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The Hellenistic Period in the Dhībān Plateau: a Quantitative Analysis

The 1996-99 archaeological survey in the Dhībān Plateau has successfully filled out the gap in our knowledge in the region's history (Ji and 'Attiyat 1997; Ji and Lee 1998, 2000). To combine the three seasons of fieldwork from 1996 to 1999, from the evidence gathered, it appears that following the decline in settlement during the Persian period, the Hellenistic period is likely to have experienced a return of settlement and population with about 80 sites occupied. This settlement intensification cycle continued to the end of the Middle Islamic period, possibly without any substantial disruptions. Eight of the 80 Hellenistic sites may be regarded as significant population centers. These eight are the following: Khirbat Sāliya (Site 3), al-Jumayl (Site 4), ar-Rāma (Site 23), al-Mudayna as-Sāliya (Site 20), al-Mushayrifa (Site 254), Qaryat Falḥa (Site 293), al-Qubayba (Site 283), and Duhfura (Site 334). Since the completion of the survey, however, little has as yet been published in detail with respect to the Hellenistic settlements in the Dhībān plateau. The purpose of this paper is fill this lacuna by presenting a quantitative analysis of the survey data from the Dhībān plateau region giving special attentions to the characteristics of the Hellenistic sites and their environmental features.

This paper proceeds in three parts. We first analyze the survey data by site typology, location, size, and regional distribution. It is followed by the analysis of environmental features of the Hellenistic sites such as terrain, vegetation, the position on the slope, and the nearest water source for the site. The final section discusses these findings in a broader historical and archaeological contexts of the Hellenistic period in central and northern Jordan.

Typology, Location, and Size

The characteristics of the Hellenistic settlements are summarized in the columns and rows of TABLE 1. For settlement type, 27 (33.75%) of the 80 Hellenistic sites are classified as cites or towns, while 23 (28.75%) take a form of circular watchtower-like structure (hereafter watchtower-like structure). Twelve and 14 of the sites, together comprising 32.50% of total Hellenistic sites, appear to have related to farming activities as they are interpreted as agricultural installations (cistern, dam, and/or rock-cut cup-hole and basin) and non-military, residential buildings, respectively. Given that in the Dhībān plateau, the watchtower-like structures are associated with either seasonal nomads or farming activities rather than defense purposes, combination of the three types of sites indicates that about 60 percent of Hellenistic sites are to be perceived as rural or pastoral, while approximately 35% pertain to a form of urban life in cities or towns. This indicates a relatively high level of demographic concentration to urban settings.

With respect to site location, 68 (85.00%) of the 80 Hellenistic sites are situated within an area 2km from the plateau edge, while 11 (13.75%) are found in the central plain area. This unequal distribution is typical of the Dhībān plateau as they are also noted in other chronological periods. During the Hellenistic period, human activities were largely confined to the rim of the plateau much as it was in the Early Bronze, Iron Age, and Byzantine-Islamic periods. On the other hand, Hellenistic sherds tend to be found at ancient ruins of various size, but in general show a bimodal distribution pattern in terms of site size. They come from 35 (43.75%), 16 (20.00%), 21 (26.25%), and 8 (10.00%) sites classified as small, medium, large, and very large

TABLE 1. Cross-Tabulation of the Hellenistic Sites by Site Location, Type, and Size (N = 80).

Site Location	Plain	Rim	Wadi	Total
	Site Type*			
City/Town	5	21	1	27
Watchtower-like Structures	1	22	0	23
Cistern/Dam	5	7	0	12
Farmstead Buildings	0	14	0	14
Sherd Scatter	0	4	1	4
Total	11	68	1	80
	Site Size**			
Small	3	32	0	35
Medium	1	15	0	16
Large	5	16	0	21
Very Large	2	5	1	8
Total	11	68	1	80

Note. *Chi-Square (df) = 15.12 (9), p = .06; **Chi-Square (df) = 13.60 (6), p < .05.

respectively.[1] That is, Hellenistic sherds are more likely to center in either small or large-very large sites as compared to the medium-sized sites.

TABLE 1 also presents the results of the cross-tabulation and chi-square analysis of location of Hellenistic settlements according to the type and size of the sites. For site type, the result is statistically significant at the level of $p < .06$ with chi-square = 49.54, df = 13.60. The rim area contains 21 (77.78%) of the 27 cities/towns and 22 (95.65%) of the 23 watchtower-like structures. All four and 14 sherd-scatter and independent buildings, respectively, are also clustered in the band along the rim of the plateau. This points to a uniform pattern of settlement concentration along the plateau rim across all types of settlements except for the agricultural catchment sites tied with cisterns and agricultural dams but no other forms of architectural remains. This is hardly surprising granted that dry farming was probably conducted in the small wadis clustered in the central plateau area; therefore, the cistern and dam sites are associated with these dry-farming activities. The cross-tabulation of location and size posits that sites larger in size tend to be better represented in the plain area than the rim area, while small- to medium-sized sites are predominantly located in the rim area. Small to medium-sized sites are relatively sparse in the plain area. The result for site size is statistically significant, chi-square = 13.60, df = 6, $p < .05$. Despite this variation, however, the overall picture clearly indicates that Hellenistic sites are clustered along the rim of the plateau regardless of type or size.

Regional Analysis of Site Attributes

Turning to the geographical distribution, the southeastern and northeastern quarters constitute almost 80 percent of total Hellenistic sites as they include 40 and 22 sites, respectively.[2] These figures are substantially greater than the five and 13 sites in the southwestern and northwestern sections, respectively. There is apparently a degree of site concentration in the area east of the modern King's Highway. This is not true, however, when the total number of sites of each region is taken into account. The survey recorded total numbers of 14, 90, 114, and 203 sites in the southwest, northwest, northeast, and southeast quarters, respectively. These can be converted to percentages, producing 36, 14, 19, 20%, respectively. That is, the southwestern region shows the highest intra-regional representation of the Hellenistic period, while the northwestern region demonstrates the lowest level of intra-regional density of Hellenistic settlements. The area east of Tall Dhībān is placed somewhere in the middle of these two areas.

The subsequent association of subregion with site type, location, and size yields a couple of tentative suggestions. The results are summarized in TABLE 2. First, Hellenistic sites are situated predominantly along the 2km band of the plateau rim across the four subregions. The ratios of sites in the rim over total sites in the region are 80.00%, 86.36%, 92.31%, and 100.00% for the southeastern, northeastern, northwestern, and southwestern sectors, respectively. Second, for site size, small sites comprise of 45.00%, 40.91%, and 53.85% for the southeastern, northeastern, and northwestern regions. These figures for large and very-large sites combined change to 35.00%, 31.82%, and 38.46% for the regions in the same order. The figures indicate no significant differences in site size across the three regions. The southwestern region is an exception to this generalization since 20.00% and 60.00% of its sites are classified small and large sites, respectively. This extreme ratio seems associated with

[1] A small site is defined as the one with area less than 20 x 20m, medium as 20 x 20m - 50 x 50m, large as 50 x 50m -100 x 100m, and very large as greater than 100 x 100m.

[2] For data presentation, the Dhībān plateau is divided into four geographical sectors, using Tall Dhībān and the King's Highway, the two most prominent ancient city and road system of the entire survey area, as the center point and dividing line. The survey region is first longitudinally divided into east and west along the line of Dhībān-King's Highway, and each then subdivided further into two latitudinal units, north and south of Tall Dhībān.

TABLE 2. Cross-Tabulation of Hellenistic Site Type, Location, and Size by Sub-Regions (N = 80).

Region+	SE	NE	NW	SW	Total
Site Type*					
City/Town	11	8	5	3	27
Watchtower-like Structure	13	7	3	0	23
Cistern/Dam	9	2	1	0	12
Farmstead Building	4	4	4	2	14
Sherd Scatter	3	1	0	0	4
Total	40	22	13	5	80
Site Location**					
Plain	7	3	1	0	11
Rim	32	19	12	5	68
Wadi	1	0	0	0	1
Total	40	22	13	5	80
Site Size***					
Small	18	9	7	1	35
Medium	8	6	1	1	16
Large	9	5	4	3	21
Very Large	5	2	1	0	8
Total	40	22	13	5	80

Note. +SE = southeast, NE = northeast, NW = northwest, SW = southwest; *chi-square (df) = 8.00 (9), p = .74; **chi-square (df) = 12.15 (12), p = .43; ***chi-square (df) = 2.78 (6), p = .84.

a smaller number of total sites in the southwestern region; the small number of total sites has inflated the values of small — and large — site ratios.

Related to site size is the typology of settlements. The analysis shows an interesting pattern of disparity across the five types of settlement by subregion. The shares of watchtower-like structures, cisterns/dams, and sherd-scatter sites are higher in the two eastern regions, whereas those of cities/villages and farmstead buildings are higher in the two western regions. Specifically, the percentage of cities and villages over total sites range from 27.50 to 60.00: 27.50% for southeast, 36.36% for northeast, 38.46% for northwest, and 60.00% for southwest. The northwestern and southwestern regions, respectively, show 30.77% and 40.00% of the farmstead building representation; yet these figures drop to 10.00% and 18.18%, respectively, for the southeastern and northeastern regions. In contrast, watchtower-like structures comprise 32.50% and 31.82% of total sites in the southeastern and northeastern regions, yet they decrease to 23.08% and zero percent for the northwestern and southwestern areas. A similar pattern exists for the sherd scatter sites. All four sherd scatter sites are in the eastern section of the survey area; one (4.55%) in the northeastern sector and three (7.50%) in the southeastern sector. There are no sherd scatter sites in the western half of the survey region. Although slightly different from those of watchtower-like structures and sherd scatters, the analysis of cistern and dam distribution posits higher shares of cisterns and dams in the east. Eleven of the 12 cistern and dam sites are located in the eastern half of the survey area.

The foregoing analysis seems informative for understanding land use by region. Presumably, as stated elsewhere, in the Dhībān plateau watchtower-like structures are closely associated with pastoral nomadism (Ji and Lee 2003). This being the case, the higher concentrations of watchtower-like buildings in the east may posit that pastoral nomadism was more widespread in the eastern area near the desert when compared to the western region. For the same reasons, dams and sherd scatters are likely to be the remains of pastoral nomad's encampment and dry-farming activities. Pastoral nomads used this eastern desert-fringe and steppe area to graze animals; they also may have built dams to conduct seasonal farming activities. This suggests sedentary farming was more typical of the western region than its eastern counterpart. This view receives support from the higher representation of cities, villages, and farmstead buildings in the western region.

The preceding suggestions, however, should not be taken seriously or at best remain tentative, since the subsequent chi-square analyses fail to yield statistically significant results. This fact strongly indicates no substantial regional variations across the four sectors in terms of Hellenistic site typology, size, and location. It also posits that the suggestions in the foregoing section apply to the Dhībān plateau in general. That is, in the Dhībān plateau, Hellenistic sites, regardless of their regional location, concentrate most heavily in the area within 2km from the plateau edge, measure either small or large in size rather than medium, and associate more often with city, towns, and watchtower-like structures as compared to other forms of archaeological sites.

Environmental Features

The Dhībān plateau survey documented four forms of environmental features for the Hellenistic sites. They are environmental terrain, environmental vegetation, nearest water source, and position on the slope. Specifically, as shown in the first tier

of TABLE 3, the survey manual categorizes environmental terrain of the sites into four groups; bedrock, rocky, cultivated, and other. Thirty six (45.00%) of 80 Hellenistic sites are located in the areas currently in cultivation or recently cultivated, whereas half of the sites are situated on the bedrock (six, 7.50%) or rocky terrain (35, 43.75%). In light of vegetation, as shown in the second tier of TABLE 3, dwarf shrub is dominant at four (5.00%) sites and 46 (57.50%) sites are barren, while only 28 (35.00%) sites are associated with a certain form of crops or horticulture.

The third tier of TABLE 3 categorizes the water source nearest to the sites. Over 50 percent of the settlements (42, 52.50%) appear have relied on the canyons (the Wādī al-Mūjib and the Wādī al-Wāla) for water; cisterns and reservoirs are found to have been primary water sources for 27 sites (33.75%). The survey team could not identify any near water sources at 11 sites. Water springs are completely absent on the plateau proper. The position on the slope is summarized on the bottom tier of the table.

TABLE 3. Frequency of Hellenistic Sites by Environment and Sub-Regional Division.

	Region+					
Environment	SE	NE	NW	SW	Total	Chi-Square (df)
Environmental Terrain						
Bedrock	3	2	1	0	6	18.21* (9)
Rocky	19	14	2	0	35	
Cultivated	16	6	10	4	36	
Others	2	0	0	1	3	
Total	40	22	13	5	80	
Environmental Vegetation						
Dwarf Shrubs	3	1	0	0	4	20.61* (9)
Bare	25	16	5	0	46	
Cultivated	12	5	7	4	28	
Others	0	0	1	1	2	
Total	40	22	13	5	80	
Position on the Slope						
Hill Top	15	8	7	4	34	23.94** (15)
Upper	3	7	5	0	15	
Middle 9	1	0	0	10		
Lower	3	0	0	0	3	
Valley Bottom 2	0	0	0	2		
Plain	8	6	1	1	16	
Total	40	22	13	5	80	
Nearest Water Source						
Wadi	20	13	6	3	42	9.04 (9)
Cistern 10	7	7	2	26		
Reservoir	1	0	0	0	1	
Unknown	9	2	0	0	11	
Total	40	22	13	5	80	

Note. +SE = southeastern, NE = northeastern, NW = northwestern, SW = southwestern; *p < .05; **p = .07.

Thirty-four (42.50%) sites are located on top of low hills, followed by 15 (18.75%) and 10 (12.82%) sites on the upper and middle parts of the slope, respectively. Only two (2.50%) and three (3.75%) sites are documented as located at the bottom of the valley and the lower part of the slope, respectively. Only 16 (20.00%) sites are situated in the flat plain area. This indicates that the Hellenistic settlers preferred the gently rolling, low hills and their slopes as places for their settlement to the open, flat plain areas in the center or around the plateau.

Regional Analysis of Environmental Features

Having explored the environmental features of the settlements, let us next discuss whether or not there are regional differences in conjunction with environmental features. For environmental terrain, as shown in the top tier of TABLE 3, there are statistically significant incongruities across the four regions, chi-square = 18.21, df = 9, $p < .05$. Hellenistic sites are more likely to be found in the rocky or bedrock terrain in the eastern region as compared to the western region. Rocky and bedrock terrain is associated with 22 (55.00%) of the 40 sites in the southeastern region and 16 (72.73%) of the 22 sites in the northeastern region. Compare these proportions to the 25.08% (three of 13) and zero percent (zero of five) of the northwestern and southwestern regions, respectively. These figures contrast with the 76.92% (10 of 13) and 80.00% (four of five) for cultivatable terrain for the two western regions, respectively. They are also significantly higher than the 40.00% (16 of 40) and 27.27% (six of 22) for the southeastern and northeastern sectors, respectively.

Closely linked with this disparity are the regional differences in environmental vegetation, and the results of the analysis are summarized in the second tier of the table. The vast majority of the sites are associated with dwarf shrub or bare terrain in the southeastern (70.00%, 28 of 40) and northeastern (77.27%, 17 of 22) areas, whereas they relate to less than 30% of the sites in the northwestern (30.76%, four of five) and southwestern (zero percent, zero of five) regions. The differences are again statistically significant, chi-square = 20.69, df = 9, $p < .05$.

The third tier of TABLE 3 indicates that in the northern areas, Hellenistic sites are likely to be located neither at the middle and lower positions of hill nor at the wadi bottom; only two sites are found on the flat plain terrain in northwestern and southwestern areas. This stands in sharp contrast

with the 55.00% (22 sites) for the southeastern area and 31.82% (seven sites) for the northeastern area. An opposite picture surfaces for the categories of hilltop and upper position sites. Only 45.00% (18 sites) and 68.19% (15 sites) of the sites are located on a hilltop or upper position of the slopes in the southeastern and northeastern regions, respectively, while 80.00% (four sites) and 92.31% (12 sites) are found in these positions in the southwestern and northwestern regions. The differences are statistically significant, by slightly generous standards, at the $p < .07$ level.

Finally, the bottom tier demonstrates no significant differences across the four regions when water source is taken into account. Cisterns and wadis are the two most common water sources for all the four regions, though the northwestern region shows a slightly higher level of dependence on cisterns than wadis and other water sources.

Put together, two distinctive regional variations stand out in terms of environmental terrain, vegetation, and site position. First, Hellenistic sites in the eastern regions are more likely to be located in rocky or bedrock terrain and relate to dwarf steppe vegetation or bare terrain as compared to those counterparts in the western region. Second, in the eastern area, the Hellenistic period is generally well represented at the lower level of slope and the plain area, while for the western region most of the Hellenistic sites are related to the higher positions of slope but rarely found at the lower levels of slope and in the plain area.

Discussion

Given the Hellenistic evidence from the 80 sites, the Dhībān plateau seems to have been relatively densely populated during the period. It seems to mark a strong resurgence of human activities in the region following the Persian-period settlement hiatus. This finding leads to a few questions with respect to historical and anthropological considerations.

A first question is when this Hellenistic settlement surge took place between the early and late Hellenistic periods. The as yet scant evidence prevents any firm conclusions. Yet there is some circumstantial evidence to show that the intensification of Hellenistic settlement began no earlier than the late Hellenistic period, while the early Hellenistic period is conceived as a continuation of the Persian settlement gap.

First, in view of the survey, the Dhībān plateau lacks typical early Hellenistic pottery such as bag-shaped jars with a thickened everted rim with a triangular-section rim (Guz-Zilberstein 1995: Types JR 1-2) and fish plate with a sharply angled rim (Gitin 1990: Types 214-215). In contrast, the late Hellenistic storage jars with a flanged rim (Gitin 1990: Type 161) are common along with thin, incurved-rim bowls (Guz-Zilberstein 1995: Type BL 8) in the Hellenistic pottery assemblage from the Dhībān plateau.

Second, according to the survey results, pottery of the Roman period is present at 65 of the 78 Hellenistic sites; that is, 81.25% of the Hellenistic settlements are likely to have continuously been used during the Roman period. This figure corresponds to almost 60% of the total Roman sites in the survey region. In a similar vein, 24 (30.00%) of the 80 sites also contained fragments of Nabatean painted ware, comprising 88.89% of the total 27 sites that included Nabatean painted sherds. The evidence indicates a strong settlement continuation from the Hellenistic period to the early Roman-Nabatean period in the Dhībān plateau. This continuity may posit that the majority of the Hellenistic sites are likely to be dated to the late part of the Hellenistic period rather than the early period.

The view that in the Dhiban plateau the settlement intensification took place late in the Hellenistic period has some implications for the study of Hellenistic history in Jordan. In a review of archaeological evidence in Jordan, the lead author suggested that the vicissitude of Tobiah's fortune in the Wādī as-Sπr region closely relate to the overall prosperity of early Hellenistic settlements and their geographical confinement to the central Transjordan plateau and the southern Jordan Valley (Ji 1998, 1999). In light of this thesis, the early Hellenistic period was characterized as the beginning of a return of intensification in settlement. Although the heaviest concentration of early Hellenistic sites occurs in the 'Irāq al-Amīr region and the southern-central Jordan Valley, the Transjordan plateau also witnessed the outset of a settlement intensification early in the Hellenistic period, which continued to the late Hellenistic period.

Should early Hellenistic remains in the Dhībān plateau prove to be few, we may propose that the Dhībān plateau was still a place of low population level during the early Hellenistic period, even though the period was one of increased population

and proliferation of settlements in the areas north of the Dhībān plateau (Smith 1997; Tidmarsh 2001). The onset of Hellenistic settlement in the Dhībān plateau perhaps lags behind by a couple of centuries those of central Jordan and the Jordan Valley. This suggestion, given that the Dhībān plateau was apparently outside of the region that scholars traditionally associate with the Tobiads, lends support for the thesis that the Tobiads played important roles in shaping the landscape of settlements and population in Jordan during the early Hellenistic period. In contrast, the increase in human settlements in the late Hellenistic period dovetails into the picture of northern Jordan that witnessed a new flourishing population late in the period as well. This late increase in settlement, as in northern Jordan, was possibly linked with the dominance of in the region of the Seleucids over the Ptolemies after their victory against this Egyptian kingdom.

Is it possible to further pinpoint the onset of this Hellenistic settlement intensification in the Dhībān plateau? To address this question, it seems worth exploring the Hellenistic settlements in the immediate north of the Dhībān plateau. Ongoing excavations at Khirbat ʻAṭarūz have uncovered Hellenistic evidence, most likely to have been initiated in the mid or late second century BC. At ʻAṭarūz, late Roman evidence is as yet to be discovered, indicating that the Hellenistic settlements at the site did not last long, possibly less than two hundred years. This suggestion also receives support from the relative sparsity of typical late Hellenistic storage jars with a flanged rim (Gitin 1990: Type 161), thin, shallow bowls with vertical side (Lapp 1961: Type 54), and late Hellenistic, folded lamps (Lapp 1961: Type 81). In line with this view is the Hellenistic pottery from the surface of Khirbat al-Qurayyāt. The lead author's 2004 survey of the site points to the presence of human activities at al-Qurayyāt during the late Hellenistic period. Typical first-century early Roman forms, as at ʻAṭarūz, are rather sparsely represented in the pottery corpus from al-Qurayyāt. Overall, ceramic evidence strongly indicates the mid to late second century BC as the chronological range of the Hellenistic settlement intensification in the ʻAṭarūz-al-Qurayyāt area. Given the close geographical proximity, the beginning of the Hellenistic settlements in the Dhībān plateau may correspond to the outset of its counterpart settlements in the ʻAṭarūz area.

Another question is why the northwestern region demonstrates the lowest level of intra-regional density of Hellenistic settlements in the Dhībān plateau. One interpretation is that it associates with the conflict between the Hasmoneans and the Nabateans along the Wādī al-Wāla and the Sayl al-Hīdān (Ji and Lee 2004). These canyons formed the border between the two nations during the second and first centuries BC, although during the early Roman period, Herod appears to have encroached further south into the Wādī al-Mūjib as demonstrated by a couple of Herodian military fortresses in the middle of the Wādī al-Mūjib and the Sayl al-Hīdān (Strobel 1997). There is, however, neither historical nor archaeological evidence showing that the Hasmonean Jews settled down on the Dhībān plateau proper. Should this suggestion be tenable, the Hellenistic inhabitants of the Dhībān plateau very likely came from non-Jewish population groups, possibly the Nabateans or those associated with the Nabateans whose fortunes began to grow rapidly in central Jordan late in the Hellenistic period. Josephus and other historical data attest to intermittent military conflicts and wars between the two rivals during the second half of the late Hellenistic period. This political instability may account for the relatively lower level of Hellenistic settlement density in the northern half of the western section. To some extent, this instability may have deterred people from settling down in the northwestern edge of the plateau.

A final question is the concentration of Hellenistic settlements at major population centers and the area along the plateau rim, leaving the center of the Dhībān plateau more or less sparsely populated. This pattern of Hellenistic settlement appears to relate to the activities of pastoral nomads along the plateau rim (Ji and Lee 2003). In the Dhībān Plateau, the rim area is highly likely to have been the area occupied by nomads for seasonal camping grounds. Hellenistic tower-like remains, as in the Iron Age, probably were summer shelters, watchtowers, or storage facilities built by sheep- and goat-herding tribes who practiced pastoral transhumance, migrating in the Dhībān Plateau and the Dead Sea region during the given period. This does not mean that all the Hellenistic settlers were dependent on pastoral nomadism for their living. Farming also appears to have been a major source of substance and economic wealth. Residents at Falḥa, al-Qubayba, and Duhfura in the central plain and the southern bank of the Wādī al-Wāla were unlikely to have heavily

been involved in pastoral nomadism. These places are somewhat off from the main trade route in the region and are located in or near the fertile central plain. Instead, agriculture possibly formed the main part of their economic activities at these sites during the Hellenistic period.

Summary

The Dhībān plateau appears to have witnessed a resurgence of human settlements in the late Hellenistic period, most likely in the mid or late second century BC. This prosperity seems to have continued through the early Roman period, although their northern counterparts in the ʻAṭarūz area possibly decreased or came to an end during the transition from the first century BC to the first century AD or slightly later. In the Dhībān plateau, the late Hellenistic settlements may have come under the control of the Nabateans who began to advance into this region sometime in the first century BC.

A couple of distinctive regional variations stand out in terms of geographical and environmental settlement pattern. In the Dhībān plateau, the Hellenistic period is heavily associated with the rim of the plateau and the populations centers in the rim and plain regions. This seems to reflect the importance of pastoral nomadism in the region along with the farming activities mostly conducted by the sedentary residents of the cities. The analysis also shows a higher level of Hellenistic representation in the eastern part of the Dhībān plateau than in the western region, when measured by the number of total Hellenistic sites in the region. Second, in view of type of settlement environment, Hellenistic settlements in the eastern regions, which is close to the desert fringe, are more likely to be located in rocky or bedrock terrain and relate to dwarf steppe vegetation or bare terrain as compared to their counterparts in the western region. Besides, in the eastern areas, the Hellenistic period is generally well represented at the lower level of slope and the plain area, while for the western region most of the Hellenistic sites are related to the higher position of slope but rarely found at the lower level of slope or on the plain area.

References

Gitin, S. 1990. *Gezer III.* Jerusalem: Hebrew Union College.

Guz-Zilberstein, B. 1995. The Typology of the Hellenistic coarse Ware and selected Loci of the Hellenistic and Roman Periods. Pp. 289-433 in E. Stern (ed.), *Excavations at Dor, Final Report, Volume I B.* Jerusalem: Israel Exploration Society.

Ji, C. C. 1998. A New Look at the Tobiads in `Iraq al-Amir. *Liber Annuus* 48: 417-40.

—— 1999. ʻIraq al-Amir and the Hellenistic Settlement in Central and Northern Jordan. *SHAJ 7*: 379-90.

Ji, C. C. and ʻAttiyat, T. 1997. Archaeological Survey of the Dhiban Plateau, 1996: A Preliminary Report. *ADAJ* 41: 115-28.

Ji, C. C. and Lee, J. K. 1998. Preliminary Report on the Survey of the Dhiban Plateau, 1997. *ADAJ* 47: 549-70.

—— 2000. A Preliminary Report on the Dhīban Plateau Survey Project, 1999: The Versacare Expedition. *ADAJ* 49: 493-506.

—— 2003. Iron Age I in the Dhiban Plateau. Pp. 105-32 in F. Ninow (ed.), *Wort und Stein: Studien zur Theologie und Archäologie, Festschrift für Udo Worschech.* Berlin: Peter Lang.

—— 2004. From the Tobias to the Hasmoneans: The Hellenistic Pottery, Coins, and History in the Regions of Iraq al-Amir and the Wadi Hisban. *SHAJ* 8: 177-88.

Lapp, P. W. 1961. *Palestine Ceramic Chronology 200 B.C. - A.D. 70.* New Haven: American Schools of Oriental Research.

Smith, R. H. 1990. The southern Levant in the Hellenistic Period. *Levant* 22: 123-30.

Strobel, A. 1997. Ancient Roads in the Roman District of South Paraea: Routes of Communication in the Eastern Area of the Dead Sea. *SHAJ* 6: 271-80.

Tidmarsh, J. 2001. The Problem of Early Hellenistic Jordan. Pp 191-206 in A. Walmsely (ed.), *Australians Uncovering Ancient Jordan.* Sydney: University of Sydney.