MIDDLE HADRAMAWT ARCHAEOLOGICAL SURVEY, 1999 Report to the General Organization for Antiquities, Manuscripts, and Museums San'a', Republic of Yemen

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SUMMARY

The second season of the Middle Hadramawt Archaeological Survey (MHAS) took place throughout the month of October, 1999. The members of this season's staff were Paul C. Zimmerman (University of Pennsylvania) and Hussein al-'Aydarus (Seiyun Museum). Additional organizational support was provided by 'Abd al-Rahman al-Saqqaf (Seiyun Museum). The goal of this season was simply to document as many sites as possible between the cities of al-Qatn and Tarim, Hadramawt. Over 50 sites, of all archaeological time periods, were visited—bringing to 82 the total number of sites examined by this project in both its 1997 and 1999 seasons. Furthermore, over 75 other sites were seen en route but not visited (their locations, however, have been recorded for plotting on the overall project map).

The ultimate goal of this research is to provide the data for my doctoral dissertation, an examination of settlement patterns in relation to the region's importance as a trade route during the Pre-Islamic and early Islamic periods. However, it is also hoped that the information collected will 1) serve as the basis of a new archaeological map of the region and 2) document the ongoing destruction of sites by modern construction—thereby assisting the Seiyun Museum's efforts to slow the pace of such destruction. A third and final season is currently planned for Spring, 2000.

DEFINITION OF THE STUDY AREA

The region herein defined as the "Middle Hadramawt" consists of the Wadi Hadramawt and its tributary wadis between the cities of al-Qatn in the west and Tarim in the east. This area is taken as a coherent unit primarily on practical grounds. To the west of al-Qatn, extensive survey has already been undertaken by the Joint Soviet-Yemeni Mission, and to the east of Tarim the French Mission has conducted archaeological reconnaissance. It is hoped that the results of the present project will dovetail with these earlier studies. Amplifying these practical considerations, minor (but perhaps significant) differences in the vernacular architecture of the Middle and Western Hadramawt (both in modern and ancient times) suggest that there may be valid geographical reasons for considering these as two related but distinct zones. Likewise, the differences in the physical geography between the Middle Hadramawt and its eastern extent (including the Wadi al-Masilah) suggest that there may be different environmental pressures on the two regions, perhaps resulting in distinct settlement patterns.

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METHOD

The method followed by this survey was relatively straightforward, and each day's mission was the same. By Land Cruiser, as many sites were visited as was possible. Known sites were examined, and stops were made at previously unrecorded sites encountered en route. The main Wadi Hadramawt was examined, as well as its side wadis. Entry was made into the side wadis on paved roads where possible, but their deepest penetration was made via off-road driving and on foot. Attention was paid to sites on the wadi bottom, on and in the alluvium, on the scree slopes, on spurs isolated from the slopes, and up to the first ledge midway up the cliff face. No attempt was made to visit sites on the jol because of their general inaccessibility.

Mapping of the routes traveled and the sites encountered was controlled with a GPS (Global Positioning System) receiver. These receivers are accurate to within 100 meters; and the correlation of these GPS data with satellite images and aerial photographs will result in an archaeological map of the region that is more detailed than any other yet produced. Moreover, the record of routes traveled will serve to demonstrate the coverage attained by this survey.

At each site visited, the same kinds of information were collected: GPS coordinates and representative surface artifacts (ceramics, principally). Additionally, photographs were taken of the sites, and textual descriptions of the sites were made. Sketch maps were also made of the larger sites, and sketch drawings were made of inscriptions and other details of interest. All these data are intended to establish the cartographic locations of the sites, their functional identification, and their chronological sequence. They will also assist the re-identification of these sites should any future researchers wish to visit them.

Upon return from the field, these data were all entered into a computer database designed specifically for this project. In the database, each site was given a sequential number with a format "MHAS S-*n*." Wherever possible, the name of the site is also recorded—but most sites do not have a local name. Therefore, the assigned serial number is the primary internal identification of the sites for this project (and its database). The main advantage gained by entering the collected data into the computer database lies in the computer's ability to easily build cross-referenced lists. Thus (for example), with minimal effort, the ceramics from all the sites of one time period can be reviewed—in textual description, measurements, photographs, and drawings. It is hoped that the use of this tool will enhance the speed and

thoroughness of the researchers' interpretation of the data.

Ceramics collected, as well as all other objects, are also entered into the database and given sequential numbers. The format for ceramics is "MHAS C-*n*" and the format for other objects (regardless of material) is "MHAS O-*n*."¹ These numbers have been written directly onto the objects (or on tags attached to the objects, where feasible), and the objects themselves have been deposited in the care of the Seiyun Museum. Following this same recording system, important architecture, inscriptions, maps, photographs, and drawings are all entered into the database and given their own sequence of numbers ("A-*n*", "I-*n*", "M-*n*", "P-*n*", and "D-*n*", respectively).²

Analysis of the distribution of sites, by chronological period and function, will be accomplished with GIS (Geographic Information System) software. In this software, the GPS coordinates of each site will be plotted on a base map and combined with satellite images and aerial photographs to produce new archaeological maps of the region.³ Not simply a means to plot data, however, GISs allow for the thematic analysis of various interrelated factors such as (for example), the terrain on which sites are found, the travel times between sites, and intervisibility between fortresses. Because all the GIS data are a subset of the data in the project database, multiple maps can be easily produced showing (for example) the distribution of sites at various points in time or the distribution of certain types of sites. Furthermore, because all the data about the recorded ceramics, objects, architecture, and inscriptions are linked to the site records with GPS coordinates, all these sub-records of the site data will, themselves, be geo-referenced. It will, therefore, be possible to incorporate these data into the GIS to plot the distribution of (for example) given ceramic types across the entire study region. These GIS analyses will be undertaken during the 2000 season of the MHAS and final production of the various thematic maps will take place after the field season, during the write-up of my doctoral dissertation.

¹ Future subdivision of the object list by material or object type, if deemed necessary, will not be a difficult task. For example, extraction from the database of new series for lithics ("L-n") or coins ("C-n") could be easily accomplished by searching for the material or content fields of the object database for the relevant information. Such a process, however, will result in multiple numbers assigned to certain objects.

 $^{^{2}}$ The reader may note a difference between this system and the one employed in the 1997 season. The previous system (wherein a single sequence crossed records of all types) became unwieldy and was too easily subject to mistakes. Sequence numbers from the 1997 season, therefore, are currently being converted to the new system—which will be the system employed in all future MHAS work.

³ Adequate and affordable base maps and satellite images have not yet been purchased by this project, but should be acquired prior to the commencement of the 2000 season.

PRELIMINARY CONCLUSIONS

As a result of the work conducted during the 1999 season of this project, some preliminary conclusions and working hypothesis have been formed concerning the distribution of sites in the study region. These will be further tested and refined during the 2000 field season of the MHAS.

- 1) Assessment of Field Methods: A wide variety of sites, many of which were previously unknown, were visited and recorded. Though parts of the region remain unexplored (most notably, the north edge of the main wadi between Shibam and Tarim), the pace with which the area was explored during the 1999 season bodes well for completing full coverage of the study region during the 2000 season. The documentation process employed, having been refined through two seasons of fieldwork, seems adequate for the project's goals. And the GPS measurements, upon preliminary plotting (see Figure 1) seem highly accurate.
- 2) Destruction of Sites: As was noticed in 1997, many sites in the study region are imperiled. Most of the damage being done to these sites is directly attributable to new construction. Perhaps the most endangered sites are the large stones with paintings and/or inscriptions. Typically, these stones are found on the wadi bottom at the foot of the scree slopes. Because the best stone for these inscriptions is the same grey limestone that is most desired for modern building stones, many of these sites are literally cut up for their raw material. Less prevalent, but nevertheless not uncommon, other sites have been excavated for their soils by local farmers, and still others have been partially or wholly bulldozed to clear land for fields, roads, and houses. Most disturbing, however, is an apparent increase in the number of sites that are being plundered for their antiquities. Perhaps it is only a reflection of the increased pace of construction activity in the area, but I was approached on numerous occasions by people asking if I was interested in purchasing inscribed stones. Though I never saw any of these objects (and, therefore, cannot vouch for their authenticity), it seems that the desirability of such artifacts to tourists is rather well known Seiyun. That the prospective sellers would never specify the location of the site from which the objects had been taken may be taken as a sign that the objects are forgeries—or that they were obtained through illicit excavation. One site, Jujah 2 (S-26), mapped by the New York University Expedition to Jujah in 1994, and known to have been previously plundered for the foundation stones of its most prominent structure, was badly disturbed

between 1997 and 1999—perhaps in the quest for marketable antiquities. The staff of this project sees the destruction of these sites as a major problem, and would like to see the growth of a sense of stewardship of Hadrami antiquities by the region's current inhabitants.

- 3) Alluviation: A working hypothesis concerning the alluviation of the wadis will be tested during the 2000 season. It has become widely accepted that the majority of the alluvial sediments in the Wadi Hadramawt and its tributaries are anthropogenic. While this is most likely true, I believe that I have seen traces of an older, natural alluviation that may be easily mistaken for that caused by human action. The more recent type of alluviation, studied in Wadi Beihan, Wadi Do'an, and elsewhere, is seen extensively in Wadi Sarr, Wadi Bin 'Ali, Wadi 'Idm, Wadi Dhahab, and the cultivated areas of Wadi Hadramawt. In all cases, this type of alluviation is recognizable by its pale color, fine grain, and distinct stratification. Deposited by sayl floodwaters diverted for agricultural irrigation, traces of irrigation systems (of Pre-Islamic and Islamic dates) are quite frequently visible on and in the alluvium. The suspected earlier alluvial deposits, however, are darker in color and coarser-grained. Stratification in this type of alluvium, though visible, is less clearly demarcated than in the clearly anthropogenic deposits. Moreover, this second kind of alluvium is usually capped with gravel deposits—and occasional cairn sites (which are believed to precede the Pre-Islamic period).
- 4) Distribution of Sites: From the results of the 1997 and 1999 seasons of survey, we can now predict the likeliness of finding archaeological sites in a given wadi. The smaller wadis entered (Wadi Na'am, Sha'ib Sahaybah, Wadi Jab, Wadi Shuhur, Wadi Jethmah) were nearly completely devoid of sites of any period. Very little alluviation is found in these sites, and very few modern towns or farms are located in these wadis. The remaining unexplored small wadis are likewise expected to yield very few new sites. The larger tributary wadis, on the other hand, are far richer. Wadi Sarr, Wadi Bin 'Ali, and Wadi Dhahab are home to numerous sites, as is the Wadi Hadramawt and Wadi 'Idm (though exploration of these latter two is largely incomplete). The most numerous type of site are cairns, stone alignments, and stone rings. Of unknown date, we can nevertheless expect that these are the work of Neolithic or Bronze Age cultures. These sites can be found throughout the region, but seem to be most plentiful in the extremities of the larger tributaries. Also of interest, the far southern end of Wadi Bin 'Ali produced at least two

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Palaeolithic sites on broad expanses of the first ledge. Future research in to the Palaeolithic should focus on this zone and its interrelation with the jol to the south. Settlement sites of the Pre-Islamic and Islamic periods, on the other hand, seem to be most prevalent in the same areas as modern settlement. The area immediately to the west of Shibam, in particular, seems to have been densely populated during the height of the Pre-Islamic Hadramawt kingdom. Unfortunately, because the Pre-Islamic and early Islamic settlements are most prevalent in the same zones as modern settlement, it can be expected that the survival of these sites is relatively rare. Whether through reuse (both ancient and modern) of their building materials, or through obscuration beneath subsequent alluviation, it is likely that many Pre-Islamic and early Islamic period sites have been lost.

FUTURE STUDY

As stated above, a field season during the upcoming year is currently planned. This upcoming season will last three months, from the middle of January through the middle of April, 2000. The goals of the upcoming season will be: 1) to complete the site reconnaissance begun in 1997 and 1999; 2) to return to selected sites for careful topographic and architectural mapping, and to conduct controlled sampled collection of surface artifacts; and 3) to conduct limited full-coverage pedestrian survey to test the efficacy of the survey method outlined above. To assist in the planned fieldwork, a small team of archaeologists and specialists will be brought to Yemen from the United States. These additional staff members will bring expertise in architectural history, art history, land surveying, photography, and soil geomorphology—in addition to general archaeological experience. The final composition of this team, and the travel dates of the individual team members will be determined in the upcoming month.

In the more distant future, further research is suggested by the results of this study. Excavation of selected sites in this region—especially those that are in imminent danger—is desirable. Sites S-23, S-26, S-35, S-65, S-73, and S-80 (see Appendix A, below) would all certainly provide valuable information if excavated properly. However, a second project is also suggested as a follow-up to this project: in five years' time, the sites could be re-visited, and their preservation could be documented. In this manner, a definitive measure of the destruction of sites in the Hadramawt could be made. Such a study would be more easily funded and more easily accomplished than would excavation—but its potential benefit to the long-term management of Yemen's cultural resources could be far greater.

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FIGURE 1: MIDDLE HADRAMAWT



Map of the study area, showing MHAS sites and routes plotted atop a geo-rectified sample of a SPOT satellite image (1:500,000 scale).

APPENDIX A: GAZETTEER

(The following notes are excerpted directly from the project database.)

S-28 Qalat Maryamat—قلعة مريمة

 $268213 \ E \qquad 1766351 \ N^4$

Islamic period fortresses atop a spur about 75m above the wadi floor. Multiple structures; mud brick with stone foundations. Some painted sherds; many red-slipped sherds. Structure A-1 on high peak; A-2 on level below the peak; other structures visible on the slopes of the spur. A-1 possibly earlier than A-2, based their preservation.

S-29 Maryama—مريمة

268380 E 1766333 N

Islamic village scattered along scree East of S-28. At least 15 structures; mud brick on stone foundations. Some walls stand almost 5m.

S-30 al-Sanahaja-الصناهجه

282566 E 1766717 N

Town site spread across 3 ridges, about 55m above the wadi bottom (and possibly also to the east, on the wadi bottom). Mud brick structures with stone foundations. Approximately 20 houses, densely packed. Four most prominent structures (A-3, A-4, A-5, A-6) noted on sketch map. According to a recently published book, the residents of this town all left for Andalousia in the Early Islamic Period. However, many of the walls of the structures in this site are in excellent condition, leading me to believe that much of this site is more recent than postulated in the book.

S-31 'Adiyyat al-Ghuraf 1 -- الغرف ا

284240 E 1766292 N

Large cave; mouth about 13m wide; 2m tall at its current highest interior point. No collections made. No definite indication of its age or use. Currently fenced off.

S-32 'Adiyyat al-Ghuraf $2-\tau$ عادية الغرف τ

284331 E 1766543 N

Supposedly, inscriptions have come from this site. At least three structures visible, in part due to soil excavation in the area. All buildings appear Pre-Islamic. A-7 is built on and in the alluvium. A short distance to the west, in another cut, stone walls are visible in section. A third structure (A-8), standing atop the alluvium is further west, but cut through by a modern water channel.

S-33 283634 E 1766655 N Fortress atop a spur between S-30 and S-32. Structure A-9 stands about 60m off the wadi floor.

S-34 287677 E 1768389 N Kiln site with much slag (iron?) on the surface. Many porcelain sherds. Kiln structure (A-10) made of mud brick.

⁴ These are UTM Zone 39 coordinates, based on the WGS 84 datum as measured with the GPS receiver.

S-35 al-Ghuraf—الغرف

284546 E 1766324 N

Small mound. 2 mud brick structures visible (A-11, A-12). A-11 may be Islamic Period. A-12 definitely Pre-Islamic. Top of A-11 about 20m off the wadi floor. Large stone wall visible to the west of A-11, in a cut near the bottom of the tell. See Sedov and as-Saqqaf (1992) for more information about this site.

S-36 277566 E 1776799 N

2 or 3 cairns; 4 stone-built shelters; 1 South Arabian inscription (I-1). No certainty that these elements are all of the same period, but the inscription is definitely Pre-Islamic.

S-37 278376 E 1776952 N

2 stone-built shelters under large stones, and 1 cairn on scree. No surface ceramics or lithics.

S-38 278370 E 1776978 N

2 very small cairns, each composed of 2 or 3 rings. Rings of the western cairn have broad rocks laid flat inside. Many "pretty" stones atop and around these possible cairns.

S-39 278418 E 1777026 N

Terminus of a footpath. Supposedly, this path takes one 2–3 days to Thamud. Marked by piles of stones, and a stone circle at its southern end. No indication of its date; probably occasionally used today, but may be ancient.

S-40 al-Qattar 1-۱ القطّار ۱

275909 E 1776629 N

Graffiti site; pecked South Arabian script, Himyari style. Numerous inscriptions (11 recorded, other possible inscriptions unrecorded). About 30m to the SE of the graffiti rock is a stone circle about 10m x 12m.

S-41 al-Qattar 2-۲ القطّار ۲

275649 E 1776625 N

Graffiti-covered rock. Pecked South Arabian inscriptions (I-13, I-14, I-15) on north face. Red and yellow painted animals, humans, designs on north and south faces. Yellow paint goes over red paint, and is therefore newer; inscriptions pecked through painted figures, therefore they are newer. Inscriptions are most certainly Pre-Islamic, but the painted figures are of indeterminate date.

S-42 al-Yuwayyeh-اليويه

274684 E 1778552 N

Cairns, lines, and stone circles stretched along a ridge and on its slopes. Numerous cairns, some standing over 1m high. Other cairn sites visible across wadis to the east and southeast. Very few surface collections (only 2 possible lithics). Top of ridge about 100m above wadi bottom. A spring is in the cliff face to the west of the site, and a newer (but probably still ancient) check dam is in the wadi below the spring. Paths and use areas are evident throughout the site.

S-43 'Uqlat al-Khamlul-عقلة الخملول

273897 E 1781599 N

Lookout on a spur at the confluence of Wadi Khamlul to the west and Wadi Thibbi (=Wadi Dhahab) to the east. Also, 1 possible cairn on the spur. Structure A-13 is mud brick with stone foundations (definitely Islamic). About 35m above the wadi floor.

S-44 284587 E 1751235 N

Stone line on north slope of side wadi to Wadi 'Idm. No cairn on top, but a footpath that can only be followed about 30 meters. Top of line about 60m above wadi floor. Small square structure (A-14) below line at bottom of slope. Roads or water channels visible on slope across wadi.

S-45 284969 E 1750693 N

Large, stone and mortar check dams and other installations in the alluvium and plainly visible above its surface. Standing up to 3m high. Besides those mapped at the above location, other similar structures are visible in the vicinity, especially to the west. One particularly large and well-preserved structure about 250m to the southwest, at the bottom of the slope.

S-46 Hakma—کمه

283446 E 1748796 N

House (A-15) in the middle of the wadi, on a gravel bed in the alluvium. Probably Islamic, but possibly built atop an earlier mud-brick structure. Much chipped obsidian in and around the structure.

وادي شب ۱ – ۲ Wadi Shab ا

276191 E 1780083 N

Two painted designs on the northeast face of an upright stone. Yellow and red paints used—together, in the case of one of the designs. Two small cairns are visible a short distance to the east. A small stone circle and a more recent stone-built shelter are about 150m to the east, across Wadi Shab.

S-48 Wadi Shab 2-۲ وادي شب

275279 E 1779843 N

Lookout (A-16) on ridge about 75m above the wadi floor. Many small stones on the foundations and in the mud, probably from decomposed brick. One small cairn (grave?) about 5m to the west. Other stone circles 20–30m west and northwest. Excellent view of S-42, Wadi Shab, and a large part of Wadi Dhahab.

S-49 275954 E 1776399 N

Two cairns on the scree slope. Upper cairn appears younger because its stones are lighter in color. Upper cairn in a rock outcrop about 70m above the wadi floor.

S-50 Husn Ba Hazayl-حصن با هزيل

249317 E 1752203 N

Castle on a spur about 45m above the wadi floor. Mud brick walls on tall stone foundations (A-17). A second mud brick structure (A-18), similar in size but probably younger, is to the west on the same spur.

S-51 249594 E 1749235 N

Seven to ten buildings, mud brick with stone foundations. Most buildings eroded to their foundations, but two or three have substantial superstructures, making me think that this is a 2-period site. Some pottery may be Pre-Islamic, but some is definitely Islamic.

S-52 250190 E 1746657 N

Cairns and a line stretching as high as 140m above the wadi floor, on the scree above the first ledge. A similar site is visible about 300m to the northeast. Overlooks S-53, to the southwest.

S-53 250143 E 1746551 N

At least a dozen stone circles, all evidently very old, on the first ledge (about 70m above the wadi floor). Also, 1 lookout (A-19), also very old but apparently younger than the rest of the site. Only sherd collected inside A-19. Each circle is 4–8m in diameter, with many trampled areas within and between them—leading me to believe that this is a village or a seasonal camp of some sort. However, there are no obvious lithics, so maybe this a graveyard of a type that I haven't seen before.

S-54 249002 E 1747249 N

Stone ring about 14m NE–SW by about 11m NW–SE. Rectangular structure (A-20) adjacent. Also, a short stone wall. Both larger structures appear contemporary. Both structures are constructed of large upright stones and piled smaller stones. The area around and inside the stone ring is blackened and clearly visible from S-53 as a dark mark. Many pieces of chipped jasper(?)—but they don't appear to be tools. Stone ring appears to be an animal pen.

S-55 248925 E 1747255 N

Small Islamic village. 5 houses, mud brick with stone foundations. Also, 1 cairn and 1 stone ring that may belong to S-54 (which is only 100m away). Most mud brick gone from the smallest houses. Largest house (A-21) has large, cut, stone foundation blocks and shows signs of multiple phases. Looks to me like A-21 is built upon the foundations of a Pre-Islamic structure (possibly a temple). The foundations of one of the smaller structures are upright stones, indicating probable reuse of a Neolithic/Bronze Age structure.

قلعة الحبوضي — Qalat al-Habudhi

264635 E 1768629 N Large structure (A-22) occupying the entire top of a spur, about 50m above the wadi floor. Also, some stone walls visible in the eastern slope of the spur and on the wadi floor to the east.

S-57 263823 E 1768559 N Stone ring 17m N–S by 14m E–W. Large stones set upright. Some stones toppled, some broken away (apparently recently). Located on a level spot in the scree about 10m above the wadi floor. Easternmost stone (the largest one) has a South Arabian inscription, badly weathered (I-16).

S-58 264586 E 1769121 N Cairn site spread on ridge about 100m above the wadi floor. Numerous cairns, the largest of which stands about a meter high. Area covered in what looks like very old lithic debitage—but probably isn't because no actual tools or fragments were found. (However, some collections were made as examples.) Two patches cleared of small stones.

S-59 252629 E 1770615 N

Cairn at the given coordinates comprised of large blocks set upright. Southernmost block of the cairn was recently removed and broken up. Also, there are some relatively recent stone-built shelters in the immediate vicinity, clustered around a very tall stone. Numerous cairns (unvisited by us) are also on the slope to the east and southwest.

S-60 252281 E 1776642 N

Small structure (A-24) atop a spur about 45m above the wadi floor. A stone check dam is visible in the wadi to the east. Only 1 sherd collected—and that's from the edge of a field to the west, below the site.

S-61 251738 E 1765577 N

Lookout on a spur overlooking the village of Bher. Appears to be three buildings. About 55m above the wadi floor. Mud brick walls on stone foundations throughout. 5 turrets visible; 1 standing over 6m tall (but badly undercut and in danger of falling soon).

S-62 250297 E 1745444 N Large stone with four pecked South Arabian inscriptions.

- S-63 Qabr al-Nabi Shu'ib—قبر نبي شعيب

250367 E 1745166 N Large grave. Supposedly, this is an old saint's tomb. Appears Islamic, by its form—but appears early, by the condition of its stones (therefore, it's probably early Islamic). About 4.5m long, aligned N–S. Fire pit to the NE of the grave, but its relationship to the grave is uncertain.

S-64 250127 E 1746062 N

Abandoned Islamic village clustered around a large stone, atop of which stands a lookout (A-25). Mud brick on stone foundations throughout. Inscription (I-34) scratched into the stone. About 30 houses, tightly clustered. Town layout and streets evident. Some houses appear to have been abandoned this century, others appear much older. Building foundations form a dyke along the east and northeast side of the town. At the southern edge of the town stands a large building (A-26).

S-65 Wadi Bram 1-۱ وادي برم ۱

245307 E 1741579 N

Over twenty cairns and stone rings on the first ledge (about 35m above the wadi bottom; about 28m above the alluvium). Expansive site, about 400m NW–SW by as much as 300m NW–SE (depending on the slope behind the site). Most visible cairn on the site is enclosed by a square stone structure with traces of mud brick (A-27). One of the stone rings is made with tall upright stones, and may have an adjoining exterior enclosure to its south. One ring stands one meter high and is equipped with an outer ring. The inner ring is quite substantial, having one straight wall. Bones are to be seen

inside the inner ring. The entire site is littered with lithics, including—most significantly—Acheulian hand-axes. 6 hand-axes were collected, but dozens were seen; there are probably over 100 such artifacts on this site, clustered mostly in and around the stone rings. The primary use of this site seems to be Palaeolithic, but it also seems to have had some possible reuse in the Neolithic/Bronze Age and also the construction of the enclosure wall of A-27.

S-66 245963 E 1742421 N

Large stone with pecked designs (probably depictions of ibexes) on its northeast face. One letter Mim, in the South Arabian script is also scratched into the stone, but it appears newer than the figures. Also, there are stone-built shelters around the stone and the other stones in the vicinity.

S-67 246258 E 1742702 N

Cairn site on the first ledge, about 55m above the wadi floor, but also extending a up the slope to the northwest a short distance. The most visible "cairn" is built like a low bench wall, of large upright stones and smaller laid. This cairn (or cluster or cluster of cairns) stretches about 15m along the edge of the cliff. Below the site, some stone rings and alignments are visible on the wadi floor. The alignments all point toward (or away from?) the site—making me think that they're related. A very similar site can be seen on the ledge about 800m to the northeast. It also has alignments on the wadi floor, there is a large stone around which are clustered numerous stone rings. On this stone is a single South Arabian inscription (I-35) and some faintly pecked animal and human figures. On the ledge above this stone is another very similar site, also with a low bench wall type cairn.

S-68 Wadi Bram 2-۲ ودي برم ۲

244661 E 1740994 N

Expansive site on the first ledge similar to, and in plain view of S-65. Numerous cairns and stone circles. Cairns are clustered along the cliff edge, and stone rings (bearing some similarity to those from S-53) are at the base of the slope and extend up it some distance. Stone rings and cairns, in worse condition, are also found on the wadi bed below the site. Choppers and lithic debris that appears very similar to the Acheulian industry discovered at S-65 abounds. However, the only good, definite hand-axe was found on the wadi bed below the site. One broken, but otherwise excellent, Neolithic point was found in one of the stone rings. The largest stone rings (of which there are at least five) appear to be house foundations. Many of these rings have smaller rings attached to their northwest exteriors and/or to their southeast interiors. (My guess is that these are hearths.) One rectangular stone-built structure is also on the site, apparently dating to the same phase as the ring "houses." The largest cairn on the site is surrounded by a ring wall with arms projecting radially inward to the cairn, like the spokes of a wheel.

S-69 250311 E 1746934 N

Stone with many pecked animal figures on its northeast face. Though mostly ibexes, there are also some human figures and some of mounted riders—whose mounts may be camels, but this is uncertain.

S-70 218445 E 1769786 N

Line, built like a low wall, that winds down the slope, over a rock outcrop, and across the wadi floor (for over 150m). Top of line about 90m above wadi floor. Wadi floor has much apparent lithic debitage. Stone ring on the wadi floor about 100m southeast of the rock outcrop. One small cairn, built as a ring of upright stones, and some possible large cairns are at the bottom of the east slope. The southern end of the line is terminated in a stone ring made of very large slabs. The interior of this ring may have been dug out in the recent past by people looking for gold, which is rumored to be hidden here.

S-71 217021 E 1768989 N

Large stone with some pecked figures on its northwest, southwest, and southeast faces. Hands on each of these faces, and stylized ibexes are also on the SW face.

S-72 Qabr al-Nabi Saleh—قبر نبي صالح

214971 E 1770234 N

Long tomb, about 25m N–S, inside of an enclosure. Though the roof of the enclosure has long since collapsed, the site is obviously still used and maintained. The tomb's northern orthostat has a South Arabian inscription (I-36). In the vicinity, there are a number of odd-looking structures that I suspect may be reused Pre-Islamic structures.

S-73 al-Markazat المركزات

222650 E 1771090 N

Cairn site on gravel bed that sits atop the non-anthropogenic alluvium. 3 dolmens made of very large stones; 1 typical stone ring (Ring 1); 1 small diameter stone ring made of very large stones set upright (Ring 2). Many lithics on the gravel bed. Line on the slope about 250m to the north of the dolmens. Fields are encroaching on all sides, and truck paths cut across the site. Southernmost dolmen (Dolmen 1) circular, 6m diameter. Dolmen 2 rectangular, 5m NE–SW by 2m NW–SE. Dolmen 3 possibly square, 2m by 2m. Dolmens 1 and 2 are enclosed within a common rectangular enclosure (9m NW–SE by 7m NE–SW) with a doorway in its southeastern wall. Northwest stone of Dolmen 3 has a carved design on its southwest face. Interior faces of uprights of Dolmen 2 have the same design pecked into their surfaces. A hand is pecked into the northwest face of a large stone at the northeast end of the site. See Van Beek, Cole, and Jamme (1964) for more information about this site.

S-74 214767 E 1777405 N

Large stone at the base of the slope, covered with a palimpsest of South Arabian inscriptions, mostly on its southwest face. Too many inscriptions to untangle and record individually at this point; listed as a group as I-37. Three inscriptions on the eastern face assigned I-38, I-39, and I-40. Low stone wall shoring up the southern side of the stone. Possible cairns across the road about 40m south of the stone. A stone line runs up the slope, starting about 10m northeast of the stone. Also, a stone ring, half washed away, stands on the wadi bottom about 80m east of the stone.

S-75 242286 E 1764299 N

Stone with pecked South Arabian inscriptions and animal and human figures. More heavily inscribed than any other such stone I've seen. Most inscriptions are on its east face, but the north and west faces also have inscriptions. As with site S-74, there are

too many inscriptions here to record each individually (at this point in time). Other large stones in the area also have some inscriptions on them (1 or 2 per stone is typical). We came to this site to investigate a report of this stone's destruction for building materials. Fortunately, this stone is intact—but a short distance to the east, much recent stone cutting has been undertaken since I last visited the area in 1997. Undoubtedly, some inscriptions have been lost and this stone, though untouched, is in some degree of peril.

S-76 242873 E 1762522 N

Castle/fortress at the intersection between the main Wadi Hadramawt trunk road and the side road to Jujah. The location of this site was shot in with the total station in 1994. Between 1995 and 1997 this site was bulldozed; now only a low mound remains.

S-77 242718 E 1764155 N

Large Islamic period house on the wadi bed (A-29). Many other structures are also in the area. Though some foundations are easily visible, some seem to be obscured by modern lime kilns. So while this house is in excellent condition, other possible structures on this site may be in bad shape. Contemporaneity of the various structures was not established.

أم العرض—S-78 Umm al-'Ardh

240744 E 1759808 N

Pre-Islamic settlement with possible earlier and later elements. Site is southeast of the mouth of Wadi Sarr, with a view directly into it. Most obvious feature of the site is a very large stone, precariously perched. Underside of the stone is covered in redpainted designs and figures. Around the base of the stone, a substantial shelter is built of piled stones. The shelter partially obscures the paintings, and is, therefore, later than them. The remains of a structure, now inaccessible, are visible atop the stone. To the west of the stone, on the scree, is the stone foundation of a Pre-Islamic house (A-30). Many ceramics were found in A-30, including an inscribed sherd from a lug-rimmed stoneware bowl (C-3). Two caves are visible in the slope to the east. The larger cave is about 6m in diameter, over 3m high at its interior peak, and with a ledge about 1.5m above the current floor running across its back walls. This cave is almost certainly a Pre-Islamic tomb. Bits of walls are visible in the slope behind A-30. Some encroachment upon the site by fields and modern houses—perhaps the site was larger in the past, but mostly removed for later fields. (However, this is only speculation.) Part of a stone censer (O-24) was found on the slope to the east of the site while I explored the slope in hopes of finding a temple.

S-79 230497 E 1751623 N

Cairn site on a level spot in the scree slope, about 30m above the wadi floor. One cairn and one small square built of stones set upright. S-80, another cairn site, is visible about 150m to the southwest.

S-80 230442 E 1751516 N

Cairn site on the scree about 50m above the wadi floor. One large cairn with some small cairns (<1m diameter) arranged in a line down the slope from the large cairn. Large cairn stands over 1m high, built on a rock outcrop. The capstones of the large cairn have fallen in slightly, but are still in place. Interior of the large cairn is filled

with dirt. (Probably, this would be one of the most rewarding cairns to excavate.)

- S-81 231353 E 1752403 N Large stone with pecked South Arabian inscriptions on its southwest face.
- s-82 'Uqran—عقران

239678 E 1755588 N Large stone with pecked South Arabian inscriptions and pecked animal figures.