The new nation of Eritrea possesses some of Africa’s most remarkable and diverse archaeological resources. Yet, only a few of Eritrea’s archaeological sites have been subject to more than cursory investigation and little collection and analysis of regional settlement site data via systematic archaeological survey projects has occurred to date. The thirty-year Eritrean armed struggle for independence (1961-1991) prevented opportunities for sustained archaeological research during a time when archaeological methods and theory advanced greatly elsewhere in Africa and around the world. In addition, until recently, most of the limited archaeological research in Eritrea focused primarily upon the monumental architecture and elite residence and burial features of presumed ancient urban centers. Non-elite residence and production areas have been ignored, and smaller, less conspicuous sites and hinterland areas of ancient settlement left unexamined. Coupled with the paucity of systematic archaeological research is the current rapid destruction of archaeological sites from development activities in Eritrea. The lack of regional archaeological settlement data and the very real threat of large-scale site destruction underscore the need for systematic archaeological survey projects in Eritrea. It is with this in mind that in July 1997 a joint National Museum of Eritrea and University of Florida team conducted both intensive and reconnaissance archaeological surveys in Eritrea. The site of Qohaito, positioned on top of the Qohaito plateau at an elevation of approximately 2,600 m a.s.l., contains many large mounds, elaborate monumental architecture, cistern-like features, and a large ancient dam and reservoir basin (Anfray 1981; Dainelli and Marinelli 1912; Littmann et al. 1913; Wenig 1997). It has been suggested that Qohaito might be “Koloe” (Bent 1893; Munro-Hay 1991:47), an ancient market city described by the Alexandrian geographer Ptolemy (Stevenson 1932) and mentioned in the first century A.D. merchants’ document The Periplus of the Erythraean Sea (Huntingford 1980; Casson 1989). Research in July 1997 revealed pockets of dense ancient occupation and an intricate pattern of settlement linking Qohaito with its hinterland. Twenty-seven ancient mound sites were documented and mapped on the Adi Qeyeh plateau via systematic transect survey (Figures 2 and 3). The extent and density of ceramic scatters in the transect survey area also were documented. In addition, thirty-five other sites were located on adjacent plateaus, valleys, and canyons kilometers west of the presumed ancient urban center of Qohaito (Figure 1). In the last several years the Adi Qeyeh area has experienced renewed industrial development including extensive rock quarrying operations and building construction activities that severely threaten archaeological sites in the area. Research in July 1997 was carried out in the effort to provide a preliminary inventory of the area’s endangered archaeological resources and contribute toward building a more regionally-focused understanding of ancient settlement in the southern highlands of Eritrea. The joint National Museum of Eritrea and University of Florida project included two components: (1) a systematic archaeological transect survey of approximately 2.5 square kilometres on the northeastern portion of the Adi Qeyeh plateau; and (2) a reconnaissance survey of archaeological resources within an approximate five kilometre radius of the transect survey area. The systematic transect survey revealed a dense concentration of ancient mound sites in the survey area. Although most effort was focused on the transect survey, reconnaissance survey in areas of varying physiography surrounding the Adi Qeyeh plateau served to supplement the transect survey data with important preliminary information on ancient settlement distribution around the ancient site of Qohaito.
via reconnaissance survey. Similarities in mound composition, architectural elements, and ceramic traditions among these hinterland sites and the larger site of Qohaito tentatively suggest the integration of these sites into a common cultural system. Diversity in mound site size and placement on the landscape also is apparent and may be indicative of specialization and interdependence among hinterland communities. Like mound sites, rockshelter sites containing pictographs are abundant in the immediate Qohaito hinterland (Graziosi 1964b). During reconnaissance survey in July 1997, the rockshelter site of Awalu Ghalba was documented and is presented briefly following the reporting of mound site survey data below.

**Survey Data**

Eight transect lines running south to north were spaced 200 m apart along a baseline established from a fixed reference point on the Adi Qeyeh plateau. All surface area in each transect was investigated intensively in successive 100 m² units on both the east and west sides of each of the south to north-running transect lines. Thus, each unit investigated contained 10,000 m² of surface area. A total of 230 of these units were investigated. Calculation of the area of mound sites documented in the Adi Qeyeh plateau systematic transect survey area reveals that the twenty-seven documented and mapped mound sites occupy a total of 62,430 m² of the survey area (Table 1). Of these 62,430 m², the three largest mound sites (mound sites #05, #15, and #25) account for 52,639 m², or 84.3% of total mound site area. When the largest three sites are excluded, the average area of mound sites in the survey area is 408 m². Calculation of distance between mound sites reveals that the average distance to the nearest neighbor mound is 237 m. The three largest mound sites (mound sites #05, #15, and #25) are positioned in locations near the plateau edge overlooking canyon and/or sloping valley areas, and are separated from one another by an average distance of approximately 1.2 km.
Figure 2. Mound site #05 on Adi Qeyeh plateau.

Figure 3. Mound site #03 on Adi Qeyeh plateau. Notice the mound site's exposed ancient architectural wall feature in the foreground. The Qohaito plateau is visible in the background.
Table 1.

<table>
<thead>
<tr>
<th>Mound site</th>
<th>Area of mound site in m²</th>
<th>Percentage of total mound site area</th>
<th>Mound site ceramic sherd density classification</th>
</tr>
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<tbody>
<tr>
<td>#01</td>
<td>41 m²</td>
<td>0.1</td>
<td>Light</td>
</tr>
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<td>#02</td>
<td>436 m²</td>
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</tr>
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<td>66 m²</td>
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</tr>
<tr>
<td>#04</td>
<td>288 m²</td>
<td>0.5</td>
<td>Very Light</td>
</tr>
<tr>
<td>#05</td>
<td>22,568 m²</td>
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</tr>
<tr>
<td>#06</td>
<td>234 m²</td>
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<td>Light</td>
</tr>
<tr>
<td>#07</td>
<td>158 m²</td>
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<td>556 m²</td>
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</tr>
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<td>Light</td>
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<td>190 m²</td>
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<td>#15</td>
<td>5086 m²</td>
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<tr>
<td>#16</td>
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<td>#19</td>
<td>125 m²</td>
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<td>314 m²</td>
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<td>#24</td>
<td>1742 m²</td>
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<tr>
<td>#27</td>
<td>152 m²</td>
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<td>Moderate</td>
</tr>
<tr>
<td>Total Area</td>
<td>62,430 m²</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Seven of the mound sites (including the three largest mound sites) documented during systematic survey on the Adi Qeyeh plateau contain ancient stone masonry wall features similar in design and structure to those found at Qohaito (Dainelli and Marinelli 1912; Littmann et al. 1913) and Matara (Anfray 1974; Anfray and Annequin 1965). Three documented mound sites have oval cistern-like features similar to those present at Qohaito. Although surface collection of artifacts from the survey area was not a goal of the project, artifacts were documented when encountered during survey. A total of 12 possible obsidian endscrapers and 2 chalcedony endscrapers were documented in the survey area. The endscrapers range from 1.5 to 5.0 cm in diameter. Twenty-one flat, roughly circular-shaped stone beads and 1 finely polished barrel-shaped stone bead were documented during survey. The flat, roughly circular-shaped stone beads resemble beads collected in the past at Tekondo and Matara (Dainelli and Marinelli 1912: 539, Figure e; Anfray and Annequin 1965: plate LXX, Figure 4) and those beads observable today on the surface of ancient mound areas at Qohaito. In addition, 1 piece of possible worked ivory (4 cm in length and 1 cm in width), a metallic hook, 4 finely constructed unidentified cylindrical metal objects, 1 possible Aksumite-era coin, and 2 sherds of cream-colored ribbed amphorae were documented on Adi Qeyeh mound site surfaces.

Survey revealed that 4 generalized Aksumite-era ceramic types are apparent on the Adi Qeyeh plateau: Red Aksumite ware, Brown Aksumite ware, and Grey/Black Aksumite wares. These generalized ceramic types are believed to have been produced locally in Aksumite settlements throughout the Aksumite culture area and are present on the adjacent Qohaito plateau. Aksumite-era ceramic sherds were documented both on mound sites and in non-mound site areas throughout the survey area. Ceramic sherd scatter densities within each 10,000 m² unit and on each mound site were recorded by documenting the approximate number of sherds observed. It is recognized that such an attempt to document sherd density is, at best, a rough approximation. Thus, the estimated density classification scheme listed below served as a means to generate only a very general classification of each 10,000 m² unit's ceramic sherd density: (A) very light ceramic sherd density = fewer than 20 sherds observed in

Figure 4. Pictographs at Awalu Ghalba rockshelter.
10,000 m² unit or mound site. (B) light ceramic sherd density = between 20 and approximately 100 sherds observed in 10,000 m² unit or mound site. (C) moderate ceramic sherd density = more than 100 sherds observed in 10,000 m² unit or mound site (but fewer than 5 sherds documented per m²); (D) heavy ceramic sherd density = designated in 10,000 m² units or mound sites with at least several areas containing more than 5 sherds per m².

Of the 230 10,000 m² units surveyed, a total of 175 units (76.1%) contained ceramic scatters. Ninety-two of the 230 units were classified as having a "very light" ceramic sherd density (40.0% of total units surveyed). Fifty-six units contained ceramic scatters of "light" density (24.4%). Fifteen units contained "moderate" ceramic sherd density (6.5%). while 12 units were classified as having a "heavy" ceramic sherd density (5.2%). All mound sites contained ceramic scatters. Two mound sites were classified as containing "very light" ceramic sherd densities (7.4% of total mound sites); twelve were classified as "light" (44.4%); eight as "moderate" (29.6%); and five as "heavy" (18.5%). Although the three largest mounds all were classified as having "heavy" ceramic sherd densities, overall, little pattern seems evident between mound size and observed ceramic sherd density (Table 1).

**Discussion of Survey Data**

From the data presented above, the following tentative patterns of ancient settlement on the Adi Qeyeh plateau can be proposed: (1) the existence of human occupation over a large area of the survey area, as evident in the wide-ranging areal extent of ceramic sherd scatter distributions. (2) a relatively dense settlement pattern in the form of ancient mound sites closely spaced throughout much of the survey area; and (3) spatial dominance of three large mound sites seemingly strategically placed on the plateau periphery overlooking adjacent canyons and valley areas.

In addition to the 27 mound sites documented and mapped on the Adi Qeyeh plateau via systematic transect survey, reconnaissance survey data gathered around Adi Qeyeh in July 1997 suggest that at least 35 additional mound sites are located within a 5 km radius of the Qohaito plateau. Based on a non-systematic estimate of mound site size, these 35 sites range from under 500 m² to 4-6 hectares in area.

Such sites await systematic investigation, but when combined with the systematic transect survey mound site data, it is possible tentatively to suggest that the density of ancient settlement in the Qohaito area may be similar to that documented for the area surrounding the ancient urban center of Aksum in Tigray, Ethiopia (Littmann et al. 1913; Michels 1994; Phillipson and Reynolds 1996).

It must be recognized that the 1997 Adi Qeyeh survey project was designed to provide a relatively rapid first attempt to document archaeological resources threatened by rock quarrying and building construction. Lack of time and personnel precluded our ability to investigate mound site function through systematic surface collection or sub-surface sampling, nor did we collect obsidian samples or other materials for chronometric dating. Thus, although evidence of Aksumite-era architecture and cultural material is abundant on the mound sites of the Adi Qeyeh plateau and surrounding areas, we do not attempt here to detail possible mound site functions, nor assign the documented mound sites to specific temporal periods. Nevertheless, research in the Adi Qeyeh area demonstrates that there exists a recognizable areal distribution of related ancient sites in the region surrounding the presumed urban settlement of Qohaito. Assuming that the integration of a presumed urban center with its surrounding hinterland is essential to understanding ancient complex society, investigating the ways in which mound sites in this region may be related should provide substantial insight into the origins of urbanism and sociopolitical complexity in ancient Eritrea.

**Awalu Ghalba Rockshelter**

On July 2, 1997, members of the National Museum of Eritrea and University of Florida team investigated the Awalu Ghalba rockshelter on the Awalu Guda plateau. The Awalu Guda plateau is located approximately 2 km north of the town of Adi Qeyeh, approximately 1 km north of the rock painting sites documented by Paolo Graziosi at Hischmele (Graziosi 1964b), and approximately 3.5 km west of the Qohaito plateau. The Awalu Guda plateau is located at the point where the Hischmele valley area and Himbrten canyon area meet. Situated at the base of the Awalu Guda plateau is the Saho community of Hayneba.
The Awalu Ghalba rockshelter is located approximately 50m down the northwestern cliff face of the Awalu Guda plateau. Saho people from the community of Hayneba use the place names “Awalu Guda” and “Awalu Ghalba,” referring to the plateau and rockshelter respectively. The rockshelter measures approximately three meters in depth from the deepest point at the base of the interior wall to the shelter’s drip line. The length of the rockshelter is approximately 12 m. The floor of the rockshelter was observed to contain a dense concentration of ceramic sherds, many of which resemble Grey/Black Aksumite wares (as described by Wilding 1989). Similar ceramic sherds were documented in great density on the top of the Awalu Guda plateau and on the Adi Qeyeh plateau.

The Awalu Ghalba rockshelter was observed to contain elaborate pictographs in red, white, and black pigments (Figures 4 and 5). A number of pictographs have been destroyed by natural exfoliation, and by the chipping of images from the wall by people. Humpless longhorn cattle and possible human-like figures are depicted on the rockshelter’s walls. While one cattle figure is depicted in a highly schematic form, the majority of cattle figures are depicted in a largely naturalistic fashion reminiscent of the Sorre-Hamaklya style of pastoral rock art (Cerviček 1979). Several of the cattle figures at Awalu Ghalba resemble those documented by Paolo Graziosi at the Ba’atti Sollum rockshelter near Ghenzabo, Eritrea (Graziosi 1964a). The human-like figures are so faintly depicted and damaged due to exfoliation and chipping that interpretation was not possible. In addition to the pictographs, a petroglyph inscription of probable South Arabian script is visible on the northern side of the rockshelter wall (Figure 6). Rough sketches of the pictographs and inscription were made and slide photographs taken. The sketches and copies of the slide photographs were deposited in the National Museum of Eritrea for reference.

The presence of ancient pastoral rock art, a probable pre-Aksumite inscription, dense concentrations of Aksumite-era ceramic material, and cur-
rent use of the rockshelter by local Saho herders to shelter livestock suggest a long and, perhaps, varied sequence of human occupation at the Awalu Ghalba rockshelter. Like the more than thirty other rockshelter sites with pastoral rock art documented in the Akkele Guzay region of southern Eritrea and northern Tigray, Ethiopia (Dainelli and Marinelli 1912; Franchini 1951, 1952; Graziosi 1964a, 1964b; Mordini 1941), the Awalu Ghalba rockshelter may be associated with early pastoralist populations.

A relatively large earthen floor and seemingly favorable preservation conditions at the Awalu Ghalba rockshelter suggest that the site may contain recoverable deposits of organic remains. Such data, if present, might prove important in the attempt to understand the development of food production in the northern Horn of Africa. Furthermore, the site's Aksumite-era ceramic content and proximity to large ancient mound sites on the Awalu Guda plateau and adjacent Adi Qeyeh and Qohaito plateaus makes the site a potentially important resource for examining diachronic aspects of sociopolitical and economic change in the Adi Qeyeh/Qohaito area. Unfortunately, the investigation on July 2, 1997, of the rockshelter and other features of the Awalu Guda plateau area was cut short by a severe hailstorm. The research team was unable to return to the site for more systematic investigation.

**Conclusion**

Given the density and diversity of archaeological resources and the very real threat posed by expanding rock quarrying and building construction, the Adi Qeyeh/Qohaito area needs to be the focus of multi-year regional archaeological investigation. Future research in the Adi Qeyeh/Qohaito area must combine systematic regional archaeological survey and detailed site excavations to ensure that attention is paid to both inter- and intra-site variation in ancient settlement. Central to such

**Figure 6.** Petroglyph of probably South Arabian script at Awalu Ghalba rockshelter (15 cm. ruler shown for scale). Writing at top of photograph is modern graffiti.
investigation should be an effort to examine processes of urban/hinterland interaction and their relation to the development of complex society in the southern highlands of Eritrea. The archaeological survey project reported above should be viewed as a preliminary, exploratory step toward such an endeavor.

Footnotes

1. The Adi Qeyeh plateau is situated between 14°50' and 14°51'N, and 39°21' and 39°23'E. The modern town of Adi Qeyeh is located on the Adi Qeyeh plateau and situated adjacent to the transect survey area reported in this paper.

2. Yoseph Libsekal, Director of the National Museum of Eritrea, documented the presence of extensive mound sites on the Adi Qeyeh plateau during initial archaeological reconnaissance survey in the area in 1995. The 1997 systematic transect survey project sought to follow-up on the initial research of 1995.

3. For some discussion concerning Aksumite architecture, see Buxton and Matthews 1974; Munro-Hay 1989; Plant 1978.

4. Francis Anfray uncovered a similar metallic hook during excavations at Matara (Anfray and Annequin 1965: plate LXVIII, figure 1). Sherds of ribbed amphorae have been reported from various sites in the Aksumite culture area, including Adulis (Paribeni 1907:454), Aksum (Wilding 1989:314; Phillipson and Reynolds 1996:135), Bieta Giyorgis (Bard et al. 1997:398), Tekendo (Dainelli and Marinelli 1912:540), and Matara (Anfray and Annequin 1965:67-68).

5. General ceramic types were identified following the typology devised by Richard Wilding (1989) in his analyses of ceramic materials from the British Institute in Eastern Africa's 1972-1974 excavations at Aksum. For some discussion on Aksumite ceramics, see Anfray 1966; Bard et. al. 1997; Phillipson and Reynolds 1996; Wilding 1989.

6. It is recognized that deflation of mound sites may account for some of the wide spacing of ceramic sherd scatters.

7. Three particularly noteworthy examples of large mound sites documented during archaeological reconnaissance survey in July 1997 have the following place names: Awalu Guda, Hitseyto, and Kinto. The Awalu Guda site (approximately 1-2 hectares in area) is located on top of the Awalu Guda plateau about 2.0 kilometers north of the Adi Qeyeh plateau and 3.5 kilometers west of the Qohaito plateau. The site at Hitseyto (approximately 2-3 hectares in area) is located adjacent to the Saho community of Hitseyto overlooking the Ruba Himbrten stream canyon between the Adi Qeyeh plateau and the Qohaito plateau. The Kinto site (approximately 4-6 hectares in area) is located adjacent to the southeastern portion of the Adi Qeyeh plateau in the Kinto valley area.


Acknowledgments

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