ḤARRAT AL-JUḤAYRA PSEUDO-SETTLEMENT: A PRELIMINARY REPORT OF THE JAFR BASIN PREHISTORIC PROJECT, 2004

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Introduction

As referred to elsewhere in this volume, the other goal of the 2004 summer excavation season of the JBPP/2 (the Jafr Basin Prehistoric Project, Phase 2) was to fill in the chronological gap between the Late Neolithic pseudo-settlement at Qā' Abū Ṭulayḥa West (QATW), the main concern of the JBPP/1 (Fujii 2000, 2001, 2002a, 2003), and the Pre-pottery Neolithic B (PPNB) small settlement at Jabal Juḥayra that was identified during our 2001-2002 winter season survey (Fujii 2002b: 41). Chosen for this issue was Ḥarrat al-Juḥayra Pseudo-settlement (HJ-PS), which had been located during our 2002-2003 winter season survey and tentatively registered as JF-0202. The last three weeks of this season were devoted to the investigation of this site. As a result, it turned out that, techno-typologically, it slightly predates the pseudo-settlement at QATW and, at the same time, probably post-dates the small PPNB settlement at Jabal Juḥayra, thus bridging the chronological hiatus between the two. The following is a brief summary of the investigation of this unique funerary site that holds a key to pastoral nomadization in the al-Jafr basin.

The Site and Site Setting

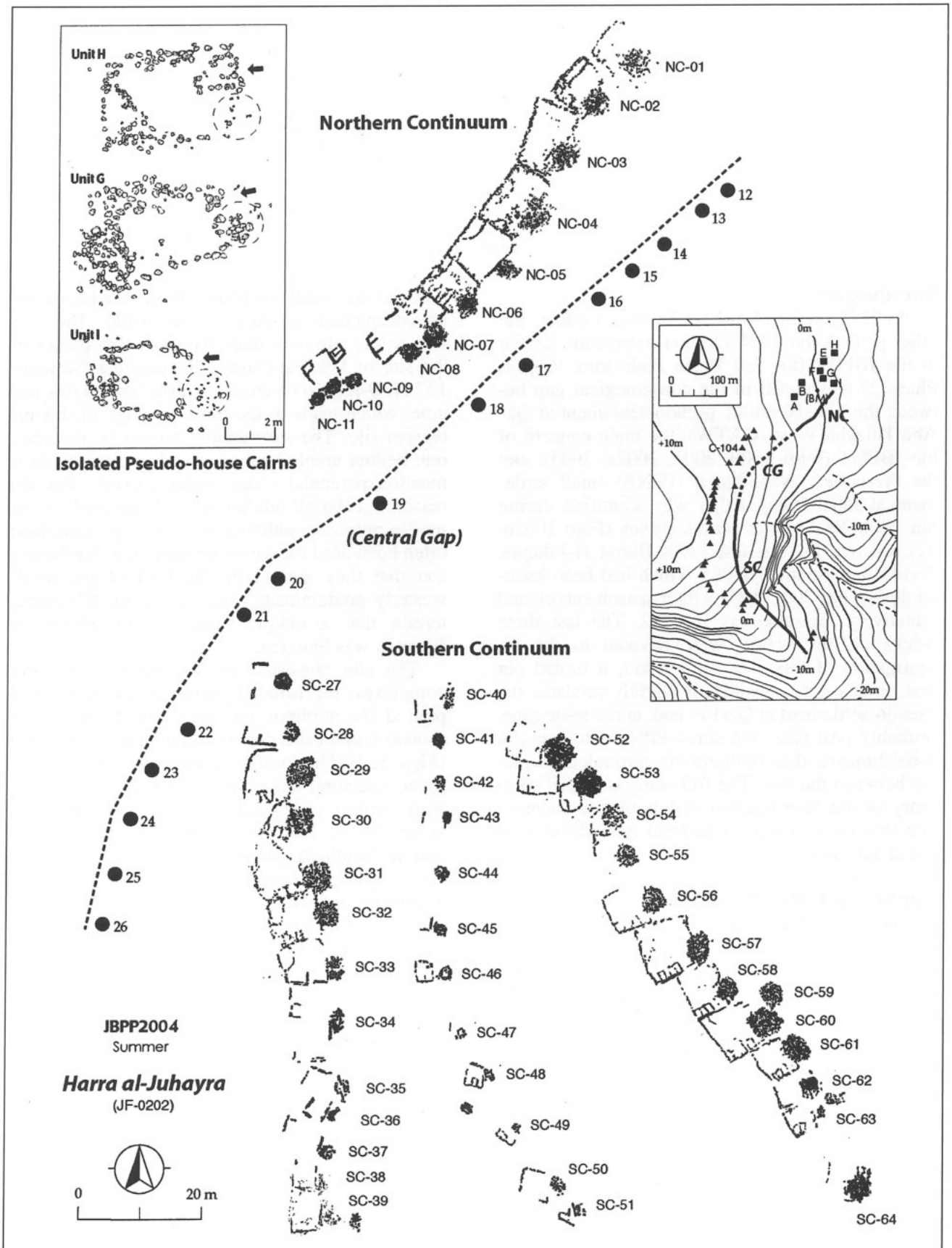
Ḥarrat al-Juḥayra, as a topographical term, refers to a large flat-topped basalt hill that extends eastward from its lava source, Jabal Juḥayra, down to the western bank of Wādī Burma. It has a relative height of ca. 20-50m and covers a wide area ca. 6km (E-W) by ca. 2-3km (N-S), thus forming, together with Ḥarrat al-Burma to the southeast, a natural boundary between Jurf ad-Darāwīsh to the north and al-Ḥusayniyya to the south. Our general surveys thus far conducted have identified a number of stone-built structures on this hill, in its eastern half in particular. Among those is Ḥarrat al-Juḥayra Pseudo-settlement, our present concern.

This site is situated nearly at the southern edge of the basalt hill, overlooking the drainage area of Wādī al-Quṣayr (Fujii this volume: fig. 45). Since it lies in the middle of *Ḥarra*, basalt cobble desert, no conspicuous landmark is available. The only way to the site is to trace the track that passes by the site of Wādī al-Quṣayr Rectangular Structure 137 (WQ-RC137) mentioned elsewhere in this volume, which leads to the northern edge of this extensive site. The surrounding terrain is quite barren; neither arable land nor reliable pasture, not to mention perennial water sources, exists. For this reason, this basalt hill has rarely been used for domestic purposes, although its southern skirts have often been used for winter encampment for the reason that they are on the leeward of the northwesterly predominant wind. It was on this barren terrain that a unique funerary site, Ḥarrat al-Juḥayra, was founded.

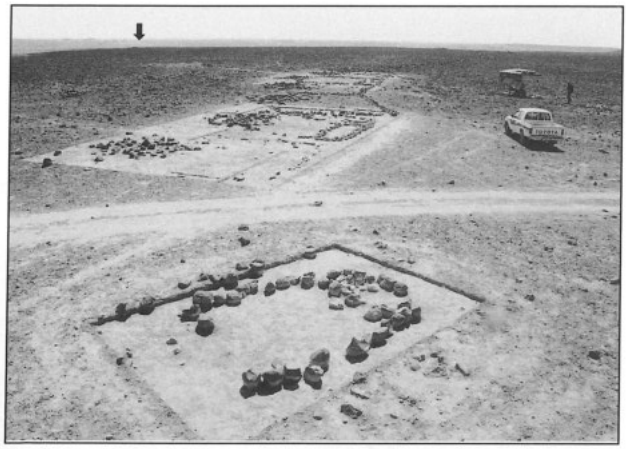
The site consisted of two distinct structural complexes: the isolated pseudo-house cairn complex at the northern extremity and the connected pseudo-house cairn complex extending to the south (**Figs. 1, 2**). The former complex contained at least seven structural units, three of which, Unit G to I, were entirely excavated. The latter complex, consisting of the Northern Continuum ca. 80m long and the Southern Continuum ca. 300m long with a central gap ca. 160m long in between, was partly excavated with the focus on some well-preserved segments. Incidentally, the site also included a series of small, cairn-like stone concentrations to the west, at a distance of ca. 50m from the connected pseudo-house cairn complex. However, since a brief sounding at C-104 revealed that they were not artificial features but, in fact, natural lava rises, they were excluded from the subject of our investigation.

The Isolated Pseudo-House Cairn Complex

The term *pseudo-house cairn* refers to a composite structure that consists of two components: a cairn as a key feature and a pseudo-house as a symbolic annex to it. Interestingly, it is often connected side by side up to forming a long continuum, which seemingly looks like a unique settlement



1. Ḥarrat al-Juḥayra: the site map.



2. Unit I (front) and the Northern Continuum (rear): the general view (from N).

that suddenly appeared in a desert without any substantial contexts. However, since this long structural complex is nothing more than a cumulative picture of pseudo-house cairns that were gradually added over a long time, it is called a pseudo-settlement. The first example of this unique site-form was attested at QATW, where three continua and their subsequent forms were revealed from 1999 to 2002 (Fujii 2000, 2001, 2002a, 2002b). Since then, a few candidates have been found during our general surveys (Fujii 2002c: 41-45), but Ḥarrat al-Juḥayra was the second to be firmly identified and excavated as a pseudo-settlement.

What differentiated these two pseudo-settlements were their components. While the QATW pseudo-settlement comprised of connected pseudo-house cairns only, the Ḥarrat al-Juḥayra pseudo-settlement, as noted above, included isolated pseudo-house cairns as well as connected examples. What we first addressed at this site was these isolated pseudo-house cairns. Our pre-excavation mapping survey had identified twelve examples from Unit A to L, but a later re-examination excluded five of these (Unit C, D, and J-L) because of their ambiguous nature. Thus the remaining seven (Unit A, B, and E-I) were finally plotted on the site map, three of which (Unit G, H, and I) were excavated because of their better preserved state. (Note that the following description will be made in order from north to south, not in the alphabetical order).

Unit H

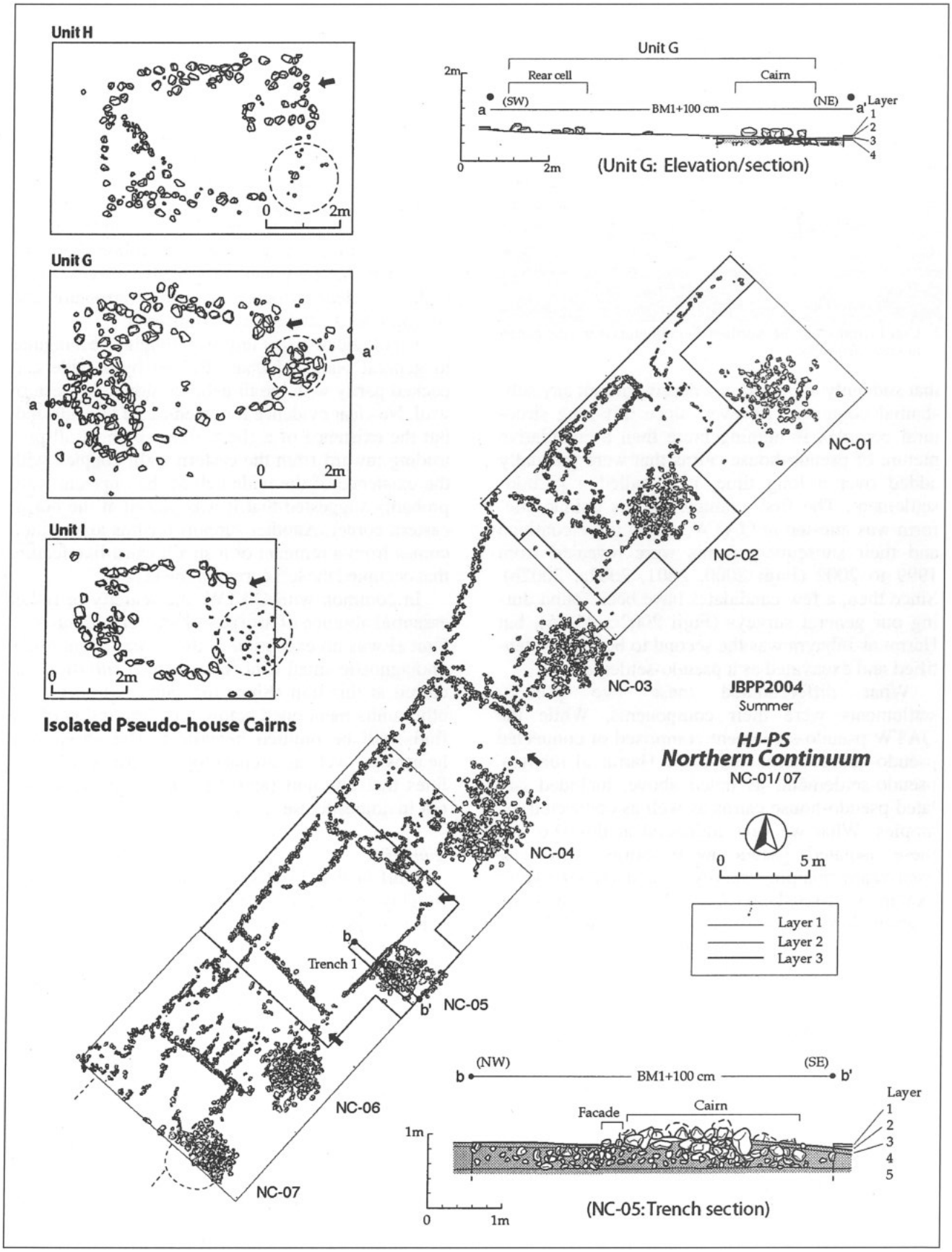
This unit was located at the northern extremity of the site. Reflecting the unique site setting, basalt pebbles and cobbles ca. 20-30cm in maximum length were exclusively used for the construction material. (Unless otherwise stated, the same holds true for the other units mentioned below). The excavation showed that this small structure, measuring ca. 3.5m wide and ca. 5m deep, was built on the upper surface of Layer 3 of the site stratigraphy (**Fig. 3**). (This also applies to the other units). The construction method was very simple; basalt cobbles were simply put horizontally on the ground surface with their longer sides parallel with a wall alignment. Neither foundation trenches nor wall banking was attested. The walls were a single row wide and preserved to single course height, but the volume of fallen stones scattered around the walls suggested that they were originally a few courses high. No clear evidence for upper structure and special floor treatment was confirmed.

Typologically, this unit was roughly rectangular in general plan and characterized by a wide cell packed partly with basalt pebbles along the western wall. No clear evidence for an entrance was attested, but the existence of a short, freestanding wall protruding inward from the eastern wall, coupled with the existence of the wide cell at the opposite wall, probably suggested that it was placed at the north-eastern corner. Another support for this assumption comes from a remnant of a small, cairn-like feature that occupied the left corner of the façade.

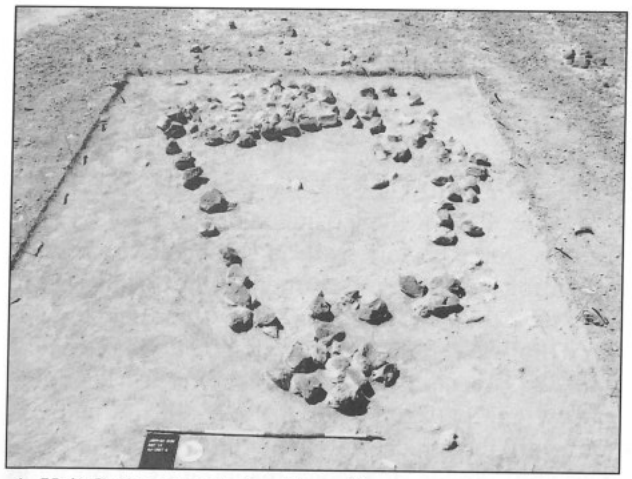
In common with QATW, the scarcity or rather essential absence of artifacts characterized this site. Unit H was no exception to this. Apart from a few undiagnostic small flint flakes, no *in situ* finds occurred at this unit (Since the same is true for the other units mentioned below, the description of the finds will be omitted hereafter). The absence of hearths as well as archaeological artifacts underlines that this unit (and the other units also) was not in domestic use.

Unit G

Unit G was located ca. 50m south of Unit H, roughly in the center of the isolated pseudo-house cairn complex. It had much in common with Unit H, including the stratigraphy, construction material, construction technique, whole size, layout, general orientation, and the contents and arrangement of small features (**Figs. 3, 4**). It is obvious that this unit was constructed following the same standards as Unit H. What most interested us was the nature of a cairn-like stone concentration attached to the left corner of the façade. A test trench across this small feature revealed that it was not an artificial structure but, in fact, a small natural lava rise. It follows that this natural lava rise was likened to a small cairn, the key feature to which a pseudo-house should be annexed. The incorporation of such a natural lava rise into a façade as substitute for a cairn was the norm of pseudo-house cairns in



3. The isolated pseudo-house cairn complex and the Northern Continuum: the plan and section/elevation.



4. Unit G: the general view (from E).

this site, as further evidenced by the other two examples referred to below.

Unit I

This unit, lying ca. 10m southeast of Unit G, can be understood as a smaller version of Unit G and H (**Fig. 3**). No special comment is needed, except that, here again, a wide, pebble-packed cell and a small, cairn-likened, natural lava rise were incorporated into the rear wall and the left corner of the façade, respectively.

The Other Units

Our surface observations suggested that the other four units shared the common traits noted above. There is little doubt that these seven units formed a homogeneous complex. What was noteworthy was that five of these (Unit H, E, F, G, and I, to enumerate from north to south) were arranged in a gentle curve as if they would join the Northern Continuum ca. 20m away to the south. This, along with the stratigraphical simultaneity and typological continuity between the two, strongly suggests that the formation of this site began with the isolated pseudo-house cairns at the northern extremity and, then, was succeeded by the Northern Continuum. Another support for this assumption comes from the gradual decrease in interval between any two examples of the isolated pseudo-house cairns and the gradual southeastward shift in general orientation from Unit H to the first few units of the Northern Continuum. As will be referred to below, the construction order evidenced by the wall-sharing relation between any two units of the connected pseudo-house cairns — NC-04 and NC–05, for example — is also in favor of this intra-site chronology.

The Nothern Continuum

To the south of this isolated pseudo-house cairn complex, an elongated complex of connected pseudo-house cairns stretched intermittently for ca. 550m with the orientation first from NE to SW, then from N to S, and finally from NW to SE. Since the identification of a pseudo-house was often difficult due to the rugged ground surface of *Ḥarra*, we noticed more conspicuous components (namely, cairn-like stone concentrations) and gave them serial numbers in order from north to south. The following description will be based on these serial numbers. Thus, when we refer to a pseudo-house attached to the cairn-like stone concentration No. 01, for example, we call it the pseudo-house 01. When we refer to both of these two features as a composite structure, we call it Unit 01 or NC-01 (i.e. Unit 01 in the Northern Continuum). When we refer to continuous units from Unit 01 to 03, for example, we use the term Segment 01-03 or Units 01-03.

Following this designation system, the long body of connected pseudo-house cairns was divided into the following three major segments: 1) the Northern Continuum ca. 80m long that consisted of ten units from Unit 01 to Unit 10; 2) the Southern Continuum ca. 300m long that comprised a total of thirty-eight units from Unit 27 to Unit 64, 3) the Central Gap ca. 160m long that intervened between the two. As a matter of course, our investigation was focused on the two continua, where the following five sorts of operations were conducted depending on the preservation state of each unit: full excavation and drawing, partial excavation and drawing, full surface-cleaning and drawing, partial surface-cleaning and drawing, and partial surface-cleaning and sketching. The first operation (i.e. full excavation and drawing) was applied to the four units containing NC-02, NC-05, SC-39, and SC-58. The second operation (i.e. partial excavation and drawing) was conducted at NC-01, NC-03, NC-04, NC-06, SC-38, SC-57, and SC-59. The other units, about forty in total number, were treated with any of the third to fifth operation.

With respect to the Northern Continuum, our investigation was focused on the first seven units and two of these, Unit 02 and -05, were entirely excavated in conjunction with some walls of adjacent units. The excavation showed that both of these were built on the upper surface of Layer 3 and, therefore, stratigraphically coeval with the isolated pseudo-house cairns to the north.

Unit 01

Since this unit was poorly preserved, it was partly excavated around the rear and left walls. The excavation showed that it was a relatively small, rectangular structure ca. 7m wide and ca. 5m deep

(**Figs. 3, 5**). Unlike isolated pseudo-house cairns and the other units in this continuum, flint slabs were used for the main construction material of the walls. They were simply put upright in two rows and no clear evidence for foundation trenches and banks was confirmed. An interrupted wall alignment at the rear left corner hinted at the existence of a wide, rectangular cell. This, along with the incorporation of a small cairn-like stone concentration into the façade, pointed to the typological continuation from isolated pseudo-house cairns to the north.

Unit 02

The full excavation showed that this unit, ca. 6-7m wide and ca. 5m deep, could be regarded as a better-preserved version of Unit 01. Here again, a wide cell and a small cairn-like stone concentration were found along the rear wall and near the left corner of the façade, respectively (**Figs. 3, 5**). Unlike isolated pseudo-houses cairns, the rear cell was empty and not packed with pebbles. In addition to these traditional components, a smaller cell was attested along the left wall, another minor typological change from isolated pseudo-house cairns (Of relevance is the second interrupted wall alignment at the rear left corner of Unit 01, which may indicate the existence of a similar cell). The walls of this unit were composed with two-rowed basalt cobbles simply put horizontally on the ground surface, a construction technique that will long be inherited to subsequent units.

This unit, though classified into connected pseudo-house cairns for convenience, was not directly connected with the preceding unit and an interval of ca. 1.5m still intervened between the two. This discontinuity probably means that both of these units did not fully break away from the tradition of isolated pseudo-house cairns. This, in turn, suggests that the Northern Continuum began with these units and then developed southwestward.

Unit 03

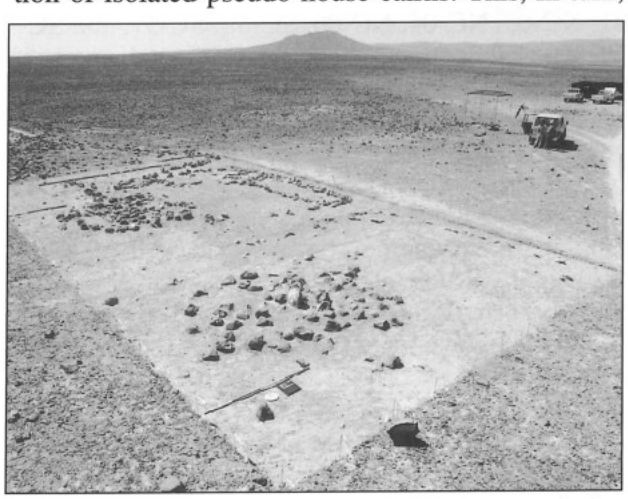
Since this unit was only partly excavated in conjunction with Unit 02, the particulars were unknown except for the existence of a short wall protruding from the left wall and a small stone concentration near the left corner of the façade (**Fig. 3**). Nevertheless, the following two phenomena were noticed. First, it was diagonally connected with the preceding unit, thus leaving a triangular, narrow gap between the two. Second, in comparison with the preceding two units, it became remarkably longer sideways, reaching ca. 11m wide (The reason for these two phenomena will be clarified at Unit 05 mentioned below).

Unit 04

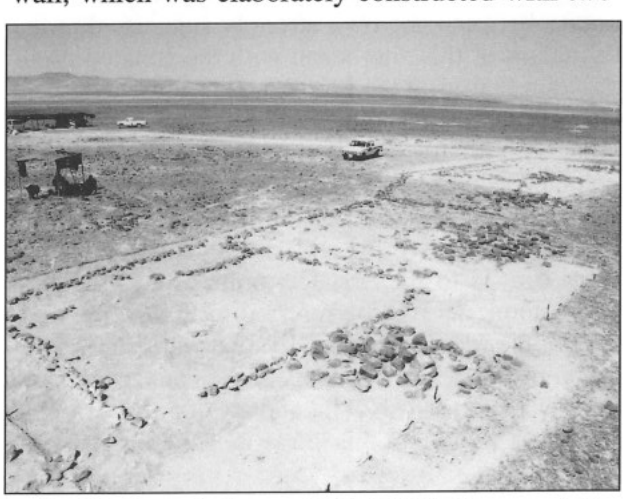
This unit shared common traits with Unit 03, forming twin units. What distinguished this unit was the joint method to the preceding unit, which was diagonal here again but opened toward the opposite direction (**Figs. 3, 6**). Another difference, which might be related to the difference in preservation state, was the existence of a wide cell and a few smaller cells along the rear and left walls, respectively. In addition, a narrow entrance flanked with a short windbreak wall on one side was attested at the right corner of the façade, a typological affinity with pseudo-house cairns at QATW (Fujii 2001: fig. 2, 3, 5, 2004: 54-57).

Unit 05

Unit 05, measuring ca. 9m wide and ca. 8m deep, is the best construction in this continuum (**Figs. 3, 6**). This is especially true of the façade wall, which was elaborately constructed with two-



5. The Northern Continuum (Units 01-03): the general view (from NE).



6. The Northern Continuum (Units 01-05): the general view (from S).

rowed upright basalt slabs. In common with the preceding unit, a narrow entrance flanked with a short windbreak wall on one side was attested at the right corner of the façade.

Three points should be noticed about this unit, the first point is that, unlike the preceding four units, it substituted the left wall of the preceding unit for its own right wall, thus leaving no gap between the two. This is important in that it provides another line of evidence for the southward development of this elongated site. It is the repetition of such conformable connection that led to the formation of a long continuum.

The next point is concerned with a minor yet very significant change in indoor space division. The wide cell along the rear wall was reduced by half in width, thus falling into a small feature around the rear right corner. This northeastward retreat of the rear cell created ample space for the smaller cells to shift up to the rear left corner, a standard layout that will long be inherited down to the last unit of the southern continuum. A sign of this typological change was recognized at Unit 04, but the reduced cell still stuck to the middle range of the rear wall and, for this reason, impeded the backward shift of the smaller cells.

The third point is related to the geological background of the cairn-like stone concentration along the façade. A 5m long test trench across this small feature revealed that, as was the case with Unit G mentioned above, it derived, in fact, from a natural lava rise (**Fig. 7**). It is therefore evident that natural lava rises dotted in this site were likened to core features to which a pseudo-house should be annexed, although it might have happened that additional cobbles were piled up over an original lave rise to make it more conspicuous. In either case, we may conclude that the location of a lava rise determined that of a pseudo-house and not the reverse. This enables us to reasonably understand the typological dichotomy of pseudo-house cairns in this site. The scattered condition of relevant lava rises in the northern extremity of the site was, most likely, responsible for the formation of isolated pseudo-house cairns there. Likewise, the linear, intermittent arrangement of relevant lava rises, most likely, led to the development of connected pseudo-house cairns to the south.

7. Unit 05: the trench across the façade and the cairn-likened natural lava rise (from SW).

A series of odd phenomena noted in connection with Unit 03 can also best be understood within this framework. First, we can conclude that the abrupt increase in width at Unit 03 and Unit 04 was not an intentional device but a natural consequence of the increase in interval of relevant lava rises. We may also conclude that both the coexistence of units with various width/depth ratio within a single continuum and the fluctuation of the relative position of a cairn-likened stone concentration along a façade were the last resort to cope with the inconsistency of the interval of relevant lava rises. Likewise, the unconformable connection between Unit 02 and Unit 03, on one hand, and Unit 03 and 04, on the other, can be regarded as a logical consequence of a slight refraction of the developing axis of relevant lava rises. All these highlight the fact that the formation of this continuum went through a continual series of trials and errors to cope with the irregularities of core features.

Unit 06

This unit is another masterpiece and can be regarded as a smaller yet more refined version of Unit 05. Needless to say, the width reduction of this unit was due to the decrease in interval of relevant lava rises. Conformable connection, which began with the joint between Unit 04 and Unit 05, was inherited to this unit also, leading to the formation of an elegant segment. Another innovation — the rightward retreat of the rear cell and the establishment of plural smaller cells along the left wall — was also succeeded here. A narrow entrance was found at the right corner of the façade, another similarity to the preceding unit.

Unit 07

This unit was surface-cleaned and drawn focusing merely on the northeastern half. No special comment is needed, except that the conformable connection with the preceding unit was recognized here again, and that the minor refraction of the developing axis of relevant lava rises necessitated the slight setback of the façade.

Unit 08 to 10

Since these three units were poorly preserved, they were merely sketched after partial surface-cleaning. This brief operation revealed, however, that further retreat of relevant lava rises caused the gradual setback of rear walls as well as façades. Of further interest is the fact that the lava rise No. 11 was left isolated. This is probably because it was too near to the preceding lava rise to be utilized as a core feature for the attachment of a pseudo-house. This provides another line of evidence that the position and interval of relevant lava rises held the key to the formation of a pseudo-settlement.

The Central Gap

A long blank began with the lava rise No. 11 mentioned above. No clear evidence for pseudo-houses was confirmed for ca. 160m until one reached SC-27, the first unit of the Southern Continuum. The reason why two dozens natural lava rises in this segment were left unutilized for a core feature is still unknown, but one plausible explanation is that the interruption at the lava rise No. 11, along with too long intervals in the middle range of this segment, led to the relinquishment of further extension of the Northern Continuum. The scarcity and poor quality of construction material around this segment may also have contributed to the formation of this long blank. In either case, it is our present observation that the construction of connected pseudo-house cairns was skipped for ca. 160m and resumed with SC-27 (It should be kept in mind, however, that the rugged ground surface of Ḥarra often made the identification of a pseudo-house difficult. Thus, the possibility cannot fully be ruled out that less conspicuous units still remain to be confirmed in this long gap, at both ends in particular).

The Southern Continuum

The Southern Continuum contained about three dozens units from Unit 27 to Unit 64. Starting with the highest elevation point of the site and, first, running roughly in parallel with contour lines and, in the latter half, following the southeastern ridge, it stretched for ca. 300m without any substantial interruption. This continuum, especially its southernmost segment, was characterized by the exclusive use of small, relatively angular flint slabs for construction material, which made the overall appearance clearer in comparison with the Northern Continuum. Our investigation was focused on the following three relatively well-preserved segments: Segment 29-33, 38-39, and 52-64. The other units and segments were drawn or sketched after partial surface-cleaning.

Unit 27 and Unit 28

These two units marked the beginning of this long continuum, but what the surface cleaning revealed was limited to some interrupted wall alignments and two cairn-likened stone concentrations. Nothing noticeable was found, except for a small cell at the rear left corner of Unit 28.

Unit 29 to Unit 33

The surface cleaning showed that this segment consisted of five units of various size and form (**Fig. 8**). Of interest were Unit 30 and Unit 31, both of which were nonstandard either in overall size or general plan. However, the next two units recovered standards in both aspects, being equipped with a larger cell at the rear right corner and a few smaller cells at the rear left corner.

Unit 34 to Unit 37

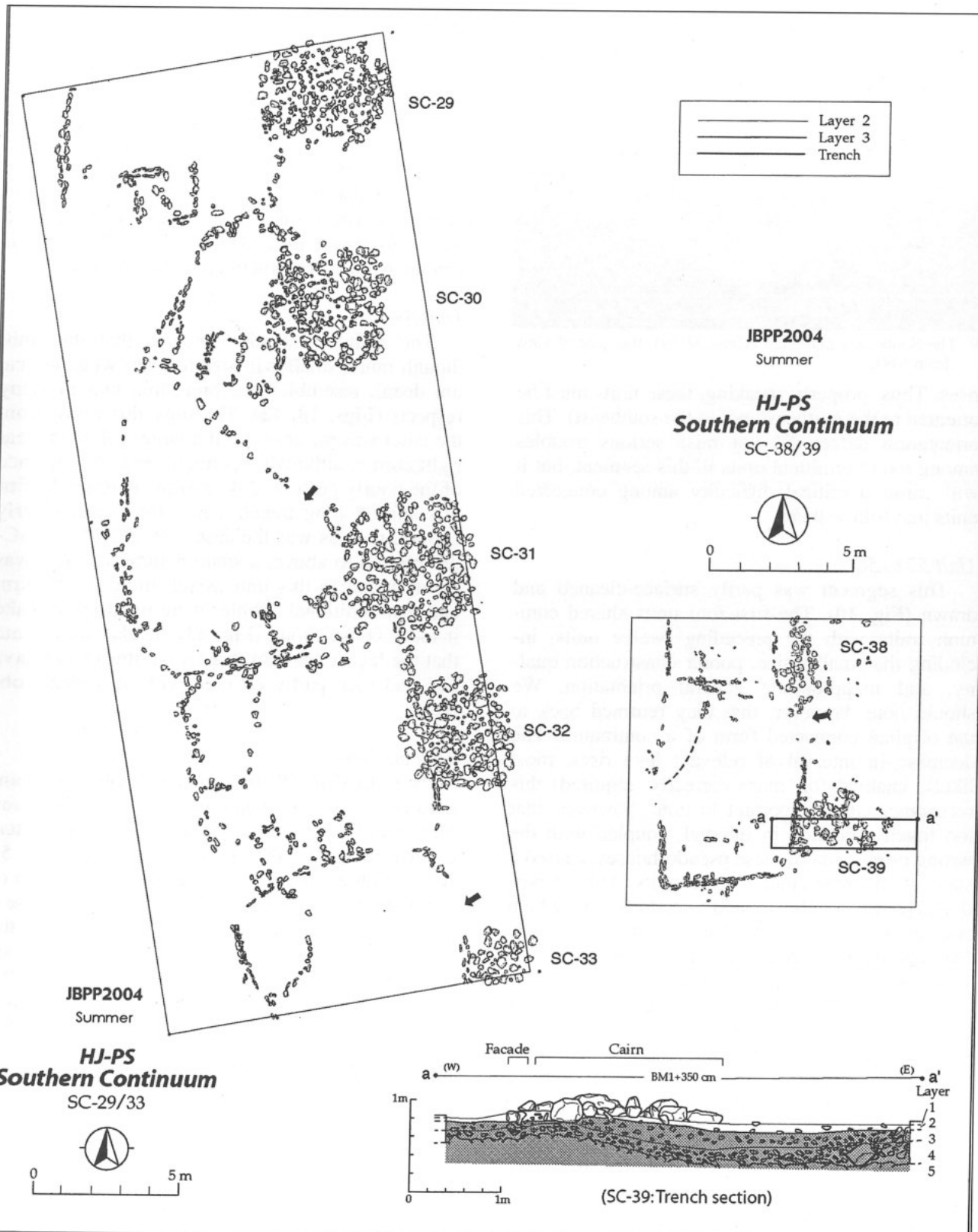
Because of their poor preservation state, these four units were merely sketched after partial surface-cleaning. No special comment is needed, except that, here again, the slight refraction of the developing axis of relevant lava rises caused unconformable connection at both sides of Unit 35.

Unit 38 and Unit 39

Unit 39, measuring ca. 6-7m wide and ca. 5m deep, was entirely excavated in conjunction with the southern half of Unit 38 (**Figs. 8, 9**). The excavation showed that, following the norm of connected pseudo-house cairns in this site, it (and, probably, Unit 39 also) was equipped with a larger cell at the rear right corner, a few smaller cells at the rear left corner, a narrow entrance at the right corner of the façade, and a cairn-likened stone concentration at the left corner of the façade, respectively. A 5m long trench across the façade revealed that, here again, a natural lava rise was incorporated into the façade as substitute for a cairn.

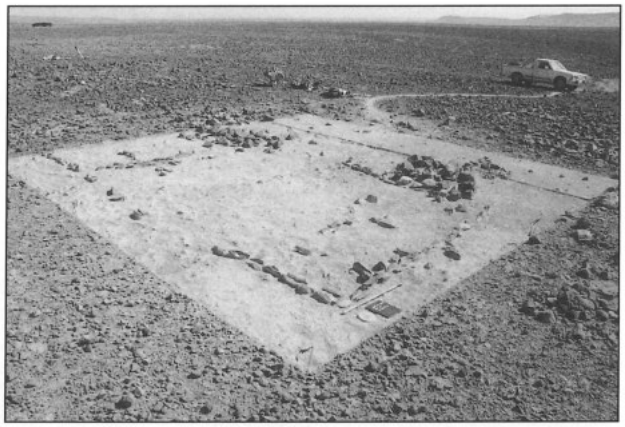
Unit 40 to 51

This segment, containing a dozen units, was only sketched after partial surface-cleaning (**Fig. 1**). What characterized these units were their smaller size, poorer construction quality, and intermittent arrangement, all of which can be understood as a natural consequence of the smaller, less conspicuous, sporadic nature of relevant lava rises. It is noteworthy, however, that, despite these difficulties, a few units including Unit 48 kept the standard layout. Of further significance was the general orientation of the last several units, which



8. The Southern Continuum (Units 29-33, 38-39): the plan and section/elevation.

failed to cope with the southeastward refraction of the developing axis of relevant lava rises, still facing to the east or, wrongly, even to the southeast (For the smooth development of a continuum, it is necessary for every unit to be placed roughly perpendicular to the developing axis of relevant lava



9. The Southern Continuum (Units 38-39): the general view (from SW).

rises. Thus, properly speaking, these units must be oriented to the northeast, not to the southeast). This orientation defect did not raise serious troubles among the intermittent units in this segment, but it will cause a critical difficulty among connected units that follow them.

Unit 52 to 56

This segment was partly surface-cleaned and drawn (**Fig. 10**). The first four units shared common traits with the preceding twelve units, including the smaller size, poorer construction quality, and inappropriate general orientation. We should note, however, that they returned back to the original connected form of a continuum. The decrease in interval of relevant lava rises, most likely, enabled (or, more correctly, required) this recurrence. It is important to note, however, that too much reduction in interval, coupled with the wrong orientation of these pseudo-houses, caused a state of disorder among these units. This is particularly true of the second pseudo-house, which was constructed independently without any key features. Another trouble can be found in Unit 53, which was not only deviated from nonstandard size but was also built abutting the façade, instead of the side wall, of the preceding defective pseudo-house. It was Unit 56 that finally settled these problems by means of a fresh start at a distance of ca. 4m from the preceding unit and, at the same time, the orientation change from the east to the northeast. With this unit being a turning point, next some units recovered the standards to form the best segment in this continuum. It is needless to say that the ideal interval and straight development of relevant lava rises also contributed to the appearance of this clear-cut segment.

Unit 57

The limited excavation revealed that this unit, measuring ca. 8m wide and ca. 9m deep, was equipped with a larger cell and plural smaller cells at the rear right corner and the rear left corner, respectively (**Figs. 10, 11**). We may therefore conclude that the standard layout, which began with NC-05, continued to be kept down to this unit. As suggested above, this unit owed its standard size and layout partly to the ideal interval of relevant lava rises. The walls were elaborately constructed with two-rowed upright flint slabs. This unit is among the best constructions in the whole site.

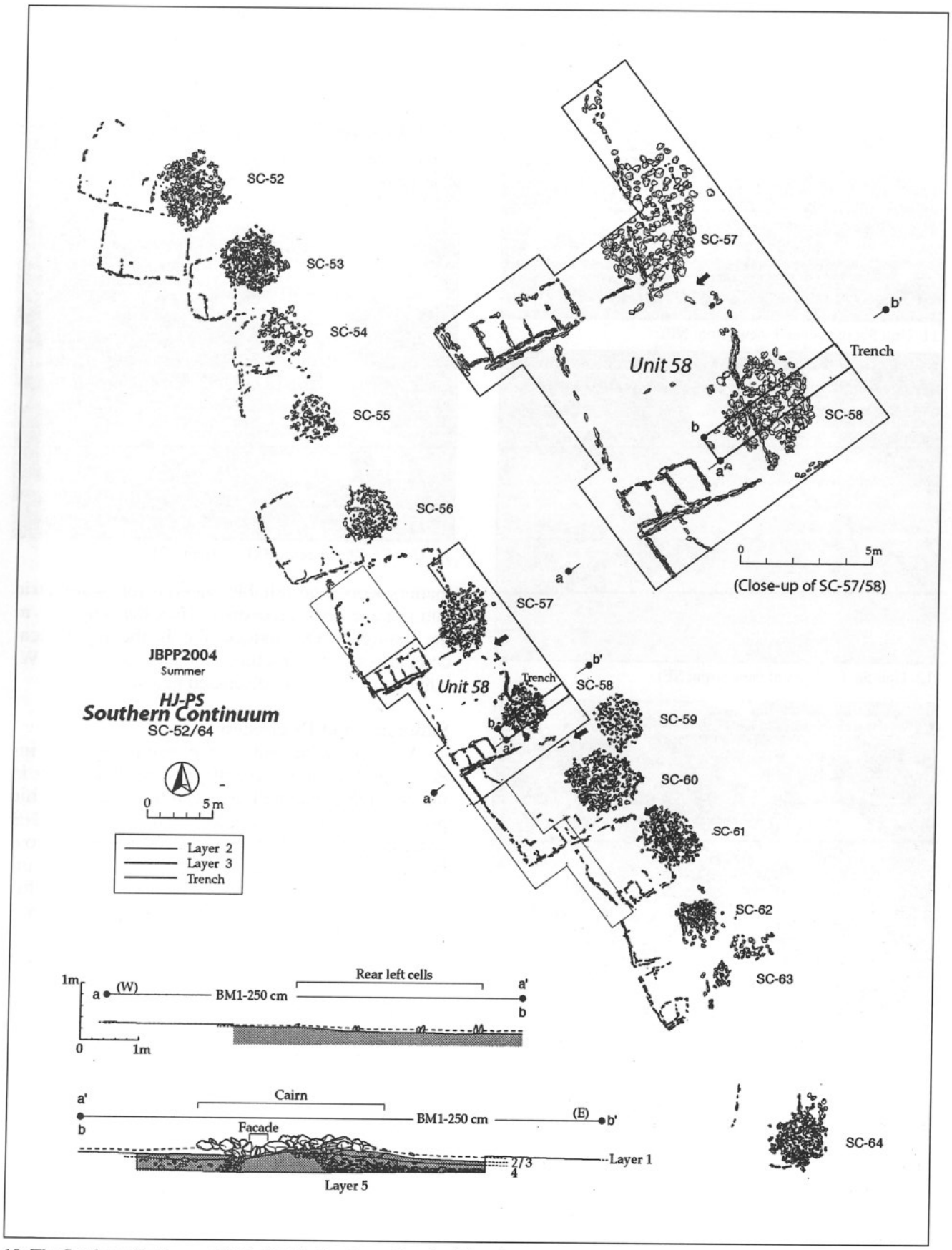
Unit 58

The entire excavation showed that this unit, though much smaller in size (ca. 8m wide and ca. 6m deep), resembled the preceding unit in many respects (**Figs. 10, 12**). The only difference from the latter was the absence of a larger cell at the rear right corner, although this might be a consequence of the poorly preserved state of the northern half of this unit. A long trench across the façade clearly showed that, as was the case with NC-05 and SC-39 referred to above, a small natural lava rise was incorporated to this unit as substitute for a cairn, and that additional cobbles were piled up to make it more conspicuous (**Fig. 13**). It also turned out that the façade was constructed on this natural lava rise and then partly covered with additional cobbles.

Unit 60 to 64

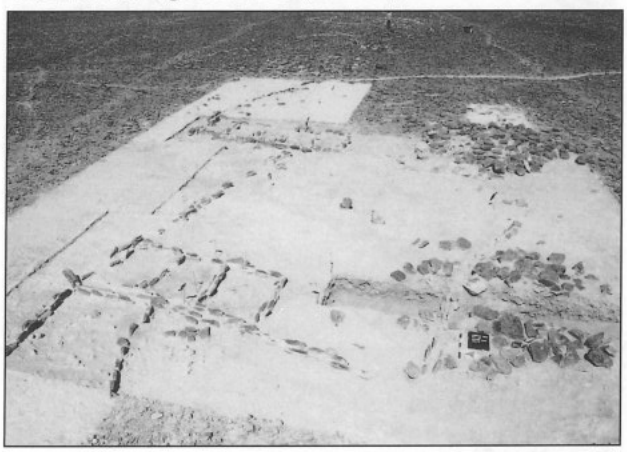
Next to Unit 58, four smaller units with standard layout still continued for ca. 25m without any clear interruption (**Figs. 10, 14**). What most interested us was that the stone concentration No. 59 was left unutilized as a core for the construction of a pseudo-house. This happened probably because it was too close to the adjacent lava rises and, at the same time, slightly offset from the developing axis of lava rises. We can reaffirm our recognition that the disturbance of interval between any two lava rises, whether too long (as seen at the Central Gap) or too short (as seen here and at the stone concentration No. 11), impeded the smooth development of a continuum. It is for this reason that Unit 60, skipping this offset lava rise, was constructed relying on the next lava rise.

Another problem arose among the subsequent three units. Further decrease in interval of relevant lava rises and the slight refraction of their developing axis brought about the size reduction and unconformable connection among them. The less conspicuous nature of the relevant lava rises also caused the deterioration in their construction quality. Nonetheless, while natural lava rises continue

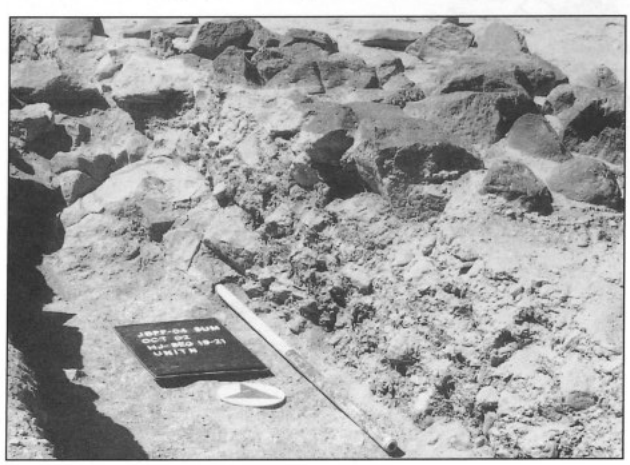


10. The Southern Continuum (Units 52-64): the plan and section/elevation.

11. Unit 57: the general view (from NE).



12. Unit 58: the general view (from SE).



13. Unit 58: the close-up view of the cairn-likened natural lava rise (from E).

to appear above soil, they are less blamable. Eventually, their exposure ended with Unit 64, resulting in the termination of this long continuum.

The Finds

In common with QATW, Ḥarrat al-Juḥayra was characterized by the scarcity of finds. To date, no datable *in situ* finds have been found. To make

14. Unit 57-60: the general view (from SE).

matters worse, no reliable material for radiometric dating have been recovered. Thus the only key to the dating of this unique site is the typological comparisons of structural remains with QATW, which will be briefly discussed below.

Summary and Discussion

As was mentioned at the beginning, our investigation at Ḥarrat al-Juḥayra aimed at filling in the chronological blank between the Late Neolithic pseudo-settlement at QATW and a small PPNB settlement at Jabal Juḥayra. It appears that this goal has almost been achieved. In conclusion, the investigation results will be summarized and, on this base, a brief discussion will be made about the relative chronology of these three sites.

The starting point is our observations that the key to the formation of this unique funerary site lies in the utilization of natural lava rises for pseudo-cairns to which a pseudo-house should be annexed. What is important is that these lava rises varied in arrangement from place to place within the site. They were scattered at the northern extremity, whereas roughly aligned to the south. This geological background enabled us to reasonably understand the locational dichotomy between the isolated pseudo-house cairns and the connected examples. With respect to the construction order between the two, a line of evidence — the typological development from a simple to more complex

layout, the gradual shift from isolated arrangement, through unconformable connection, to conformable connection, and the way of wall-sharing between any two connected units — clearly showed that the formation of this site began with the isolated pseudo-house cairns at the northern extremity and then was succeeded southward to the connected pseudo-house cairns. For the same reason, we may also conclude that, within the latter entity, the Northern Continuum was followed by the Southern Continuum, with the Central Gap in between. The southward development also holds true for the construction order of plural units within a continuum. To summarize, this elongated site was gradually developed from north to south.

Typologically, this pseudo-settlement consisted of the following three types of pseudo-house cairn: to list from north to south, namely, from earlier to later examples in the intra-site chronology, 1) smaller, isolated pseudo-house cairns equipped simply with a wide cell along the rear wall, which were concentrated on the northern fringe of the site; 2) larger, generally connected pseudo-house cairns equipped simply with a wide cell along the rear wall, which were seen from NC-01 to NC-04, 3) larger, generally connected pseudo-house cairns equipped with both a wide yet much deteriorated cell at the rear right corner and plural smaller cells at the rear left corner, which were the norm from NC-05 down to the last unit of the Southern Continuum. There is little doubt that Ḥarrat al-Juḥayra pseudo-settlement was formed following this typological transition.

The question is the chronological correlation between the Ḥarrat al-Juḥayra and QATW pseudo-settlements. However, no clear equivalents to Ḥarrat al-Juḥayra pseudo-house cairns can be found at QATW, where every unit was conformably connected with each other and, more importantly, equipped merely with a few smaller cells at the rear left corner (Fujii 2001: fig. 2). This probably means that QATW was slightly posterior to HJ-PS in both typology and chronology. Suggestive in this regard is the last several units of Ḥarrat al-Juḥayra, which can be regarded as a proto-type of QATW pseudo-house cairns. Of further significance is the existence of a small bank at the rear right corner of the first few units at QATW (i.e. Unit B and Unit C in the Northern Continuum; Fujii 2001: fig. 3), which are most likely remnants of a rear right cell that was the norm of later units at Ḥarrat al-Juḥayra. From these observations, we can conclude that Ḥarrat al-Juḥayra pseudo-settlement slightly antedated QATW and, therefore, can be assigned to the earlier half of the Late Neolithic or a little earlier.

Integrating the suggested date of Jabal Juḥayra (Fujii 2002b: 41) and published information of the Wādī Faynān Neolithic sites (Najjar 1994; Barker 2000: 69-71; Finlayson *et al.* 2000; Mithen *et al.* 2000; Simmons and Najjar 1998, 2003) into this chronological perspective, and, at the same time, referring to some recent syntheses about the origin of the pastoral nomadism in southern Levant (Köhler-Rollefson 1992; Cauvin 1994: 247-259; Garrard *et al.* 1996; Betts 2001; Rosen 2002), an overall picture of pastoral nomadization in the al-Jafr Basin, though still vaguely, will come into sight. Current evidence suggests that initial agro-pastoral settlements from PPNA to Middle PPNB were established first in the Jordan valley, the Wādī Faynān area in this case, and then, at least by the end of the Late PPNB horizon, expanded beyond the watershed up to the Transjordan plateau including the Jabal Juḥayra area. What is important is that the Jabal Juḥayra PPNB settlement appears to be small in site size (ca. 0.5ha), less sedentary in settlement pattern (ca. 0.5m in thickness of a soil deposit), and isolated in site location. This means, most likely, that it was at best a summer pastoral camp derived from a cis-watershed parent settlement. Given this, it follows that an incipient pastoral group at this summer camp soon, probably in the PPNC or Late Neolithic horizon, embarked on the road to pastoral nomadization. What triggered off this gradual transition seems to be the eastward extension of grazing area from the Wādī al-Quṣayr drainage basin encompassing Jabal Juḥayra toward the al-Jafr basin. In this regard, it is highly suggestive that Ḥarrat al-Juḥayra pseudo-settlement, a symbolic cemetery for the initial pastoral nomads, was founded at a point commanding the Wādī al-Quṣayr catchment area. Given the relative chronology suggested above, we may also hypothesize that they further infiltrated the desert fringe by the latter half of the Late Neolithic and founded the second cemetery at QATW. Of relevance is the existence of some PPNB outposts in the al-Jafr Basin, including WBn-TU102 (Fujii in this volume), JF-0106 (Tal'at Abū Ṭulayḥa), JF-0155 (Wādī Abū Ṭulayḥa), and QATW Square N-VI (Fujii 2005). Such task-specific land use at the desert fringe might also have paved the way for the pastoral nomadization in the subsequent periods.

Concluding Remarks

The investigation at Ḥarrat al-Juḥayra pseudo-settlement turned out just as we had expected. There is little doubt that this site fills in partially, if not completely, the chronological hiatus between

the Late Neolithic Pseudo-settlement at QATW and a small PPNB settlement at Jabal Juḥayra. We have now obtained a reliable base to trace the pastoral nomadization in the al-Jafr Basin. The next issue is to explore the reason how and why some PPNB agro-pastoral groups finally shifted to pastoral nomadism in the desert fringe. A series of investigation at Jabal Juḥayra (JF-0116) and Wādī Abū Ṭulayḥa (JF-0155) is scheduled for the next several seasons (For acknowledgements, see the other report in this volume).

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