

Introduction

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Dedication

Lawrence E. Toombs (1919–2007) was the Senior Archaeologist of the Joint Expedition from 1970 through 1983. Starting in 1973 and continuing until 1983 his wife Carol joined the project as the Objects Registrar. Together they helped ground the project as a collective work and educational experience. Larry had the most complete view of the archaeological enterprise and was a master stratigrapher. He imparted his knowledge and archaeological philosophy to everyone who participated in the project, yet he easily acknowledged he also learned from the totality of the project's participants. The project participants from Wilfrid Laurier University were also just a fraction of his students during the normal academic year. He was a master teacher who pushed you to go beyond what you thought were your limits while leading you to believe you had discovered a great insight—one he had seen all along. This volume is dedicated to the memory of Larry Toombs (opposite).

What Are We Celebrating?

The year 2020 was the 130th anniversary of the first formal excavation at Tell el-Hesi and the fiftieth anniversary of the Joint Archaeological Expedition to Tell el-Hesi. These anniversaries mark significant moments in the history of excavations in the Levant. In 1890, Sir William Matthew Flinders Petrie began the first excavation of a site in Israel using his newly developed idea of a correspondence between layers, pottery, and civilizations. One might call it the first scientific excavation in the region. In 1970, a consortium of schools, organizations, and scholars returned to the site of Hesi and began a new set of excavations, using the latest “new archeology” methods of the time. Since then, surveys, excavations, research, and publications have continued.

This volume is a small contribution to the past, present, and future of Hesi.

Where Is Tell el-Hesi?

One can easily locate Tell el-Hesi by its coordinates: 31°32'52"N; 34°43'49"E. This places it in the southwestern part of what is now the state of Israel and provides a modern sense of its place. However, that information informs only part of Hesi's location and its ancient importance (Fig. 1.1).

In a larger geographical context, Hesi is located on a land bridge. This bridge connects three continents, Africa with Asia and Europe, and was the path of the earliest human migrations from Africa. Later, crossing the Nile and proceeding up the Mediterranean coast of the Sinai Peninsula into ancient Palestine and Syria was the only route possible for major movements of people and civilizations in the ancient world. In early historic times, this bridge was the connection between Egypt, with its civilization in the Nile River valley, and Mesopotamia and its civilizations between the two rivers of the Tigris and the Euphrates. As early as the third millennium B.C.E. we know that these two centers of civilization were in contact with each other. And the major north-south route for that contact was along the coastal plain of ancient Syria, Lebanon, and Palestine. Near the edge of that coastal plain sits Hesi, about 14 miles/23 km from the current Mediterranean coast.

In a smaller geographical context, Hesi is located on the borders of three climatic, geographical, and even political zones in Palestine: it is on the northern edge of the Negev desert; the western edge of the Shephelah, the low hilly country; and on the eastern limits of the coastal plain (Fig. 1.1). Thus, it was strategically located, accessing the communities from these climatic and geographical zones and providing an interface for those communities, allowing them to network

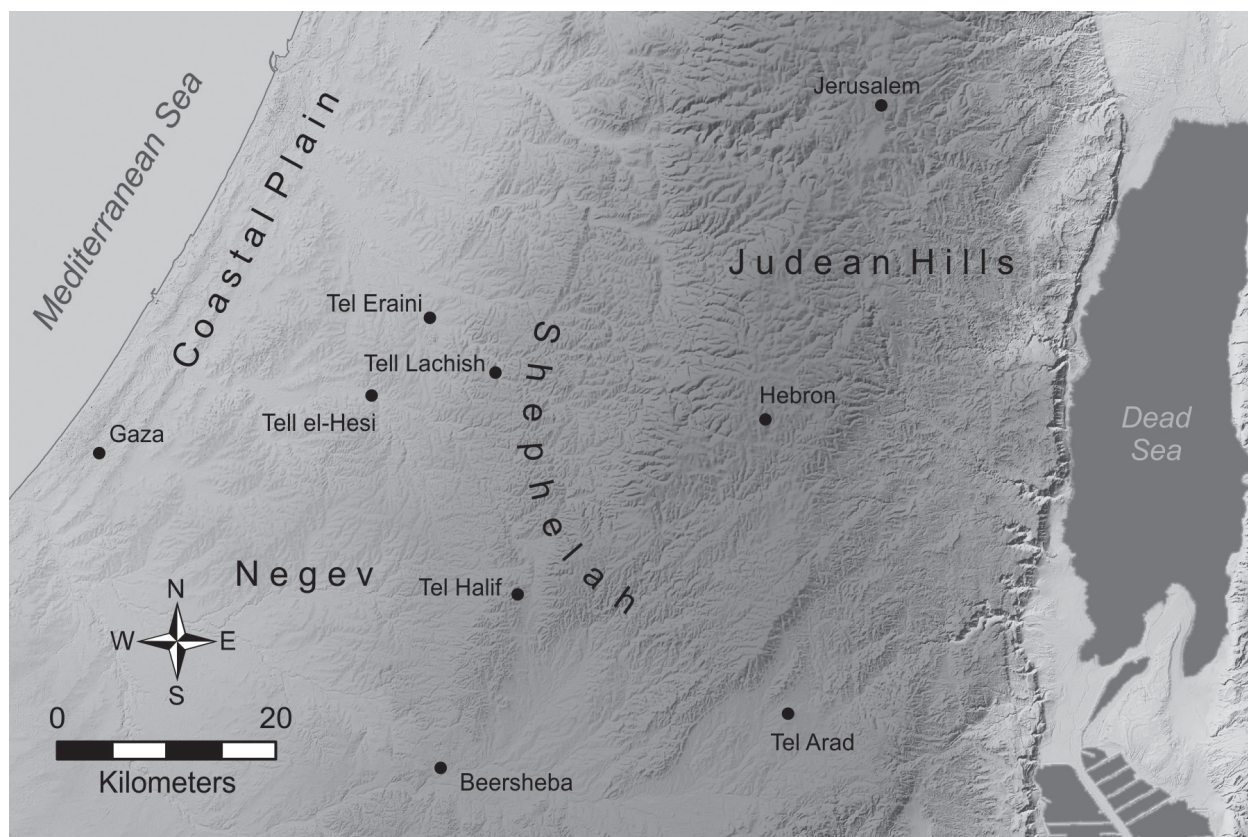


Figure 1.1. Location Map, showing Hesi in southern Palestine/Israel. The modern cities Jerusalem, Hebron, and Gaza are shown along with geographical features in relief. A few neighboring sites are also presented for reference. (Image by W. Isenberger along with J. Blakely on behalf of the Hesi Regional Project.)

into the more significant north/south trade routes on which it sat. Given these coordinates, it is not surprising that Hesi provides us with important knowledge of the ancient world.

However, locating Hesi does not mean we know its identity. Attempts to link the site with biblical cities such as Ziklag, Lachish, Gath, and Eglon must all be rejected. They more reflect the attempts of early scholars to tie all sites to the Bible than the usage of solid evidence (Blakely and Horton 1995; Blakely and Horton 2001).¹ Could the site have been Migdal-Gad as Hardin and coworkers speculated (2014)? Also recently, Horton and Blakely have argued that Hesi may be the unnamed site of the baptism of the Ethiopian Eunuch, reported in Acts 8:26–40 (Horton and Blakely

2000). In the Crusader and Ottoman periods, the site may have been known as Tell Ahsas. Even then the site is mentioned only rarely. Thus, while it is likely that the site was known in the ancient world, we must be comfortable with Hesi as, so far, an unidentified site.

What Happened with the First Excavations?

It was Hesi's location on this north-south route that led, in part, to the first formal excavation of the site by Petrie. As he moved north from his work in Egypt, he brought with him the new insight that there was a correlation between layers in the soil and layers of occupation—stratigraphy. Added to this was the idea that changes in pottery type were also connected to changes in historical periods. Funded by the Palestine Exploration Fund and intent on finding sites that linked with the biblical text, Petrie came upon the

1. The citations in this Introduction can be found in the unified bibliography at the volume's end. Most, however, also appear in the comprehensive bibliography of Hesi publications found at the end of this chapter.



Figure 1.2. In the spring of 1890 Petrie went to Tell el-Hesi to initiate excavations and took this photograph of the wadi face of the mound of Hesi where, over the centuries, it was cut by the wadi. (Courtesy of the Palestine Exploration Fund, London, photograph PEF21.)

prominent mound of Tell el-Hesi and applied his methodology to the site (Fig. 1.2). The result was the publication of *Tell el Hesi (Lachish)* (Petrie 1891) in which he both identified various cultures that had occupied Hesi over time and labeled the site as biblical Lachish. His work was quickly followed by the work of Frederick J. Bliss. Bliss's work is noted for two reasons. The first is the title of the work that resulted from his excavations *A Mound of Many Cities, or Tell el Hesi Excavated* (Bliss 1894). It demonstrates the results of using Petrie's stratigraphic techniques; Hesi was indeed a "mound of many cities." Bliss is also noted for his impact on the site itself. He decided he wanted to explore the layers of civilization at Hesi by taking a wedge out of the mound, a slice out of a multi-layer cake. And so on the northeast corner of the upper tell, nearly a quarter of the area was removed. It is this distinctive feature of the acropolis, known as, "Bliss's Cut," that marks Hesi to this day (Fig. 1.3).

Why Go Back to Hesi?

In 1968 G. Ernest Wright began to consider the idea of starting a new ASOR dig in Israel with the goal of reexcavating one of the sites that the pioneer archaeologists had investigated. In 1969 Wright and future staff members visited Tell el-Hesi and chose it for the new project. In 1970, the Joint Archaeological Expedition to Tell el-Hesi, returned to the site. In part it was to check the results of Petrie's and Bliss's much earlier work. More importantly, however, it was to also employ newer, scientific methods in the excavation of a site. Hesi was one of the first excavations that sought to introduce the "new archeology" into the field in Israel. This "new archeology" had four basic tenets. The first was to look at the nature of the culture being excavated, not just at its history. Sometimes called processual archaeology, this sought to take a broader view of the culture and see its growth and

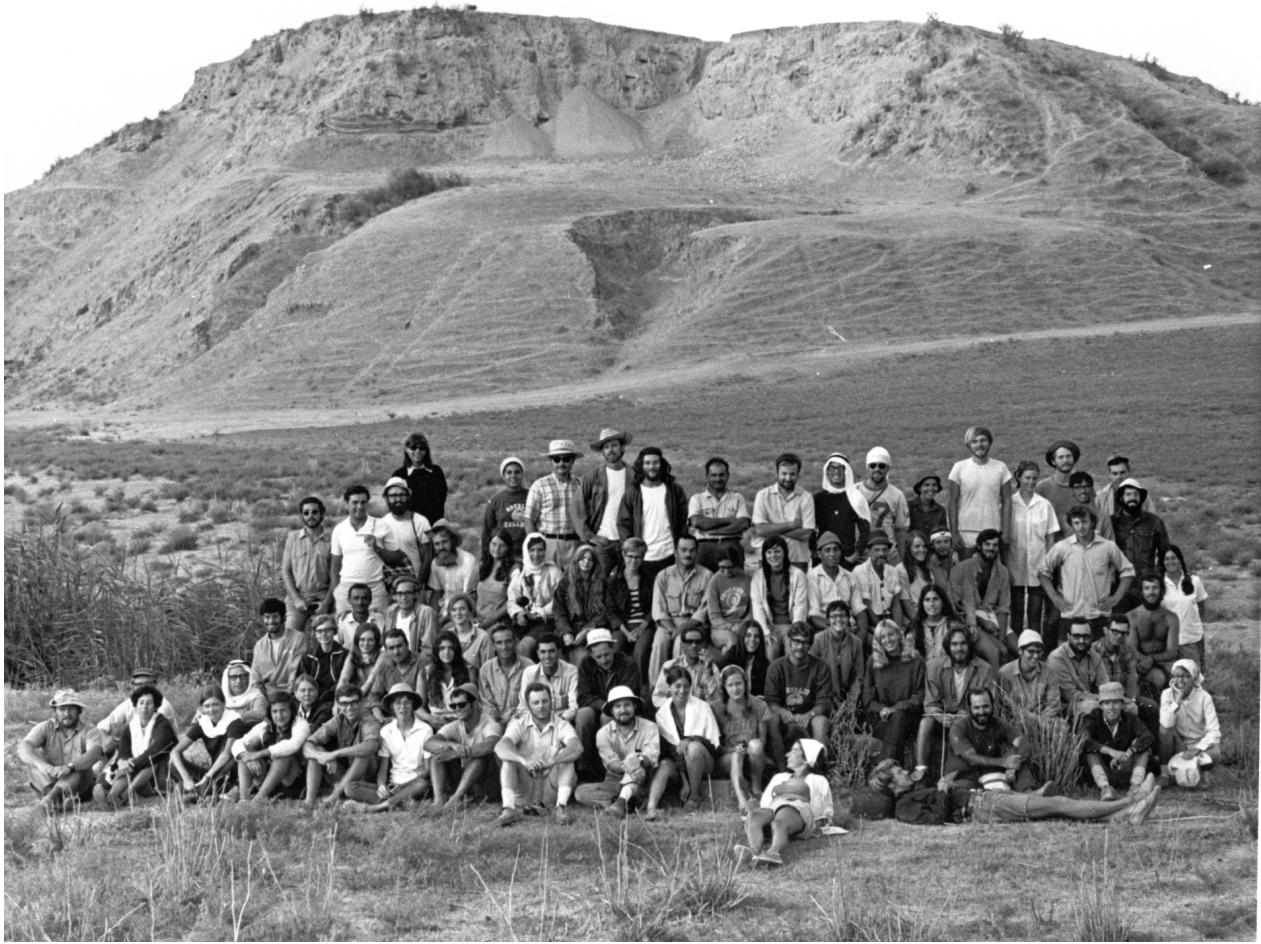


Figure 1.3. The Joint Expedition began excavation in the summer of 1970, taking this group photograph in front of the mound. In the background, however, Bliss's Cut dominates the image. In addition one can see where the Joint Expedition conducted some balk trimming in an attempt to correlate Bliss's work with what was still preserved. (Photograph by T. Rosen on behalf of the Joint Expedition.)

development over time rather than simply seeking a series of snapshots of the culture. Secondly, the “new archeology” viewed itself as a science rather than an art or a humanity. This was part of the broader movement where the social sciences sought to emphasize the science aspect of their name more than the social. Thus, archaeology too wanted to see itself as the objective, scientific analysis of past cultures. This manifested itself in the emphasis on rigorous methodology and copious data collection. The third aspect of this movement was to stress the environmental aspect of archaeology. This meant a larger concern for the ecological setting of a site, the examination of the region, and the relationship of the human and environmental factors. Finally, the “new archeology” saw

itself as being responsible for interpreting the data extracted from the field. Mere description was insufficient; the analysis and reconstruction of the ancient culture became essential.

This movement had its impact on the new excavators of Hesi and the methods that they employed in the field. First of all, this meant an environmental study of the site was needed. This was primarily the responsibility of the geologist, Frank Koucky. Koucky, with his knowledge and valuable insights, was able to place Hesi in the larger geological and climatological context. He frequently lectured the staff and volunteers on the geomorphology of the area, the deposition of loess on the site, and the role of coastal dew in the raising of crops.



Figure 1.4. Bruce Dahlberg of Smith College was an Area Supervisor from 1977 through 1983. Area Supervisors filled the most important role during excavation: teaching field methods to students, teaching practical theory to students, managing the Area, and recording everything in the Area. Here at the start of a season Bruce was explaining something to a student while another is hoeing topsoil as excavation began. (Photograph by J. Czechowsky and M. Rose on behalf of the Joint Expedition.)

A second influence was the employment of rigorous methodology and consistent record keeping. Starting in a crude form but quickly progressing, the excavators at Hesi developed a system for preserving artifacts and recording data on the site. The time-consuming processes of filling out tags, bagging artifacts, drawing balks and top plans, and recording specific information on a locus sheet were not designed to impede the process of excavation. Rather, they were employed to be sure the data were fully and carefully preserved. This process turned into a manual for all supervisors on the site (Fig. 1.4). When it was published in 1980 as *The Tell el-Hesi Field Manual* (Blakely and Toombs 1980), volunteers were urged to purchase the book in preparation

for work at the site. Hesi was one of the first sites to create such a manual, and it marked the attempt by Hesi to codify and regularize the process of preserving artifacts and information. This manual became the basis upon which later excavations have further developed recording methods. Now 40 years later it provides the organizational tree allowing new scholars of a younger generation to access the data.

A third example of the influence of the new archaeology on Hesi was the “holistic” approach taken in forming the staff. This meant both having specialists on the masthead of the excavation’s stationary and bringing those specialists to the site itself. When modern excavations at Hesi began in 1970, the “team approach” meant specialists in fields



Figure 1.5. Ken Eakins of Golden Gate Baptist Theological Seminary served as the Joint Expedition's osteologist from 1977 through 1983. Here Ken was in the tech shed examining some remains with students. (Photograph S. Lezon, T. Lengnick, and M. Rose on behalf of the Joint Expedition.)

such as botany, geology, osteology, lithics, metallurgy, and malacology were included in the team and were frequently present on the site. Koucky, Hesi's geologist, has already been mentioned. There was the botanist, Bob Stewart, whose employment of the methodology of flotation greatly improved the excavators' ability to preserve material culture and to understand the daily life of the ancient peoples (Stewart 1978; Stewart and Robertson 1973). There was the

continuous presence of photographers, who were responsible for recording (1) the artifacts, both in situ and for publication, (2) the excavation process at critical junctures, and (3) the life of the excavation itself. Next there was Jeff Schwartz and later Ken Eakins (Fig. 1.5) and their osteological staff, whose meticulous excavation and examination of bones provided both learning moments and valuable information (Eakins 1993).

A fourth consequence of the “new archeology” was the development of a volunteer program originally organized and led by Tom Frank. First of all, volunteers were used at the site rather than laborers. In addition, the volunteers were seen as “co-learners,” rather than merely dirt movers. Finally, the volunteers became the focus of a well-designed educational program—seeking to train future generations of archaeologists and to expand their knowledge of the people and history of the area. This employment of volunteers also became a model for later excavations.

One final example of the influence of the new archaeology was the conscious decision, made early on, to excavate the over 800 Bedouin burials on the site rather than simply removing them or destroying them (Toombs 1985; Eakins 1993). This decision marked a significant stride in recognizing the value and importance of all artifactual materials in understanding a site and its history and culture. While this decision was frequently mumbled about in the field, and ridiculed by some visitors, as careful excavation of the burials slowed the progress of the overall excavation, no project member seriously questioned the appropriateness of the decision to excavate those burials. The mention of these burials calls for more comments about one of the staff specialists at Hesi. Eakins and his osteological staff were integral to the excavation of the burials and to the expansion of the knowledge base about the local Bedouin. In addition, Eakins’s patience and reverence for life, even in its death, provided the staff and volunteers with a model of how to learn from the bones and how to treat the human remains with appropriate respect, and garnered the appreciation of the local Bedouin.

So Who Provided the Labor for These Excavations?

In the nineteenth century, most excavations employed local laborers. Petrie, a man of his time, did the same. So when he arrived at Hesi, he hired about thirty local Palestinian men to do the digging with women and children carrying the baskets. He writes he had difficulty finding good workers—only one eighth of the originals were still there after six weeks. In addition, he talks about the workers being lazy and taking things that were found (Petrie 1891: 10). As one can imagine, this attitude did not create a positive atmosphere for the excavations at Hesi. However, this attitude toward Arabs was not unique to Petrie nor to his time. Bliss, on the other hand, understood the local culture and spoke Arabic fluently, being a native of Beirut. His attitude was different and he sought interpretive insight from his workers (Bliss 1891) (Fig. 1.6).

The more recent excavators at Hesi took a different approach in many important subtle and significant ways. Hesi created an atmosphere where there were opportunities for the volunteers, the “diggers,” to learn about archaeology and history, and to interact with and learn about both the Arab and Israeli communities (Fig. 1.7). The excavation itself exemplified the respect for all communities and encouraged its volunteers to adopt a similar approach.

So How Did This New Approach Actually Work?

This inclusive approach by the Joint Archaeological Expedition to Tell el-Hesi was manifested in both the overall structure of the excavation and in the structure of the Volunteer Program.

The renewed excavation at Tell el-Hesi began in 1970 and continued through the 1983 season. These seasons were divided into two phases: Phase One included the years 1970, 1971, 1973, and 1975; and Phase Two covered the years 1977, 1979, 1981, and 1983. The excavations were administered by a number of directors, including John Worrell, Glenn Rose, and Valerie Fargo (Fig. 1.8). And it was a diverse consortium of schools that supported the excavations and sent staff and volunteers to participate in the on-site work. The consortium included The College of the Holy Cross, Hartford Seminary, John Carroll University, Oberlin College, Oklahoma State University, the Protestant Episcopal Theological Seminary in Virginia, Seabury-Western Theological Seminary, Smith College, Trinity Lutheran Seminary, Wake Forest University, Wartburg Theological Seminary, and Wilfrid Laurier University. There was even an Earthwatch contingent at times.

The expedition undertook excavations in three main areas of the site. One was on the acropolis and entailed a reexamination of the excavations of Petrie and Bliss and an expansion of our knowledge of that portion of the early Iron Age and Persian Period at the site. A second emphasis was on the larger, pre-Israelite EB city and its walls. Finally, there was the process of removing and studying the over 800 Muslim burials across the excavated site. All of these periods and cultures were seen as important to excavate and to understand.

This reference to the excavation of the Muslim/Bedouin burials at Hesi was one example of honoring different cultures. While many excavators would have viewed those burials as impediments to excavation, as something to be removed so that artifacts of real interest can be accessed, the excavators at Hesi viewed their responsibility as one



Figure 1.6. (top) Petrie and Bliss hired local Bedouin and *fellahin*, one family shown here, to do the actual excavation. Bliss was a native Arabic speaker who interacted with the workers, asking for their insights into what was being found. (Photograph courtesy of the Palestine Exploration Fund, London, photograph P112.)

Figure 1.7. (bottom) The 1977 season was among the largest conducted by the Joint Expedition. As opposed to when Petrie and Bliss excavated, now students provided the labor for their teacher's research in exchange for education and college credits. (Photograph by J. Czechowsky and M. Rose on behalf of the Joint Expedition.)



Figure 1.8. Glenn Rose, Larry Toombs, and Valerie Fargo observing excavation in Field VI in 1981. Glenn was Project Director from 1975 until his death in 1981 and Valerie was Project Director in 1983. Larry was the Senior Archaeologist on staff from 1970 through 1983. (Photograph by R. Adams and M. Rose on behalf of the Joint Expedition.)

that included a careful excavation of all archaeological elements found at the site—including Arab burials. Hence, Hesi undertook the careful and time-consuming excavation and removal of all encountered burials; the study and analysis of the burials themselves and the artifacts associated with them; and the publication of the results of that study.

Another example of exploring different cultures was the administration of the excavation intentionally seeking out Arab merchants and purveyors, in addition to Israeli merchants, to provide the goods and services necessary to run the excavation. For instance, for several seasons the chief supplier of daily food and goods was Samir Khayo. He would appear every morning at the site with his Mercedes taxi. Inside and on the roof would be piled and tied boxes of food and supplies for the day. In the later seasons it was Samir's wife and family who operated as cooks and kitchen staff on the site (Fig. 1.9).

The excavation also employed Arabs from the city of Balata, who were designated “technical men” because of their expertise at excavation techniques. They provided many learning opportunities for the volunteers as they taught techniques of excavation and demonstrated use of tools. They also provided a chance to interact with Arabs at close hand. And Nasr Dial Mansoor (known familiarly as Abu Issa), famous for his ability to trim perfect balks and trace challenging surfaces, frequently remained at the site

to continue to teach, provide expertise on excavation, and interact with the staff and volunteers (Fig. 1.10).

This desire for diversity at Hesi was integrated into its volunteer program. Built on earlier programs at Masada and Gezer, the program's key was having the volunteers both “move the dirt” and learn about archaeology and the various cultures they were excavating and experiencing. The program at Hesi had three goals. The first was personal enrichment. This meant learning about the site itself and about the larger environment of the “Holy Land.” Thus, there were background lectures, visits to other excavation sites, and tours of major archaeological, cultural, and historical places in Israel and Palestine. The second goal was academic quality. The educational training had to be of a quality which allowed consortium schools to offer academic credit to students who participated in the program. The third goal was field training in archaeology. Volunteers were taught basic archaeological techniques, from the use of the trowel and patish to the recording of data. In addition, volunteers were placed on a rotation schedule so that they were exposed to the methods and techniques of the experts on the staff, such as the geologist, botanist, pottery restorer, photographer, field recording techniques, and osteologist. The hope was that the volunteers would leave Hesi with a much fuller appreciation of the culture and history of Israel as well as the techniques and results of archaeology itself.



Figure 1.9. (*above*) Samir Khayo was the chief provider of food and other essentials for the project starting in 1973. Here he is shown with him family during the 1983 season. In the final years of the project members of the family served as cooks and kitchen staff. (Photograph by R. Adams and C. Peachey on behalf of the Joint Expedition.)



Figure 1.10. (*left*) At the start of each season the students had to be taught how to dig. An important aspect of that was learning how to trim a balk. Here Abu Issa was teaching the art of balk trimming. (Photograph by S. Lezon, T. Lengnick, and M. Rose on behalf of the Joint Expedition.)



Figure 1.11. Integral to the Hesi experience were the education weekend field trips led by various project members. Here students and project staff were examining the Early Bronze Age remains at Ai. (Photograph by J. Spencer.)

The volunteer program usually started in Jerusalem, prior to the start of the excavation itself. The idea was to allow some acclimatization of the volunteers and to begin to introduce them to Israel. They toured major sites in Jerusalem, such as Yad Vashem, the Rockefeller Museum, the Dome of the Rock, the Western Wall, and the Church of the Holy Sepulcher. They were also introduced to the Albright Institute. During the initial visit to Jerusalem, the volunteers frequently stayed in accommodations in East Jerusalem, sometimes at the Jordan House, where they were introduced to Arab culture and cuisine. On subsequent weekend visits to Jerusalem, volunteers stayed all over the city, west and east Jerusalem as well as the Old City, experiencing the richness of the cultures that inhabit Jerusalem.

During the season, the volunteers were taken on other tours, which included major Jewish, Christian, and Arab sites. There were visits to Bethlehem, Masada, Jericho, Akko, Tiberius, Dan, active excavations, and many more sites. The goal was always to provide the students and

volunteers with a balanced and diverse exposure to the peoples of Israel and Palestine (Fig. 1.11).

This kind of volunteer program certainly slowed the process of removing dirt and added cost to the excavation, but it was well worth it. The volunteers went away feeling that they had learned something, that they had been a valuable part of the larger scholarly enterprise, and that their lives has been enriched by learning about other cultures and times. This educational program served as a model for later excavations and, equally important, provided invaluable experiences for hundreds of volunteers themselves. Some volunteers moved on to staff positions at Hesi or other excavations and to graduate schools. However, the vast majority of volunteers went home with a wealth of experiences, archaeologically, historically, and culturally, which continue to inform their lives and the lives of those with whom they had contact. In the end, each student received up to six semester hours credit for the experience, tuition free from either Oberlin College or their own university.

What Results of the Excavation Have Been Published?

During these years of excavation a regular series of preliminary reports and specialized studies appeared. When the excavations ended, interested and invested staff members moved on to assigned research and publication tasks. Four final reports appeared in rapid succession: Toombs (1984) on half of the Bedouin Cemetery, Bennett and Blakely (1989) on the Early Persian-period remains, Dahlberg and O'Connell (1989) a collection of essays about the project and short final reports, and Eakins (1993) on the second half of the Bedouin Cemetery. Then the final reports stopped and, although research continued, publication dwindled. This left some major stratigraphic reports incomplete, including the citadel (Fields I and III) and the EB City (Fields V, VI, and IX). Organizing, research, and some writing began on these reports, but most of these efforts stalled.

What happened was age and infirmity in some cases and youth, growing families, and careers in other cases. By 1995 no one working on Hesi materials was associated with a graduate school of archaeology or a museum, and the model of doing the research through teaching failed. The research responsibilities narrowed to a few people who could do the work but only in the evenings after their day jobs, whether that was teaching at a university or college, or functioning in the world of CRM archaeology. Some papers appeared and great progress was made on typing paper records into electronic data bases, but all momentum was lost.

What Was Left Undone?

One example of the difficulties in getting things published was the unexpected death of Roger Anderson in 2014. With his demise, all previously active members of the EB team had passed and the responsibility of seeing that work to completion defaulted to others. Anderson had fully organized all the material and even gathered data on the accessibility of materials excavated by Petrie and Bliss. By 2016 all of these materials and records were organized and available for scholarly research or study by advanced students at Mississippi State University, under the supervision of Blakely and Hardin. With a growing interest in this material as well as some unexpected discoveries, work began anew on the final reports of the EB materials in 2020. Most of the materials are now fully stratified and analysis is beginning. Special reports on EB figurines and on Field IV appears as chapters 2 and 3 in this volume.

Blakely is responsible for the final report of excavations on the citadel, his original assignment. The materials are fully stratified, but active work toward a final report stopped in order to concentrate on the less stratigraphically challenging EB materials. Nonetheless, a number of articles relating to these remains have been prepared over the past years and now we have a far better understanding of the historical context of the site during the Late Bronze and Iron ages (e.g., Blakely 2018; Blakely and Hardin 2019). Chapter 4 in this volume, "The Phantom Stratum" is another such report.

What Has Happened in the Last 25 Years?

One important goal of an archaeological final report is to set the results into the generally accepted scholarly consensus for the particular region at the particular time. Obviously the results of excavation should alter, tweak, and augment the scholarly consensus a bit because of the new discoveries from the excavation, but rarely should they radically change that consensus. By the late 1990s a problem began to emerge. The results from Hesi did not appear to fit the then current scholarly consensus for the region.

One example of this conflict arose when Blakely and Horton (2001) and Blakely and Hardin (2002) suggested, based on ceramic and structural remains, that ninth and eighth century Hesi was a Judahite fort that was destroyed in the late eighth century B.C.E. by the Assyrians. In contrast the scholarly consensus held that Hesi was in Philistia, destroyed in the early seventh century (Finkelstein and Na'aman 2004), and, apparently, known to be Assyrian (Oren 1993). The implication, therefore, was that we would have to create a variety of historical contexts ourselves in which to place the site's excavation results.

Another issue arose from the work of project geologist Koucky. From 1970 to 1983 he conducted the regional survey research for the project. His geological and geomorphological results were published in Dahlberg and O'Connell (1989). In that report Koucky used the archaeological materials he had found to date the landscape around Hesi. It was a fine and very useful geomorphological study. He studied aspects of the written and cartographic historical records as tools in his research, pointing out that a detailed historical study of the Hesi region might isolate important materials.

The problem with Koucky's work, however, is that he approached it as a geomorphologist, and his report did not satisfy the requirements for reporting of an archaeological survey in Israel. Koucky had used the archaeology to date the landscape, but he had not recorded all the sites or even

where he had looked. He only noted the sites needed to date the landscape. Since the work was conducted under an Israeli archaeological permit, it meant that a true archaeological survey report needed to be prepared, but the data behind such a report were lacking, and this was a major lacuna.

To satisfy the requirements of a modern survey, a slightly larger area than that examined by Koucky, 100 km² to be precise, was resurveyed in 2004 and 2008. The limits were the borders of the Ruhama Map of the Archaeological Survey of Israel, and Tell el-Hesi is fortuitously near the dead center. This work became the Hesi Regional Survey, Phase III of the larger Hesi project. The work was sponsored by the Cobb Institute of Archaeology at Mississippi State University, and it was co-directed by Blakely and Hardin.

The preparation of a final report on this work is well advanced (Hardin and Blakely, forthcoming). In fact, it was the advent of the COVID pandemic that curtailed finishing this report when vital materials became inaccessible. Thus, the authors switched gears to create the volume at hand. Hardin and Blakely will return to the survey volume once they again can access the materials in Israel. Briefly, the entire 100 km² was covered with planned transects and, depending on how you count, a total of about 800 archaeological sites were identified (Fig. 1.12). They span the time from the Lower Paleolithic (possibly 1,400,000 years ago) to 1948. Beyond the site descriptions, the volume will follow the traditional format of the Archaeological Survey in Israel and include a summary overview of the archaeology of the region separated out by period.

As part of this survey work, Benjamin A. Saidel undertook more detailed study of a number of the late period sites in the Hesi region. Much of this fieldwork was conducted in 2009 and 2010, with an additional survey season working with Rachel Hallote at neighboring Burayr in 2014. Some of this research is now published (Saidel, Hallote, Erickson-Gini, Schecter, and Hardin 2020), and other aspects are nearing completion. The results of these small projects will be summarized in the survey report but will also appear as independent publications.

Starting about 1995, but attaining more focus from 2001 to about 2019, Blakely conducted an intensive literature study of the history of the Hesi region, which also extended into soils, geomorphology, flora, and climate. The idea was to assemble what was known about the region, especially how it was described in primary historical accounts spanning the Roman Period to 1970. Various small studies were published, but ultimately this led to the creation of a model for how the greater Hesi region functioned from about 3300 B.C.E. to

the present. Given the region's loessic soils and the normal values for precipitation, sedentary agriculture is not successful except in special cases. Those special cases would be (1) in wadi floodplains where different soils are present, and (2) during exceptional wet climatic events such as the EB III and the fourth and fifth centuries C.E. when the water table was much higher (Blakely and Hardin 2018, 2019; Hardin and Blakely 2018; Blakely 2018, 2021). At other periods the sedentary agricultural enterprise ultimately failed, although very short-term subsistence did succeed. Thus, for most of the past 5,500 years it would appear that the greater Hesi region has functioned as a pasturage. All of these datasets will be joined and then merged with the survey site studies to create one comprehensive study of the Hesi region. Work is also well advanced on this volume.

As the fieldwork relating to the Hesi Regional Survey wound down, Hardin and Blakely organized a new excavation project, which should be viewed as Phase IV of the modern work at Hesi. Again the work was sponsored by the Cobb Institute of Archaeology at Mississippi State University and was co-directed by Hardin and Blakely. The Hesi Regional Project's excavation of Khirbet Summeily, a small Iron Age tell some three kilometers west of Tell el-Hesi, began in 2011 with additional seasons in 2012, 2014, and 2017 (Fig. 1.13). The final planned excavation season is currently on hold awaiting the end of the COVID pandemic. While the directors had expected to uncover a small agricultural hamlet on the borders of Judah and Philistia, they instead uncovered a tenth-century B.C.E. governmental facility, possibly a postal station.

With the Cobb Institute becoming the license holder for the Hesi Regional Project in Phases III and IV, the Cobb agreed to become the home for all Hesi materials and records in the possession of the Joint Expedition. Much of this move has been accomplished. This reorganization means that the modern Hesi expeditions are now housed at a university research institute and that students have access to the materials under the supervision of both museum and Hesi staff. As can be seen from this volume, this means that more broad-based research can be readily accomplished.

At the same time the almost half-a-century-old relationship between the Pontifical Biblical Institute (PBI) in Jerusalem and the Hesi project ended. For all these years the Hesi project had stored both excavated materials and dig equipment at the PBI. With the death of Kevin G. O'Connell, S.J. in 2016 a direct relationship between the PBI and Hesi ended, and in 2018 all materials in storage at the PBI were moved to Kibbutz Ruhama where they are now in storage.

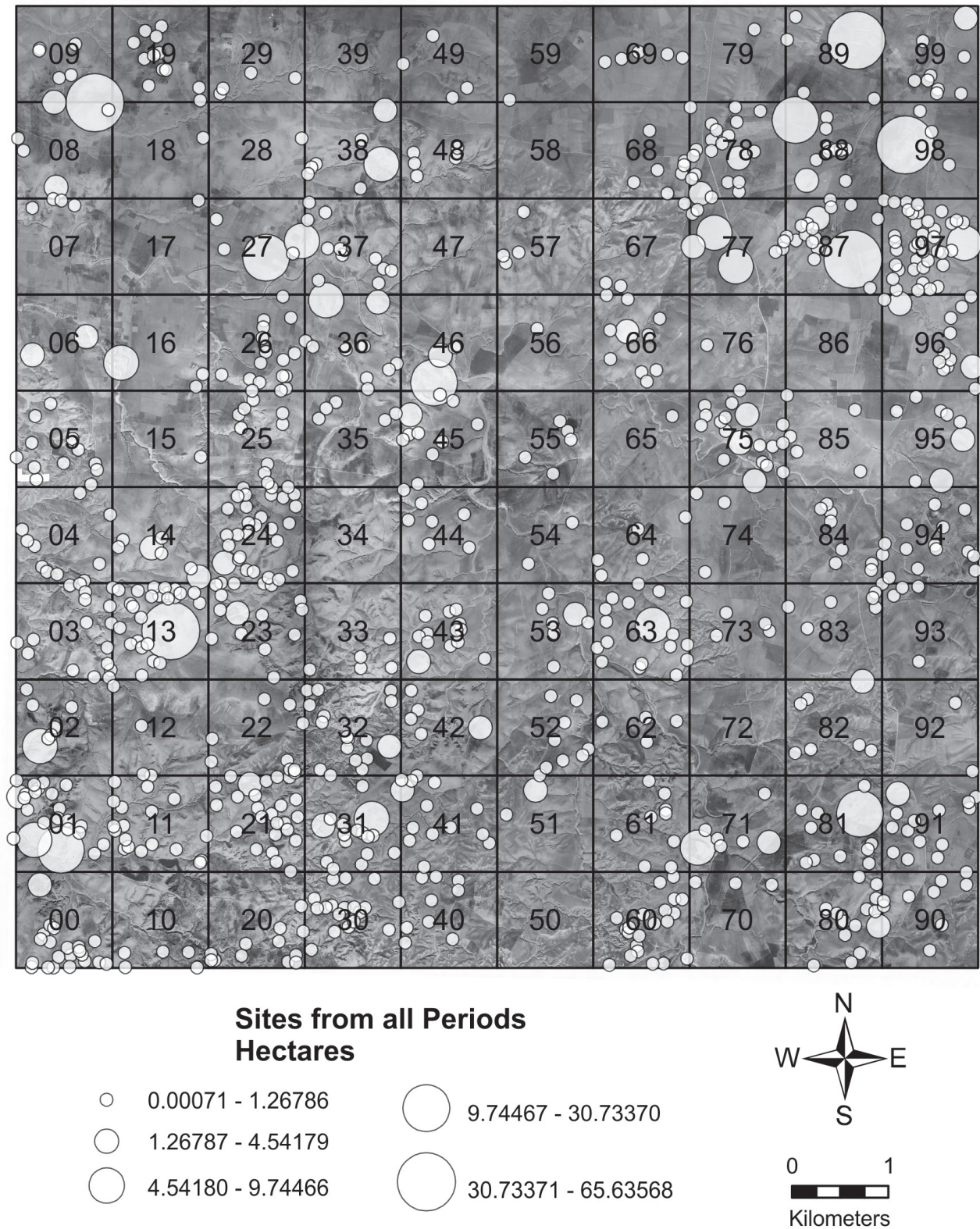


Figure 1.12. In 2004 and 2008 the Hesi Regional Survey walked transects across the Hesi region, covering 100 km². This image is a photomosaic created from 1945 RAF photographs covering this region. The dots are all the locations where surface archaeological remains were found. (Image by W. Isenberger along with J. Hardin and J. Blakely on behalf of the Hesi Regional Project.)



Figure 1.13. Starting in 2011 the Hesi Regional Project initiated excavations at Khirbet Summeily, about 3 km WNW of Tell el-Hesi. The site functioned from the late eleventh century B.C.E. to about 800 B.C.E., apparently serving as a border outpost. Here the site is seen from the north during excavation in 2014. (Photograph by W. Isenberger on behalf of the Hesi Regional Project.)

What Is the Future of Hesi?

The legacy of Hesi will probably have another chapter. There is plenty of area at the site that has not been excavated and been left for future archaeologists with new ideas, new techniques, and new instrumentation. These future excavators will have been provided with a long history of an important site that was dug with the best practices of the times. Perhaps the site will be identified, perhaps the extent of the EB city will be more fully explored, perhaps the acropolis will be understood better, perhaps the surrounding area will provide new insights, perhaps a burial area will be discovered. Only time will tell what the future will bring, but we are pleased to present in this volume some of what is currently known about Tell el-Hesi.

What Is in This Volume?

One of the goals for the past 25 years has been to highlight features of the Hesi region and to create archaeological, historical backgrounds, and contexts in which

to place research on the greater Hesi region. Therefore articles in journals, *Festschriften*, and essay volumes have contributed to the ongoing scholarly discussions. At times, however, the studies are too long to be an article but too short to be a stand-alone monograph. This volume collects a number of these studies, on a wide variety of Hesi-centric topics, to create a publication venue within our final report series.

Following this introductory chapter, which closes with a remembrance of colleagues we have lost and a bibliography of Hesi publications, most of which were written by project members, we move on to five individual chapters. In chapter 2, Geoffrey E. Ludvik and Jeffrey A. Blakely discuss the excavation of Field IV by the Joint Expedition in 1973. This was a small test excavation located on the site's North Ridge where the survey crew excavated a 2×2 m probe to a depth of about 2.25 m, almost reaching sterile soil. The probe was conducted to investigate the EB IIIA remains. In fact two phases of EB IIIA were encountered, probably indicative of domestic architecture. Above these phases, a highly disturbed layer was discovered in which Persian-period remains dominated. Based on this probe it

appears the North Ridge contains an intact EB deposit with a depth of more than 1.5 m covering about 2.0 acres.

Excavations at Tell el-Hesi from 1977 to 1983 uncovered a number of terracotta animal figurines from the EB III. In chapter 3, John R. Spencer presents information on these figurines and figurine parts that were identified at Hesi. He also discusses the presence of terracotta animal figurines throughout the broader ancient Near East and from pre-historic periods to the Iron Age. Spencer then identifies sites outside and inside ancient Israel/Palestine where EB terracotta animal figurines were also found. Finally, he takes up the issue of the function of these figurines. Were they cultic objects, toys, or some combination thereof? It is a difficult issue to resolve since nearly all figurines are found in secondary contexts. While many argue that the figurines are cultic, the provenance of most of the finds at Hesi make it difficult to accept that label.

In chapter 4, Jeffrey A. Blakely, James W. Hardin, and their colleagues discuss one of the Joint Expedition's goals, to investigate the same stratigraphic layers excavated by Frederick Jones Bliss in 1891 and 1892 and to compare the results of the two projects. Here the focus is Bliss's City V, which is also the Joint Expedition's Stratum IX. Surprisingly, the Joint Expedition found no identifiable stratigraphic remains they could tie to City V, Bliss's phase that includes three tripartite pillared buildings, a.k.a. stables. The authors investigate this phase, reconstructing its stratigraphy and dating it before placing it in a broad historical context of the late eleventh and tenth centuries B.C.E.

Geoffrey E. Ludvik argues in chapter 5 that archaeologists must exercise caution when attempting to reconstruct chronology and behavior in multi-period sites given the potential presence of "residual" artifacts that significantly predate the deposition of an assemblage. He presents a case study in identifying and interpreting this "residuality" using a sample of carnelian and other hard-stone beads from Tell el-Hesi. Beads derived from mixed fill and pit deposits in Fields I, III, and V as well as from the Islamic period cemetery in Fields I and VI were examined and seriated by the production technology employed. To accomplish this seriation, scanning electron microscopy (SEM) of silicon drill hole impressions and technostylistic analyses of bead shaping and morphology were employed. Based on the chronologically specific features of drilling and shaping identified, the most likely period of production for twenty three beads was determined. The results indicate that: (1) within fill and pit contexts, beads from many different periods were documented that testify to the antiquity of bead exploitation at Hesi; (2) within burial contexts, some beads from the

surrounding fill significantly predate internment, while others were likely contemporaneous primary deposits ("grave goods"); and (3) careful examination of hard-stone beads can successfully identify examples of residuality. Ludvik further identifies the presence of early South Asian imports at Hesi: an Indus Valley Civilization-style agate bead and the two earliest diamond-drilled beads documented using technological analysis in the southern Levant.

Khirbet Summeily, an early Iron Age II site located northwest of Tell el-Hesi in southern Israel, is the subject of Kara Larson's inquiry in chapter 6. Excavations sponsored by the Cobb Institute of Archaeology at Mississippi State University have revealed a large structure with a potential ritual space dated to the Iron Age IIA (ca. 1000–980/850 B.C.E.). Recent interpretations, based on the material culture and architecture recovered from the Iron Age IIA layers, suggest the site was integrated into a regional economic and political system and functioned as an administrative outpost. Larson tests that suggestion through the analysis of carbon, oxygen, and strontium isotopic data from intra-tooth samples of ovicaprine and cattle remains to assess if the herd-management strategies from the recovered animals are linked to administrative and cultic provisioning activities. The animal remains are used as proxies to identify political and economic ties through herd-management patterns. These results indicate that Khirbet Summeily was an administrative outpost integrated into a larger political and/or economic network during the Iron Age IIA.

In Memorium: Our Coworkers

Over the years of the modern Hesi project, more than 1,000 individuals participated, and after 50 years, it is hard to know how many have now passed away. Those who accepted publication responsibilities in and after 1985 were our coworkers for even more years. Each of the remaining staff has felt the loss of these friends and coworkers:

Gary L. Johnson (1941–2001)
 James F. Ross (1927–2007)
 Lawrence E. Toombs (1919–2007)
 Frank L. Koucky, Jr. (1927–2010)
 Bruce T. Dahlberg (1924–2012)
 Frances Carolyn Toombs (1929–2013)
 Roger W. Anderson, Jr. (1948–2014)
 Robert B. Stewart (1926–2015)
 Kevin G. O'Connell, S.J. (1938–2016)
 Ralph W. Doermann (1930–2020)

Hesi Excavation Publications: 1890–2022

This bibliography lists all known primary reports and studies prepared by the excavators and surveyors of Tell el-Hesi, Khirbet Summeily, and Umm Lakis on behalf the Palestine Exploration Fund, the Joint Archaeological Expedition to Tell el-Hesi, and the Hesi Regional Project. This list also includes regional and background studies prepared by these projects as part of their ongoing research. It does not include, however, subsequent responses or primary reports prepared by the excavators of, for example, Tell en-Negila or Bizat Ruhama, projects with different researchers and objectives.

Bibliography

- Albright, W. F.
1942 A Case of Lèse Majesté in Pre-Israelite Lachish, with Some Remarks on the Israelite Conquest. *BASOR* 87: 32–38.
- Amiran, R., and Worrell, J. E.
1976 Hesi, Tel. Vol. 2, pp. 514–20 in *EAEHL*, ed. M. Avi-Yonah and E. Stern. London: Oxford University Press.
- Anderson, R. W., Jr.
2006 South Palestinian Chronology: Two Radiocarbon Dates for the Early Bronze Age at Tell el-Hesi (Israel). *Radiocarbon* 48.1: 101–7.
2014 Early Bronze Age Pottery from Tell el-Hesi: The Petrie Donation. *PEQ* 146.3: 241.
- Bennett, M., and Bennett, W. J., Jr.
1976 Material Culture Registry at Tell el-Hesi. *JFA* 3: 97–101.
- Bennett, W. J., Jr.
1974 The Field Recording of Ceramic Data. *JFA* 1: 209–14.
- Bennett, W. J., Jr., and Blakely, J. A.
1989 *Tell el-Hesi: The Persian Period (Stratum V)*. TEH 3. Winona Lake, IN: Eisenbrauns.
1989 The Levantine Mortarium of the Persian Period. Pp. 45–65 in *Analysis and Publication of Ceramics: The Computer Data-Base in Archaeology*, ed. J. A. Blakely and W. J. Bennett, Jr. BARIS 551. Oxford: BARpt.
- Bennett, W. J., Jr.; Sollberger, J. B.; and Gettys, A. F.
1989 Flint Tools. Pp. 231–56 in *Tell el-Hesi: The Persian Period (Stratum V)*, ed. W. J. Bennett, Jr., and J. A. Blakely. TEH 3. Winona Lake, IN: Eisenbrauns.
- Betlyon, J. W.
1982 The Joint Archaeological Expedition to Tell el-Hesi, 1981. *BA* 45: 124–26.
1986 Coins Excavated Between 1970 and 1983 at Tell el-Hesi. *PEQ* 118: 66–69.
- 2003 Neo-Babylonian Military Operations other than War in Judah and Jerusalem. Pp. 263–83 in *Judah and the Judeans in the Neo-Babylonian Period*, ed. O. Lipschits and J. Blenkinsopp. Winona Lake, IN: Eisenbrauns.
- Bieber, A. M., Jr.; Brooks, D. W.; Harbottle, G.; and Sayre, E. V.
1976 Compositional Groupings of Some Ancient Aegean and Eastern Mediterranean Pottery. Pp. 111–43 in *Applicazione dei metodi nucleari nel campo della opera d'arte. Congresso internazionale, Roma-Venezia 24–29 Maggio 1973*. Roma: Accademia Nazionale dei Lincei.
- Blakely, J. A.
1981 Judahite Refortification of the Lachish Frontier. MA thesis, Wilfrid Laurier University.
1990 Historical Geography and Its Impact on the Analysis and Publication of Excavated Ceramics in the British and American Traditions of Palestinian Archaeology. Ph.D. dissertation, University of Pennsylvania, Philadelphia.
1993 Frederick Jones Bliss: Father of Palestinian Archaeology. *BA* 56.3: 110–15.
1999 Resurrecting Dead Digs. Vol. 2, pp. 71–93 in *Archaeology's Publication Problem*, ed. by H. Shanks. Washington, DC: Biblical Archaeology Society.
2000 Petrie's Pilaster Building at Tell el-Hesi. Pp. 66–80 in *The Archaeology of Jordan and Beyond: Essays in Honor of James A. Sauer*, ed. L. E. Stager; J. A. Greene; and M. D. Coogan. Winona Lake, IN: Eisenbrauns.
2002 Reconciling Two Maps: Archaeological Evidence for the Kingdoms of David and Solomon. *BASOR* 327: 49–54.
2003 Davidic and Solomonic Bazaars, Barracks, Stables, Warehouses, Toll Stations, Tripartite Pillared Buildings, or Entrepôts . . . Whatever: Beyond the Structures Themselves. *Bibleinterp.com*.
2007 The Location of Medieval/Pre-Modern and Biblical Ziklag. *PEQ* 139.1: 21–26.
2010a Ajlan: Locating the Estate of Amr b. al-As. *NEA* 73: 210–22.
2010b A Note on Henry Timberlake's Route from Gaza to Beersheba to Hebron in 1601. *PEQ* 142.1: 64–68.
2015 Tell el-Hesi. Vol. 11, p. 985 in *Encyclopedia of the Bible and its Reception*, ed. D. C. Allison, Jr.; C. Helmer; V. Leppin; C.-L. Seow; H. Spieckermann; B. D. Walfish; and E. J. Ziolkowski. Berlin: de Gruyter.
2018 Tell el-Hesi: A Type Site for Reevaluating So-Called "Egyptian Governors' Residencies" of the South. *PEQ* 150.4: 271–95.
2021 The Changing Landscape of the Hesi Region and its Implications for Archaeological Research. *JEMAHs* 9.1–2: 135–63.
- Blakely, J. A., and Bignasca, A.
2006 Tell el-Hesi in Guida e un Nuovo Kernos Inedito. *Numismatica E Antichità Classiche. Quaderni Ticinesi* 35: 31–51.

- Blakely, J. A., and Czitron, D.
2020 The Mamluk Bridge at Dayr Sinayd. *JIA* 7.1: 79–92.
- Blakely, J. A., and Hardin, J. W.
2002 Southwestern Judah in the Late 8th Century B.C.E. *BASOR* 326: 11–64.
- 2018 Coming to Recognize that Sedentary Agriculture, or Farming, Was Rarely Practiced in the Hesi Region. Pp. 229–63 in *Archaeology and History of Eighth Century Judah*, ed. Z. I. Farber, and J. L. Wright. Ancient Near East Monographs 23. Atlanta: Society of Biblical Literature.
- 2019 Land Use, Regional Integration, and Political Complexity: Understanding the Hesi Region as Pasture during the Iron Age IIA. *Strata* 37: 53–81.
- Blakely, J. A.; Hardin, J. W.; Banks, R.; Carlucci, E. M.; Ellis, G.; Farrow, D.; Hatfield, B.; Ludvik, G. E.; Morrow, A. R.; Schadeberg, J. L.; and Zwang, D.
2023 Dating the Joint Archaeological Expedition's Phantom Stratum (IX): Bliss's City 5 at Tell el-Hesi. Pp. 79–111 in *Hesi after 50 Years and 130 Years: Beginning a New Generation of Hesi Research*, ed. J. R. Spencer, J. W. Hardin, and J. A. Blakely. TEH 6. University Park, PA: Eisenbrauns.
- Blakely, J. A.; Hardin, J. W.; and Master, D.
2014 Expenditure of Human Capital on the Southern/Western Borders of Judah in the 9th Century as Evidence of Judahite Statehood. Pp. 33–51 in *Material Culture Matters: Essays on the Archaeology of the Southern Levant in Honor of Seymour Gitin*, ed. J. R. Spencer; R. A. Mullins; and A. J. Brody. Winona Lake, IN: Eisenbrauns.
- Blakely, J. A., and Horton, F. L., Jr.
1986 South Palestinian Bes Vessels of the Persian Period. *Levant* 18: 111–19.
- 1995 Tell el-Hesi: What Is in a Name? Pp. 94–149 in *The Yahweh/Baal Confrontation and Other Studies in Biblical Literature and Archaeology: Essays in Honor of Emmett Willard Hamrick*, ed. F. L. Horton, Jr., and J. O'Brien. Lewiston, NY: Edwin Mellen Press.
- 2001 On Site Identifications Old and New: The Example of Tell el-Hesi. *NEA* 64.1–2: 24–36.
- Blakely, J. A.; Horton, F. L., Jr.; and Doermann, R. W.
2007 Judäischer Regierungsvorposten und Festung: Der Tell el-Hesi während der 10.–8. Jahrhunderte v. Chr. *ZDPV* 123.2: 133–64.
- Blakely, J. A., and Huster, Y.
2016 The Wadi el-Hesi Region in 1256/7: An Interpretation of John of Ibelin's Contract with the Hospital of Saint John. *Crusades* 15: 35–53.
- Blakely, J. A.; Huster, Y.; and Cobbing, F.
2014 Charles Warren's Survey of the Plain of Philistia: Geographic Notes on the Hesi Region. *PEQ* 146.3: 198–204.
- Blakely, J. A., and Ktalav, I.
2017 Identifying and Understanding Residuality in Hesi's Archaeological Record: The Malacological Evidence. Pp. 3–28 in *The Wide Lens in Archaeology: Honoring Brian Hesse's Contributions to Anthropological Archaeology*, ed. J. Lev-Tov, P. Hesse, and A. Gilbert. Atlanta: Lockwood Press.
- Blakely, J. A., and Storfjell, J. B.
2020 Tell el-Hesi: The Joint Expedition. *PEQ* 152.4: 281–82.
- Blakely, J. A., and Toombs, L. E.
1980 *The Tell el-Hesi Field Manual*. Excavation Reports of the American Schools of Oriental Research. TEH 1. Cambridge, MA: American Schools of Oriental Research.
- Bliss, F. J.
1891a Reports from Mr. F. J. Bliss. *PEFQS* 23: 97–98.
- 1891b Reports from Mr. F. J. Bliss. *PEFQS* 23: 207–11.
- 1891c Excavating from Its Picturesque Side. *PEFQS* 23: 291–98.
- 1891d Report of Excavations at Tell-el-Hesi during the Spring of 1891. *PEFQS* 23: 282–90.
- 1892a Notes from Tell el Hesi. *PEFQS* 24: 36–38.
- 1892b Report on the Excavations at Tell el-Hesi for the Autumn Season of the Year 1891. *PEFQS* 24: 95–113.
- 1892c Notes from Tell el Hesi. *PEFQS* 24: 192–96.
- 1893a Report of the Excavations at Tell-el-Hesi, during the Spring Season of the Year 1892. *PEFQS* 25: 290.
- 1893b Report on the Excavations at Tell el Hesi during the Autumn of 1892. *PEFQS* 25: 103–19.
- 1894a *A Mound of Many Cities, or Tell el Hesi Excavated*. London: A. P. Watt and Son.
- 1894b Palestine Exploration Fund Quarterly Statement. *RB* 3.3: 306–7.
- 1906 *The Development of Palestine Exploration, being the Ely Lectures for 1903*. New York: Charles Scribner's Sons.
- Brooks, D. W.
1975 Persian Period Relationships of Tell el-Hesi as Indicated by Neutron Activation Analysis of Imported Ceramics: Implications for Archaeological and Biblical Research. Ph.D. dissertation, The Hartford Seminary Foundation.
- Brooks, D. W.; Bieber, A. M., Jr.; Harbottle, G.; and Sayre, E. V.
1974 Biblical Studies through Neutron Activation Analysis of Ancient Pottery. Pp. 48–80 in *Archaeological Chemistry*, ed. C. W. Beck. Washington, DC: American Chemical Society.
- Clermont-Ganneau, C.
1896 *Archaeological Researches in Palestine during the Years 1873–1874*, vol. 2, trans. J. MacFarlane. London: Palestine Exploration Fund.
- Cobern, C.
1890 The Work at Tell el Hesi as Seen by an American Visitor. *PEFQS* 1890: 166–70.
- Conder, C. R., and Kitchen, H. H.
1880 *Map of Western Palestine*. London: Palestine Exploration Fund. Scale 1:63,360, 26 sheets.

- 1883 *The Survey of Western Palestine: Memoirs of the Topography, Orography, Hydrology, and Archaeology*. Vol. 3, *Judaea*. London: Palestine Exploration Fund.
- Coogan, M. D.
1975 A Cemetery of the Persian Period at Tell el-Hesi. *BASOR* 220: 37–46.
1989a Field II. Pp. 163–68 in *Tell el-Hesi: The Site and the Expedition*, ed. B. T. Dahlberg, and K. G. O’Connell, S.J. TEH 4. Winona Lake, IN: Eisenbrauns.
1989b Chalcolithic Remains in Field III. Pp. 169–76 in *Tell el-Hesi: The Site and the Expedition*, ed. B. T. Dahlberg, and K. G. O’Connell, S.J. TEH 4. Winona Lake, IN: Eisenbrauns.
- Cytryn-Silverman, K., and Blakely, J. A.
2013 The Khân at al-Sukkariya: A Station on the Gaza–Hebron Route. *BASOR* 369: 201–29.
- Dahlberg, B. T., and O’Connell, K. G., S.J., eds.
1989 *Tell el-Hesi: The Site and the Expedition*. TEH 4. Winona Lake, IN: Eisenbrauns.
- Doermann, R. W., and Fargo, V. M.
1985 Tell el-Hesi, 1983. *PEQ* 117: 1–24.
- Eakins, J. K.
1993 *Tell el-Hesi: The Muslim Cemetery in Fields V and VI/IX (Stratum II)*. TEH 5. Winona Lake, IN: Eisenbrauns.
- Engstrom, C. M. A.
2004 The Neo-Assyrians at Tell el-Hesi: A Petrographic Study of Imitation Assyrian Palace Ware. *BASOR* 333: 69–81.
- Fargo, V. M.
1979a Settlement of Southern Palestine during Early Bronze III. Ph.D. dissertation, University of Chicago.
1979b Early Bronze Age Pottery at Tell el-Hesi. *BASOR* 236: 23–40.
1993 Hesi, Tell el-. Vol. 2, pp. 630–34 in *NEAEHL*, ed. E. Stern. New York: Simon & Schuster.
1997 Hesi, Tell el-. Vol. 3, p. 23 in *OEANE*, ed. E. M. Meyers. New York: Oxford University Press.
- Fargo, V. M., and O’Connell, K. G., S.J.
1978 Five Seasons of Excavation at Tell el-Hesi (1970–1977). *BA* 41: 165–82.
- Frank, H. T., and Horton, F. L., Jr.
1989 The Volunteer and Educational Program: 1970–1975. Pp. 88–96 in *Tell el-Hesi: The Site and the Expedition*, ed. B. T. Dahlberg, and K. G. O’Connell, S.J. TEH 4. Winona Lake, IN: Eisenbrauns.
- Gregoricka, L. A., and Ullinger, J. M.
2022 Isotopic Assessment of Diet and Infant Feeding Practices among Ottoman-Period Bedouin from Tell el-Hesi. *International Journal of Osteoarchaeology* 2022: 1–12. <https://doi.10.1002/oa.3081>.
- Hallote, R.
2006 *Bible, Map, and Spade: The American Palestine Exploration Society, Frederick Jones Bliss, and the Forgotten Story of Early American Biblical Archaeology*. Piscataway, NJ: Gorgias Press.
- 2014 A New Suggestion Regarding Plaque Figurines and a New Figurine from Khirbet Summeily. *Strata* 32: 37–47.
- Hammond, W. M.
1977 The Raw and the Chipped: An Analysis of Correlations between Raw Material Tools of a Lithic Industry from Tell el-Hesi, Israel. Ph.D. dissertation, Columbia University.
- Hardin, J. W., and Blakely, J. A.
2018 An Alternate Interpretation of Iron Age Tell en-Negila: The Relationship between Tell el-Hesi and Tell en-Negila. Pp. 612–31 in *Tell it in Gath: Studies in the History and Archaeology of Israel. Essays in Honor of A. M. Maeir on the Occasion of his Sixtieth Birthday*, ed. I. Shai; J. R. Chadwick; L. Hitchcock; A. Dagan; C. McKinny; and J. Uziel. ÄAT 90. Munster: Zaphon.
- Hardin, J. W., and Blakely, J. A., eds.
forthcoming *Archaeological Survey of Israel Map of Ruhama (97)*. Jerusalem: Archaeological Survey of Israel.
- Hardin, J. W.; Rollston, C. A.; and Blakely, J. A.
2012 Biblical Geography in Southwestern Judah. *NEA* 75.1: 20–35.
2014 Iron Age Bullae from Officialdom’s Periphery: Khirbet Summeily in Broader Context. *NEA* 77.4: 299–301.
- Horton, F. L., Jr., and Blakely, J. A.
2000 “Behold, Water!” Tell el-Hesi and the Baptism of the Ethiopian Eunuch (Acts 8:26–40). *RB* 107.1: 56–71.
- King, K. E.
1975 Aegean Ware from Tell el-Hesi: The First Three Seasons. MA thesis, UCLA.
- Koucky, F. L.
1989 The Present and Past Physical Environment of Tell el-Hesi, Israel. Pp. 5–36 in *Tell el-Hesi: The Site and the Expedition*, ed. B. T. Dahlberg, and K. G. O’Connell, S.J. TEH 4. Winona Lake, IN: Eisenbrauns.
- Lamdan, M.; Tsippor, D.; Huster, Y.; and Ronen, A.
1977 *A Prehistoric Archaeological Survey in Nahal Shiqma*. Regional Council of Shaar Ha-Negev (Hebrew).
- Larson, K.
2020 Meat on the Hoof: A Zooarchaeological Isotopic Investigation into Administrative and Cultic Herd Management at Khirbet Summeily. MA thesis, Mississippi State University.
2023 Meat on the Hoof: A Zooarchaeological and Isotopic Investigation into Administrative Herd Management at Khirbet Summeily. Pp. 141–60 in *Hesi after 50 Years and 130 Years: Beginning a New Generation of Hesi Research*, ed. J. R. Spencer, J. W. Hardin, and J. A. Blakely. TEH 6. University Park, PA: Eisenbrauns.
- Larson, K.; Arnold, E.; and Hardin, J. W.
2022 Resource Allocation and Rising Complexity during the Iron Age IIA: An Isotopic Case Study from Khirbet Summeily, Israel. *Quaternary International*.

- Larson, K., and Hardin, J. W.
 2022 Rethinking "Cultic" Herd Management: A Multi-Isotopic Perspective on the Proposed Iron Age IIA Cultic Space at Khirbet Summeily. Pp. 36–54 in *In Pursuit of Visibility: Essays in Archaeology, Ethnography, and Texts in Honor of Beth Alpert Nakhai*, ed. J. Ebeling and L. B. Mazow. Tucson: University of Arizona Press.
- Larson, K.; Hardin, J. W.; and Cody, S.
 2020 Cultural Modification Analyses on Faunal Remains in Relation to Space Use and Direct Provisioning from Field VI EBIIIA Tell el-Hesi. *PEQ* 152.4: 365–88.
- Ludvik, G. E.
 2018 Hard Stone Beads and Socio-Political Interaction in the Intermediate Bronze Age Southern Levant, ca. 2500–2000 B.C.E. Ph.D. dissertation, University of Wisconsin-Madison.
 2020 A Faience Amulet of Pataikos/Ptah-Sokar from the Iron Age IIA Border Site of Khirbet Summeily, Israel. *Strata* 38: 11–30.
 2023 Dating and Interpreting Hard Stone Beads from Tell el-Hesi: A Case Study in Residuality. Pp. 112–40 in *Hesi after 50 Years and 130 Years: Beginning a New Generation of Hesi Research*, ed. J. R. Spencer, J. W. Hardin, and J. A. Blakely. TEH 6. University Park, PA: Eisenbrauns.
- Ludvik, G. E., and Blakely, J. A.
 2020 The Early Bronze Age of Tell el-Hesi and Its Environs: From Petrie's Initial Discovery to Today's Understanding. *PEQ* 152.4: 304–31.
 2022 Tell el-Hesi Field IV: A Final Report. Pp. 23–50 in *Hesi after 50 Years and 130 Years: Beginning a New Generation of Hesi Research*, ed. J. R. Spencer, J. W. Hardin, and J. A. Blakely. TEH 6. University Park, PA: Eisenbrauns.
- Ludvik, G. E., and Larson, K.
 2020 Identification of an EBIIIA Incised Bone Tube Workshop at Tell el-Hesi, Israel. *PEQ* 152.4: 332–64.
- Matthers, J. M.
 1974 A Reassessment of the Early Bronze Age Material Culture at Tell Hesi, 1890–1892. MA thesis, University of London.
 1975 An Inscribed Sherd from the Palestine Exploration Fund. *PEQ* 107: 151–53.
 1989 Excavations by the Palestine Exploration Fund at Tell el-Hesi 1890–1892. Pp. 37–67 in *Tell el-Hesi: The Site and the Expedition*, ed. B. T. Dahlberg and K. G. O'Connell, S.J. TEH 4. Winona Lake, IN: Eisenbrauns.
- Montanari, D.
 2018 Early Bronze Age Levantine Metal Weapons from the Collection of the Palestine Exploration Fund. *PEQ* 150.3: 236–52.
- O'Connell, K. G., S.J.
 1977 An Israelite Bulla from Tell el-Hesi. *IEJ* 27: 197–99.
- O'Connell, K. G., S.J., and Rose, D. G.
 1980a Tell el-Hesi, 1979. *PEQ* 112: 73–91.
 1980b Tell el-Hesi, 1979. *BA* 43: 254–56.
 1980c Tell el-Hesi, 1979. *IEJ* 30: 221–23.
- O'Connell, K. G., S.J.; Rose, D. G.; and Toombs, L. E.
 1977a Tell el-Hesi, 1977. *HA* 63: 54–55 (Hebrew).
 1977b Tell el-Hesi, 1977. *IEJ* 27: 246–50.
 1978a Tell el-Hesi, 1977. *PEQ* 110: 75–90.
 1978b Tell el-Hesi (1977). *RB* 85: 84–89.
- Papadopoulos, A.
 2017 Report for the Study and Publication of Cypriot and Aegean Material Stored at the PEF (Phase 2: 2015). *PEQ* 149.1: 91–95.
- Petrie, W. M. F.
 1890a Palestine Exploration Discoveries. *ILN*, September 27: 405–6.
 1890b Summary of the Excavations Included in the Minutes of the Annual Meeting of the Palestine Exploration Fund. *PEFQS* 22: 141–44, 150–56.
 1890c Explorations in Palestine. *PEFQS* 22: 159–66.
 1890d Journal of Mr. W. M. Flinders Petrie. *PEFQS* 22: 219–46.
 1890e Archaeological News: Lachish—Flinders Petrie's Excavations. *AJA* 6: 335–40.
 1891 *Tell el Hesi (Lachish)*. London: Palestine Exploration Fund.
 1892a Notes on the Results at Tell el Hesi. *PEFQS* 24: 114–15.
 1892b The Story of a Tell. Pp. 183–207 in *The City and the Land*. London: Palestine Exploration Fund.
- Pilcher, E. J.
 1921 Philistine Coin from Lachish. *PEFQS* 53: 134–41.
- Robinson, E.
 1841 *Biblical Researches in Palestine, Mount Sinai, and Arabia Petraea*, 3 vols. London: John Murray.
- Rose, D. G.
 1975 Tell el-Hesi. *NASOR* 1975.3–4: 5–7.
 1976 Eglon (City). 2. Tell el-Hesi? Pp. 252–53 in *The Interpreter's Dictionary of the Bible Supplementary Volume*. Nashville: Abingdon Press.
 1977 The 1977 Season at Tell el-Hesi. *NASOR* 1977.3: 4–5.
 1989 The Methodology of the New Archaeology and Its Influence on the Joint Expedition to Tell el-Hesi. Pp. 72–87 in *Tell el-Hesi: The Site and the Expedition*, ed. B. T. Dahlberg, and K. G. O'Connell, S.J. TEH 4. Winona Lake, IN: Eisenbrauns.
- Rose, D. G., and Toombs, L. E.
 1975 Tell el-Hesi, 1975. *IEJ* 25: 172–74.
 1976a Tell el-Hesi, 1973 and 1975. *PEQ* 108: 41–54.
 1976b Tell el-Hesi. *HA* 56: 36 (Hebrew).
- Rose, D. G.; Toombs, L. E.; and O'Connell, K. G., S.J.
 1978 Four Seasons of Excavation at Tell el-Hesi: A Preliminary Report. Pp. 109–49 in *Preliminary Excavation Reports: Bâb edh-Dhrâ', Sardis, Meiron, Tell el-Hesi, Carthage (Punic)*, ed. D. N. Freedman.

- AASOR 43. Cambridge, MA: American Schools of Oriental Research.
- Rosen, S. A.
1982 Lithics in the Bronze Ages in Israel. Ph.D. dissertation, University of Chicago.
- Ross, J. F.
1979 Early Bronze Age Structures at Tell el-Hesi. *BASOR* 236: 11–21.
- Saidel, B. A., and Blakely, J. A.
2019 “Bedouin Settlement” in the Tell el-Hesi Region in the Late Islamic to British Mandate Period. *JIA* 6.1: 19–39.
- Saidel, B. A.; Hallote, R.; Erickson-Gini, T.; Schecter, B.; and Hardin, J. W.
2020 An Archaeological Survey of the Arab Village of Bureir: Perspectives on the Late Ottoman and British Mandate Period in Southern Israel. *BASOR* 383: 141–73.
- Spencer, J. R.
2007 Ostraca and Other Epigraphic Material from Tell el-Hesi. Pp. 395–403 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: Israel Exploration Society.
2023 The Presence and Function of Early Bronze Age Terracotta Animal Figurines at Tell el-Hesi. Pp. 51–78 *Hesi after 50 Years and 130 Years: Beginning a New Generation of Hesi Research*, ed. J. R. Spencer, J. W. Hardin, and J. A. Blakely. TEH 6. University Park, PA: Eisenbrauns.
- Spencer, J. R., and Blakely, J. A.
2023 Introduction. Pp. 1–22 in *Hesi after 50 Years and 130 Years: Beginning a New Generation of Hesi Research*, ed. J. R. Spencer, J. W. Hardin, and J. A. Blakely. TEH 6. University Park, PA: Eisenbrauns.
- Spencer, J. R.; Hardin, J. W.; and Blakely, J. A., eds.
2023 *Hesi after 50 Years and 130 Years: Beginning a New Generation of Hesi Research*. TEH 6. University Park, PA: Eisenbrauns.
- Stager, L. E.
1971 Climatic Conditions and Grain Storage in the Persian Period. *HTR* 64: 448–50.
- Stewart, R. B.
1978 Archeobotanic Studies at Tell el-Hesi. *EB* 32: 379–86.
- Stewart, R. B., and Robertson, W., IV.
1973 Applications of the Flotation Technique in Arid Areas. *EB* 27: 114–16.
- Stillinger, M. D.
2018 Archaeomagnetism as a Geochronological Tool: Dating a Levantine Iron Age Conflagration. Ph.D. dissertation, University of Minnesota.
- Stillinger, M. D.; Feinberg, J. M.; Ben-Yosef, E.; Shaar, R.; Hardin, J. W.; and Blakely, J. A.
2018 A Rejoinder on the Value of Archaeomagnetic Dating Integrative Methodology Is the Key to Addressing Levantine Iron Age Chronology. *NEA* 81.2: 141–44.
- Stillinger, M. D.; Hardin, J. W.; Feinberg, J. M.; and Blakely, J. A.
2016 Archaeomagnetism as a Complementary Dating Technique to Address the Iron Age Chronology Debate in the Levant. *NEA* 79.2: 90–106.
- Sutherland, A.
1877 Camp at Tell el Hisy. Unpublished draft map prepared as part of the Survey of Western Palestine, preserved in the Archives of the Palestine Exploration Fund in London under Shelfmark PEF/M/WS/146.
- Toombs, L. E.
1970 Tell el-Hesi. *HA* 36: 19–20 (Hebrew).
1971a Tell el-Hesi. *HA* 40: 16–17 (Hebrew).
1971b Tell el-Hesi. *IEJ* 21: 177–78.
1971c Coding Pottery in the Field. Pp. 25–28 in *Coding and Clustering Pottery by Computer*, ed. N. Wagner. Waterloo, ON: Waterloo Lutheran University.
1974a Tell el-Hesi, 1970–71. *PEQ* 106: 19–31.
1974b Tell el-Hesi. *HA* 48–49: 75–77 (Hebrew).
1982 Tell el-Hesi, 1981. *IEJ* 32: 67–69.
1983 Tell el-Hesi, 1981. *PEQ* 115: 25–46.
1985 *Tell el-Hesi: Modern Military Trenching and Muslim Cemetery in Field I, Strata I–II*, ed. K. G. O’Connell, S. J. TEH 2. Waterloo, ON: Wilfrid Laurier University Press.
1989a The Changing Functions of a Palestinian Site: Tell el-Hesi. *EMC* 8: 125–46.
1989b The Stratigraphy of the Site. Pp. 125–62 in *Tell el-Hesi: The Site and the Expedition*, ed. B. T. Dahlberg, and K. G. O’Connell, S. J. TEH 4. Winona Lake, IN: Eisenbrauns.
1990 The Joint Archaeological Expedition to Tell el-Hesi and the Results of Earlier Excavations. *PEQ* 122: 101–13.
- Toombs, L. E.; Anderson, R. W., Jr.; and Blakely, J. A.
2020 The Economic Base of Early Bronze Age Hesi. *PEQ* 152.4: 283–303.
- Toombs, L. E., and Blakely, J. A.
1985 The Northern Negeb During the Divided Monarchy. Pp. 61–74 in *Put Your Future in Ruins: Essays in Honor of Robert Jehu Bull*, ed. H. O. Thompson. Bristol: Wyndham Hall Press.
- Toombs, L. E., and Rose, D. G.
1976 Tell el-Hesi. *RB* 83: 257–60.
- Worrell, J. E.
1970a The Expedition to Tell el-Hesi: A New Joint Project. *NASOR* 1969–70.8: 1–4.
1970b Tell el-Hesi: Mound of Many Surprises. *NASOR* 1970–71.5: 1–4.
1974 Tell el-Hesi. *IEJ* 24: 139–41.
1975 Tell el-Hesi. *RB* 82: 268–70.
1989 The Evolution of a Holistic Investigation: Phase One of the Joint Expedition to Tell el-Hesi. Pp. 68–71 in *Tell el-Hesi: The Site and the Expedition*,

- ed. B. T. Dahlberg, and K. G. O'Connell, S.J. TEH 4.
Winona Lake, IN: Eisenbrauns.
- Worrell, J. E., and Betlyon, J. W.
1989 Phase One at Tell el-Hesi: A Season-by-Season
Account. Pp. 97–124 in *Tell el-Hesi: The Site and the
Expedition*, ed. B. T. Dahlberg and K. G. O'Connell,
S.J. TEH 4. Winona Lake, IN: Eisenbrauns.
- Worrell, J. E., and Toombs, L. E.
1971 Tell el-Hesi. *IEJ* 21: 232–33.
1972 Tell el-Hesi. *RB* 79: 585–88.
- Wright, G. E.
1971 A Problem of Ancient Topography: Lachish and
Eglon. *HTR* 64: 437–50.