘am dwellings. They include a single Roe deer antler base, and the rest are tines, beams and burrs that belong to fallow deer. Several of the Iron Age antler pieces at Yoqne‘am exhibit perforations, cut marks and/or other modifications, suggesting that antlers were used for the manufacture of artifacts (Kolska Horwitz et al. 2005: 399). At nearby Tel Qashish, fallow-deer antler fragments were also found in dwellings, including shed basilar fragments from EB III and LB II (Kolska Horwitz 2003: 434)

Although worked antler pieces have been recovered from Tel Yoqne‘am, Tel Qashish, the Iron Age fort at Ḥorbat Rosh Zayit in the Lower Galilee (Horwitz 2000), and a few other sites, in general, antler working seems to have been rare at Bronze and Iron Age sites in Israel (Kolska Horwitz et al. 2005: 399; Bartosiewicz and Lisk 2018: 289). Tel Reḥov has proved to be an exception in this regard, as more than 50 pieces in different stages of tool production were found, including shed basilar parts with sawn surfaces, waste pieces and preforms. The finished tools included spindle whorls, spindle, spatula, and several types of handles (Shatil 2020).

An interesting case, already mentioned above, is the “Antler Room” at Dor. An unusually high proportion of deer and gazelle bones, alongside a complete (possibly massacred) fallow-deer antler, were found in a primary assemblage in this room. The same context, as well as the adjacent rooms, also yielded a few bones of fox, badger, domestic dog, and human. Also found was a concentrations of ceramic tableware. The excavators had interpreted this room as a “gathering of men”, a locus of male activity that included feasting, drinking, games and display of trophies (Gilboa, Sharon and Zorn 2014: 65).

Mortuary Contexts

Despite the fact that one of the world’s earliest example of a burial offering is a pair of massacred fallow-deer antlers, intentionally deposited in a Mousterian child burial at the Qafzeh Cave in Israel (Vandermeersch and Bar-Yosef 2019: 267–68, Fig. 8), antlers as mortuary furnishings appear only rarely and sporadically in the Levant.

A number of Near Eastern textual sources from the Bronze Age, and later, provide evidence that the practice of sacrificing or otherwise making offerings of food and drink to the dead existed in antiquity (Lev-Tov and Maher 2001: 91). Despite the fact that wild animals are not mentioned in the biblical texts as accepted offerings, in the Ugaritic Ba‘al cycle, wild game, including deer, is sacrificed as part of the mourning ritual for the death of Ba‘al (*CTA* 6 i 24; translation in Pardee 2003: 286).[11]

Archaeological evidence in the form of wild-animal bones from tombs seems to generally agree with the texts, although they appear in these contexts in extremely small quantities (Kolska Horwitz 2001b; Lev-Tov and Maher 2001). The paucity of evidence includes a single fallow-deer antler fragment found in Intermediate Bronze Age Tomb E2 at Jebel Qa‘aqir (Kolska Horwitz 1987: 252), a few deer bones from MB II tombs at Tel Dan (Kolska Horwitz 1996), a worked antler and two red-deer bones in pit burials from MB II–LB I at Megiddo (Sapir-Hen, Martin and Finkelstein 2017: 1053). Fragments of a deer antler were found in the Mycenean tomb at Tel Dan (Kolska Horwitz 2002: 219), which also contained what is possibly the largest Bronze Age assemblage of antler-made objects in Israel, including whorls, inlays and duck-shaped box parts (Biran and Ben-Dov 2002). Cut marks are visible on the base of the antler in the tomb and can probably be associated with its removal from the skull of a killed dear (Kolska Horwitz 2002: 219). On the floor of a room to the east of the Mycenaean Tomb at Dan, a complete antler of a Persian fallow deer was found (Biran and Ben-Dov 2002: Fig. 2.27), although its stratigraphic position may indicate that this room and the tomb were unrelated.

[11] This is a difficult passage and caution is warranted. Among the difficulties Pardee notes are (1) the verb *ṯbḫ* is used, not the usual *ḏbḥ*; (2) the translation “as a funerary offering” for *kgmn* is a best guess; (3) wild game is never found in the ritual texts at Ugarit (Pardee 2003: 268–69, n. 242).

Public or Communal Contexts

At the Area M3 administrative palace at Canaanite Hazor (LB IIB), a complete fallow-deer antler was found in the westernmost of four vat-like installations flanking both sides of a monumental staircase leading from the northern courtyard to the entrance hall (Bechar and Ben-Tor 2018: Fig. 2). The antler was burnt and could not be recovered. In a photograph published on the excavation's social media page, it appears to have been a well-developed antler from a massacred, adult fallow deer. It can be speculated that the antler was not burnt intentionally, as it was found in the Late Bronze destruction layer. It was originally either kept in the installation or was attached to the wall above it. The significance of the function of the antler, or of the installations in which it was found, is unclear (Bechar and Ben-Tor 2018).

Faunal material at et-Tell/Bethsaida on the northern shore of the Sea of Galilee indicates that the inhabitants utilized sheep, goats, cattle, pigs, fallow deer, gazelle and catfish for food. At the Iron Age II gate complex, which includes the high place with the famous basalt, bull-head stele, 6% of the NISP were of fallow deer (Fisher 2005: 46). Most of the deer remains were concentrated in the paved courtyard outside the gate, both at the foot of the high place and in the high place itself. Although antlers are not specifically mentioned, in the latter context, four of the five deer bones are cranial elements, and they compose almost a third of all deer bones at the gate complex (Fisher 2005: Tables 3–7). Although the gate area at the site includes the high place and other cultic features, such as an offering basin and other stele, the gate and its piazza were likely used chiefly for secular functions, such as trade, taxation, judiciary actions, and exchange of information.

Yet another city gate with antlers found in its destruction layer is the LB Ramesses gate at Jaffa, where antlers from at least 32 deers were found. These antlers were both whole and cut, found along with decorative ivory inlays, seeds and pottery vessels. These finds may show the role of the gate as a place for trade and exchange (Burke et al. 2017).

Cult and Ritual Contexts

The Iron Age I site at Mt. Ebal poses a unique picture regarding deer remains in the faunal assemblages of Israel. The remains at the site, supposedly of sacrifices, offerings or feasts, included sheep, goat, cattle, fallow deer, and an assortment of other small animals and birds. One of the most intriguing finds was the high incidence of fallow-deer remains, comprising 10% of the total diagnostic bone sample, found in highest concentrations in the fill of the main structure, where 63% of all deer bones at the site were collected and comprised 20% of the structure's bone assemblage, as opposed to 5% in all other areas combined (Kolska Horwitz 1986–87: 174, Fig.1). According to the analysis of dentition wear and epiphyseal fusion, the deer at the site were young adults and at least four animals were represented. The remains did not include complete antlers, but rather, fragments; a frontal skull bone with pedicles where the antlers were chopped off was found, suggesting at least one massacred stag is represented in the assemblage (Kolska Horwitz 1986–87: 174, 178). Gazelle is completely absent from Mt. Ebal, which is another unique attribute of the site (Kolska Horwitz 1986–87: 181).

Since no other bone assemblages are available from other open-air Iron Age I cult sites in the hill country, such as the Bull Site near Dothan or Giloh near Jerusalem, Mt. Ebal remains an exceptional phenomenon of its type. The deer bones of Mt. Ebal had drawn greater attention than those from other cultic contexts (see below) mostly because of the controversial interpretation of the site as Joshua's shrine (Zertal 1986–87), and its location in the central hill country, considered by some scholars to be the heartland of the Israelite settlement in Iron I.

In the preliminary report of the site, Zertal described the fill sealed inside the main structure, from which more than 60% of the deer bones derived, as originating in Stratum II, which preceded the construction of the main structure (Zertal 1986–87: 115) and ascribed a cultic affinity to it as well (Zertal 1986–87: 151). Thus, Zertal proposed that the deer bones originated from a 13th century B.C.E. cultic context, and not from the slightly later "Joshua's Shrine", showing that in that early stage of Israelite religion, deer was still accepted for sacrifice (quoted by Pitkänen 2004: 180, note 335, as well as by Hawkins 2012: 180). This interpretation was challenged by Ben-Noon (1985) who claimed that the deer bones were residue from feasts

eaten in purity or holiness, brought as a popular offering to fill the altar, or they might have been the remains of the inauguration feast of the site (Ben-Noon 1985: 142). However, this interpretation does not take into account the fact that more than 50% of the deer bones from the main structure at Mt. Ebal were cranial elements (skulls, antlers, maxilla, mandibles and loose teeth) and toes, which are poor in meat, while the meaty trunk parts (ribs and vertebrae) are not present at all (Kolska Horwitz 1986–87: Table 3). The other 50% (or slightly less) of the deer bones include both meaty (scapula, humerus, radius, femur, tibia) and non-meaty parts (metatarsals, metacarpals).

Miller (2011; 2014) suggested a link between the Mt. Ebal deer remains and ancient shamanistic practices. That half of the deer bones are of cranial elements, suggested that antlers were being sought out for some reason other than consumption, perhaps for liturgical use as headdresses (Miller 2014: 23). The use of antlers or antlers, skull and skin of deer as a headdress is attested from several venues, including the famous Upper Paleolithic cave painting of the so-called "Sorcerer" in the Cave of the Trois-Frères in France (Clottes and Lewis-Williams 1998: Fig. 64), the Mesolithic Starr-Car deer headdresses (Conneller 2004), and more-recent shamanic masks from Siberia, Mongolia and North and South America (Miller 2014: 26). Masks are known from the Late Bronze stele-shrine at Hazor, the Iron Age I temple at Tell Qasile, and the Iron I sanctuary at Tel Dan, as well as from a number of other sites, among them Achziv, Shu'afat, Ashdod and Beersheba (Kletter 2007). However, the use of these masks is not clear, and none of them seem to have had a fixture for antlers.

In a pit near the Middle Bronze Age "High Place" at Gezer, deer bones were recovered, along with bones of cow, sheep, goat and human bones; Macalister (1912: 399–401) speculated that these were the remains of sacrifices conducted at that spot.

Bones of some gazelle and/or roe deer and some fallow deer were found at the 10th century B.C.E. cultic structure at Taanach (Frick 2000: 65–66). Deer and gazelle bones have also been noted in the Iron Age II sacred precinct at Dan (Wapnish and Hesse 1991; Borowski 2002: 412). Similar evidence for the Iron II shrine at Lachish has also been reported (ibid: 412).

LB I (Stratum XI) Courtyard 118 at Tel Mor was designated by the excavator Moshe Dotan as a "high place" or bamah (Barako 2007: 15, Fig. 2.3). There is no architecture associated with this bamah, although scattered on it were miniature bowls, chalices, a seven-spouted oil lamp, and an Egyptian jar. Among the finds was the antler of a Mesopotamian fallow deer (Maher 2007: Fig. 11.2). Since the antler was not successfully retrieved during the excavation, it could not be studied. From the photos produced during excavation, it was difficult to determine if the antler was shed or still attached to a portion of the cranium (Maher 2007: 231)

The deer bones from the high place in the Iron Age II gate complex at et-Tell/Bethsaida should be noted here as well; while most of the bones came from a public, administrative context of the gate and its piazza, some originated in the high place itself, as detailed above.

In Room 5 in a late Iron I phase of the temple at Sidon, a complete antler was found set up against a small standing stone. The excavators believe the antler was part of a ritual that took place in this room (Doumet-Serhal 2021–22: 19–20, Figs. 12–13). Based on the photo (ibid: Fig. 14), it appears to be a shed antler of an adult deer, probably a Mesopotamian fallow deer.

Antlers and Ritual

In light of the above presentation of what antlers can signify in the archaeological record vis-a-vis the deer-human relationship, and the fact that both of the whole antlers at Abel Beth Maacah were found in cultic contexts, we turn to look at whether, and how, these items might have played a role in rituals and cultic behavior in the region, or beyond, and during the time period of their discovery (Iron Age I), or otherwise. If the antlers served a purpose in a cultic setting, it was one in which they were either used whole or after being processed in some way. We begin our discussion by reviewing textual data pertaining to possible uses of *whole* antlers, then we will turn to *processed* antlers.

Whole Antlers and Ritual

Preliminary investigations sought textual evidence of the use of whole antlers in a cult setting as amulets, decoration, votive offerings, or cult symbols. As for amulets, it is known that animal products could be used on, in, or under a building to offer protection or to ritually seal a destruction context (e.g., astragali; see Susnow et al. 2021). However, there is no evidence that whole antlers were used in this way in structures; they could be worn or otherwise used by people, but only after processing (see examples below). Neither are there instances of antlers as decorations in cult settings. *ARM* 13.55: 4–8 was once thought to contain such a reference, but Guichard (2005: 270–75) has convincingly argued that the subject matter of the text is zoomorphic vessels in the cellar, and the antlers in question (interestingly, *qarnāt nālī u ayyalī)* are part of one of the vessels in need of repair (note that the subsequent references in that text to *nālu* and *ayyalu* concern the whole head, not the antlers, *l.* 15–16). Nor is there reason to believe, from the textual evidence, that antlers were given as a kind of votive offering.

The textual data does, however, allow for the *possibility* that whole antlers could have been used as a cult symbol. Cult symbols are a known phenomenon in which an object symbolizing a deity was used in place of an image of that deity. Like an image, a cult symbol could receive offerings, offer protection, etc. Hundly (2013: 346) has observed a move towards such symbolic representation of deities in the Iron Age (particularly seen in Assyria).

In order for an object to serve as a cult symbol, it needed to meet several requirements. First, it had to pass the material standards of durability and value. Antlers clearly meet durability requirements and, given their use as tools, jewelry, seals, and other finished products, they also pass the material value test. Second, the object needed to be an accepted symbol of a deity. It is at this point that the use of whole antlers becomes theoretical, though not implausible. If whole antlers were used as a cult symbol, the most likely candidate deity is the Syro-Canaanite chthonic Rešeph, who was identified with the Luwian stag-god Runza as early as the 13th century B.C.E. at Ugarit (Hawkins 2000: 63; or perhaps earlier at Nuzi; see Lipiński 2009, 119–20). This identification continued into the eight century B.C.E., as evidenced by the bilingual Karatepe inscription from Cilicia, in which Luwian Runza ($CERVUS_2$) corresponds to Phoenician *ršp ṣprm*, very probably "Rešeph-of-the-stags" (see discussion in Younger 2019: 331–33).[12] Worship of Rešeph was "[popular] in the regions bordering on the Mediterranean" as early as the third millennium BCE, and continued through the Hellenistic period (Archi 2013: 223–24). Significantly, the archives from Ebla repeatedly refer to ^{d}*ra-sa-ap du-ne-éb*^{ki}, indicating that Tunip (near Hamath) was a center of Rešeph worship (for examples, see Pomponio and Xella 1997: 307–9). Given the northern location of Abel Beth Maacah and its position on the route to the Beq'a (which continued on to Tunip and was particularly active during Iron I, with new sites in the Wadi et-Taym [Marfoe 1998: 223]), as well as the presence of early Aramaean polities in the region (Younger 2019: 191–220), worship or veneration of Rešeph at the site is entirely plausible. Perhaps further strengthening these ties is the possible connection of the site to Cilicia, the location of the Karatepe inscription and an important area for the worship of Runza and Rešeph (see comments below on this connection).

The connection of the antler to Rešeph comes predominantly through the identification with the stag-god Runza, who is regularly connected with the stag and whose name was written in Hieroglyphic Luwian using the antler sign: (DEUS) $CERVUS_2$ / $CERVUS_3$, G +. That said, the long textual and iconographic history of Hittite and Luwian stag-gods (and gods associated with stags) suggests that the whole animal, not just the antlers, would be the expected cult symbol (e.g., the construction of stags for procession in the KI.LAM festival [Singer 1983], the depiction of the stag-gods standing on a stag [Gunter 2002: 94, Figs. 2.5–2.6). On the other hand, the 14th century BCE Altinyala Stele, which depicts the Stag-God as both mounted on a stag and holding an antler in his hand, while exceptional, may keep the possibility of the antler as a cult symbol open (Müller-Karpe 2003: 317–19).

[12] It was during a visit by Prof. Lawson Younger to Tel Abel Beth Maacah in 2018 that this intriguing suggestion was first made by him. Oblivious to the scorching sun in the courtyard where the Stratum A2 antler was found, Lawson expounded enthusiastically on this possibility and encouraged us to pursue the topic. We are honored and pleased to follow up on his idea and to present this contribution to the much-deserved *festschrift* in his honor.

Finally, an object intended for use as a cult symbol needed to transition from a mundane object to one that carried the presence of the deity (such that it could receive offerings, offer protection, etc.). This was accomplished through the same "washing the mouth" ritual that was performed on cult images (e.g., a crescent moon for the moon god; for instances from Mesopotamia, see Berlejung 1998: 188–90; for Hittite cases, see Collins 2005: 22–35). Here, however, a whole, shed antler is, again, somewhat theoretical. While there are instances of "mouth washing" of animals, both alive and on their processed skin, these were meant to be used as *objects* in cult settings for cultic purpose, not as cult *symbols* (e.g., "The Kettledrum Ritual," *TU* 44 [AO 6479] *ii*.8; see now Linssen 2004: 252–82). In fact, all known instances of cult symbols are either made or fashioned by people (wood, stone, or metal). This fact, taken together with the relatively loose association of the antler to the deity, leads to the preliminary conclusion that while whole antlers as a cult symbol may be *allowable* by the textual data, it is not *driven* by it, and so remains speculative and in need of further investigation.

In summary, despite the fact that whole antlers do appear occasionally in cultic contexts of the Late Bronze and Early Iron Age (e.g., Abel Beth Maacah, Sidon, Tel Mor) textual evidence for the use of *whole* antlers in a cultic/ritual setting is lacking. Caution is, of course, warranted, both because research is still in its early stages, and because, historically, there is a gap between the material-culture record of cult/ritual settings and the available textual record's explanatory value. In fact, a good case in point involves stags (and deer in general). As mentioned above, there was deer sacrifice at Mt. Ebal in Iron I, but the practice is absent from the textual record until the late 4th or early 3rd century B.C.E. (The Marseilles Tariff; *CIS* 165; *KAI* 69; Houston 1993: 152ff; Pardee 1997: 305).[13]

Processed Antlers in Ritual

We turn now to texts involving *processing* or *processed* antlers in ritual and/or a cult setting. In this case, there are a good many instances of antlers in texts, specifically the processing of antlers for magico-medical reasons. Such texts indicate the use of antlers in and as amulets, fumigants, salves against demons, the "hand" of ghosts, and perhaps some pharmaceuticals, anti-witchcraft rituals, and more (see lexical ambiguity below). It may also be significant that the texts in which antlers are found mention ingredients and procedures that correlate with other objects found near the Stratum A2 antler in Courtyard 5141, such as the goat's horn, grinding implements, two stone weights and, possibly, the cult stand. The implications will be briefly explored following the presentation of the texts.

Medical texts are known from traditions that arose from Mesopotamia, Hatti, and Egypt, while the traditions of the Levant, especially the southern Levant, are less well known. The few texts selected to be mentioned here are Babylonian and Assyrian in origin (others, i.e., Egyptian and Hittite texts, will be presented in a forthcoming study). A few general remarks are necessary before presenting them. First, these texts are from a tradition that is so firmly and widely established that they may be regarded as (also) broadly encompassing the Iron Age I at Abel Beth Maacah. That this tradition was enduring is demonstrated by the fact that some texts continued to be copied into Graeco-Roman times.[14] The breadth of their use is seen in the find spots of texts, which range from Uruk to Sultantepe to Hattuša. At Hattuša, Babylonian physicians were known to practice in the capital itself (Haas 2003: 9–10; 15th–13th centuries B.C.E.; medical texts found there include ŠÀ.ZI.GA and Udug-hul). Though the specific tradition is unknown, mention should be made of the

[13] This Punic text, discovered in the foundation of an old house in the port of Marseilles, is dated paleographically to the late fourth – early third century B.C.E. (Pardee 1997: 305). It describes economic aspects of the cult (the temple of Ba'al Ṣaphon), listing the sacrifice of adult and young male deer as whole offerings or presentation offerings alongside those of the standard ox, sheep, and goat.

Mention should be made of the possibility of the sacrifice of deer being alluded to in a much earlier text, if Haas (2003, 546, n.29) is correct that LIMMU should be identified with Runta and that the text also reflects an actual sacrifice: "Wahrscheinlich haben in der Dichtung vom Königtum des Gottes Kurunta (dLAMMA) der Wettergott und Ninurta den Kurunta nach seiner Tötung, die der Schlachtung eines Hirsches entspricht, rituell verspeist, KUB 33.112+KUB 33.114+KUB 36.2 Rs.IV 17–22. (Duplikate: KBo 12.76 und KBo 12.82)"

[14] Tablet 9 of Udug-hul is one such example. On the details of this tablet, which has representation in Uruk, Nippur, Babylon, Sippar, Assur, and Sultantepe, see Geller 2016: 14.

myth of Elkunirsa and Ashertu, which provides evidence of professional exorcists in Amurru towards the end of the Late Bronze Age (Haas 2003: 7; see translation and bibliography in Hoffner 1998: 91–92, 96). Along these lines, it should be kept in mind that Abel Beth Maacah had broad cultural exposure in both the Late Bronze and the Iron Age. The material culture demonstrates close ties to the Phoenician coast, as well as indications that Egyptian items were held as "prestige" (Yahalom-Mack, Panitz-Cohen and Mullins 2018: 155; David, Mullins and Panitz-Cohen 2016: 9–10). The biblical record indicates connections farther north, both with the presence of Arameans (whether they are connected directly with the site or not) and the Hivites (Joshua 11:3; Judges 3:3), whom many have identified with Luwian *Hiyawa(REGIO), now firmly identified with Cilicia.[15]

Second, a word must be said about lexemes. As indicated above, there are several species of deer in the region. The discussion about which species is tied to which lexeme is ongoing and is complicated by the many regions and vast time span represented by the texts.[16] A thorough review of the matter is forthcoming, but for now, we will follow *CAD* which gives *ajalu* (*ayyalu*; DÀRA.MAŠ) the gloss "stag, deer", *lulīmu* (LU.LIM) "red deer, stag," and *najalu* (*nālu*) for "roe deer." Since the Abel Beth Maacah antlers come from the Mesopotamian fallow deer, our interest is in phrase SI DÀRA.MAŠ *qaran ayyali*, which is poorly translated as "stag horn" (stags do not have horns).

Frustratingly, "stag horn" is also the name of a plant, as seen unequivocally in a copy of a list of plants, garden utensils, and personnel of the garden of Merodach-Baladan II: *qa-an-nu a-a-lu*^{sar} (*CT* 14 50:53;[17] see brief comments in Brinkman 1964: 37, 48). This presents a problem: How, then, can one know whether SI DÀRA.MAŠ refers to "antler" or "stag horn" (the plant)? There are ambiguous cases, to be sure, but there are also reasonably unambiguous instances. It likely refers to a plant when the text summarizes the ingredients as "*x* number of plants" and all the other ingredients are plants.[18] In other cases, SI DÀRA.MAŠ appears alongside animal products such as horns or fat. And in one clear instance, the physician is told to create an amulet using the "stag horns" of seven "stags" (*STT* 286, given below). In these latter cases, it is reasonable (though not assured) to assume "antler" for SI DÀRA.MAŠ.[19]

The four texts given below draw from the set where "antler" is reasonably unambiguous.[20] The texts selected for presentation here demonstrate the wide variety of circumstances in which "antlers" were used, and two (possibly three) of them were widely used, as indicated by copies. In each instance below, the antlers were prescribed to be either burnt or ground up and combined with other ingredients. The resulting concoction in these particular texts were to be used as either an amulet, salve, or fumigant.

---

[15] For a review of the how Hivites are understood, see Day 2007: 114–16. In addition to the bibliography provided by Day, support of a connection between the Hivites and Cilicia, is found in Singer 2006: 735; Collins 2007: 201–2; and Na'aman 1994: 240. The identification of Luwian *Hiyawa(REGIO) with Cilicia is now firmly established, having once again been corroborated by Arsuz stele 1&2 §13: *wa/i-tá-*a* |*hi-ia-wa/i-ha*(REGIO) |(PES$_2$)*tara/i-zi-i-ha* "And I routed?/turned to? the land of Hiyawa (also)" (translation depends upon whether one takes the verb *tarza/i-* here as transitive or intransitive; Dinçol et al 2015: 67). On this line and the issue of Hiyawa, Dinçol et al. (2015:67) write, "That Hiyawa is the origin of the Assyrian designation Que (Qawe) can hardly be doubted, while its connection with Hittite Empire Ahhiyawa, though questioned by some, can plausibly be argued". For a recent review of the data, see Fales 2017: 191–93, especially note 46.

[16] For examples, see Collins 2003, in which she offers a review of the scholarship, interpretive options, and suggests DÀRA.MAŠ is red deer; also Geller 2016: 26, in which he normalized SI DÀRA.MAŠ as *qarnu lulīme*.

[17] For high resolution photographs, see https://www.britishmuseum.org/collection/object/W_1881-0706-688.

[18] Complicating things are cases where the text summarizes the ingredients as "*x* plants," but seems to include animal products, e.g., "If a ghost afflicts a [perso]n: root of *baltu*-thorn which (has grown) on a grave root of an *ašāgu*-thorn which (has grown) on a grave, right horn of an ox, left horn of a he-goat, *bīnu*-tamarisk seed, *e'ru*-tree seed (and) *azallû*: seven plants: a bandage for "hand" of ghost" (Scurlock 2006: 278 [text No. 65]).

[19] I (S.B.) thank Maddalena Rumor for discussing this problem and a sound way forward with me.

[20] Ambiguous and more complicated cases will be presented in future studies, including fumigants against demons and sorcerers.

Amulet around the neck against convulsive seizures: STT 286, ii 2–3

STT 286 is a Neo-Assyrian tablet that was discovered in a private house in Sultantepe, in the Harran plain (*STT* I, iv). Parallels are *CTN* IV, 159 rev. 7–8, discovered in the Temple of Nabû, Kalḫu (ca. 800 – ca. 612 B.C.E. *CTN* IV, "Introduction," 1–4), and *BAM* 166:11–12 (Aššur). Though all three tablets have suffered damage, each clearly calls for the charring of the antler(s).[21] The end of both lines below is provided by CTN IV 159, *ina* is found only in BAM 166. For an updated discussion of AN.TA.ŠUB.BA as both epileptic and non-epileptic seizures, see Avalos 2007: 134.

(2) ⌜*ana*⌝ AN.TA.ŠU.BA ZI-*ḫi* SI DÀRA.MAŠ *šá* 7 [(DÀRA.MAŠ)] (3) [*t*]⌜*u*⌝-*pat-taḫ* <*ina*> IZI *tu-kab-bab ina* GÚ-*šú* [(GAR)]

"To expel AN.TA.ŠUB.BA, you pierce the antlers of seven [(deer)], char <with> fire, (and) [(put it)] around his neck".

Amulet of a leather bag around the waist for sexual desire: LKA 95:28–29

The tablet is Neo-Assyrian, likely after the rebellion in 763/2 B.C.E., probably to be dated to the time of Aššurbanipal (Pedersén 1986a: 11, 58). It was part of the N4 library (Pédersen 1986a: 64, no. 202):

"a large private house with apotropaic figurines under the floor in many rooms … A family of exorcists (of the Aššur temple) lived in [the] house. Their library with more than 800 texts was placed in a room next to an inner courtyard" (Pédersen 1986b: 145; for more details, see Pédersen 1986a: 41–43).

The reading here follows Hoppe's recent collation of the tablet (Hoppe 2016: 91–95). Note that Hoppe differs from Ebeling in terms of line numbers (Hoppe's *l*.28 is Ebeling's *l*.27), and Hoppe also removed sign values "parallel" *STT* 280 i 51 (*ri-kib-*<*ti*> *a-a-l*[*i*], "the declaw (/false hoof) of the stag" [Biggs 1967, 62, see p. 26 for his treatment of *rikibti*]).[22] *STT* 280 is from Sultantepe, and is also Neo-Assyrian.

(28) DIŠ KI.MIN ⌜x x⌝ [x x x] ⌜SI⌝ *a-a-li* GÌŠ *a-a-li* (29) ú*tak-*⌜*da*⌝*-na-nu ina* KUŠ DÙ.DÙ.BI *ina* GÚ-*šú* GAR-*an*

"When ditto: …, the antler of a deer, the penis of a deer, *takdananu*-Plant, put it in leather bag, (and) put it around his neck".

[21] *STT* 286 seems to only have enough room for "you pierce, you char <with> fire, you place it on his neck." CTN IV 159 has room for a preceding verb, and *-am* is clearly the final syllable. Böck has suggested *šarāmu* "to cut" (Böck 2010: 92). In a personal communication, she noted that (1) part of a sign consistent with [*-r*]*a-* is present, (2) *šarāmu* is attested in D referring to the cutting of a cow-horn, and (3) that *tu-*⌜*šar*⌝*-x* is visible BAM 166:13, though not the expected subjunctive. In the same communication, Böck also pointed to V. Chalender's reading of *BAM* 166 as SI ⌜DÀRA.MAŠ⌝ (12) GAR.GAR ⌜DÀRA.MAŠ⌝ *tu-*⌜*šar*⌝*-*⌜*rap*?⌝ […] (Chalender 2018: 32, n. 82). Chalender's proposal is to accept that GAR.GAR is A.GAR.GAR *piqqannu* (*CAD* P: 385; instead of *šá 4*[!]), resulting in deer dung being burned along with the antler (Chalender 2018, 32, n. 82). Chalender's reading is followed in *BabMed* Corpora (https://www.geschkult.fu-berlin.de/e/babmed/Corpora/BAM-2/BAM-2_-166/index.html). However, Chalendar's proposal has the ingredients undergoing both *šarāpu* (*l.* 13) and *kabābu* (*l.* 14), the reason for which is not entirely clear. Böck's proposal makes good sense. Since the patient is suffering from some sort of convulsion, "antler" almost certainly refers to small, amulet size tangs that have been cut off the antler. However, there may not be room on the tablet for it. Such variation in the middle section leads one to wonder about the relationship (development?) of the procedure recorded on the tablets. I (S.B.) thank Barbara Böck for her help and for discussing this text with me.

[22] I (S.B.) am grateful to Marius Hoppe for his helpful interactions regarding magical texts and the material culture record.

Salve for shortness of breath caused by a drowned ghost: AMT 4/6:8'–12'

Found as part of Aššurbanipal's library in Nineveh, the text dates to the 7th century B.C.E. but is a copy of an older text of unknown age and origin. Following Scurlock's reading, with minor differences in the placement of the brackets. Missing text is supplied by parallel AMT 96/4:1–2 (Scurlock 2006: 298 [no. 213]).[23]

(8') [DIŠ KIMIN] ⌜SI⌝ MÁŠ.ZU *šá* GÙB *tur-ár* SI DÀRA.MAŠ *tur-ár* TÚG *a-ru-uš-te ta-man-z*[(*a-'a*)] (9') [*tu-u*]*š-ku-um* <lú>SIMUG> *ni-ip-ṣi* Ú.KUR.RA na4*ga-bi-i* <<*list of plants*>> (11') … na4*mu-ṣa* ú[(LAL)] (12') [(ÚḪ-dÍD AN.BAR) x Ú.MEŠ *an-nu*]-*te* 1-*niš* SÚD *ina* Ì.GIŠ ḪE.ḪE [ŠÉŠ.MEŠ-*su*]

[If ditto]: You char[24] the left horn of a male goat. You char the antler of a deer. With a dirty cloth you sque[ez]e (them). [Filing]s of the <smith>, metal powder, *nīnû* alum, <<*list of plants*>>, *mūṣu*-stone, r[u'tītu-sulphur, (and) iron.] You grind t[hese x plants] together. You mix them in oil. You rub him with it.

Fumigant for the "hand" of a ghost: BAM 469 r. 20–21

This text is the third prescription for "A persistent attack of 'hand' of ghost which the *āšipu* is not [able] to remove" (BAM 469 r. 11; translation Scurlock 2006: 593). The tablet was found as part of Aššurbanipal's library at Nineveh. Missing text provided by parallel BAM 471 iv 4'–5'. Following Scurlock's readings of both tablets (Scurlock 2006, 595 [no. 279]), though NE (*pēmtu*) is given here in place of DÈ (Stol 1998, 350–351; Scurlock 2014, 403, n. 20). Regarding the use of "stag's horn" as a fumigant, Stol helpfully observes that the practice continued into Greek and Roman times: "In the Classical world (and later) it had special use in discovering epilepsy: by burning bitumen, jet or stag's and goat's horn, and by eating the liver of a he-goat, one could detect this disease" (Stol 1993: 104, see also 143–44).

(r.20) [DIŠ 3 Ì.U]DU NAGA.SIsar A KI.A.dÍD SI DÀRA.MAŠ TÚG.NÍG.DÁRA.ŠU.LÁL (r.21) [(GÌR.PAD.DU) N]AM.LÚ.U18.LU *la-aš-ḫi* ŠAḪ ⌜NITA⌝ 1-*niš* <ḪE.ḪE> *ina* NE SAR-*šú-ma* TI

[If three (i.e., third prescription)]: [s]heep [fat], *uḫūlu qarnānu*, *kibrītu*-sulphur infusion, antler of a deer, soiled rag, [h]uman [(bone)], (and) the jaw of a male pig. <You mix> them together. If you smoke it over coals, he will get well.

Concluding Remarks

It is known that magic and medicine were specialized vocations across the ancient Near East, often tied to the cult, and widely used for daily life in the ancient world (as it is today). Geller describes the overall picture well:

> Magic was utilised by priests who were exorcists, but also by physicians and diviners, since incantations were used in many kinds of rituals and medical recipes, and to counteract evil omens. In effect, magic was a form of conflict-resolution between men and gods and at the same time functioned to reduce levels of anxiety in the human psyche (Geller 2016: 27).

[23] For a different reading, see also *BabMed* (https://www.geschkult.fu-berlin.de/e/babmed/Corpora/AMT/AMT4-6/index.html). Photograph and line drawing are available on CDLI https://cdli.ucla.edu/search/archival_view.php?ObjectID=P397518.

[24] The idea here is to make it crumbly, following Köcher, who sites this in his discussion of *urruru* as drying with fire: "„Mürbe oder morsch machen" ist sicher die treffendste Bezeichnung derjenigen Tätigkeit, die man sich unter dem Dörren von Tierhäuten oder … Hörnern (vgl. AMT 4,6:8'; BAM III, No. 237 i 38) … und ähnlichen Stoffen vorstellen kann" (Köcher 1965: 324).

It is also known that the "physicians," whether in Babylonia, Assyria, Hatti, or Egypt, performed their duties by doing house calls or taking their clients into a specified place, be it a natural environment, a temple gate, etc. (Scurlock 2006: 22). And while the texts indicate that healers were responsible for the preparation of the pharmaceuticals (Scurlock 2006: 43), little is known about where the ingredients were stored or prepared.

The small sample of magico-medical texts presented above can not only help make sense of the antlers, but also the horn, the grinding implements, and the "cult stand" (if it was used for fumigation). All of these were found in the courtyard replete with cultic paraphernalia in Area A at Abel Beth Maacah. Similar texts, which do not contain "antlers" as an ingredient (and so were not presented), may also account for the presence of the razor (covered with animal hair) and a hematite weight in that space.[25]

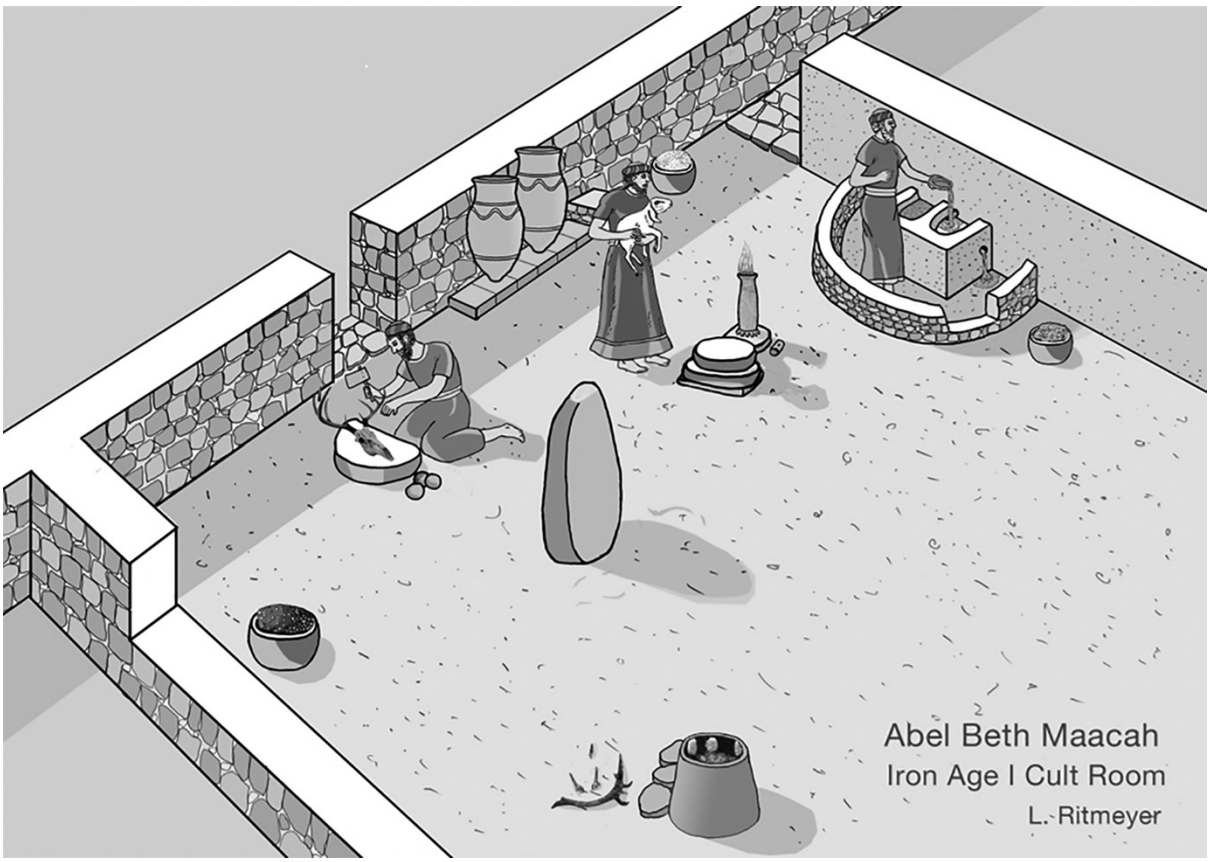

Fig. 20. Imaginary reconstruction of the ritual operation in cultic courtyard 5141 (drawing by Leen Ritmeyer, done under the guidance of Carroll Kobs).

Preliminary findings thus indicate the possibility that Courtyard 5141, belonging to an Iron Age IB cultic context at Abel Beth Maacah, may have been connected to magical and medical practices, perhaps used for the preparation and/or storage of magico-medical stuffs. Preparation in a special location makes logical sense, as the materials were taken from their mundane state to one that could be effective with the gods and against ghosts (Fig. 20).

The question may be asked whether such rituals, if indeed performed at the site, were rooted in the local Canaanite culture, a modicum of which continued well into Iron Age I, and/or represent foreign (northern?) influence at that time. This may also comport with the astragali in the subsequent Iron IIA Stratum A1, probably used for divinatory purposes, and may indicate prolonged use of the complex for a similar purpose

[25] For use of hair as an ingredient, Scurlock 2006, Nos. 49 [lion], 58 [virgin she-goat], 136a [horse], 136b [stallion], 179 [lamb] et passim; for weighing ingredients, see Scurlock 2006, No. 230; BAM 159 iv 16'–22' (transliteration and translation in Scurlock 2014: 364–67); and BM 78963 60–65 (transliteration and translation in Scurlock 2014: 469–79).

over time. This is particularly intriguing in light of the assumed political changes between the Iron Age I and IIA in this region. If further investigation bears out these initial, and very tentative suggestions, this would provide unique insight into magico-medical practices broadly, and could open the door to new understandings of other ritual practices and venues in the region. The antler found in this context, as well as the one from the earlier Iron I cultic building, provide the trigger for such a study, exploring the fascinating and elusive interface between material culture and text.

Bibliography

Aharoni, Y.
1967 *The Land of the Bible: A Historical Geography*. Philadelphia: Westminster.
AMT
1923 R. Campbell Thompson. *Assyrian Medical Texts from the Originals in the British Museum*. London: H. Milford, Oxford University Press.
Arnold, D.
1995 *An Egyptian Bestiary*. New York: The Metropolitan Museum of Art Bulletin.
Avalos, H.
2007 "Epilepsy in Mesopotamia Reconsidered." Pp. 131–36 in *Disease in Bablyonia*, eds. I. L. Finkel and M. J. Geller. CM 36. Leiden/Boston: Brill.
BabMed Babylonische Medizin. https://www.geschkult.fu-berlin.de/e/babmed.
BAM = Köcher, F.
1963–80 *Die babylonisch-assyrische Medizin in Texten und Untersuchungen*. Berlin: de Gruyter.
Barako, J. T.
2007 "Stratigraphy and Building Remains." Pp. 11–42 in *Tel Mor, The Moshe Dothan Excavations, 1959-1960,* ed. J.T. Barako. IAA Reports 32, Jerusalem: IAA.
Bartosiewicz, L. and Lisk, E.
2018 "Mammalian Remains." Pp. 277–312 in *Excavations at Dor, Final Report, Volume IIB. Area G, The Late Bronze and Iron Ages: Pottery, Artifacts, Ecofacts and Other Studies*, eds. A. Gilboa, I. Sharon, J.R. Zorn and S. Matskevich. Qedem Reports 11. Jerusalem: Institute of Archaeology, the Hebrew University of Jerusalem.
Bechar, S. and Ben-Tor, A.
2018 "Tel Hazor 2017." *HA*/*ESI* 130 (https://www.hadashot-esi.org.il/report_detail_eng.aspx?id= 25447 &mag_id=126; accessed September 27, 2021)
Ben-Noon, Y.
1985 "The Structure on Mt. Ebal and Its Identification as an Altar." Pp. 137–63 in *"Before Ephraim and Benjamin and Manasseh": A Collection of Researches and Discoveries in Historical Geography*, ed. Z. Ehrlich. Ophrah: Ophrah Field School. (Hebrew).
Berlejung, A. 1998 *Die Theologie der Bilder: Herstellung und Einweihung von Kultbildern in Mesopotamien und die alttestamentliche Bilderpolemik*. Freiburg: Vandenhoeck and Ruprecht.
Biggs, R.
1967 *Ancient Mesopotamian Potency Incantations*. New York: J. J. Augustine.
Biran, A.
1986 "The Dancer from Dan, the Empty Tomb and the Altar Room." *IEJ* 36/3–4: 168–87.
Biran, A. and Ben Dov, R.
2002 *Dan II, A Chronical of the Excavations and the Late Bronze Age "Mycenaean" Tomb*. Jerusalem: Hebrew Union College.
Böck, B.
2010 "AN.TA.ŠUB.BA, >Herr des Daches<: Amulett und Magische Zeremonie." In *TUAT.NF 5,* eds. B. Janowski and D. Schwemer. Gütersloh: Gütersloher Verlagshaus, p. 92.
Borowski, O.
2002 "Animals in the Religion of Syria-Palestine." Pp. 289–306 in *A History of the Animal World in the Ancient Near East,* ed. Billie Jean Collins; HdO 1/64; Leiden/Boston/Köln: Brill.

Brinkman, J. A.
1964 „Merdach-Baladan II." Pp. 6–53 in *Studies Presented to A. Leo Oppenheim, June 7, 1964*. ed. R. M. Adams. Chicago: University of Chicago Press.
Burke, A., Peilstöcker, M., Karoll, A., Pierce, G., Kowalski, K., Ben-Marzouk, N., Damm, J. C., Danielson, A. J., Fessler, H. D., Kaufman, B., Pierce, K. V. L., Höflmayer, F., Damiata, B. N. and Dee, M.
2017 "Excavations of the New Kingdom Fortress in Jaffa, 2011–2014: Traces of Resistance to Egyptian Rule in Canaan." *AJA* 121/1: 85–133.
Chalender, V.
2018 "Éléments de pharmacopée mésopotamienne : retour sur l'ingrédient *rikibtu*." *Le Journal des Médecines Cunéiformes* 32: 24–55.
Clottes, J. and Lewis-Williams, D.
1998. *The Shamans of Prehistory. Trance and Magic in the Painted Caves*, New York.
Collins, B. J.
2003 „On the Trail of the Deer: Hittite Kūrala." Pp. 73–82 in *Hittite Studies in Honor of Harry A. Hoffner Jr. on the Occasion of his 65th Birthday*, eds. G. Beckman, R. Beal and G. McMahon. Winona Lake: Eisenbrauns.
2005 "A Statue for the Deity: Cult Images in Hittite Anatolia." Pp. 13–42 in *Cult Image and Divine Representation in the Ancient Near East*, ed. N. H. Walls. Boston: ASOR.
2007 *The Hittites and Their World*. SBL, ABS, No. 7. Atlanta: SBL.
Conneller, C.
2004 "Becoming Deer. Corporeal Transformations at Starr Carr." *Archaeological Dialogues* 11/1, Cambridge: 37–56.
CTA 6 = Herdner, A.
1963 *Corpus des tablettes en cunéiformes alphabétiques découvertes à Ras Shamra-Ugarit de 1929 à 1939*. Mission de Ras Shamra 10. BAH 79. Paris: Imprimerie Nationale; Geuthner.
CTN IV = D. J. Wiseman and J. Black.
1996 *Literary Texts from the Temple of Nabû*. The British School of Archaeology in Iraq.
David, A., Mullins, R. A. and Panitz-Cohen, N.
2016 "A *Mnḫprr'* Scarab from Tel Abel Beth Maacah." *JAEI* 9: 1–13
Day, J.
2007 "Gibeon and the Gibeonites in the Old Testament." Pp. 113–38 in *Reflection and Refraction. Studies in Biblical Historiography in Honour of A Graeme Auld*, eds. R. Rezetko, T.H. Lim and W.B. Aucker. Leiden, Boston: Brill.
Dever, W. G.
1986 "Abel-beth-Maacah: Northern Gateway of Ancient Israel." Pp. 207–23 in *The Archaeology of Jordan and Other Studies. Presented to Siegfried H. Horn*, eds. L.T. Geraty and L.G. Herr. Berrien Springs: Andrews University Press.
Dinçol, B., Dinçol, A, Hawkins, J. D., Peker, H. and Öztan, A.
2015 "Two New Inscribed Storm-God Stelae from Arsuz (İskenderun): ARSUZ 1 and 2." *Anatolian Studies* 65: 59–77.
Doumet-Serhal, C.
2021–22. *Sidon from the End of the 13th to 10th Century BC: The Temple*. Archaeology & History in Lebanon, 54–55.
Eisenberg, E., Gopher, A., Greenberg, R.
2001 *Tel Te'o: A Neolithic, Chalcolithic and Early Bronze Age Site in the Hula Valley*. IAA Reports 13. Jerusalem: IAA.
Fales, F. M.
2017 "Phoenicia in the Neo-Assyrian Period: An Updated Overview." *The South African Archaeology Bulletin* 23: 181–295.
Finkelstein, I., Bunimovitz, S., Lederman, Z., Hellwing, S. and Sadeh, M.
1985 "Excavations at Shiloh 1981–1984: Preliminary Report." *TA* 12/2: 123–80.

Fisher, G. T.
2005 *A Zooarchaeological Analysis of Change in Animal Utilization at Bethsaida from Iron Age II through the Early Roman Period*. Ph.D. dissertation, University of Tennessee.
Frick, F.
2000 *Tell Taannek 1963–1968 IV: Miscellaneous/2: The Iron Age Cultic Structure.* Birzeit: Palestinian Institute of Archaeology.
Geller, M. J.
2016 *Healing Magic and Evil Demons*. *Canonical Udug-hul Incantations*. Die babylonisch-assyrische Medizin in Texten und Untersuchungen 8. Boston, Berlin: de Gruyter.
George, A. R.
2016 *Mesopotamian Incantation and Related Texts in the Schøyen Collection*. CUSAS 32. Bethesda, Maryland: CDL Press.
Gilbert, S. A.
2002 "The Native Fauna of the Ancient Near East." Pp. 3–75 in *A History of the Animal World in the Ancient Near East*, ed. B. J. Collins. Leiden: Brill.
Gilboa, A., Sharon, I. and Zorn, J. R.
2014 "An Iron Age I Canaanite/Phoenician Courtyard House at Tel Dor: A Comparative Architectural and Functional Analysis." *BASOR* 372: 39–80.
Gophna, R.
1996 *Excavations at Tel Dalit. An Early Bronze Age Walled Town in Central Israel*. Tel Aviv: Ramot, Tel Aviv University.
Greer, J.S., Fulton, D. and Wapnish, P.
2019 "The Animal Bone Remains." Pp. 571–86 in *Dan IV. The Iron Age I Settlement, The Avraham Biran Excavations (1966–1999)*, ed. D. Ilan. Jerusalem.
Guichard, M.
2005 *La vaisselle de luxe des rois de Mari – Matériaux pour le dictionnaire de babylonien de Paris – Tome II. ARM* 31. Paris: ERC.
Gunter, A.
2002 "Animals in Anatolian Art." Pp. 79–96 in *A History Of The Animal World in The Ancient Near East*, ed. B. J. Collins. Leiden, Boston, Köln: Brill.
Hawkins, J. D.
2000 *Inscriptions of the Iron Age.* Vol. 1 of *Corpus of Hieroglyphic Luwian Inscriptions.* Berlin: de Gruyter.
Hawkins, R. K.
2012 *The Iron Age I Structure on Mt. Ebal, Excavations and Interpretation*, Winona Lake: Eisenbrauns.
Hoppe, M.
2016 *Texte zur Behandlung von Impotenz*. Ph.D. Dissertation, Freien Universität Berlin.
Houston, W.
1993 *Purity and Monotheism: Clean and Unclean Animals in Biblical Law*. JSOT.SS 140. Sheffield: Sheffield Academic Press.
Hundly, M. B.
2013 *Gods in Dwellings. Temples and Divine Presence in the Ancient Near East.* Atlanta: SBL.
Kaplan, Y.
1966 "On the Identification of Abel-Beth-Maacah and Janoaḥ." *Yediot Bahaqirat Eretz-Israel* 30: 52–55 (Hebrew).
Kletter, R.
2007 "To Cast and Image: Iron Age Masks from Judah and the Biblical 'Massekha'." Pp. 189–208 in *"Up to the gates of Ekron": Essays on the Archaeology and History of the Eastern Mediterranean in Honor of Seymour Gitin*, ed. S. W. Crawford. Jerusalem: Albright Institute of Archaeological Research.
Köcher, F.
1965 "*Urruru*, ‚(Am Feuer) Dörren'." Pp. 323–25 *Studies in Honor of Benno Landsberger on his Seventy-*

Fifth Birthday, April 21, 1965, eds. H. G. Güterbock and T. Jacobsen. AS 16. Chicago: University of Chicago Press.

Kolska Horwitz, L.

1986–87 "Faunal Remains from the Early Iron Age site on Mt. Ebal." *TA* 14: 173–89.

1987 "Animal Offerings from Two Middle Bronze Age Tombs." *IEJ* 37:4: 251–55.

1996 "Animal Bones from the Middle Bronze Age Tombs at Tel Dan." Pp. 268–77 in *Dan I*. ed. A. Biran. Jerusalem.: Hebrew Union College.

2000 Appendix 4: Animal Exploitation – Archaeozoological Analysis." Pp. 221–32 in *Horbat Rosh Zayit: An Iron Age Storage Fort and Village,* eds. Z. Gal and Y. Alexandre." IAA Reports 8. Jerusalem: IAA.

2001a "The Mammalian Remains." Pp. 171–95 in *Tel Te'o: a Neolithic, Chalcolithic and Early Bronze Age Site in the Hula Valley*, eds. E. Eisenberg, A. Gopher and R. Greenberg. IAA Reports 13. Jerusalem: IAA.

2001b "Animal Offerings in The Middle Bronze Age: Food for the Gods, Food for Thought." *PEQ* 133: 78–90.

2002 "The Animal Remains." Pp. 219–21 in *Dan II. A Chronical of the Excavations and the Late Bronze Age "Mycenaean" Tomb,* eds. A. Biran and R. Ben Dov. Jerusalem: Hebrew Union College.

2003 "Fauna from Tel Qashish." Pp. 427–43 in *Tel Qashish: A Village in the Jezreel Valley – Final Report of the Archaeological Excavations (1978–1987),* eds. A. Ben-Tor, R. Bonfil and S. Zuckerman. Qedem Reports 5. Jerusalem: Institute of Archaeology, the Hebrew University of Jerusalem.

Kolska Horwitz, L., Bar Giora, N., Mienis, H. K. and Lernau, O.

2005 "Faunal and Malacological Remains from the Middle Bronze, Late Bronze and Iron Age Levels at Tel Yoqne`am." Pp. 395–435 in *Yoqne'am III: The Middle and Late Bronze Ages – Final Report of the Archaeological Excavations (1977–1988),* eds. A. Ben-Tor, D. Ben-Ami and A. Livneh. Qedem Reports 7. Jerusalem: Institute of Archaeology, the Hebrew University of Jerusalem.

Kopetzky, K. and Bietak, M.

2016 "A Seal Impression of the Green Jasper Workshop from Tell el-Dab`a." *Ägypten und Levante* 26: 357–75.

Lev-Tov, J. S. E. and Maher, E. F

2001 "Food in Late Bronze Age Funerary Offerings: Faunal Evidence from Tomb 1 at Tell Dothan." *PEQ* 133/2: 91–110.

Linssen, M.J.H.

2004 *The Cults of Uruk and Babylon. The Temple Ritual Texts as Evidence for Hellenistic Cult Practices*. CM 25. Leiden, Boston: Brill.

Livingstone, A.

1989 *Court Poetry and Literary Miscellanea*. SAA 3. Helsinki: Helsinki University Press.

Livneh, A. and Ben-Tor, A.

2005 "The Architecture and Stratigraphy of the Middle Bronze Age." Pp. 11–40 in *Yoqne'am III: The Middle and Late Bronze Ages – Final Report of the Archaeological Excavations (1977–1988),* eds. A. Ben-Tor, D. Ben-Ami and A. Livneh. Qedem Reports 7. Jerusalem: Institute of Archaeology, the Hebrew University of Jerusalem.

LKA = E. Ebeling and F. Köcher,

1953 *Literarische Keilschrifttexte aus Assur*. Berlin: Akademie-Verlag.

Maher, E.F.

2007 "Faunal Remains." Pp. 229–32 in *Tel Mor, The Moshe Dothan Excavations, 1959–1960,* ed. J.T. Barako. IAA Reports 32, Jerusalem: IAA.

Marfoe, L.

1998 *Kāmid el-Lōz 14. Settlement History of the Biqāʿ up to the Iron Age*. Bonn: Dr. Rudolf Habelt.

Marom, N. and Zuckerman, S.

2012 "The Zooarchaeology of Exclusion and Expropriation: Looking Up from the Lower City in Late Bronze Age Hazor." *Journal of Anthropological Archaeology* 31(4): 573–85.

Marom, N.

2020 "Analysis of Animal Bones from Selected Contexts in the 2010 and 2012 Excavation Seasons." Pp.

553–98 in *Tel Reḥov, A Bronze and Iron Age City in the Beth-Shean Valley. Volume V: Various Objects and Natural-Science Studies*, eds. A. Mazar and N. Panitz-Cohen. Qedem 63. Jerusalem: Institute of Archaeology, the Hebrew University of Jerusalem.

Mazar, B.
1961 "Geshur and Maacah." *JBL* 80/1: 16–28.

Meyer, J. W.
2008 *Die eisenzeitlichen Stempelsiegel aus dem 'Amuq-Gebiet: Ein Beitrag zur Ikonographie altorientalischer Siegelbilder*. Fribourg.

Miller II, R. D.
2011 "Shamanism in Early Israel." *WZKM* 101: 309–41.
2014 "Shamanism and Totemism in Early Israel." *Journal of the Washington Academy of Sciences* 100: 21–58.

Na'aman, N.
1994 "The 'Conquest of Canaan'." Pp. 218–81 in *From Nomadism to Monarchy: Archaeological and Historical Aspects of Early Israel,* eds. I. Finkelstein and N. Na'aman. Jerusalem: IES.

Ornan, T. and Peri, L.A.
2017 "Cylinder Seals." Pp. 475–513 in *Hazor VII, The 1990–2012 Excavations, The Late Bronze Age,* eds. A. Ben-Tor, S. Zuckerman, S. Bechar and D. Sandhaus. Jerusalem: Institute of Archaeology of the Hebrew University of Jerusalem and IES.

Panitz-Cohen, N. and Yahalom-Mack, N.
2019 "The Wise Woman of Abel Beth Maacah." *BAR* 45/4–5: 18–25.

Panitz-Cohen, N., Mullins, R. A. and Bonfil, R.
2013 "Northern Exposure: Launching Excavations at Tell Abil el Qameḥ (Abel Beth Maacah)." *Strata* 31: 27–42.

Pardee, D.
1997 "A Punic Sacrificial Tariff." Pp. 305–9 in *The Context of Scripture, Volume 1: Canonical Compositions from the Biblical World*, eds. W. H. Hallow and K. L. Younger. Leiden, Boston: Brill.
2003 "The Baʿlu Myth (1.86)." Pp. 241–74 in *The Context of Scripture, Volume I, Canonical Compositions from the Biblical World*, eds. W. Hallo and K. L. Younger. Leiden and Boston: Brill.

Pédersen, O.
1986a *Archives and Libraries in the City of Assur: A Survey of the Material from the German Excavations, Part II*. Uppsala: Alqvist & Wiksell.
1986b "Libraries in the City of Assur." *CRRAI* 32: 143–47.

Pitkänen, P.
2004 *Central Sanctuary and Centralization of Worship in Ancient Israel*. New Jersey: Gorgias Press.

Riede, P.
2002 *Im Spiegel der Tiere: Studien zum Verhältnis von Mensch und Tier im alten Israel.* Freiburg: Herder.

Rotem, Y. and Mazar, A.
2020 "Stone Vessels and Objects." Pp. 225–54 in *Tel Reḥov. A Bronze and Iron Age City in the Beth-Shean Valley. Volume V. Various Objects and Natural-Science Studies*, eds. A. Mazar and N. Panitz-Cohen. Qedem 63. Jerusalem: Institute of Archaeology, the Hebrew University of Jerusalem.

Sapir-Hen, L., Martin, M. A. S. and Finkelstein, I.
2017 "Food Rituals and Their Social Significance in the Mid-Second Millennium BC in the Southern Levant: A View from Megiddo." *International Journal of Osteoarchaeology* 27: 1048–58.

Sapir-Hen, L., Sasson, A., Kleiman, A. and Finkelstein, I.
2016 "Social Stratification in the Late Bronze and Early Iron Ages: An Intra-Site Investigation at Megiddo." *Oxford Journal of Archaeology* 35(1): 47–73.

Scurlock, J.
2006 *Magico-Medical Means of Treating Ghost-Induced Illnesses in Ancient Mesopotamia*. Ancient Magic and Divination 3. Leiden, Boston: Brill, Styx.
2014 *Sourcebook for Ancient Mesopotamian Medicine*. WAW 36. Atlanta: SBL.

Shatil, A.
2020 "Bone, Antler and Ivory Objects." Pp. 25–58 in *Tel Reḥov, A Bronze and Iron Age City in the Beth-*

Shean Valley. Volume V, Various Objects and Natural-Science Studies, eds. A. Mazar and N. Panitz-Cohen, Qedem 63. Jerusalem: Institute of Archaeology, the Hebrew University of Jerusalem.

Singer, I.
2006 "The Hittites and the Bible Revisited". Pp. 723–56 in *"I will speak the riddles of ancient times." Archaeological and Historical Studies in Honor of Amihai Mazar on the Occasion of his Sixtieth Birthday*. Volume 2, eds. A.M. Maeir and P. de Miroschedji. Winona Lake: Eisenbrauns.

Stern, E. and Beit Arieh, I.
1979 "Excavations at Tel Kedesh (Tell Abu Qudeis)." *TA* 6/1–2: 1–25.

Stol, M.
1993 *Epilepsy in Babylonia*. Cuneiform Monographs 2. Gronigen: Styx Publications.

Stol, M.
1998 "Einige kurze Wortstudien." Pp. 343–52 in Festschrift für Rykle Borger zu seinem 65. Geburtstag am 24. Mai 1994. Edited by Stefan M. Maul. Groningen: Styx.

STT = Gurney, O. R. and Finkelstein, J. J.
1957, 1964. *The Sultantepe Tablets*. Occasional Publications of the British Institute of Archaeology at Ankara 7. London: British Institute of Archaeology at Ankara.

Susnow, M., Marom, N., Shatil, A., Panitz-Cohen, N., Mullins, R. A. and Yahalom-Mack, N.
2021 "Contextualizing an Iron Age IIA Hoard of Astragali from Tel Abel Beth Maacah, Israel." *Journal of Mediterranean Archaeology* 34.1: 58–83.

Tufnell, O., Inge H. C. and Harding, L.G.
1940 *Lachish II: The Fosse Temple*. London.

Tamar, K., Marom, N. and Raban-Gerstel, N.
2020 "Faunal Remains from the 1997–2008 Excavation Season." Pp. 495–552 in *Tel Reḥov, A Bronze and Iron Age City in the Beth-Shean Valley. Volume V: Various Objects and Natural-Science Studies*, eds. A. Mazar and N. Panitz-Cohen. Qedem 63. Jerusalem: Institute of Archaeology, the Hebrew University of Jerusalem.

Tsahar, E., Izhaki I., Lev-Yadun, S. and Bar-Oz, G.
2009 "Distribution and Extinction of Ungulates during the Holocene of the Southern Levant." *PLoS ONE* 4(4): e5316. (https://doi.org/10.1371/journal.pone.0005316 , accessed September 27, 2021)

Vandermeersch, B. and Bar-Yosef, O.
2019 "The Paleolithic Burials at Qafzeh Cave, Israel." *PALEO* 30/1: 256–75.

Venturi, F.
1998 "The Late Bronze II and Early Iron I Levels." Pp. 123–37 in *Tell Afis (Syria), The 1988–1992 Excavations on the Acropolis*, eds. S.M. Cecchini and S. Mazzoni. Pisa: ETS.

Wapnish, P. and Hesse. B.
1991 "Faunal Remains from Tel Dan: Perspectives on Animal Production at a Village, Urban and Ritual Center." *Archaeozoologica* 4: 9–86.

Yahalom-Mack, N., Panitz-Cohen, N. and Mullins, R. A.
2018 "From a Fortified Canaanite City-State to "a City and a Mother" in Israel. Five Seasons of Excavation at Tel Abel Beth Maacah." *NEA* 81.2: 145–56.

Yahalom-Mack, N., Panitz-Cohen, N. and Mullins, R.A.
2019 "An Iron Age I Cultic Context at Tel Abel Beth-Maacah." Pp. 233–50 in *Research on Israel and Aram. Autonomy, Independence and Related Issues. Proceedings of the First Annual RIAB Center Conference, Leipzig, June 2016*, eds. A. Berlejung and A.M. Maeir. Research on Israel and Aram in Biblical Times I. Mohr Siebeck: Tübingen

Yahalom-Mack, N., Panitz-Cohen, N., Rollston, C. A., Cohen-Weinberger, A. and Mullins, R. A.
2021 "The Iron Age IIA 'Benyaw Inscription' on a Jar from Tel Abel Beth Maacah." *PEQ* 153 (doi: 10.1080/00310328.2021.1975070, accessed May 24, 2022).

Younger, K. L., Jr.
2016 *A Political History of the Arameans. From Their Origins to the End of Their Polities*. Atlanta: SBL.

2019 "Gods at the Gates: A Study of the Identification of the Deities Represented at the Gates of Ancient Sam'al (Zincirli) with Possible Historical Implications." *ARAM* 31: 317–48.

Zertal, A.

1986–87 "An Early Iron Age Cultic Site on Mount Ebal: Excavation Seasons 1982–1987: Preliminary Report." *TA* 14: 105–65.