ARCHEOLOGICAL STUDIES IN THE SEISTAN BASIN OF SOUTH-WESTERN AFGHANISTAN AND EASTERN IRAN

WALTER A. FAIRSERVIS, JR.

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INTRODUCTION

THE PRESENT REPORT on archeological fieldwork in the Seistan area is based primarily on two trips made by the author to that area as a member of the First (1949) and Second (1950–1951) Afghan Expeditions, both sponsored by the Department of Anthropology of the American Museum of Natural History. It is the fourth in a series of monographs on the archeology of several key areas in the Indo-Iranian borderland region. The first field trip, made in company with Henry W. Hart (surveyor) and Louis B. Dupree (archeologist), was spent on a survey of sites along the main road from Farah to approximately 12 miles northwest of Chakansur. The summer heat and wind, combined with the state of our motor equipment, curtailed a more ambitious program to a week's operation (September 3–8, 1950). Nevertheless, we were able to collect material from seven sites along the route and also to gain some idea of the environment of the northern reaches of Seistan.

The Second Afghan Expedition was in Seistan from early January to after the middle of February in 1951. January is the ideal month to be in Seistan; the weather is moderate, and the river and canal waters are low. We succeeded in attaining a good percentage of our objectives. We reached the site of Kala-i-Amir (Fig. 1), some 5 miles west of Chahar Burjak on the northern banks of the lower Helmand River. This site served as a base camp for our archeological reconnaissance for over a month. The right bank of the Helmand River, from the vicinity of Chahar Burjak to Kala-i-Fath, was surveyed in general, but the main concentration was across the Helmand River along the dried bed of the Rud-i-Biyaban to the Iranian frontier. As our principal goal was to discover prehistoric sites, we were led to the possibilities of the Rud-i-Biyaban by Sir Aurel Stein's survey of the Iranian side where he located a profusion of prehistoric sites.[1] It was disappointing to find no such sites on the Afghan side of the Rud-i-Biyaban channel. Many sites of a later period were, however, studied. After an unsuccessful reconnaissance north of the Rud-i-Biyaban (Fig. 23), we crossed the Dasht-i-Zirreh to the south, arriving eventually at the bluffs that mark the eastern and northern margins of the depression of southern Seistan through which flows the Shela Rud outlet of the Hamun-i-Seistan to the north. We found an extensive prehistoric settlement between these bluffs and the sands of the Gardan Reg belt.

Delays in leaving Seistan provided an opportunity to collect at several sites. The most important of these were the mounds of Nad-i-Ali. Fifty-five sites are represented in the collections.

The personnel of the Second Afghan Expedition were the following: Howard Stoudt, Rose Lilien, L. D. Kelsey, George MacLellan, my wife Jan, and myself. Hafizullah Khan, who represented the Afghan Government, was a very valuable member of the group. His understanding of the archeological problems and his efforts to enlist local assistance for our researches were very helpful.

I must pay tribute in this report to all the participants in both expeditions. Seistan in summer is an incredible place of intense heat and continuous wind. Temperatures rise above 115° F. by day and fall only to 85° F. at night. The continuous wind averages 35 to 40 miles per hour, with occasional puffs as high as 60 miles per hour. It is open country, with little place for shelter from sand, dust, and glare. Only the uncomplaining enthusiastic efforts of the group made possible our productive stay in the area.

Some conception of the difficulties encountered on the second trip can be gained by noting that it took only three days to reach our base on the Helmand, but it was 19 days after leaving Kala-i-Amir before we again reached Farah and the road to Kandahar. One of our two Dodge power wagons forded the Helmand at Chahar Burjak, enabling us to cover a great deal of ground on the western side. In the final days of our reconnaissance west of the Helmand, we discovered the prehistoric settlements of the Gardan Reg. At that time Stoudt, Kelsey, Hafizullah, my wife, and I comprised the survey crew. Even though we were short of water (the nearest water was 60 miles away), food, and fuel, it was obvious that it would negate much of our effort to leave when

[1] Stein, 1928, Vol. 2, 896–979.

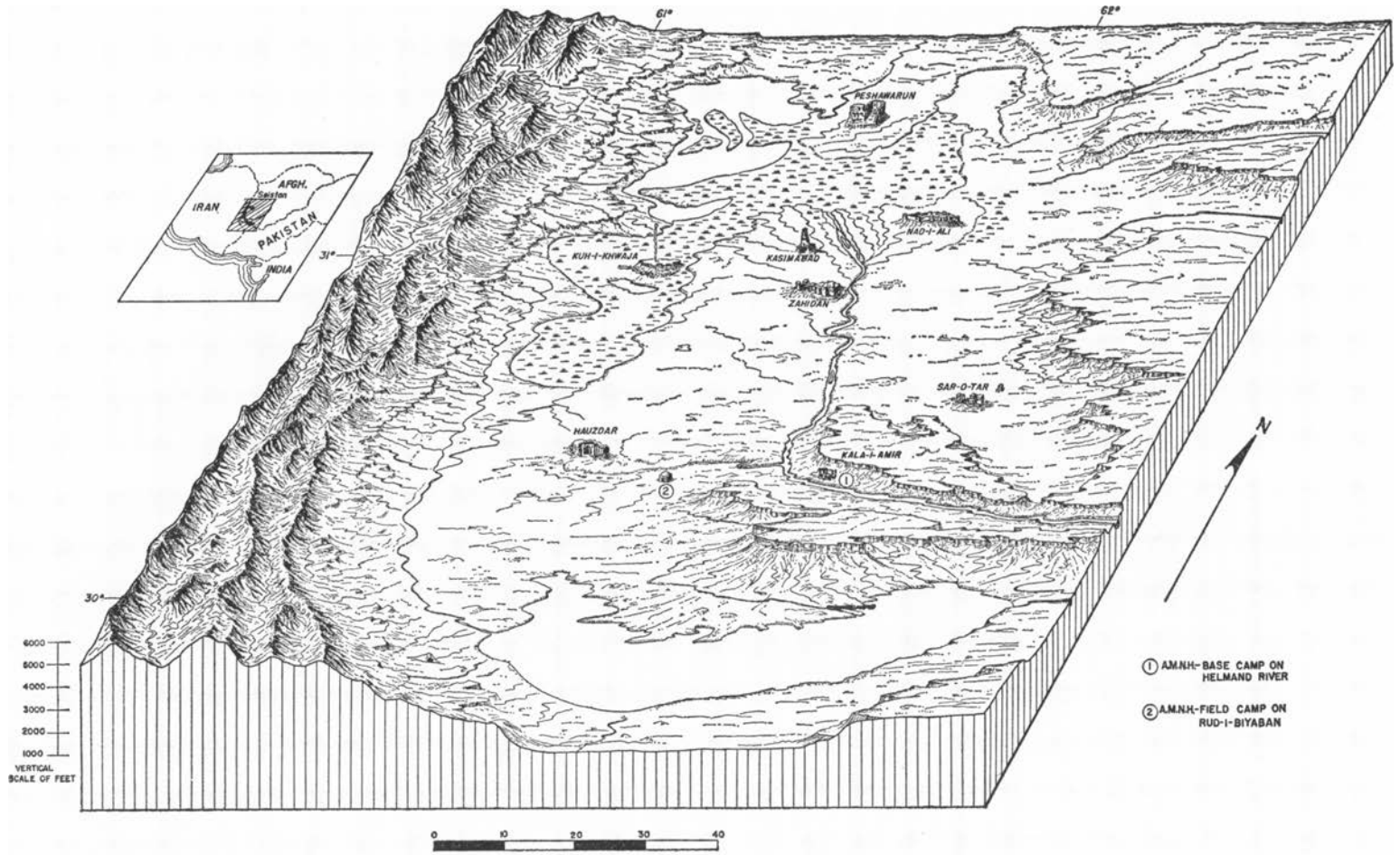

FIG. 1. Topographic map of Seistan proper.

we had finally found our principal objective. The group willingly went on half rations, virtually lived off a colloidal solution of mud, and completed three additional days of field-work. The result was the evidence produced by our strata cuts, the discovery of the prehistoric cemeteries, and the mapping of additional sites in the area. On the return to the river our fuel ran out, and we had to walk exhausting miles over the desert and hills to the village of the Baluch chief, Mohammad Omar, whose hospitality had made much of our success possible.

The return north was impeded by rainstorms which dominated the weather that winter. Flooded irrigation ditches wrecked the bridges, and we waged continuous battle as the trucks bogged down in mud or the engines became clogged with sand. In spite of local help and the full efforts of everyone in the group, our movements were painfully slow. During this difficult period George MacLellan, who was in charge of our equipment, worked the hardest. My fondest memory of him is of his hauling a storage battery from one hopelessly mired truck to the dead engine of the other on a night when the thermometer had dropped below freezing and the wind was blowing a gale. Only those who knew about his torn and frozen hands could conceive of the effort involved.

This report, then, is built of broken springs, leaky fuel pumps, cracked radiators, and a wonderful group of individuals whose sense of humor was unfailing. Two entries from my wife's diary are worth noting:

> January 29, 1951. Beside the road 25 miles from Kala-i-Emir. Today's mileage, *55 feet* . . . George found a can of tobacco and we made cigarettes with toilet paper—they were huge.
>
> January 30, 1951. We have made 25 miles! And that's a heck of a lot faster than a normal camel!

The earliest western accounts of Seistan were based on nineteenth century British exploration which was largely confined to visits to ascertain the nature of the country and the status of the local political situation. The ruins observed were usually mentioned. Among the most important of these explorations were those of Christie in 1810, MacGregor and Lockwood in 1880, and Conolly and Cameron in 1839.[1] The last-named provided a map of the area. The Frenchman, Ferrier, should also be mentioned as an important visitor during this period.[2]

The British arbitration mission of 1870–1872 that considered the Seistan boundary dispute initiated the most extensive nineteenth century exploration of Seistan. It was directed by Sir Frederic Goldsmid, who, with his associates, gathered much valuable information.[3] As a result of the interest aroused by the Goldsmid mission, publications on the historical position of Seistan appeared. The most important of these, by Sir Henry Rawlinson, tapped both the classical and Islamic records for information on the ancient landmarks, settlements, routes, and other features.[4]

Another important journey was made between 1897 and 1901 by Major P. Sykes who later gained considerable acclaim for his studies of the geography and history of Persia and Afghanistan.[5] During this period, Sykes set up the British Consulate in Nasratabad. One of his companions, the survey officer, G. P. Tate, was later an important member of the Seistan Arbitration Commission which established the present boundaries of Iran and Afghanistan in Seistan in 1903–1905. The Seistan Arbitration Commission functioned under the leadership of Sir Henry McMahon. The size of the commission, its stay of over two years, and the broad interests of its personnel provided a wealth of important detail about Seistan in many fields of science.[6]

Since the McMahon survey there have been several other journeys to Seistan, important not only for the archeological data derived, but for geographical and other evidence which provides a clearer picture of the area. Among these are Sir Aurel Stein's survey of 1916 which produced much archeological information (see pp. 37–59) and Annandale and Kemp's expedition to study the fauna and flora in 1918–1919.[7]

The keen observations on the geography made by Sven Hedin in 1906 are worthy of

[1] Pottinger and Christie, 1824, 154–166; MacGregor, 1882; Conolly, 1840, 710–726.

[2] Ferrier, 1857.

[3] Goldsmid, 1876.

[4] Rawlinson, 1873, 272–294.

[5] Sykes, 1902a, 121–173; 1902b, esp. 361 ff.

[6] Most important of the reports of this commission are the following: McMahon, 1906, 209–228, 333–352; Tate, 1909, 1910–1912.

[7] Stein, 1928, esp. Vol. 2, 906–979; Annandale and Carter, 1920, 267–297; Annandale and others, 1921.

note.[1] A. H. Savage-Landor, who was a visitor to Seistan in 1902, should also be mentioned.[2] In addition to that of Tate, the most important geographical study was carried out by Ellsworth Huntington as a member of the Pumpelly expeditions of the Carnegie Institute of Washington in 1903 and 1904. Huntington was, in fact, a guest of the Seistan Arbitration Commission in Seistan.[3]

In recent years the Helmand Valley has been explored, and both the Arghandab and Helmand rivers have been dammed while still in the mountains. This damming and its effect on Seistan are of vital interest to the inhabitants, especially on the Iranian side. Hydrographic experts from the Morrison-Knudsen Afghanistan Company have paid frequent visits to Seistan to study the water situation. I have had access to some of their reports, and I must acknowledge a debt for much information on road, food, and other conditions in Seistan.

I repeat here my grateful thanks for the support of the many contributors to both field expeditions listed in the report on the archaeology of the Quetta Valley.[4]

The Government of Afghanistan was very cooperative, giving us permission to work in Afghan Seistan and granting us the larger share of the collections for this research. In particular, Mr. Ahmad Ali Kohzad, Director of the Kabul Museum, went out of his way to make our field-work possible.

The head of the French Archaeological Mission to Afghanistan, Dr. Daniel Schlumberger, and his colleague, Dr. J. M. Casal, furnished us with the facilities of their fine library in Kabul, the hospitality of their homes, and acted for us when we were absent from Kabul.

Dr. Harry L. Shapiro, Chairman of the Department of Anthropology of the American Museum of Natural History, is ultimately the one who by his encouragement and material support made this research possible. Miss Bella Weitzner labored over my drafts until the present manuscript was forthcoming. Mr. Nicholas Amorosi is responsible for all the drawings and maps. Miss Judith Treistman, a graduate student in archeology at Columbia University, made the initial classification of the pottery.

I am very grateful to my wife, Jan, both for her accurate field drawings and for her optimistic spirit which so much helped in overcoming difficulties both during and after the 1950–1951 expedition.

To my mother must always belong the final and most heartfelt word of thanks for making so much possible then, now, and always.

GEOGRAPHIC SETTING

Seistan is located approximately between latitude 30° and latitude 32° N. and longitude 60° and longitude 63° E. Two-thirds of the area is within the Afghan border; the remaining third is under the dominion of Iran (Seistan, 7006 square miles: Iran, 2847 square miles; Afghanistan, 4159 square miles). The Seistan area is geologically the deepest section of the so-called Seistan Basin which consists of the Dasht-i-Margo and Registan deserts, including the Helmand drainages. Huntington[5] has defined the over-all Iranian plateau as a double basin (Tertiary series), that is, the Persian and the Seistan. Basins like these are characteristic of Central Asia in which large areas cut off from oceanic influences by mountain ranges have interior drainage. This geographical situation results in the formation of a string of interior deserts of high aridity. The Dasht-i-Lut, Dasht-i-Kavir, the Dasht-i-Margo, and Registan are excellent examples of this type of desert. The Helmand River which drains from the Koh-i-Baba in the vicinity of Girishk divides the Seistan Basin into two sections. At Kala Bist, about 50 miles to the south, the Arghandab River, which receives the flood of the numerous streams of southeastern Afghanistan, joins the Helmand. The enlarged river flows down a valley 4 to 7 miles wide in a channel that varies seasonally from widths of $\frac{1}{2}$ to 1 mile (Pl. 1a). At first it flows almost due south, then gradually west (at Khwaja Sultan), then (after

[1] Hedin, 1910, esp. 257–320.
[2] Savage-Landor, 1903, esp. 151 ff.
[3] Huntington, 1905, 219–317.
[4] Fairservis, 1956a.
[5] Huntington, 1905.

Rudbar) north, until at the mouth of the Old Rud-i-Biyaban channel due north, it empties into a low basin in which a *hamun* or lake is formed and surrounded by marshlands. This low basin, more properly the Seistan of history, should be differentiated from Huntington's geographical Seistan. The present monograph is concerned with the Seistan of history.[1]

The Seistan area extends some 70 miles from east to west and about 100 miles from north to south, covering approximately 7000 square miles. The over-all elevation of the basin is between 1400 and 1600 feet above sea level. It is described by one author as follows:

> . . . It is an undulating plain (or rather low plateau, less than 2000 feet above sea-level) of stiff grey clay, almost bare to the eye in winter, containing a large lake of almost fresh water and surrounded by black stony desert. It is in fact the inland delta of the Helmand river and the basin into which that river drains. The Helmand has escaped the fate of most bodies of water in Persia—that of desiccation or salinity—by reason of the fact that it runs for the greater part of its course, before debouching on the great desert of Afghanistan, through the mountains, whence it receives many tributaries. Its waters are fresh, but the soil of the basin into which they flow is impregnated with soluble mineral salts. These they naturally dissolve and the solution rises through the soil by capillary action, forming a kind of cement which is very infertile and has to be removed before any kind of agriculture becomes possible.[2]

In addition to the Helmand, the basin is fed by three other major streams, all of which are, however, usually intermittent: the Harut Rud and Farah Rud that flow from the northwest and northeast, respectively, and the Khash Rud that flows from the east-northeast. The Farah Rud, the largest of these intermittent streams, usually has a significant flow from January to June (Pl. 2a). The Harut Rud runs only in early spring, that is, January to April, unless the annual rainfall has been heavy. Until June the Khash Rud has an ample flow, but the long journey through the Dasht-i-Margo drastically reduces the flow into the basin. No statistics are available on the Khash Rud drainage into the basin, but two personal experiences (January and February) with the stream near Chakansur indicate that the flow is negligible, in spite of a heavy flood at Dilaram.

The Helmand River is the "life-line" of the Seistan Basin. The variation in the flood of the Seistan Basin is in direct proportion to the flood of the Helmand. The water concentrates in a lagoon, lake, or *hamun*, sometimes called the Hamun-i-Seistan or Hamun-i-Helmand, of which the northern section is Hamun-i-Sabari. A second lagoon, the so-called Hamun-i-Puzak, is recorded, but its existence as a permanent body of water is very doubtful. However, it is probable that in periods of high water in the Hamun-i-Sabari and in the Farah Rud, the Hamun-i-Puzak receives its water, and, because it is a depression within a larger depression, it can hold water for a long time. Such is not, however, an annual occurrence. On a smaller scale this phenomenon occurs over the whole delta.

Because of the extreme flatness of this basin, the flood waters spread over a wide area, which aids in maintaining a high evaporation ratio. The center of the *hamun* is rarely over 6 to 10 feet deep. Reed swamps (*naizar*) surround the water-filled depressions through which flat-bottomed boats can maneuver. A band of fertile, clayish, sandy silt is used by the modern inhabitants for the cultivation of crops (Pl. 3c).

An arid plain of alluvial gravel fans that derive from an outer ring of mountains surrounds the entire basin. It is the transitional area between the flood depression and the desert (Fig. 2).

The gravel fans are intersected by river channels that extend into the basin. In most cases these rivers lose themselves in the gravels before reaching the flood plain. Three types of sand dunes are found especially in this zone, but these can of course occur in the other zones. Some encroachment on cultivated areas does occur, which the people make some attempt to stop by shoveling and erecting occasional barriers.

It must be kept in mind that these basin divisions are constantly in a state of flux. As the *hamun* expands or shrinks, it affects the surrounding areas, and correspondingly they change in area and productivity. These in turn affect not only the crop growing, but working conditions. Each area can be said to advance or

[1] The Helmand Valley and the *dashts* will be considered in another paper as more properly part of the Kandahar area.

[2] Annandale and Carter, 1920, 268.

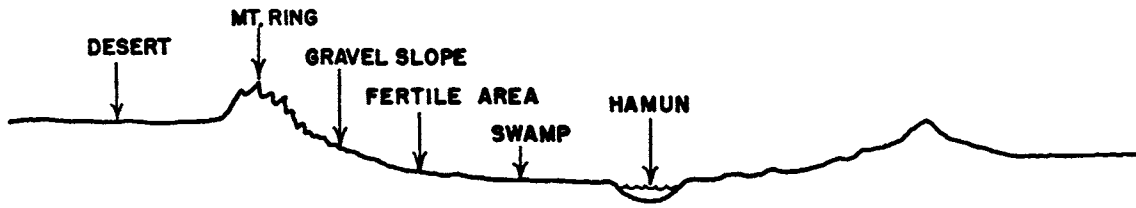

FIG. 2. Idealized cross-section (west-east) of the Seistan basin.

retreat in relation to the other. Thus the soil belt advances or retreats in relation to the reed swamp area. As the basin is not always filled to its maximum, the area between the fertile plain and the gravel fans may be regarded as a separate zone as it undergoes maximum fluctuation. It is very flat, often pierced by floodstream channels and spotted with playas (Pl. 3b). Water is obtained from wells, usually at considerable depth, that is, over 30 feet. There is a high degree of salinity only in the southern outlet.[1]

A narrow channel, the Shela Rud, in the south of the Seistan depression leads into the large saline and clay plain known as the Gaud-i-Zirreh. In exceptional years there is a drain-off from the Seistan *hamun* into the Shela Rud and thus to the Gaud-i-Zirreh. This prevents the northern basin from over-flooding and, in arid conditions, controls excessive salinity. There is some evidence that in earlier times when the Rud-i-Biyaban was filled there was a constant flow of water in the Shela Rud and subsequently into the Gaud-i-Zirreh. In the last 50 years there is only one record of any sizable body of water in the Gaud-i-Zirreh. Occasional pools are said to exist in the Shela Rud over most of the year.[2]

GEOLOGY

The Seistan Basin (Fig. 3) is a typical Asiatic interior basin. The uplifts which began the isolation of the interior of Asia occurred at the close of the Cretaceous. During the Eocene, shallow seas covered the Seistan Basin and the Baluchistan mountain regions. In the earlier periods of the Tertiary, marine deposits were laid down in rather uniform beds. Subaerial deposition occurred in the later Tertiary. A series of volcanic outpourings resulted in the formation of volcanic dikes, such as Kuh-i-Khwaja, and igneous plains like that northeast of Sefidabeh.

During the Quaternary a number of glacial lakes were present. These gradually shrank, changing the depositional processes to a repetition of the later Tertiary, that is, subaerial. The beach lines of some of these lakes, especially on the Iranian side, are observable. Depositional products carried into the basin by the rivers that were eroding the surrounding mountains filled in the old lake beds. The modern fluvial deposition is therefore a continuation on a much smaller scale of these earlier basin-filling depositions. The increase in aridity, a feature of post-glacial time, reduced the rate of fluvial erosion. The modern erosional features are thus largely a part of the desert geomorphic cycle, with the interior portion of the basin subjected to fluvial deposition.[3]

CLIMATE

The climate of Seistan is perhaps the most extreme of the Iranian plateau. There are generally only two seasons, winter and summer. The milder winter period has the greatest rainfall (January especially). Snow is rare; temperatures frequently fall below freezing during the night. The smaller irrigation channels and rain pools freeze very frequently. Annual precipitation is rarely over 2½ inches; the wettest months are January to April.

Summer, from May to October, is extremely arid. Generally, not a drop of rain falls from June to October. Temperatures may rise above 115° F. in the shade. The extreme heat bakes the clay soil to great hardness which is broken only by erratic networks of cracks. In the face of this excessive aridity, irrigation must be maintained. Fortunately, the high floods of the

[1] Note description of mineral content of Seistan water in Annandale and others, 1921, 4–5, 15–16.

[2] Tate, 1909, 1910–1912; Hedin, 1910, Vol. 2, 318.

[3] Based on Huntington, 1905. In Clapp, 1940, a good geological chart is included.

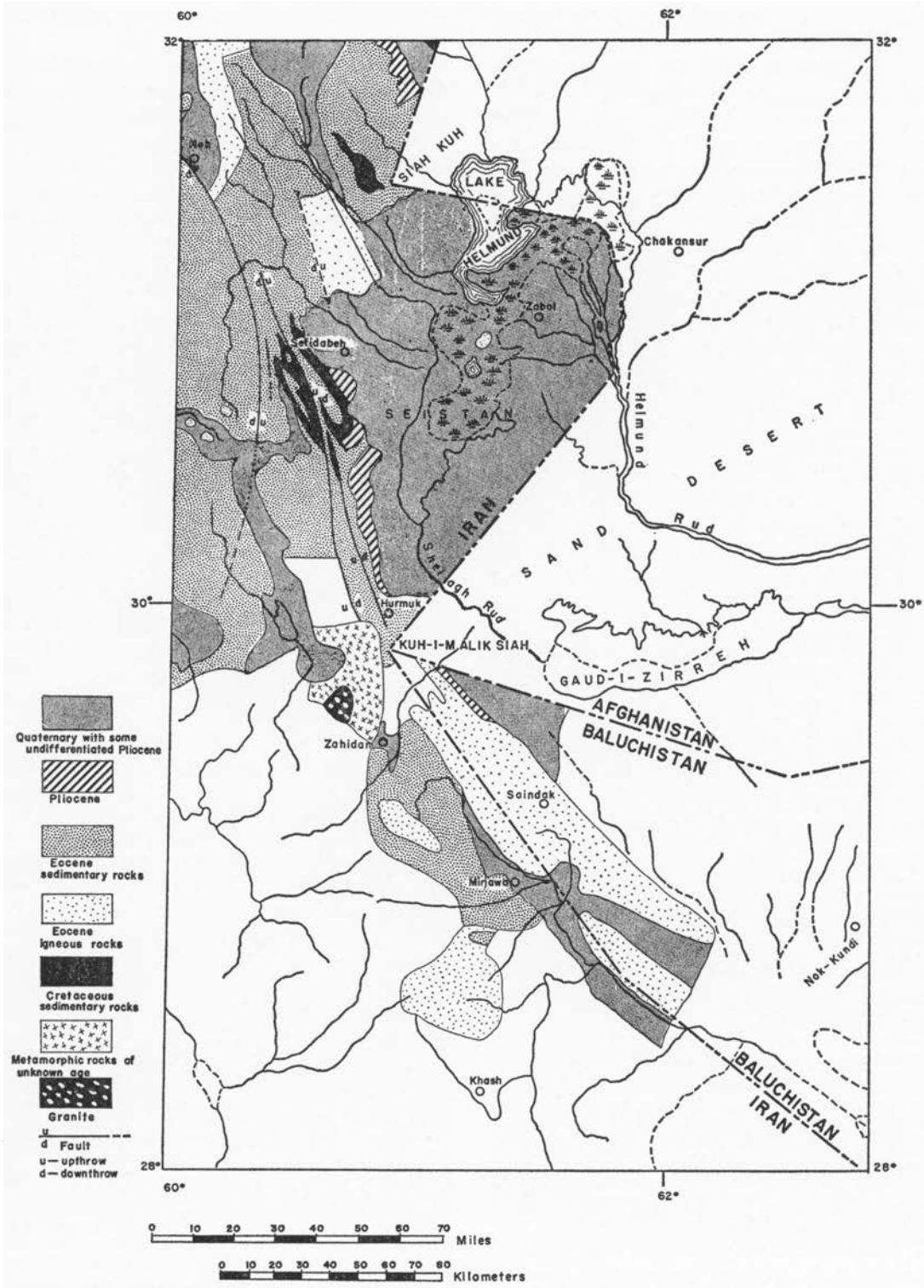

FIG. 3. Map of the geology of western Seistan (after Clapp, 1940).

Helmand River occur during the early part of the summer season.

The northwest wind is the most formidable and striking feature of the climate of Seistan. In winter, windy and calm days alternate, but, beginning in May and ending in September, the so-called *bad-i-sad-o-bist ruz*, or 120-days wind, blows virtually without cessation. The wind is very violent, averaging perhaps 20 to 30 miles per hour, and reaches velocities as high as 70 miles per hour. During the winter of 1905, members of the Seistan Arbitration Commission experienced a violent blizzard. Over a 16-hour period, the anemometers recorded an average hourly wind velocity of 88 miles; at one point the velocity reached 120 miles per hour.[1] Needless to say, this strong prevailing wind has a marked effect upon the topography. Dunes, for example, build up with remarkable speed, especially during the early summer when winter-loosened dust and sand are picked up by the wind. Rock and soil formations are frequently contorted into wind-carved shapes (Pl. 3a). Tall trees are non-existent.

The effect of the wind on ruins is very striking, as walls with a thin northwest-southeast axis are far less eroded than those with the long axis across the wind path (Pls. 6a, 8a). The wind tends to carry particles of soil away from around heavy, resistant objects such as potsherds, so that eventually only the objects are left on the virgin soil (p. 58).

The natives of the area use the wind to turn their windmills and grind corn. Properly used the wind also ventilates the houses. Grated windows, roof ventilators, and the like are utilized to cool the air in the interiors of a house. There are advantages gained in that the wind also blows away the swarms of flies that tend to breed in the waters of the marshes and which make life intolerable.

Summary of General Physical Characteristics

In summary the Seistan Basin can be characterized by the following:

1. High escarpment walls running north to south; higher on the Iranian (*ca.* 6000 feet) than on the Afghan side (*ca.* 2000 feet).

2. A piedmont plain of heavy erosional gravel fans, intersected by ravines or gullies which were filled only in case of rainfall.

3. A transitional plain of silt and gravel often dune-covered. Playas and salt-encrusted areas are frequently present. Very flat sections of the area are occasionally occupied and cultivated by the use of wells and irrigation canals, the latter dug from the nearest surface sources of water. After rain or in heavy flood season, considerable water may be retained in this zone. A *karez* system occurs rarely.

4. A fertile belt of clayey silt and sand intersected with irrigation systems (Pl. 3c). This zone provides for the maximum cultivation of Seistan. It is the most heavily populated of the zones, possessing all the major villages and cities as well as most of the archeological sites of the *hamun* area.

5. The *naizar*, or reed swamp, is shallow, with a clayey bottom. Subsistence here is based on fishing, bird trapping, and hunting. It is fordable.

6. The *hamun*, or lake area. A shallow lake fed principally by the Helmand River is usually found in the deepest depression in the northern part of the basin, that is, Hamun-i-Sabari. Smaller lakes, or *hamuns*, are formed after heavy floods, especially in the area immediately south of the Hamun-i-Sabari.

7. A drainage system, the Shela Rud and Gaud-i-Zirreh, which provides for the drawing off of excess water and which may permit habitation farther south. This can be an uncertain source of water for desert traveling.

8. Within the basin, the evaporation potential is high because of the arid climate. This high aridity causes a significant fluctuation in the quantity of water flowing into the basin, so that the zones described above can decrease or increase in size depending on the degree of fluctuation. Therefore the extent of each area can vary within a few weeks. The piedmont zone is, however, the most stable and of the widest extent. It varies in width from about 20 miles to as much as 50 miles.

Water can be easily found in the *hamun*, *naizar*, and the cultivated belt. Wells or rain puddles supply the transitional area. The piedmont plain retains some rain puddles, especially in the bottoms of ravines. Deep wells and *karezes* can reach the sources of water inside the fans, but these devices are infrequent in Seistan.

[1] Tate, 1909, 195–197, contains excellent descriptions of the Seistan climate.

HYDROGRAPHIC SYSTEM

In the midst of the generally arid basins that characterize so much of the Iranian plateau, the basin of Seistan (Fig. 1) with its perennial supply of water is unusual. The Helmand River provides the greatest percentage of moisture in Seistan, though both the Farah and Khash *ruds* contribute in good seasons, especially the former. The Helmand drains a wide area of the Kuh-i-Baba ranges, reaching eastward to the Kabul River and Indus watershed near Kabul. Descending rapidly through rather spectacular gorges and frequently through fertile upland valleys, it eventually debouches into the great basin of southern Afghanistan near Girishk. Its course thenceforward becomes somewhat meandering as the rate of flow gradually decreases. South of Girishk the Helmand Valley is rather broad (5 to 8 miles); the river meanders between the abrupt walls of the deserts—Dasht-i-Margo on the west, and Registan on the east (Pl. 1a).

At Kala Bist the Arghandab River, which has received the floods from streams east of Kandahar, joins the main stream of the Helmand. Near the foot of the high point of the Kuh-i-Khan Nashin (4497 feet) the river turns more abruptly from its southern direction to a course almost due west. At the village of Lower Kwaja Ali it is at an elevation of 1920 feet.[1] At Bandar-i-Kamal Khan, some 70 miles farther west, it is at an elevation of 1733 feet and flowing at a rate of about 4 miles per hour (Fig. 4).

The southern bluffs which are about 2000 feet high at Bandar-i-Kamal Khan suddenly drop off into a low, flat plain lying almost at the level of the river which here turns abruptly north. There is a channel, however, that continues due west between a gravel desert, the Dasht-i-Zirreh, and a 50-foot high desert plateau on the north, which, for want of a name, I call the Trakun Hills. This channel is now dry and is called the "waterless river," or Rud-i-Biyaban.

The Rud-i-Biyaban runs due west on an almost straight line, its southern bank broken by the ancient channels of what may have been spill-water streams. Two of these may have been of some importance (example, Rud-i-Kushk). About 90 miles west of Bandar-i-Kamal Khan, the Rud-i-Biyaban fans out into a broad, westward-sloping delta (*ca.* 1580 feet at the Afghanistan border to 1544 feet at Tasuki Wells). There is also an incline to the northwest (Hauzdar, 1537 feet) which in former times probably aided in the formation of a *hamun* in the southern part of the Seistan delta.

North of Bandar-i-Kamal Khan, the Helmand flows between the abrupt walls of the Trakun Hills and the Dasht-i-Meshki. At Dok-i-Dela an ancient channel of the Helmand, the Sena Rud, branches off to the northwest. This channel was apparently abandoned prior to human occupation of the delta.[2] On the east, at Kala-i-Fath, the bluffs of the Dasht-i-Meshki curve away to the east and south, but there is a broken trend line which continues north and eventually curves northeast to end in the vicinity of Ziarat Amiran east of Nad-i-Ali. This trend line and the northern portion of the Trakun Hills confine the main stream of the river until, at a point near the village of Khwabgah and the Band-i-Seistan, the Trakun Hills curve away to the west and south. This is the beginning of the northern and modern delta of the Helmand.

The various streams, both ancient and modern, which mark the oscillations of the Helmand in its northern delta are diagrammed by Tate[3] (Fig. 5). Between the various channels, fingers of accumulated clay alluvium stand out, isolated by the down-cut courses of the river. The ruins of the various capitals of Seistan, as well as the modern villages and towns, are found on these fingers which range from west to east in an almost 140-degree arc. Eventually the waters discharge to a *hamun*, or shallow lake, a good portion of which is reed covered (*naizar*), with shores fluctuating with the seasons.

The Hamun-i-Seistan is a composite of several sub-basins, the most important of which are the Hamun-i-Sabari on the northwest and the Hamun-i-Puzak on the northeast. These sub-basins are created by the ridges formed by the juncture of two deltas. In the case of the Hamun-i-Sabari, the alluvial deposition of the Farah and Harut *ruds* forms a ridge with the northern limit of the Helmand River delta. This

[1] Altitude measurements are based on Survey of India charts, editions of 1940–1941, Afghanistan and Iran; scale, 1 inch to 4 miles.

[2] Tate, 1910–1912, Vol. 1, 133.

[3] Tate, 1910–1912, Vol. 1, plate following 177.

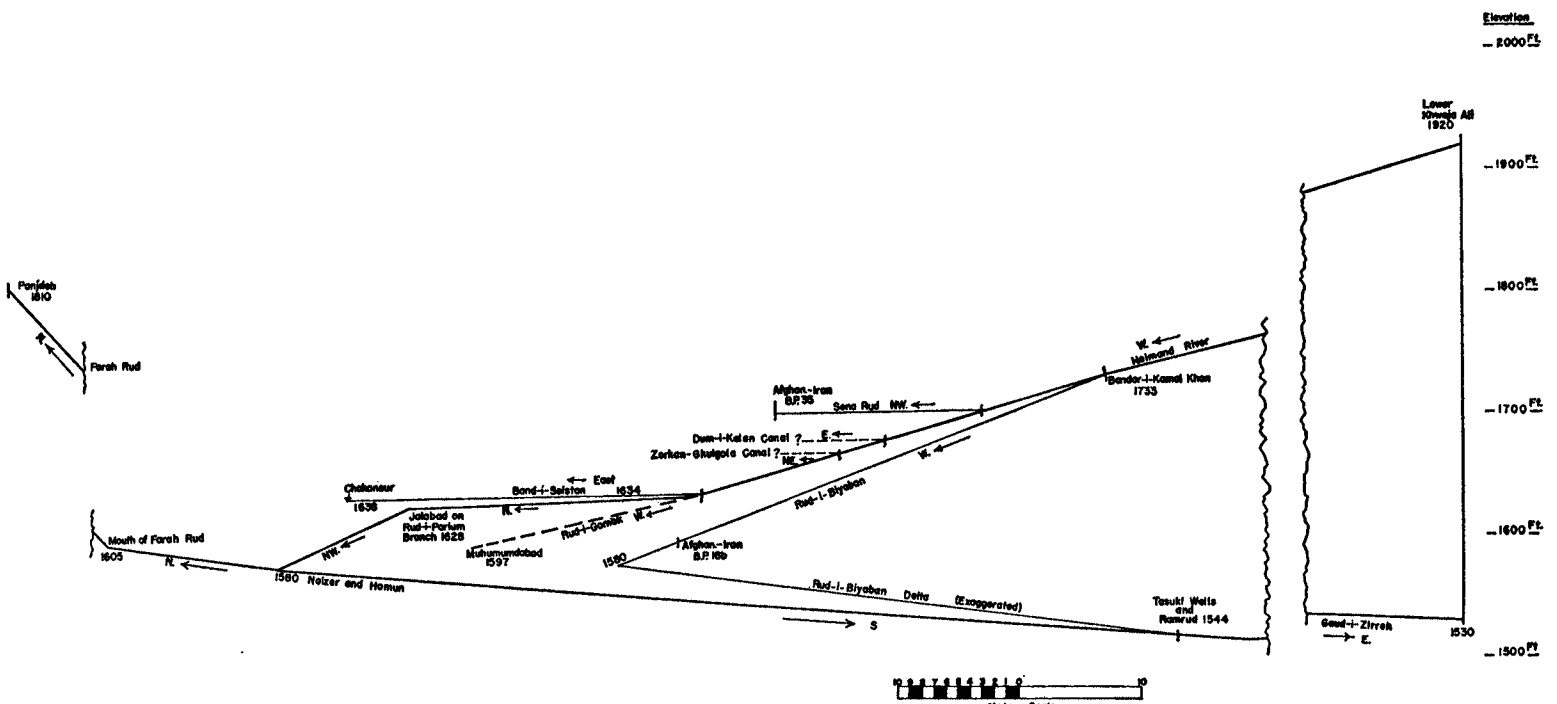

FIG. 4. Gradient of the river and basin system of Seistan.

ridge runs in a generally north to south direction, curving to the west from the vicinity of Salian southward. Another ridge is formed near Barong with the small delta of the Bandan Rud on the western side of the main *hamun*.

The Hamun-i-Puzak is bounded by the ridge of the Hamun-i-Sabari, just described, and possibly by the ridge of the deltaic fans of the Khaspas and Khash *ruds* and the eastern extremes of the Helmand delta. Another ridge exists at the south of the main *hamun*, the result of the contact of the northern Helmand delta on its extreme west with the deltaic fans of the intermittent streams from the western hill ranges.

The *hamun* depressions are also interspersed with smaller sub-basins, called *chungs*, in which water can usually be found when the larger *hamuns* are dry. Main ridges are subject to flooding from the main *hamun* in years of heavy

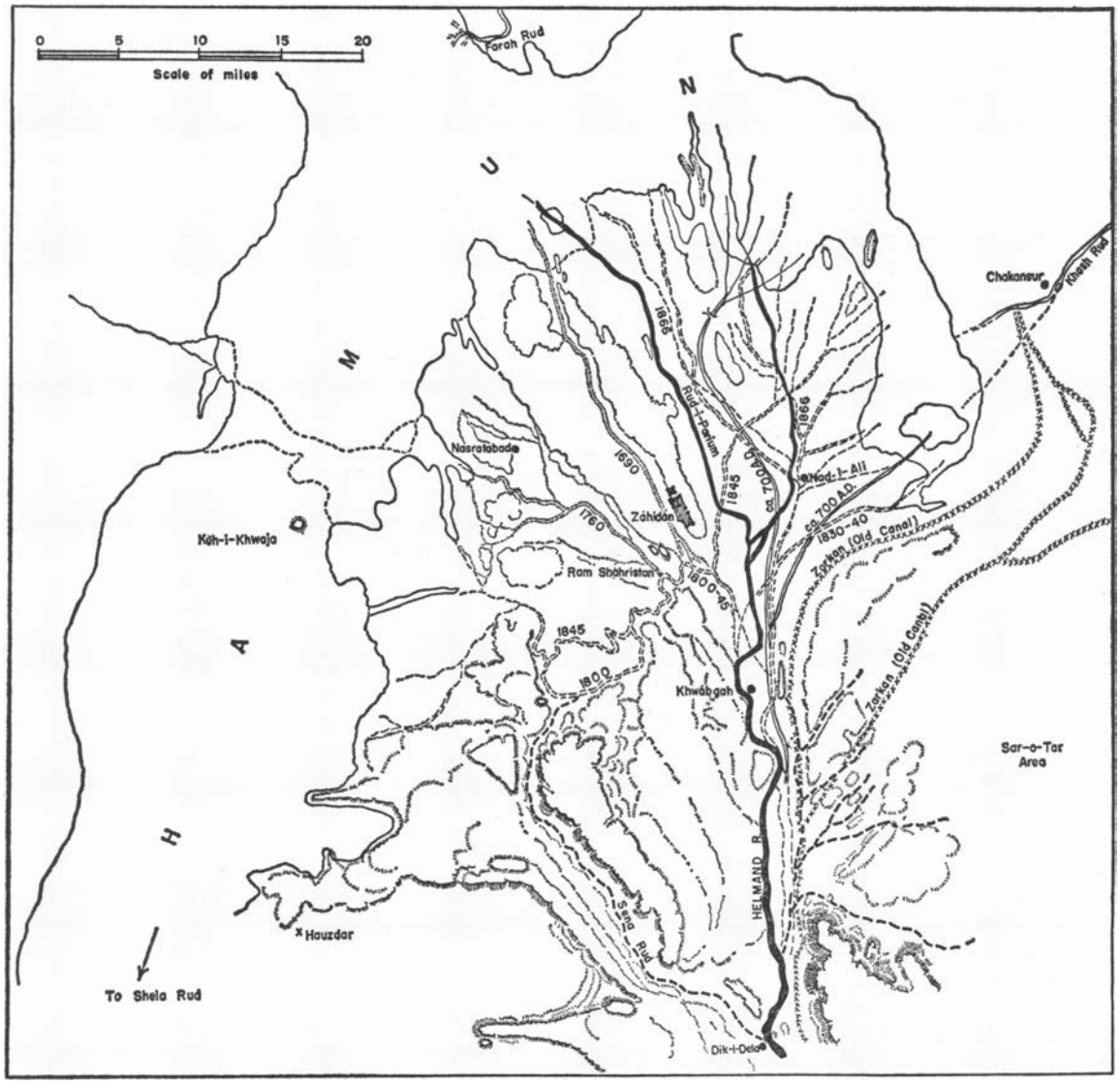

FIG. 5. Oscillations of the Helmand River in the Seistan delta (after Tate, 1910–1912).

flow; then all the sub-basins are joined in one enormous lake.

The bed of the *hamun* consists of a hard, impermeable clay called *kim* which prevents the water from sinking deeply into the subsoil. A large part of the moisture loss in Seistan is the result of evaporation. However, in seasons of heavy flood there is a natural outlet to the south.

As shown in Fig. 4, the Hamun-i-Seistan declines generally towards the Shela Rud, about 60 feet in 70 miles. The Shela Rud, in turn, wanders to the southeast, eventually debouching into the wide, flat Gaud-i-Zirreh which slopes gently to the east. The Gaud-i-Zirreh is thus the terminus of the Seistan Basin system.

As suggested by the number of sites found in its delta, the Rud-i-Biyaban was probably the main bed of the Helmand River in prehistoric times. The prehistoric "villages" found by Stein were probably on higher tongues of alluvium in this ancient delta and were located in much the same situation as the historic ruins of the northern delta. The main Helmand drainage must have been to the north, so that the area south of the Kuh-i-Khwaja may have been heavily flooded. The overflow would then be considerable, and the Shela Rud and Gaud-i-Zirreh would thus have had water seasonally, if not always perennially. The Shela flowed south of the Dasht-i-Zirreh escarpment, and it probably meandered over its flood plain quite considerably. On this basis it seems likely that the sites discovered on the expedition (Sites 104 to 114, G.R. 1 to G.R. 11) were situated on the shores of the ancient Shela.

At some unknown date, probably in the protohistoric period, the silt accumulation of the Helmand in the Rud-i-Biyaban raised the bed of that stream to such an extent that the Helmand main stream, forced to a new outlet, pushed on to the north along one of its former branches which now became the main stream.

Conceivably a trickle of water still flowed in the old channel. During the Partho-Sassanian times apparently a weir was constructed at the Bandar-i-Kamal Khan (Band-i-Rustam?) and the water conveyed by a system of canals to the southern delta. The buildings found in the delta, with their locations almost identical with those of the prehistoric sites, are indicative of the similarity of the water sources (pp. 97–102). However, the general absence of Partho-Sassanian sites in the Shela Rud area south of the Dasht-i-Zirreh suggests a less copious flow.

The surface of the Dasht-i-Zirreh, especially in the area just south of the Rud-i-Biyaban, shows signs that an extensive system of canals and reservoirs existed in the region (Fig. 23). The evidence from the sites discovered in the area makes it likely that this system was built in the Partho-Sassanian periods.

The evidence for the Islamic periods is surprisingly slight.[1] There is an Early Islamic weir just east of New Gina. The towns of Old Gina and Trakun are remarkable for their spectacular ruins, but there are no indications of extensive occupation along the *rud*. True, the domed tombs, or *gumbats*,[2] occur sporadically, but there are no evidences of settlement on the same scale as in the earlier periods. The situation of sites such as New Gina (Site 96) and "The Fort" (Site 83) on the flood plain demonstrates that the water resources were limited to small canals. Apparently the Rud-i-Biyaban was occupied to some extent until the nineteenth century, when the canal system was abandoned. Today, occasional pools of rain water provide sustenance for herds of camels driven by itinerant herders.

The Sar-o-Tar tract, east of the present course of the Helmand, provides additional evidence to prove that the Rud-i-Biyaban was not the main stream of the Helmand during Partho-Sassanian and later times. As we have seen, in the vicinity of Kala-i-Fateh the Dasht-i-Meski spur of the Dasht-i-Margo curves away to the east and south. The northernmost point of this spur is called Sargah-i-Seistan. Just south of this point traces of an old canal are visible. It ran almost due east to the vicinity of Sar-o-Tar, the southernmost of the extensive ruins found in the now desert area east of the Helmand and west of the main western scarp of the Dasht-i-Margo. It is possible to trace other channels from this canal (Fig. 5); most of these run due east or northeast.

Two other canals are very important. One, the Zarkan, broke through the raised trend line

[1] Tate, 1910–1912, Vol. 1, 162 ff. Tate describes a more extensive use of the Rud-i-Biyaban in Islamic times than present evidence would indicate.

[2] We occupied one, Tomb Camp, during our stay (Fig. 22).

east of the Helmand in the vicinity of Deh Dost Mohammad. This canal brought water to the Ghulghula tract north of Sar-o-Tar, probably taking advantage of the northward decline of the land. The second canal, the Zorkan, paralleled the main course of the Helmand, then curved to the northeast with the trend line, reaching perhaps as far north as Chakansur. Traditionally associated with these canals is the Naushirwan weir, said to have been built at the bluff of Tirkoh by Dik-i-Dela near the Sena Rud channel. The latter, by the way, is said to have had a canal along part of its length at the time of Naushirwan. The archeological evidence from the Ghulghula and Sar-o-Tar tract suggests that this eastern canal system flourished during the Partho-Sassanian and Early Islamic periods, a suggestion that does not contradict the tradition (pp. 101–102).[1]

In the north, the main delta of the Helmand River presents a complex network of canals, weirs, and ditches. Tate was able to trace some of these intricacies (the present paper, Pl. 5a; Fig. 5). Recently the Helmand Valley Commission of the United Nations has had the task of determining what effect the damming of the upper Helmand and Arghandab rivers would have on Seistan and the improvement of methods of controlling the water in the delta itself.

Chakansur and the area to the northeast were supplied with water by the Khash Rud in other years. Around Juwain, canals running southeast from the Farah Rud to the Hamun-i-Puzak provided a water supply to such places as Peshawarun. The modern village of Salian depends, to some extent, on the Farah Rud which, though seasonally intermittent, is nonetheless sufficiently dependable to provide water for at least one substantial crop (Pl. 5b). In dry seasons water is procured from wells, some of them 30 feet or more in depth, in the areas north of Chakansur. It is of interest that a number of these brick-lined wells are found in Peshawarun (Pl. 8b).

Not much imagination is needed to understand the degree of hardship incurred in seasons when the water supply is low during those dry years which from time to time plague these regions. Any extended drought requires drastic compensations by the population, among which one might list the necessary concentration of the population in cities. The far-flung villages of Seistan would feel the effects of drought first, and the natural tendency would be for the villagers to move towards the northern delta and the main Helmand channel where water was still available. The rise of important urban centers during the Islamic period may well be the combined result of drought and the political misfortunes of the time. Such, of course, is pure speculation, but the abandonment of the Sar-o-Tar and Rud-i-Biyaban tracts and of portions of the area watered by the Farah Rud during the Islamic period is indicative of man's failure to control the water system there.

FAUNA AND FLORA

Game in Seistan is scarce. On the surrounding desert plateaus gazelle (*Gazella subgutturosa*) are rather plentiful. Afghan hounds are kept in many Baluch villages and are used in the chase. The wild ass (*Ghorkhar*) is said to occur in the Dasht-i-Margo, but no one reported seeing one when we were in Seistan. *Felis constantina*, or the desert cat, occurs in the valley of the Helmand but does not seem to be very common. Foxes, hedgehogs, and jackals are found in some abundance.

Several forms of lizard, including *Centrotrachelus*, are found in Seistan. The land tortoise is common. There are several forms of nonpoisonous snakes (*Psammophis*, *Zamenis*); *Echis carinatus* was the only poisonous species we encountered.[2]

The bird life provides a food source for the *naizar* dwellers. Flights of migratory fowl arrive seasonally to feed on the abundant insects and the ripe seeds of the water plants. Two observations made by E. C. Stuart Baker in connection with birds collected in Seistan are worthy of note here.

> The geographical affinities are Indo-Palaearctic, the races of resident birds nearly all belonging to the Palaearctic rather than to the Indian forms.
>
> The birds of Seistan, as might be expected from

[1] Tate, 1910–1912, Vol. 1, 154.

[2] Blanford, 1876.

the peculiar conformation of the country, are, with few noteworthy exceptions, either water-birds or desert-birds. . . . On the other hand a few subspecies, apparently resident, are typically tropical Indian.[1]

The aquatic fauna was rather extensively studied by Annandale and his associates. The data are summarized as follows:

The aquatic fauna is thus, as might be expected from its geographical habitat, mainly Palaearctic. . . . It is among the less highly organized invertebrates that the tropical Indian element is most clearly manifest.[2]

The fauna of Seistan is generally characteristic of the Iranian plateau, with few evidences to indicate its comparative closeness to that of the Indian subcontinent.

I know of no systematic study of the flora of Seistan. The desert species are, however, described in the various district gazetteers of Baluchistan; those on Chagai and Kharan are particularly important.[3]

The economic importance of the tamarisk both as a source of fuel and as a building material should be emphasized. Screens constructed of tamarisk boughs soaked in water are placed over the window openings opposite the prevailing wind and serve as excellent cooling devices.

Perhaps the greatest natural economic asset among the flora of Seistan is the huge beds of reeds that cover many square miles of the Hamun area during the flood season. These reed beds fluctuate with the flood and can be found wherever there is water.

Narrow channels between the reed beds are kept open by the Saiyad hunters and the Gaudar herdsmen. Both of these peoples use the reeds in house construction and for their *tutin* boats (p. 26), as well as for mats, baskets, and other household paraphernalia. The pasturage afforded by the young dry reed shoots provides rich sustenance for cattle, sheep, and goats. Most prevalent among reed types are *Phragmites*, then *Scirpus littoralis*, and a bulrush of the genus *Typha*.

The archeological evidence so far collected adds nothing to our knowledge of man's use of the fauna and flora of Seistan except by inference. Sheep, goats, and cattle very likely have a long history in Seistan, especially in view of the modern usage of the reed pastures. Perhaps this pasturage has been the chief attraction of the area rather than its agricultural potential. In any case, we can be certain that once the reeds were used the archeological traces of the uses are more than likely forever lost, a fact to be considered when the population and settlement of the area at any given time are assessed.

NOTES ON THE ETHNOLOGY

The ethnography of Seistan was outlined by G. P. Tate during the visit of the British Boundary Commission in 1903–1905.[4] Tate emphasized the legendary and historical differentiation of the various tribes and subtribes rather than their respective cultures. Therefore his report lists the groups to which the Seistani traditionally claim attachment. It is obvious from the history of Seistan (p. 30) that its population is composed of a great many different peoples. It is more unusual to encounter an unmixed group than otherwise. Most of the tribal groups claim unbroken descent from ancestors who ruled other areas and migrated to Seistan for one reason or another. In spite of this traditional differentiation it is possible to divide the population into four main groups: the Tajik[5] or Farsiwan, the Baluch, the Afghan, and others of Brahui, Arab, Indian, or other descent. Surprisingly, there is little of the Central Asian Turko-Mongol type, though the Sarts of the Tajik group claim Uzbeg origins.

The following are some of the familial, tribal, or other divisions recognized in Seistan:

Tajik: Deh-kan, Dehwar, Arbab, Tat, Sart, Kaiani
Pablawan, Kamalis, Jamalis, Dilarami
Baluch: Nahrui, Dalkhaki

[1] Baker, 1921, 121. This work provides a revised listing that should be used as a supplement to Blanford's account.
[2] Baker, 1921, 248.
[3] Hughes-Buller and Rai Sahib Diwan Jamiat Rai, 1906, Vol. 4; 1907, Vol. 7.
[4] Tate, 1910–1912, Vol. 2.
[5] By Tajik we mean here the Irano-Afghan branch of the Mediterranean race which inhabits the Iranian plateau and which in general uses Iranian speech. The Afghan, though of the same basic racial stock, are Pushtu-speakers.

Afghan: Ghilzai, Turins, Sigzis, Barech, Alizais, Seiad?
Other: Brahui: Sarparra, Kushanis. Arab: Shabraki, Sarbandi (sometimes regarded as Baluch. India (Punjab?): Jats, Gaudar (Dahmarda, Saruni, Kalbalis, Abils)

Both the Afghan and Tajik groups emphasize agriculture, which is accompanied by some sheep, goat, and cattle herding. The Baluch-Brahui groups, until recently at least, emphasized herding and a limited agriculture. The Gaudar are cattle herders who use the reed beds for pasturage, while the Seiads are fishermen and bird hunters who live a semi-marine life in the *naizar* of the Hamun area. Little is known of this last-named sub-culture.

The Tajik, apparently the indigenous group, are widely spread in Seistan, Farah, Herat, the Helmand Valley, and Kandahar. In Seistan they are most heavily concentrated in the Hamun area, from Zabul to Chakansur and Juwain (Fig. 6). The greatest number of Afghan are found on the north and east of the Hamun. The Baluch inhabit the southern portion of Seistan, including both the western desert areas and the Helmand Valley.

The majority of the Tajik are Shi'a Moslems, though Sunni adherents are found among them. The Afghan and the Baluch are both Sunni.[1]

Agriculture in Seistan is centered on wheat and barley. Fruits, dates, onions, and melons, consistent with an arid climate, are also grown.[2] Cattle raising is of considerable importance in the Hamun area. There seem to be prestige factors involved with cattle ownership about which little is yet known.

We took the opportunity to make some observations on two of the principal groups: the Tajik and the Baluch. The Afghan culture pattern is closer to the Tajik than to the Baluch, that is, its greatest emphasis is on agriculture. The Afghan groups are responsible for much of the local trade in the area. Pathan caravans are known to ply the roads between Kerman, Farah, and Chakansur (Pl. 4a). Trade has, of course, been stimulated by the railhead and air base recently set up at Zahidan.

[1] For an account of the practice of Islam in Iran, see Vreeland, 1957, Chap. 23; for that of Afghanistan, see Wilbur, 1956.

[2] The annual rainfall is about 2½ inches; Annandale and others, 1921, 4.

Tajik

Hajji Dervish Khan, a man possibly 55 years old, lived in the area between Nad-i-Ali and Chakansur. He is part Tajik, part Baluch. His family, according to his own estimate, has lived in the Nad-i-Ali area for 10 generations; previously, they are said to have lived in the area of Kirman. The Hajji speaks a rich Persian, that is, his conversation is interspersed with numerous allusions to Persian literature and history; he also speaks Baluchi and Pushtu. He has two brothers, each of whom possesses land around Nad-i-Ali. One brother is the *Khakhuda* of the Kala-i-Kang area. The three brothers control two-thirds of the land area between Chakansur and the Iranian frontier. They are supposed to control 250 able-bodied men, each of whom possesses a rifle. Included in the area controlled by the Hajji and his family are about 20 villages, with probably between 60 and 100 persons in each. These villages operate under the *pago* system common in Seistan. Each village possesses several units of six to eight men; each unit is called "*pago*." They are formed under the supervision of the village headman (*sirdar*) who receives his instructions from the district governor, or *Khakhuda*. All the land is technically owned by the governor of the province for the state, except for that land presented to local heroes or to holy men. Traditionally, each village uses the fields immediately around it. Under the *pago* system each village through its *pago* allots money or a certain quantity of goods to pay the rental of the land to be put under cultivation during a given year. This is paid to the governor of the district, who in turn pays it to the governor appointed by the central government, and thus it is a form of taxation. The *Khakhuda* bids for his post and is appointed by the governor of the province. Often these appointments are made as a return for gifts from the appointees. There are two kinds of *pagos*. The *ghami pago* is a sort of communal labor group that can be sent by the *Khakhuda* or by the Seistan government wherever work on public land is needed. Under these circumstances, the labor group is responsible for its own food and shelter. The *tahwil pago* comes directly under the *Khakhuda* who grants it to each unit for a specific price. This system permits the *pago* to work near its home village and also to receive a

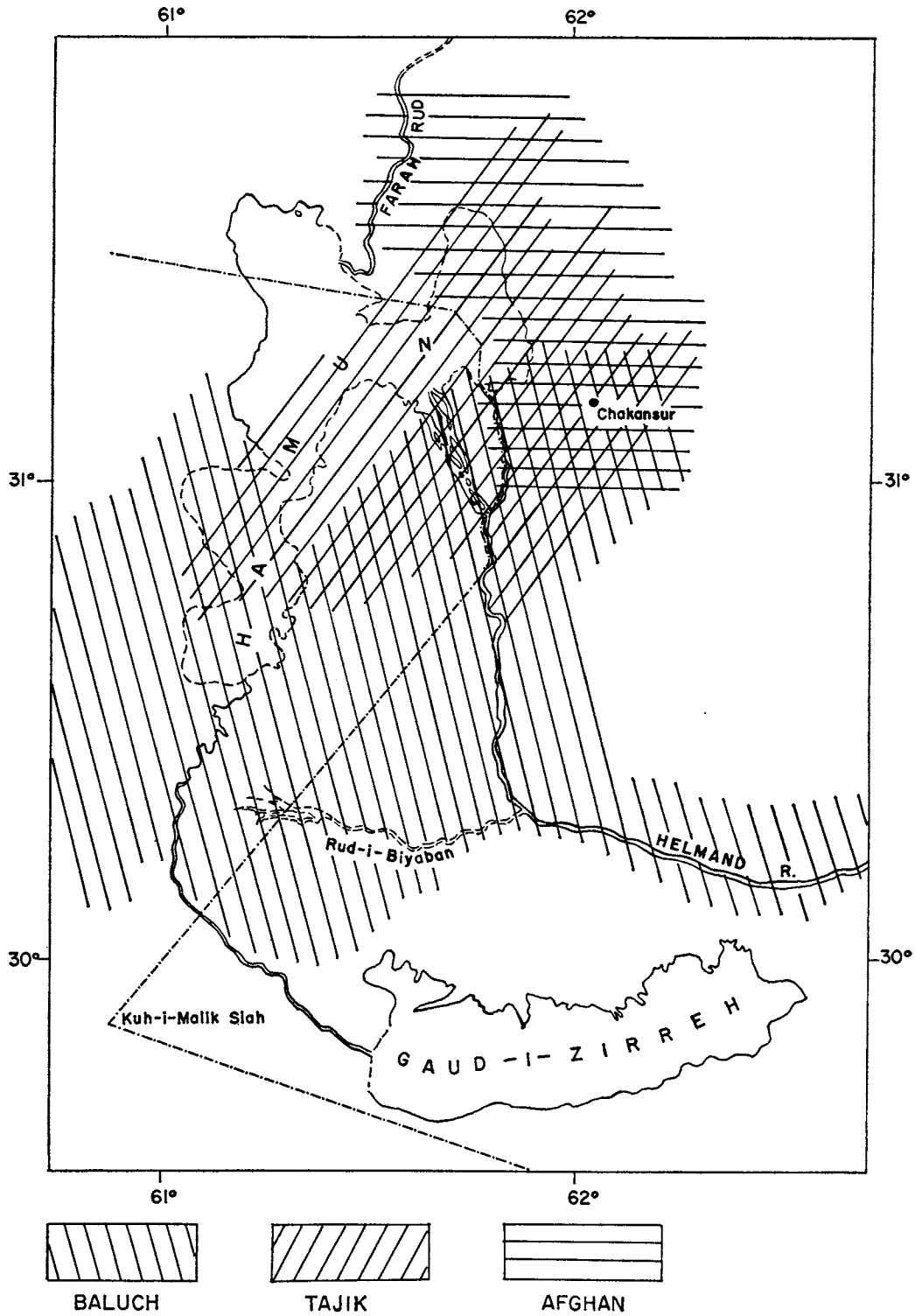

FIG. 6. Ethnography of Seistan.

part of the agricultural yield. The advantage of the system rests on the close proximity of food and shelter. The original land purchased by tax is usually cared for by the *tahwil pago*.

The *pago*, in spite of the system of "squeezes" to which it is subjected, carries with it decided advantages. For example, it permits the government to summon gangs of laborers very quickly and efficiently when the great weir needs to be reconstructed each winter. It also allows for cooperative construction of the major canals and irrigation channels of the area. Each village is required to maintain a specified portion of the irrigation system, and a circle of villages under its *Khakhuda* maintains the system for an entire district.

The *Khakhuda* must also provide levies whenever these are required. The most important official under the *Khakhuda* is the irrigation engineer (*paukar* or *galva*), who is responsible for the proper construction and strategic placement of the irrigation channels. He also estimates the needs of each village and supervises the construction and repair of weirs and dams. His authority stems from the *Khakhuda*. Many of these irrigation engineers have established high reputations and have amassed considerable wealth, though their ultraconservatism, as compared to modern methods, results in a great deal of inefficiency.

The *pago* and *Khakhuda* system was probably fully operative in early Islamic times. So long as a strong central government ruled, such a system was efficient and capable of mustering the labor force necessary for the big irrigation projects. The destruction of the weirs by Timur and others was probably less important than their destruction of the central control. The jumbling of authority would have had fatal effects on the agricultural resources of the area.

A number of specialists within each village are paid, usually in kind such as grain, by the villagers. The blacksmith, the most important of these specialists, is responsible not only for sharp knives and horse gear, but also for the mattock, the major tool of Seistan. The mattock is a sharp-edged, spade-like piece of metal, fastened at right angles near the end of a wooden pole. Its sharpness and its angle to the pole make it useful as a pick, while its width and general form make it useful as a shovel.

The Afghan also has a personage known as a "dead" man whose job is to remain in the village while the others work in the fields to discharge the corvées to which each village is subject. The weaver is another specialist. Weaving is done by a man who uses fiber that has been spun by the women. One village may have several weavers. Potters are now rare in Seistan, one potter doing the work for a whole district.

The Hajji Dervish Khan made a pilgrimage to Mecca about 30 years ago after having committed the Koran to memory. His father was *Khakhuda* of the Nad-i-Ali district, and, though both called themselves "Farsiwan," the father's relation to the increasing Afghan-Baluch elements was always very good. This rested ostensibly on the family tradition of the marriage of a famous Baluch chieftain into the family. When the Hajji Dervish Khan returned from Mecca (a two-year trip), he found that his father had died and his two brothers were still too young to assume control. His father's house had been maintained by an uncle pending his return. The young pilgrim succeeded his father. Later, the two brothers gained reputations as warriors; one supported Nadir Shah Durrani in the 1929 revolution in Afghanistan.

The Hajji Dervish Khan is a kindly man who has gained great respect not only because of his religious accomplishments but also for his sympathy, hospitality, and understanding. The two younger brothers have great respect for him, not only as head of the house, but as a holy man. The Hajji has thus become an extremely important figure in Seistan affairs. He represents a form of leadership prevalent in the Seistan area throughout centuries of its history. Numerous shrines and tombs (*gumbaz*, *ziarat*) for this kind of leader are spread over the country. Such men are invested with certain elements of immunity which free them from the normal political disturbances of Asia.

Agriculture forms the basis of Seistan economy. The principal crops are wheat, barley, melons, grapes, and onions. Some fruit, such as mulberries and peaches, is grown within the compounds of the well-to-do. The size of the crop varies with the flow of the river. Seistan is very dependent upon the flow of the Helmand; in times of low water the population suffers very badly. One striking feature of the country is the poverty of the common people. The system of taxation, the lack of a stable water supply, and the rare use of fertilizers curtail the margin

above survival. The reeds of the *naizar* are burned over annually, so that in the spring the fresh green shoots provide fodder for the cattle. The cattle of Seistan are primarily Indian. Formerly, the cattle were famed for the quality of their milk, but the recent history of crop failure, political changes, and cattle blight has served to cut down on the cattle population, which has affected Iranian Seistan more than Afghan Seistan, as the area in which cattle can exist on the Afghan side is very limited. The Tajik are primarily agriculturists and have had very little contact with the Gaudars or cattle raisers.

The Seiad people of the *naizar* barter their fish and wild fowl with the Tajik for agricultural products; thus the diet on both sides gains variety.

The Tajik live in pisé or brick houses, many with roofs domed like beehives (Pl. 4b–c). The houses are so constructed that they present a blank wall to the northwest wind, except perhaps for an arrangement of small grated holes which permit ventilation, but which can be plugged with clay when necessary. A ventilator arrangement on the roof is tipped slightly away from the northwest to prevent the direct force of the wind from upsetting the interior of the room. A smokehole is also present. The entrances are on the south or southwest side of the building. Within most villages there is usually a high-walled compound; the latter protects a number of small trees and plants which provide shade and occasionally fruit. Outside his door, the *sirdar* of the village usually has a mud platform about 10 inches high on which rugs can be spread and guests entertained. Entertainment with all the people of Seistan consists of drinking tea with large quantities of sugar which is imported from the north. Fresh fruit is offered in season.

Meat consumption is limited, but chicken, wild fowl, and mutton are commonly eaten. Eggs are a staple item in the diet.

Transportation, aside from the motor lorries that venture into the capital cities of the province, is usually by camel and horse for the longer distances. Wheeled vehicles are rarely used, principally because of the irrigation-ditch barriers. The Seiad fishermen provide a sort of ferry service across the Hamun and the surrounding swamps. Their boats, made of reeds tightly bound together, are usually not more than 10 feet long or more than 4 feet wide; their draft is only a few inches so that they can float over extremely shallow areas. These boats are called *tutins*. They are propelled with poles. The Gaudars use them for driving their cattle out of the swamps. There are two types of camel in Seistan. One, the pack camel, the more common, is about 7 feet tall at the saddle. The pack camels are slow and rather sluggish and need considerable care whenever there are extremes in the weather. The riding camel is usually about half a foot taller than the pack camel. He is faster and hardier. The Seistani like to decorate their camels with brightly colored cloth and shiny metal objects. Because of the nature of the terrain, horses are especially valuable in Seistan, but only the rich and their retainers own them. These animals are usually well taken care of. The donkey, used for short distances, is the true beast of burden in Seistan, as he is over much of Asia. The loads of brush and thorn, trade goods, and lumber that the donkey can carry are phenomenal. He is sure-footed, patient, and very hardy.

The Tajik are essentially peace loving. They form a direct contrast to the more war-like Baluch and Afghan. They consistently do the work in the fields and all the necessary engineering. There is an old saying that the Tajik build the forts and the Afghan hold them. They are less prone to emotional upheaval than is either of the other two groups living in Seistan. In the worst possible weather the Tajik consistently continue labor regarded as impossible by Afghan and Baluch.

The Tajik people are virtually all illiterate; the boys are supposed to gain some education from the mullahs. There are parochial schools in Chakansur and Zabul. Both the Iranian and and Afghan governments have organized educational programs for the people of the Seistan area, but the number so far affected by this program is quite small. The children of the chiefs, however, are usually given some opportunity to acquire a rudimentary education which consists of learning to read and write and acquiring some familiarity with Persian classics and the Koran. Traditionally the women do not learn to write, but an ability to read is not unusual among well-to-do women. New interest in the possibilities of the Helmand Basin as an agricultural resource may stimulate the trend towards education.

Baluch

The Baluch have lived in Seistan only about 200 years. As a result, their connections to their previous homelands are fairly well known. Though the Baluch have adopted the Tajik culture, even to their complete acceptance of agriculture and their abandonment of grazing, some tribes still maintain the old way of life. Among the Baluch groups traditionally present in Seistan are the Nahrui, the Dalkhaki, and the Barech of the lower Helmand Valley who are regarded as part Afghan. The Brahui groups are also closely related.

The major Baluch areas are in the south, though the Baluch fan out into the Dasht-i-Margo and the Parangan ranges to provide grazing areas for their herds. The lower Helmand Valley, Kala-i-Fateh up to Nad-i-Ali and portions of southern Shahristan, are populated primarily by Baluch. Some economic dependence on grazing demands wide wandering beyond the confines of this area in search of fodder for their herds.

In Baluchistan, generally speaking, the Baluch may be divided into an eastern and a western group. The Eastern Baluch are found primarily in the former state of Kalat and in eastern Makran, and are strongly influenced by their proximity to the Punjab and Sind. They tend to be shorter, darker, and somewhat slighter than the Western Baluch. The Western Baluch range throughout Persian Baluchistan and northern Baluchistan up to the Quetta Valley where they encounter the Eastern Baluch, Brahui, and Pathan. The Baluch in Seistan derive mainly from this western stock, though some groups, for example the Jats, probably stem from the Eastern Baluch. In Iran they traditionally rarely intermixed with the Tajik, though this aloofness is breaking down at present. The Eastern Baluch have absorbed many Urdu, Pushtu, and Brahui words into their language. The Western Baluch are closer to the Persian. In Seistan the Western Baluch language is prevalent.

The *Sirdar* Mohammad Omar and his village provide a good insight into the organization of a Baluch family in Seistan. Mohammad Omar is absolute chief of a village area on the south bank of the Helmand, 7 miles west of Chahar Burjak. His head village is located directly opposite the old fort of Kala-i-Amir. He controls approximately 350 families, which can be estimated at about 1500 persons, in the district —a considerable population.

The Baluch of this lower Helmand River area have a strain of Afghan blood through intermarriage with other peoples of the Helmand Valley, especially the Barech. It is therefore not surprising that the governor of Chahar Burjak, whose authority stems from Kabul via the governments of Farah and Chakansur, is the brother of Mohammad Omar. The position of the two brothers is somewhat similar to that of the brothers of the Hajji Dervish Khan who lives to the north.

Traditionally, the Baluch of Mohammad Omar came from southern Iran about 200 years ago, when, as the result of a sudden invasion, they became masters of Seistan. When the Afghan came, after the time of Nadir Shah of Persia, the Baluch formed an alliance with them, and these two peoples now control Seistan. But some Baluch, in an alliance with Iran, help the Iranians to hold Shahristan, while other Baluch and the Afghan hold Afghan Seistan. In other words, the Baluch believe themselves to be the major political and military force in Seistan.

A Baluch village is composed of two essential parts: a group of permanent dwellings and a clearing for temporary shelters of brush or mats. The nomadic life of the Baluch has been considerably restricted in the past 50 years. The most important contributing factor was the British military control of Baluchistan, which resulted in limiting the grazing ranges and cutting down banditry. In addition, the increasing use of motor vehicles and the improvement of roads have largely diminished the advantages gained in raiding caravans. With the stabilization of central government in Iran, Afghanistan, and Baluchistan, the boundaries of tribal territories tend to become more rigid; consequently any nomadic tribe faces difficulties in grazing herds outside its own circumscribed area. As a result, the Baluch have turned more and more towards a sedentary life, retaining animal husbandry as an economic asset but including the agriculture which they formerly despised.

Mohammad Omar's village illustrates these progressive changes. At the edge of the desert bluffs on both sides of the river and along the outskirts of the village are the temporary dome-shaped shelters of the shepherd families. These

are usually constructed of branches and reeds bent over, tied together, and covered with leather or black felt, leaving an entrance for one to crawl through. The kids, lambs, and sheep are driven into thorn pens. The main herd rests nearby, with a watchdog to keep off the jackals. Occasionally the entire herd is driven into a large pen. The sub-bluffs of the *dasht* and occasional pockets in the *dasht* itself provide the best fodder. The shepherds keep a number of fine horses and camels for the *sirdars*. A few cattle are included with the grazing animals, though these are used mainly for ploughing.

Along the flood plain of the Helmand a system of canals carries the water close to the arid bluffs. From these canals a ramifying system of smaller canals carries water to the area between the main canal and the river. This area is covered with fields bounded by narrow, water-carrying ditches elevated slightly above each field—the typical irrigation pattern of the Helmand Valley. Wheat, melons, grapes, and onions are grown. The Baluch-Barech farmers have copied the methods of the Tajik, but they seem not to be able to raise such abundant crops as the Tajik in Shahristan, even though the fertility of the Helmand flood plain is probably higher because of the lesser chances of leaching. The Baluch who till these fields have temporary shelters in their vicinity but tend to congregate in the more substantial mud-constructed houses of the permanent villages.

The plan of Mohammad Omar's community is interesting in that it reflects the changing pattern of Baluch life. Nomadism is reflected in the temporary shelters of the shepherds clustered on the edges of the arid alluvial fans; the sedentary elements are revealed in the permanent mud houses in the midst of the fertile flood plain surrounded by irrigated fields.

These Baluch permanent houses are of two kinds. The first is a square or rectangular structure with walls of pisé, typical of Baluchistan and Afghanistan. The flat roof is of mud, laid upon a layer of interwoven branches. The low door is usually covered with a woven mat or reeds. There are customarily one or two square openings in the wall, with a smokehole in the roof. The floor of packed earth is covered with mats; a rug or two is placed on a low, raised platform along one wall upon which blankets or other sleeping rugs are placed. The well-to-do use cushions on this platform. The earth floor is well swept. A firepit for warmth, as well as for cooking, usually occupies the center of the room. Houses of this type may have several rooms. The women sleep in a separate room; the men usually sleep in the room just described. A wall surrounds the front of some of these houses and serves as an enclosure for animals or for the storage of supplies. The Helmand Valley is largely protected from the wind by the bluffs of the Dasht-i-Meski and the Helmand Valley, so that the need for high walls is far less acute than in the delta.

The second type of Baluch house marks a transition in the cultural patterns of these people. Two lines of tamarisk are planted and spaced evenly opposite each other (Fig. 7). The trees are shorn of all but the main branches which meet overhead, thus forming a sort of tunnel between the rows. Woven reed mats are placed over this arch and fastened at the outside base of the trees; the whole is then plastered over with a thin layer of mud. The result is a sort of "long house." The entrance, which is at or near one end, can be closed with a mat. A smokehole is made, a firepit built, and in general the interior of the mud house is duplicated. This provides not only a comfortable dining hall where guests can be received, but warm sleeping quarters.

Mohammad Omar and his people are Sunni. They are pious people, maintaining a rigid schedule of at least three prayers daily. Mullah Hassan, the leading priest of the area, an energetic man of 40, leads the way in digging irrigation ditches, cutting brush, and building houses. He is *sirdar* of a village and has earned the respect of the populace as much through his physical prowess as through his piety. He has been known to cuff a recalcitrant and to shower him with curses. He energetically leads the men at prayers and almost militantly sees that the proper hours for prayers are kept. Mullah Hassan is not educated as is the Hajji Dervish Khan. He neither reads nor writes, but he is able to quote many passages of the Koran and to describe the deeds of holy men. Much of his religious strength derives from a knowledge of local tradition and history and an extraordinary ability to dramatize religious and secular tales. Among the Baluch an actively aggressive priest is more appreciated than one who merely threatens.

The shrines of Bibi Dost and of Amian are

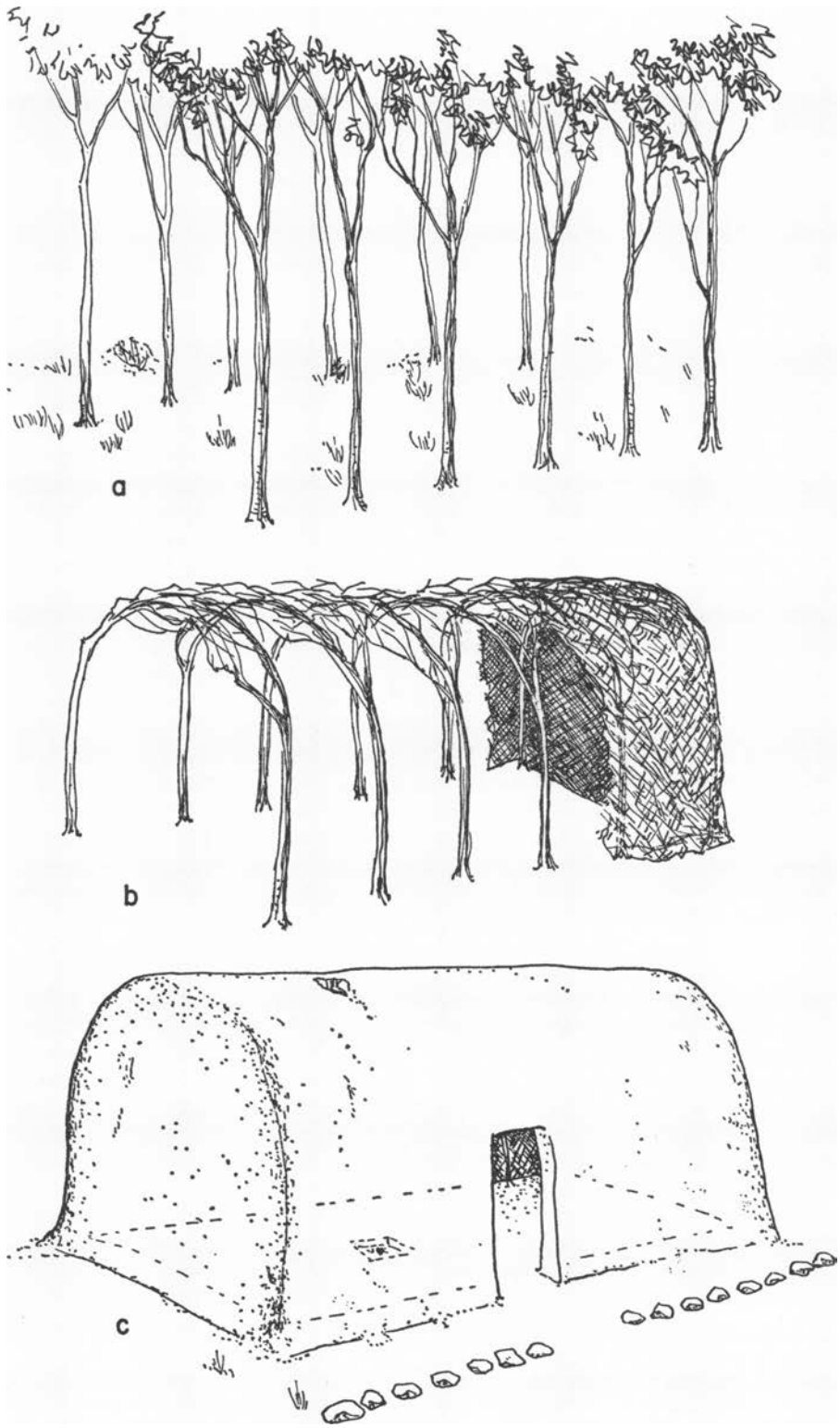

FIG. 7. Stages in the construction of a Baluch house in southern Seistan.

reverenced in the same way as by the Tajik, but the Baluch have their own local saints and holy men as well. However, none of these is regarded with the same reverence as the shrines of Bibi Dost and Amian. Tales of the prophet "Ali" are favorites among the Baluch, especially when they concern the ancestry of some of the legendary or historical Baluch culture heroes such as Mir Chakur or Bivaragh who are the leaders in the Baluch epic struggles between Mir Chakur and Gwaharam.[1] These tales are filled with battles and heroic deeds.

Mohammad Omar is a stocky, heavy-set man about 40 years old. He has four sons ranging from 16 to seven years in age. Each son, even the youngest, possesses a horse and a rifle (in perpetuity). The *sirdar* takes great pride in showing off his male offspring. For a series of photographs he and all his children were dressed in the uniforms of the United States Army and Marines which were in excellent shape and which they all wore with great pride.

The Baluch take great pleasure in vivid colors as do the Pathans. A single earring, a flower in the hair, a brightly hued embroidered skirt, flower-embroidered shoes, and henna-stained eyelids are very typical adornments. Leather belts, cartridge pouches, saddles, and other gear are highly polished and often enhanced with silver ornaments or brightly colored cloth. A weapon is handled with great care and exhibited with pride. All these factors are demonstrative of Baluch vitality and love of the chase. The blood feud, though present, is less significant among the Baluch than among the Pathan. Though the Baluch are strongly Moslem, they are not fanatically so. The Seistan Baluch take great pride in their blood lines; nevertheless the stock is slowly merging with the Tajik and to some extent with the Afghan.

Unfortunately there are as yet no archeological data that would give us some idea as to the relative emphasis on cattle raising, sheep and goat herding, and grain agriculture that prevailed in the past in Seistan—all familiar traits in the modern population. Again, if we consider the geographical position of Seistan, it may well have been that in the prosperous days of the Sassanids trade and pilgrims brought important revenues to enhance or perhaps, in certain districts, supersede, for a time at least, the more sedentary pursuits of farming and herding. We might, for instance, speculate about the Parthian-dominated agriculturists and their enemies, the semi-nomadic Saca (p. 33), as being paralleled in the Tajik-Baluch relationships of the last century. In any case, the distribution of mud villages, nomad shelters, moderate-sized towns, irrigation networks, and the varied ethnic groups that constitute the population in present-day Seistan are the result of both historical incident and cultural evolution upon which our present meager archeological evidence casts faint light.

HISTORICAL BACKGROUND

The ancient name for the Seistan Basin proper was Drangiana (Sarangiae) or Zaranka. At the beginning of the Achaemenid period, Drangiana was located south of Aria (Haraira), presumably the Hari Rud Valley, and southwest of Arachosia where modern Kandahar stands today near the junction of the Helmand and Arghandab rivers.[2] The Helmand[3] was known as the Etymandrus and its local inhabitants were the Ariaspi.[4] Drangiana appears to have been a fairly peaceful farming area of some prosperity which assisted Cyrus of Persia by feeding his army during his eastern campaign. This aid so pleased Cyrus that he had the Ariaspi labeled "King's Benefactors" (*evergetas*), a title that apparently freed them from paying an annual tribute.[5] The capital of Drangiana was known, according to Tarn, as "The Zarangians" and was located near the Hamun.[6]

The history of Seistan is closely connected with both the legendary and religious history of

[1] Dames, 1907.

[2] For a summary of this location, see Olmstead, 1948, 46.

[3] The name Helmand derives from the old Persian name *hetumant* or "with many dykes." See Herzfeld, 1947, Vol. 2, 761–762.

[4] Olmstead, 1948, 46.

[5] Olmstead, 1948, 46.

[6] Tarn, 1951, 14.

Iran. In the former category can be placed the account in the Zend-Avesta of Zoroaster's flight from northwest Iran to the east where he finally found refuge under the rule of Vishtaspa (Hystaspes) of the Achaemenid house, nominally subject to the Median Empire. Mount Ushida, Kuh-i-Khwaja, appears to have been Zoroaster's principal home in Vishtaspa's realm. Vishtaspa was converted to Zoroastrianism in 550 B.C. when his son Darius, later Darius I, was born.[1] Five years later Cyrus, having cast off Median control, undertook to conquer eastern Iran and as a consequence made Vishtaspa satrap. Thus Zoroaster's home, the Kuh-i-Khwaja, attained its sacred aspect early, but probably it had been held sacred long before.

During the Achaemenid period, Drangiana appears to have had little political importance. Drangians served under Xerxes in the army that invaded Greece in 480 B.C. They are described as being conspicuous "by having dyed garments; they also wore buskins reaching up to the knee, and had bows and Median javelins."[2] During the reign of Artaxerxes I (465–424 B.C.), the satrapy of Arachosia was apparently lost. Possibly Drangiana had some relations with Arachosia, as the Helmand River connected the two areas. Artaxerxes united Drangiana with areas to the southwest as far as the Persian Gulf. Among the areas involved were the modern Yezd (Sagartia) and the exile islands of the Persian Gulf. This area formed one satrapy of which Drangiana (Zarangia) was the easternmost section.[3]

In spite of the apparent loss of Arachosia, some control was maintained over territories in northwestern India (Gandhara). Communication with these areas was maintained through the Khyber region, Kabul, and Bactria north of the Kuh-i-Baba ranges. During this period, Baluchistan (Carminia and Gedrosia) was apparently of little importance as a route to the east.

The importance of Drangiana as a fertile region accessible by several trade routes made it well worth holding. But in the later Achaemenid period it was apparently a frontier province and thus of some military importance. Control of Seistan gave the Persians a bastion south of the Afghan mountains athwart the the main route to the Kandahar region and the Gomel Pass and perhaps the Bolan Pass.[4] It is of interest to note that no attempt was made to lump Drangiana with the Herat region (Aria) or Northeast Iran (Hyrcania) but rather with Kirman and areas to the southwest, perhaps an indication of both ethnic affinities and of economic connections.

So far as I know, there is no evidence that will identify the people who wrested Arachosia from Achaemenid control during this period, but it seems likely that the inhabitants of the mountainous regions north, east, and south of Kandahar were readily able to isolate garrisons stationed there and along the Helmand, thus making the defense of the region untenable. The long desert roads across southern Afghanistan were hardly suitable for continued reënforcement. An indication of how slight the Achaemenid hold in southern Afghanistan was is perhaps furnished by the fact that so few Achaemenid coins have been found there. For example, only two gold coins of Darius I, to my knowledge, have been collected from the Kandahar area.[5]

Alexander's campaign in eastern Iran was confined to its northeastern part, with Balkh as his main objective. Balkh was apparently the most important city of Bactria and as such the last major Achaemenid city still unconquered. However, Satibarzanes, satrap of Aria, revolted, forcing Alexander to attack him in the vicinity of Herat on the Hari Rud (328 B.C.). Apparently the revolt was supported by Barsaentes, satrap of Drangiana, so that after the defeat of Satibarzanes, Alexander thought it expedient to invade Seistan. The province appears to have yielded with little resistance.

There is some dispute as to whether the capital of Drangiana, then called Phrada, was Farah, from which the modern name was derived, located on the middle Farah Rud,[6] or Nad-i-Ali just east of the Hamun.[7] In any case, Alexander stopped at Phrada, renaming it Prophthasia. Here Philotes, the son of Par-

[1] Olmstead, 1948, 103.
[2] Herodotus, 1908, Vol. 7, 67.
[3] Olmstead, 1948, 292.
[4] For a discussion of these passes in antiquity, see Fairservis, 1956a, 190–193.
[5] Fairservis, 1953, 144.
[6] Sykes, 1915, Vol. 1, 285–286.
[7] Tarn, 1948, Vol. 1, 62.

menion, was executed.[1]

Alexander did not linger at Prophthasia but proceeded along the Helmand River (probably including southern Seistan), encountering initially the "Benefactors" of Cyrus' appellation. These people were apparently as peace loving as ever and as a consequence suffered no molestation from the Macedonians. Alexander encountered difficulties in Arachosia, especially in the mountains: "All these various tribes he invaded through deep snow, with lack of provisions, and with much distress of his men,"[2] a proof perhaps of the recalcitrant, unsubduable nature of the region bordering the deserts of southern Afghanistan on the north.

Alexander returned from India through the Makran (Gedrosia) to the Kirman region. However, Krateros, one of his generals, was dispatched with a part of the army from the area around modern Sukkur (Mahorta?) to go by way of Arachosia and Drangiana. Most authorities believe that Krateros initially went to Kandahar (Alexandria in Arachosia?) via the Bolan and Khojak passes, whence he descended on the Arghandab-Helmand route to Seistan. If there was water in the Rud-i-Biyaban at that time (p. 100), probably Krateros avoided the marshes and irrigation systems of the Hamun area and struck out to the west from the area around Hauzdar. Otherwise it is probable that he traveled north on the Helmand River route, possibly as far as Shahristan or along the Sena Rud, whence he could move south, then west, from the same area around Varmal or Hauzdar.

The distance from Varmal to Bam in the Narmashir area is approximately 200 miles and, at a rate of about 15 miles a day, could be covered in about two weeks by caravan. Though much of this road is desert, stations along the way ease the crossing.[3] This is the constricted portion of the Great Desert of Persia, and the fact that the crossing is relieved at its center by a rather sizable settlement with fertile soil and water is important, for it emphasizes the advantages of the route.[4]

Krateros' choice of route was probably influenced by the habits of the time; in view of the satrapal division that made Drangiana a part of southwest Iran, this road was probably commonly used. The fact that Krateros is supposed to have brought elephants with him and even so burdened was able to rejoin Alexander in southwest Iran without apparent loss would indicate that the road was not a difficult one. In this regard and in retrospect one wonders if Krateros crossed by the Bolan[5] and Khojak passes or if he ascended the easier Gomel Valley and thus to Kandahar.

The Seleucid control of Seistan lasted about 140 years, although in 305 B.C. Seleucus came close to losing it. His invasion of India was thwarted by Chandragupta Maurya, and he was forced to cede Aria, Arachosia, and Paropanisadai to the Indian monarch. Again, Drangiana, even though adjacent to both Arachosia and Aria, remained under the control of the western power. Apparently Drangiana was still of little importance at that time; the control of the mountains was of greater political and perhaps economic significance. Gedrosia, too, fell into the Maurya ruler's hands, but it is doubtful that active control of this area went beyond the seacoast towns.

The collapse of the Maurya Empire and the steady weakening of the Seleucids opened the border provinces to invasion. However, the Seleucid, Antiochos the Great, raided India, probably around 205 B.C., and returned via Arachosia and Drangiana, apparently on the same route as that followed by Krateros.

Demetrios of Bactria invaded Drangiana, probably around 185 B.C. The Bactrian hold was not prolonged, however, and, as a result, few indeed are the Bactrian coins found in Seistan today. W. W. Tarn comments thus on Bactrian rule: " . . . one is bound to remember that Seistan was ruled by the Bactrian Greeks for precisely one generation and no more, from 187 B.C. at the very earliest to *ca.* 155 B.C. at the very latest, and that it is even doubtful if

[1] Arrian, 1954, Vol. 1, Book 3, 26.

[2] Arrian, 1954, Vol. 1, Book 3, 28.

[3] Sir Percy Sykes has written an excellent account of his journey over this route in 1899. See Sykes, 1902b, 415 ff. It is of interest to note that in Moslem times towers were erected to direct travelers over the worst of the desert route: Sykes, 1902b, 418. See also account of Major Euan Smith, *in* Goldsmid, 1876, Vol. 1, 241 ff.

[4] This settlement is now known as Nasratabad, but in early Islamic times it was called Sanij. See Le Strange, 1930, 328.

[5] Or possibly the Mula Pass. See Smith, 1958, 89.

they ever coined there."[1] Under Bactrian control Drangiana was divided into at least two satrapies: Zarangiane in the Hamun area and Paraitakene on the lower Helmand.

It should be noted that the Greeks knew the Helmand as Etymandrus, but it is referred to as Hetumant ("with many dykes")[2] in the Zend-Avesta. The latter became the basis for the names used by the various rulers of Persia in later periods and evolved into the modern name.[3]

The Parthians, after their revolt from Seleucid rule in about 248 B.C., rose steadily to power in Iran. Under Mithradates I (*ca.* 171–136 B.C.) most of eastern Iran fell under Parthian rule. It appears, however, that Mithradates had not only to quell, but to ally himself with, the Saca who pressed in on both Bactria and Parthia in the north. Around 155 B.C. Saca strength was centered on the lower Helmand, probably as a result of a necessary appeasement policy of Mithradates.[4] At this time, Drangiana took the name of Sacastene, from which the modern name Seistan is derived. Sacastene probably included territory as far east as Kandahar and perhaps the passes of the Suleiman Mountains south and east. It is of interest that, though Mithradates claimed portions of Gandhara, including the Kingdom of Taxila, he seems to have retained little interest in Sacastene, which may be fair evidence that the best routes to India were the same as in Achaemenid times, that is, via Bactria and the Kabul Valley through the Khyber Pass.

In any case, the Saca were virtually independent and difficult subjects at best. In 129–128 B.C. they even invaded Parthia, supported by nomadic brethren still resident in the northern steppe country. Though defeated on the west, the Saca spread eastward into India. Their empire may have included most of the Indus Valley and parts of Rajputana, and reached as far south as Bombay.[5]

Under Mithradates II of Parthia, the powerful Suren appear to have invaded Sacastene in retaliation for the Saca raid of 129–128 B.C. and to have taken at least part of Saca territory for Parthia. The part taken probably included the Hamun area of Seistan, but Saca probably still held much of the Helmand Valley. This event occurred between 124 and 115 B.C.[6]

As has been pointed out, the Saca were not only nomads but also agriculturists.[7] Probably many of them settled in Seistan and remained as farmers no matter what the current rule. In this way the population of Seistan retained its Saca flavor, and the name remained extant even though political control was lost.

Apparently Saca rule in the west declined as the Parthian power waxed. However, local dynasties sprang up acknowledging Parthian rule when expedient. One of these rulers, Gondophernes (*ca.* 20–48 A.D.), probably of the house of Suren, held Taxila, Kabul, and Arachosia but not Seistan which seems to have continued under Arsacid rule. Seistan itself, then, may at this time have been a frontier region and the eastern outpost of the Parthian Empire.

The Kushans, who became the dominant power in India and Afghanistan after 48 A.D., annexed much of Gondophernes' territory and attacked the Parthians but never took Seistan which probably remained under nominal Parthian control until the Sassanian seizure of the Parthian Empire around 226 A.D.

It is of interest that King Gondophernes (Gondopharr) has been identified with Rustam, the legendary hero of the Persian epic poem, the "Shahnamah."[8] In turn, even though that monarch may never have ruled Seistan itself, Rustam's legendary home is Seistan by tradition, which may of course be owing to the tendency to establish Gondophernes as the ruler of Sacastene in the broadest sense of the word.

Sassanian rule of Seistan probably came into full sway under Bahram II (276–293 A.D.). Thenceforward until the coming of Islam the area was securely under Iranian control.

An appraisal of the pre-Islamic history of Seistan brings out several salient points. It is clear that from the economic view, at least, Seistan had little importance in early times. The uncertainty of its agricultural situation, owing to its geographic setting in a riverine

[1] Tarn, 1951, 127.
[2] Herzfeld, 1947, Vol. 2, 761–762.
[3] Hindmand, Hidmand, Hirmand, Hilmand are some of the names used in antiquity. See Le Strange, 1930, 339.
[4] See Tarn, 1951, 223, for a brief discussion.
[5] Herzfeld, Reiner, and Vobsen, 1924, Vol. 2, 43.
[6] Tarn, 1951, 223.
[7] Tarn, 1951, 223.
[8] Herzfeld, 1941, 291.

delta, must have retarded its potential role as a source of surplus. Only with irrigation can Seistan flourish. Unfortunately, the historical sources give little clue as to when irrigation was generally practised. The accounts of Alexander's campaigns indicate that Seistan was regarded as little more than an important oasis. However, as an oasis on routes extending east and west, Seistan was important and probably for that reason was held so firmly by Seleucid and Parthian alike, which, however, emphasizes the fact that the major communication with the Indus River area was via Bactria, Kabul, and the Khyber Pass and not with southern Afghanistan. Thus the Seistan-Helmand Valley route was a secondary one, usable only during rare periods when Arachosia, i.e., Kandahar, could be firmly held. Other routes via Chagai or the Makran were too difficult for more than occasional travel.

Under both Achaemenid and Parthian rule, Seistan was, in effect, a military frontier. Capable of supporting large bodies of troops, it was unquestionably an ideal base for the protection of the southern flank of the various successive empires that ruled northern and western Iran. During the Saca period, it is likely that the Saca controlled the Helmand Valley, while the Hamun was held by the Parthians. The boundary was probably east of Band-i-Kamal Khan, possibly around Chahar Burjak or even Rudbar.

A third role played by Seistan was that of a religious center which, as we have seen, probably focused on the Kuh-i-Khwaja. Zoroaster's relationship to the place and the erection of fire temples, perhaps as early as Achaemenid times, certainly invested Seistan with a religious aura and were, perhaps, its major attraction. Under the Parthians it would appear that Zoroastrian and Magian worship flourished in the empire, though the histories are not specific for Seistan. The Sassanians were devout Zoroastrians and as such encouraged the worship everywhere. Certainly during Sassanian times, Seistan achieved great prominence because of its religious centers.

During the early Sassanian period Ram Shahristan was the capital of Seistan, but this place was abandoned, and a new capital was set up at Zaranj (Nad-i-Ali) during the reign of Chosroes I (531–579 A.D.).[1] As the capital of Seistan, Zaranj remained the dominant city during early Islamic times.

The Sassanian monarchs ruled the provinces of the empire by means of the satrap system. Local rule was probably in the hands of the Kaiani family whose descendants still live in Seistan and who claim that their early ancestors were rulers of all Iran before the time of the Achaemenids.[2]

All the data point to the fact that Seistan flourished during the Sassanian period; so much so, in fact, that it became one of the most important provinces of the empire. Irrigation projects were planned and completed, and as a result the food supply and the population increased enormously. Zaranj, for example, was apparently a city of no mean size.[3] The area along the Khash Rud was a populous, well-irrigated region which served as a link to Kandahar. Local irrigation was apparently very dependent on the *karez* (*khanat*) system. The resultant prosperity continued into early Islamic times.[4]

The Arab invasion of Seistan occurred about 652 A.D. The base for the attacking army was in Kirman, and the invasion route was via Fahrij to Varmal—in other words, the regular road from southwestern Iran.[5]

Though Arab rule was at least initially relatively unoppressive, some of the fire temples and other monuments of Zoroastrianism were destroyed. Except for such destruction, the former administrative machinery that would have assured the continued prosperity of Seistan was not disturbed.[6] The capital of Arab Seistan was transferred to Zahidan in the tenth century.[7] There is some confusion among historians as to the differentiation between Zaranj and Zahidan.[8] Zahidan would appear to be the extensive ruins west of the present Iranian border. Nad-i-Ali may have some claims as Sassanian Zaranj. There is no evidence, however, that Zaranj was completely abandoned when another city became the capital (see Table 5).

[1] Tate, 1910–1912, Vol. 1, 199.

[2] Tate, 1910–1912, Vol. 1, 1 ff.; note Tate's account of the legendary history of Seistan.

[3] Le Strange, 1930, 335 ff.

[4] Tate, 1910–1912, Vol. 1, 12; Le Strange, 1930, 342–343.

[5] For an account of the invasion, see Tate, 1910–1912, Vol. 1, 15. During the Islamic period the name for Seistan was Sijistan or Sejistan (Sejestan), later written Sistan or Seistan.

[6] Tate, 1910–1912, Vol. 1, 18–19.

[7] Tate, 1910–1912, Vol. 1, 21.

[8] Note, especially, Le Strange, 1930, 335 and footnote.

The early Islamic history of Seistan indicates that it was a relatively independent province ruled by powerful local families who gave at least token allegiance, according to political expediency, to empires that flourished east or north of them.[1] About 1003 A.D., Mohammad of Ghazni defeated Khalaf, a powerful reigning prince of probably Kaiani descent and a patron of learning and religion. Seistan was part of the Ghaznavid Empire until about 1067 A.D., when Khalaf's son was restored as its ruler under the aegis of the Seljuk rulers of Iran.

In 1297 A.D. Seistan fell to the Mongols after the 19-month defense of the fortress of Arg (Lash?). The Mongol treatment of Seistan was mild.[2] In spite of the general depression of Iran under early Mongol rule, the province continued to flourish, though probably not so fully as previously. Kirman, for instance, became impoverished and heavily depopulated.[3]

Under the Il Khans, Seistan was ruled by a line of governors with headquarters in Herat.[4] The Kaiani rulers of Seistan submitted, at least nominally, to the Karts, the ruling line of Herat. With the weakening of the control of the Il Khans in the early fourteenth century, Seistan became independent under its Kaiani family. One of its most famous rulers was Kutb-ud-din who probably controlled many districts of Baluchistan and very likely Kirman as well.[5]

In 1363 A.D., Timur, who was then a vigorous young prince and a political refugee wandering in southern Afghanistan, was requested by Jellal-ud-din Mahmud Kaiani to help him suppress a local insurrection. So successful was Timur, who rapidly took three out of seven fortresses, that the rebels warned Jellal-ud-din that Timur might seize Seistan for himself. The Kaiani joined his forces with those of the rebels, and the united Seistan army fought a savage battle against the Turk. Timur was victorious, but received two arrow wounds, one of which permanently lamed him, giving him the appellation by which he is known to history "Timur-i-lang."

Timur's initial rule of Seistan appears to have been very moderate and probably involved no more than an annual tribute. However, the Seistani revolted. In 1383 A.D. Timur, who was now the ruler of a vast empire in Turkestan, was forced to turn aside from a contemplated invasion of western Iran. So terrible was his vengeance that Seistan never really recovered from it. Zahidan, the capital city, held out for some time but fell eventually and was completely destroyed.

> I issued orders that the fortress and city of Seistan should be destroyed and that the treasures and hoards laid up by the Maliks and sovereigns of past ages should be collected and brought into my presence.

Timur also destroyed the fortress of Tak (probably Sar-o-Tar[6]) which guarded the southeastern flank of Seistan proper. But the most significant destruction was that of the entire Band-i-Rustam, which completed the impoverishment of the Southern Delta. In 1407–1408 A.D. another Seistan revolt brought Shah Rukh, successor to Timur in the Timurid line, into the area, and, though the Seistani offered only a token resistance, Shah Rukh caused all three of the remaining important weirs to be destroyed, thus completing the mortal damage.[7]

The capital of Seistan after Timur-i-lang was Kala-i-Fath. Probably because of its remoteness the city was able to hold out against Shah Rukh who later withdrew to Herat. Seistan was a favorite place for the later Timurids and their supporters to raid, and in this way its impoverishment was completed.

The Moghul emperors of India and the various shahs of Safavid Persia struggled for possession of southern Afghanistan, and in the seventeenth century Seistan was a base for Persian operations against, or in support of, the Kandahar area. The Safavids apparently ruled through native Seistani governors. In 1639 A.D. troops from India raided Seistan via the Helmand Valley and destroyed the weirs in the southern part of the province, but Seistan remained under Persian rule.[8] Around 1700 the capital of Seistan was moved from Kala-i-Fath to Kundrak.

In the latter part of the seventeenth century the mountain tribes of Afghanistan, especially the Ghilzai, having attained considerable strength, revolted against Persian rule. The Ghilzai raided Seistan in 1715 A.D. and began

[1] For an account of the rise and fall of the control of Seistan in Islamic times, read Tate, 1910–1912, Vol. 1, 19 ff.
[2] For example, see Le Strange, 1930, 337.
[3] Sykes, 1915, Vol. 2, 190.
[4] Tate, 1910–1912, Vol. 1, 38 ff.
[5] Tate, 1910–1912, Vol. 1, 47.
[6] Tate, 1910–1912, Vol. 1, 224 ff.
[7] Tate, 1910–1912, Vol. 1, 159, footnote especially.
[8] Tate, 1910–1912, Vol. 1, 79, footnote.

the struggle for the possession of the country that was only finally settled by the British Seistan Arbitration Commission of 1903–1905.

In 1747 Seistan was a heavily taxed province under Nadir Shah and became, therefore, the center of revolt in eastern Persia. The successors of Nadir confirmed the Kaiani family as rulers of Seistan and of Herat. However, its rule was disturbed by the quick rise to dominance of the Durrani Afghan under Ahmad Shah. Nevertheless, under the Durrani the Kaiani princes continued to rule; it is of interest that Kirman was sometimes placed under the control of the Seistan rulers as well.[1]

The weakening of Durrani control in Persia helped to bring an influx of Baluch nomads into Seistan around 1800 A.D. or somewhat earlier. The Baluch had favored the successors of Nadir Shah and at their defeat retreated to the east and south.

Numerous rival Baluch families (including Brahui and others) rose to power and gradually superseded the Kaiani. Among them we may mention the Sarbandi, the Shahraki, the Nahrui, and the Sanjarani. The center of the latter was Chakansur. These rival families called upon both Afghans and Persians for support and thus augmented the division of the country. In 1866 the Persian control waxed, and the Shah's activity there increased the threat of war with Afghanistan—a fact that brought about British arbitration.

The modern boundary division worked out by the arbitration commission reflects to some extent the ancient situation of Seistan—an agricultural area subject to invasion by mountain people over well-defined routes from the east and north. In this division it is possible to trace the old provincial boundaries of Arachosia and Drangiana. The inability of the ruling powers in Iran to control the mountain and desert areas of southern Afghanistan for any length of time has always made Seistan the easternmost station of purely Iranian control. The Helmand Valley, as far as the Rud-i-Biyaban, strongly reflects the cultures of Afghanistan, whereas the Hamun is Iranian. Thus the modern boundaries are remarkably true to the ancient ethnic situation.[2]

[1] Tate, 1910–1912, Vol. 1, 93.

[2] The capitals of modern Seistan also reflect this situation in their location: Nasratabad (Zabul) in the midst of the Hamun, and Chakansur at the mouth of the Khash Rud.

ARCHEOLOGY OF SEISTAN

METHOD AND PROBLEMS

IN SEISTAN THE ARCHEOLOGIST is confronted with remains representing not only a great range in time but a multitude of cultural expressions. The peculiar physiographical situation of the area has brought about the eroding out of an enormous mass of ceramic and other remains, thereby increasing the available surface evidence and coincidentally decreasing the stratigraphic and other important evidence *in situ* that is normally attainable by excavation. As is shown below, erosion has frequently made excavation impossible. Accordingly, the emphasis in Seistan is necessarily on the surface remains and their typological relations from site to site. The relative chronology, therefore, must be derived from available dating evidence and from ex-Seistan sources.

Initially, we hoped to apply in Seistan the quantitative technique of seriation in vogue in New World archeology. However, the fact that most of the sites encountered represented a number of occupations mitigated against such a plan. Consequently, the emphasis was necessarily on the qualitative approach which stresses decorated wares and enhances the need for finds of coins, seals, and art objects.

It was obvious from the first that, if our survey of Seistan was to be reasonably complete, a visit to Iranian Seistan was a necessity. Though we had planned such a visit as an adjunct to our work in Afghan Seistan, we were unable to carry it out in 1950 and 1951. However, the survey by Sir Aurel Stein, together with the brief visits of others with archeological interests insured that our study of Seistan would not be confined to the east of the international border.

The present study, therefore, endeavors to combine all the available evidence of previous investigators with our own surveys. The evidence is mutually supplementary. In fact, our collections and those of Stein duplicate each other to such an extent that it was possible to expand the meaning of some of his more general statements, as, for example, his remarks about pottery types associated with illustrated decorated wares. All the sites, whether in Iranian Seistan or Afghan Seistan, are treated similarly insofar as the evidence permits.

Though the initial emphasis was upon prehistory, obviously no report on any area within the Indo-Iranian borderlands could neglect that vast body of historical remains that appears at every hand. Consequently, we decided to collect at sites representing all periods, in an effort to accumulate all possible material evidence for the cultural evolution of Seistan.

The basic problem in the archeology of Seistan is to establish the chronology of the known sites and to confirm their place in the historical record. Next, it is necessary to assess the character of the habitation of Seistan during the various periods of its existence. Finally, the evidence should make it possible to place Seistan in the larger perspective of the history of the human occupation of the Iranian plateau.

Reference to pottery and other typological criteria is made whenever they occur or are remarked at the particular site.

THE SITES

NORTHERN SEISTAN

The plateau of Kuh-i-Khwaja is the most spectacular landmark in Seistan. It has had a long tradition as a sacred mountain. There is some ground for identifying it with Mt. Ushidhao in the Avesta.[1] It is still venerated by Moslems, and a series of shrines and tombs of saints situated on the plateau is the object for annual pilgrimages.

Aurel Stein explored three sites at the Kuh-i-Khwaja in 1917. It is primarily his survey that furnishes the available details.

SITE 1, GHAGHA-SHAHR: Located on the terraced slopes of the southeastern portion of the Kuh-i-Khwaja. It is an extensive building complex. A palace and temple unit dominate the upper part of the site, while living quarters are indicated on the lower. Stein regards the frescoes in the upper buildings as Early Sassanian.[2] Herzfeld, while confirming Stein believed, however, that the long gallery and the paintings

[1] Stein, 1928, Vol. 2, 923; Herzfeld, 1941, 291.

[2] Stein, 1928, Vol. 2, 921.

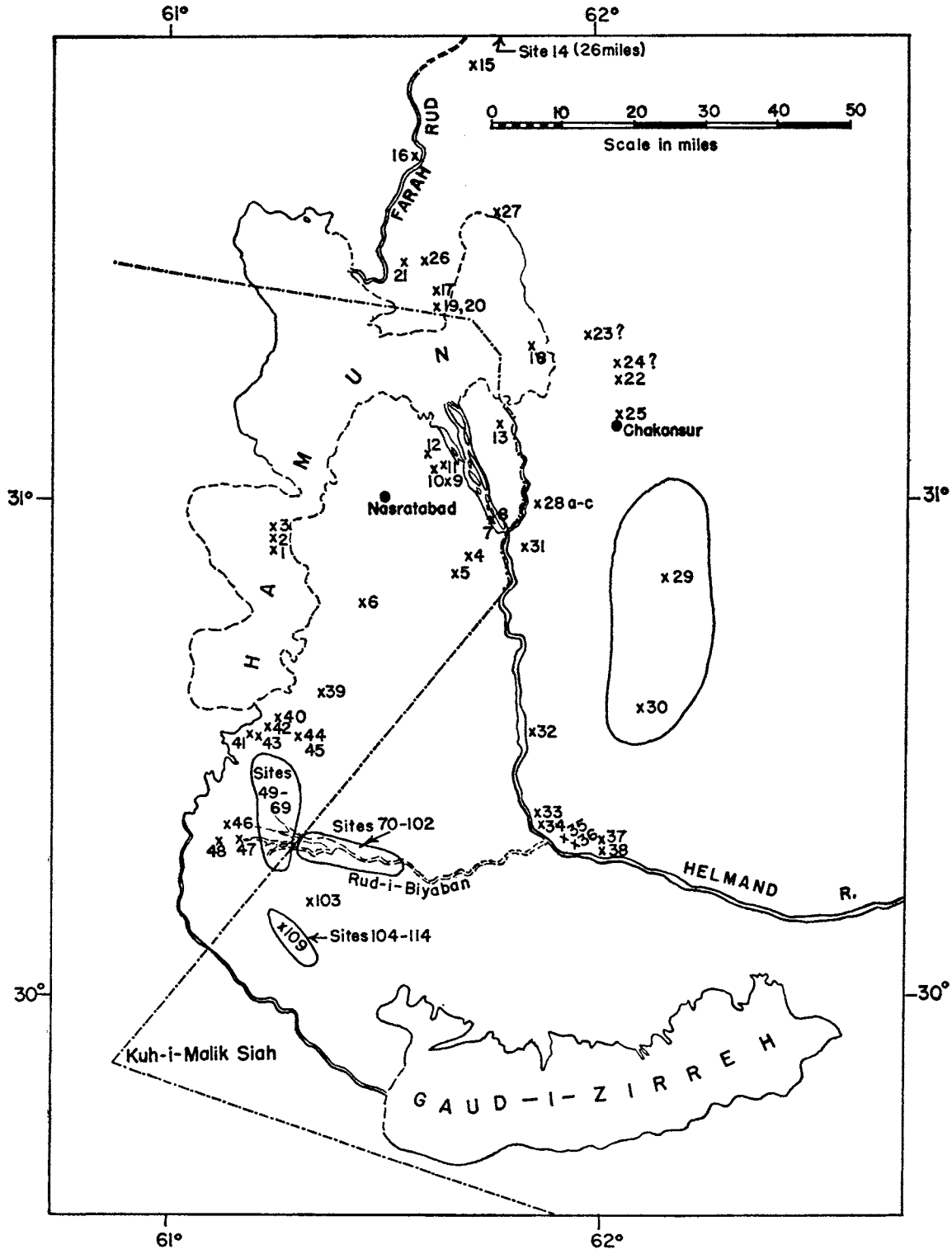

FIG. 8. Location of sites in Seistan.

were Parthian, especially of the period of the first century A.D.[1] The buildings thus represent two periods. The pottery described is Seistan Ribbed,[2] with a red wash or slip. However, a sherd of Red-Streaked Burnished is illustrated by Stein.[3]

SITE 2, KOK-I-ZAL: A small fort above the Ghagha-Shahr on the summit of the plateau. Seistan Ribbed is one of the pottery types found.[4]

SITE 3, CHIHIL-DUKHTARAN: A fort on the southernmost spur of the plateau guards the easiest approach to the summit. Pottery includes Seistan Ribbed.[5]

SITE 4, SHAHRISTAN: A complex of fortified, ruined buildings located on a ridge just west of the Band-i-Seistan. The pottery described by Stein[6] is principally Seistan Ribbed. Glazed wares are uncommon. The presence of the stamped and incised wares is very important because of their typological implications (p. 89),[7] and the specimen of Rope Banded ware[8] is important for the same reason. Sherds of Red-Streaked Burnished were also picked up at the site.[9]

SITE 5, ATISH-KADAH OR ATISH-GAH: Located about 6 miles west of Shahristan on a narrow clay ridge close to the inundation plain.[10] The buildings on this ridge were, in general, unfortified and were perhaps part of a temple complex. The pottery at this site is Seistan Ribbed, some with a red slip or wash. Sherds of comb-incised and other incised forms occur.[11] Incised handles are found at the site.[12] There was no glazed ware.

SITE 6, KALA-I-SAM: A ruined fort on the edge of the *dasht* approximately 2½ miles northwest of Sehkoha. It is separated from the main *dasht* by a moat which encircles the walls. There is nothing to suggest a date, but Tate believes the extremely eroded condition of the ruin indicates very great antiquity.[13]

SITE 7, ZAHIDAN: A complex of habitations dominated by a citadel, about 6 miles northwest of Shahristan, represents a walled town.[14] Stein reports Seistan Ribbed ware[15] as absent, but an abundance of glazed wares which are described but not illustrated by F. A. Andrews.[16]

Traditionally Zahidan was known as the capital of Seistan, until it was destroyed by Timur in the fourteenth century A.D. In medieval times it was known as Zaranj. Zahidan is sometimes extended to include Mil-i-Kasimabad and Shahristan.[17] The site of Nad-i-Ali is also called Zaranj by some authorities, so that there is still some uncertainty as to the exact location of that ancient capital.[18]

SITE 8, KALA-I-TIMUR: A small fort or walled enclosure approximately 300 yards northeast of Zahidan "town," described by Stein, is probably contemporaneous with Zahidan proper.[19]

SITE 9, MIL-I-KASIMABAD: A complex of ruins a few miles northwest of Zahidan in which the most prominent feature is a ruined minaret over 70 feet high. At the top of the minaret two relievo bricks were found. The lower one mentions Malik Tajuddin the elder, who died in 1163–1164 A.D.; the higher brick mentions his great grandson, Malik Tajuddin Harab.[20] Stein states that a great deal of Islamic pottery was strewn around, among which some sherds of Seistan Ribbed ware from the eroded ridge were found.[21]

SITE 10, GHALA-TAPPA: A double-walled structure set on a low mound about 1 mile northwest of Mil-i-Kasimabad. Stein emphasizes that glazed wares (plain blues, greens, grays), although they occur, are less abundant than Seistan Ribbed and the plainwares, the latter two of which are of the same types as those found at Ghagha-shahr.[22] Stein illustrates

[1] Herzfeld, 1935, 66, 74.
[2] Stein, 1928, Vol. 3, Pl. 115, Gha. 02, 07, 08.
[3] Stein, 1928, Vol. 3, Pl. 115, Gha. 010, 012.
[4] Stein, 1928, Vol. 2, 922.
[5] Stein, 1928, Vol. 2, 922.
[6] Stein, 1928, Vol. 2, 927.
[7] Stein, 1928, Vol. 2, 929–930; Vol. 3, Pl. 115, Shahr. 03, Shahr. 08, Shahr. 02, Shahr. 07, Shahr. 033, Shahr. 025, Shahr. 014, Shahr. 030, Shahr. 023, Shahr. 036, Shahr. 017, Shahr. 037.
[8] Stein, 1928, Vol. 3, Pl. 115, Shahr. 032.
[9] Stein, 1928, Vol. 3, Pl. 115, Shahr. 012; Vol. 2, 929.
[10] Stein, 1928, Vol. 2, 927–928.
[11] Stein, 1928, Vol. 3, Pl. 115, Atish. 05, Atish. 02.
[12] Stein, 1928, Vol. 3, Pl. 115, Atish. 010.
[13] Tate, 1910–1912, Vol. 1, 238.
[14] Stein, 1928, Vol. 2, 933; see also Tate, 1910–1912, Vol. 1, 219 ff.
[15] Stein, 1928, Vol. 2, 934.
[16] Stein, 1928, Vol. 2, 938–939.
[17] Le Strange, 1930, 335–338; see especially footnote on p. 335. Refer to map in Tate, 1910–1912, Vol. 1.
[18] Tate, 1910–1912, Vol. 1, 199.
[19] Stein, 1928, Vol. 2, 934.
[20] Tate, 1910–1912, Vol. 1, 270–271; Stein, 1928, Vol. 2, 935.
[21] Stein, 1928, Vol. 2, 935.
[22] Stein, 1928, Vol. 2, 936.

several incised and mould-made wares from this site.[1]

SITE 11, BIBI-DOST: A group of ruins that stretches over a half mile northward from a point 1½ miles from Ghala-tappa to the graveyards of Bibi-dost. According to Stein, the architecture is like that of Ghagha-shahr. Stein describes the pottery as follows:

> By the side of the abundance of plain glazed fragments in bright greens and blues, pieces decorated with painted and glazed patterns such as abound at Zahidan seemed very rare. Plain "ribbed" ware [Seistan Ribbed] was represented but not as plentiful as at Ghagha-shahr.[2]

SITE 12, BURJ-I-AFGHAN: A complex of ruined buildings with massive walls, about 3 miles northwest of the Ziarat of Bibi-dost. There appear to be a number of structures representing different periods. Stein points out voussoirs like those of Ghagha-shahr, but another type, like that at Mil-i-Kasimabad, also occurred.

A mile east of Burj-i-Afghan village was a small, double-walled fort. The principal pottery type found there was Seistan Ribbed, with a soft quality to the ribs.[3] Glazed wares were abundant among these ruins, but Stein does not indicate which buildings, if any, had more or less of them. He illustrates them as "Glazed Pottery."[4]

SITE 13, KARKU-SHĀH: A small "stronghold" on a clay terrace in the Mian Kangi jungle. This site may be identical with the ancient Karkuyeh of the early Arab geographers. It has a tradition of having been a holy place in pre-Islamic times.[5]

SITE 14, TELL 1: About 14 miles south of Farah on the Juwain Road and about 50 yards west of the road is a tell, about 60 feet in height, about 100 yards in length from north to south, and about 60 yards in width from east to west. We visited the site September 4, 1949. A low mound crowned by ruins about 1 mile north of this site was observed but not visited. Some 6 miles south on the west bank of the Farah Rud was a ruined Islamic building about 75 by 50 yards in dimensions.

POTTERY[6]

1. Seistan Ribbed ware
2. Nad-i-Ali Ridged (Fig. 9b)
3. (a) Sherd of Nadi-i-Ali Gray?; (b) several sherds of a dark, almost gray or grayware, different in appearance, however, from 3a.
4. Two sherds of what may well be Nad-i-Ali Ridged, with ridges incised decorated (Fig. 9c-d)
5. Glazed wares: (a) A sherd with mottled black and yellow-green glaze (interior); (b) a sherd with mottled dark green and gray-green glaze (both surfaces); (c) three examples of a plain, light gray-green glaze on thick paste (interior); (d) a sherd with plain blue-green glaze on thick paste (interior); (e) a fine yellow-brown glaze (both surfaces).
6. A coarse burnished ware parallel in its surface treatment to Seistan Polished, but not nearly so fine. To distinguish the type, I call it Chakansur Polished. The polishing is streaked, as is indicated by horizontal lines where the burnishing is heavy. The color varies from almost black to a deep red; yellow-brown is quite frequent. The surface is shiny and quite hard; burnishing may occur on both surfaces (Fig. 9e).
7. A single sherd with a red-brown painted design on a slightly burnished, medium dark-brown slip. The paste is quite thin but rather coarse. The complete vessel was probably a small jar with slightly flaring rim and tapering sides (Fig. 9i).

SITE 15, TELL 2: Approximately 36 miles south of Tell 1, we visited a low mound about 1 mile west of the Farah-Juwain Road across a ploughed field. The mound is about 25 feet high and 50 by 30 yards in dimensions.

POTTERY

1. Seistan Ribbed ware
2. Nad-i-Ali Ridged
3. A fine-line banded sherd
4. A sherd with fine dark slip
5. Fine paste sherd, purple red slip on interior
6. Painted ware sherd with dark brown stripes on a buff surface (Fig. 9a).

SITE 16, JUWAIN: Across the Farah Road west of Juwain an extensive ruin is clearly seen on the high bluff. By tradition and appearance it seems to be recent.

[1] Stein, 1928, Vol. 3, Pl. 115, Gh. Ta. 03, Gh. Ta. 04, Gh. Ta. 05, Gh. Ta. 08.

[2] Stein, 1928, Vol. 2, 936.

[3] Stein, 1928, Vol. 2, 937; Vol. 3, Pl. 115, B.i.A. 01.

[4] Stein, 1928, Vol. 2, 939–940; Vol. 3, Pl. 117; B.i.A 07, B.i.A 05, B.i.A. 09, B.i.A. 06, B.i.A. 04, B.i.A. 03, B.i.A. 08, B.i.A. 023, B.i.A. 025, B.i.A. 026.

[5] Refer to discussions of this and the nearby bridge, Takht-i-pul, in Tate, 1910–1912, Vol. 1, 205 ff.; Rawlinson, 1873, 286 ff., 294; Stein, 1928, Vol. 2, 937–938.

[6] For description of pottery, see pp. 48–52.

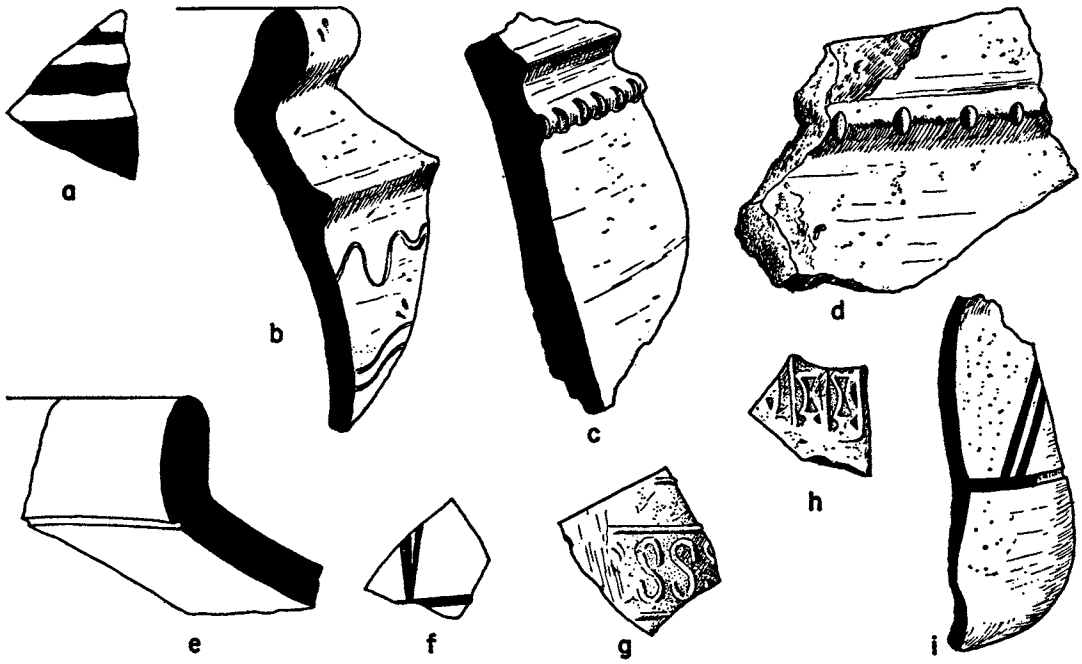

FIG. 9. Miscellaneous sherds from various sites of northern Seistan.

SITE 17, TELL 3: Approximately 15 miles south of Juwain a low mound just west of the Juwain Road. It is about 18 feet high and about 250 feet square. There are a number of washouts or deliberate excavation in the sides of the site.

POTTERY

1. Seistan Ribbed ware
2. Two sherds of Red-Streaked Burnished (Ring ware)
3. Multiple fine-line incised decorated sherd
4. Group of gray-black sherds, thin, with fine paste
5. Glazed wares: (a) Light brown on yellow-white; interior of open bowl?; (b) light gray-green glaze on interior of thick-walled sherd; (c) light blue on interior of thick sherd; (d) black on dark-blue painted decoration
6. Painted sherd, red-brown on brown surface (Fig. 9f)
7. Mould-made decorated sherds (Fig. 9g-h)
8. Red-brown slipped sherd
9. Loop-incised decorated sherd

SITE 18, TELL 4: A kind of blow-out of a sand dune lying across a windswept flat area in a northwest-southeast direction is located about 9 miles south of Tell 3. Pottery and glass were found on the virgin soil at the northwest end of the dune.

POTTERY

1. Seistan Ribbed ware
2. Glazed wares: (a) Two sherds, mottled purple glaze; (b) sherd of mottled gray-green glaze; (c) two sherds, black-on-blue-green glaze
3. Green glass

Four miles north of Border Post 70 on the Juwain-Chakansur Road a complex of mounds was encountered which we designated as Tell Groups 5A and 5B.

SITE 19, TELL GROUP 5A: A complex of 22 low mounds extending in a generally north to south direction. The mounds range in height from about 10 to 30 feet. Some of the mounds are only 75 feet long, while others are over 300 feet. While most of the mounds are irregularly shaped, several are definitely square or rectangular and suggest buildings. Collections of pottery, slag, glass, and copper were made.

POTTERY[1]

1. Schist sherd
2. Handles: (a) Twisted rope; (b) center ridge; (c) smooth, oval cross-section
3. Glazed wares: (a) Red-brown, black, and yellow

[1] See p. 42 for description of Peshawarun pottery.

glaze; (b) plain green glaze; (c) graffito or champlévé green; (d) black and green on white glaze; (e) black or black-brown on white glaze; (f) black and green on white; (g) incised roulette decorated

SITE 20, TELL GROUP 5B: A concentration of over 35 mounds about 1 mile south of Tell Group 5A seems to extend a great distance to the southeast. Both the shapes of the mounds and the collections made conform to the descriptions of Tell Group 5A above.

POTTERY

1. Green glass
2. Incised, like Peshawarun Incised
3. Plain, blue-green glaze, identical with Peshawarun
4. Black and green on white glaze, identical with Peshawarun
5. Green glass decorated, identical with Peshawarun
6. Breast covers, like the cover at Peshawarun
7. Piece of porcelain ware
8. Graffito Brown on Gray-Green Glaze, also at Peshawarun
9. Red-brown and black glaze, like that at Peshawarun
10. Rope twist handle
11. Gray sherd, with suggestion of exterior ribbing

SITE 21, PESHAWARUN: An enormous complex of ruined buildings surrounding a citadel located just west of the town of Salian. Because of the prevailing summer wind, the heaviest erosion is along a northwest-southeast axis. Many buildings are well preserved owing to the protecting outlying walls and other adjacent ruins. The ruins extend southward for several miles. The site was probably abandoned in the fifteenth century. The present ruins were probably built on the smaller and older town of Basher, mentioned by Istakhir and Ibn Rusteh as a stage on the road from Herat to Zaranj.[1] Descriptions by Europeans include those of Major Euan Smith[2] and E. P. Tate.[3]

POTTERY

Blue-green glazed ware (Fig. 10a-m): Blue-green glaze over a buff or white clay. Note the use of a clay cone for the shaping of the handle (Fig. 10e)

Blue-green glazed decorated ware (Fig. 10n-v; Pl. 14a-r): Blue-green, sometimes light or dark blue, glazed ware with black painted decorations

White glazed decorated ware: Two essential varieties, based on variation in the coloring of the white glaze. The first has a greenish tinge and both black and green-blue are used to form the designs (Fig. 11n-t; Pl. 14s-ee). The second emphasizes ultramarine or bright blue as the main color along with black, though green sometimes occurs (Pl. 15a-r)

Green glazed decorated (Fig. 11u–z; Pl. 15w–aa, cc): A soft green glazed ware with decorative designs in dark green or black

Brown glazed decorated (Fig. 11c-g; Pl. 15s-v): A soft yellow-brown or tan glazed ware, with decorations in darker brown

Yellow glazed decorated (Fig. 11a–b; Pl. 15bb, dd–hh, jj–rr): Usually a light yellow glaze with decoration in brown-yellow, green, or black, rarely red; frequently polychrome

Red and brown glazed decorated (Fig. 11h-i; Pl. 15ss-uu): Dark brown and/or red glaze on a tan, white, or brown glazed background

Plain dark brown glaze (Fig. 11j-l): A smooth, usually black-brown glaze on a rather fine clay

Coarse dark glaze (Fig. 11m): A coarse clay with a dark purplish to maroon glaze

Incised and moulded wares (Pls. 16–18)

Plainwares: The bulk is of smooth brown or buff clay; not infrequently, greenish buff sherds occur (Fig. 12). Rarely, an apparently overfired redware was collected. Most of the sherds are unslipped

Miscellaneous wares: Several sherds of a hard, gray, thick ware, resembling stone ware, were recovered. One vessel appears to have been slipped black on the inside; it has a flat bottom (Fig. 13c). There is some suggestion that this ware was parallel-incised or grooved (Fig. 13a)

Ring ware (Red-Streaked Burnished) occurs infrequently (Pl. 18a)

A sherd of hard, gray, ribbed ware was found (Fig. 13b), but it is difficult to decide if it is Seistan Ribbed. Other ribbed wares known here may be the last vestiges of a type usually wider and more pronounced in its ribbing (p. 89)

A tubular or cylindrical buff clay object, grooved on the exterior and apparently finger-tip decorated at one end (Fig. 13d)

Handles and spouts: Twisted rope (Fig. 14c-d); a rope twist centered between grooved strips (Fig. 14b, e); oval cross-section, smooth surface (Fig. 14j); center ridge (Fig. 14f, g, i); double parallel incised (Fig. 14h)

MISCELLANEOUS OBJECTS

Fragments of green glass are common at the site. One rather thick piece seems to be the bottom fragment of a vessel with its center indented. Blue-green glass also occurs.

Thin glass bracelet fragments, found in some abundance (Fig. 14m-p).

[1] Tate, 1910–1912, Vol. 1, 216.
[2] Smith, *in* Goldsmid, 1876, 314–315.
[3] Tate, 1910–1912; see especially Vol. 1, 216.

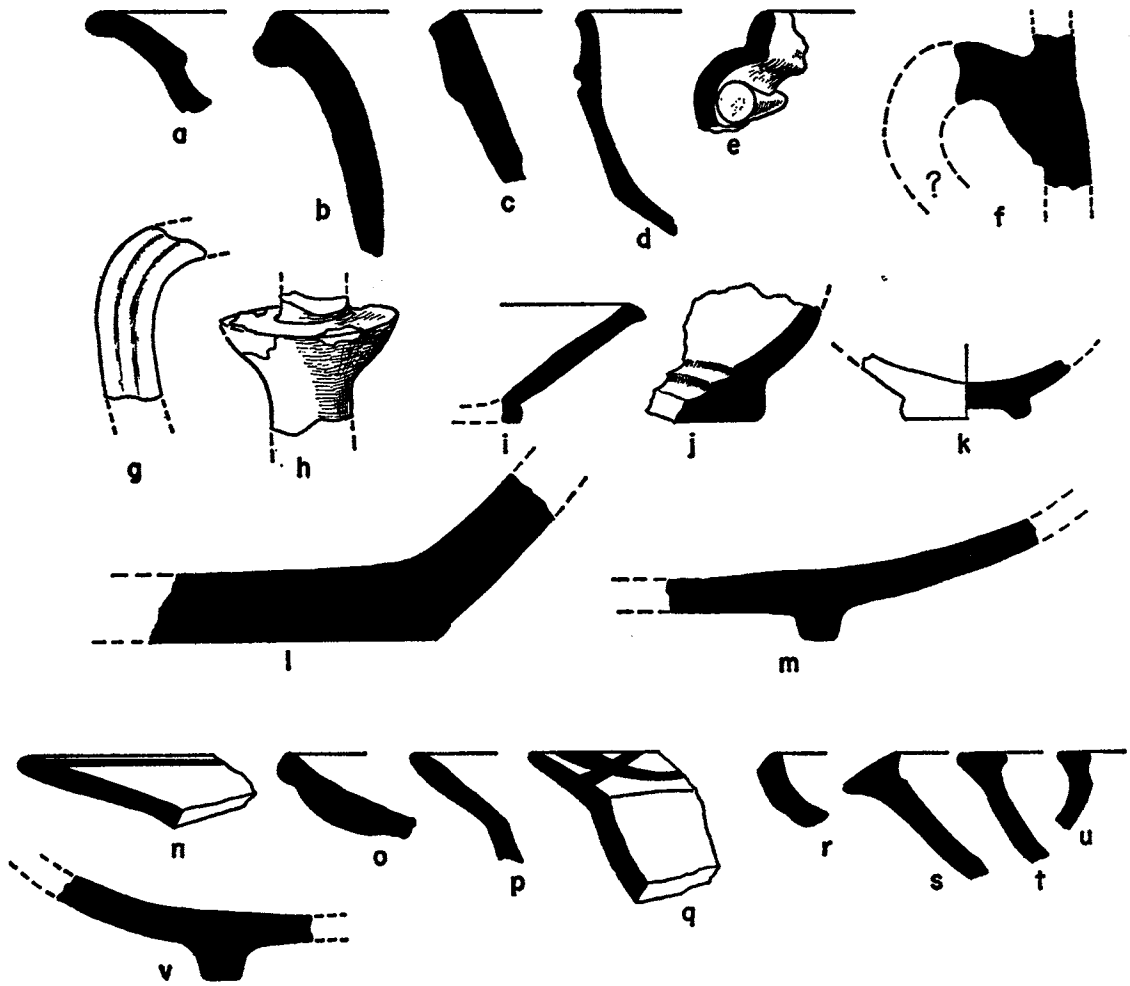

FIG. 10. Rims and bases of glazed wares, Site 21 (Peshawarun). a–m. Plain blue-green glaze. n-v. Blue-green glazed decoration.

Fragments of gray schist bowls. One rim sherd suggests the flat rim of a large-mouthed jar. Lug handles are also present (Fig. 14q).

Six copper coins were found at the site; two still carried an inscription (Pl. 19d–e). Identification of these two was made by Dr. George C. Miles,[1] American Numismatic Society, New York, to whom I am greatly obliged.

[1] Letter of June 17, 1959: "These two coins are identical bronze issues of Harb b. Muhammad of the Third Safārid dynasty of Seistān. This man was a vassal of the Ghūrids. He ruled from 562 to 612 A.H. The coin also bears the name of the Caliph al-Nāsair li-Dīn Allāh, whose dates were 575 to 622. The date of the coin therefore must fall between 575 to 612. These dates are equivalent to 1179–1215 A.D. The coins bear no mint name or date. You will find a similar type illustrated in the British Museum Catalogue of Oriental Coins, vol. IX, page 268, No. 42f."

SITE 22, POST-I-GAO (PUSHT-I-GAU): Located about 6 miles north of Chakansur, a large enclosure with massive walls within which are remains of buildings. The enclosure is in the midst of an extensive building (probably a town) complex, especially concentrated in the northwest.[2] Stein obtained some pottery from this site.[3] He is uncertain whether Tate's Post-i-Gao and Pusht-i-Gau were synonymous. The natives who brought the pottery to him did not specify either the town or the enclosure as the source of their collection. All the pottery is glazed and is apparently late Islamic.[4]

[2] For description, see Tate, 1910–1912, Vol. 1, 187.

[3] Stein, 1928, Vol. 2, 938–941.

[4] Stein, 1928, Vol. 2, 941; Vol. 3, Pl. 158, Pusht. 02, Pusht. 07, Pusht. 08.

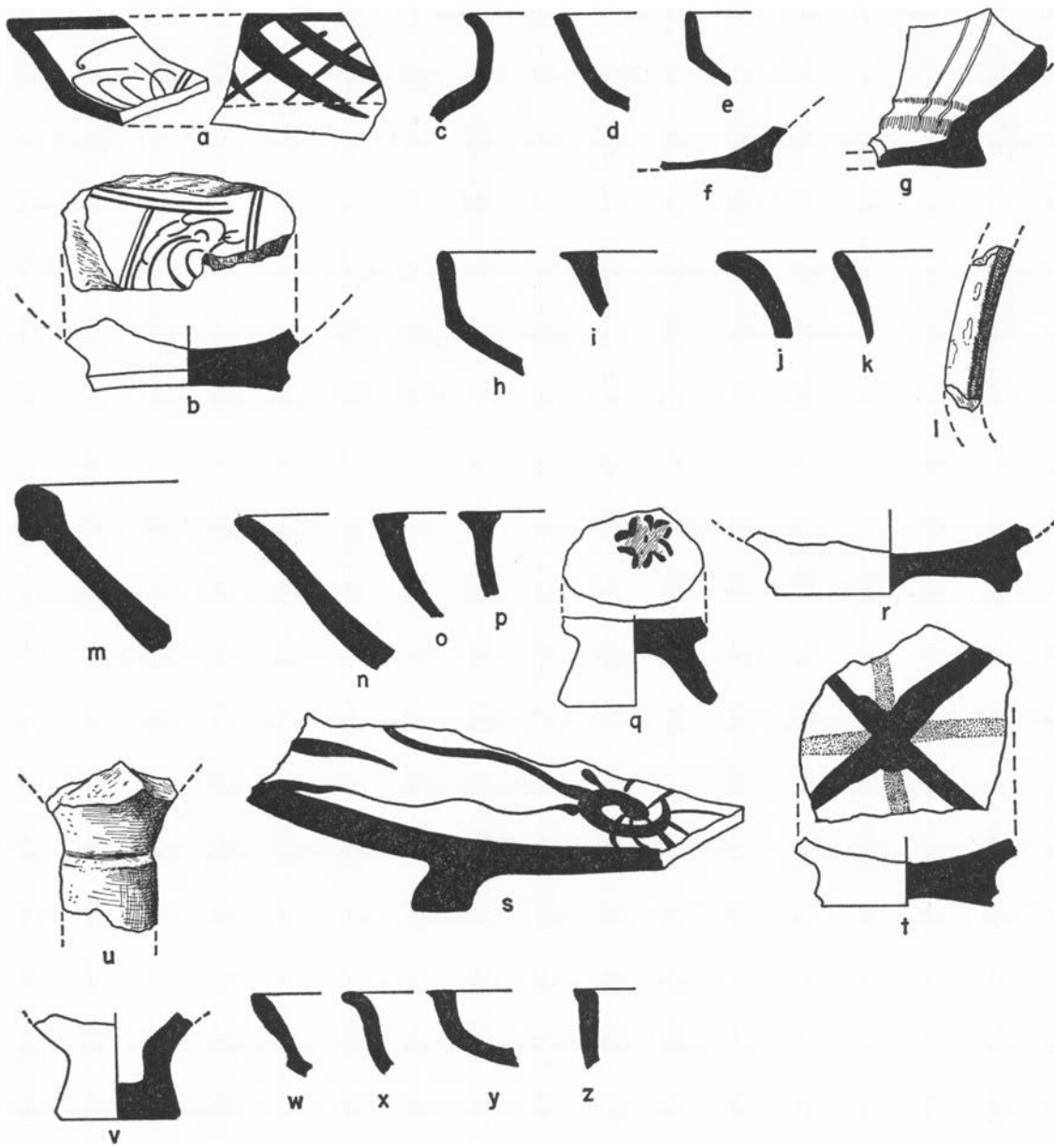

FIG. 11. Rims and bases of glazed wares, Site 21 (Peshawarun). a–b. Yellow glazed decorated. c–g. Brown glazed decorated. h–i. Red and brown glazed decorated. j–l. Plain dark brown glaze. m. Coarse dark glaze. n–t. White glazed decorated. u–z. Green glazed decorated.

SITES 23–27: These sites are mentioned for northern Seistan, but no good chronological evidence is available for them.

SITE 23, KALA-I-BAIAN: Northwest of Pusht-i-Gau, described by Tate as the ruins of a "smaller town or village."[1]

SITE 24, KALA-I-CHAPU: Near Pusht-i-Gau; an extensive complex of ruined buildings which include a citadel.[2]

SITE 25, CHAKANSUR: The modern capital of Afghan Seistan, which may be built over an early or medieval Islamic town.[3]

SITE 26, SALIAN: Stein records some glazed pottery as having come from a ruined village

[1] Tate, 1910–1912, Vol. 1, 187.

[2] Tate, 1910–1912, Vol. 1, 187.

[3] Tate, 1910–1912, Vol. 1, 710 ff.

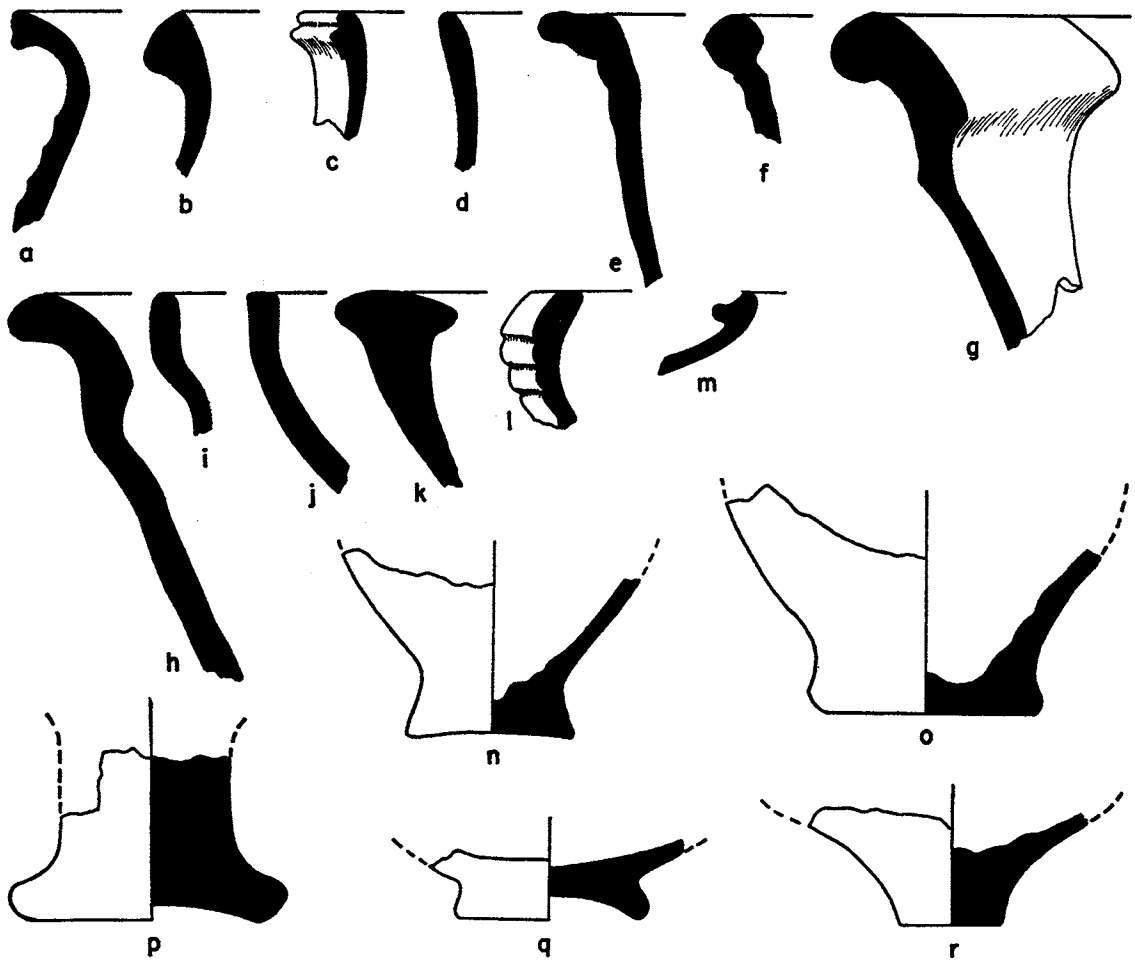

FIG. 12. Rims and bases of plainwares, Site 21 (Peshawarun).

near Peshawarun. If one may judge from Andrews' description, the site would probably be late Islamic.[1] The modern town of Salian is close to the site.

SITE 27, TAKHT-I-RUSTAM: Said to be on the northern edge of the Hamun-i-Puzak. Sherds which seem to be Seistan Ribbed suggest a pre-Islamic date. No glazed wares are reported.[2]

SITE 28, NAD-I-ALI (BINA-I-KAI): A complex of three prominent mounds surrounded by extensive ruins, located some 15 miles to the southwest of Chakansur in Afghan Seistan. There is some evidence that this is the site of the old Seistan capital of Zaranj (p. 34).

SITE 28A: The principal mound, over 30 meters high, bears the name Nad-i-Ali. It is now surmounted by a modern fort. The inner city of the old capital extends southward in the form of a series of mounds and elevations crossed by the modern road from Chakansur to Kala-i-Fath. The Nad-i-Ali mound is over 35 meters in height.

SITE 28B, NA-2: East of the Nad-i-Ali mound, about ¾ of a mile distant, is the Sorh-dagh, or Red Mound, which is also over 30 meters high. In 1936 the French Archaeological Mission to Afghanistan worked briefly on the Sorh-dagh under the direction of Roman Ghirshman.[3] A pit, 12.50 meters deep, was dug in the top of the mound. As a result of this excavation, Ghirshman was able to define two periods.

Period I includes the upper part, i.e., top to 7.70 meters, of the pit. Fragments of brick walls

[1] Stein, 1928, Vol. 2, 938, 941.
[2] Stein, 1928, Vol. 2, 938, 942.
[3] Ghirshman, 1939.

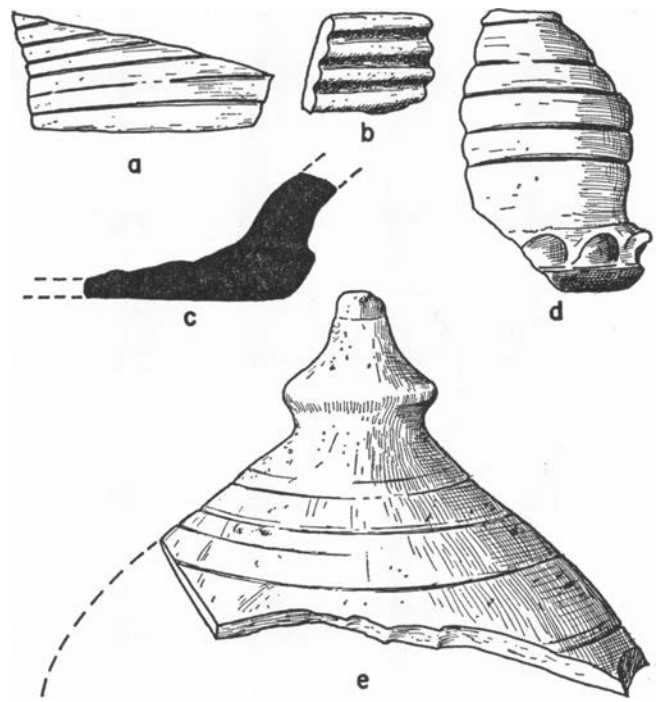

FIG. 13. Rims and bases of miscellaneous wares, Site 21 (Peshawarun).

were outlined. Some of the bricks were painted white and blue. The pottery was unpainted, generally brown, red, or gray. Bronze was found in the form of three-flanged arrowpoints and a palmette-like ornament.[1] Ghirshman believes that this period is probably Achaemenian.[2] There does not appear to be a clear break between Periods I and II.

In Period II (7.70 to 12.50 meters) a brick wall or platform was encountered. The bricks of the exterior wall measured 13¾ by 13¾ by 3½ inches; those of the interior wall, 22½ by 11 by 3½ inches. The pottery in Period II is especially important. It includes yellow or red jars with some incised decoration,[3] some red paste?, and a number of white or yellow vessels with black and red polychrome painted decorations.[4] Of considerable importance is a group of gray-black wares which seem to be identical with the graywares of Hissar III and perhaps Sialk VIB.[5]

[1] Ghirshman, 1939, 17, Pl. 3.

[2] Or immediately preceding Achaemanian; see Berghe, 1959, 17.

[3] Ghirshman, 1939, Pl. 4, N.A. 34, N.A. 75.

[4] Ghirshman, 1939, Pl. 4, N.A. 80, N.A. 81, N.A. 82, N.A. 84.

[5] Ghirshman, 1939, Pl. 4, N.A. 67, N.A. 85.

Stone objects found included mortars and pestles. Bronze three-flanged arrowpoints and flat spearheads, and several ornamental pieces in bronze and gold, completed the finds in Period II.[6]

During our visit to the Sorh-dagh we collected a quantity of sherds from the surface of the slopes and surrounding ground. Classification of the sherds reveals a large number of pottery types, most of which were not described by Ghirshman, as he did not encounter these types in his limited excavations. The presence of such wares as Prehistoric Painted and Seistan Ribbed suggests that the site was occupied over a long period of time.

Though we are unable to establish the stratigraphic position of these pottery types, a brief description is warranted, as their identification may have eventual value in the tracing of the distribution of periods not yet defined. We suspect that at least some of these types antedate Period II.

Additional pottery types found at Safid-dagh are similarly described.

[6] Ghirshman, 1939, Pl. 5; gold objects illustrated are N.A. 31, N.A. 68.

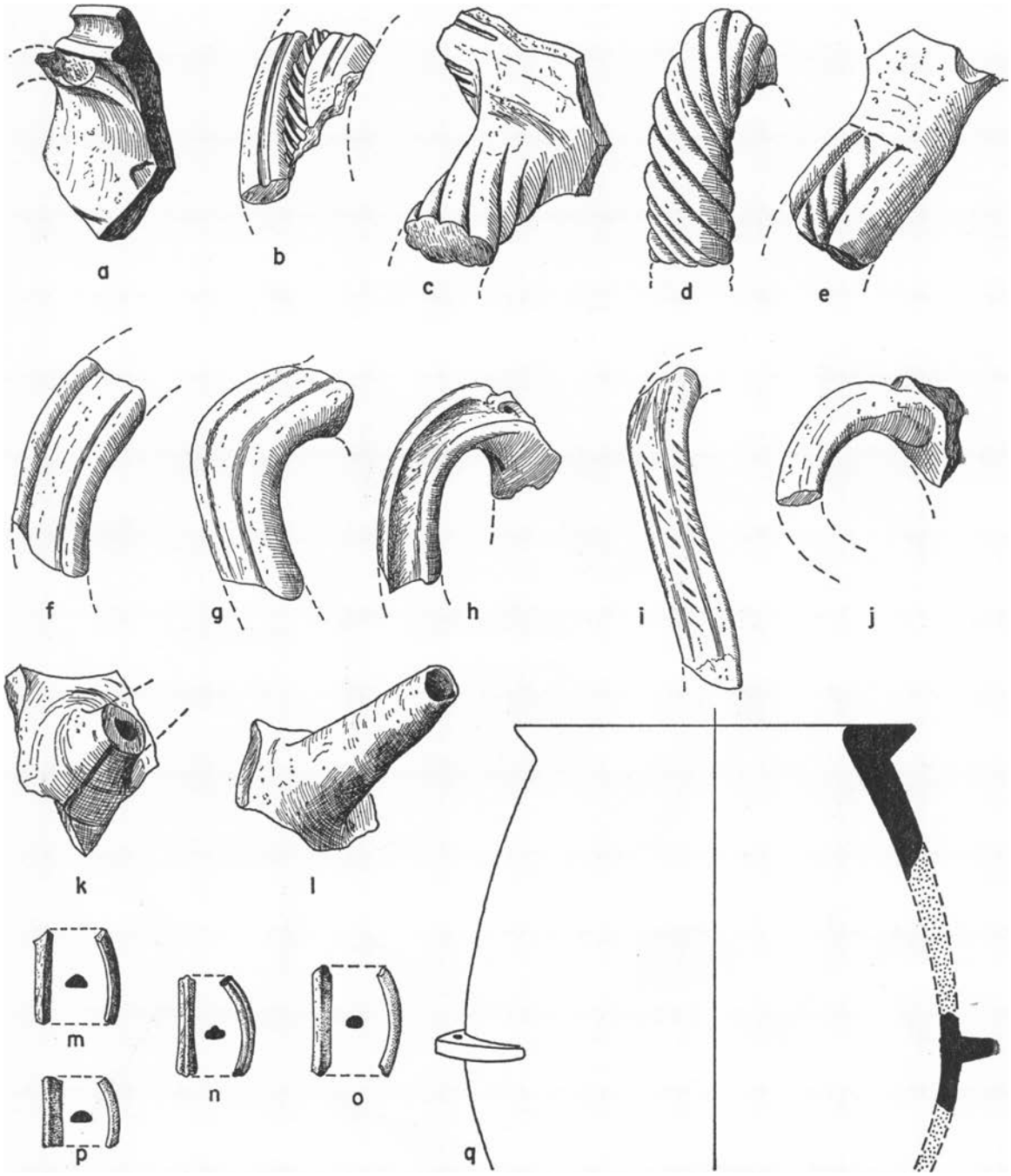

FIG. 14. Handles, spouts, glass bangles, and stoneware, Site 21 (Peshawarun).
a–j. Handles. k–l. Spouts. m–p. Glass bangles. q. Stoneware.

Pottery

Prehistoric Painted ware: Black-on-buff slip fine ware with black-on-dark brown surface (see Gardan Reg Decorated, p. 87).

Seistan Red-band (Fig. 15e-f): A type of painted decoration consisting of a single broad or narrow band on the lip or exterior of a fine paste ware is represented at Na-2 by only two sherds.

Nad-i-Ali Black and Cream (Fig. 15g-j): A fine, occasionally very delicate ware, sometimes fired brown-red. The clay is smooth and homogeneous. The type is identifiable by its decoration which usually consists of red, red-brown, or even black paint enclosing areas of cream or buff slip or designs painted on the slip. Frequently the areas around the geometric designs are unslipped or only faintly slipped, thus defining the cream and red paint areas. The designs are simple geometrics. Occasionally the ware is horizontally grooved on the exterior as if the potter had pushed inward with a single finger as the wheel spun.

Seistan Fine Plain (Fig. 15k-p): A fine plainware very reminiscent of Mian Ghundai Fine Plain. It is usually unslipped, light brown or buff, though reddish examples occur. The paste is smooth and free of conspicuous temper lumps. Occasionally, however, the type is buff slipped, and there are single examples of a dark brown slip and a plum-red slip burnished to a polish. There is some suggestion that pedestal bases occur in this type.

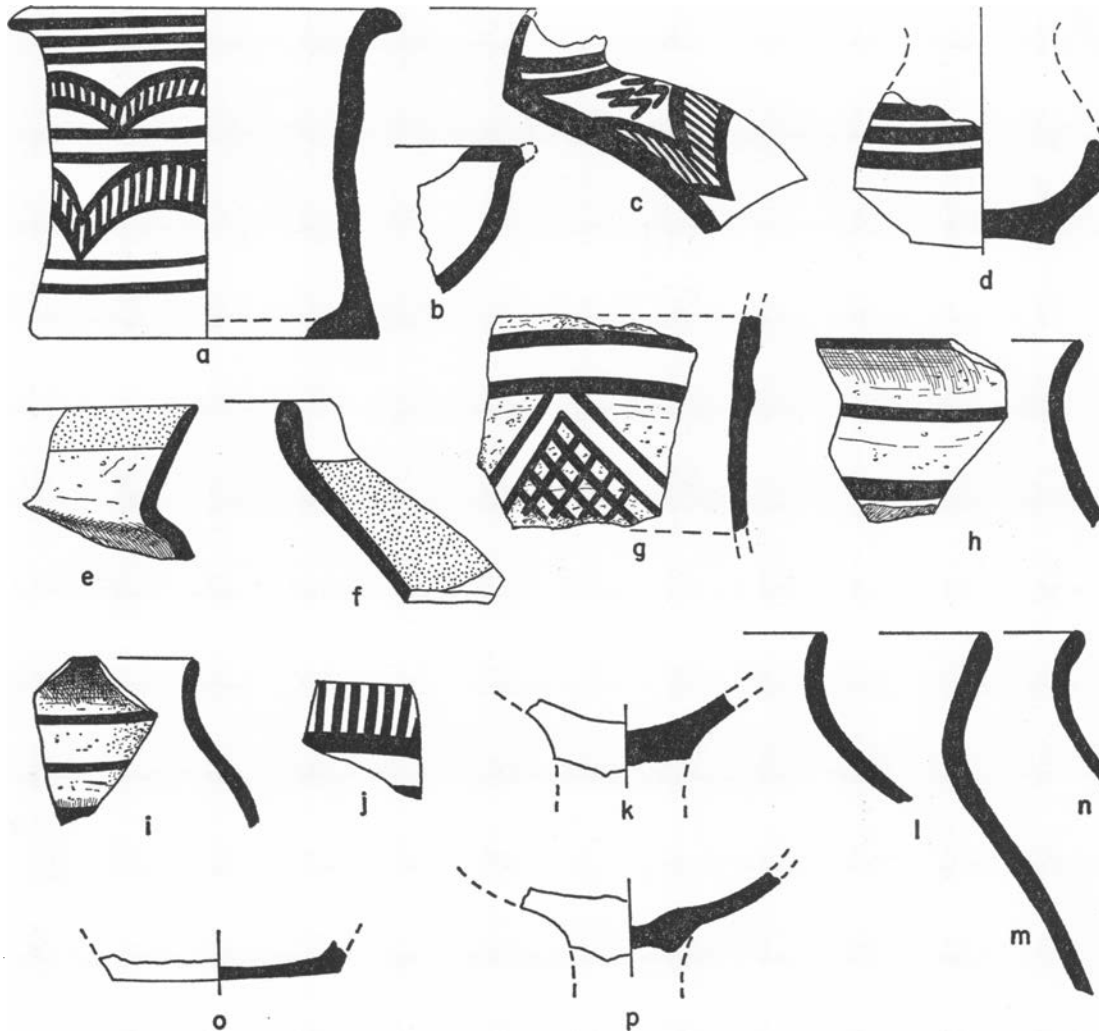

Fig. 15. Rims and bases of various decorated wares, Site 28b (Na-2). a–d. Prehistoric Painted ware. e–f. Seistan Red-band. g–j. Nad-i-Ali Black and Cream. k–p. Seistan Fine Plain.

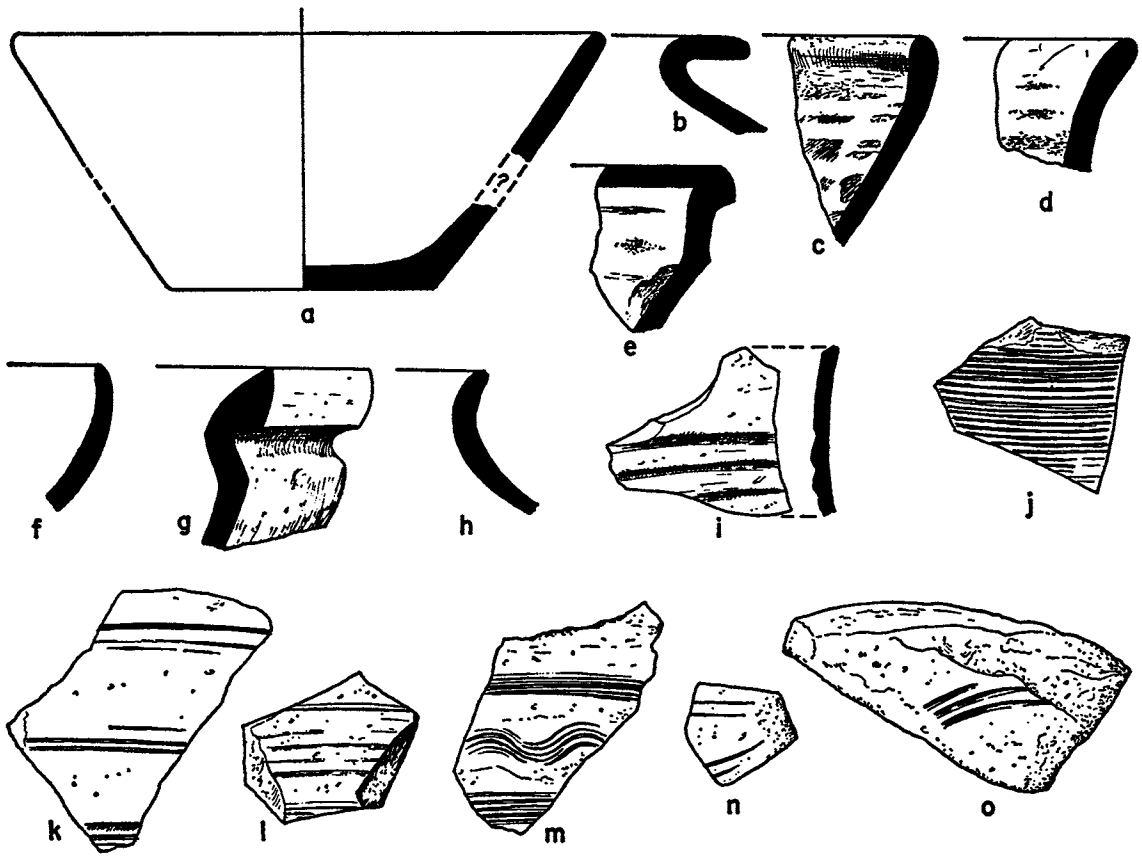

FIG. 16. Rims, bases, and incised sherds of wares from Nad-i-Ali sites. a. Nad-i-Ali Coarse Plain, Site 28b. b–e. Seistan Polished, Site 28b. f–g. Nad-i-Ali Gray, Site 28c. h–i. Nad-i-Ali Gray, Site 28b. j–o. Incised, Site 28b.

Nadi-i-Ali Coarse Plain (Fig. 16a): A few sherds of this type were found at Na-2. The type is characterized by a buff-brown clay. Moderately large black or black-brown particles found abundantly in the paste protrude from both the exterior and interior of this ware which is fairly thin. In some examples it appears to have been somewhat smoothed.

Seistan Polished (Fig. 16b-e): An interesting and important ware because of its possible use in comparative typology. It is characterized principally by the presence of erratic horizontal lines produced by burnishing. These lines appear on the interior and/or rim of open bowls and large-mouthed jars. The paste is smooth and the thickness moderate. The color is light brown, except in the burnished areas where the lines are dark brown or even reddish brown. The identity of some of its rim forms are identical with those of Nad-i-Ali Ridged, suggesting some degree of contemporaneity.

Nad-i-Ali Gray: A very small collection of grayware sherds (Fig. 16h-i) was recovered; only one was a rim sherd. Small as it is, it is sufficient to confirm Ghirshman's recognition of the presence in Seistan of the characteristic graywares of northeastern Iran (Hissar II and III).[1] The ware is of fine clay and is hard fired. It is gray throughout. One sherd is smoothed to a polish on the interior surface. A suggestion of multiple parallel ribs or grooves appears on the exterior surface of one example.

Incised Decorated: A few incised sherds (Fig. 16j-o). The most conspicuous is comb loop incising (Fig. 16m).

Seistan Ribbed ware: Described in the report on the Quetta Valley, in which its wide distribution in the Indo-Iranian borderlands is noted.[2] It occurs at Na-2 very sparsely where only three good and two possible examples were found. This seems to be evidence of a very minor occupation during the vogue of ribbed pottery.

[1] Ghirshman, 1939.
[2] Fairservis, 1956a, 340.

Nad-i-Ali Plain (Fig. 17a-e): A possible close relative, if not merely a variant of Seistan Fine Plain, characterized by a similar fine paste and thin-walled structure. It parallels that type in all respects except form.

Nad-i-Ali Thick ware (Fig. 17g-j): A small number of rim sherds indicates that large thick-walled vessels were used at one time. These vessels were made of a smooth clay with no trace of temper. The vessels are light brown, reddish, or buff and seem to have been

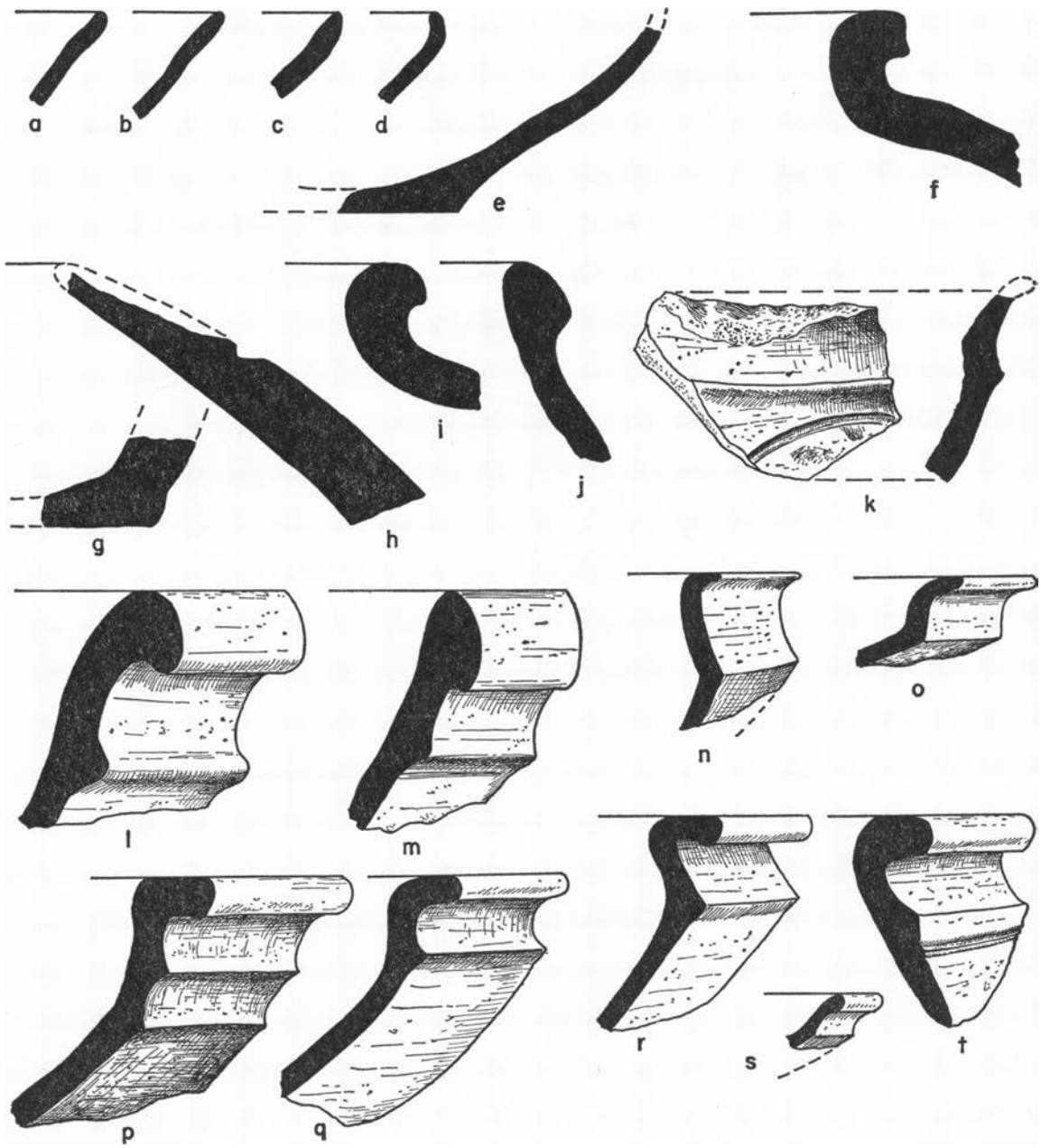

FIG. 17. Rims and bases of wares from Nad-i-Ali sites. a–e. Nad-i-Ali Plain, Site 28b. f. Na-1 Gray, Site 28c. g–j. Nad-i-Ali Thick ware, Site 28b. k. Nad-i-Ali Ridged, Site 28b. l–m. Nad-i-Ali Ridged, Site 28b, Rim Type 2. n. Nad-i-Ali Ridged, Site 28b, Rim Type 1A. o–t. Nad-i-Ali Ridged, Site 28b, Rim Type 1B.

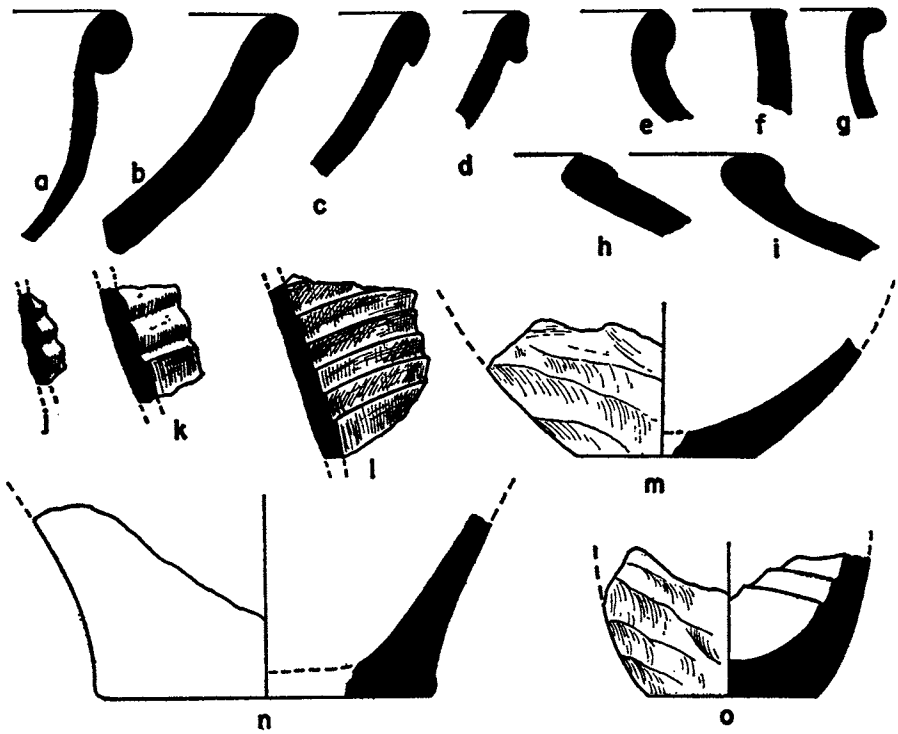

FIG. 18. Rims and bases of various wares, Site 28b. a–d. Nad-i-Ali Rolled. e–i. Nad-i-Ali miscellaneous large-mouthed jars. j–o. Miscellaneous types.

flat based. One sherd (Fig. 17j) suggests that black slips were occasionally used, though its rim is different from anything found at the site.

Nad-i-Ali Ridged ware (Fig. 17k): One of the most common and striking types found at Nad-i-Ali, characterized by a single or multiple raised ridge just below the lip of the vessel. The principal form appears to have been a large open bowl.

There seem to have been two rim types. One, a flat rim horizontal to the base (Fig. 17n-t), had two variants: the first (Fig. 17n), with a fine knife-like edge to the lip, usually occurs on the smaller bowls, and the second is (Fig. 17o-t) a rolled lip quite common to the larger, heavier vessels. In the second rim type, (Fig. 17l-m), the lip is pulled back and down almost at a right angle to the rim. The clay is buff-brown, though occasionally reddish brown. The paste is generally smooth and varies from quite thin to moderately thick. The ware is usually undecorated, but one example has a red slip; another has simple loop incising.

Nad-i-Ali Rolled: A series of sherds from open bowls without ridges (Fig. 18a–d), probably related to Nad-i-Ali Ridged. The paste is similar to that of the ridged type.

Miscellaneous Nad-i-Ali large-mouthed jars: A variety of rims of rather fine paste, free of temper particles, and varying in thickness from moderately thin to quite fine (Fig. 18e–i). These are probably rims from one or another of the fine ware types defined at Nad-i-Ali, but it is difficult to make a specific determination.

Miscellaneous pottery: A number of pottery types are represented by only one or two sherds (Fig. 18j-n), too few for proper description. Therefore, the following notes must serve.

1. A greenish buff ware with thin walls, almost certainly of the same family of wares represented by Mian Ghundai Buff Plain.[1]

2. A base sherd of reddish brown, sandy clay with small fragments of what I have called hard-clay temper.[2] It may be buff slipped.

3. A fine, smooth, reddish clay sherd burnished along its exterior, but not burnished to a polish.

4. A coarse, but quite thin, black paste sherd with large pebbly temper particles is buff slipped on the exterior.

5. A small group of hard-fired, gray-black sherds. Some of these exhibit pock marks as if gas had escaped during the firing. There is an example of

[1] Fairservis, 1956a, 242.
[2] Fairservis, 1956a, 249.

what appears to be a black slip on the interior, a reddish paste at the base. It is also grooved or ribbed (Fig. 18o). These sherds appear to be unrelated to Nad-i-Ali Gray.

6. Two examples of black slip over red-brown clay; both bear evidence of grooving or ribbing on the slipped side (one interior, one exterior; Fig. 18k-l).

7. Two glazed sherds; heavy, thick examples apparently from a large open bowl. The clay is quite smooth, and the bright blue-green glaze is on the interior.

8. Smooth paste, rather fine reddish or buff-brown sherds representing apparently high-walled vessels. Some of these sherds are ribbed horizontally along the interior. The sherds generally exhibit cutting marks, as if the vessel had been trimmed with a flat tool before being fired (Fig. 18m-o).

Artifacts

Fragments of the following artifacts were found during the surface survey of Na-2:

Alabaster bowls
Green and blue glass
Copper
Iron; one apparently from a hollow shaft
Cuprous slag
Stone: Flat, slate-like, and eroded knife or cutting tool; corner of a block of polished limestone, perhaps a facing block; rosy limestone which may have been shaped into a disc-like form; calcite
Unidentifiable animal bone

Site 28c, Na-1: About ½ mile south of the Red Mound is the White Mound, or Safid-dagh (Safedik).

Pottery

The following pottery types identified at Na-2 also occur at this site:

Ribbed wares
Prehistoric? painted wares (Fig. 19a-g)
Black-slipped sherds similar to those of Na-2
Sherds of Nad-i-Ali Gray, one of which may represent a later grayware (Fig. 16f-g)
Rim of Seistan Fine Plain
Sherd of Nad-i-Ali Coarse Plain
Sherd, apparently of the same type as at Na-2, Miscellaneous 3
Blue-green glazed sherds somewhat paler in hue than those of Na-2
Fragment of simple loop incising
Sherd of what appears to be an example of Miscellaneous 6, Na-2

Ceramic types not identified at Na-2 include: A single sherd of black on green-blue glaze, the black design consisting of roughly parallel lines; sherd with dark gray-black glaze on both surfaces and a suggestion of glaze appliqué decoration; examples of bands consisting of multiple parallel incised lines probably produced by an incising instrument held against the clay as the vessel was spun; a single example of Ring ware,[1] consisting of the major portion of a ring base incised with a potter's mark (Fig. 19h); heavy gray rim sherd of fairly smooth paste with occasional lumps of pebble temper, surface somewhat round, sherd gray throughout, possibly a variant of Nad-i-Ali Thick ware rim types (Fig. 17), called Na-1 Gray; a rather fine buff or cream-slipped ware, closely parallel in type, color of paste, and slip to Nad-i-Ali Black and Cream ware but lacking any suggestion of black paint; limey clay sherd with slight parallel ridges on the interior; a distinctive coarse type, named Kala Kang Raised (Fig. 19k-n), characterized by what may be deep closed-mouth bowls with shouldered rims often closely outlined by grooving just below the exterior ridge, paste rather smooth and somewhat sandy, ranging from a somewhat reddish brown to a greenish black, apparently overfired in the latter case.

Site 29, Ghulghula: Extensive ruins exist in the deserted, arid depression between the Helmand main stream and the bluffs of Dasht-i-Margo, south of Chakansur in Afghan Seistan. Apparently this tract was irrigated in ancient times by an extensive canal system that penetrated to the "Jehannum" neck on the extreme south.[2] The northern part of the tract, generally called Ghulghula, probably includes the fort of Sohren-Kalat and the more recent fort of Koken-Kalat, as well as the forts of Shahr-i-Kalan and Kurdo. The first two and Kurdo are probably of Islamic times.

Site 30, Sar-o-Tar (Tak): The extensive ruins of Sar-o-Tar are located in the southern part of the tract. The site has been visited by the English[3] and by the French.[4] While no descriptions of pottery are available, coins of the Parthian, Sassanian, and Early Islamic periods have been found there.[5] We were able to purchase Parthian coins and a piece of animal-ornamented glass, all of which were said to have come from ruins in the region east of Camp Despair which presumably referred to Sar-o-Tar or other ruins in that tract (Pl. 19).

Ruins on the east bank of the Helmand are

[1] Dupree's Red Streak Pattern-Burnished ware; see Dupree, 1958.

[2] For a description of irrigation remains, see Tate, 1910–1912, Vol. 1, 140 ff.

[3] Tate, 1910–1912, Vol. 1, 224 ff.

[4] Hackin, Carl, and Meunié, 1959.

[5] Tate, 1910–1912, Vol. 1, 141.

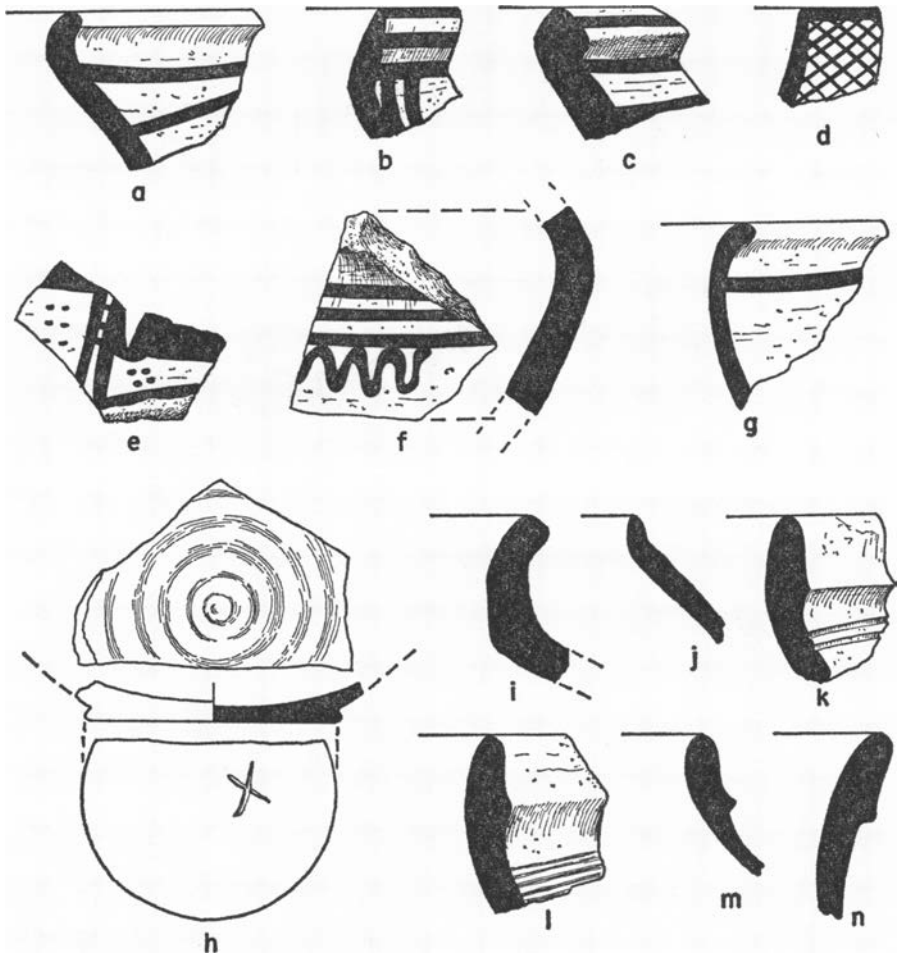

FIG. 19. Rims and bases of miscellaneous wares, various sites. a–g. Painted wares, Site 28c. h. Ring ware (Red-Streaked Burnished), Site 28c. i–j. Nad-i-Ali Coarse Plain?, Site 37. k–n. Kala Kang Raised, Site 28c.

numerous but do not seem to be very ancient. The fertile area along the Helmand south of Nad-i-Ali is gradually pinched between the river in the west and the sandy desert on the east until, in the vicinity of Pada-i-Sultan, the desert is within a few hundred yards of the river. The road actually ascends onto a gravelly desert bluff which provides fine driving until it returns to the silt plain a few miles south of Kala-i-Fateh. South of this partially ruined but still occupied fort the road continues on a bluff above the river flood plain. A part of this bluff is cultivated when rains are heavy, but for the most part it is desert.

SITE 31, CAMP DESPAIR: A small ruined village about 4 miles south of Nad-i-Ali, just west of the main road to Kala-i-Fateh.

SITE 32, KALA-I-FATEH: This is a crumbling fortress and ruined city, the former still occupied by an Afghan garrison. The place was of some importance in Late Islamic times as one of the capitals of Seistan.[1] We did not collect at this site.

SITE 33, KF-1: This site, just east of the Kala-i-Fateh and Chahar and Burjak Road 11 miles south of Kala-i-Fateh, consists of a group of three small mud-brick buildings about 75 yards apart in the midst of a burial ground.

[1] Tate, 1910–1912, Vol. 1, 245 ff.; also 63 ff.

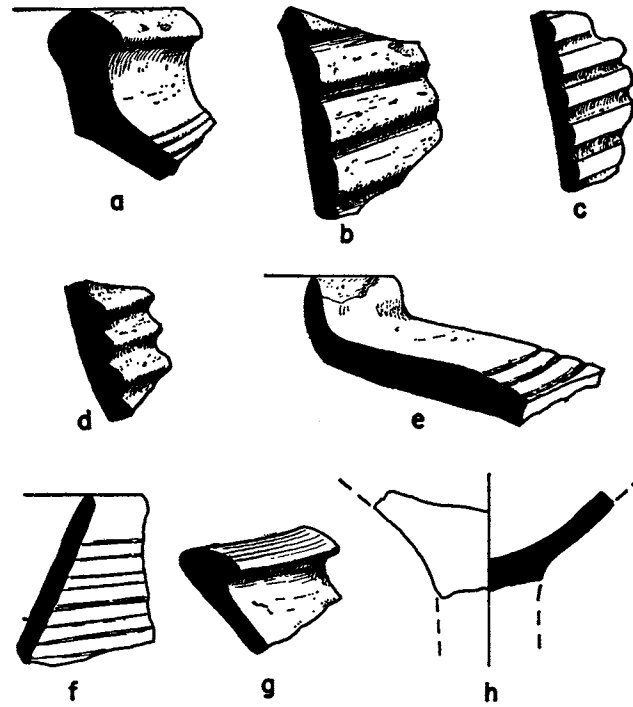

FIG. 20. Rims of decorated wares, Site 34. a–e. Seistan Ribbed ware. f–h. Ring ware (Red-Streaked Burnished).

Most of the burials are in small, vault-roofed mud-brick tombs 3 feet wide and 8 feet long. The tombs are oriented northeast-southwest. The ruins are Islamic and, to judge from their condition, Late Islamic.

SITE 34, KF-2: A mound about 25 feet high, 150 feet wide, 225 long is located about 12 miles south of Kala-i-Fateh, 150 yards east of the Chahar and Burjak Road. There are the remains of a tower-like building in the southeast corner of the site.

Ribbed wares occur in great abundance at this site (Fig. 20a–e). Ring ware (Red-Streaked Burnished) is fairly abundant (Fig. 20f–h). There are a very few examples of simple blue-green glaze and one example of a dark maroon on bright blue-green glaze on the interior and lip of a deep open bowl.

A single example of rope banding occurs on a thick sherd characterized by a fairly smooth paste (Fig. 21a). As a result of the firing, the exterior surface is red, and the core and interior are gray-brown. A curious sherd has raised bands incised with slight diagonal clefts (Fig. 21b). Another, which appears to be an example of Ribbed ware, has horizontal pock marks below the ribbed area (Fig. 21c).

Unusual at this site is a group of smoothed, dark-brown sherds from open bowls or jars. I have called this type Kala Fateh ware (Fig. 21d–i). The traces of burnishing suggest a probable relation to Red-Streaked Burnished ware.

Artifacts found include slag and a fragment of light-green glass.

SITE 35, KF-3: A tall, well-preserved, mosque-like building is located about 14 miles south of Kala-i-Fateh, some 100 yards to the north of the Chahar and Burjak Road.

Several examples of Ribbed ware were found here. There are also examples of sherds glazed in light-green to deep-blue colors. A very light blue-green and black or dark-blue glaze occurs on what may be the bottom of an open bowl. One sherd of fine grayware, remarkably like Nad-i-Ali Gray in composition, should be noted. However, its rim form would appear to preclude its assignment to that type (Fig. 21j).

Two dentate-marked sherds are of interest: a spout of fine reddish brown clay with a buff slip (Fig. 21l), and an unusual rim in red-brown

clay with fine hard-clay temper (Fig. 21k). Lastly, a group of three handles deserves mention: one, fine reddish clay with double-grooved exterior surface (Fig. 21n); one, light brown fine clay (Fig. 21o), slipped purplish red and finger-tip grooved, raising a ridge up the middle; and one, buff clay, thinner than the previous two but with the middle ridge (Fig. 21m).

SITE 36, KF-4: A complex of some 20 or 30 small buildings in various stages of ruin, on the road some 15 miles southeast of Kala-i-Fateh.

Ribbed ware occurs in great abundance at

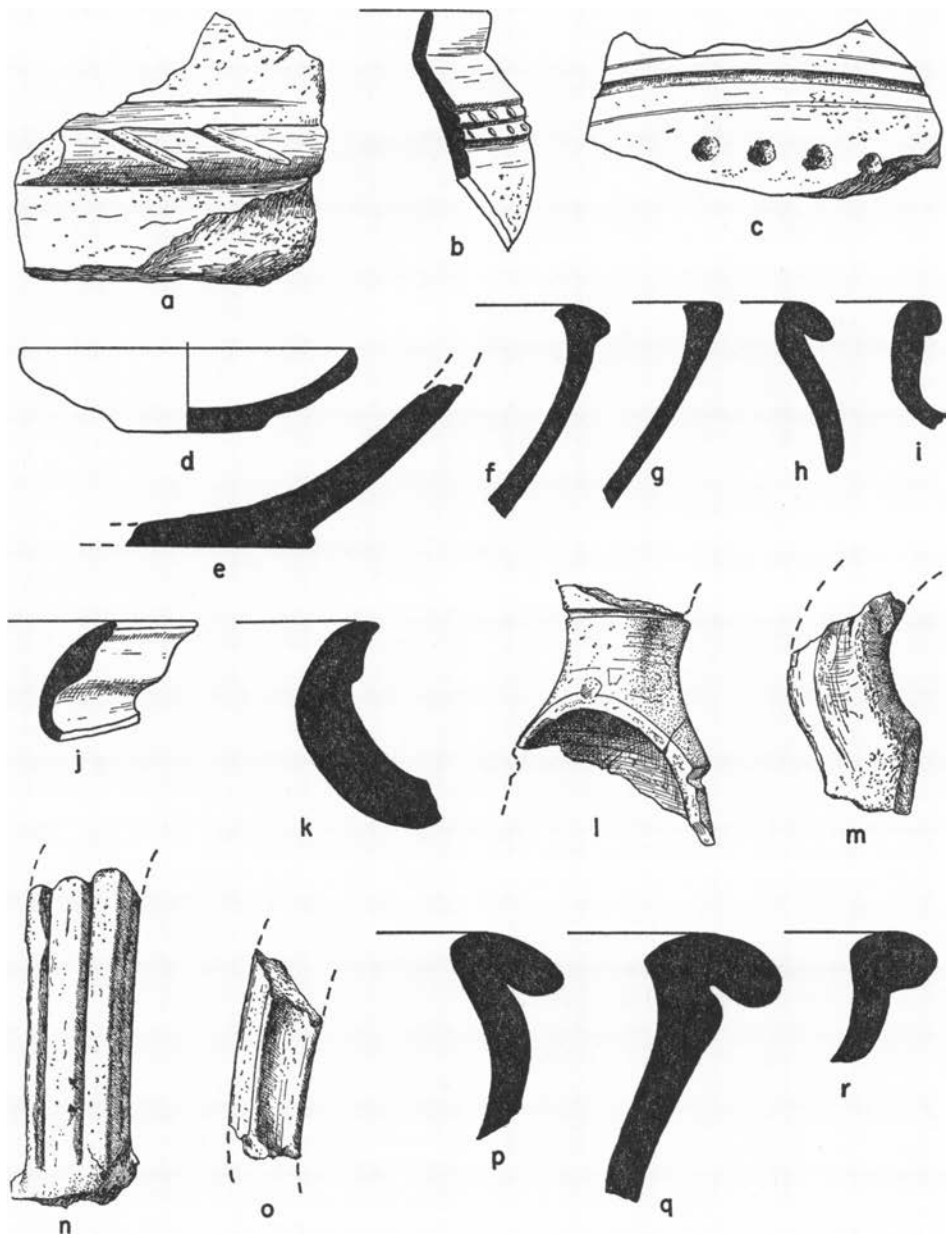

FIG. 21. Various wares found in Helmand River sites of southern Seistan. a–c. Incised and punched types, Site 34. d–i. Kala Fateh ware, Site 34. j–k. Miscellaneous types, Site 35. l. Spout, Site 35. m–o. Handles, Site 35. p–r. Helmand Rolled, Site 36.

this site. One form of ribbing consists of close parallel grooves marked by a barely discernible ridge. This may constitute a different type of banded decoration or a degeneration of the ribbed technique. Both blue and blue-green glazes are represented; some designs are in black glaze. An example of black-on-white glaze and one of black-on-green glaze were found. One sherd with a black slip and three with a smooth reddish slip were found at the site. One sherd with a highly polished brown on orange-brown paste may well be modern, as it suggests some of the types observed in the bazaar.

Incised decoration includes single loop incising, comb incising, dashes, multiple parallel bands, vertical strokes, dentate stamping, and a few examples of meander and crisscross.

A long, tapering spout of buff clay and finger-tip smoothed is of some interest. Four handles were recovered. The largest bears parallel incised marks; the remainder are fairly smooth on the exterior, though finger-tip pressures are visible. On the under side of two of these handles, both buff slipped, there is a single medial ridge.

Another type found at this site is Kala Kang Raised.

Apparently related to Kala Fateh ware in rim type but not in polish or composition is a group of sherds which I have named Helmand Rolled. This ware is made of a smooth brown or red-brown clay. The shapes are characterized by a rounded rim that tends to overlap on both sides of the wall of deep open bowls (Fig. 21p–r).

Sherds from a vessel (?) of bluish stone were recovered. The exterior surfaces of several exhibit parallel markings, apparently the result of cutting to form the vessel. Parallel grooves are also cut on the exterior surface as if to decorate by repeating grooves in a band around the vessel.

SITE 37, KF-5: Located approximately 5 miles northwest of Kala-i-Amir is a semicircular mound. Its longest axis is in a northwest-southeast direction. It is about 25 feet high at its highest point.

The ware type of Kala Kang Raised occurs in some quantity at this site. Three coarse-tempered sherds suggest the presence of Nad-i-Ali Coarse Plain, though the rim form is unfamiliar in this type (Fig. 19i–j). One body sherd has a textile impression.

An interesting band-incised sherd has a meandering wave-like decoration. Two fragments of black or purple on white glaze were recovered. One is a piece of the rim of an open bowl. One rim sherd of a small-mouthed jar made of smooth brown clay with traces of fine hard-clay temper was found.

SITE 38, KALA-I-AMIR: A high, fortress-like building is located about 4 miles west of Chahar Burjak on the edge of the Helmand River flood plain. The site is said to have been abandoned in the eighteenth century. The American Museum of Natural History expedition used it as a base camp because of its proximity to the Rud-i-Biyaban.

CHAHAR BURJAK AND VICINITY

In the vicinity of Kala-i-Amir are numerous building mounds, all apparently late Islamic. No early Islamic or pre-Islamic objects were found in the Chahar-Burjak bazaar or brought in by local villagers, thus confirming the paucity of such remains in the area.

SOUTHERN PORTION OF IRANIAN SEISTAN

Sir Aurel Stein's report on his brief visit to the sites of the southern portion of Iranian Seistan remains the only definitive archeological account of the area.[1] The country is now poorly watered, though there are indications that there was more abundant moisture in earlier times (p. 20). The modern population is very sparse and consists largely of herders and the border patrols.

SITE 39, SHAHR-I-SOKHTA: The "burnt town" is an extensive prehistoric deposit of pottery, bronze, stone, and other materials, $7\frac{1}{2}$ miles northeast of Hauzdar in the bay of the *dasht* escarpment. The site itself is on a mesa-like island of clay detached from the escarpment wall.[2]

The artifacts are heavily massed, because the wind has eroded the surrounding fill. This phenomenon is very common in Seistan, and it effectively militates against a stratigraphic differentiation of the cultures represented by the artifacts. Stein found "a soft stratum of loose disintegrated clay," red in color, but did

[1] Stein, 1928, Vol. 2, 943 ff.
[2] Stein, 1928, Vol. 2, 954 ff.

not describe any specific artifacts other than bone as coming from this layer. The stratum is about 12 to 18 inches in thickness, beneath which is a virgin clay soil or *sir*.[1]

Large quantities of black-on-buff painted pottery were found at the site, but not "a single piece of glazed pottery of any kind."[2] Alabaster bowls were found in profusion, and some bronze objects and a lignite seal fragment were collected, as were some stone beads.[3]

SITE 40, HAUZDAR: This site consists of a fortified enclosure surrounding a water tank with a gate on the eastern side. Small huts cluster around a large building. According to local tradition, the site was abandoned in the nineteenth century.[4]

SITE 41, KUNDAR: A small fortified village some 4 miles southwest of Hauzdar; also probably abandoned in the nineteenth century.[5]

SITE 42, AKHUR-I-RUSTAM: A low mound with a central brick-work structure rising about 23 feet above the mound. The ruins of a low, brick, oval enclosure occur close to the central structure. Stein's pottery collections suggest several periods of occupation. Prehistoric occupation is indicated by painted pottery and fragments of stone vessels.[6] The structures on the mound are historic as indicated by associated finds of glazed wares, Seistan Ribbed pottery, and other historic wares.[7] Iron objects were also found at the site.[8]

SITE 43, PAI-KASH-I-RUSTAM: An irregularly shaped enclosure surrounded by a massive earthen rampart. Its purpose is unknown. Just outside an opening in the northeast is a small, brick, "massively built rotunda" which had once supported a dome. The pottery found around the rotunda is mainly Seistan Ribbed, but glazed, undecorated sherds in blue, green, and white were also found. Coarse green glass and some bluish frit were gathered. Of great importance was a silver Sassanian coin of Queen Boran (630–631 A.D.) found about 3 feet from the northern base of the rotunda.[9]

SITE 44, MACHI: The remains of a large village, some 2 miles southeast of Hauzdar, said to have been last occupied during the early portions of the nineteenth century.[10] Several ruins near Machi appear to be Late Islamic. These include a windmill (*chigini*) and a fortified mansion.

SITE 45, MACHI MOUND: Some 2 miles south-southwest of the fortified mansion is a mound about 20 feet high, about 240 feet long, and 90 feet wide. Moslem graves have been dug into the top of the mound. Stein mentions plain redware of the type associated with Ghaghashahr and Shahristan, and prehistoric painted pottery. A few fragments of blue-glazed pottery were also collected. Some glass was also found.[11]

SITE 46, RAMRUD: A series of ruined buildings inside a walled enclosure,[12] about 1½ miles east of Girdi Ghah post. Apparently the latest occupation of the site was in the early part of the nineteenth century. There are other apparently late structures in the vicinity.[13]

SITE 47, KALAT-I-GIRD: A circular, bastioned fort about 3 miles southeast of Ramrud. Stein believes that a walled-off area in the western part of the enclosure represents a later occupation, because the ruins here are better preserved than those elsewhere on the site. As regards the pottery, Stein noted that "within the inner enclosure fragments of manifestly late glazed pottery were far more common than in the walled area outside."[14] On the other hand, very little Seistan Ribbed was found in the main enclosure; the principal pottery there was the plain red type. Quantities of prehistoric painted pottery were also found.[15] Seven Moslem coins,

[1] Stein, 1928, Vol. 2, 954.

[2] Stein, 1928, Vol. 2, 954. For a description of painted pottery, see Stein, 1928, Vol. 2, 971–972.

[3] Stein, 1928, Vol. 2, 954. For examples of pottery, see Stein, 1928, Vol. 3, Pl. 113, S.S. 050, S.S. 051, S.S. 01, S.S. 074, S.S. 0119, S.S. 0107, S.S. 048, S.S. 09, S.S. 085, S.S. 024, S.S. 04, S.S. 015, S.S. 026; Pl. 114, S.S. 014, S.S. 0121, S.S. 0105, S.S. 0101, S.S. 05, S.S. 066, S.S. 06.

[4] Stein, 1928, Vol. 2, 944.

[5] Stein, 1928, Vol. 2, 944.

[6] Stein, 1928, Vol. 2, 959, Akh. 01, 2, 19, 23; Akh. 09, 11–13, 16; Akh. 017–8.

[7] Stein, 1928, Vol. 2, 945; Vol. 3, Pl. 115, Akh. 05, Akh. 010, Akh. 014.

[8] Stein, 1928, Vol. 2, 945.

[9] Stein, 1928, Vol. 2, 945–946; coin illustrated in Vol. 3, Pl. 120, no. 20; plan of site, Vol. 3, Sketch Plan 57.

[10] Stein, 1928, Vol. 2, 946–947.

[11] Stein, 1928, Vol. 2, 947; also list on 959–960, but this is not all from Machi Mound; Vol. 3, Pl. 113; Machi. 05, Machi. 010–011.

[12] Stein, 1928, Vol. 2, 947; Vol. 3, Sketch Plan 57.

[13] Stein, 1928, Vol. 2, 947.

[14] Stein, 1928, Vol. 2, 948; Vol. 3, Sketch Plan 57.

[15] Stein, 1928, Vol. 2, 961, K.G. 07.a; Vol. 3, Pl. 113, K.G. 0135, K.G. 039, K.G. 055, K.G. 033, K.G. 0131, K.G. 011, K.G. 047, K.G. 032, K.G. 058; Pl. 114, K.G. 029, K.G. 028, K.G. 010, K.G. 0137, K.G. 09, K.G. 0120,

two of which have been dated, were recovered in the outer enclosure.[1] Stein believes the inner enclosure is not so recent as Machi or Ramrud.[2] He also noted other ruins near Kalat-i-Gird which, on the basis of brick size (p. 91) and the state of erosion, he believes to be of the fourteenth century.[3]

SITE 48, GUMBAZ-I-SHAHI (KALATI-I-TAGHAZ): A group of domed tombs in a graveyard about 1 mile west of Kalat-i-Gird. For the reasons mentioned above, Stein believes that these tombs and some additional ruins, about 3 miles southeast of Kalat-i-Gird, belong to a later period of occupation, but manifestly not so late as Machi and Ramrud.[4]

RUD-I-BIYABAN DELTA

The delta of the Rud-i-Biyaban fans westward from the Afghan frontier and when watered in prehistoric times must have supported a sizable population. The artifacts of the prehistoric sites have acted as a shield against the extensive wind erosion. As a result, the sites stand out as dark mesas, usually somewhat higher than the natural mesas formed by wind action. In historic times these mesas were frequently used as foundations for limes, towers, and small dwellings. Stein, who collected from many of these mesas, describes his finds in his report.[5] He found 25 of these sites, which he designated R.R.

SITE 49, R.R. 1 (JANGAR-I-HAJI): Located 3 miles northeast of Ramrud. The prehistoric finds include painted pottery, fragments of alabaster jars, and arrowheads.[6] Seistan Ribbed ware and fragments of glazed pottery and glass occur.[7]

SITE 50, R.R. 2: A large collection was made at this site which is about 1 mile northeast of R.R. 1. The site is about 420 feet long by 300 feet wide. Stein not only collected quantities of prehistoric artifacts but encountered a large amount of slag as well; the latter indicates good sources of copper nearby, perhaps one reason for the occupation of the area.[8]

SITE 51, TASUKI WELLS SITES: A group of sites observed by Stein but not visited by him, located west of R.R. 1 and R.R. 3. Objects brought to Stein by his water carriers probably came from these sites. Although most of the objects appear to be prehistoric, the series also included glass, bronze, and glazed wares.[9]

SITE 52, R.R. 3: A mound about 3 miles northeast of R.R. 2, approximately 300 feet square, is thickly covered with prehistoric pottery.[10]

SITE 53, R.R. 4 (BURJ-I-CHAKAR): A massive ruin about 2 miles east-northeast of R.R. 3. No prehistoric remains were found here. Stein identifies this building as one of the watch stations on the ancient limes.[11]

SITE 54, R.R. 5: This site, another watch tower of the limes, but located on a prehistoric site, is about 3 miles north-northeast of R.R. 4. Most of the pottery and stone implements found there are prehistoric.[12] Fragments of glass and of green glazed pottery probably belong to the watch tower.[13]

SITE 55, R.R. 6: The site, 1½ miles east-southeast of R.R. 5, consists of a mound over which prehistoric artifacts, including painted pottery, alabaster vessels, and arrowheads are scattered.[14]

K.G. 01.a, K.G. 0127, K.G. 08; Pl. 115, K.G. 0223, K.G. 0229, K.G. 024, K.G. 091, K.G. 092, K.G. 06; Pl. 116, K.G. 0286, K.G. 0207, K.G. 02.a, K.G. 0208, K.G. 0295, K.G. 0209, K.G. 0305, K.G. 0303, K.G. 0306, K.G. 0169, K.G. 0174, K.G. 0175, K.G. 0178, H.G. 0179; Pl. 118, K.G. 0182, K.G. 0145, K.G. 0143, K.G. 0250, K.G. 0155, K.G. 084, K.G. 0241, K.G. 0260, K.G. 083, K.G. 0264, K.G. 0100, K.G. 088, K.G. 0239, K.G. 0237, K.G. 086, K.G. 0144, K.G. 0261, K.G. 099, K.G. 0108, K.G. 095, K.G. 0153, K.G. 0146, K.G. 0249, K.G. 0148, K.G. 0245, K.G. 081, K.G. 0154, K.G. 0246, K.G. 098.

[1] Stein, 1928, Vol. 2, 948. One coin is dated 692 A.H., or 1293–1294 A.D.; the other was issued by Qutb-ud-din Shah of Nimroz (Seistan), 1331–1383 A.D.; Vol. 3, Pl. 120, Fig. 21.

[2] Stein, 1928, Vol. 2, 948.

[3] Stein, 1928, Vol. 2, 948.

[4] Stein, 1928, Vol. 2, 949.

[5] Stein, 1928, Vol. 2, 949–979; Vol. 3, Pls. 112–116.

[6] Stein, 1928, Vol. 2, 951, 963–964; Vol. 3, Pl. 112, Mound I.043, Mound I.046, Mound I.047, Mound I.048; Pl. 113, Md.(R.R.) I.011.

[7] Stein, 1928, Vol. 2, 951; Vol. 3, Pl. 118, Mound I.029, Mound I.022.

[8] Stein, 1928, Vol. 2, 951, 964–965; Vol. 3, Pl. 113, Md.(R.R.) II.018, Md.(R.R.) II.07, Md.(R.R.) II.03, Md.(R.R.) II.040; Pl. 114, Md.(R.R.) II.037, Md.(R.R.) II.027, Md.(R.R.) II.02, Md.(R.R.) II.021.

[9] Stein, 1928, Vol. 2, 951, 967–968; Vol. 3, prehistoric artifacts, Pl. 114, R.R. 068; historic artifacts, Pl. 115, R.R. 01.

[10] Stein, 1929, Vol. 2, 951, 965–966; Vol. 3, Pl. 113, R.R.III.03, R.R.III.018, Md.(R.R.) III.04, R.R.III.05, R.R.III.015, R.R.III.011; Pl. 114, R.R.III.016, R.R.III.010, R.R.III.013; Pl. 116, R.R.IIIM.III.01.

[11] Stein, 1928, Vol. 2, 951–952; Vol. 3, Plan 59.

[12] Stein, 1928, Vol. 2, 952, 968; Vol. 3, Pl. 112, R.R.V.09, R.R.V.010.

[13] Stein, 1928, Vol. 2, 952; Vol. 3, Plan 59.

[14] Stein, 1928, Vol. 2, 952, 968; Vol. 3, Pl. 112, R.R.VI.01,

SITE 56, R.R. 7: Another mound with steep slopes rising about 25 feet above the plain level is about 2 miles east-southeast of R.R. 6. Most of the prehistoric remains found were scattered around its base.[1]

SITE 57, R.R. 8–10: A cluster of three mounds, located less than 1 mile southwest of R.R. 7; all were prehistoric occupation sites.[2]

SITE 58, R.R. 11: Another mound, 1 mile south of R.R. 8–9, contained objects indicating a prehistoric occupation. The most interesting of them is a bronze compartmented seal.[3]

SITE 59, R.R. 12: The ruins of a watch tower of the limes, erected on a prehistoric site, are located about 1½ miles southwest of R.R. 11. An iron knife found here may possibly date from the time of the town occupation.[4]

SITE 60, R.R. 12A: Another watch tower built on a mound covering a prehistoric occupation site is located about 1 mile south-southeast of R.R. 12.[5]

SITE 61, R.R. 13: A ruined watch tower built on a prehistoric site about 1 mile south of R.R. 12a.[6]

SITE 62, R.R. 14: A ruined watch tower on a delta branch of the Rud-i-Biyaban about ½ mile south of R.R. 13.[7]

SITE 63, R.R. 15: A late Islamic ruin on the top of a prehistoric site about 1½ miles northwest of R.R. 5. Late Moslem glazed wares, probably associated with the building, as well as prehistoric remains, were found here.[8]

SITE 64, R.R. 16: A ruined watch tower of the limes, 1½ miles northwest of R.R. 17.[9]

SITE 65, R.R. 17: Stein calls this site "a small castrum with a central fort." It is about 1½ miles south-southwest of R.R. 5. Prehistoric painted pottery and fragments of alabaster vessels were found beyond the limits of the fort, "while within the potsherds were mainly coarser plainware."[10]

SITE 66, R.R. 18: A watch tower on a prehistoric site about 2 miles northwest of R.R. 16. A fragment of a triangular bronze arrowhead was found in its ruins.[11]

SITE 67, R.R. 19: A ruined watch tower about 3 miles northwest of R.R. 18. Combed decorated ware was found here.[12]

SITE 68, R.R. 20–21: Ruined watch towers less than ½ mile from each other on each side of a branch of the Rud-i-Biyaban somewhat less than 1 mile south-southwest of R.R. 14.[13]

SITE 69, R.R. 22–25: A group of watch stations extending east-southeast of Border Post 16 (Afghan Seistan) was cursorily surveyed by Stein. No prehistoric artifacts were encountered here.[14]

SITES IN RUD-I-BIYABAN AREA LOCATED BY MUSEUM EXPEDITION

Figure 23

Scattered on the surface, odd objects were picked up on this survey not associated with specific sites. For example, about 3 miles south of Border Post 19 on the rim of a series of basins some stone pendants, alabaster, and a spindle whorl were collected on the surface of the desert. There were, however, many sites in the area.

SITE 70, R.B.[15] 1: A large mound (100 yards long) on the Dasht-i-Zirreh about 10 miles south of Border Post 20. Fragmentary alabaster bowls, some bronze animal-headed pins, and two rings were found (Fig. 22). The abundance of alabaster fragments at this site merits some attention. Almost all these fragments seem to have come from small, open, thin-walled bowls

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R.R.VI.017, R.R.VI.033, R.R.VI.013, R.R.VI.016, R.R. VI.014, R.R.VI.015.

[1] Stein, 1928, Vol. 2, 952, 968–969; Vol. 3, Pl. 112, R.R.VII.024, R.R.VII.025, R.R.VII.026; Pl. 113, R.R. VII.01; Pl. 115, R.R.VII.015, R.R.VII.020.

[2] Stein, 1928, Vol. 2, 952, 969; Vol. 3, Pl. 112, R.R.IX.06, R.R.IX.05; Pl. 113, R.R.IX.01, R.R.IX.02, R.R.VIII.012, R.R.VIII.013; Pl. 116, R.R.IX.026 (bronze pin?).

[3] Stein, 1928, Vol. 2, 952, 969; Vol. 3, Pl. 112, R.R.XI.05, R.R.XI.016, R.R.XI.011, stone bead; Pl. 116, seal, R.R.XI.014, R.R.XI.013.

[4] Stein, 1928, Vol. 2, 952, 970; Vol. 3, Pl. 116, R.R.XII.-037; Plan 59.

[5] Stein, 1928, Vol. 2, 952.

[6] Stein, 1928, Vol. 2, 953, 970; Vol. 3, Pl. 113; R.R.XIII.-018.

[7] Stein, 1928, Vol. 2, 953; Vol. 3, Plan 59.

[8] Stein, 1928, Vol. 2, 953–954, 970; Vol. 3, Pl. 112, R.R.XV.020, R.R.XV.05, R.R.XV.011, R.R.XV.019, R.R.XV.015, R.R.XV.018, R.R.XV.012, R.R.XV.03, R.R.XV.021, R.R.XV.08, R.R.XV.02, R.R.XV.01 (blade), R.R.XV.09, R.R.XV.028, R.R.XV.017, R.R.XV.014, R.R.XV.026.

[9] Stein, 1928, Vol. 2, 952.

[10] Stein, 1928, Vol. 2, 952, 970; Vol. 3, Pl. 112, R.R.XVII.-030; Pl. 113; R.R.XVII.01; Pl. 116, R.R.XVII.031 (bronze pin); Plan 59.

[11] Stein, 1928, Vol. 2, 953; Vol. 3, Pl. 116, R.R.XVIII.01.

[12] Stein, 1928, Vol. 2, 953, 971.

[13] Stein, 1928, Vol. 2, 953.

[14] Stein, 1928, Vol. 2, 953.

[15] R. B. is the abbreviation used for sites in or about the Rud-i-Biyaban.

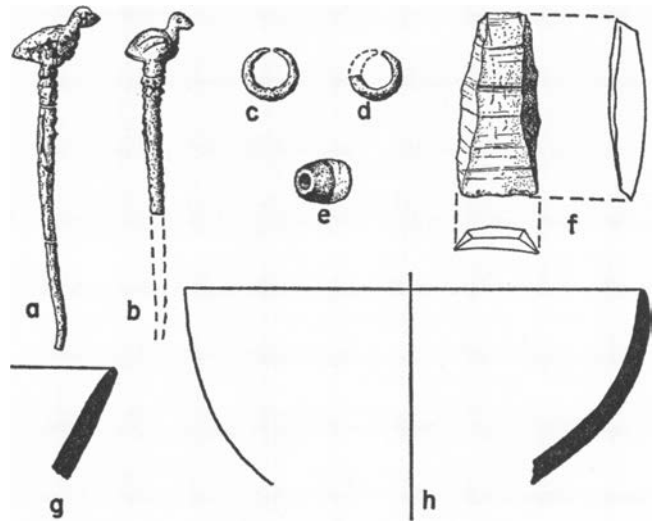


FIG. 22. Bronze and alabaster objects from Site 70 (R.B. 1). a–b. Bird-headed pins, bronze. c–d. Earrings, bronze. e. Stone bead. f. Alabaster scraper? g–h. Alabaster vessel rims.

(Fig. 22g–h). A fragment of what is probably carnelian was also found. Chunks of cuprous slag were common.

Several sherds of Nad-i-Ali Ridged Rims 1A and 1B were the only identifiable pottery found at the site. For this and the following sites, the pottery found is identified in Table 1. For illustrations of pottery types, see Fig. 17.

SITE 71, R.B. 2: A small mound, heavily gravel covered, about 6 miles due east of R.B. 1.

SITE 72, R.B. 3: A small site on a heavily eroded silt bluff in the midst of other bluffs and mesas. All the sherds recovered were badly eroded.

SITE 73, R.B. 4: The ruins of a squarish building on a silt mound about 150 yards north of R.B. 3. The site is in the midst of a gravel *dasht*. The building may equate to Stein's watch towers. A single painted sherd found here suggests the possibility of a prehistoric occupation in the neighborhood.

SITE 74, R.B. 5: The ruins of a small squarish building on a mound some 120 by 60 feet. The site is in a depression that leads to the alluvial plain (Fig. 23) about 200 yards west of R.B. 4. This may equate with Stein's watch stations.

SITE 75, R.B. 6: The ruins of a small building on a 35-foot high silt mound in the midst of a complex of silt mounds about 350 yards north of R.B. 5.

SITE 76, R.B. 7: A small, gravel-covered mound about 500 yards southwest of R.B. 5 on a gravelly alluvial plain.

SITE 77, R.B. 8: A silt mound about 25 feet high and about 150 by 90 feet in area. A few scattered fired bricks suggest that a structure once occupied the site.

SITE 78, R.B. 9: A silt mound in the midst of a badlands of other sterile silt mounds, about 200 yards northwest of R.B. 6. The mound is about 20 feet high at its highest point and some 120 feet by 60 feet in area.

SITE 79, R.B. 10: A silt mound about 15 feet high and some 120 by 90 feet in area, located in the midst of a complex of sterile silt mounds some 250 yards northwest of R.B. 9.

SITE 80, R.B. 11: A high, 20-foot silt mound ½ mile north-northwest of R.B. 10. The mound measures about 35 by 43 yards (Fig. 24a).

SITE 81, R.B. 12: A high building on a silt mound about 2 miles west of R.B. 11. A single black chalcedony arrowpoint was found here (Fig. 30b).

SITE 82, R.B. 13: Sherd-dotted, gravel-silt bluffs about 4 miles northwest of Tomb Camp (Fig. 23). Both the site and the sherds were so greatly eroded that no distinctive features of either were determinable.

SITE 83, R.B. 14: This site, called "the fort" by our field party, is on the river bed (Fig 23). It consists of a rectangular structure (*ca.* 180 by 150 feet) with towers at each corner. The ruins

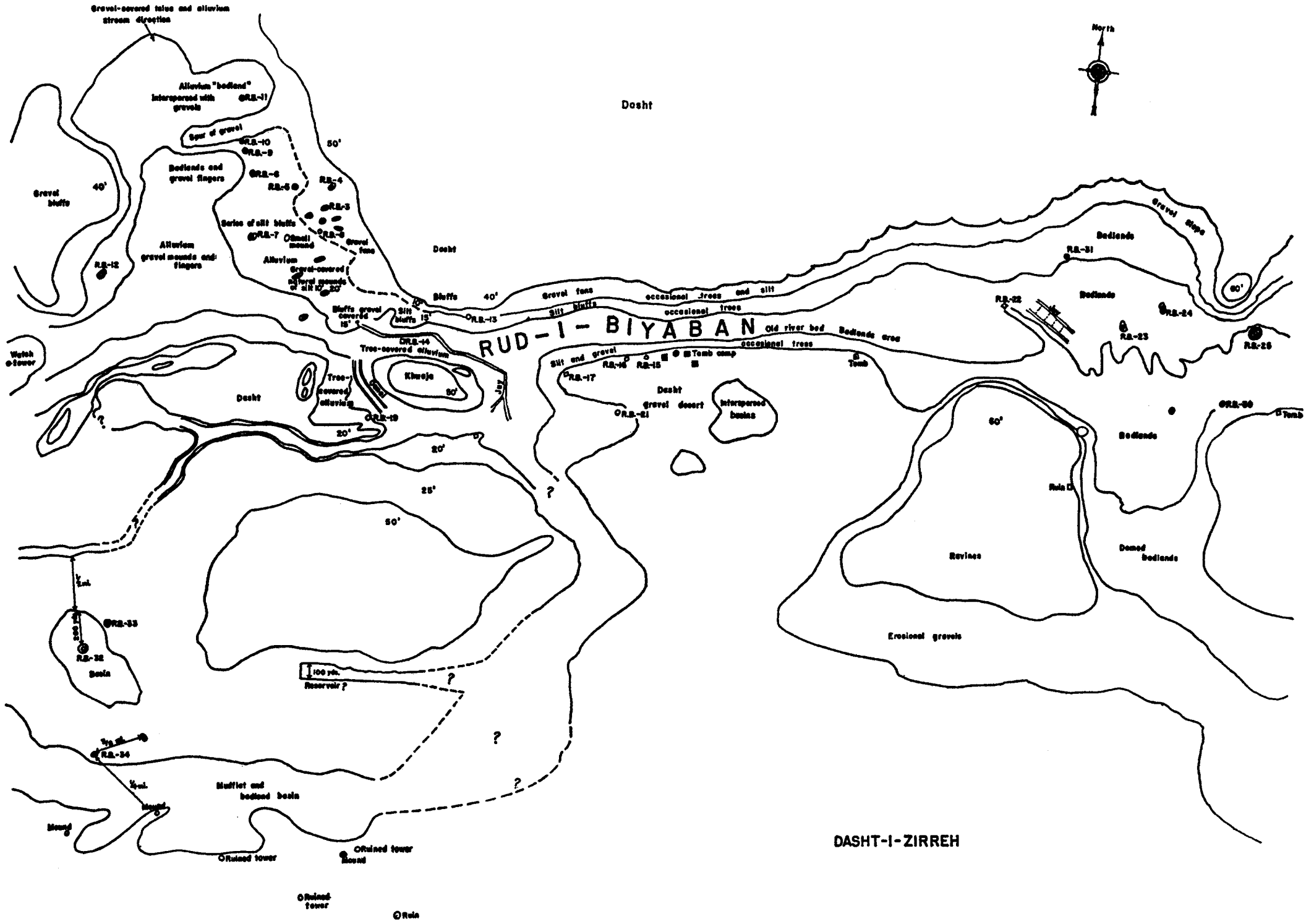


FIG. 23. Drainage and relative site location, Rud-i-Biyaban. (Not to scale; dimensions in text.)

TABLE 1

DISTRIBUTION OF PRINCIPAL POTTERY TYPES

Site No.	Prehistoric Painted	Nad-i-Ali Gray[a]	Seistan Ribbed	Grooved Wares	Blue-Green Glazed	Early Islamic Glazed	Medieval and Late Islamic Glazed	Moulded and Incised
1	—	—	x	—	—	—	—	—
2	—	—	x	—	—	—	—	—
3	—	—	x	—	—	—	—	—
4	—	—	x	x	—	—	—	—
5	—	—	x	x	—	—	—	—
6	—	—	—	—	—	—	—	—
7	—	—	—	—	—	—	x	—
8	—	—	—	—	—	—	—	—
9	—	—	R[b]	—	—	x	—	—
10	—	—	x	—	x	—	—	x
11	—	—	R	—	x	R	—	—
12	—	—	x	—	—	—	x	—
13	—	—	—	—	—	—	—	—
14	—	—	x	x	x	x	—	—
15	—	—	x	—	—	—	—	—
16	—	—	—	—	—	—	—	—
17	—	—	x	x	x	x	—	x
18	—	—	x	—	—	x	—	—
19	—	—	—	—	x	x	R	—
20	—	—	—	—	x	x	R	—
21	—	—	R	—	x	x	R	x
22	—	—	—	—	—	—	x	—
23	—	—	—	—	—	—	—	—
24	—	—	—	—	—	—	—	—
25	—	—	—	—	—	—	—	—
26	—	—	—	—	—	—	x	—
27	—	—	x	—	—	—	—	—
28a	—	—	—	—	—	x	x	—
28b	R	x	R	—	R	R	—	—
28c	—	x	R	—	R	R	—	—
29	—	—	—	—	—	—	—	—
30	—	—	—	—	—	—	—	—
31	—	—	—	—	—	—	x	—
32	—	—	—	—	—	—	—	—
33	—	—	—	—	—	—	—	—
34	—	—	x	—	R	—	—	—
35	—	—	x	—	x	R	—	—
36	—	—	x	x	x	x	—	—
37	—	—	—	—	—	R	—	—
38	—	—	—	—	—	—	—	—
39	x	—	—	—	—	—	—	—
40	—	—	—	—	—	—	—	—
41	—	—	—	—	—	—	—	—
42	—	—	x	—	—	R?	—	—
43	—	—	x	—	x	—	—	—
44	—	—	—	—	—	—	—	—
45	x	—	x?	—	x	—	—	—
46	—	—	—	—	—	—	—	—
47	x	—	R	—	—	x	x	x

TABLE 1—(*Continued*)

Site No.	Prehistoric Painted	Nad-i-Ali Gray	Seistan Ribbed	Grooved Wares	Blue-Green Glazed	Early Islamic Glazed	Medieval and Late Islamic Glazed	Moulded and Incised
48	—	—	—	—	—	—	—	—
49	x	—	x	—	R?	—	—	—
50	x	—	—	—	—	—	—	—
51	x	—	—	—	x?	x?	—	x
52	x	—	—	—	—	—	—	—
53	—	—	—	—	—	—	—	—
54	x	—	—	—	R	—	—	—
55	x	—	—	—	—	—	—	—
56	x	—	—	—	—	—	—	—
57	x	—	—	—	—	—	—	—
58	x	—	—	—	—	—	—	—
59	x	—	—	—	—	—	—	—
60	x	—	—	—	—	—	—	—
61	x	—	—	—	—	—	—	—
62	—	—	—	—	—	—	—	—
63	x	—	—	—	—	—	x	—
64	—	—	—	—	—	—	—	—
65	x	—	—	—	—	—	—	—
66	x	—	—	—	—	—	—	—
67	—	—	—	x	—	—	—	—
68	—	—	—	—	—	—	—	—
69	—	—	—	—	—	—	—	—
70	—	—	—	—	—	—	—	—
71	—	—	—	—	—	—	—	—
72	—	—	x	x	—	—	—	—
73	R	—	x	x	—	—	—	—
74	—	—	x	x	x	—	—	—
75	—	—	x	x	—	—	—	—
76	—	—	x	x	—	—	—	—
77	—	—	x	x	—	—	—	—
78	—	—	x	x	—	—	—	—
79	—	—	x	x	—	—	—	—
80	—	—	x	x	—	—	—	—
81	—	—	x	x	—	—	—	—
82	—	—	—	—	—	—	—	—
83	R	—	x	x	x	—	—	—
84	—	—	x?	x?	—	—	—	—
85	—	—	x	x	—	—	—	—
86	R	—	x	x	—	—	—	—
87	—	—	x	—	x	x	x	—
88	—	—	x	x	—	—	—	—
89	—	—	x	x	—	—	—	—
90	—	—	x	x	—	—	—	—
91	—	—	x	x	x	x	x	—
92	—	—	x	x	—	—	—	—
93	—	—	x	x	—	—	—	—
94	—	—	x	x	x	—	—	—
95	—	—	x	x	—	x	—	—
96	—	—	—	—	—	—	—	—
97	—	—	—	—	—	—	—	—

TABLE 1—(*Continued*)

Site No.	Prehistoric Painted	Nad-i-Ali Gray	Seistan Ribbed	Grooved Wares	Blue-Green Glazed	Early Islamic Glazed	Medieval and Late Islamic Glazed	Moulded and Incised
98	—	—	x?	x?	—	—	—	—
99	—	—	—	—	—	—	—	—
100	—	—	—	—	—	—	—	—
101	—	—	—	—	—	—	—	—
102	—	—	—	—	—	—	—	—
103	—	—	—	—	—	—	—	—
104	x	—	x	—	—	—	—	x
105	x	—	—	—	—	—	—	x
106	x	—	—	—	—	—	—	—
107	x	—	—	—	—	—	—	—
108	x	—	—	—	—	—	—	—
109	x	—	—	—	—	—	—	—
110	x	—	—	—	—	—	—	—
111	x	—	—	—	—	—	—	—
112	x	—	—	—	—	—	—	—
113	x?	—	—	—	—	—	—	—
114	x?	—	—	—	—	—	—	—

[a] And variations.
[b] Rare.

of a small building can be identified in the southwest corner of the site. The place appears to have been a caravanserai in Islamic times (p. 20).

SITE 84, R.B. 15: A small mound on the bluff just west of Tomb Camp (Fig. 23).

SITE 85, R.B. 16: A small mound near the south edge of the old river bed on the same bluff as R.B. 15, but about 100 yards to the west.

SITE 86, R.B. 17: A small "fortress" (150 by 75 feet), rectangular in groundplan, west of R.B. 16 (Fig. 23).

SITE 87, R.B. 18: A watch tower and ruins of several small adjacent buildings about 2 miles west of Tomb Camp.

SITE 88, R.B. 19: A mound about 21 feet high and approximately 120 by 75 feet in area, about 300 yards west of R.B. 18.

SITE 89, R.B. 20: A site about 3 miles southeast of R.B. 19 on the edge of a silt-gravel bluff. Heavy erosion had destroyed the occupation level.

SITE 90, R.B. 21: A low, silt and gravel-covered mound in an area resembling badlands, about 200 yards southwest of Tomb Camp.

SITE 91, R.B. 22: A small, rectangular, ruined building (Fig. 24b) (*ca.* 30 by 18 yards) on a silt bluff which was probably part of the flood plain of the Rud-i-Biyaban. Located east of Tomb Camp (Fig. 23).

SITE 92, R.B. 23: A mound on a natural bluff in the midst of badlands. The whole site is about 100 feet square and is somewhat over ¾ of a mile east of R.B. 22.

SITE 93, R.B. 24: A mound about 20 feet high in the midst of badlands. The site is about 120 feet square.

SITE 94, R.B. 25: A group of small mounds about ¾ of a mile east-southeast of R.B. 24. The largest mound, almost 60 feet high, is heavily eroded but has remains of a building on its summit.

SITE 95, R.B. 26A: A large mound with traces of a building complex on its summit.

SITE 95, R.B. 26B: A small mound about 350 feet south of R.B. 26a.

SITE 96, R.B. 27: A fort or caravanserai, perhaps ¾ of a mile northeast of R.B. 26a and 26b, resembles R.B. 14. The site was observable from the height of R.B. 26a. This is possibly the "New Gina" on Stein's map.[1] The site is in the river bed.

[1] Stein, 1928, Vol. 4; see "Map of the dry Helmand Delta."

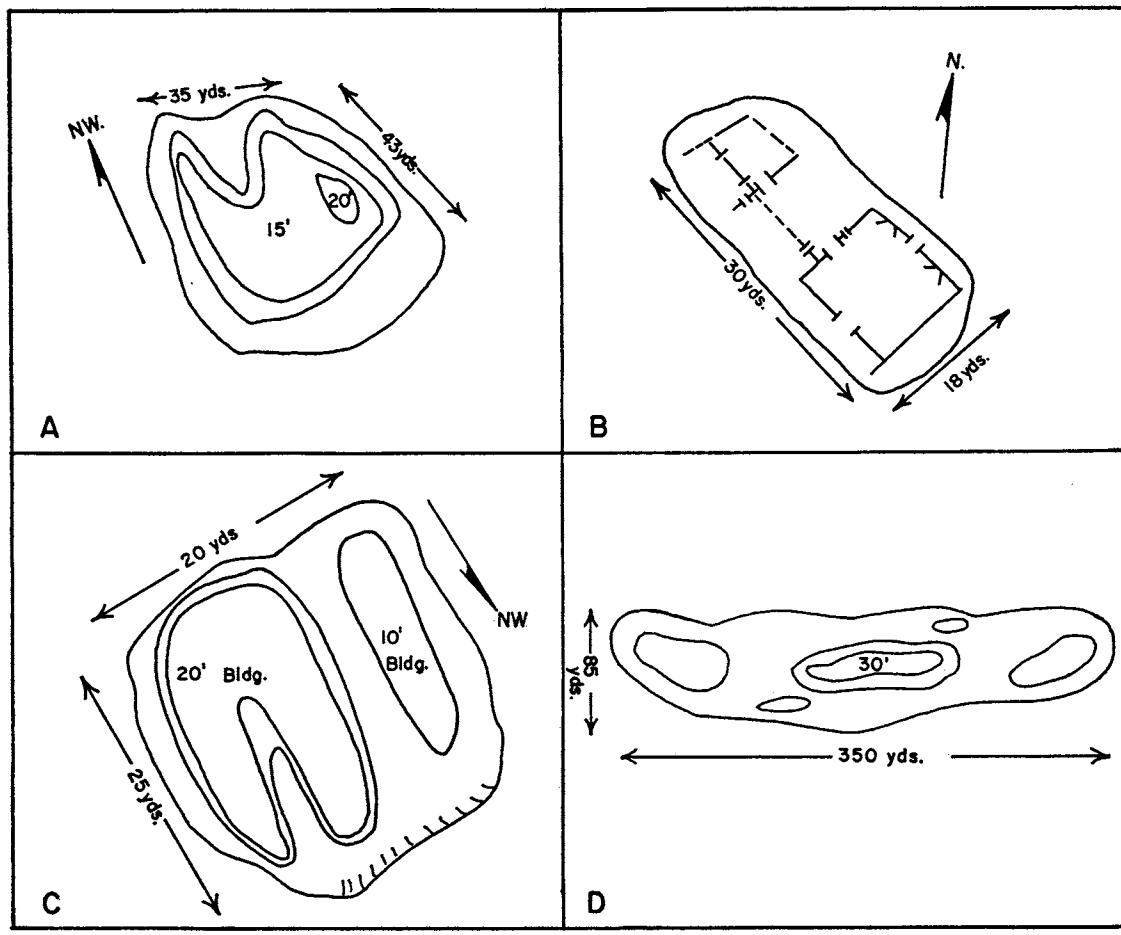


FIG. 24. Sketch plans of sites in the Rud-i-Biyaban and Gardan Reg areas. a. Site 80 (R.B. 11). b. Site 91 (R.B. 22). c. Site 102 (R.B. 34). d. Site 108 (G.R. 5).

The designation R.B. 28 was set aside for a group of ruins east of R.B. 26, but we did not succeed in visiting them.

SITE 97, R.B. 29: A "city" on the bluffs, about 2½ miles east of R.B. 26a and R.B. 26b. This is undoubtedly Trakun, a site described by Tate.[1] We did not visit this place. Tate believes it flourished in Islamic times, though traditionally a pre-Islamic fire temple was situated there.[2]

SITE 98, R.B. 30: A small round mound on top of a bluff overlooking a "bay" in the river valley (Fig. 23), about ½ mile west-southwest of the R.B. 25 group. The mound is about 45 feet high and about 100 feet long at each side. The pottery is reddish, very badly eroded, and resembles the wares of R.B. 9.

SITE 99, R.B. 31: The site of Old Gina, not visited by us but described by Tate as Islamic.[3]

A series of basins, some of them probably artificial (Fig. 23), are located south of the main stream bed of the Rud-i-Biyaban. Sites occur both in the basins and on the Dasht-i-Zirreh itself.

SITE 100, R.B. 32: A small mound site, 120 by 60 by 15 feet, about ½ mile southwest of a feeder of the Rud-i-Biyaban delta (Fig. 23), in a basin near its northern edge. Pottery was collected, but was unfortunately left unstudied at the site

[1] Tate, 1909, 96–99, 242–244.
[2] Tate, 1910–1912, Vol. 1, 243–244.
[3] Tate, 1910–1912, Vol. 1, 163.

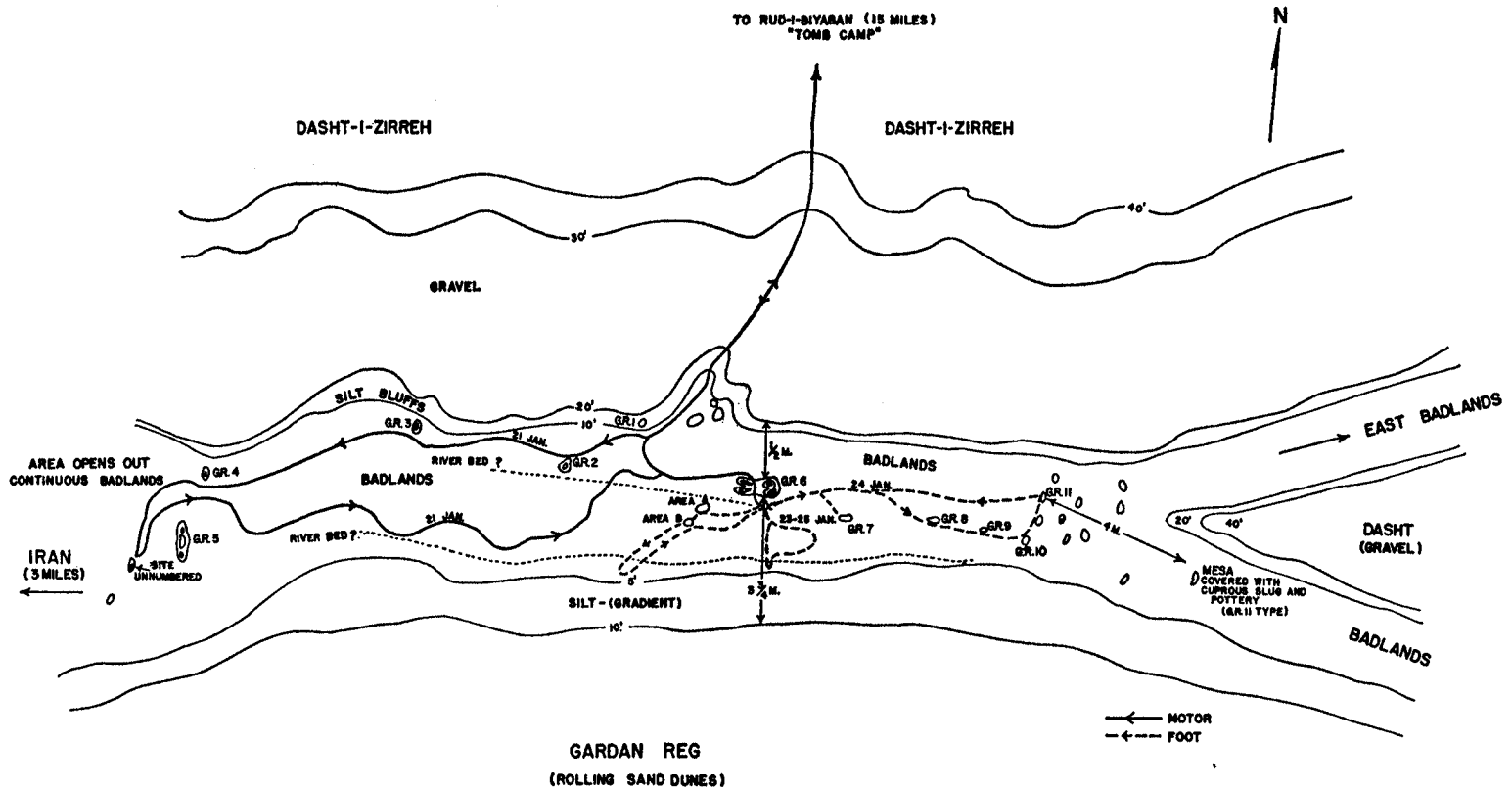


FIG. 25. Relative topographic and site location of the Gardan Reg survey (scale estimate on map).

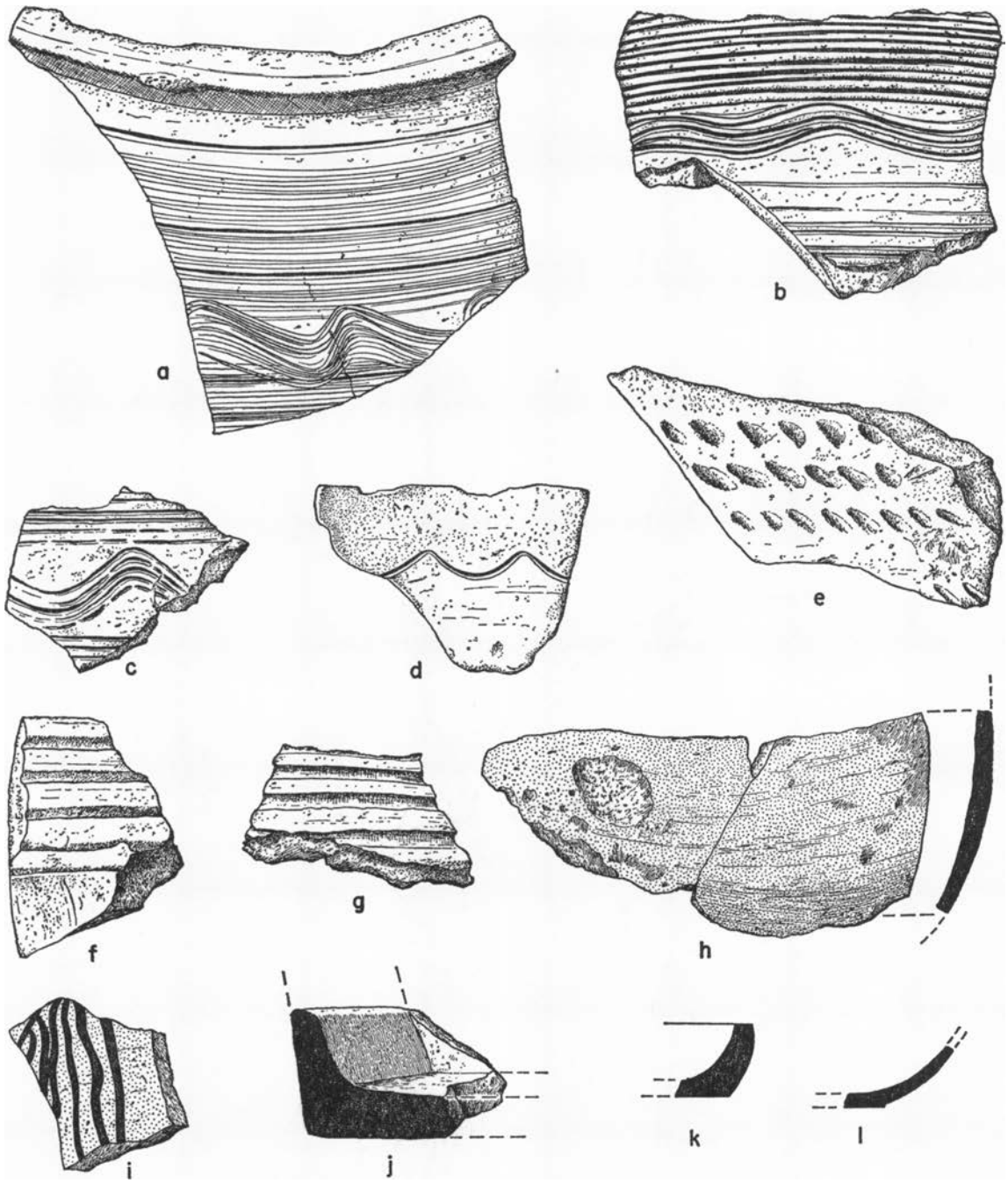


FIG. 26. Decorated wares and stone vessels, Site 104 (G.R. 1). a–c. Comb incised. d. Loop incised. e. Incised. f–g. Seistan Ribbed. h. Red-slipped. i. Black on plum-brown painted. j. Limestone vessel? k–l. Alabaster vessels.

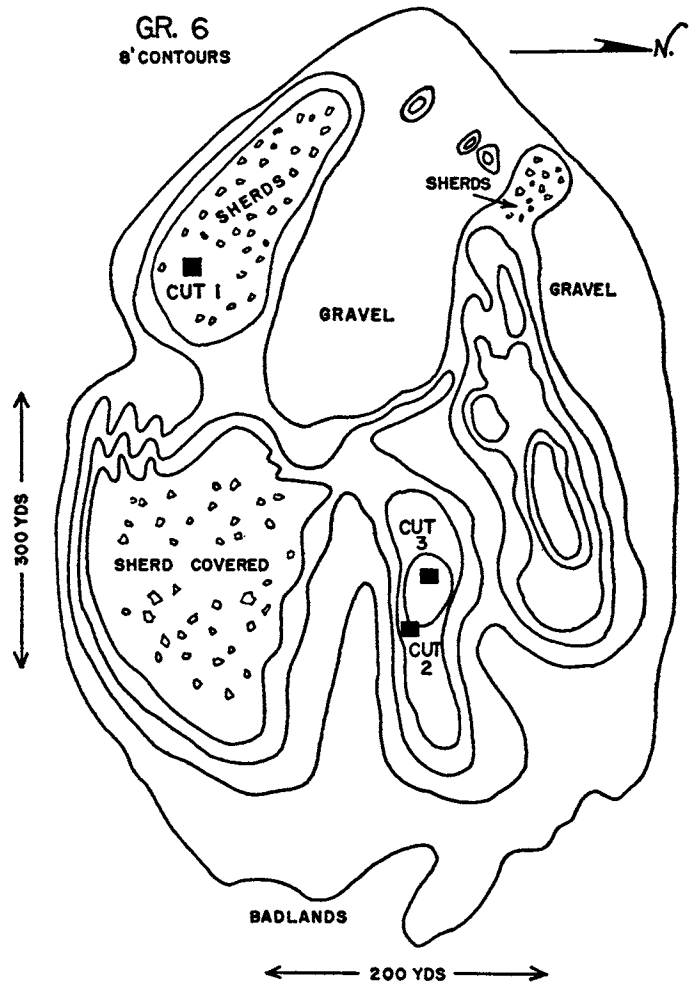


FIG. 27. Sketch plan of Site 109 (G.R. 6).

owing to the exigencies of our return trip (p. 11).

SITE 101, R.B. 33: A small mound on the eastern lip of the basin, about 300 yards east of R.B. 32. It is about 18 feet high.

SITE 102, R.B. 34: A ruined building (Fig. 24c), squarish in form, on a small mound (75 by 60 yards by 20 feet in height), about 1½ miles south-southwest of R.B. 32.

OTHER SITES: South of R.B. 34 at distances varying from ¼ mile to several miles numerous sites could be seen (Fig. 23). Especially conspicuous was a group of ruined towers built on the high part of the *dasht*. It is likely that these towers equate to Stein's Sites R.R. 22, R.R. 23, and R.R. 25 (p. 59).

SITE 103, D.Z. 1: Approximately 8 miles southwest of the Tomb Camp on the Rud-i-Biyaban a group of sites was encountered out on the Dasht-i-Zirreh. The mound, D.Z. 1, is only about 60 feet in diameter. The pottery is like that of R.B. 15 (Table 1).

About 100 yards to the westward are the ruins of a high rectangular building (60 feet). The pottery was so eroded that its identification was not possible. A small mound about 300 yards south of this building was seen but not visited.

The southern rim of the Dasht-i-Zirreh overlooks a narrow valley extending east to west, its southern side bounded by the rolling dunes of the Gardan Reg. This valley consists of high

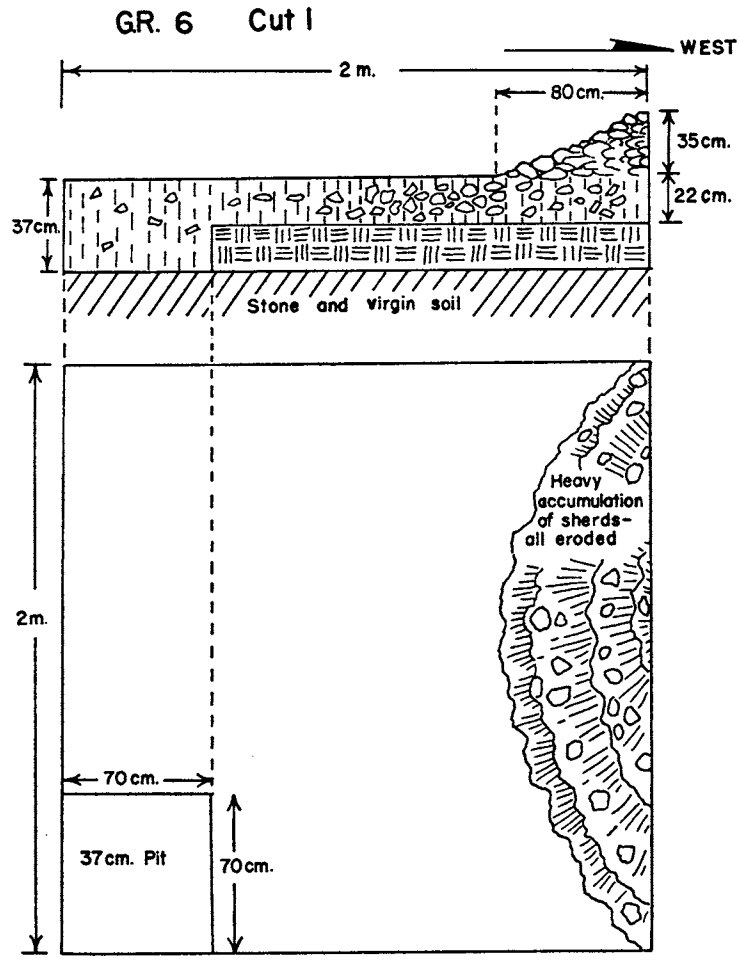


FIG. 28. Section and plan of Cut 1, Site 109 (G.R. 6).

silt mesas forming a badlands.[1] Heavily wind-eroded sites were found in these badlands and occasionally on the bluff of the northern side of the valley (Fig. 25).

SITE 104, G.R. 1: A bluff site heavily strewn with pottery (Fig. 26) that includes prehistoric painted, Seistan Ribbed ware, and loop incised. A human, very fragmentary skeleton was found on the south side of the base of a washed cliff. Scattered about among the bone fragments were bits of copper, enough remaining to indicate that they were part of an open bowl, probably about 7 inches wide.

[1] See p. 14 for an account of the geological situation.

SITE 105, G.R. 2: An ovoid mound oriented northwest-southeast, about ½ mile southwest of G.R. 1 in the midst of the badlands. The pottery is the same as that of G.R. 6.

SITE 106, G.R. 3: A mesa about ⅜ of a mile due west of G.R. 1, on which was scattered pottery like that of G.R. 6.

SITE 107, G.R. 4: A small mound about 5½ miles west-southwest of G.R. 1, with pottery similar to that of G.R. 6.

SITE 108, G.R. 5: A large mound about 350 by 85 yards with three pinnacles; one pinnacle was about 30 feet high (Fig. 24d). The site is in the badlands. The pottery is similar to that at G.R. 6.

SITE 109, G.R. 6 (Fig. 27): Approximately ½ mile southeast of G.R. 1 is a large site. Its highest point protrudes clearly above the other mesas of the badlands. As we approached this site from the direction of G.R. 1, we observed a series of sub-mounds and a long talus slope or bank, with groups of reddish heaps in curiously regular rows on its surface. When we arrived at the site, we discovered that the red hue was caused by countless numbers of sherds strewn about (see p. 76 for description of pottery). Noticeable, too, were alabaster vessels, stone ware, stone implements, copper, and other artifacts (Figs. 29–32). Wind and water erosion had cut deeply into the ground of the site. A seal of zinc or tin was also found (Fig. 32f). Three excavations were made.

CUT 1: A test pit 2 meters square was sunk into the southwestern spur of the site in the area of the curious heaps of sherds. In fact, one of these heaps was included in the cut (Fig. 28). At 37 cm. virgin soil was encountered. A very

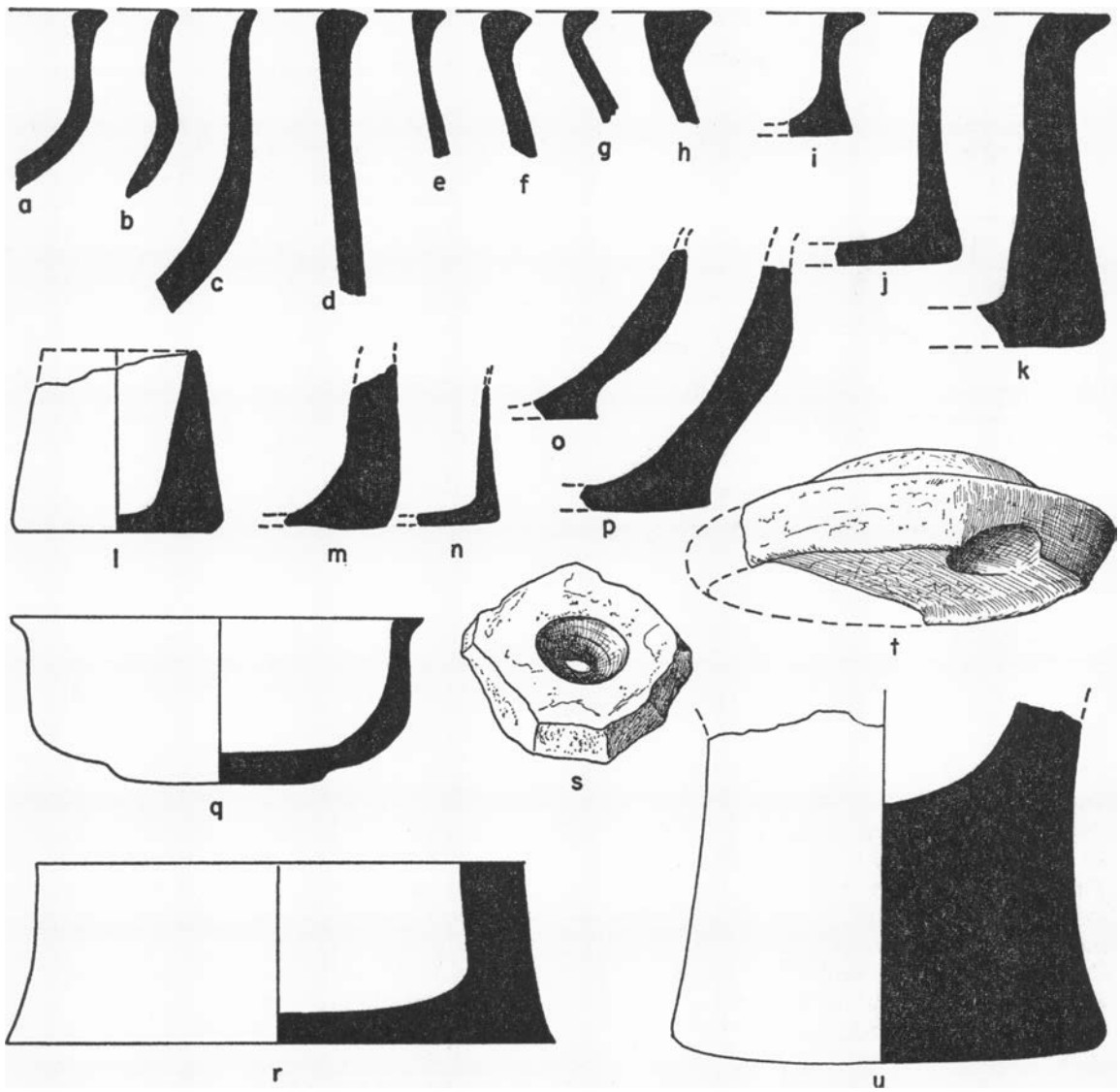


FIG. 29. Rims and bases of alabaster vessels, Site 109 (G.R. 6).

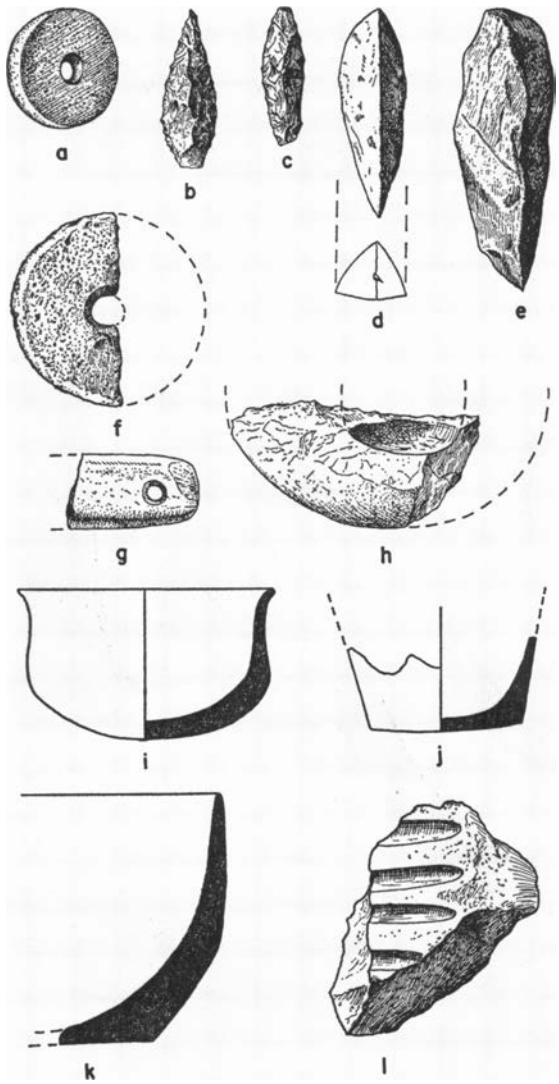


FIG. 30. Miscellaneous artifacts from various sites of southern Seistan. a. Spindle whorl, clay, Site 109 (G.R. 6). b. Arrowpoint, stone, Site 81 (G.R. 12). c. Fragment of dark stone point?, Site 109 (G.R. 6). d–e. Prism-like stone points, Site 109 (G.R. 6). f. Spindle whorl, stone, Site 109 (G.R. 6). g. Fragment of slate? pendant, Site 72 (R.B. 3). h. Fragment of alabaster vessel? Site 109 (G.R. 6). i–j. Dark stone? vessels, Site 109 (G.R. 6). k. Limestone fragment of vessel, Site 109 (G.R. 6). l. Grooved calcite? fragment, Site 109 (G.R. 6).

heavily calcined layer at 22 cm. contained some charcoal, but at 37 cm. the layer was sterile. At all depths the potsherds showed signs of erosion. The piles of sherds were accumulated in very soft, windblown (?) silt. In all probability these sherd piles were the contents of rooms or houses. Centuries of erosion probably wore away the walls and the surrounding fill, causing the heavier, unerodable artifact material to settle into piles.

CUT 2: A cut 2 meters by 1.3 meters was made in the slope of the high mound (Fig. 27). But after a depth of 23 cm. in a windblown accumulation of light sand and silt dust containing only an occasional sherd had been reached, a hard clay sterile mass was encountered which must have been the virgin soil of the site, as in Cut 1.

CUT 3: A cut 1 meter by 56 cm. was attempted at the very top of the high mound (Fig. 27). The hard clay mass contained no cultural material to a depth of 15 cm. It was obviously the same virgin soil encountered in Cuts 1 and 2.

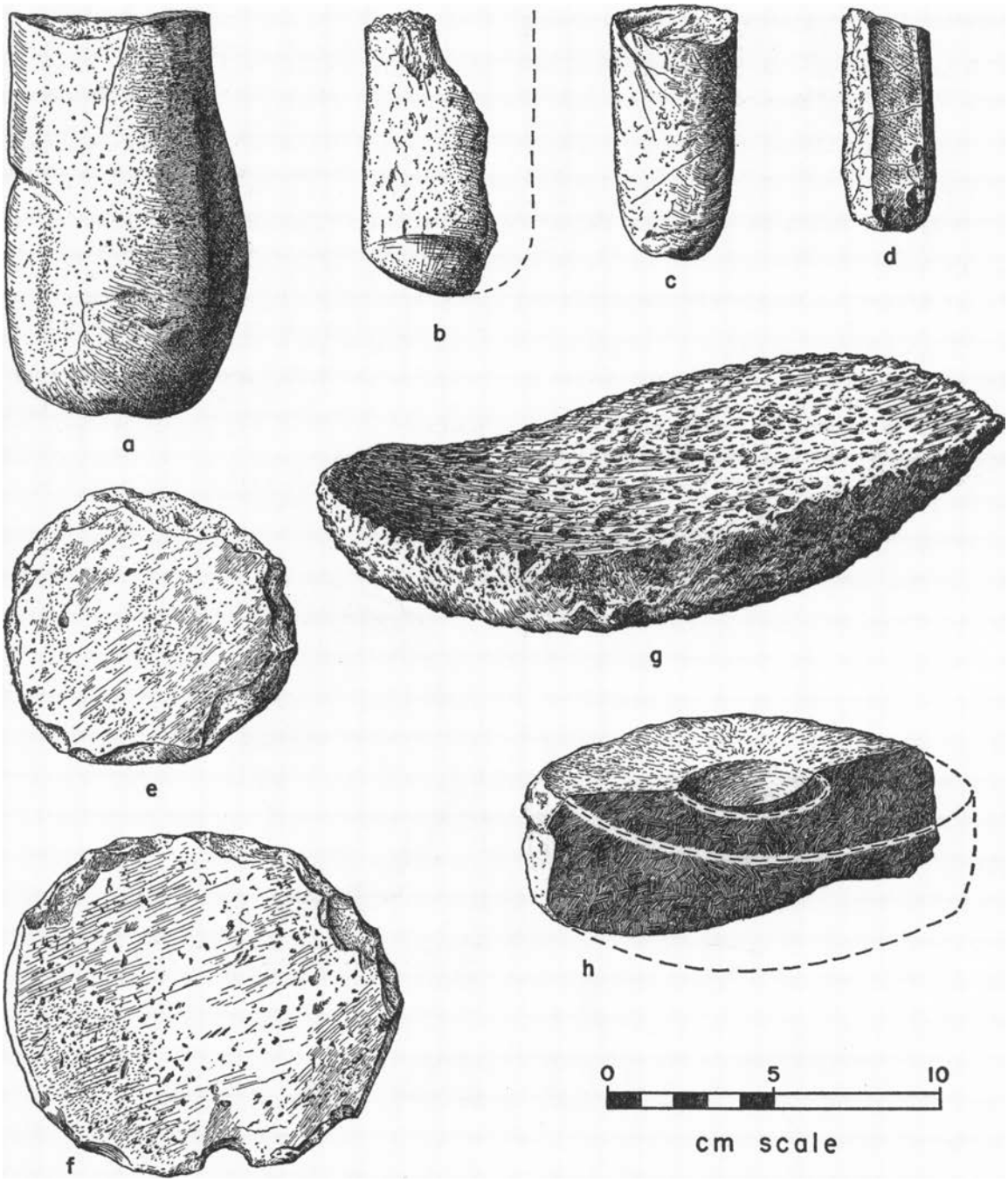


FIG. 31. Stone artifacts, Site 109 (G.R. 6).

G.R. 6, AREA A (FIG. 33): Approximately ¼ mile west-southwest of G.R. 6 an area in the midst of the mesas proved to be an extensive cemetery, probably used by the inhabitants of G.R. 6. The graves were badly eroded and the skeletons fragmentary. Quantities of pottery (Fig. 36), copper, and stone artifacts were scattered around. Some of the graves had been undercut by the wind, so that an occasional vessel hung out of the bluffs above our heads. In two graves mud brick or pounded clay had formed the floor and probably the sides of the pit (Pl. 11a).

The fragmentary skeletons indicated that the bodies had been laid in a flexed position on the left side, with the head on the east and the legs on the west (Fig. 34). One skeleton (Burial 5) was badly confused by erosion, but enough remained to suggest that exactly reverse orientation had been used. This skeleton was found some 4 feet higher than the skeletons of Burials 1–4. As it was impossible to establish the stratigraphic relation of the separate graves, this fact probably has little significance.

G.R. 6, AREA B: Another cemetery occurs just southwest of and probably contiguous with Area A. The graves occur around a small basin or on the bluffs within it. Additional graves were located at least 150 feet to the east-southeast. All the graves of Area B were in so poor a state of preservation that it was impossible to determine even the orientation of the skeletons. This grave furniture was of the same type as that in Area A—nests of pottery vessels (Pl. 10b), beads (Fig. 35), and alabaster cups (Fig. 29)—suggesting its use by the inhabitants of the site of G.R. 6.

SITE 110, G.R. 7: A sprawling, heavily wind-eroded site on a 15-foot bluff about ¼ mile southeast of G.R. 6. The pottery is similar to that at G.R. 6.

SITE 111, G.R. 8: A large site on a silt bluff in

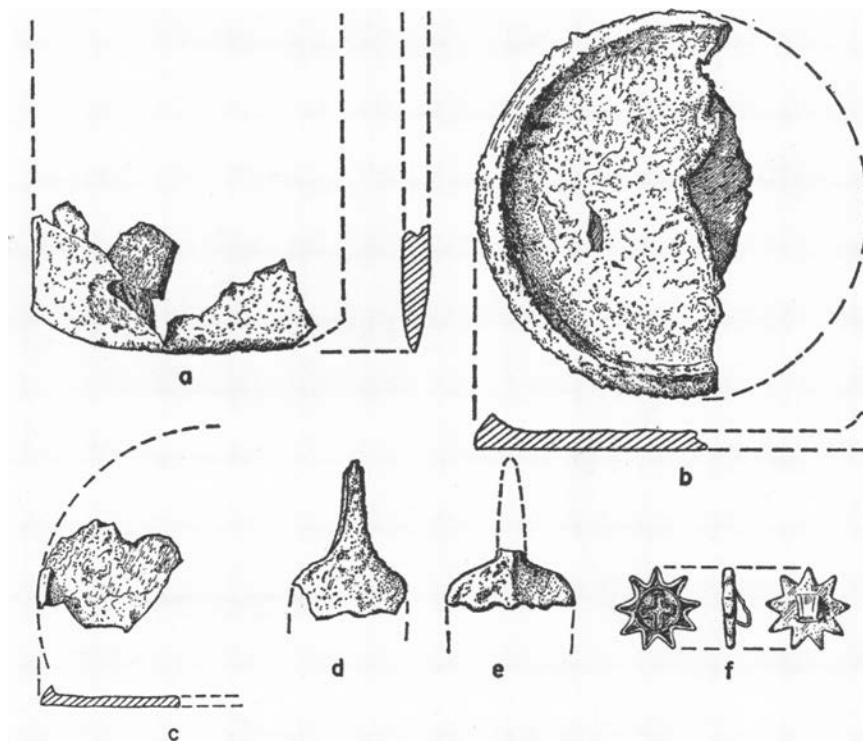


FIG. 32. Metal artifacts, Site 109 (G.R. 6). a Fragment of axe, bronze. b–c. Fragments of mirrors?, bronze. d–e. Fragments of dagger blades, bronze?. f. Metal seal, zinc or tin.

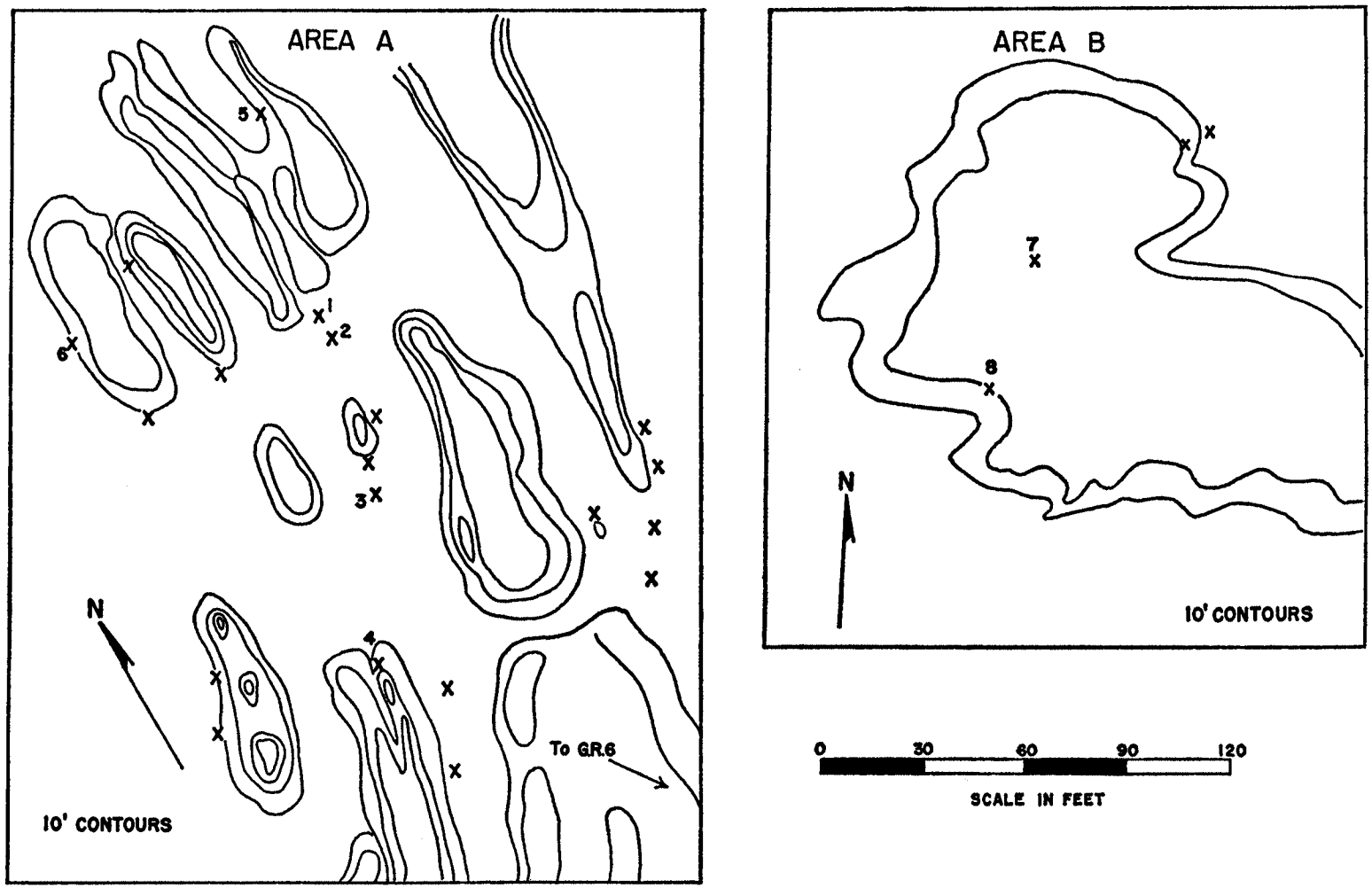


FIG. 33. Location of graves in Areas A and B near Site 109 (G.R. 6).

the midst of the badlands, about 1½ miles southeast of G.R. 6.

SITE 112, G.R. 9: A small, bluff site about ¼ mile southeast of G.R. 8. The pottery is similar to that at G.R. 6.

SITE 113, G.R. 10: One of a group of mesas capped with cuprous slag that begin about 3 mile southeast of G.R. 6. These mesas usually project about 10 feet higher than the surrounding silt bluffs or mesas. Pottery mixed with slag suggests types found at G.R. 6, but clear identification was impossible because of the poor condition of the sherds.

SITE 114, G.R. 11: A high, mesa site strewn with slag. The pottery suggests that of G.R. 6. The site is in the midst of the badlands north of G.R. 10 and is probably contemporaneous with that site.

The Gardan Reg, Shela Rud, and Gaud-i-Zirreh areas have never been systematically explored; they remain almost a blank on our archeological maps. However, casual reports of

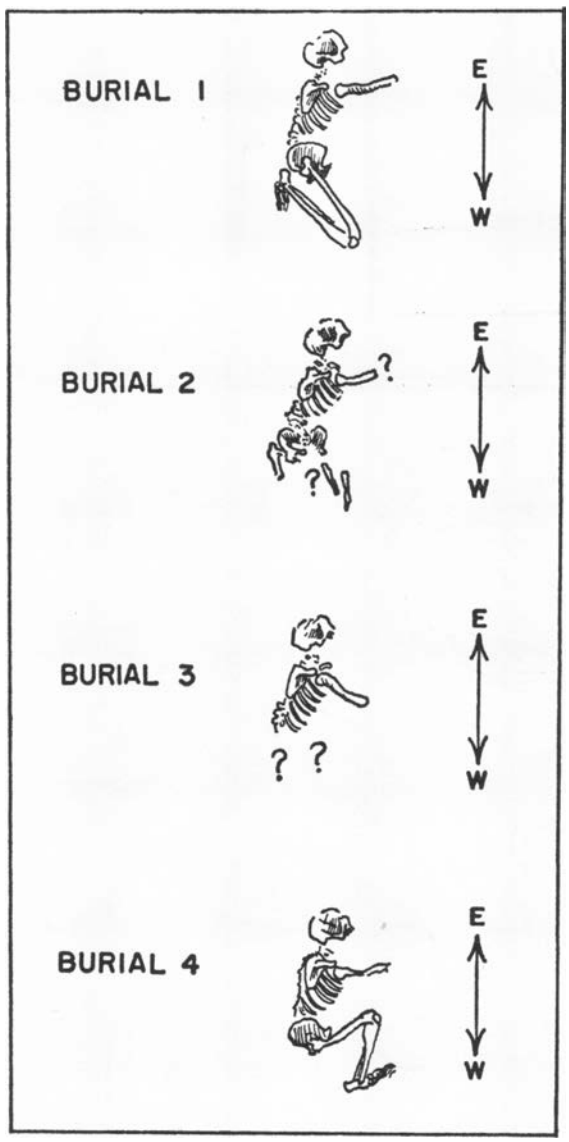


FIG. 34. Orientation of burials, Areas A and B, near Site 109 (G.R. 6).

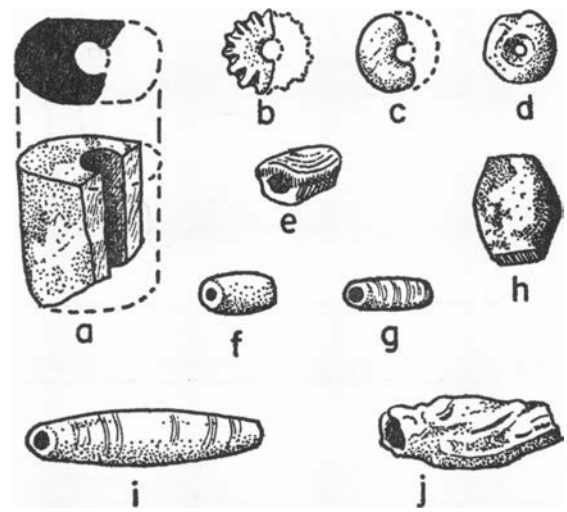


FIG. 35. Beads from Rud-i-Biyaban area and Site 109 (G.R. 6). a. Mottled blue and white stone (G.R. 6). b. Lapis (G.R. 6). c. Green stone (G.R. 6). d. Carnelian (Rud-i-Biyaban area). e. Shell (G.R. 6). f. Greenstone (G.R. 6). g. Greenish alabaster (G.R. 6, Area B). h. Mottled lapis (G.R. 6, Area B). i. Orange alabaster (G.R. 6, Area B.). j. Shell (G.R. 6, Area B).

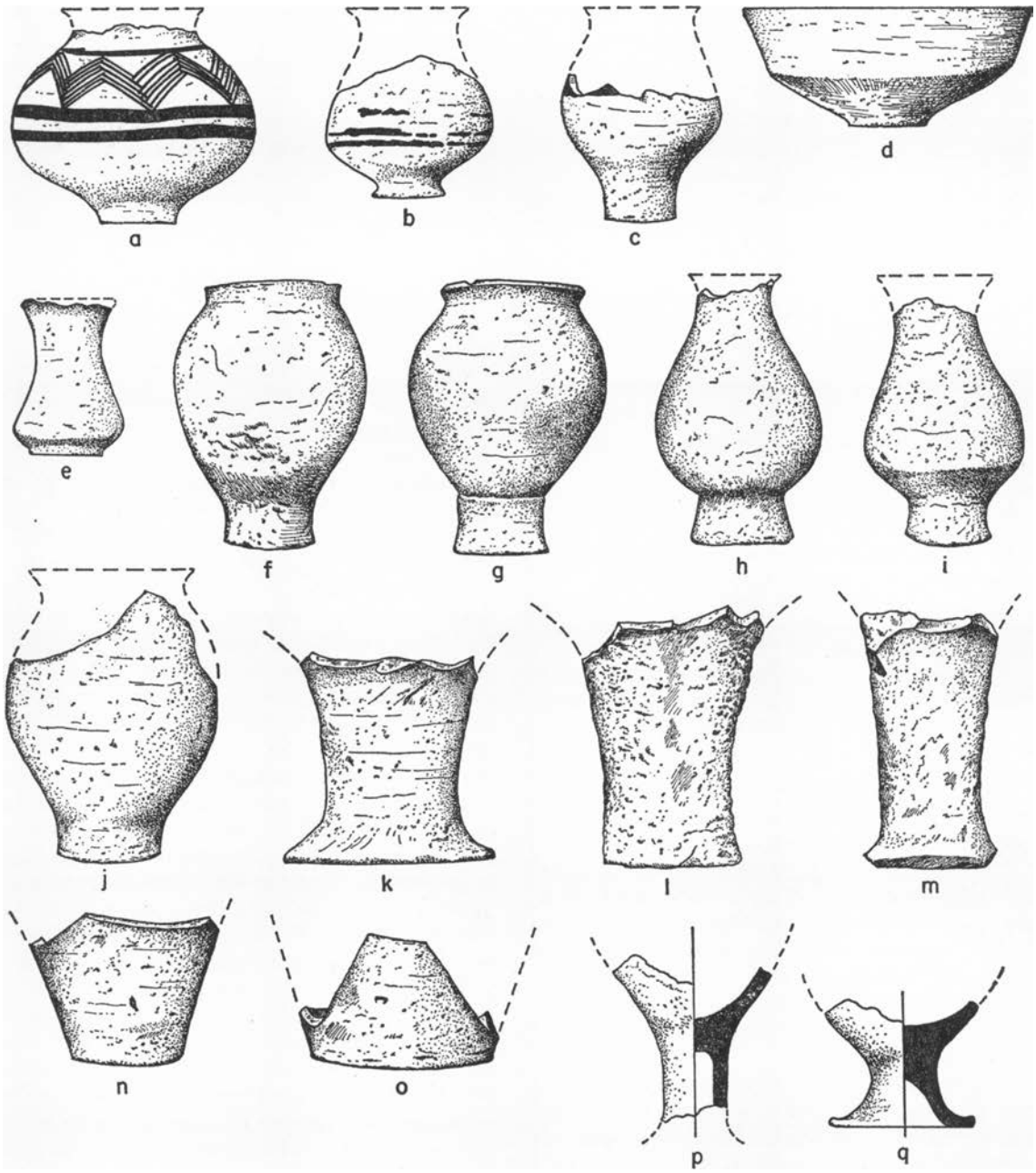


FIG. 36. Pottery of Grave Areas A and B, Site 109 (G.R. 6), and Site 110 (G.R. 7). a–c. Gardan Reg Decorated, Site 109. d–j. Seistan Plain, Site 109. k–m. Seistan Coarse Tempered, Site 109. n–o. Seistan Plain, Site 109. p–q. Seistan Plain, Site 110.

sites indicate some habitation of these areas in former times. Sven Hedin reported two sites on the western side of the Gardan Reg, south of Border Post 14.[1] Percy Sykes reported "domed ruins" in the immediate vicinity of the Shela Rud below Godar-i-Shah.[2] Stein's map indicates that a "ruined fort" exists at Godar-i-Shah.[3] At Chop Chot on the southern bank of the Shela, just south of Gardan Reg, are other unspecified ruins.

Hedin also reported ruins at Zirreh on the lower part of the Shela Rud,[4] but these may be fairly recent. Savage-Landor also reports ruins on the Shela Rud.[5]

No sites have been reported in the Gaud-i-Zirreh area, so far as I have been able to determine.

TYPOLOGICAL EVIDENCE

THE POTTERY

Stein's careful observations produced invaluable typological data. In particular, his broad understanding of the value of pottery evidence is of great importance. The results of his ceramic survey can be summarized as follows:

1. The firm identification of the prehistoric occupation sites on the basis of the painted pottery.
2. The recognition of "ribbed" pottery (which I now call Seistan Ribbed) as a type common at sites such as Ghagha-shahr.
3. The observation of the relative quantity of glazed ware as opposed to ribbed ware at many sites.
4. The recognition of ornamented glazed pottery as Islamic.

Stein's survey data thus provide a working basis for this study which is largely an amplification of his pioneer work.

Initially the links to the prehistoric cultures of the Bampur region (Fig. 37), Kandahar, and the Quetta Valley (Fig. 38; p. 80) confirm Stein's estimate of the age of the prehistoric pottery in Seistan, and therefore we can accept as prehistoric those sites so designated by him. We can now add to this the pottery corpus from the Gardan Reg area.

The largest collection of pottery was made at Site 109, the type site for this area. In spite of the accessibility of the material, a degree of incompleteness necessarily influences the following type catalogue. This results primarily from the lack of stratigraphy, the heavy erosional factor, and the uncertainty as to the exact nature of the site itself (p. 69).

All the pottery types described were also found associated with the graves of Areas A and B (Fig. 36; not all types are illustrated).

The color designations are based on the Munsell Color Charts as used in the report on the archeology of the Quetta Valley.[6]

The Munsell Color System is based on three factors: hue, value, and chroma. The recognition and application of these factors permit the descriptive designation of color. *Hue* is the initial color word that comes to mind when one observes a potsherd, for instance, for the first time. Thus one may say "brown" or "red." Closer examination and comparisons with similar sherds often reveal wide differences in shading in these browns and reds. Thus the system utilizes *value* to describe the quantity of light in a given color. Value, designated as a numerator in a color fraction, ranges on an ascending scale from 0 (black or dark) to 10 (white or light). *Chroma*, the third factor, represents the strength of a color. For example, among three pale yellow sherds, one may be a stronger pale yellow than the other two, and one of these stronger than the third. In other words, though they are the same in value, they differ in chroma. Chroma is described in numbers from 1 to 8 and set down as the denominator in the color fraction. Number 1 is the nearest to N, or neutral gray. Thus the stronger the chroma, the higher the number.[7]

[1] Hedin, 1910, Vol. 2, 305.
[2] Sykes, 1902b, 372.
[3] Stein, 1928, map of portions of Seistan.
[4] Hedin, 1910, Vol. 2, 317.
[5] Savage-Landor, 1903, Vol. 2, 320.
[6] Fairservis, 1956a, 243.
[7] Munsell, 1929; also Soil Color Charts, issued by Munsell Color Company.

TABLE 2

MUNSELL COLOR NOTATIONS

Hue	Notation	Common Name
2.5 YR (reddish Yellow Red)	2/0	
	3/0	
	4/4	Reddish brown
	5/2	Purplish gray
	5/4	Reddish brown
	5/6	Red
	5/8	Red
	8/2	
2.5 Y (reddish Yellow)	3/0	
	4/0	
	5/0	
	6/0	
	6/2	Light brown-gray
	6/8	Olive yellow
	7/0	
	7/2	Light gray
	7/4	Pale yellow
	7/6	Yellow
	8/0	
	8/2	White
	8/4	Pale yellow
	8/6	Yellow
2.5 R (purplish Red)	4/0	
	5/0	
	6/2	
	6/8	
	7/4	
5 YR (Yellow-Red)	3/1	Very dark gray
	3/2	Dark reddish brown
	3/3	Dark reddish brown
	4/1	Dark gray
	4/2	Purplish gray
	5/1	Gray
	5/2	Purplish gray
	5/4	Reddish brown
	5/6	Yellowish red
	6/3	Light reddish brown
	6/4	Light reddish brown
	6/6	Reddish yellow
	6/8	Reddish yellow
	7/3	Pink
	7/4	Pink
	7/6	Reddish yellow
	7/8	Reddish yellow
5 Y (Yellow)	6/1	Gray
	7/2	Light gray
	7/3	Pale yellow
	7/4	Pale yellow
	8/1	White
	8/2	White
	8/3	Pale yellow
7.5 YR (yellowish Yellow-Red)	3/0	
	4/0	
	4/2	Brown
	5/0	
	6/0	
	6/2	Pinkish gray
	6/4	Light brown
	6/6	Reddish yellow
	7/0	
	7/4	Pink
	7/6	Reddish yellow
	7/8	Reddish yellow
	8/4	Pink
	8/6	Reddish yellow
7.5 R (yellowish Red)	3/2	
	3/4	
	3/6	
	4/0	
	4/2	
	4/4	
	4/6	
	4/8	
	5/2	
	5/4	
	5/6	
	5/8	
	6/4	
	6/6	
	6/8	
	7/4	
	7/6	
10 YR (Yellow-Red Yellow)	3/1	Very dark gray
	4/1	Dark gray
	5/1	Gray
	6/2	Light brown-gray
	6/3	Pale brown
	6/4	Light yellowish brown
	7/2	Light gray
	7/3	Very pale brown
	7/4	Very pale brown
	8/1	White
	8/2	White
	8/3	
	8/4	
	8/6	Yellow
10 R (Red Yellow-Red)	3/1	Dark red
	3/2	Dark red
	3/6	Red
	4/1	Purplish red
	4/2	Purplish red
	4/3	Purplish red
	4/4	Purplish red
	4/8	Red
	5/3	Purplish red
	5/4	Purplish red
	5/6	Red
	5/8	Red

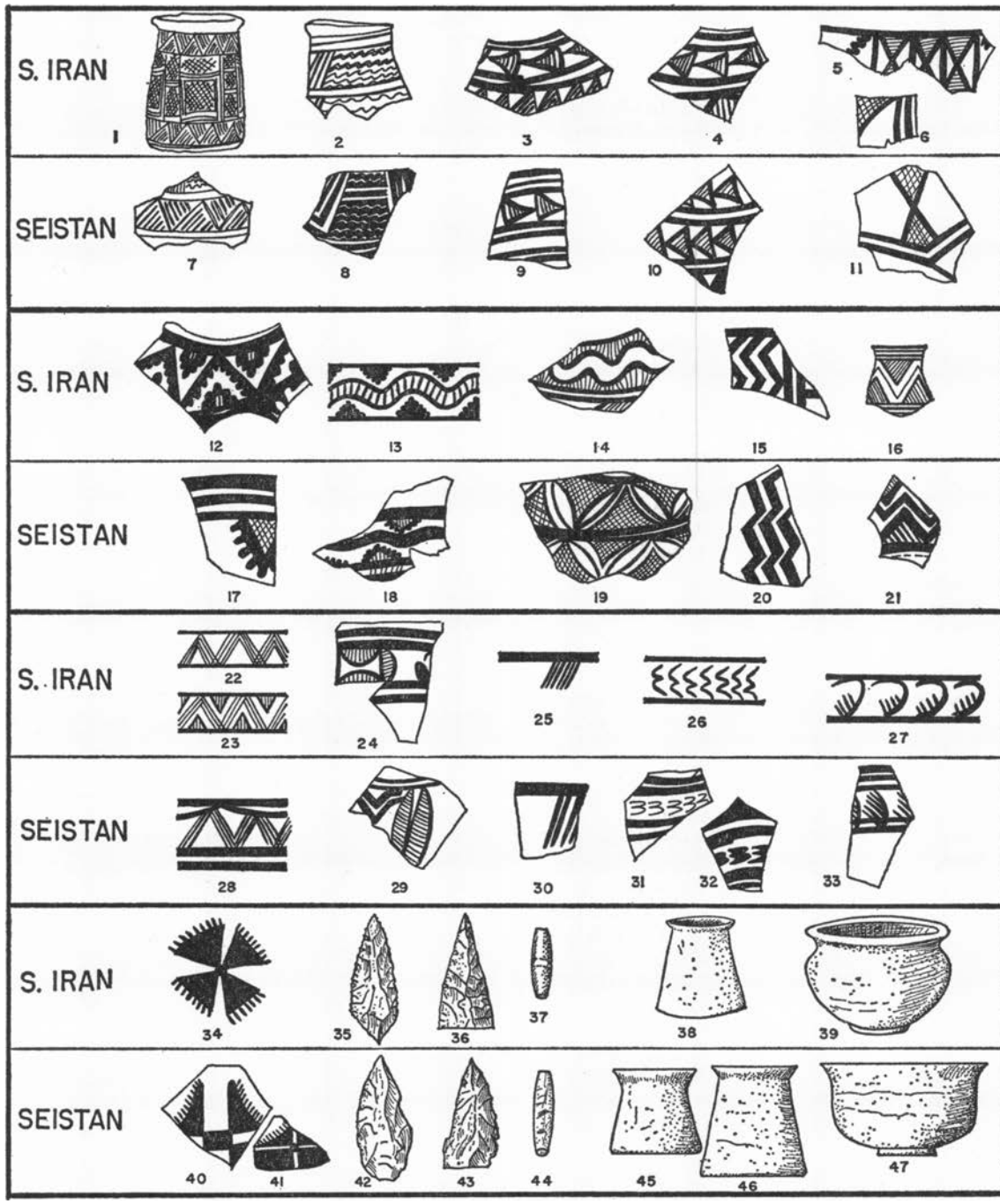


FIG. 37. (For legend, see opposite page.)

Plainwares

Seistan Plain

Figure 39a–i

An extremely common brownish ware with forms that include globular jars with long tapering necks and flaring rims.

Site: 109, G.R. 6.
Construction: Wheelmade.
Firing: Oxidizing.
Paste: *Color:* 10 YR 7/4, 7.5 YR 7/4, 6/4. *Temper:* Black and white moderately mixed grains. *Texture:* Sandy. *Hardness:* 3–4.
Surface Finish: Sandy.
Surface Color: 10 YR 7/3, 7/4, 8/3.
Thickness: Extremes, 0.04–1.0 cm.; mean, 0.08 cm.
Decoration: None.

Seistan Buff Plain

Figure 39j–m

A fine plainware of greenish or whitish color. Forms appear to be like those of Seistan Plain.

Site: 109, G.R. 6.
Construction: Wheelmade.
Firing: Oxidizing.
Paste: *Color:* 5 Y 8/1; 10 YR 8/2, 8/3. *Temper:* Fine sand. *Texture:* Smooth. *Hardness:* 2.5–3.
Surface Finish: Smooth.
Surface Color: 10 YR 8/2; 5 Y 8/2.
Thickness: Extremes, 0.04–0.07 cm.; mean, 0.06 cm.
Decoration: None.

Fig. 37 (opposite page). Seistan and Bampur-Makran.

1. Stein, 1937, Pl. 6, Kat. 019
2. Stein, 1937, Pl. 8, Bam. A. 140
3. Stein, 1937, Pl. 9, Bam. C. 67
4. Stein, 1937, Pl. 11, Kat. 28
5. Stein, 1937, Pl. 19, Hus. 472
6. Stein, 1937, Pl. 19, Hus. 9+71
7. Stein, 1928, Vol. 3, Pl. 115, R.R. VII.015
8. Stein, 1928, Vol. 3, Pl. 113, R.R. VII.01
9. Stein, 1928, Vol. 3, Pl. 113, R.R. III.018
10. Stein, 1928, Vol. 3, Pl. 113, Md.(R.R.) I.011
11. Stein, 1928, Pl. 113, R.R. IX.01
12. Stein, 1937, Pl. 11, Kun. 2
13. Stein, 1937, Pl. 13, Khur. B. ii. 202
14. Stein, 1937, Pl. 11, Damin C. 126
15. Stein, 1937, Pl. 11, Damin C. 127
16. Stein, 1937, Pl. 15, Khur. L. ii. 293
17. Stein, 1928, Vol. 3, Pl. 113, S.S. 074
18. Stein, 1928, Vol. 3, Pl. 113, Machi. 010–011
19. Stein, 1928, Vol. 3, Pl. 13, S.S. 024
20. Stein, 1928, Vol. 3, Pl. 113, R.R. XIII.018
21. Stein, 1928, Vol. 3, Pl. 113, S.S. 0119
22. Stein, 1937, Pl. 17, Khur. B. ii. 178
23. Stein, 1937, Pl. 17, Khur. B. ii. 212
24. Stein, 1937, Pl. 11, Damin A. 62
25. Stein, 1937, Pl. 13, Khur. B. ii. 202
26. Stein, 1937, Pl. 16, Khur. B. ii. 149
27. Stein, 1937, Pl. 16, Khur. B. ii. 153
28. Stein, 1938, Vol. 3, Pl. 114, R.R. III.013
29. Stein, 1928, Vol. 3, Pl. 113 , Md.(R.R.) II.07
30. Design 31, Site G.R. 6
31. Stein, 1928, Vol. 3, Pl. 113, K.G. 0135
32. Stein, 1928, Vol. 3, Pl. 113, K.G. 011
33. Design 114, Site G.R. 6
34. Stein, 1937, Pl. 13, Khur. B. ii. 200
35. Stein, 1937, Pl. 30, Mau. 22
36. Stein, 1937, Pl. 30, Bam. C. 320
37. Stein, 1937, Pl. 10, Bam. A. 147
38. Stein, 1937, Pl. 19, Khur. B. ii. 229
39. Stein, 1937, Pl. 6, Khur. F. i. 262
40. Stein, 1928, Vol. 3, Pl. 113, Md. (R.R.) II.03
41. Stein, 1928, Vol. 3, Pl. 113, Md.(R.R.) II.08
42. Stein, 1928, Vol. 3, Pl. 112, R.R. VII.025
43. Stein, 1928, Vol. 3, Pl. 112, R.R. VI.015
44. Fig. 35i, Site G.R. 6B
45. Fig. 29i, Site G.R. 6
46. Fig. 29k, Site G.R. 6
47. Fig. 29q, Site G.R. 6

FIG. 38 (opposite page). Seistan, Kandahar, and the Quetta sequence.

1. Fig. 36h, Site G.R. 6
2. Fig. 36a, Site G.R. 6
3. Fig. 36g, Site G.R. 6
4. Fig. 36p, Site G.R. 7
5. Fig. 29j, Site G.R. 6
6. Fig. 44h, Site G.R. 6, Cut 1
7. Fig. 36q, Site G.R. 7
8. Stein, 1928, Vol. 3, Pl. 114, Md.(R.R.) III.01
9. Stein, 1928, Vol. 3, Pl. 113, R.R. XIII.018
10. Stein, 1928, Vol. 3, Pl. 113, S.S. 01
11. Stein, 1928, Vol. 3, Pl. 113, R.R. VIII.011
12. Design 97, Site G.R. 6
13. Stein, 1928, Vol. 3, Pl. 114, R.R. III.013
14. Design 126, Site G.R. 6
15. Design 84, Site G.R. 6
16. Stein, 1928, Vol. 3, Pl. 113, S.S. 015.
17. Stein, 1928, Vol. 3, Pl. 113, R.R. XVIII.08
18. Stein, 1928, Vol. 3, Pl. 113, S.S. 048
19. Stein, 1928, Vol. 3, Pl. 113, S.S. 09
20. Design 93, Site G.R. 6
21. Design 66, Site G.R. 6
22. Fairservis, 1956a, Fig. 49
23. Fairservis, 1956a, Fig. 41B
24. Fairservis, 1956a, Fig. 71j
25. Fairservis, 1956a, Fig. 48
26. Fairservis, 1956a, Fig. 44
27. Fairservis, 1956a, Fig. 42
28. Fairservis, 1956a, Fig. 71o
29. Fairservis, 1956a, Fig. 48
30. Fairservis, 1956a, Design Q174
31. Fairservis, 1956a, Design Q173
32. Fairservis, 1956a, Design Q175
33. Fairservis, 1956a, Design Q182
34. Fairservis, 1956a, Design Q210
35. Fairservis, 1956a, Design Q211
36. Fairservis, 1956a, Design Q215
37. Fairservis, 1956a, Design Q131
38. Fairservis, 1956a, Design Q200
39. Fairservis, 1956a, Design Q217
40. Fairservis, 1956a, Design Q482
41. Fairservis, 1956a, Design Q470
42. Fairservis, 1956a, Design Q274
43. Fairservis, 1956a, Design Q259
44. Fairservis, 1956a, Design Q257
45. Fairservis, 1956a, Design Q371
46. Fairservis, 1956a, Design Q370
47. Unpublished, A.M.N.H., Morasi B Khr-5
48. Casal, 1955, Fig. 18, Mundigak, Level 9
49. Unpublished, A.M.N.H., Morasi A Khr-10
50. Unpublished, A.M.N.H., Morasi A Khr-10
51. Unpublished, A.M.N.H., Morasi B Khr-10
52. Casal, 1955, Fig. 20, Mandigak, Level 9
53. Casal, 1955, Fig. 16, Mundigak, Level 9?
54. Unpublished, A.M.N.H., Morasi A Khr-10
55. Unpublished, A.M.N.H., Morasi A Khr-10
56. Unpublished, A.M.N.H., Morasi A Khr-10
57. Casal, 1955, Fig. 18, Mundigak, Level 9
58. Unpublished, A.M.N.H., Morasi B Khr-5
59. Casal, 1955, Fig. 19, Mundigak, Level 9
60. Fairservis, 1952, Fig. 4g, Morasi B Khr-5
61. Fairservis, 1952, Fig. 4g, Morasi B Khr-5
62. Casal, 1955, Fig. 16, Mundigak, Level 9?
63. Stein, 1928, Vol. 3, Pl. 113, R.R. IX. 02
64. Stein, 1928, Vol. 3, Pl. 113, R.R. III.03
65. Stein, 1928, Vol. 3, Pl. 114, S.S. 02+053
66. Stein, 1928, Vol. 3, Pl. 114, Md. (R.R.) II.02
67. Design 10, Site G.R. 6
68. Design 5, Site G.R. 6
69. Design 16, Site G.R. 6
70. Stein, 1928, Vol. 3, Pl. 113, K.G. 0135
71. Stein, 1928, Vol. 3, Pl. 113, R.R. III.05
72. Stein, 1928, Vol. 3, Pl. 113, Md. (R.R.) II.018
73. Design 53, Site G.R. 6
74. Design 37, Site G.R. 6
75. Design 95, Site G.R. 6
76. Stein, 1928, Vol. 3, Pl. 114, R.R. III.010
77. Fig. 32f, G.R. 6
78. Fairservis, 1956a, Design Q326
79. Fairservis, 1956a, Design Q233
80. Fairservis, 1956a, Design Q136
81. Fairservis, 1956a, Design Q237
82. Fairservis, 1956a, Design Q398
83. Fairservis, 1956a, Design Q153
84. Fairservis, 1956a, Design Q154
85. Fairservis, 1956a, Design Q177
86. Fairservis, 1956a, Design Q150
87. Fairservis, 1956a, Design Q404
88. Fairservis, 1956a, Design Q150
89. Fairservis, 1956a, Design Q289
90. Fairservis, 1956a, Design Q302
91. Fairservis, 1956a, Design Q428
92. Fairservis, 1956a, Design Q136
93. Fairservis, 1956a, Design Q360
94. Fairservis, 1956a, Design Q455
95. Fairservis, 1956a, Design Q433
96. Fairservis, 1956a, Fig. 16f
97. Fairservis, 1956a, Fig. 38a
98. Fairservis, 1956a, Fig. 20e
99. Fairservis, 1956a, Fig. 23a
100. Fairservis, 1956a, Fig. 23b
101. Unpublished A.M.N.H., Morasi A Khr-10
102. Casal, 1955, Fig. 18, Mundigak, Level 9
103. Unpublished, A.M.N.H., Morasi A Khr-10
104. Unpublished, A.M.N.H., Morasi A Khr-10
105. Unpublished, A.M.N.H., Morasi A Khr-10
106. Unpublished, A.M.N.H., Morasi A Khr-10
107. Casal, 1955, Fig. 25, Mundigak, Level 9
108. Casal, 1955, Fig. 25, Mundigak, Level 9
109. Casal, 1955, Fig. 22, Mundigak, Level 9
110. Casal, 1955, Fig. 20, Mundigak, Level 9
111. Fairservis, 1952, Fig. 3c, Morasi B
112. Casal, 1955, Fig. 5, Mundigak, Level ?
113. Unpublished, A.M.N.H., Morasi B Khr-5
114. Casal, 1955, Fig. 3, Mundigak, Level 9
115. Casal, 1955, Fig. 3, Mundigak, Level 10

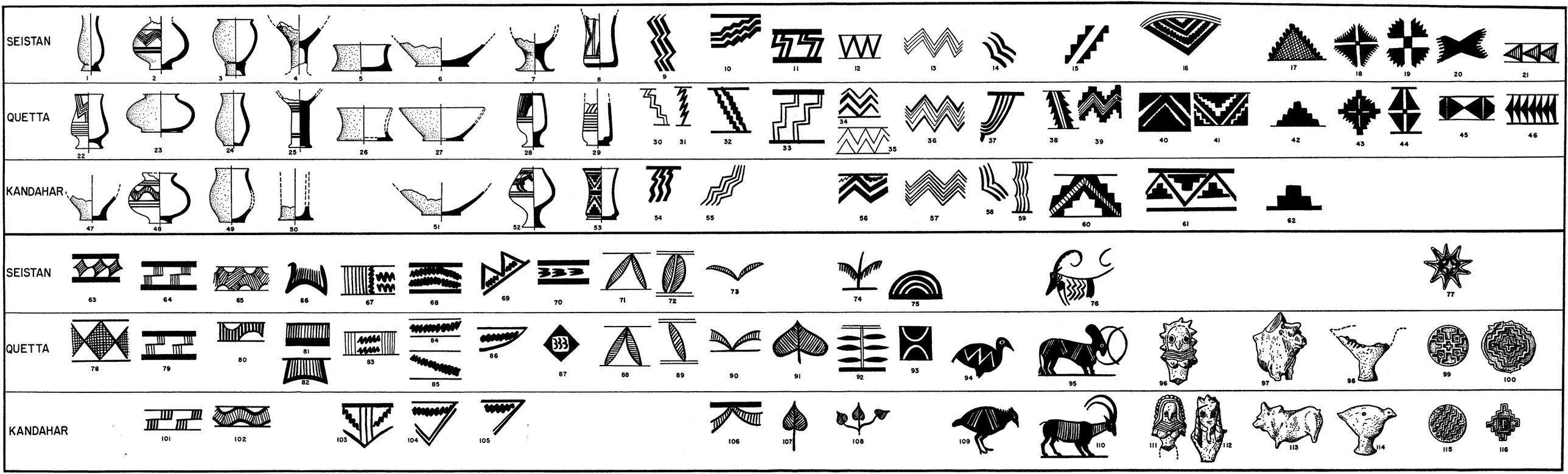


FIG. 38. (For legend, see opposite page.)

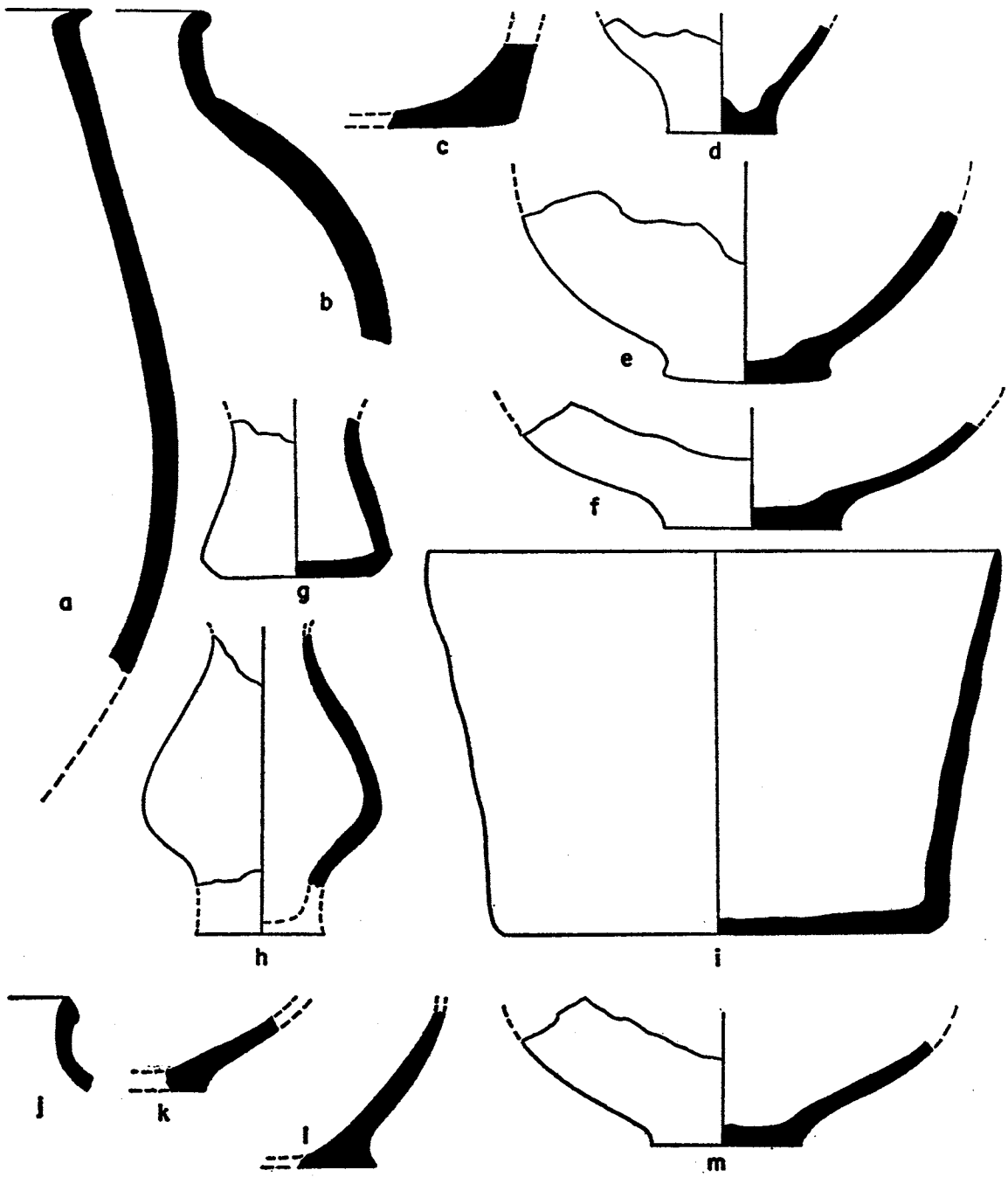


FIG. 39. Rims and bases. a–i. Seistan Plain. j–m. Seistan Buff Plain.

Seistan Black

Figure 40

A hard-fired ware with a tendency towards over-firing apparent in the distortion of some of the sherds. The surface colors range from a gray black to a dull red. The forms are deep open bowls and globular jars not unlike Seistan Plain. Pedestal vessels also occur, though none was recovered intact.

Site: 109, G.R. 6.

Construction: Wheelmade.

Firing: Reduced and oxidized. The problem of detecting a true reduction is beyond the limits of my knowledge. It would certainly require the skills of ceramic technologists.

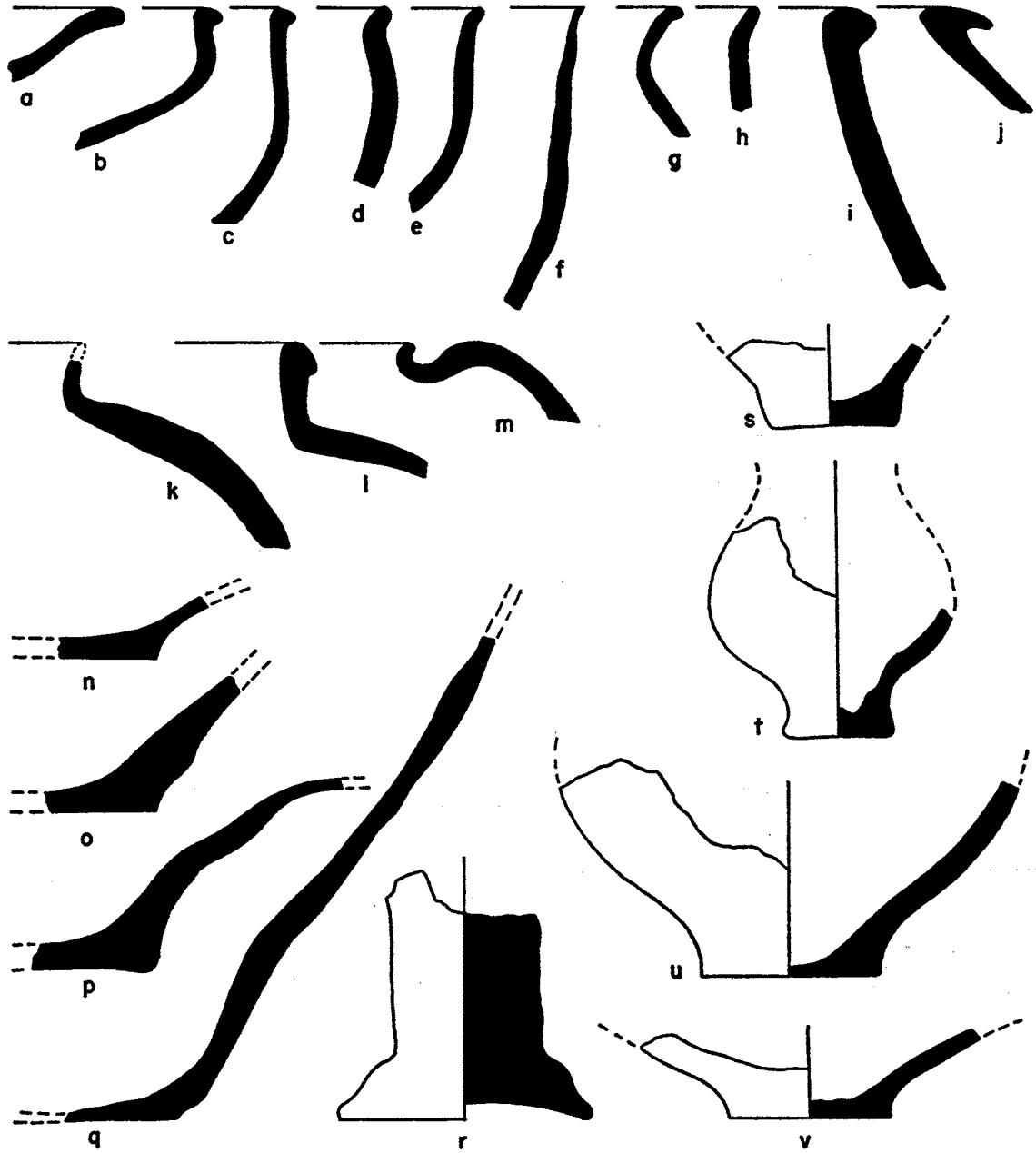


Fig. 40. Rims and bases, Seistan Black.

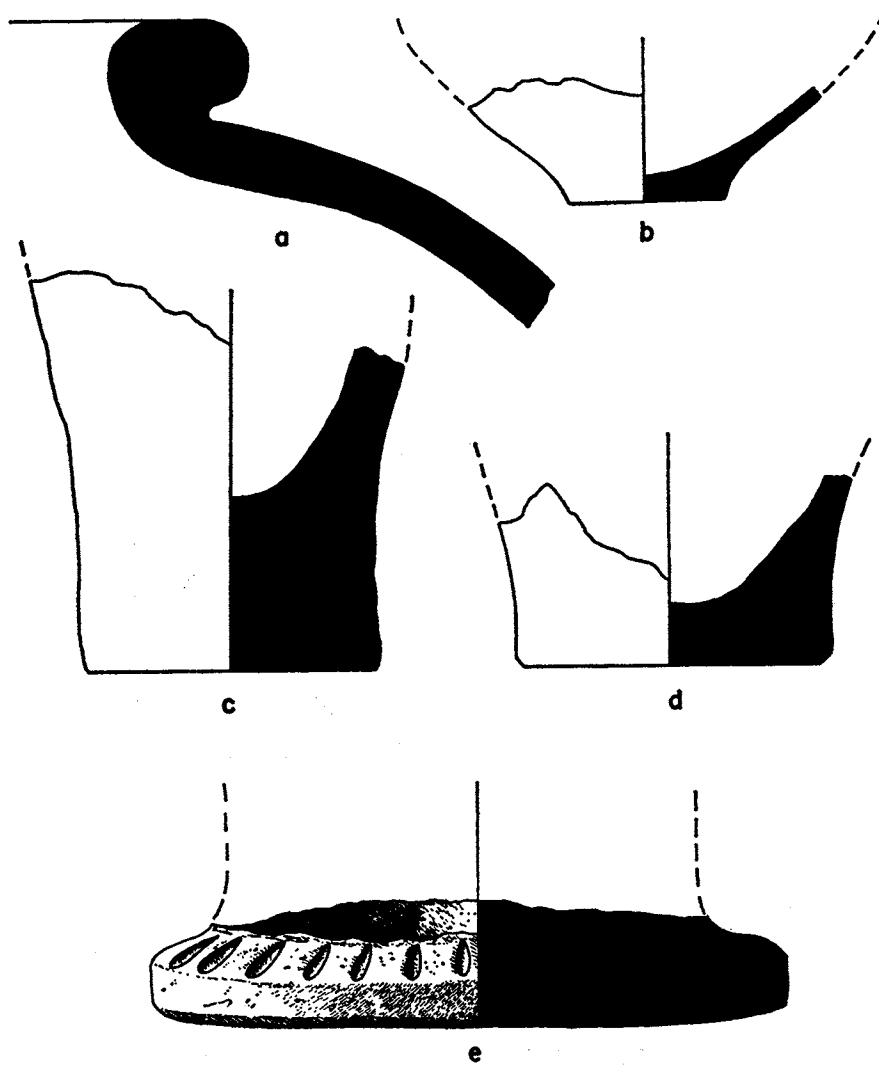


FIG. 41. Rims and bases, Seistan Coarse Tempered.

PASTE: *Color:* 7.5 R 4/0, 5/0, 6/0; 10 R 5/2; 2.5 YR 5/2, 5 YR 6/2; 10 YR 5/1, 6/1. *Temper:* Fine sand, occasional white clay or hard clay particles. *Texture:* Smooth-sandy. *Hardness:* 4–6; almost vitrified in some cases.

SURFACE FINISH: Smooth-sandy.

SURFACE COLOR: 7.5 R 4/0, 5/0; 10 R 5/3; 2.5 YR 5/0; 5 YR 5/3; 10 YR 5/1, 6/1.

THICKNESS: Extremes, 0.4–1.3 cm.; mean, 0.8 cm.

COMMENT: Occasionally surface is reddish while core is black.

SEISTAN COARSE TEMPERED

Figure 41

A thick and coarse plainware with numerous particles of dark temper protruding on both surfaces. Forms include deep, globular vases and tall, flaring(?) jars.

SITE: 109, G.R. 6.

CONSTRUCTION: Wheelmade.

FIRING: Oxidizing, though occasional dark exterior surfaces occur.

PASTE: *Color:* 7.5 YR 7/2; 10 YR 7/2, 7/3. *Temper:* Black particles; size, 0.5–4 mm.; shape, angular; amount, heavy. *Texture:* Moderately coarse. *Hardness:* 4.

SURFACE FINISH: Smooth and granular.

SURFACE COLOR: 5 YR 6/4; 7.5 YR 7/4; 5 Y 8/3.

THICKNESS: Extremes, 0.5–1.5 cm.; mean, 1.2 cm.

DECORATION: Incised decoration may occur in this type.

Seistan Plain Red
Figure 42a–h

Probably a reddish phase of Seistan Plain and also related perhaps to Seistan Black. Until a complete ceramic sample is obtained in stratigraphic context, we must regard this as a separate though related type.

Site: 109, G.R. 6.
Construction: Wheelmade.
Firing: Oxidizing.
Paste: *Color:* 2.5 YR 5/4; 5 YR 6/3; 7.5 TR 6/4. *Temper:* None perceptible. *Texture:* Sandy. *Hardness:* 3.
Surface Finish: Sandy.
Surface Color: 5 TR 6/3; 7.5 YR 6/4, 7/4.
Thickness: Extremes, 0.05–0.09 cm.; mean, 0.05 cm.
Decoration: Several sherds show a reddish polish because of wind patination.

Decorated Wares
Kala Black Slip
Figure 42i–l

A rather fine, dark-slipped ware with identifiable forms tending to globular jars with small mouths and small, flaring rims.

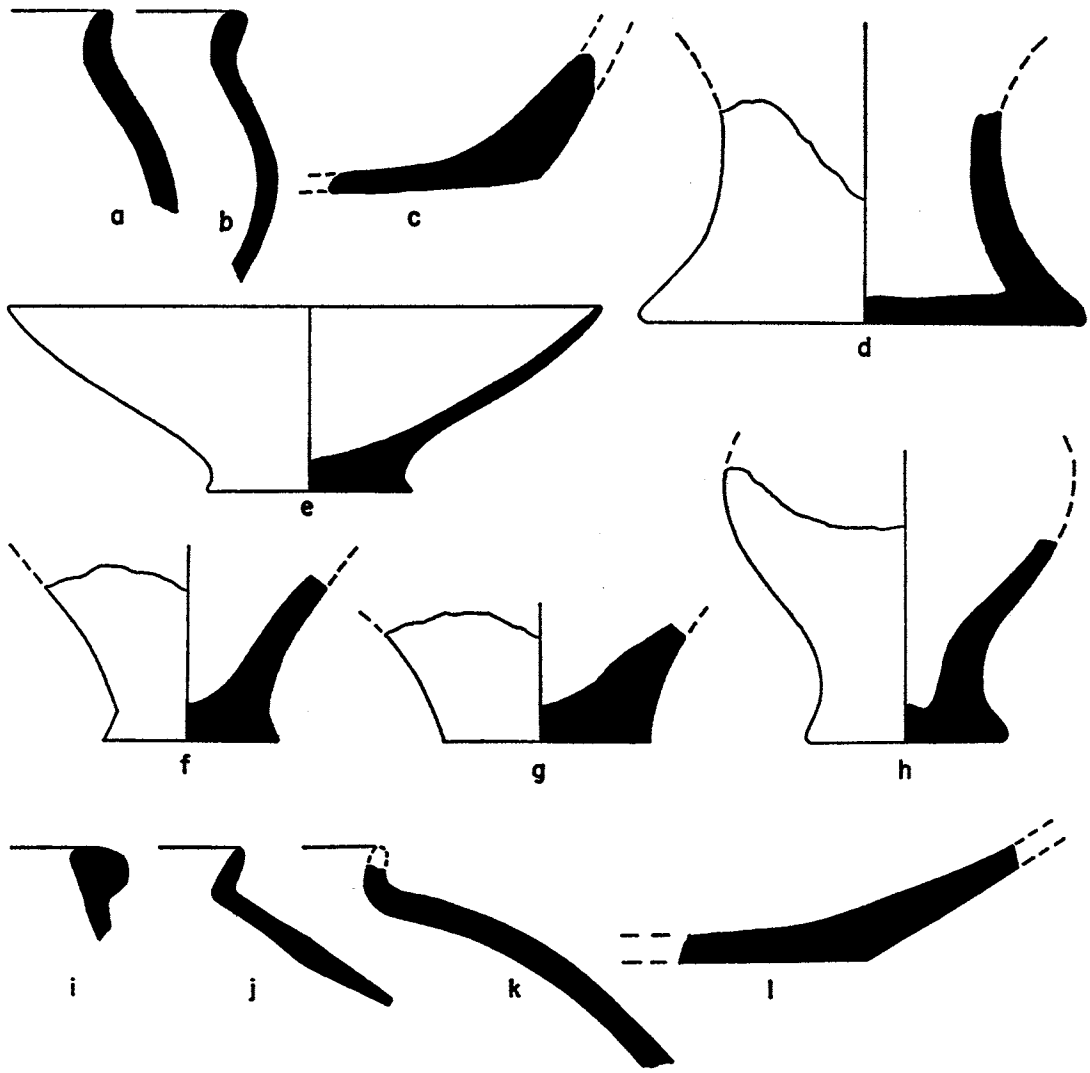


Fig. 42. Rims and bases. a–h. Seistan Plain Red. i–l. Kala Black Slip.

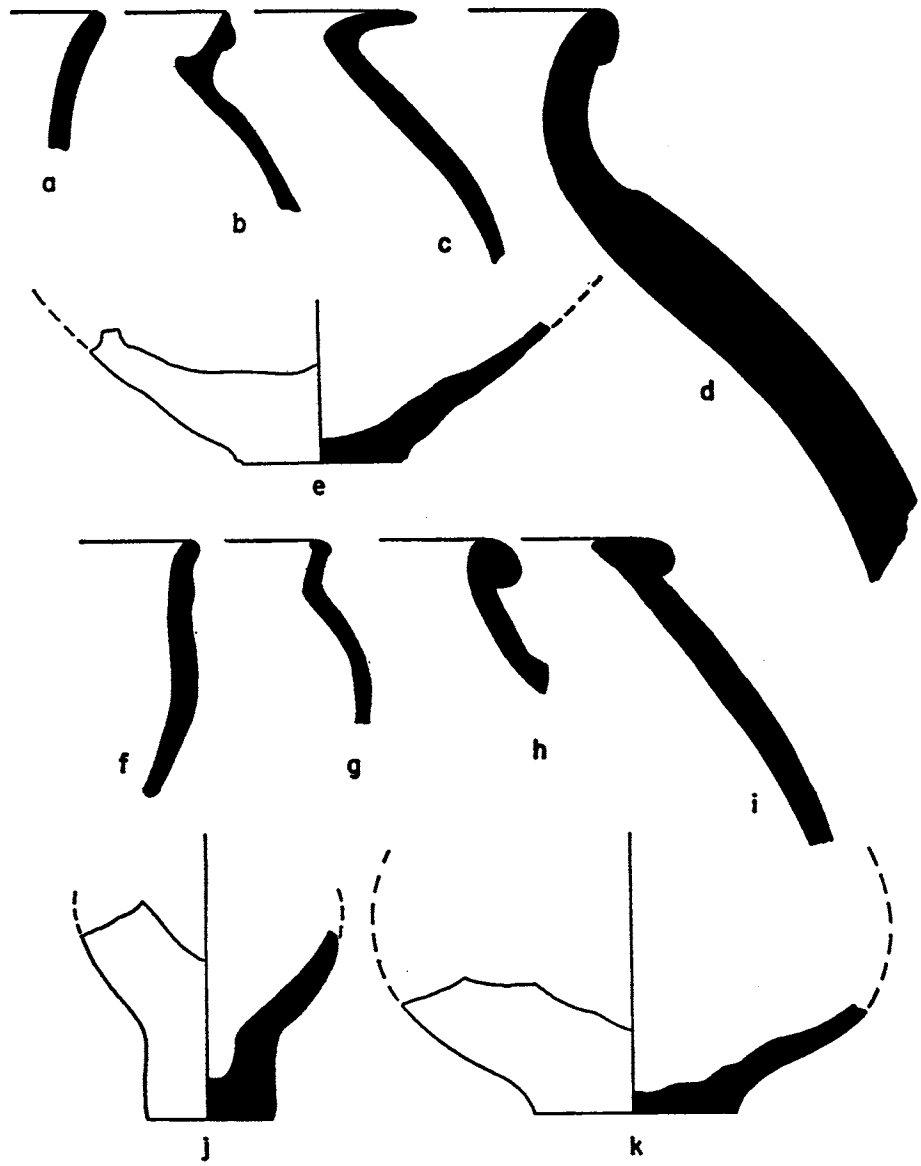


FIG. 43. Rims and bases. a–e. Kala Red Slip. f–k. Kala Buff Slip.

SITE: 109, G.R. 6.
CONSTRUCTION: Wheelmade.
FIRING: Oxidizing.
PASTE: *Color:* 10 YR 6/2, 7/3, 7/4. *Temper:* Occasional black particles. *Texture:* Sandy. *Hardness:* 3.
SURFACE FINISH: Smooth.
SURFACE COLOR: 2.5 Y 4/0; 5 YR 3/1, 3/2; 10 YR 5/1.
THICKNESS: Extremes, 0.08–0.04 cm.; mean, 0.05 cm.
DECORATION: The dark slip appears to be limited to exterior surfaces of vessels.

KALA RED SLIP

Figure 43a–e

Probably nothing but the polished and painted phase of Seistan Plain Red, or perhaps even some sherds now classified as Kala Red Slip, belong to Kala Black Slip as a lighter variety of slipped ware. Because, on the present evidence, I am unable to clarify this matter, it is classified as another type. However, this does not appear to be a true red slip in the same

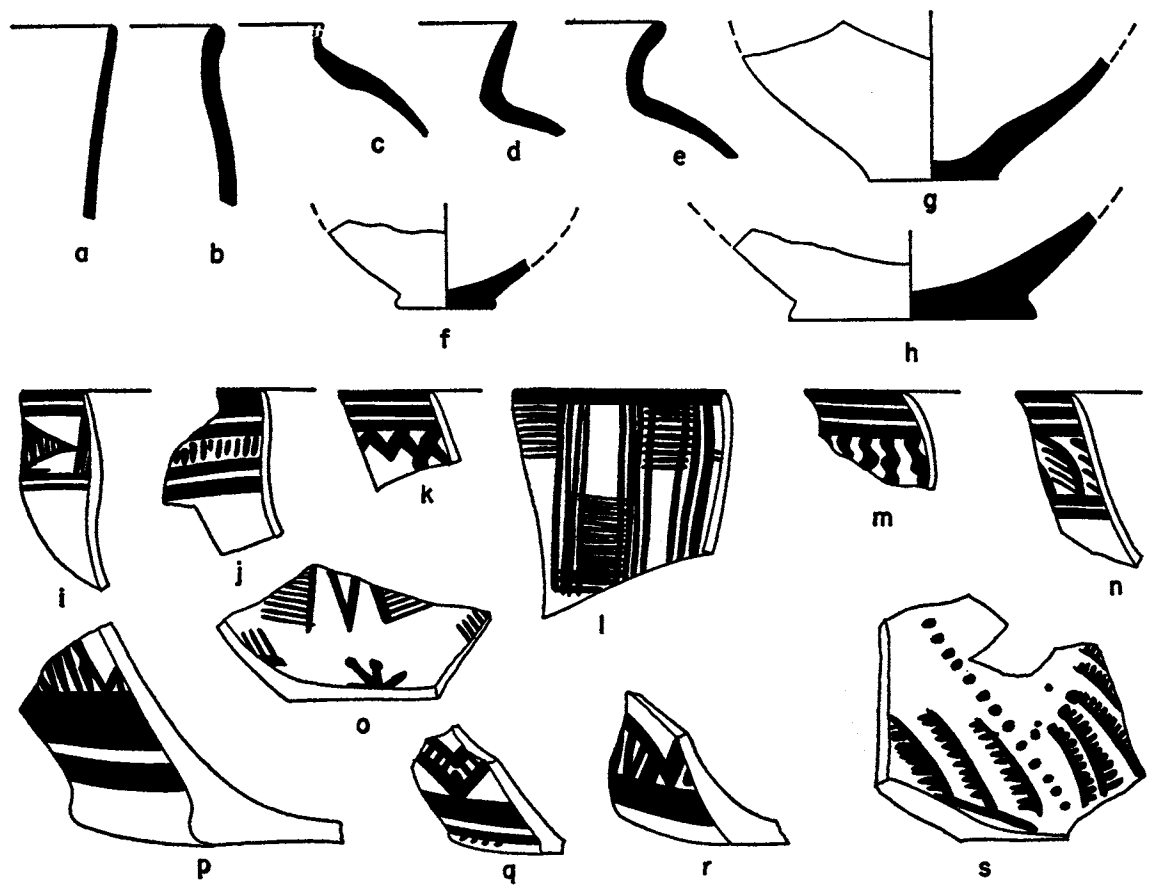


FIG. 44. Rims and bases, Emir Gray. a–h. Variant 2. i–s. Variant 1.

sense as that of Zhob-Loralai or, in fact, of Chashmi-Ali.

SITE: 109, G.R. 6.
CONSTRUCTION: Wheelmade.
FIRING: Oxidizing.
PASTE: *Color:* 10 R 5/3, 5/4; 5 YR 6/4; 10 YR 7/3. *Temper:* Fine white clay or shell. *Texture:* Smooth to sandy. *Hardness:* 3.
SURFACE FINISH: Smooth.
SURFACE COLOR: 10 R 4/4, 5/4, 5/6.
THICKNESS: Extremes, 0.4–0.7 cm.; mean, 0.6 cm.
DECORATION: Red slip.

KALA BUFF SLIP
Figure 43f–k

A fine, buff-slipped ware, with globular jars and deep, open bowls the apparently common forms.

SITE: 109, G.R. 6.
CONSTRUCTION: Wheelmade.
FIRING: Oxidizing.
PASTE: *Color:* 5 YR 6/4, 6/6; 10 YR 6/1, 7/3. *Temper:* Occasional fine black particles. *Texture:* Sandy. *Hardness:* 3–4.
SURFACE FINISH: Smooth.
SURFACE COLOR: 5 Y 8/3, 8/4; 10 YR 8/2; 5 YR 6/6.
THICKNESS: Extremes, 0.6–1.2 cm.; mean, 0.7 cm.
DECORATION: Buff to cream slip.

EMIR GRAY
Figure 44

A rather handsome and delicate ware of fine gray color throughout. In general, the decorated variant (Fig. 44i–s) emphasizes deep open bowls; the undecorated variant, globular small-mouthed jars. It is possible that at least some of the plain gray sherds recovered were originally painted but that wind erosion has erased all trace of paint, a common enough occurrence in the Gardan Reg area.

SITE: 109, G.R. 6.
CONSTRUCTION: Wheelmade.
FIRING: Oxidized.
PASTE: *Color:* 2.5 YR 5/0; 5 Y 6/1; 10 YR 6/2; 10 R 5/1. *Temper:* Indistinguishable. *Texture:* Smooth. *Hardness:* 3–5.
SURFACE FINISH: Smooth.
SURFACE COLOR: 10 YR 6/1; 5 YR 5/1; 2.5 Y 8/2; 7.5 R 6/0; paint, 2.5 Y 3/0, 4/0; 10 YR 5/1.
THICKNESS: Extremes, 0.03–0.05 cm.; mean, 0.04 cm.
DECORATION: Black painted geometric designs, Variant 1; plain, Variant 2.

GARDAN REG DECORATED

Figure 45

The characteristic painted ware of the prehistoric sites so far discovered in Seistan is a moderately fine ware, with globular jars and open bowls the most frequent forms. Considerable variation in surface and paste color is due

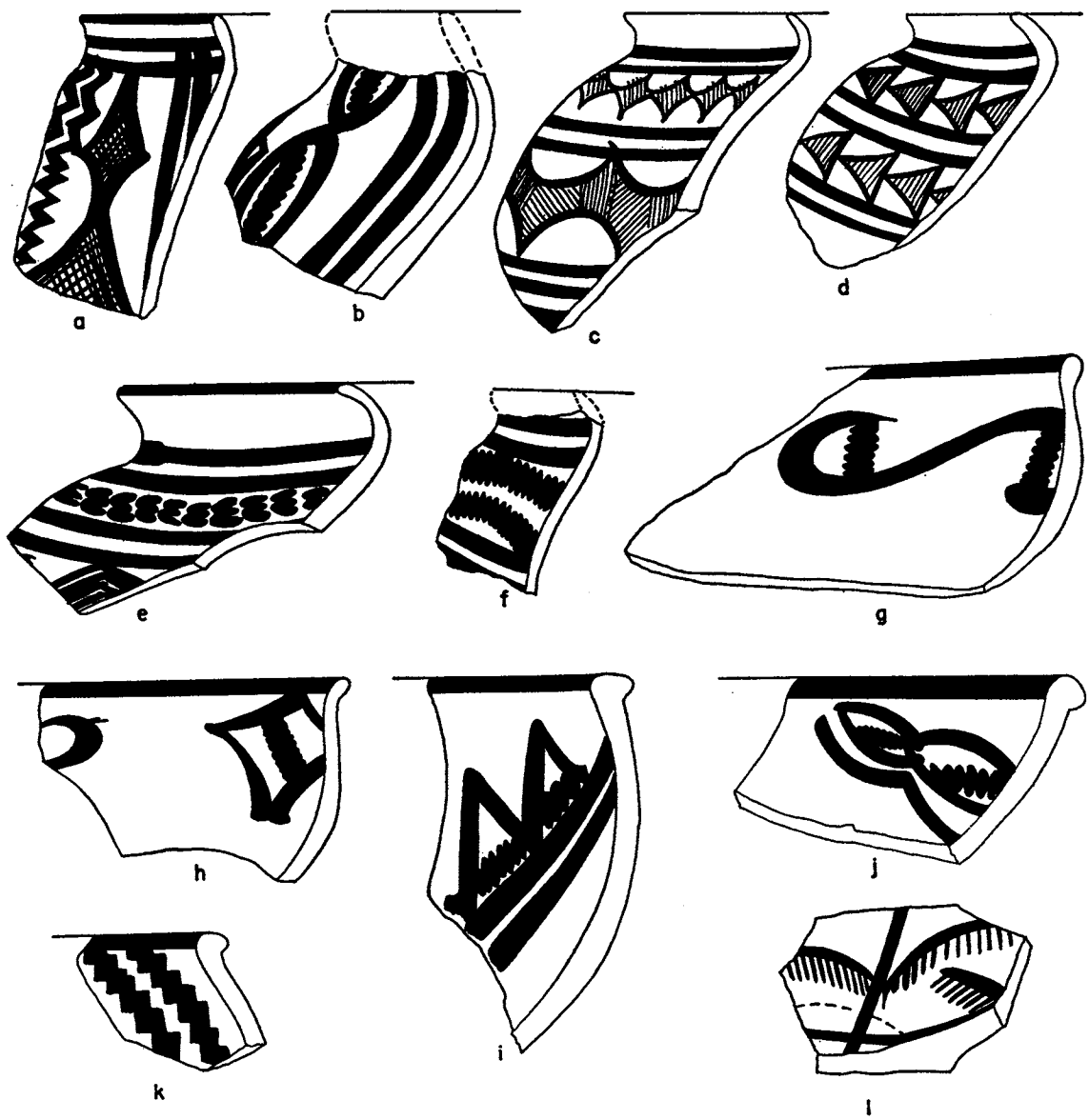


FIG. 45. Rims and bases, Gardan Reg Decorated.

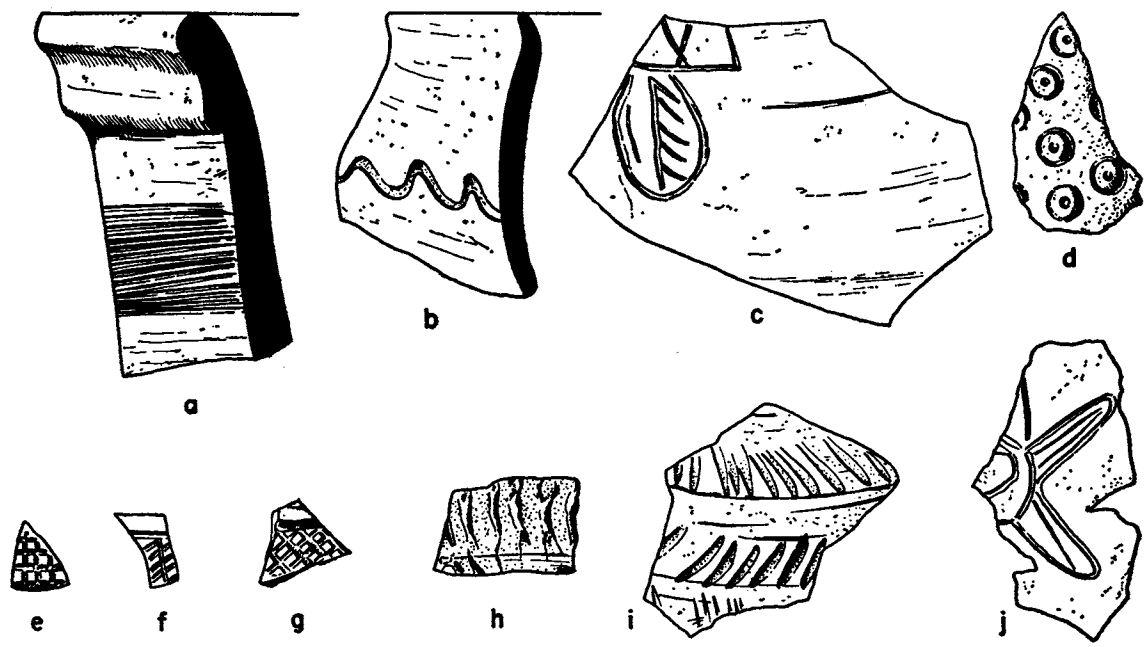


FIG. 46. Miscellaneous incised, stamped, and other decorated wares. a. Fine grooved. b. Loop incised. c. Incised. d. Ring stamped. e–g. Fine grayware incised on exterior. h. Quetta Wet ware. i–j. Incised.

to firing differences. This variation ranges from a cream through buff and greenish to dark brown. There are occasional red browns, but no indication of red slips. Slipping, in fact, was not frequently used. The examples we collected were confined to buff or brownish slips. Paint color ranges from deep black to reddish brown.

SITE: 109, G.R. 6.

CONSTRUCTION: Wheelmade.

FIRING: Oxidized.

PASTE: *Color:* 5 YR 6/4, 6/3, 7/4; 2.5 Y 4/0; 10 YR 7/2, 7/3/ 8/3. *Temper:* Occasional black particles, 1 mm. or less in size. *Texture:* Sandy. *Hardness:* 3–4.

SURFACE FINISH: Smooth, sandy.

SURFACE COLOR: 2.5 Y 7/2; 5 Y 8/4; 10 YR 7/2, 7/3, 6/2; 5 Y 8/3, 6/2, 6/3, 7/3; 5 YR 6/3, 6/4; 10 YR 4/2; paint, 10 YR 3/1, 4/1; 5 YR 5/2.

THICKNESS: Extremes, 0.04–1.0 cm.; mean, 0.06–0.07 cm.

DECORATION: Painted geometric designs rather heavily drawn in blackish paint, usually on exterior of vessels.

MISCELLANEOUS DECORATED WARES

WET WARE

Figure 46h

There is a single, buff-slipped sherd of the type known as Quetta Wet (Fig. 46h)[1] found at Site 109.

INCISED DECORATED

Figure 46b–g, i–j

"Leaf" design incised in a cream-slipped sherd of smooth paste (Fig. 46c).

A sherd with sloping dashes in brown, slightly rough ware (Fig. 46i).

A sherd with star-like design incised in thin red-brown ware, with occasional black temper particles on surface (Fig. 46j).

Fine grayware (Emir Gray) incised with cross-hatched design (Fig. 46e–g).

Undulating loop incised (Fig. 46b).

Single example of ring stamping on exterior of moderately rough fabric, dark red-brown in color, gray core and interiors (Fig. 46d).

HISTORIC WARES OF SITE 109

A few sherds of an obviously later period were found at G.R. 6. These include the following: one sherd with a light-brown polished slip or glaze on its interior; two sherds of light blue-green glaze on interior; one rim sherd of a cylindrical vessel decorated with fine, multiple, parallel lines (Fig. 46a).

[1] Fairservis, 1956a, 269.

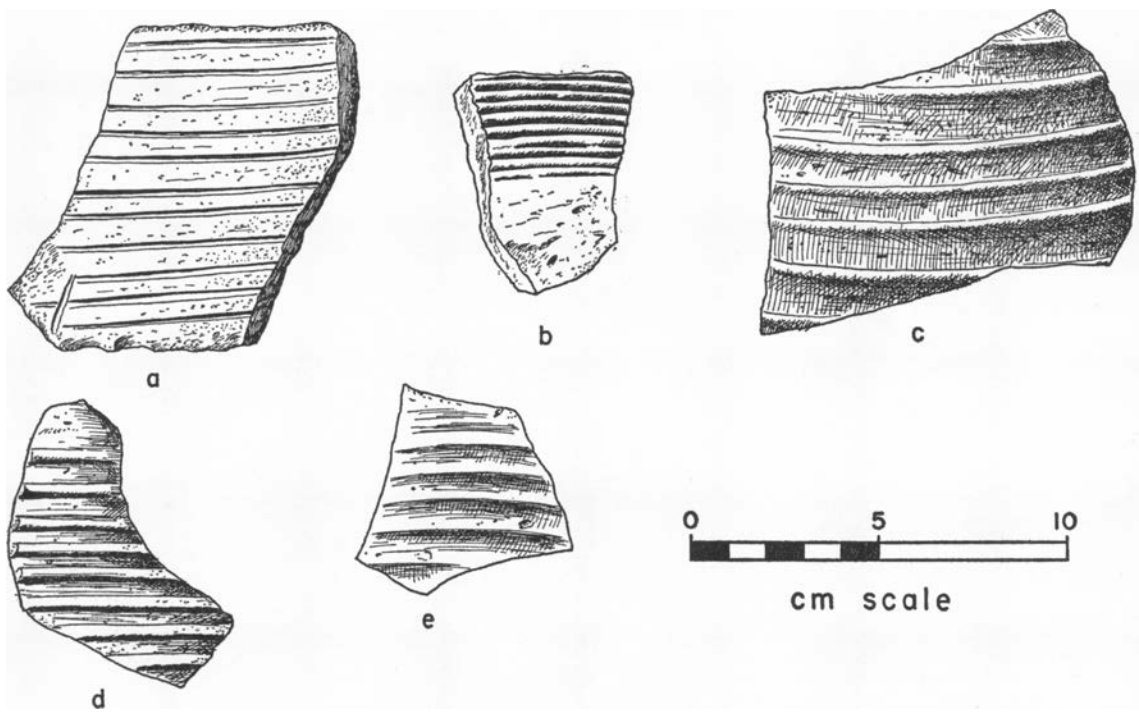


FIG. 47. Types of grooved and Seistan Ribbed wares of the Rud-i-Biyaban area.
a–b. Grooved. c–e. Seistan Ribbed.

HISTORIC WARES OF SEISTAN

SEISTAN RIBBED

Seistan Ribbed ware has a wide distribution east of Seistan[1]; in the Quetta Valley study it was assigned to Periods D–C, perhaps overlapping into B.[2] Dupree found sherds of this type in stratigraphic context at the Shamshir Ghar Cave in the Kandahar area. There it appears in Late Kushan (100–300 A.D.) context.[3]

The apparent association of a Late Sassanian coin (630–631 A.D.) with Seistan Ribbed and plain glazed wares at Pai-kash-i-Rustam and the paucity of the type at Peshawarun, where it appears in Early Islamic context (Pl. 16i–k; p. 42), indicate its latest time limits. If Herzfeld's estimate of the age of the earlier buildings at Ghagha-shahr is correct (p. 37), the Seistan Ribbed would apparently have a time range from at least the first century A.D. to Early Islamic times, or at least to the tenth century A.D. On the present evidence, its heyday was pre-Islamic.[4]

At a number of sites, including the so-called watch towers (Table 4) in the Rud-i-Biyaban, sherds of Seistan Ribbed were found (Fig. 47). With few exceptions, no glazed wares were present. However, coarse-grooved decorated (Fig. 48a), fine band-grooved decorated (Fig. 48c–d), and loop-incised decorated (Fig. 48e–i) wares were found rather consistently. Grooved wares of this type are common from Late Kushan to Early Islamic times at Shamshir Ghar, with perhaps some climax in usage in Dupree's Kushano-Sassanian period.[5]

GLAZED WARES

Glazed wares are, of course, not confined to Islamic sites, as glazing was practised from at least Parthian times. Generally, however, pre-Islamic pottery glazing tended to be plain and unornamented. The colors were usually in the blue-green categories.[6] It is, therefore, of inter-

[1] Fairservis, 1956a, 340.
[2] Fairservis, 1956a, 345, Fig. 63.
[3] Dupree, 1958, Pl. 25 f.
[4] Fairservis, 1956a, Fig. 63.
[5] Dupree, 1958, Pls. 22a-f, 26a-d; 185, Fig. 5; also note Seistan Ribbed in Late Kushan context, Pl. 25f.
[6] Dupree, 1958, 184 ff.; Lane, 1947, 8–9.

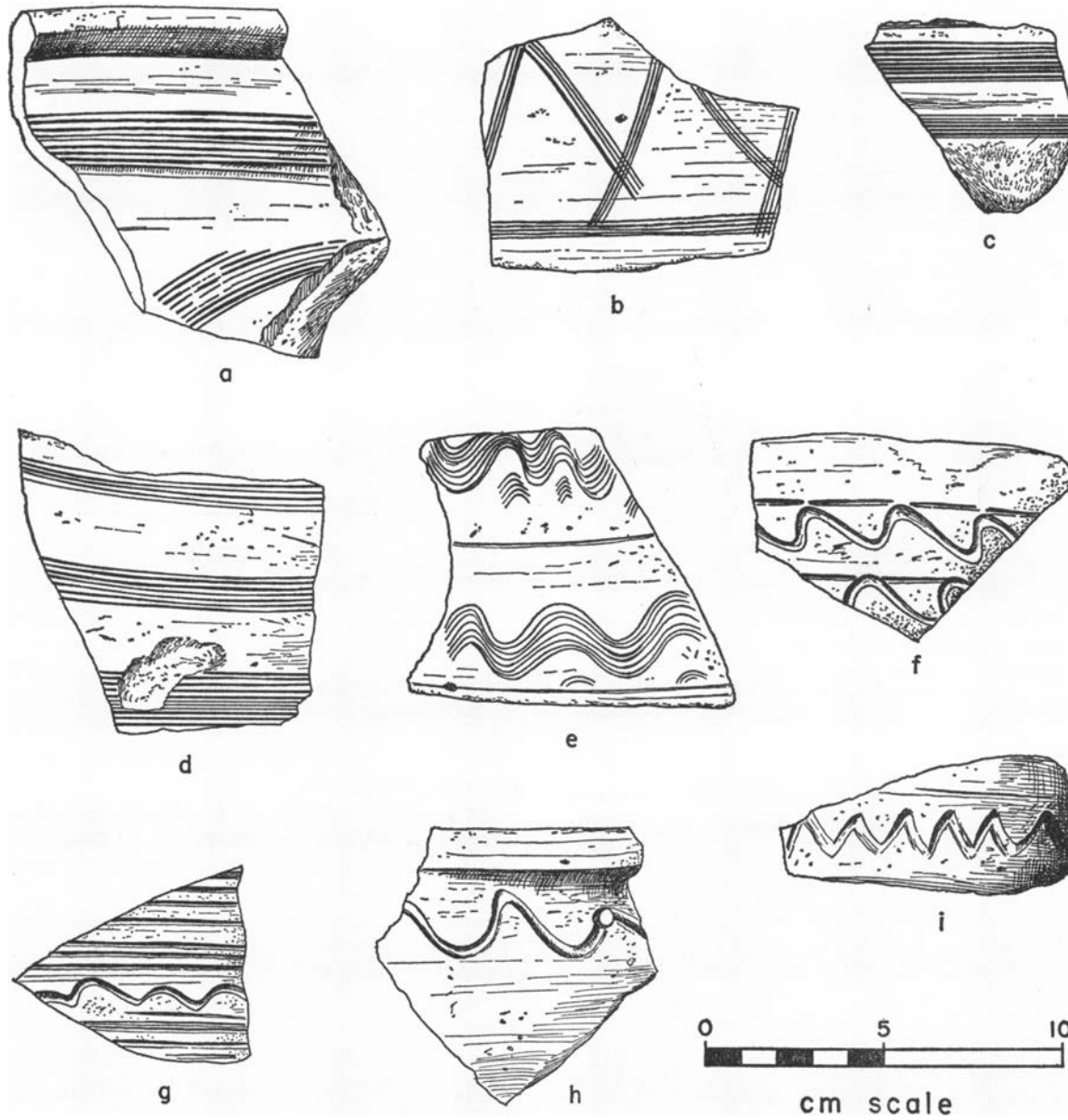


FIG. 48. Miscellaneous incised decorated wares of the Rud-i-Biyaban area.

est that the glazed ceramics usually found associated with the Seistan Ribbed wares are of the plain blue-green type.

The body of datable pottery collected at Peshawarun (Pls. 14–18) provides a corpus of ceramic types useful for correlating surface finds in Seistan. Initially, however, the pottery found by Dupree at Shamshir Ghar in Early Islamic context can be compared (Table 3). That a number of wares found at Peshawarun are absent or scarce at Shamshir Ghar (blue-green glazed, decorated white-glaze, twisted rope handles) may well be owing to the nature of the latter site rather than to great chrono-

TABLE 3

EARLY ISLAMIC WARES: SHAMSHIR GHAR AND PESHAWARUN

Dupree, 1958 Plate No.	Wares	Present Paper Plate No.
12s	Graffito 3, Early Islamic	15gg
12o	Graffito 3, Early Islamic	15bb
15h	Nishapur 2, Early Islamic	15uu
15w	Brown-green, Early Islamic	15dd
15y	Brown-green, Early Islamic	15ff, jj, oo
15p–v	Brown-green, Nishapur 4	15ff, jj, oo
15b–f	Nishapur 1, Early Islamic	15kk–ss
15l–m	Nishapur 3, Early Islamic	15kk–ss
14r, u	Samarkand Kufic	15kk–ss
12a–j, l	Graffito 1, Early Islamic	15r–t, v–aa
14f–i	Blue and Blue-green, Early Islamic	14c–r
28a	Incised	16o–aa, 17a–p
29j	Incised	18b–d, l, p
24a–k	Red-Streaked Burnished[a]	18a

[a] Dupree's Red Streak Pattern-Burnished ware.

logical discrepancy. Studies of Islamic ceramics tend to confirm Peshawarun as being thirteenth century or earlier.[1]

EVIDENCE OF THE BRICKS

Valuable data for the determination of the relative chronology of certain sites are attainable by a comparative study of the measurements of bricks found at these sites. Initially, bricks from the sites on the Kuh-i-Kwaja, Ghagha-shahr, and Kok-i-Zal can be considered. With the use of Herzfeld's typology (p. 37), the earlier building period is first century A.D., Saka or Parthian, and the later period, Early Sassanian. Stein observed that the later building bricks measured 24 by 13 by 3 inches.[2] The outer wall of Ghagha-shahr was made of bricks ranging from 22 to 17 by 15 inches to 12 by 4 to 5 inches. Therefore this wall was manifestly of the later period. The same range of brick size occurred in the larger buildings within the walls.[3] The smaller bricks appear to represent the earlier period. The Kok-i-Zal bricks measured 17 by 12 by 4 to 5 inches and thus also represent the earlier period.

If this evidence is applied to other sites, it appears that Shahristan (bricks: 18 by 16 by 4 inches, 16 by 11 by 4 inches) and Atish-kadah (gāh) (bricks: 16 by 11 by 4 inches) also represent the earlier period, a fact borne out by the ceramic evidence.

In contrast to the above, the bricks in the twelfth-century (A.D.) structure of Mil-i-Kasimabad measured 14 by 8 by 2 inches and those in nearby square structures, 12 by 7 by $2\frac{1}{2}$ inches. We can add to this group of small rectangular bricks those of Zahidan (12 by 6 by $2\frac{1}{2}$ inches) and very probably those of Kala-i-Timur (10 by 6 by $2\frac{1}{2}$ inches) and Gumbaz-i-Shahr (10 by 6 by 2 inches). The Early Islamic site of Peshawarun had buildings made of bricks measuring 9 by $6\frac{1}{4}$ by $1\frac{3}{4}$ inches.

Of great interest is the "rotunda" of Paikash-Rustam; the bricks here measured 17 to 18 by 8 to 9 by $2\frac{1}{2}$ inches. Based on data provided by coins, this structure can be dated Late Sassanian, perhaps indicating a transitional stage between the large rectangular bricks of the Early Sassanian period (for example, Ghagha-shahr) and the smaller bricks of Early Islamic times.

Square bricks appear to be both Early and Late Islamic. Bricks from the inner fort of Kalat-i-Gird measured 12 by 12 by 2 inches, as

[1] For example, see especially Lane, 1947. Compare Pl. 14b of the present report with Pl. C, Lane, 1947; and Pl. 15s-aa of the present report with Pl. 31A, Lane, 1947.

[2] Stein, 1928, Vol. 2, 919.

[3] Stein, 1928, Vol. 2, 909–910.

TABLE 4

BRICK DIMENSIONS AND SITE-PERIOD ATTRIBUTION

Site No.	Brick Dimensions (in Inches)	Period Attribution
53	28×7×2	Probably Sassanian
13	25½×16½×2	Sassanian
54	25×13×4½	Sassanian
66	25−24×13−12×4	Sassanian
1	24×13×3 (later masonry)	Sassanian
53	24×13×4	Sassanian
62	24×13×4	Sassanian
69	24×12×4	Sassanian
64	24−22×12×4	Sassanian
42	24−22×12×3	Sassanian
28b (interior)	22½×11×3½	Protohistoric
1	22×15×5	Sassanian
65	20×12×4	Sassanian
4	18×16×4	Sassanian?
43	18−17×9−8×2½	Late Sassanian
2	17×12×5−2	Parthian
1	17×12×4	Parthian
68	16×15×?	Islamic?
4	16×11×4	Parthian
5	16×11×4	Parthian
47	14−13×14×3	Islamic
47 (outside ruins)	14×13×3	Islamic
9	14×8×2	Early Islamic
28b (interior)	13¾×13¾×3½	Protohistoric
Rud-i-Biyaban (Moslem pottery associated)	12×12×2	Islamic
47	12×12×2	Islamic
12	12×12×2	Islamic
9 (structures near)	12×7×2½	Early Islamic
70	12×6½×2¼	Protohistoric?
7	12×6×2½	Early Islamic
73	12×5¾×4¾	Early Islamic
5 (near Atish-Gah, Moslem)	11×7×2	Late Islamic
109	11?×6¼×2½	Prehistoric
75	11?×6¼×2½	Prehistoric
47	11×6×2	Prehistoric
8	10×10×2½	Early Islamic
8	10×6×2½	Early Islamic
83 (the fort)	10×5½−5¼×2¼	Early Islamic
48	10×6×2	Early Islamic
21	9×6¼×1¾	Early Islamic
71	7½×3¾×2¼	Parthian
77	7½×3¾×2¼	Parthian
100	7¼?×3½×2½	Parthian?
91	6¾×4¼×2¼	Early Islamic
91	5½×4¼×2	Early Islamic
87 (tower)	?×4×2¼	Early Islamic
108	?×8½×2¼	Prehistoric

did those of Burj-i-Afghan. Stein also reported a brick associated with Moslem pottery in the Rud-i-Biyaban that measured 12 by 12 by 2 inches. Bricks from the Islamic site of Kalat-i-Timur measured 10 by 10 by 2½ inches.

Prehistoric bricks were always fragmentary, and therefore accurate measurements were impossible. Nevertheless, apparently slender, rectangular bricks were commonly used: G.R. 6, 11? by 6¼ by 2½ inches; G.R. 4, ? by 8½ by 2¼ inches.

Finally, some interest must certainly be attached to brick measurements made by R. Ghirshman at Sorh-dagh, Nad-i-Ali. These measurements were made on bricks from the two walls of Period II, the protohistoric period marked by the Nad-i-Ali graywares. The exterior wall bricks, which measured 13¾ by 13¾ by 3½ inches, are thus somewhat larger than the square Islamic bricks. The interior wall bricks are, on the other hand, 22½ by 11 by 3½ inches, well within the range of the Sassanian bricks previously described.

With due caution, the brick measurements are of value in identifying the period of occupation represented at certain sites. The measurements obtained at all sites is summarized in Table 4. On this evidence, the watch tower sites described by Aurel Stein as part of a limes system are of Early Sassanian, or possibly Parthian, times—a fact apparently confirmed by the ceramic evidence.

SUMMARY OF THE ARCHEOLOGICAL HISTORY

THE ASSIGNMENT of a chronological sequence to the 114 sites presently known to me presents a rather complex problem. Because so little stratigraphy has been determined, precision is not possible. On the other hand, coins and occasional inscriptions help to shed light on the period to which a site belongs. However, we must depend largely on the evidence furnished by the pottery. With some qualification, the pottery provides a fairly reliable chronological index.

I have taken into consideration local traditions and published historical records as well as other available evidence. In some cases traditions and historical records are the only means of dating, and, when such is the case, the chronological position of the site is obviously subject to greater error than otherwise.

The relative chronology is based on the following nine criteria: tradition, historical records, coin evidence, architectural evidence, art, pottery, inscriptional evidence, bronzes, and brick measurements. Obviously, the more criteria for each period and each site, the more reliable its chronological assignment.

Table 7 summarizes the site occupations according to period. If we consider these figures as in any way representing the tendency towards or away from maximum settlement in Seistan, then we can assert that the Sassanian period was the most prosperous, the Parthian closely following, the Islamic and Prehistoric periods of moderate settlement, and the Achaemenid and proto-Historic periods representing a decided diminution of occupancy.

The history of Seistan (pp. 30–36) leads us to approximately the same conclusion. However, it is unnecessary to state that we must exercise caution in accepting these figures as symptomatic of the true situation. Initially, we must bear in mind the fact that the term "site," as used here, has a wide range of meaning; it can refer to anything from an enormous urban complex, such as Site 7 or Peshawarun (Site 21), to a tiny ruin such as G.R. 10 (Site 113). In Table 5 all the sites, regardless of extent, are given the same weight.

We must remember, too, that we do not

TABLE 5

PROBABLE CHRONOLOGICAL ORDER OF SEISTAN SITES

Site No.	Late Islamic	1400 A.D.[a]– Early Islamic	700 A.D.– Sassanian	200 A.D.– Parthian	200 B.C.– Achaemenid and Hellenistic	600 B.C. Protohistoric	1500 B.C.– ?1200 B.C. Prehistoric
1	—	—	P,[b] T, Brk	P?, A, Ar, Brk	T	—	—
2	—	—	P	Brk, Ar	—	—	—
3	—	—	P	Ar	—	—	—
4	—	—	P, T	Brk	—	—	—
5	Brk[c]	—	P, T	Brk	—	—	—
6[d]	—	—	—	—	—	—	—
7	—	P, T, R, Brk	—	—	—	—	—
8	—	T, Brk	—	—	—	—	—
9	—	P, T, R, I, Brk	P?	—	—	—	—
10	—	P	P	—	—	—	—
11	—	—	P	Ar?	—	—	—
12	P, Brk	—	P	—	—	—	—
13	—	T, R	T, Brk	—	—	—	—
14	—	P?	P	—	—	—	—
15	—	—	P	—	—	—	—
16	R	T	—	—	—	—	—
17	—	P	P	—	—	—	—
18	—	P	P	—	—	—	—
19	P?	P	—	—	—	—	—
20	P?	P	—	—	—	—	—

TABLE 5—(*Continued*)

Site No.	Late Islamic	1400 A.D.– Early Islamic	700 A.D.– Sassanian	200 A.D.– Parthian	200 B.C.– Achaemenid and Hellenistic	600 B.C. Protohistoric	?1500 B.C. ?1200 B.C. Prehistoric
21	P?	P, C, Brk	—	—	—	—	—
22	P?	—	—	—	—	—	—
23	T?	—	—	—	—	—	—
24	T?	—	—	—	—	—	—
25	R, T	—	—	—	—	—	—
26	R, P	—	—	—	—	—	—
27	—	—	P?	—	—	—	—
28a	R, T, P	P, R, T	—	—	—	—	—
28b	—	—	P	P	P, Ar	P	P
28c	—	—	P	P	—	—	P
29	T, R	T	T	—	—	—	—
30	—	C, T	C, T	C	—	—	—
31	P	—	—	—	—	—	—
32	T, R	—	—	—	—	—	—
33	Ar	Ar	—	—	—	—	—
34	—	—	P	P	—	—	—
35	—	—	P	P	—	—	—
36	—	—	P	P	—	—	—
37	—	P?	P	—	—	—	—
38	T, P?	—	—	—	—	—	—
39	—	—	—	—	—	—	P
40	T	—	—	—	—	—	—
41	T	—	—	—	—	—	—
42	—	P?	P, Brk	P	—	—	P
43	—	—	P, C, Brk	—	—	—	—
44	T	—	—	—	—	—	—
45	—	—	P?	—	—	—	P
46	T, R?	—	—	—	—	—	—
47	P?, Brk	P, C, Brk	—	—	—	—	P, Brk
48	T	Brk	—	—	—	—	—
49	—	—	P?	—	—	—	P
50	—	—	—	—	—	—	P
51	—	—	—	—	—	—	P
52	—	—	—	—	—	—	P
53	—	—	Brk	Ar	—	—	—
54	—	—	Brk	Ar	—	—	P
55	—	—	—	—	—	—	P
56	—	—	—	—	—	—	P
57	—	—	—	—	—	—	P
58	—	—	—	—	—	—	P
59	—	—	—	Ar	—	—	P
60	—	—	—	Ar	—	—	P
61	—	—	—	Ar	—	—	P
62	—	—	Brk	Ar	—	—	—
63	P	—	—	—	—	—	P
64	—	—	Brk	Ar	—	—	—
65	—	—	Brk	Ar	—	—	P
66	—	—	Brk	Ar	—	—	P
67	—	—	—	Ar	—	—	—
68	Brk?	—	—	Ar	—	—	—

TABLE 5—(*Continued*)

Site No.	Late Islamic	1400 A.D.– Early Islamic	700 A.D.– Sassanian	200 A.D.– Parthian	200 B.C.– Achaemenid and Hellenistic	600 B.C.– Protohistoric	1500 B.C.– ?1200 B.C. Prehistoric
69	—	—	Brk	Ar	—	—	—
70	—	—	—	—	—	Br, Brk?	—
71	—	—	—	Brk	—	—	P?
72	—	—	P	P	—	—	—
73	—	Brk?	P	P	—	—	—
74	—	—	P	P	—	—	—
75	—	—	P	P	—	—	Brk?
76	—	—	P	P	—	—	—
77	—	—	P	P, Brk	—	—	—
78	—	—	P	P	—	—	—
79	—	—	P	P	—	—	—
80	—	—	P	P	—	—	—
81	—	—	P	P	—	—	—
82[d]	—	—	—	—	—	—	—
83	—	Brk	P	P	—	—	—
84	—	—	P	P	—	—	—
85	—	—	P	P	—	—	—
86	—	—	P?	P	—	—	P
87	P?	P, Brk?	—	—	—	—	—
88	—	—	P?	P	—	—	—
89	—	—	P?	P	—	—	—
90	—	—	P?	P	—	—	—
91	P?	P, Brk	P?	—	—	—	—
92	—	—	P?	P	—	—	—
93	—	—	P?	P	—	—	—
94	—	—	P	P?	—	—	—
95	—	—	—	P	—	—	—
96	R	R	—	—	—	—	—
97	—	T	T	—	—	—	—
98	—	—	P?	P?	—	—	—
99	—	R?, T	—	—	—	—	—
100	—	—	P?	P?, Brk	—	—	—
101	—	—	P?	P?	—	—	—
102	—	—	P?	P?	—	—	—
103	—	—	P?	P	—	—	—
104	—	—	P?	P	—	—	P
105	—	—	—	—	—	—	P
106	—	—	—	—	—	—	P
107	—	—	—	—	—	—	P
108	—	—	—	—	—	—	P, Brk
109	—	—	—	—	—	—	P
110	—	—	—	—	—	—	P
111	—	—	—	—	—	—	P
112	—	—	—	—	—	—	P
113	—	—	—	—	—	—	P?
114	—	—	—	—	—	—	P

[a] Dates represent approximate close of periods.

[b] The symbols signify: A, art; Ar, architectural evidence; Brk, brick measurements; Br, bronzes; C, coin evidence; R, historical records; I, inscriptional evidence; P, pottery; T, tradition.

[c] Site near Atish-gah (p. 39).

[d] No identifying evidence.

TABLE 6

GEOGRAPHICAL DISTRIBUTION OF KNOWN SITES

Location	Number of Sites
Southern Delta (Rud-i-Biyaban)	76
Helmand River Valley, south of Band-i-Seistan	8
Desert basin south of Chakansur	2
Northern and eastern Seistan	14
Western and central Seistan	14
Total	114

know how large a percentage of the total number of sites is represented by this sample. Is it really representative? Again, the geographic distribution, as expressed in Table 6, must be considered. By far the largest number of sites occurs in the Southern Delta, the area where both Stein's surveys and ours were concentrated. Both prehistoric and Partho-Sassanian sites occur with greater frequency in this Southern Delta than in areas to the north. Does this mean that settlements were more extensive in the Southern Delta during those periods? Though likely, such cannot be proved. The situation in the Hamun and surrounding areas where annual floods deposit mud that gradually submerges the existing landscape bodes ill for the recovery of anything approaching an adequate sample of the ancient occupation. Stein records just such a situation:

> Extensive ruins are known to have disappeared there within living memory, buried under the heavy alluvium deposited by river branches escaping into new channels or effaced by resumed cultivation . . . apart from a few sites such as Shahristan and Atish-kadah occupying little island-like outliers of the "Dasht" plateau, practically all remains surviving above ground within the limits above indicated belong to Muhammadan times.[1]

In spite of these and similar handicaps, it should be borne in mind that both surveys were reasonably thorough and must therefore be accorded some validity.

As has been stated above, Seistan has had a varied role in the history of the Iranian plateau. It has functioned: (1) as a food-producing area in which fertile soil and water of varying extent and quantity are always available; (2) as a base for movement up the Khush, Farah, or Helmand river valleys for purposes of trade, travel, or war; (3) as an area of sacred memories suitable for pilgrimage; (4) as an easternmost extension of purely Iranian cultures, with its closest affinities to the Kirman area to the southwest; and (5) as a meeting place for nomadic desert and mountain cultures with the sedentary agriculturists of Iran.

These special characteristics of Seistan are observable in the archeological remains in so far as they are known. It is possible to stress features of the various periods in a general way, emphasizing at the same time the restricted state of our knowledge.

PREHISTORIC PERIOD

Figure 49a

The majority of identifiable prehistoric sites are found in the so-called Southern Delta. Most of them represent small villages or perhaps the dwelling sites of a few families, but some, such as Shahr-i-Sokhta (Site 39) and G.R. 6 (Site 109), clearly represent occupation by sizable communities.[2]

In the past, the Southern Delta sites clearly depended on the flow of water from the Rud-i-Biyaban branch of the Helmand River; the fertile alluvium of southern Seistan could sustain a sizable population as long as this flow was maintained. The heavy clustering of villages on the Iranian side and in the Gardan Reg channel in Afghan Seistan suggests a prosperous food-producing settlement. As already stated, the absence of stratigraphy prevents our differentiating phases of the prehistoric period; in fact, one characteristic of the prehistoric sites is the homogeneity of their artifact material in all sites. On the basis of this evidence, we might speculate that the prehistoric occupation of Seistan was short and reached its peak very rapidly. We might ask if this possible occupation climax was due to a sudden and successful resort to irrigation, or to the attraction offered by a consistent flow of water from the Helmand resource. Again, with no evidence available from northern Seistan, it is impossible to compare the two areas in the prehistoric period. However, it is noteworthy that in areas such as

[1] Stein, 1928, Vol. 2, 933.

[2] Shahr-i-Sokhta: 800 by 400 yards; G.R. 6, 300 by 250 yards.

TABLE 7

SITE OCCUPATIONS ACCORDING TO PERIOD

Period	Known	Probable	Total
Late Islamic	18	10	28
Early Islamic	23	4	27
Sassanian	45	17	62
Parthian	35	18	53
Achaemenid-Hellenistic	1	1	2
Protohistoric	1	1	2
Prehistoric	31	3	34
Unknown	1	—	1

Sar-o-Tar and Juwain, outside the present Hamun flood plain, no prehistoric sites have so far been reported. Again, there is a suggestion of prehistoric occupation around Farah.[1] The affinities of the prehistoric cultures to those of southeastern Iran (p. 78) and the location of their occupation sites in southern Seistan at the point nearest to the most frequented route to Kirman are perhaps of some significance, suggesting as they do a South Iranian derivation for the Seistan cultures.

The large quantities of cuprous slag noticed at many prehistoric sites (p. 74) in southern Seistan suggests that copper was locally available and was probably one of its attractions. Whether or not copper had a significant role in the settlement concentrations in the area is not answerable on the present evidence.

RELATIVE CHRONOLOGY OF PREHISTORIC SITES

As indicated in Fig. 37, the strongest ties of the Seistan settlements are with the Khurab phase of the Bampur-Makran area. There appears to be little doubt of their contemporaneity. However, there are also ties with the Quetta Valley, particularly in Damb Sadaat II times (Fig. 38). Not only are there design parallels, but specific pottery types familiar in the Quetta sequence are represented: these are Faiz Mohammad style Black-on-Gray[2] and probably Quetta Wet ware (Fig. 46h). In the absence of stratigraphy, we cannot, of course, be certain that these types are contemporaneous with the main Seistan occupation represented by Stein's sites in Iran or those excavated by us in Afghanistan. However, it appears probable, in view of the apparent cultural homogeneity of the other finds and the correlation of Bampur-Makran in the Khurab phase with the Mehi phase of the Kulli culture. The general parallelism of the designs also tends to corroborate this conclusion.

The Seistan material suggests some influences from the north, though at present they are only suggested. At Tepe Hissar, flexed burials are found at all levels though not all are in the same orientation.[3] Beads of the barrel form are common in northern Iran. A fragment of a copper dagger found at Site 109, Gardan Reg 6, has a stemmed hafting arrangement familiar in Sialk III and IV.[4] The tendency towards a vertical emphasis in ceramic design, an arrangement common in Hissar I,[5] also occurs in Seistan.

North of the Seistan Basin, in the plain surrounding the city of Farah, a black-on-buff ware site has been identified by both Beatrice de Cardi[6] and our expedition of 1950–1951.[7] This site, Tepe Barangtud, is ceramically poorly represented, as sherds were very scarce on its loam surface. However, it suggests an extension of the Seistan buff ware tradition northward to the junction of the Herat-Seistan-Kandahar route that skirts the Koh-i-Baba branch of the Hindu Kush Mountains of west-central Afghanistan.

PROTOHISTORIC PERIOD

Figure 49a

The Period II occupation of the Sorh-dagh at Nad-i-Ali represents the single clearly protohistoric site. The initial basis for this attribution is, of course, the presence of the distinctive grayware (p. 46).[8]

The Period II occupation is represented by a possible fortification situated high on a mound. The quantity of weapons found in Period II seems to confirm the military nature of the site.[9]

[1] De Cardi, 1950, 56; Fairservis, 1952, 31.

[2] Example, Stein, 1928, Vol. 3, Pl. 113, S.S. 015.

[3] See especially Schmidt, 1937, Fig. 48, for Hissar I.

[4] Ghirshman, 1938–1939, Vol. 1, Pls. 85, 95. Cf. Fig. 32d, present paper.

[5] Schmidt, 1937, Fig. 42, Pl. 10 H. 4637, Pl. 11 H. 4817.

[6] De Cardi, 1950.

[7] Fairservis, 1952, 31.

[8] R.B. 1 (Site 70), with its bird-headed bronze pins (Fig. 22a-b), probably also belongs to this period or at least to the late prehistoric phase, but this wind-eroded site provides no clue as to its occupational character.

[9] Ghirshman, 1939, Pl. 5.

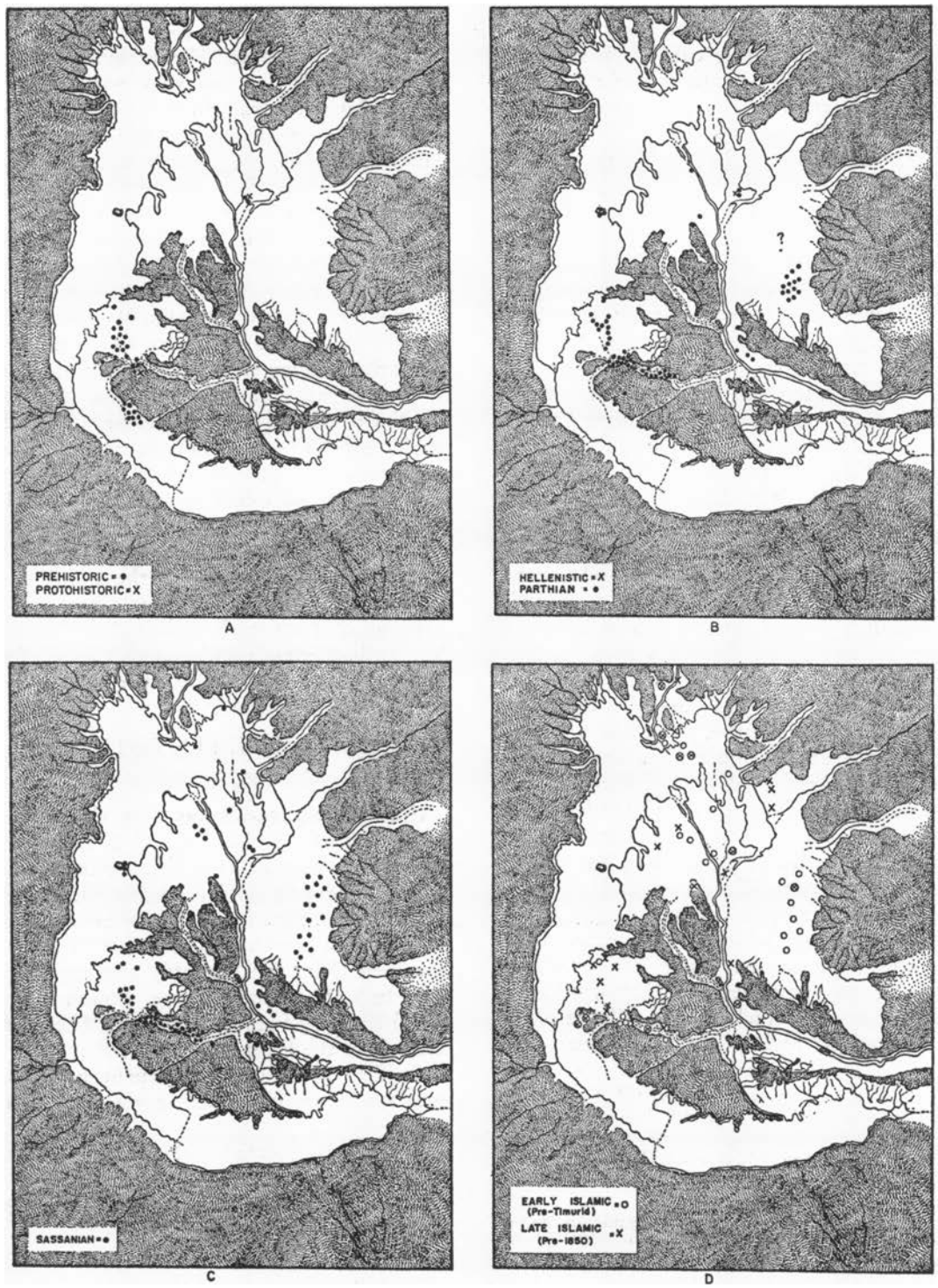


FIG. 49. Settlement patterns so far distinguished for various periods in Seistan.

A striking feature of these areas within the Indo-Iranian borderlands is that the period following the prehistoric can be characterized as one of scattered occupation. In this special feature, at least, Seistan seems not to differ from the Quetta Valley or Sind.[1]

Ghirshman and others regard this period as one of vast displacement or conquest by Indo-Iranian invaders who moved from the area around the Oxus River.[2] The decline of population was probably directly caused by these invasions and the disorder accompanying the establishment of a war-like society that dominated indigenous village people.[3]

The identification of the invaders of Iran and India in the latter part of the second millennium poses a very complex problem. The distribution of the grayware (or its equivalent), so familiar at Tepe Hissar II and III, from Nad-i-Ali in Seistan west to Lake Urmia,[4] seems to indicate the initial settlement areas of the invaders of Iran as they derived either out of the Caucasus or from the Oxus basin and beyond. The point to consider is that the grayware or its equivalent is as yet unknown east of Seistan. It is not present in the Quetta Valley, in Kandahar, or in the Indus River area. Can we speculate that the role of Seistan as an eastern outpost of Iranian culture, as known in history, originated here in its prehistoric context? Traditionally, the Aryans who invaded the Punjab came out of Bactriana via the Kabul River and the Khyber. There is as yet no clear identification of Aryan sites in those areas, but there is indication that some of the hill tribes of Baluchistan were either pushed or voluntarily moved into Sind via the Gomel.[5] The absence of the graywares indicates that the incentive for their departure may have been the Aryan invasion, either an actual attack or the collapse of the "authoritarian" regime of the Harappan civilization. In any case, if the grayware distribution is a valid index, the border aspect of Seistan is confirmed. The turbulent areas of Arachosia and Gedrosia were not part of the realm of the new Iran. In fact, some authorities consider the Aryan invasion as having occurred earlier and that the Aryans were already in possession when the later Iranians appeared, thus blocking the eastern areas.[6]

There are some puzzling facets in the problem of the collapse of the old prehistoric village cultures. Neither in the Quetta Valley nor in the Southern Delta of Seistan are there indications of violence to give a clue to the reason for the rather sudden end of the prehistoric culture in those areas. Did overpopulation destroy the fertility of the soil? The clustering of the village settlements in both areas indicates that a large number of people was involved. Again, with Huntington, we might speculate that a long drought in southeastern Iran wiped out the too-dependent village populations. At this point there is no direct answer to these and similar questions, but the apparent homogeneity of the collapse of prehistoric culture in the Indo-Iranian borderlands undermines the belief that the event was entirely caused by militant and all-destroying invasion.[7]

ACHAEMENID-HELLENISTIC PERIOD

Figure 49b

Ghirshman's suggestion that the Period I occupation at Sorh-Dagh of Nad-i-Ali was probably Achaemenid remains the only possible clue to a site of this period.[8] Again, the historical allusions to Seistan (p. 31) appear to emphasize its unimportance during this period. The Southern Delta was probably unoccupied, perhaps because water no longer flowed into the Rud-i-Biyaban from the Helmand. The Hamun shores and the Helmand River Valley were the probable centers of a settlement area which does not seem to have been very heavily populated.

As already pointed out, Seistan played a minor role during the Achaemenid Period (pp. 30–31). As an eastern outpost of the empire

[1] For Quetta, see Fairservis, 1956a, 353. For Sind, the large number of Amri and Harappan sites seem not to be matched by equivalent later occupations. For example, note the limited distribution of Jhukar and Jhangar sites.

[2] Ghirshman, 1951, 58 ff.; note especially 66; also Piggott, 1950, 239–241.

[3] Dates given for the collapse or subjugation of the prehistoric cultures vary from about 1500 to 1200 B.C. See Heine-Geldern, 1956, No. 151, 136–138; Fairservis, 1956b, No. 173, 153–156; Wheeler, 1953, 92–93.

[4] Ghirshman, 1951, 66.

[5] Fairservis, 1956b, 155–156; Fairservis, 1959.

[6] See Ghirshman, 1951, 59.

[7] For a short discussion, see Fairservis, 1956a, 359.

[8] Ghirshman, 1939, 22; see also, footnote 2, p. 46, of the present paper.

during its later years, it probably had some military importance as a bulwark against desert and mountain raiders. The location of the Period II occupation high on the Sohr-Dagh site may indicate that a citadel of some kind in keeping with the military role of Seistan in Achaemenid times was located there.

The Zoroastrian traditions relative to the Kuh-i-Khwaja apparently began during this period. Whether these traditions replaced a body of established myths and legends stemming from the earlier occupation of Seistan is, of course, unanswerable on the present evidence. However, in view of the universal prevalence of this kind of legend evolution, such is not at all unlikely. The peculiar, striking form and location of the Kuh-i-Khwaja have made it the focus for much legend and story in historic times, and this phenomenon certainly appears to have had its antecedent in the prehistoric period.

So far, no physical evidence for the Seleucid period in Seistan has been uncovered. In all probability there was little change from the situation as it existed during the Achaemenian period. Alexander's capital, Prophthasia, apparently died as it began; there is no tradition as to its location now recounted in Seistan.

PARTHIAN PERIOD

Figure 49b

The historical accounts stress the division of Seistan early in this period. The Saca apparently occupied the province primarily as agriculturists (p. 33); the seat of their control was the Helmand River Valley where their firm entrenchment seems rarely to have been seriously challenged by the Arsacid Parthians. In fact, the Saca were so well entrenched east of Seistan that Arachosia, parts of northern Baluchistan, and certainly sections of Gandhara owed them allegiance. The Hamun and Southern Delta areas, including the Sar-o-Tar tract southeast of Chakansur, also appear to have fallen under Parthian rule. The Saca, retiring from Seistan proper, controlled the valley.

The Kuh-i-Khwaja buildings, especially Ghagha-shahr, and at least some of the ruins in the Sar-o-Tar tract, as well as important sites such as Shahristan and Atish-kadah, are of this period. There is a strong suggestion for Parthian occupation of the Southern Delta (p. 99). The problem of the so-called limes, described by Sir Aurel Stein, should be considered in this connection.[1] A Parthian date for these buildings has some basis in the available evidence, but of course there is a strong possibility that they are Early Sassanian (p. 93). In view of the political situation of Seistan during Parthian times, it is interesting to speculate whether these limes may not have been constructed to help patrol the southern reaches of the Rud-i-Biyaban Delta, the enemy being the Saca horsemen who raided from their bases in the Helmand to the east and north. The forts in the Sar-o-Tar tract, and as yet unidentified defenses in the Helmand Valley, probably formed a line of resistance extending obliquely across southern Seistan. As the limes stations are for the most part located in the Rud-i-Biyaban Delta, water probably flowed in that stream bed during this period, probably for the first time since the prehistoric period over one thousand years earlier. This event was probably brought about by the use of a weir and the deepening of the Rud-i-Biyaban channel.

During this period, Seistan was again a border province of Iranian culture and probably supported a considerable military force. However, the available evidence in the form of the large religious and secular buildings indicates that the religious sanctity of the Kuh-i-Khwaja was by now officially accepted. Other temple structures near the Hamun, such as Atish-gah (Site 5), also imply a flourishing religious community. Similarly, efforts to utilize more profitably the resources of soil and water present in Seistan give physical foundation to the flourishing province Seistan eventually became.

SASSANIAN PERIOD

Figure 49c

What was begun in Parthian times was continued and expanded in Sassanian. The great number of identifiable Sassanian sites provides evidence of the large growth of population and density of settlement all over Seistan. The Sar-o-Tar tract, the Hamun area, and the Southern Delta were all cultivated. The great city of Zaranj, east of the Hamun, was the capital of the province. Its size is an index of the

[1] Stein, 1928, Vol. 2, 972–979.

prosperity of Seistan (p. 34). We can assume that the irrigation systems were extensive and fully operative in all parts of the area. The religious ascendancy of Seistan was fully attained in those days of Zoroastrian popularity, and the great shrines on the Kuh-i-Khwaja reached their greatest extent. Although the village was apparently the basic occupation unit, large towns also flourished all over the province. Village sites abound in the Southern Delta, but it is likely that a complex of ruins such as Trakun also represented a town in the Rud-i-Biyaban area—the southernmost in Seistan.

EARLY ISLAMIC PERIOD

Figure 49d

A peculiar and interesting aspect of this period is the enormous growth of cities such as Zahidan and Peshawarun. The evidence gathered in the Rud-i-Biyaban area leads us to conclude that this urban development caused a general shift in population away from the villages. Certainly the known Islamic sites in Seistan are either urban or sacred in character. Apparently the Rud-i-Biyaban area was gradually abandoned, even though some irrigation was maintained.[1] Undeniably, there must have been numerous small villages in the Hamun area, but no trace of them has thus far been found. The great Islamic cities must have provided the largest percentage of the population of Seistan, and with their fortunes waxed and waned the prosperity of Seistan.

LATE ISLAMIC PERIOD

Figure 49d

The fortress cities, such as Kala-i-Fath, Nad-i-Ali, and Lash-Juwain, are most representative of this period, reminders, perhaps, of the fluctuating fortunes of Seistan. Though I have no comparative measurements to offer, I believe that none of these places compares in size with the expanded urban centers of the previous period. Even the modern scattered villages and small towns provide a poor contrast to the obvious splendors of Zahidan, Zaranj, or Peshawarun, a further indication of the potential prosperity of Seistan and the extent to which it has fallen.

[1] Note Weir Site 91, R.B. 22, and sites such as Old Gina(?) and probably Trakun.

APPENDIX: CATALOGUE OF PREHISTORIC DESIGNS

GARDAN REG DECORATED

THE DESIGN PAINTING in Gardan Reg Decorated can be characterized by a broad brush stroke and a rather loose construction of the over-all design and its component motifs. As in comparably decorated types from Iran and Baluchistan, the tendency is to express horizontality by the repetition and placement of the design motifs. This stems, of course, from the use of the potter's wheel, which we may presume was turned as the horizontal lines were drawn. (See, for example, Design 48 in which the start and finish of brushed lines are clearly shown.)

The design motifs are rather commonplace, reflecting little local variation from the widespread family of designs that are characteristic of Halaf-Ubaid in the west and of the Quetta culture on the east.

Horizontal, vertical, and diagonal zigzags, meanders, and loops in varying combinations occur very frequently (1–15). The wavy and jagged-edged stripe or line (5–7) is very common. A characteristic pattern, usually drawn on the interior of open bowls, is a wavy line completely or partially enclosed by a zigzag, oval, or horizontal S (16–23).

Design elements are commonly cross-hatched. Numerous examples were collected at G.R. 6 (24–27). Multiple line decorations, both as a treatment and as a separate design motif, occur frequently (28–33). Multiple dashes were used as a decorative device (34–36, 38) and as a part of floral or possibly animal designs (37), but even more common than these are the willow-leaf designs (40–42, 45–50). This floral design is varied by the elongation of its elements (43, 51–53). Hatched scallops occur with considerable frequency, especially as alternates or pairs resting on or suspended from horizontals (44, 55, 56, 132).

Probably the most common design motif is multiple horizontal zigzags (57–62). Dominant horizontality is attained by the use of hatched curvilinear diamonds, opposing loops separated by varied hatching (63–64, 67–70), and by rows of equilateral triangles arranged with the apex at the base (65–66).

Diagonally hatched diamonds also occur (71), and the floating sigma appears in various forms (75–78). Varieties of what may be concentric flowing triangles are represented by a few poor examples (79–80). Of interest is the hourglass formed of two opposing triangles cross-hatched on the interior and outlined by jagged or saw-toothed lines (81); another form of hourglass is horizontal (93). The use of multiple vertical and diagonal straight or curved lines is indicated (82).

Saw-toothed as a design motif, or an embellishment of a design motif, is quite common, as in Quetta ware (84–86, 88).[1]

Variants of the Maltese cross are characteristic of Gardan Reg Decorated wares (90–92, 139–140). A single example of an animal design (94) seems to represent rows of naturalistic ibexes or goats. Stein found two other examples of animals on this painted pottery (141–142); however, the design motif appears to be uncommon in Seistan.

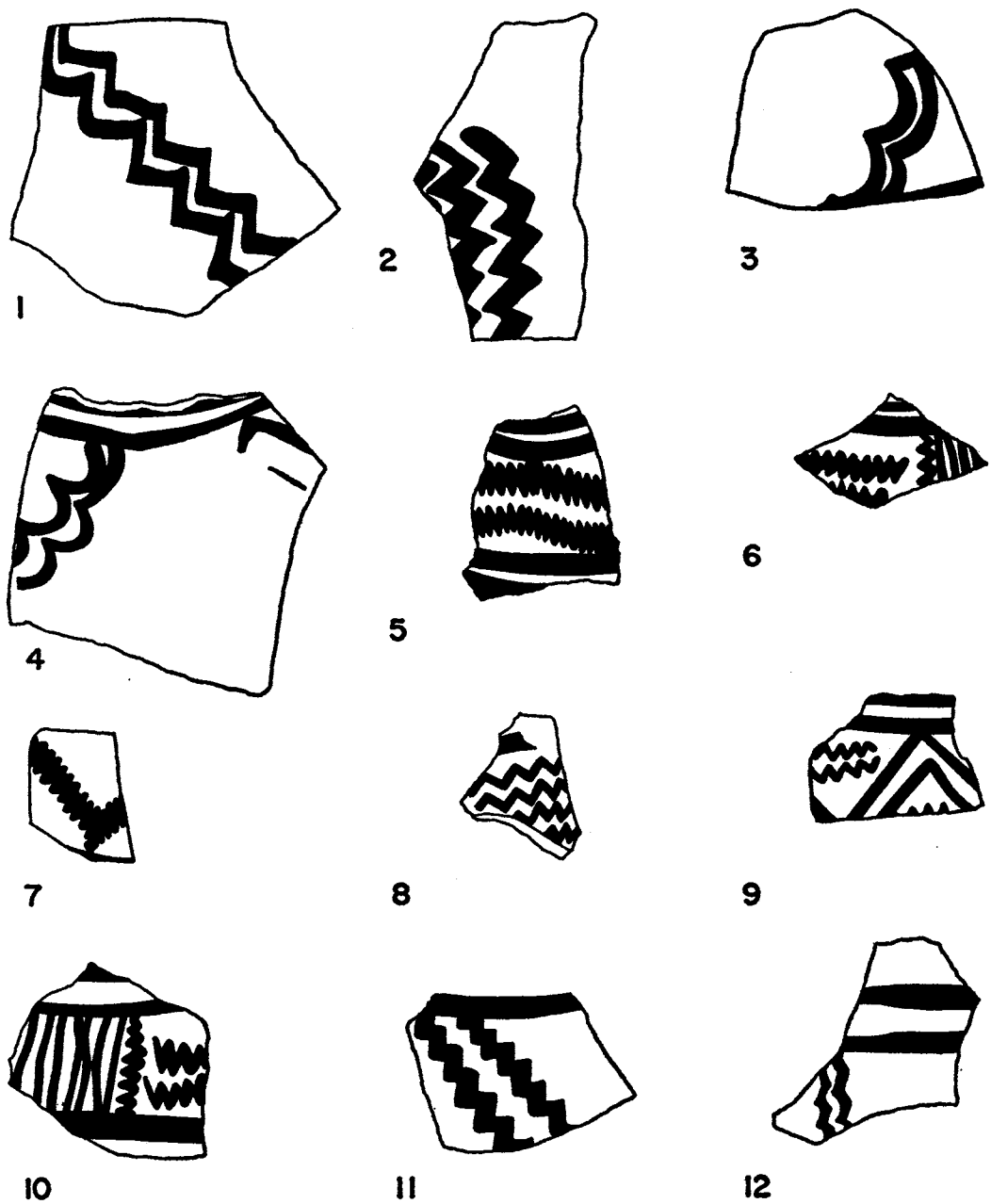
STEIN'S COLLECTION

For the sake of completeness it is necessary to illustrate a number of design motifs in Stein's collection[2] which were not duplicated in the American Museum collection. Stein's illustrations and the Andrews' descriptions indicate that the bulk of his painted sherds belong to the type Gardan Reg Decorated. Among the important motifs found by Stein should be mentioned vertical meanders and zigzags (123) and the single vertical zigzag between horizontals (124), with variants of the latter in multiple vertical lines (125). Diagonally inclined scallops or loops dangling from a rim horizontal in the interior of a vessel are of interest (126). A cross-hatched curving element suggests a horizontal S that may have been intended as a floral motif (127). Short dashes on sigmas and loops also suggest a floral theme (128–130).

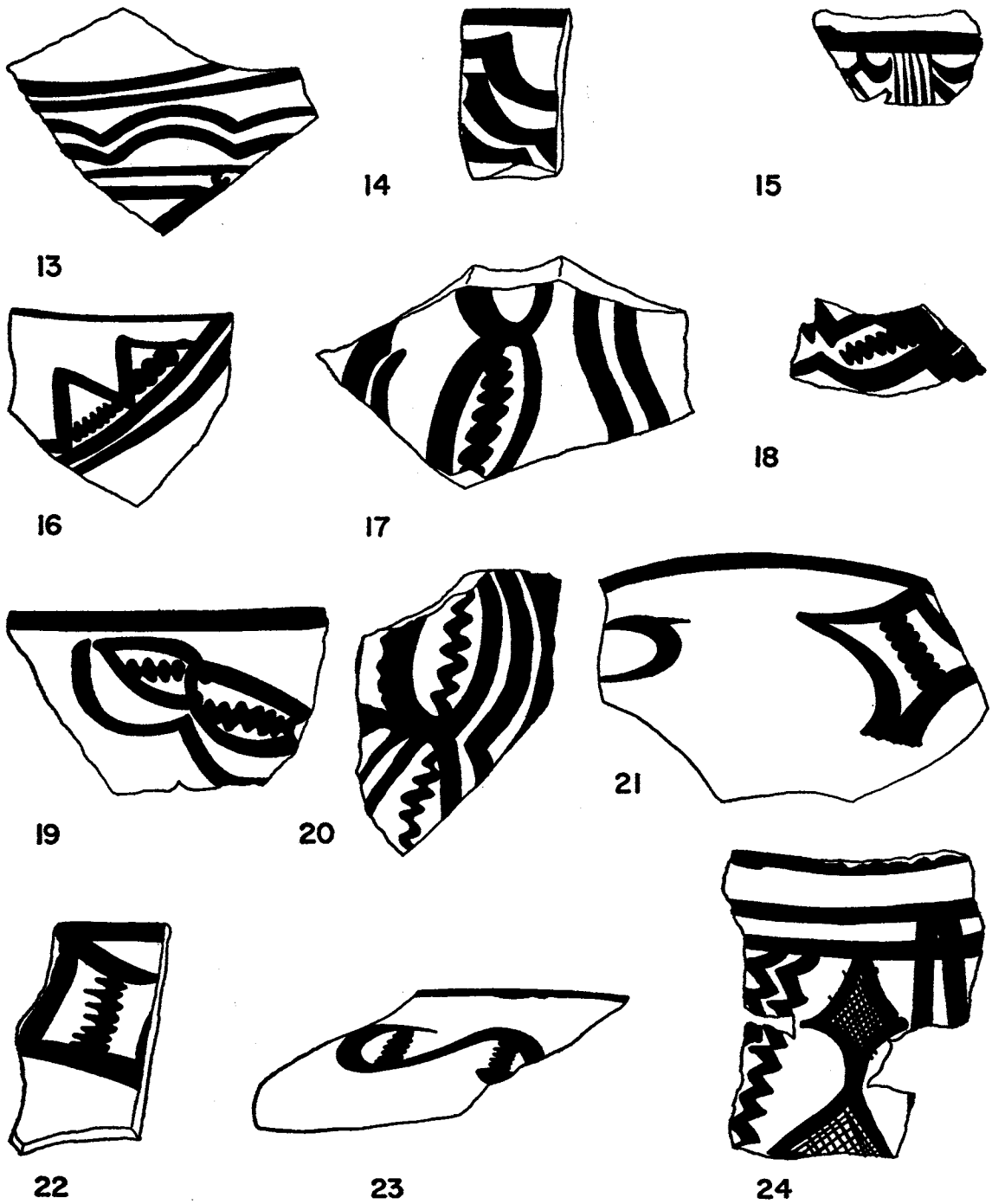
The horizontal diamond (131) is close to the horizontal lozenge in its emphasis (39). Opposing scallops and paired leaf elements have already been noted; the Stein collection provides a particularly good example (132).

Only a single example of the horizontal zigzag, bisected with a line and with the alternating triangles filled (133), is known from Seistan.

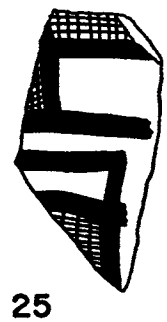
[1] Fairservis, 1956a, Designs 195–206, 282; also p. 322.
[2] Stein, 1928, Vol. 3, Pls. 63–64.



DESIGNS 1–12. Gardan Reg Decorated.



DESIGNS 13–24. Gardan Reg Decorated.



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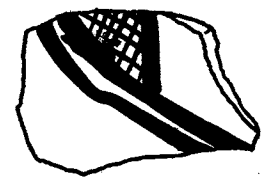

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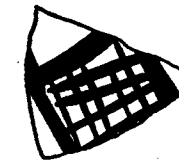

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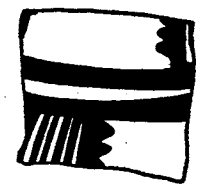

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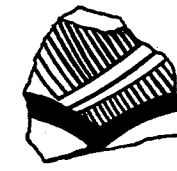

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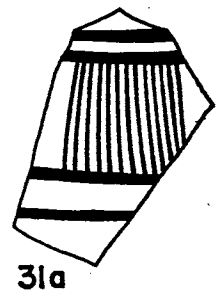

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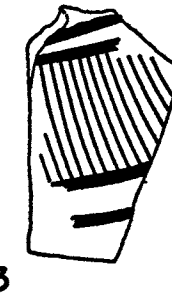

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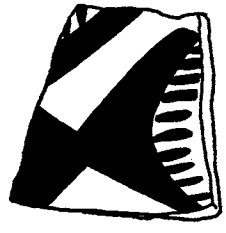

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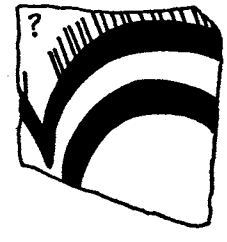

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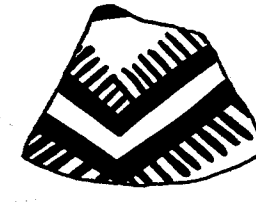

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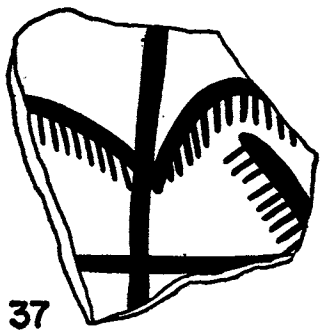
DESIGNS 25–36. Gardan Reg Decorated.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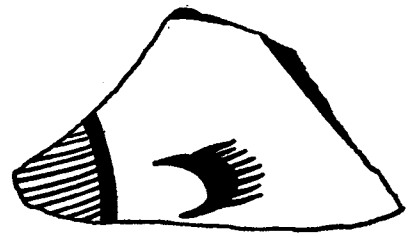
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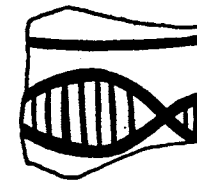
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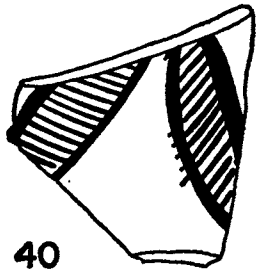
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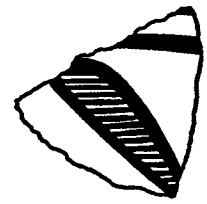
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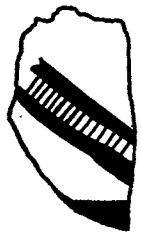
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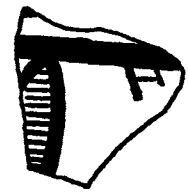
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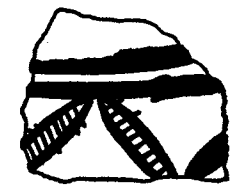
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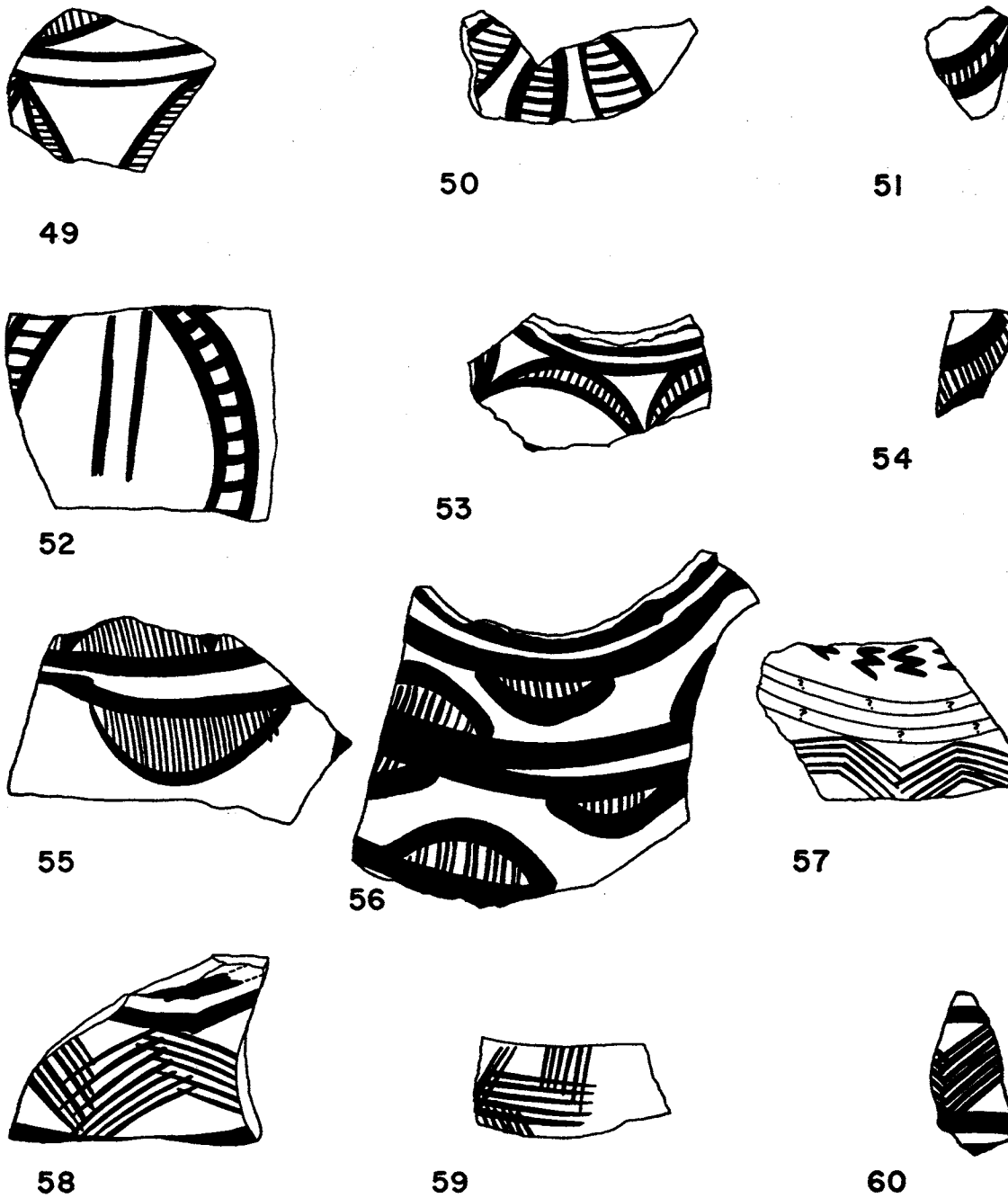
DESIGNS 37–48. Gardan Reg Decorated.



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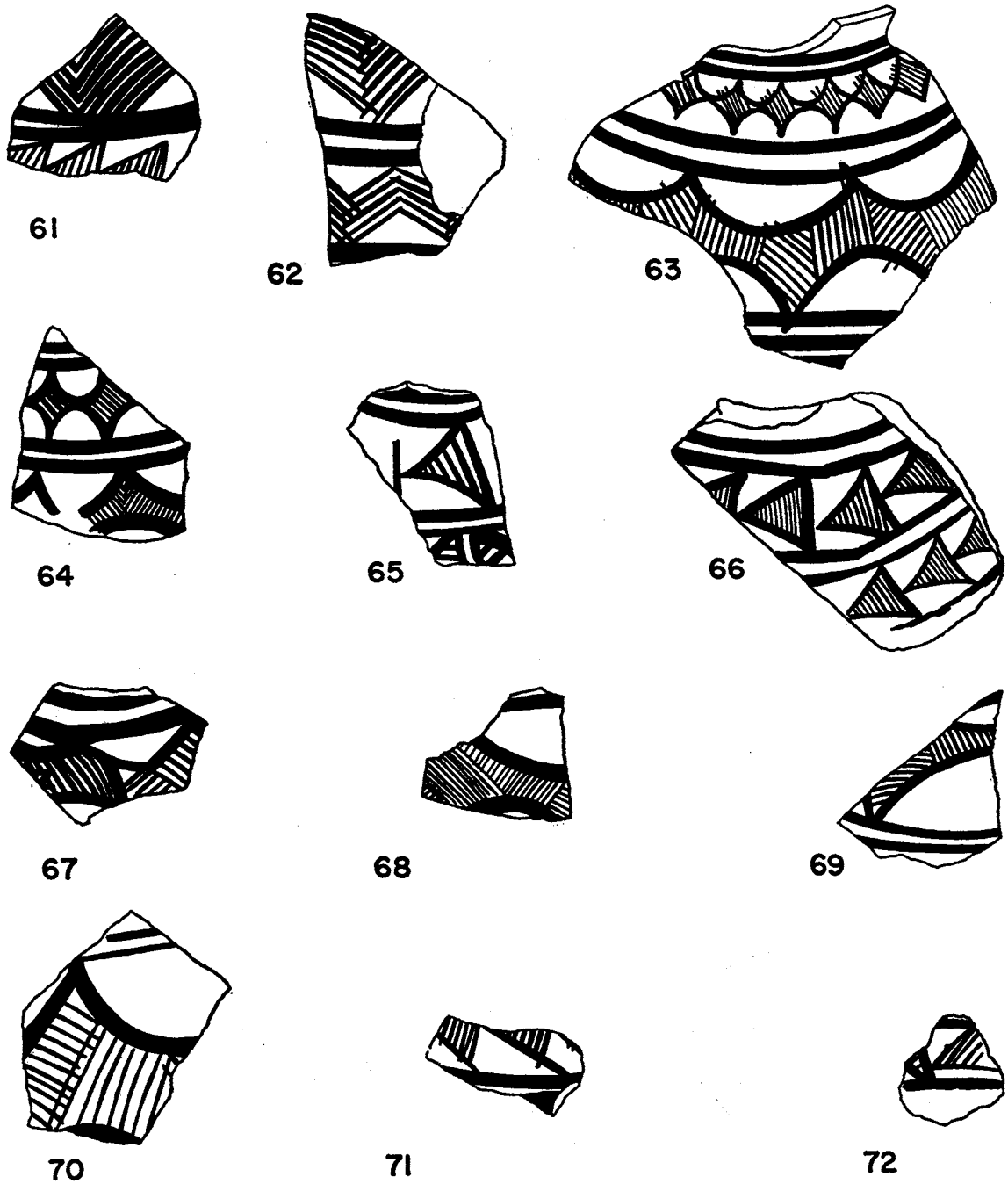

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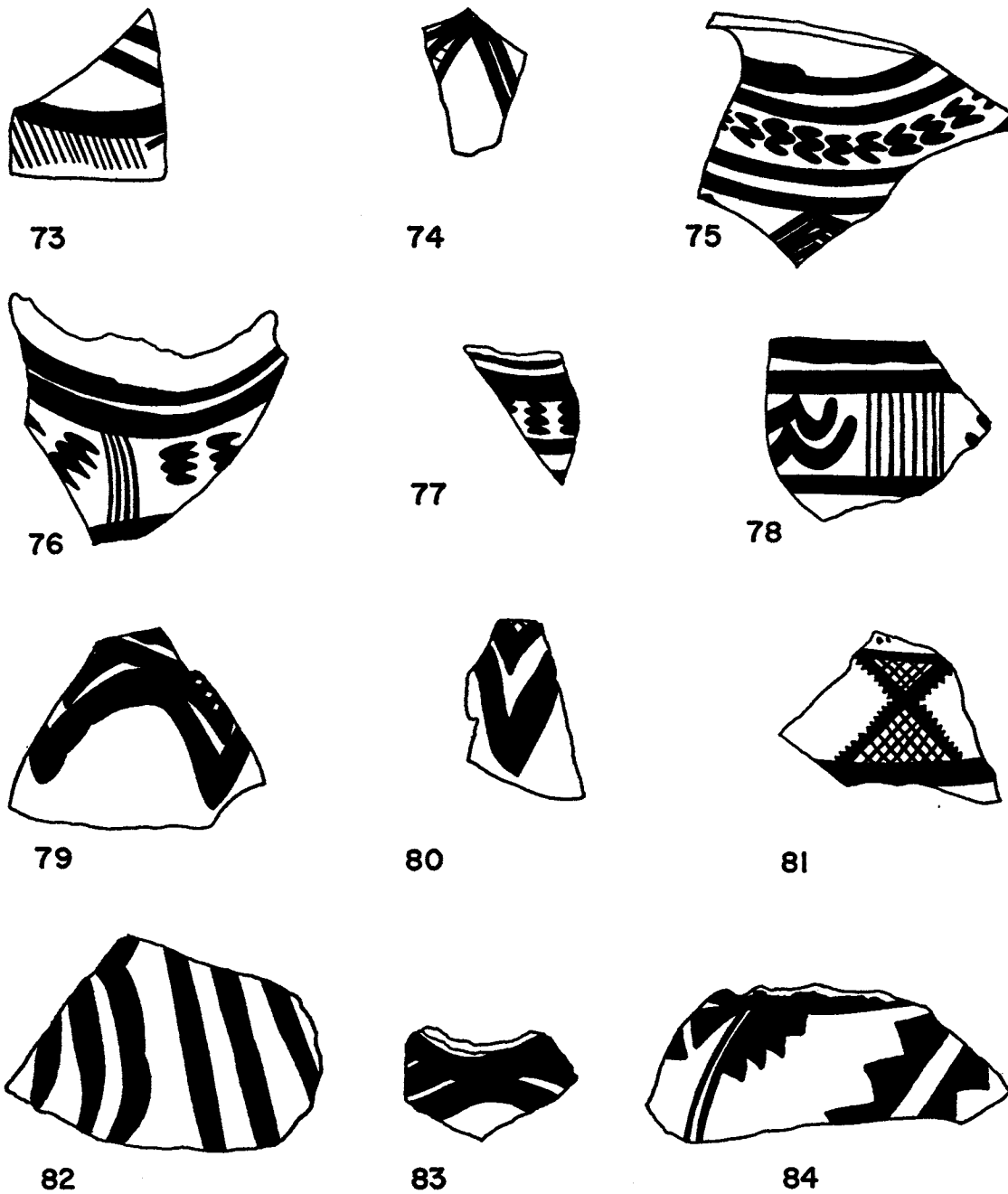

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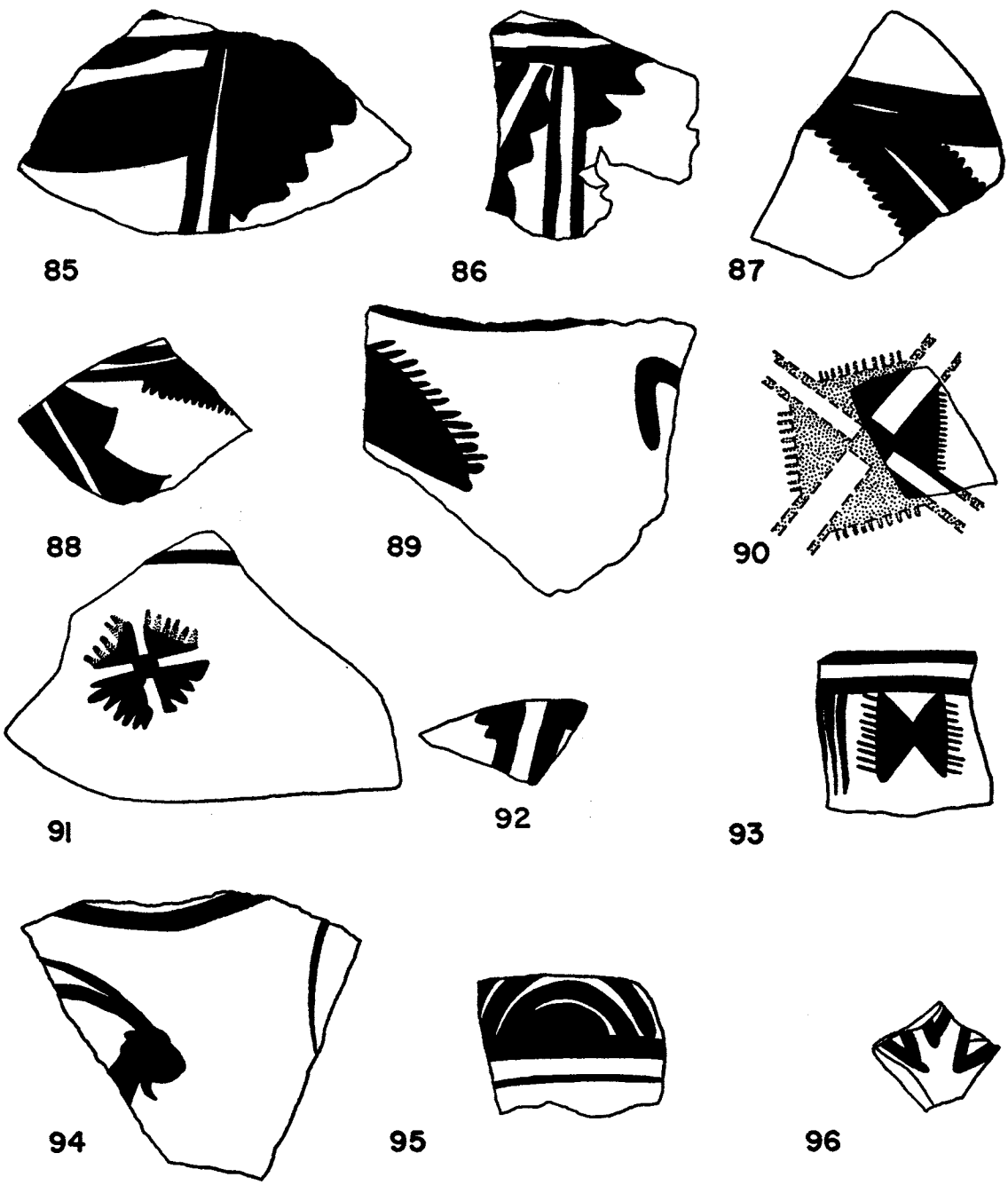

DESIGNS 85–94, 96. Gardan Reg Decorated.
DESIGN 95. Emir Gray.

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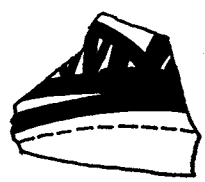
DESIGNS 97, 98. Gardan Reg Decorated.
DESIGNS 99–108. Emir Gray.



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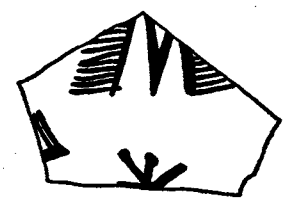

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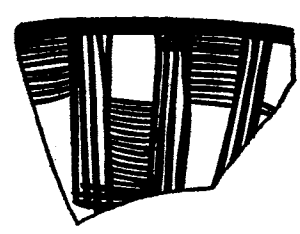

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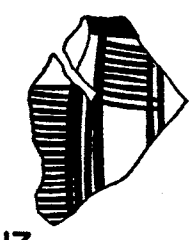

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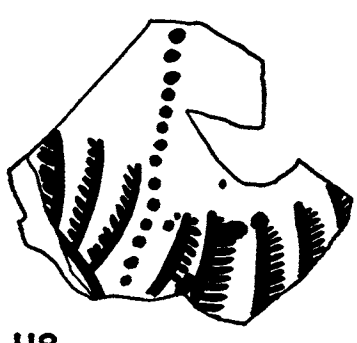

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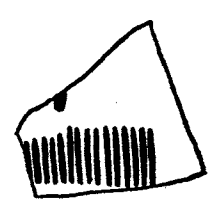

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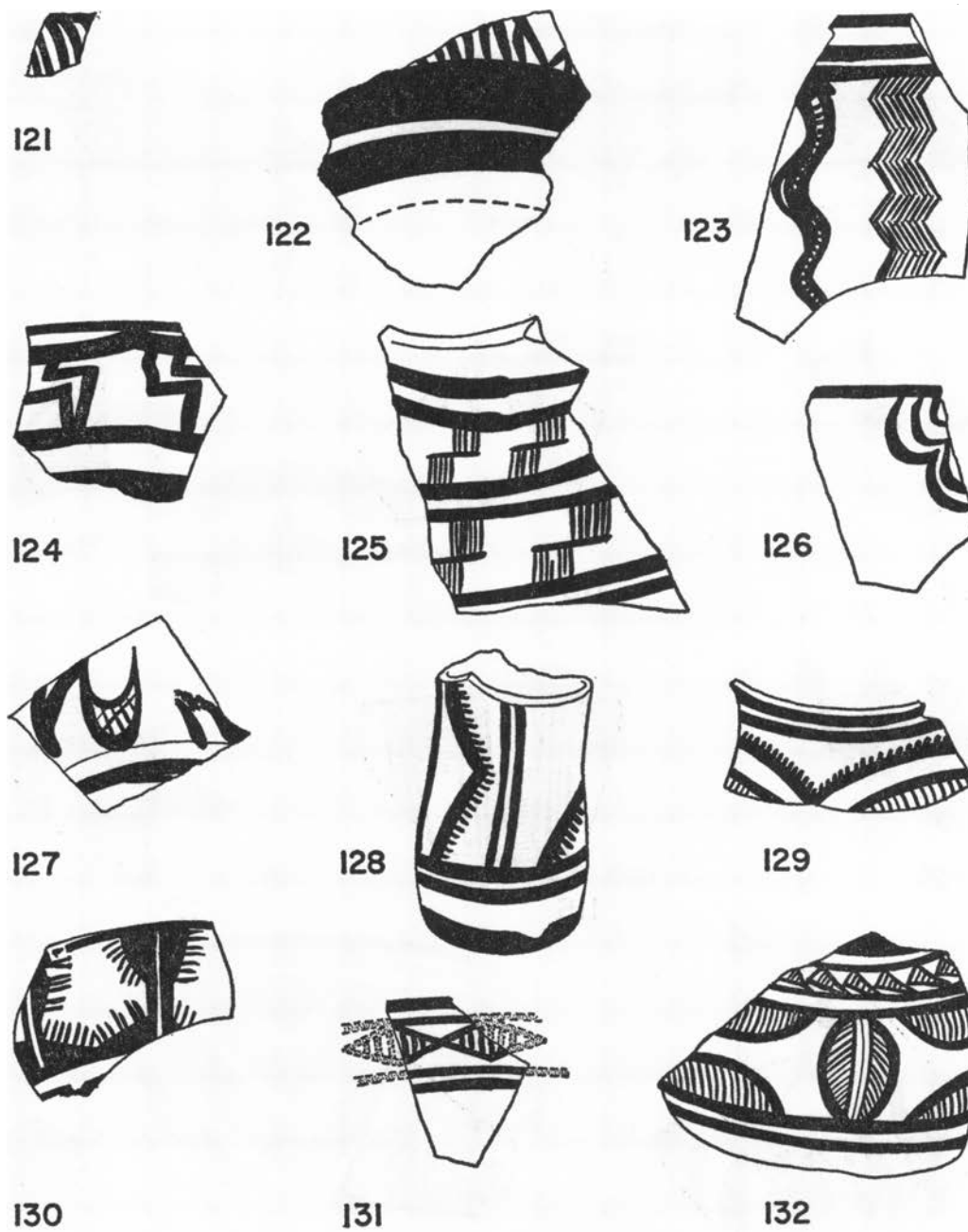
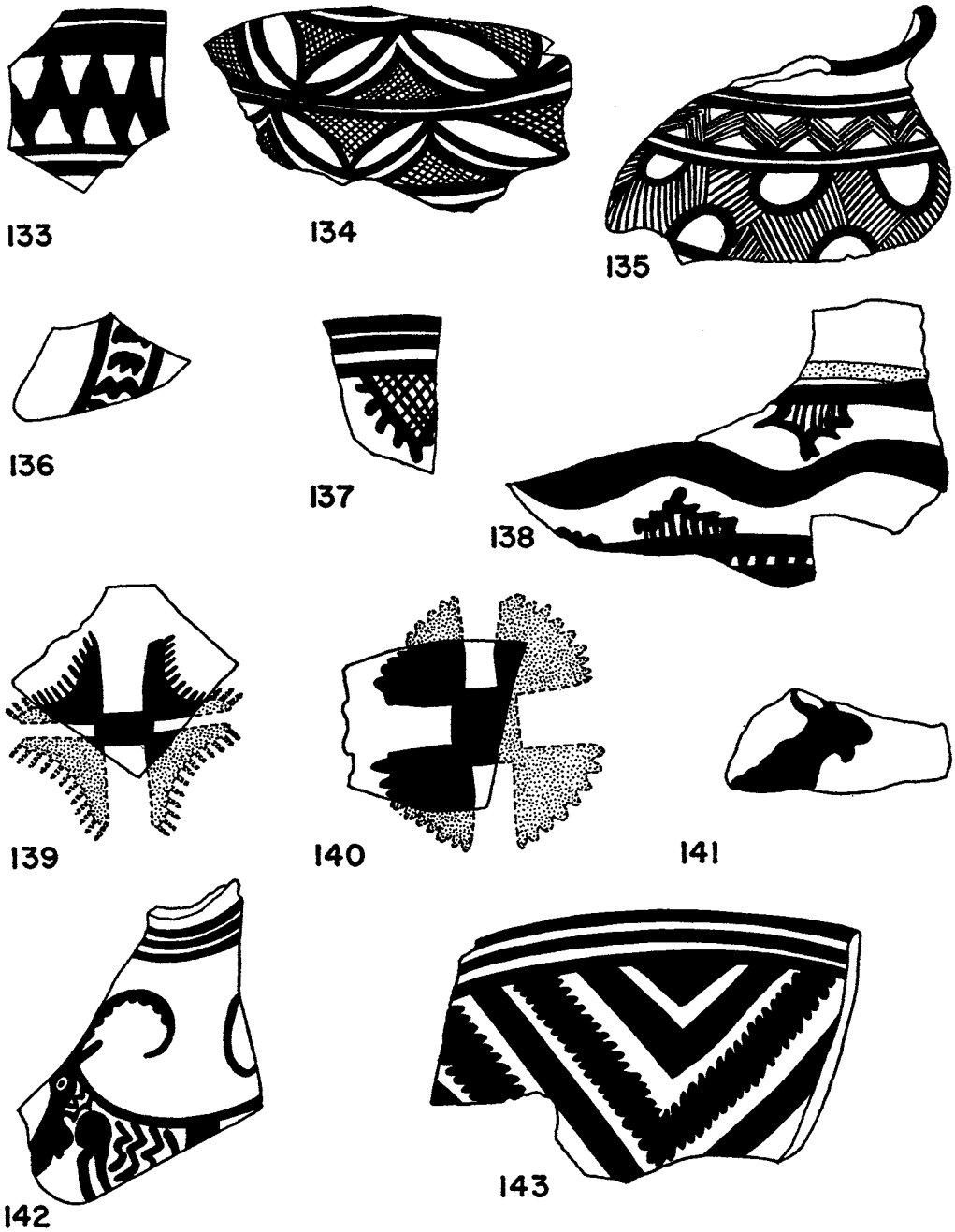
DESIGNS 109–120. Emir Gray.



DESIGNS 121, 122. Emir Gray.

DESIGNS 123–132. After Stein, 1928, Vol. 3. 123. Pl. 114, S.S. 05. 124. Pl. 113, R.R. VIII.011. 125. Pl. 113, R.R. III.03. 126. Pl. 114, K.G. 010. 127. Pl. 113. R.R. VIII.012. 128. Pl. 114, Md. (R.R.) III.01. 129. Pl. 113, Md. (R.R.) II.040. 130. Pl. 113, K.G. 0131. 131. Pl. 113, K.G. 055. 132. Pl. 113, Md. (R.R.) III.04.



DESIGNS 133–143. After Stein, 1928. 133. Vol. 3, Pl. 113, K.G. 039. 134. Vol. 3, Pl. 113, S.S. 024. 135. Vol. 3, Pl. 114, S.S. 02+053. 136. Vol. 3, Pl. 114, S.S. 0101. 137. Vol. 3, Pl. 113, S.S. 074. 138. Vol. 3, Pl. 113, Machi. 010–011. 139. Vol. 3, Pl. 113, Md. (R.R.) II.03. 140. Vol. 3, Pl. 113, S.S. 09. 141. Vol. 2, 961, K.G. 07.a. 142. Vol. 3, Pl. 114, R.R. III.010. 143. Vol. 3, Pl. 113, S.S. 015.

Curvilinear patterns are of considerable interest as they reflect influences from the Bampur area (Fig. 37).

The most obvious feature of Designs 134 and 138 is the undulating horizontal line weaving over and under design elements. Among these elements are the cross-hatched triangle with saw-toothed outline (137) or rather sloppily drawn terraces (138). Sigmas drawn between parallel lines are of some interest (136).

EMIR GRAY

The painting technique used in this ware is generally finer and more delicate than in Gardan Reg Decorated. The brush strokes are thinner, and the designs are more skillfully laid on. The design motif repertoire is generally different from that of the other painted ware, almost as if it were derived from another source.

An interesting motif suggests an eye with numerous brows (95). Zigzags and various triangles are used to emphasize horizontality (97–101, 104, 108). An unusual use of the multiple dash occurs (103), and the horizontal zigzag weaving over and under curvilinear triangles suggests designs in Stein's collection (134, 138). Among design motifs apparently characteristic of Emir Gray is the bird-like element frequently drawn inside open bowls (113) on which floral-like patterns (118) also appear. Another characteristic design usually occurring on the inside of open bowls consists of multiple verticals connected by short multiple horizontals forming a ladder-like effect (116–117).

One sherd of this pottery type in the Stein collection is of interest. The design consists of multiple varied chevrons hanging from horizontals on the inside of an open bowl (143).

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CATALOGUE DATA FOR CERTAIN ILLUSTRATIONS

PLATES

14. Glazed sherds from Site 21 (Peshawarun), surface. a–r. Blue-green glazed decorated ware. s–ee. White glazed decorated ware, first variety

a. 73.0-912e
b. 73.0-913c
c. 73.0-912m
d. 73.0-912b
e. 73.0-912d
f. 73.0-912i
g. 73.0-912t
h. 73.0-912c
i. 73.0-912t
j. 73.0-912m
k. 73.0-912p
l. 73.0-912u
m. 73.0-912 l
n. 73.0-912a
o. 73.0-912s
p. 73.0-912a
q. 73.0-912v
r. 73.0-912y
s. 73.0-912f
t. 73.0-916j
u. 73.0-916n
v. 73.0-916h
w. 73.0-916v
x. 73.0-916a
y. 73.0-916g
z. 73.0-916k
aa. 73.0-916q
bb. 73.0-916m
cc. 73.0-916w
dd. 73.0-912w
ee. 73.0-917b

15. Glazed sherds, Peshawarun (Site 21). a–r. White glazed decorated ware, second variety. s–v. Brown glazed decorated ware. w–aa, cc. Green glazed decorated ware. bb, dd–hh, jj–rr. Yellow glazed decorated ware. ii. Black-on-green glazed ware. ss–uu. Red and brown glazed decorated ware.

a. 73.0-917d
b. 73.0-917e
c. 73.0-917j
d. 73.0-917u
e. 73.0-917z
f. 73.0-917i
g. 73.0-917c
h. 73.0-917 l
i. 73.0-917g
j. 73.0-917o
k. 73.0-917s
l. 73.0-917 l
m. 73.0-917p
n. 73.0-917w
o. 73.0-917m
p. 73.0-917s
q. 73.0-914h
r. 73.0-917x
s. 73.0-918g
t. 73.0-918e
u. 73.0-918f
v. 73.0-923n
w. 73.0-923 l
x. 73.0-923s
y. 73.0-923m
z. 73.0-923z
aa. 73.0-923h
bb. 73.0-921g
cc. 73.0-923b
dd. 73.0-922a
ee. 73.0-921m
ff. 73.0-921e
gg. 73.0-921h
hh. 73.0-921a
ii. 73.0-916t
jj. 73.0-921d
kk. 73.0-919e
ll. 73.0-920q
mm. 73.0-920t
nn. 73.0-920r
oo. 73.0-920f
pp. 73.0-920i
qq. 73.0-920d
rr. 73.0-919a
ss. 73.0-920x
tt. 73.0-920g
uu. 73.0-931a

16. Incised and moulded wares from Site 21 (Peshawarun), surface

a. 73.0-948f
b. 73.0-948i
c. 73.0-948m
d. 73.0-948j
e. 73.0-948n
f. 73.0-948p
g. 73.0-949a
h. 73.0-948o
i. 73.0-949qq
j. 73.0-949q
k. 73.0-946o
l. 73.0-948k
m. 73.0-948b
n. 73.0-948 l
o. 73.0-948c
p. 73.0-948d
q. 73.0-949a
r. 73.0-949e

s. 73.0-949v
t. 73.0-949u
u. 73.0-949d
v. 73.0-949pp
w. 73.0-949vv
x. 73.0-949ff
y. 73.0-949d
z. 73.0-949kk
aa. 73.0-949y

17. Incised and moulded wares from Site 21 (Peshawarun), surface

a. 73.0-949t
b. 73.0-949n
c. 73.0-949o
d. 73.0-949a
e. 73.0-948g
f. 73.0-949c
g. 73.0-949w
h. 73.0-949c
i. 73.0-949f
j. 73.0-949o
k. 73.0-949ii
l. 73.0-949s
m. 73.0-949n
n. 73.0-949g
o. 73.0-949b
p. 73.0-942a
q. 73.0-949j
r. 73.0-949ee
s. 73.0-949r

18. Miscellaneous decorated wares, Site 21 (Peshawarun), surface

a. Ring ware (Red-Streaked Burnished), 73.0-946d
b. 73.0-949l
c. 73.0-949m
d. 73.0-948g
e. 73.0-949s
f. 73.0-949e
g. 73.0-949jj
h. 73.0-949b
i. 73.0-947b
j. 73.0-947a
k. 73.0-948e
l. 73.0-947f
m. 73.0-949z
n. 73.0-947d
o. 73.0-947g
p. 73.0-947e

19. Coins and other objects. a. Green glass raised animal. b–c. Parthian coins, silver. d–e. Medieval Islamic coins from Peshawarun, copper

a. 73-6774
b. 73-6775
c. 73-6776
d. 73-6777
e. 73-6778

TEXT FIGURES

9. Miscellaneous sherds from various sites of northern Seistan

a. 73.0-815
b. 73.0-802b
c. 73.0-808a
d. 73.0-808b
e. 73.0-800a
f. 73.0-847b
g. 73.0-846d
h. 73.0-846e
i. 73.0-802c

10. Rims and bases of glazed wares, Site 21 (Peshawarun). a–m. Plain blue-green glaze. n–v. Blue-green glazed decoration

a. 73.0-912z
b. 73.0-911c
c. 73.0-911i
d. 73.0-911o
e. 73.0-911j
f. 73.0-911j
g. 73.0-911x
h. 73.0-911r
i. 73.0-911q
i. 73.0-911n
k. 73.0-911s
l. 73.0-911e
m. 73.0-911a
n. 73.0-912o
o. 73.0-912k
p. 73.0-912q
q. 73.0-912d
r. 73.0-912v
s. 73.0-912x
t. 73.0-912h
u. 73.0-912o
v. 73.0-912b

11. Rims and bases of glazed wares, Site 21 (Peshawarun). a–b. Yellow glazed decorated. c–g. Brown glaze decorated. h–i. Red and brown glazed decorated. j–l. Plain dark brown glaze. m. Coarse dark glaze. n–t. White glazed decorated. u–z. Green glazed decorated

a. 73.0-921c
b. 73.0-921b
c. 73.0-920b
d. 73.0-918j
e. 73.0-918p
f. 73.0-920c
g. 73.0-918c

h. 73.0-920b
i. 73.0-920d
j. 73.0-940g
k. 73.0-940j
l. 73.0-940e
m. 73.0-939a
n. 73.0-916f
o. 73.0-916p
p. 73.0-917n
q. 73.0-917n
r. 73.0-916a
s. 73.0-916e
t. 73.0-916h
u. 73.0-923f
v. 73.0-927
w. 73.0-923w
x. 73.0-923j
y. 73.0-923a
z. 73.0-923v

12. Rims and bases of plainwares, Site 21 (Peshawarun)

a. 73.0-950k
b. 73.0-950r
c. 73.0-950v
d. 73.0-950e
e. 73.0-950a
f. 73.0-950n
g. 73.0-950a
h. 73.0-950b
i. 73.0-950t
j. 73.0-950x
k. 73.0-950g
l. 73.0-950q
m. 73.0-950i
n. 73.0-950c
o. 73.0-952j
p. 73.0-952t
q. 73.0-952e
r. 73.0-952u

13. Rims and bases of plainwares, Site 21 (Peshawarun)

a. 73.0-959d
b. 73.0-959e
c. 73.0-959b
d. 73.0-954a
e. 73.0-951a

14. Handles, spouts, glass bangles, and stoneware, Site 21 (Peshawarun). a–j. Handles. k–l. Spouts. m–p. Glass bangles. q. Stoneware

a. 73.0-956c
b. 73.0-957c
c. 73.0-955a
d. 73.0-955g
e. 73.0-957b
f. 73.0-956f
g. 73.0-956h
h. 73.0-956n
i. 73.0-956a
j. 73.0-956r
k. 73.0-953h
l. 73.0-953b
m. 73.0-963c
n. 73.0-963a
o. 73.0-963b
p. 73.0-963a
q. 73.0-960d, i

15. Rims and bases of various decorated wares, Site 28b (Na-2). a–d. Prehistoric Painted ware. e–f. Seistan Red-band. g–j. Nad-i-Ali Black and Cream. k–p. Seistan Fine Plain.

a. 73-6540
b. 73-6541
c. 73-6542
d. 73-6543
e. 73-6544
f. 73-6545
g. 73-6546
h. 73-6547
i. 73-6548
j. 73-6549
k. 73-6550
l. 73-6551
m. 73-6552
n. 73-6553
o. 73-6554
p. 73-6555

16. Rims, bases, and incised sherds of wares from Nad-i-Ali sites. a. Nad-i-Ali Coarse Plain. b–e. Seistan Polished. f–g. Nad-i-Ali Gray. h–i. Nad-i-Ali Gray. j–o. Incised.

a. Site 28b (73-6556)
b. Site 28b (73-6557)
c. Site 28b (73-6558)
d. Site 28b (73-6559)
e. Site 28b (73-6560)
f. Site 28c (73-6561)
g. Site 28c (73-6562)
h. Site 28b (73-6563)
i. Site 28b (73-6564)
j. Site 28b (73-6565)
k. Site 28b (73-6566)
l. Site 28b (73-6567)
m. Site 28b (73-6568)
n. Site 28b (73-6569)
o. Site 28b (73-6570)

17. Rims and bases of wares from Nad-i-Ali sites. a–e. Nad-i-Ali Plain. f. Na-1 Gray. g–j. Nad-i-Ali Thick ware. k. Nad-i-Ali Ridged. l–m. Nad-i-Ali Ridged, Rim Type 2. n. Nad-i-Ali Ridged, Rim Type 1A. o–t. Nad-i-Ali Ridged, Rim Type 1B

a. Site 28b (73-6571)
b. Site 28b (73-6572)
c. Site 28b (73-6573)
d. Site 28b (73-6574)
e. Site 28b (73-6575)
f. Site 28c (73-6576)
g. Site 28b (73-6577)
h. Site 28b (73-6578)
i. Site 28b (73-6579)
j. Site 28b (73-6580)
k. Site 28b (73-6581)
l. Site 28b (73-6582)
m. Site 28b (73-6583)
n. Site 28b (73-6584)
o. Site 28b (73-6585)
p. Site 28b (73-6586)
q. Site 28b (73-6587)
r. Site 28b (73-6588)
s. Site 28b (73-6589)
t. Site 28b (73-6590)

18. Rims and bases of various wares, Site 28b. a–d. Nad-i-Ali Rolled. e–i. Nad-i-Ali miscellaneous large-mouthed jars. j–o. Miscellaneous types.

a. 73-6591
b. 73-6592
c. 73-6593
d. 73-6594
e. 73-6595
f. 73-6596
g. 73-6597
h. 73-6598
i. 73-6599
j. 73-6600
k. 73-6601
l. 73-6602
m. 73-6603
n. 73-6604
o. 73-6605

19. Rims and bases of miscellaneous wares, various sites. a–g. Painted wares. h. Ring ware (Red-Streaked Burnished). i–j. Nad-i-Ali Coarse Plain? k–n. Kala Kang Raised.

a. Site 28c (73-6606)
b. Site 28c (73-6607)
c. Site 28c (73-6608)
d. Site 28c (73-6609)
e. Site 28c (73-6610)
f. Site 28c (73-6611)
g. Site 28c (73-6612)
h. Site 28c (73-6613)
i. Site 37 (73-6614)
j. Site 37 (73-6615)
k. Site 28c (73-6616)
l. Site 28c (73-6617)
m. Site 28c (73-6618)
n. Site 28c (73-6619)

20. Rims of decorated wares, Site 34. a–e. Seistan Ribbed ware. f–h. Ring ware (Red-Streaked Burnished)

a. 73-6620
b. 73-6621
c. 73-6622
d. 73-6623
e. 73-6624
f. 73-6625
g. 73-6626
h. 73-6627

21. Various wares found in Helmand River sites of southern Seistan. a–c. Incised and punched types. d–i. Kala Fateh ware. j–k. Miscellaneous types. l. Spout. m–o. Handles. p–r. Helmand Rolled.

a. Site 34 (73-6628)
b. Site 34 (73-6630)
c. Site 34 (73-6631)
d. Site 34 (73-6632)
e. Site 34 (73-6633)
f. Site 34 (73-6634)
g. Site 34 (73-6635)
h. Site 34 (73-6636)
i. Site 34 (73-6637)
j. Site 35 (73-6638)
k. Site 35 (73-6639)
l. Site 35 (73-6640)
m. Site 35 (73-6641)
n. Site 35 (73-6642)
o. Site 35 (73-6643)
p. Site 36 (73-6644)
q. Site 36 (73-6645)
r. Site 36 (73-6646)

22. Bronze and alabaster objects from Site 70 (R.B. 1). a–b. Bird-headed pins, bronze. c–d. Earrings, bronze. e. Stone bead. f. Alabaster scraper? g–h. Alabaster vessel rims

a. 73-6519
b. 73-6520
c. 73-6518a
d. 73-6518b
e. 73-6517
f. 73-6516
g. 73-6510
h. 73-6509

26. Decorated wares and stone vessels, Site 104 (G.R. 1). a–c. Comb incised. d. Loop incised. e. Incised. f–g. Seistan Ribbed. h. Red-slipped. i. Black on plum-brown painted. j. Limestone vessel? k–l. Alabaster vessels

a. 73-6522
b. 73-6523
c. 73-6533
d. 73-6527

e. 73-6524
f. 73-6530
g. 73-6531
h. 73-6526
i. 73-6529
j. 73-6525
k. 73-6534
l. 73-6532

29. Rims and bases of alabaster vessels, Site 109 (G.R. 6)

a. 73-6647
b. 73-6648
c. 73-6649
d. 73-6650
e. 73-6651
f. 73-6652
g. 73-6653
h. 73-6654
i. 73-6655
j. 73-6656
k. 73-6657
l. 73-6658
m. 73-6659
n. 73-6660
o. 73-6661
p. 73-6662
q. 73-6663
r. 73-6664
s. 73-6665
t. 73-6666
u. 73-6667

30. Miscellaneous artifacts from various sites of southern Seistan. a. Spindle whorl, clay. b. Arrowpoint, stone. c. Fragment of dark stone point? d–e. Prism-like stone points. f. Spindle whorl, stone. g. Fragment of slate? pendant. h. Fragment of alabaster vessel? i–j. Dark stone? vessels. k. Limestone fragment of vessel. l. Grooved calcite? fragment

a. Site 109 (73-6539)
b. Site 81 (73-6537)
c. Site 109 (73-6668)
d. Site 109 (73-6669)
e. Site 109 (73-6670)
f. Site 109 (73-6538)
g. Site 72 (73-6536)
h. Site 109 (73-6535)
i. Site 109 (73-6671)
j. Site 109 (73-6672)
k. Site 109 (73-6673)
l. Site 109 (73-6674)

31. Stone artifacts, Site 109 (G.R. 6)

a. 73-6675
b. 73-6676
c. 73-6677
d. 73-6678
e. 73-6679
f. 73-6680
g. 73-6681
h. 73-6682

32. Metal artifacts, Site 109 (G.R. 6). a. Fragment of axe, bronze. b–c. Fragments of mirrors?, bronze. d–e. Fragments of dagger blades, bronze? f. Metal seal, zinc, or tin

a. 73-6514
b. 73-6515
c. 73-6513
d. 73-6512
e. 73-6511
f. 73-6521

35. Beads from Rud-i-Biyaban area and Site 109 (G.R. 6). a. Mottled blue and white stone. b. Lapis. c. Green stone. d. Carnelian. e. Shell. f. Greenstone. g. Greenish alabaster. h. Mottled lapis. i. Orange alabaster. j. Shell

a. Site 109 (73-6683)
b. Site 109 (73-6684)
c. Site 109 (73-6685)
d. Rud-i-Biyaban area (73-6686)
e. Site 109 (73-6687)
f. Site 109 (73-6688)
g. Site 109, Area B (73-6689)
h. Site 109, Area B (73-6690)
i. Site 109, Area B (73–6691)
j. Site 109, Area B (73-6692)

36. Pottery of the Grave Areas A and B, Site 109 (G.R. 6), and Site 110 (G.R. 7). a–c. Gardan Reg Decorated. d–j. Seistan Plain. k–m. Seistan Coarse Tempered. n–q. Seistan Plain

a–o. Site 109 (Kabul Museum)
p. Site 110 (73-6780)
q. Site 110 (73-6779)

39. Rims and bases, Site 109 (G.R. 6). a–i. Seistan Plain. j–n. Seistan Buff Plain

a. 73-6693
b. 73-6694
c. 73-6695
d. 73-6696
e. 73-6697
f. 73-6698
g. 73-6699
h. 73-6700
i. 73-6701
j. 73-6702
k. 73-6703
l. 73-6704
m. 73-6705

40. Rims and bases, Seistan Black, Site 109 (G.R. 6)

a. 73-6706
b. 73-6707
c. 73-6708
d. 73-6709
e. 73-6710
f. 73-6711
g. 73-6712
h. 73-6713
i. 73-6714
j. 73-6715
k. 73-6716
l. 73-6717
m. 73-6718
n. 73-6719
o. 73-6720
p. 73-6721
q. 73-6722
r. 73-6723
s. 73-6724
t. 73-6725
u. 73-6726
v. 73-6727

41. Rims and bases, Seistan Coarse Tempered, Site 109 (G.R. 6)

a. 73-6728
b. 73-6729
c. 73-6730
d. 73-6731
e. 73-6732

42. Rims and bases, Site 109 (G.R. 6). a–h. Seistan Plain Red. i–l. Kala Black Slip

a. 73-6733
b. 73-6734
c. 73-6735
d. 73-6736
e. 73-6737
f. 73-6738
g. 73-6739
h. 73-6740
i. 73-6741
j. 73-6742
k. 73-6743
l. 73-6744

43. Rims and bases, Site 109 (G.R. 6). a–e. Kala Red Slip. f–k. Kala Buff Slip

a. 73-6745
b. 73-6746
c. 73-6747
d. 73-6748
e. 73-6749
f. 73-6750
g. 73-6751
h. 73-6752
i. 73-6753
j. 73-6754
k. 73-6755

44. Rims and bases, Emir Gray, Site 109 (G.R. 6). a–h. Variant 2. i–s. Variant 1

a. 73-6756
b. 73-6757
c. 73-6758
d. 73-6759
e. 73-6760
f. 73-6761
g. 73-6762
h. 73-6763
i. 73-6469
j. 73-6473
k. 73-6475
l. 73-6486
m. 73-6485
n. 73-6484
o. 73-6483
p. 73-6492
q. 73-6474
r. 73-6479
s. 73-6488

45. Rims and bases, Gardan Reg Decorated, Site 109 (G.R. 6)

a. 73-6401
b. 73-6397
c. 73-6438
d. 73-6441
e. 73-6451
f. 73-6383
g. 73-6400
h. 73-6398
i. 73-6393
j. 73-6396
k. 73-6388
l. 73-6413

46. Miscellaneous incised, stamped, and other decorated wares, Site 109 (G.R. 6). a. Fine grooved. b. Loop incised. c. Incised. d. Ring stamped. e–g. Fine grayware incised on exterior. h. Quetta Wet ware. i–j. Incised.

a. 73-6764
b. 73-6765
c. 73-6766
d. 73-6767
e. 73-6768
f. 73-6769
g. 73-6770
h. 73-6771
i. 73-6772
j. 73-6773

47. Types of grooved and Seistan Ribbed wares of the Rud-i-Biyaban area. a–b. Grooved. c–e. Seistan Ribbed

a. 73-6500
b. 73-6505
c. 73-6506
d. 73-6507
e. 73-6508

48. Miscellaneous incised decorated wares of the Rud-i-Biyaban area

a. 73-6494
b. 73-6495
c. 73-6496
d. 73-6497
e. 73-6498
f. 73-6499
g. 73-6501
h. 73-6502
i. 73-6503

DESIGNS

Design No.	Location	Catalogue No.	Design No.	Location	Catalogue No.
	Gardan Reg Decorated		41	Site 109	73-6416
1	Site 109	73-6379	42	Site 109	73-6417
2	Site 109	73-6380	43	Site 109	73-6418
3	Site 109	73-6381	44	Site 109	73-6419
4	Site 109	73-6382	45	Site 109	73-6420
5	Site 109	73-6383	46	Site 109	73-6421
6	Site 109	73-6384	47	Site 109	73-6422
7	Site 109	Kabul Museum	48	Site 109	73-6423
8	Site 109	73-6385	49	Site 109	73-6424
9	Site 109	73-6386	50	Site 109	73-6425
10	Site 109	73-6387	51	Site 109	73-6426
11	Site 109	73-6388	52	Site 109	73-6427
12	Site 109	73-6389	53	Site 109	73-6428
13	Site 109	73-6390	54	Site 109	73-6429
14	Site 109	73-6391	55	Site 109	73-6430
15	Site 109	73-6392	56	Site 109	73-6431
16	Site 109	73-6393	57	Site 109	73-6432
17	Site 109, Cut 1	73-6394	58	Site 109	73-6433
18	Site 109	73-6395	59	Site 109	73-6434
19	Site 109	73-6396	60	Site 109	73-6435
20	Site 109	73-6397	61	Site 109	73-6436
21	Site 109	73-6398	62	Site 109	73-6437
22	Site 109	73-6399	63	Site 109	73-6438
23	Site 109	73-6400	64	Site 109	73-6439
24	Site 109	73-6401	65	Site 109	73-6440
25	Site 109	73-6402	66	Site 109	73-6441
26	Site 109	73-6403	67	Site 109	73-6442
27	Site 109	73-6404	68	Site 109	73-6443
28	Site 109	73-6405	69	Site 109	73-6444
29	Site 109	73-6406	70	Site 109	73-6445
30	Site 109	73-6407	71	Site 109	73-6446
31	Site 109	73-6493	72	Site 109	73-6447
31a	Site 109	Kabul Museum	73	Site 109	73-6448
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33	Site 109	73-6409	75	Site 109	73-6450
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35	Site 109	73-6411	77	Site 109	73-6452
36	Site 109	73-6412	78	Site 109	Kabul Museum
37	Site 109	73-6413	79	Site 109	73-6453
38	Site 109	73-6414	80	Site 109	73-6454
39	Site 109	Kabul Museum	81	Site 109	Kabul Museum
40	Site 109	73-6415	82	Site 109	73-6455

Design No.	Location	Catalogue No.
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84	Site 109	73-6457
85	Site 109	73-6458
86	Site 109	73-6459
87	Site 109	73-6460
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93	Site 109	Kabul Museum
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96	Site 109	73-6466
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	Emir Gray	
99	Site 109	73-6469
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105	Site 109	73-6475
106	Site 109	73-6476
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108	Site 109	73-6478
109	Site 109	73-6479
110	Site 109	73-6480
111	Site 109	73-6481
112	Site 109	73-6482
113	Site 109	73-6483
114	Site 109	73-6484
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119	Site 109	73-6489
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121	Site 109	73-6491
122	Site 109	73-6492

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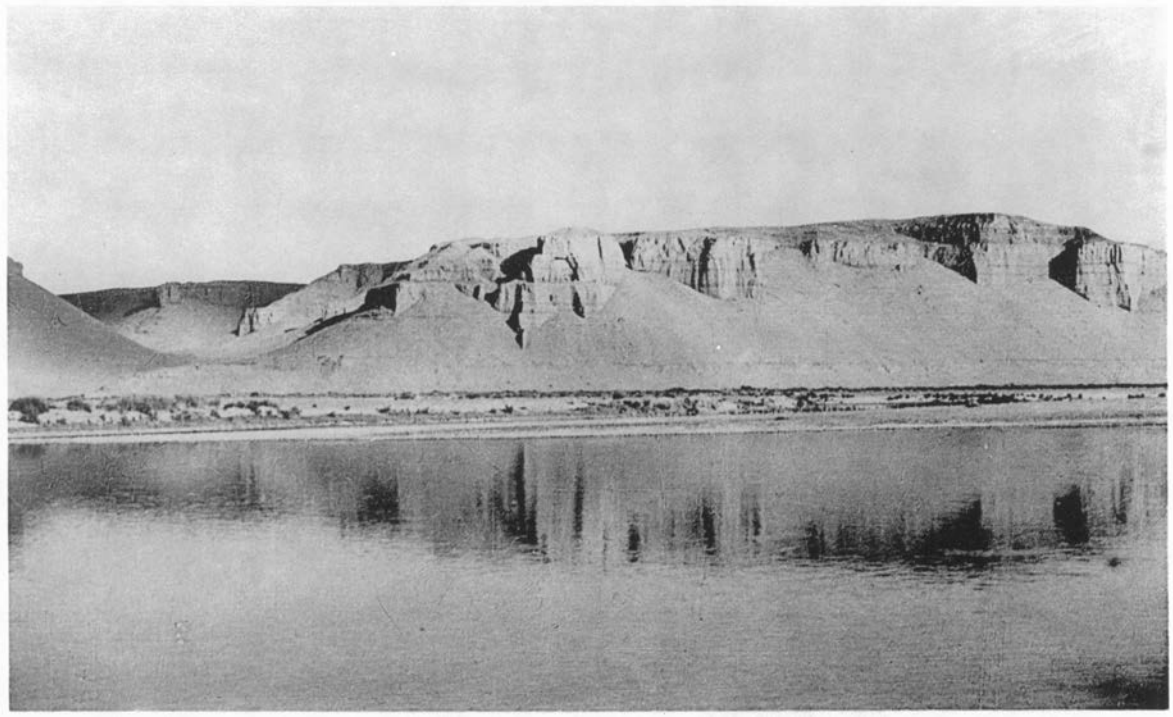
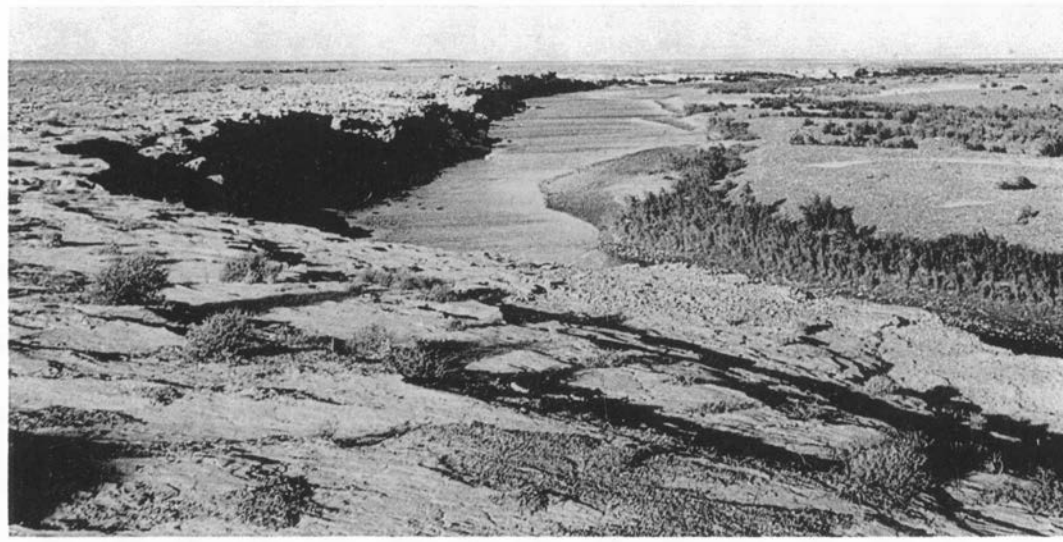


A

B

a. Middle Helmand Valley south of Kala Bist, looking east. b. Silt bluffs of the middle Helmand Valley



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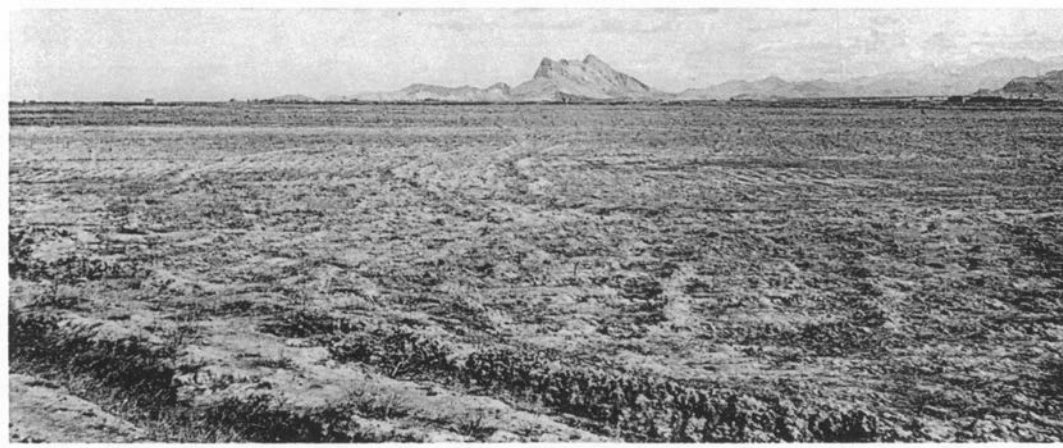

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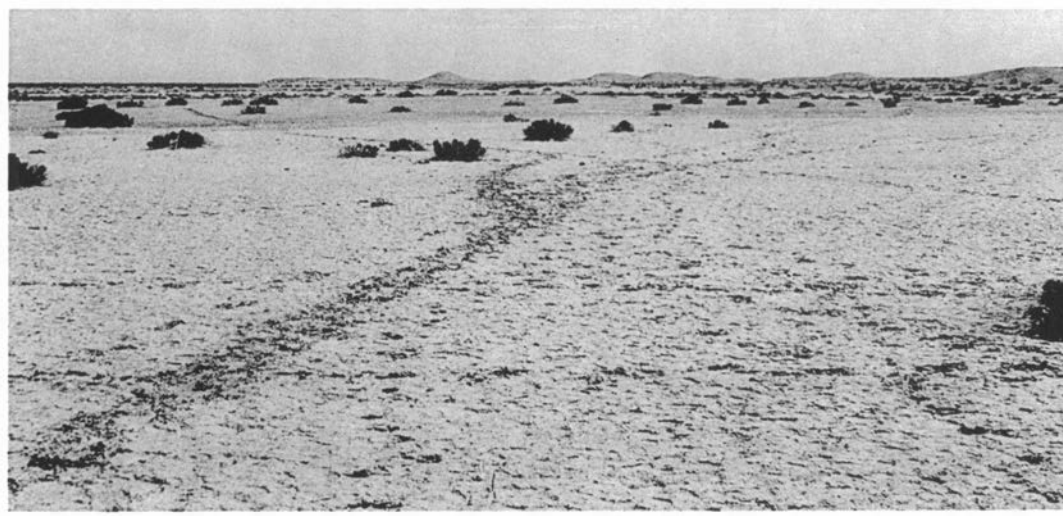
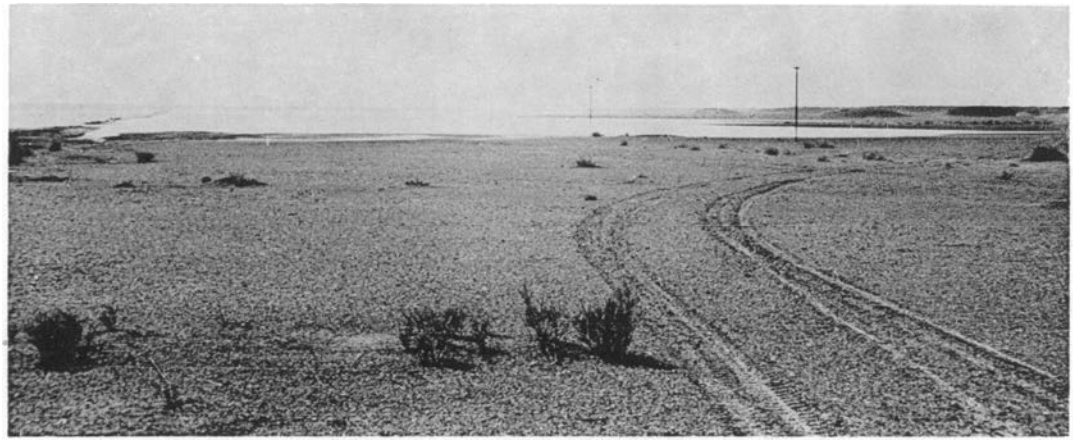


C

a. The Farah Rud north of Juwain, looking southwest. b. Fertile plain just south of Farah. The mountains are the outlying outcrops of the Koh-i-Baba ranges, looking northwest. c. Cracked soil surface in midst of mounds of Site 19

A



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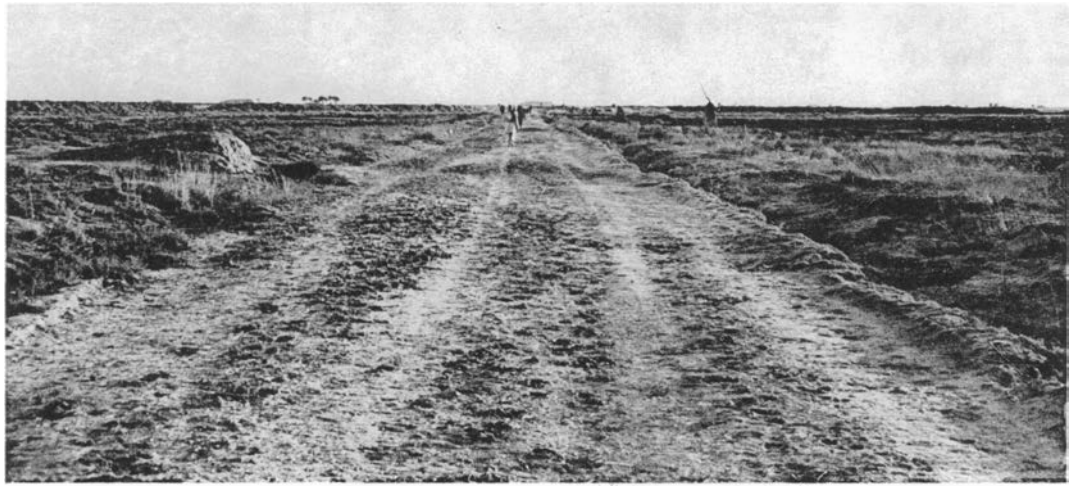


C

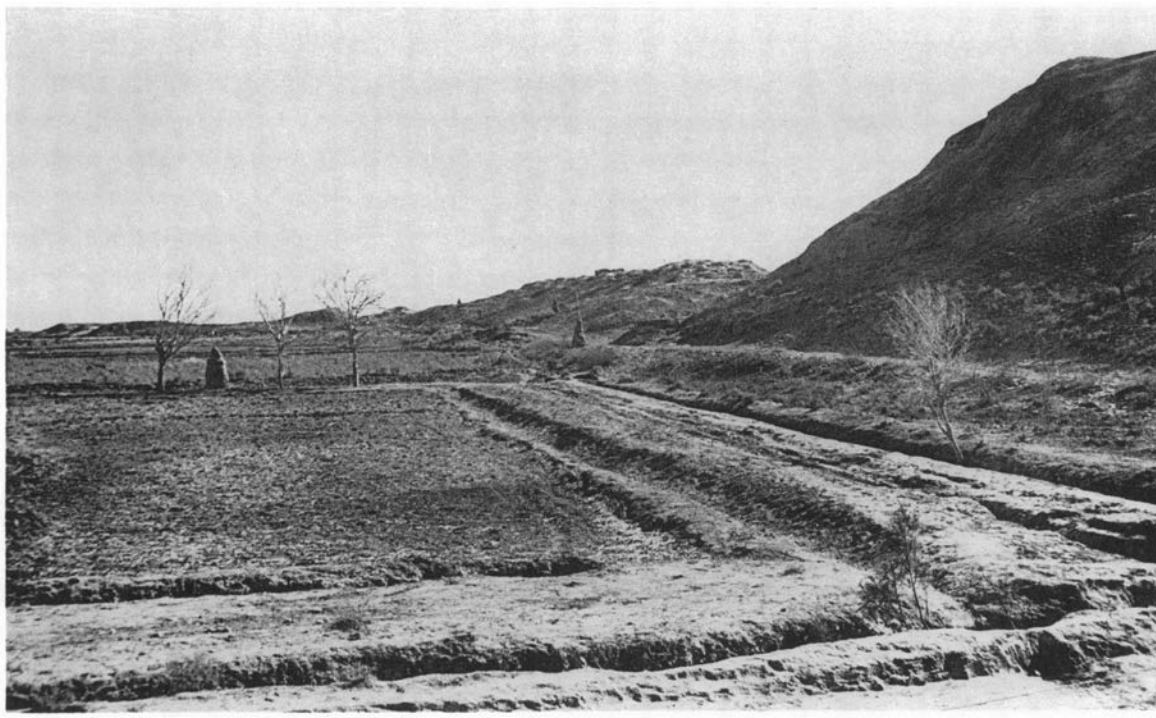
a. Desolate butte area in the vicinity of Site 109, Gardan Reg (G.R. 6). b. Main road from Farah to Chakansur in area of Hamun-i-Puzak. Playa in middle distance. c. Road passing through fertile area near Nad-i-Ali

A

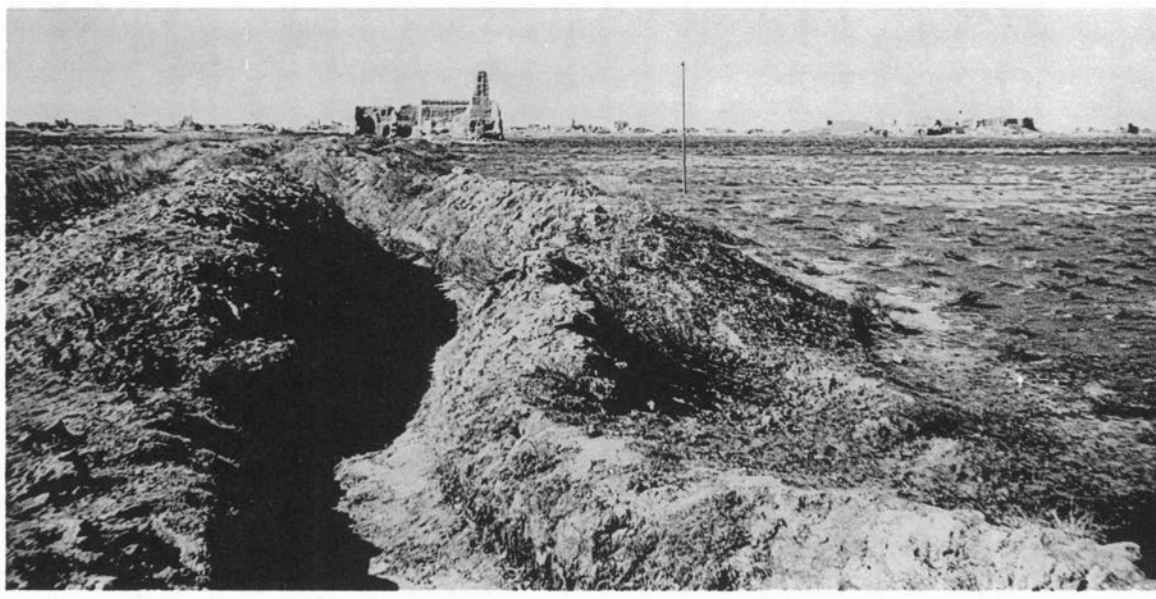
B

C

a. Chakansur, shop fronts; Afghan traders discussing shipment of wool and hair. Note irrigation ditches in foregound. b. Village of Salian, house types. c. Village of Salian, rear view of houses

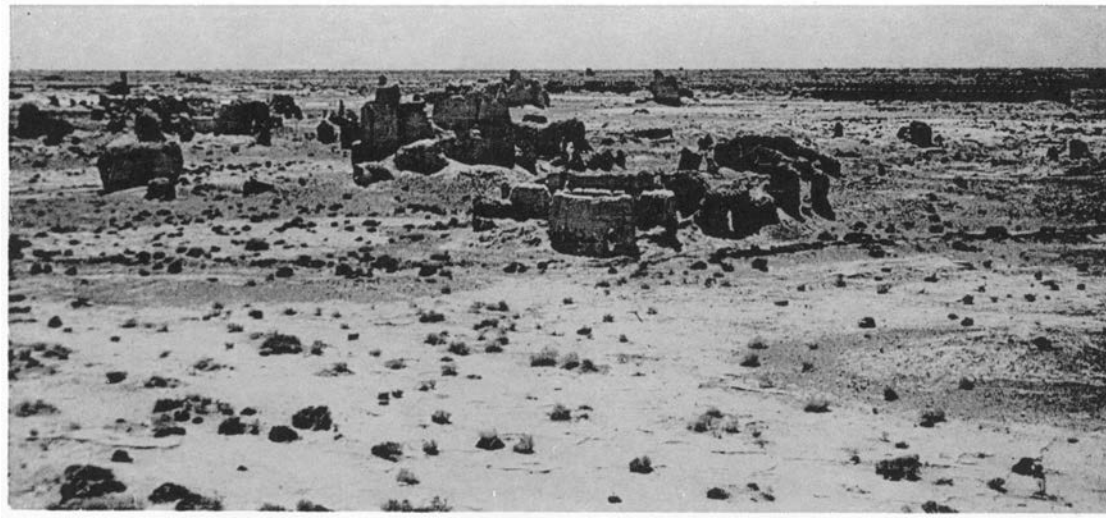


A

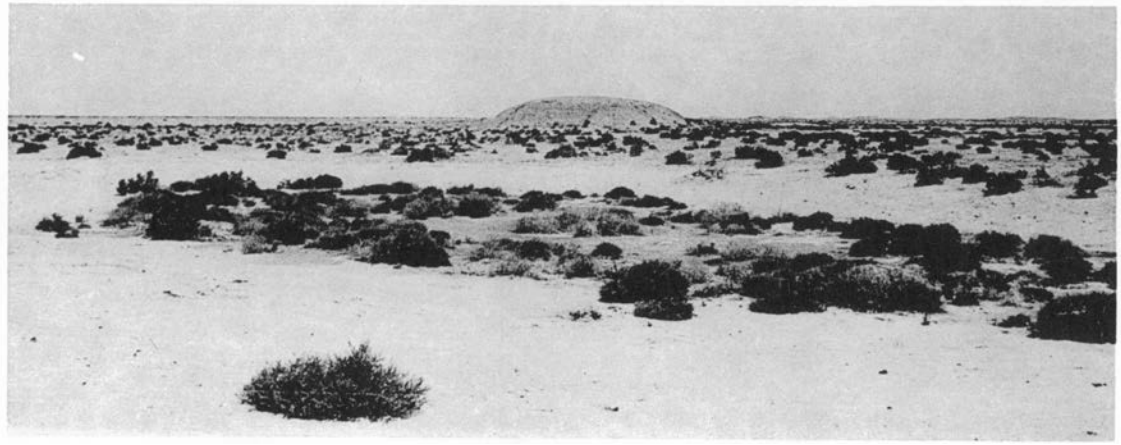


B

a. Small irrigation channels which utilize the water derived from the Band-i-Seistan. Mounds on right are those of Nad-i-Ali (Site 28A). b. Feeder irrigation channel for village of Salian. Channel passes through Peshawarun to Farah Rud



A



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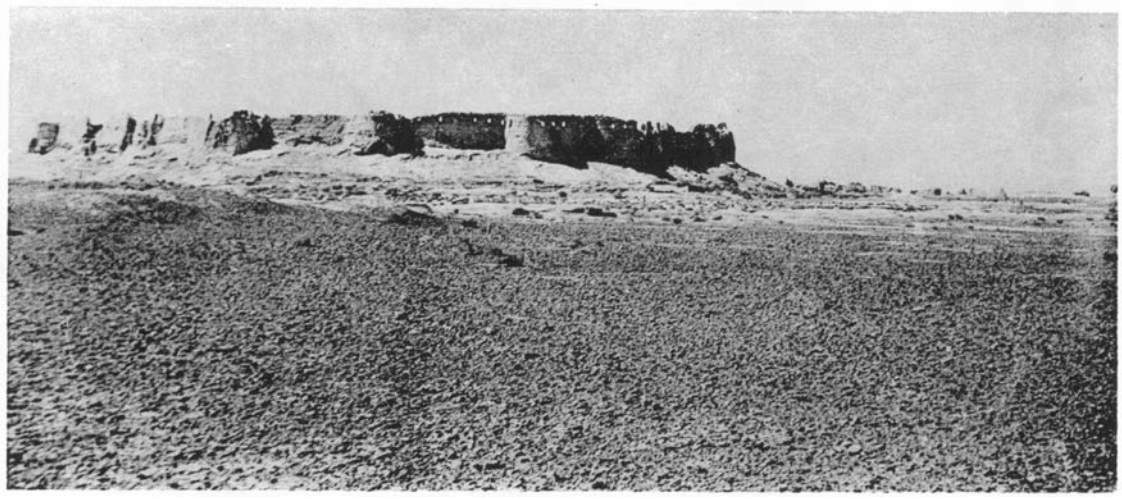
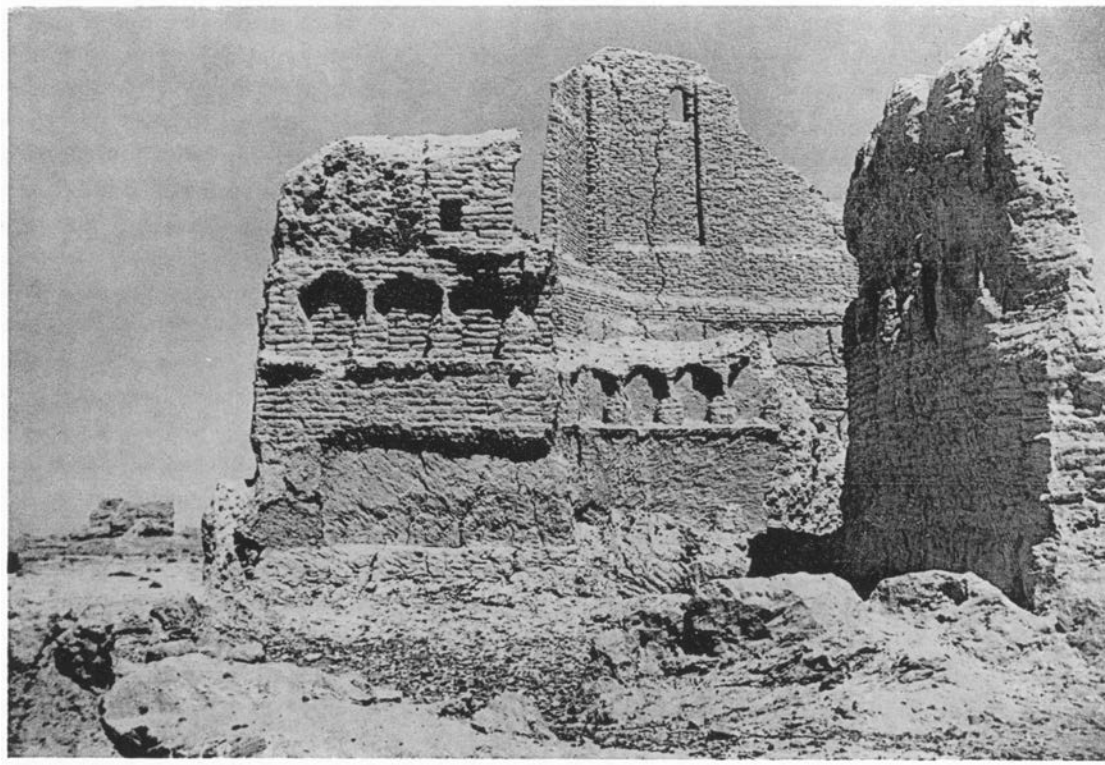
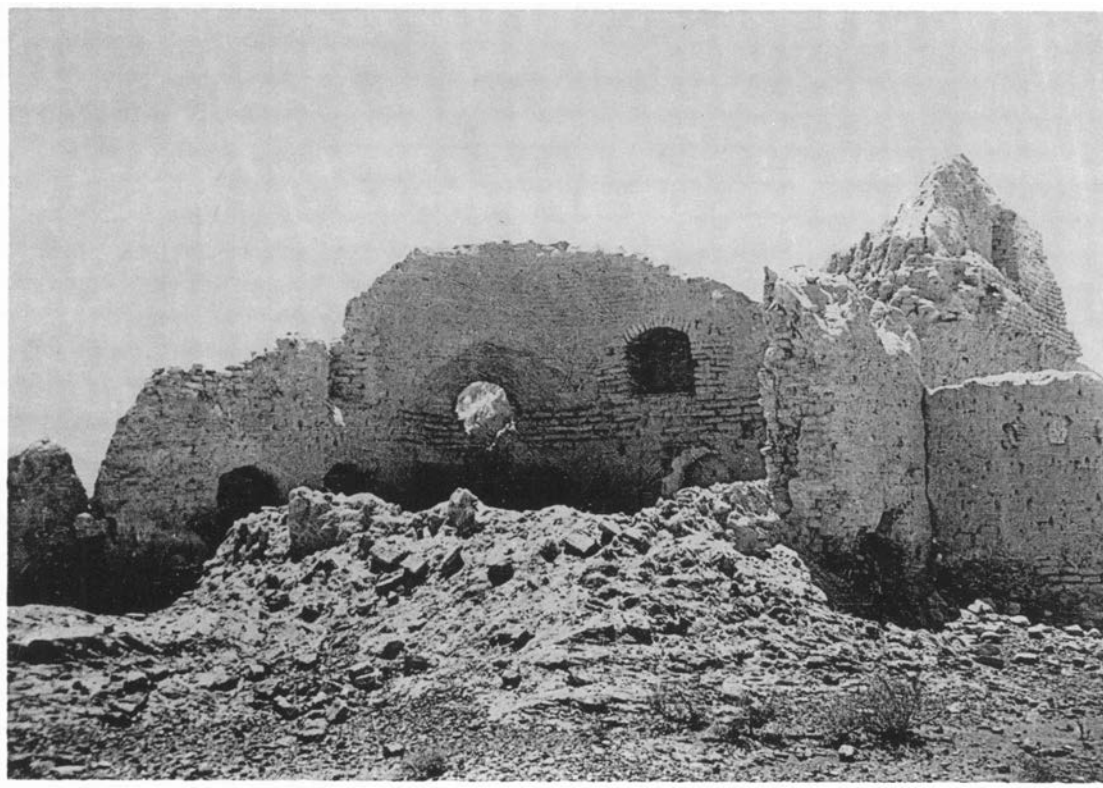


C

Character of sites. a. Ruins of Peshawarun (Site 21). b. Site 15. c. Citadel of Peshawarun (Site 21)

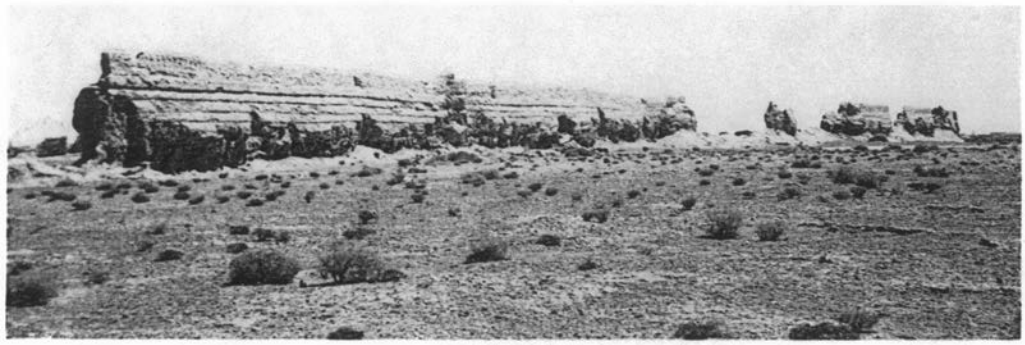


A



B

a. Peshawarun (Site 21). Highest wall is about 60 feet. b. Remnants of roof and walls within building



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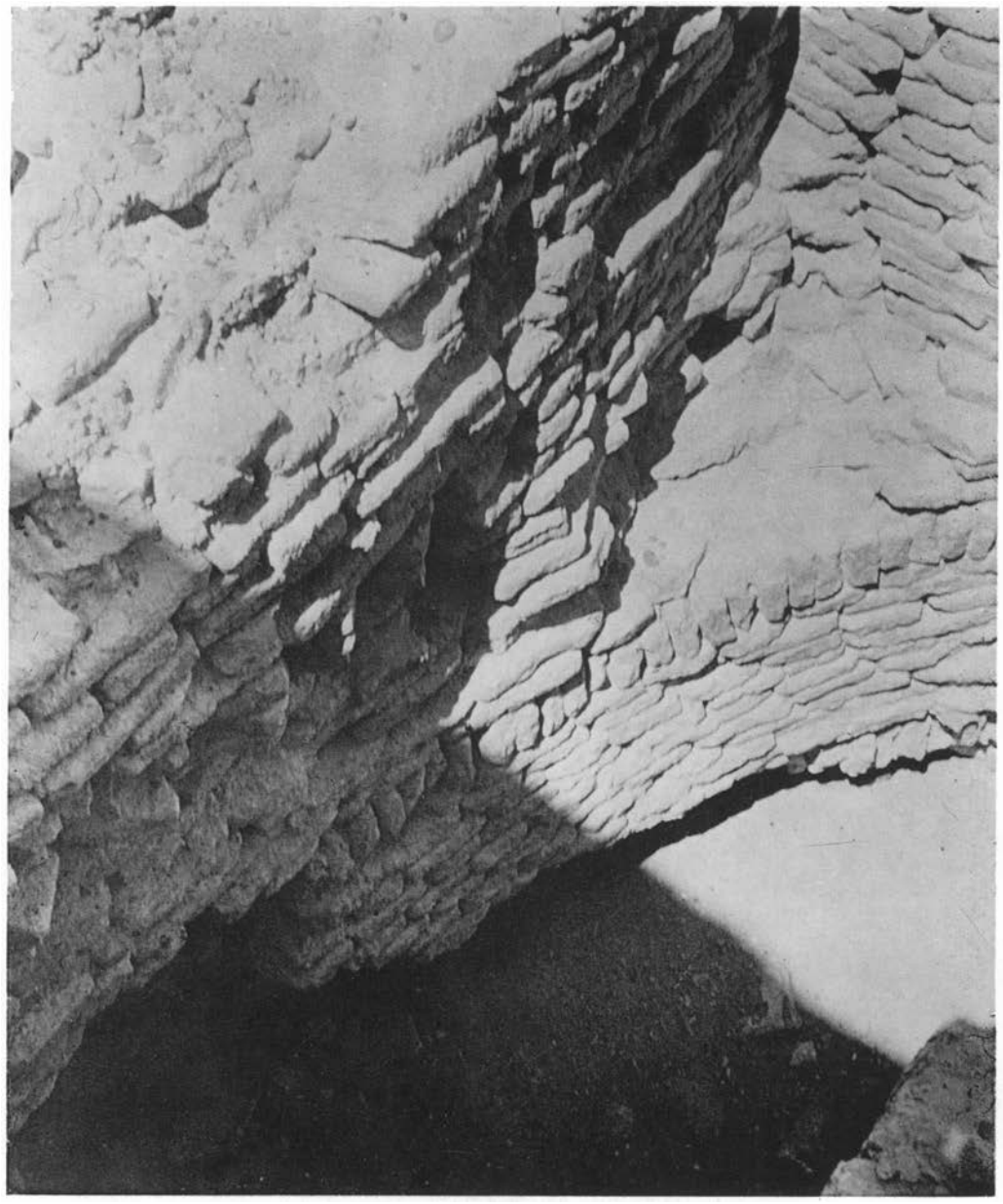
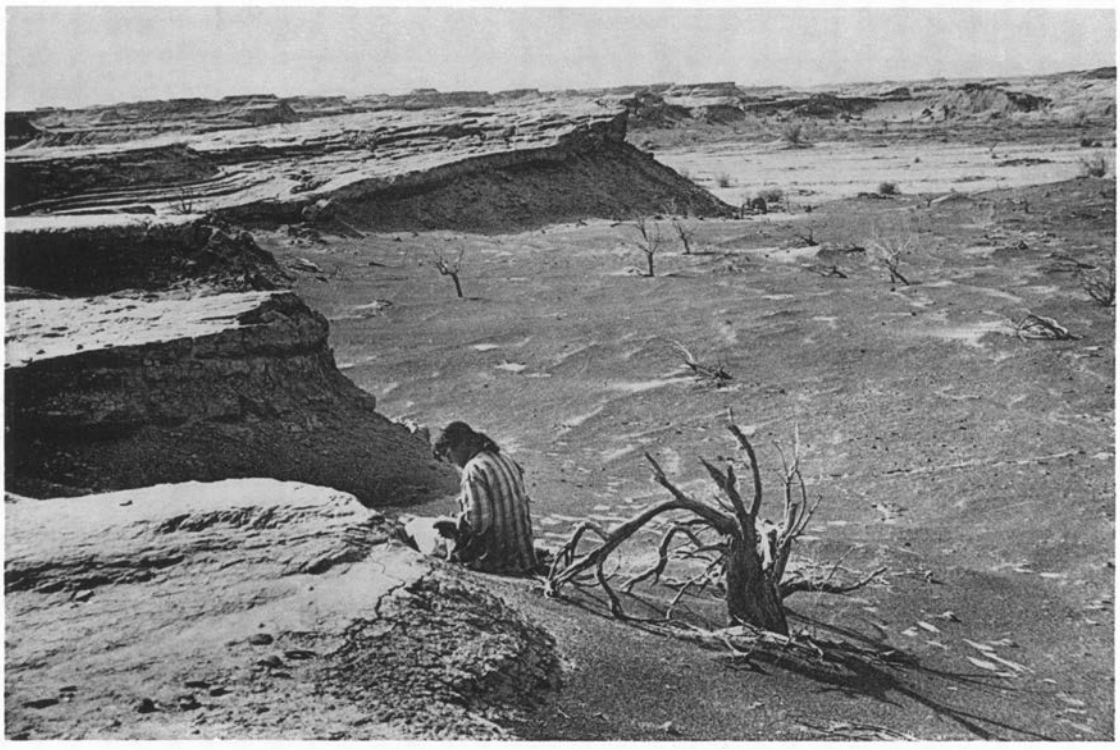


B

a. Remnants of main wall surrounding major buildings of Peshawarun. b. Brick-lined well at Peshawarun

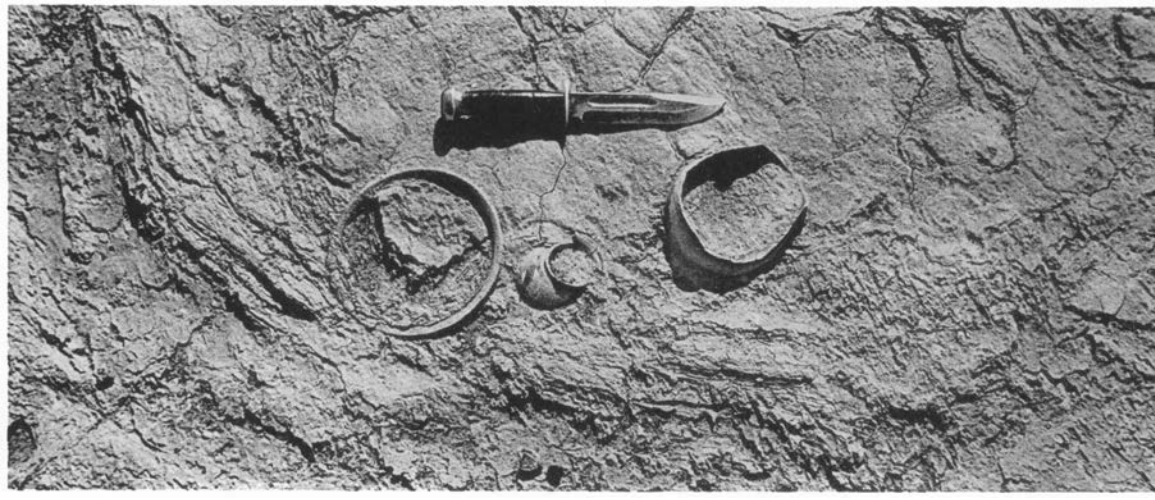
A



B

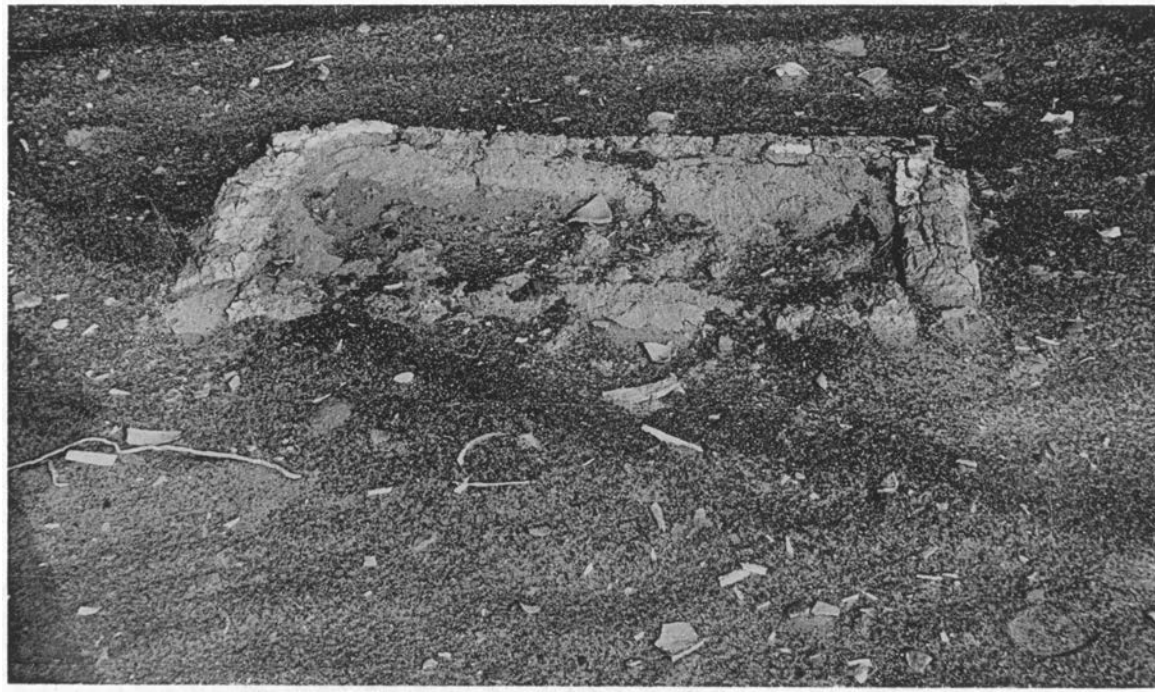
a. Gardan Reg, Site 109 (G.R. 6), Grave Area A. Sherds and graves found on sand where Jan Fairservis is walking. b. Sherds found on top of bluff to the left of Jan Fairservis

A

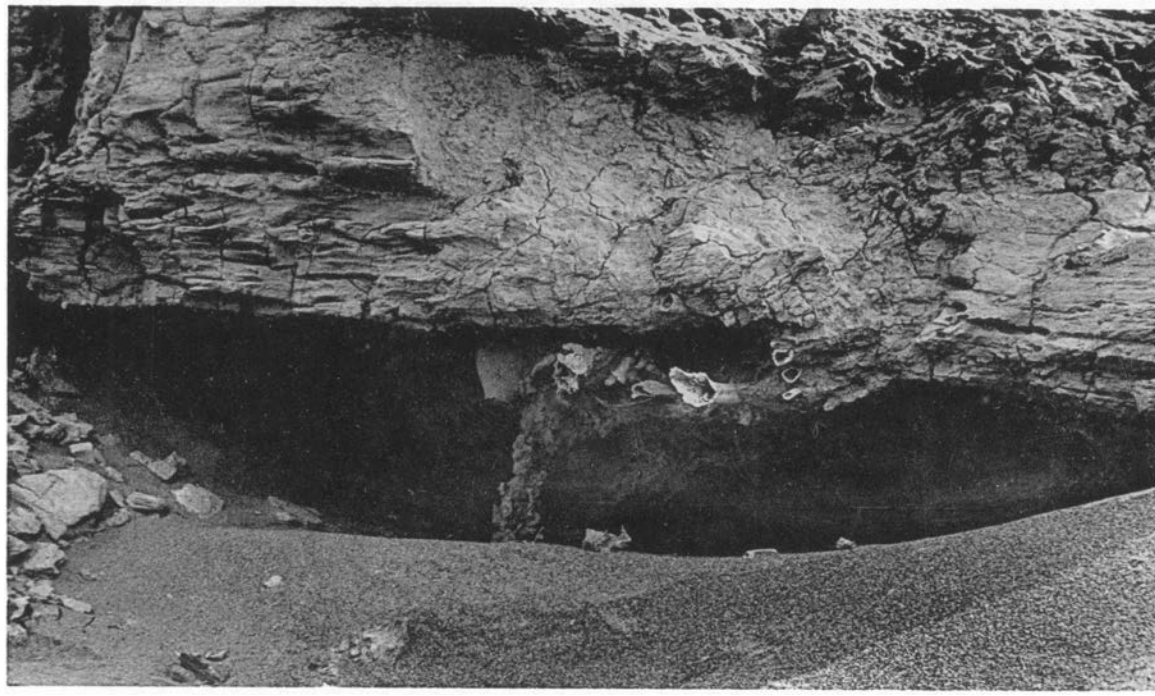


B

a. Gardan Reg, Site 109, Grave Area A, sherd and bone-strewn area. Remnants of grave in left background.
b. Grave Area B. Pottery exposed *in situ* by wind action



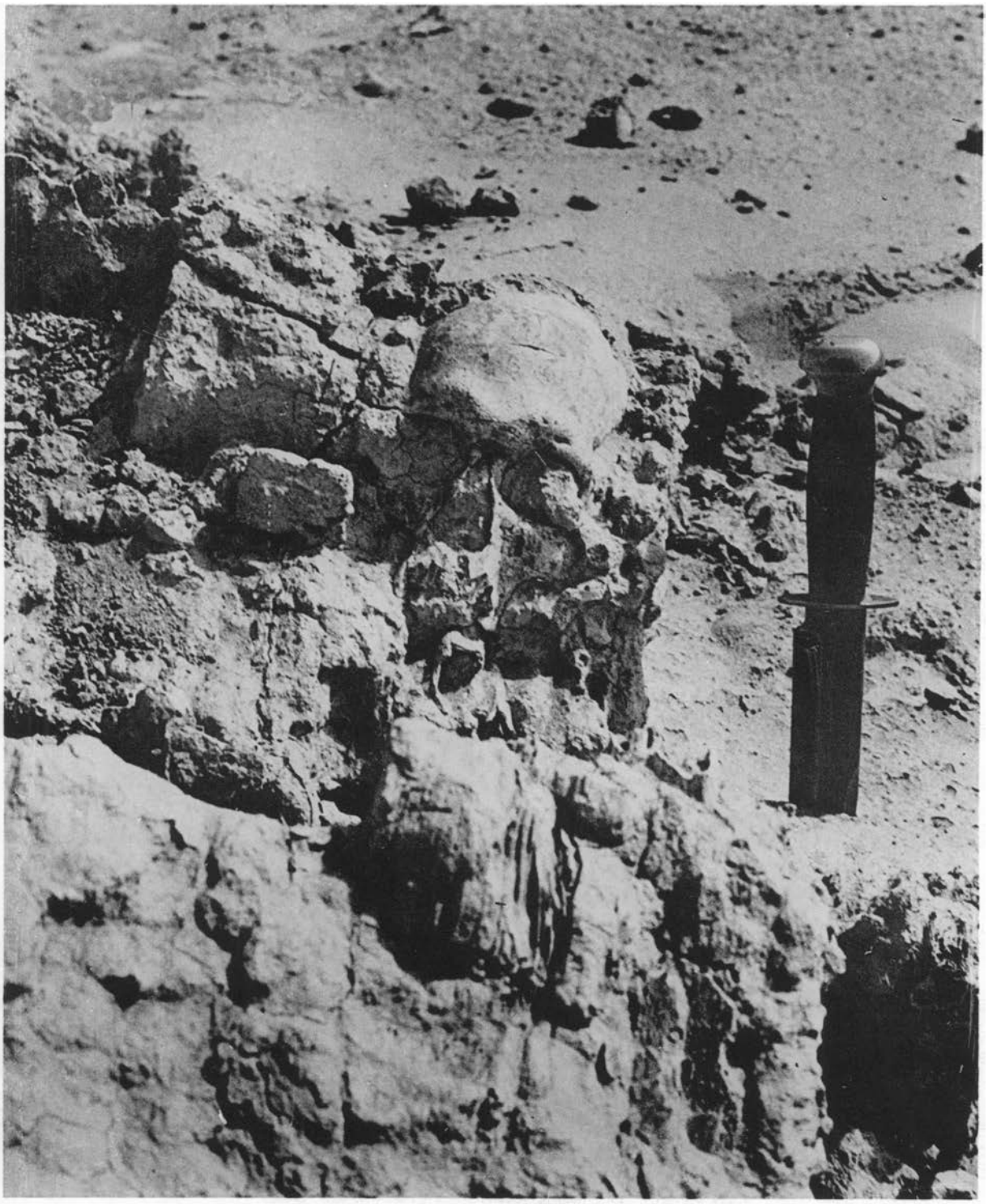
A



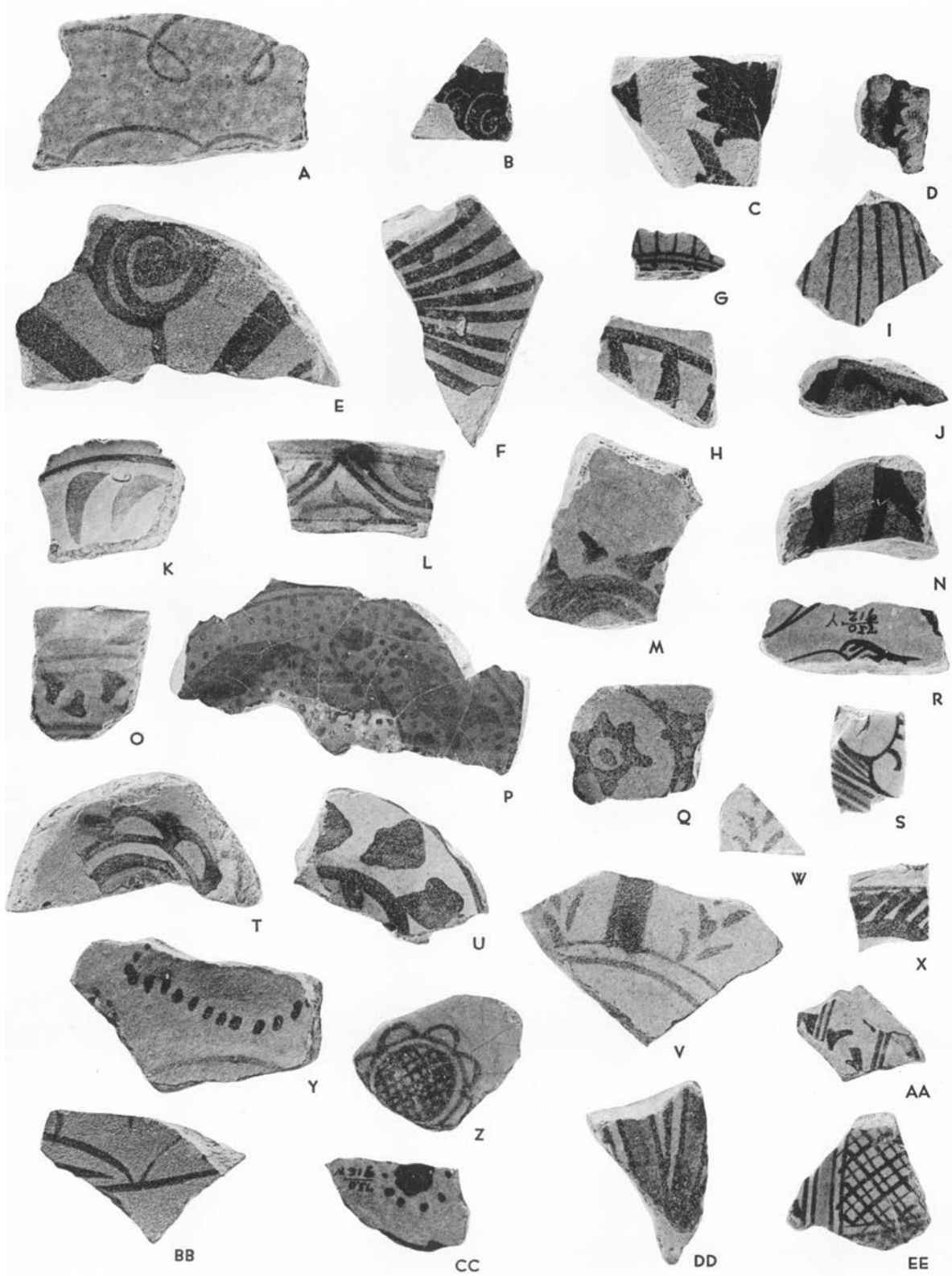
B

a. Gardan Reg, Site 109, Grave Area A, clay base of grave "pit." The skeleton and pottery had been eroded out except for small fragments. b. Grave Area A. Grave 6 undercut by wind, exposing pottery and skeleton from below

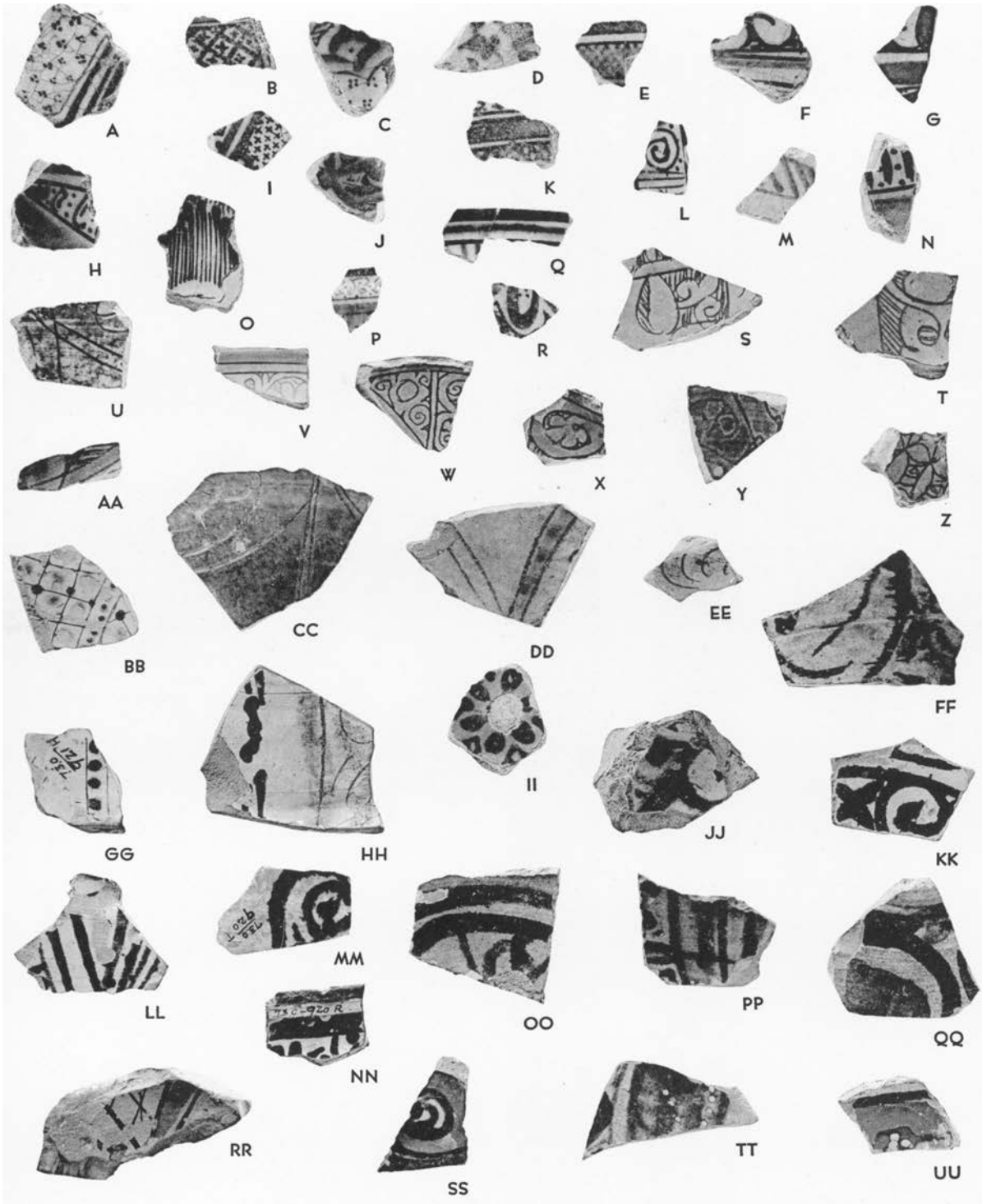
Gardan Reg, Site 109 (G.R. 6), Grave Area A, Grave 1, showing flexed position of skeleton. The point of the knife is to the west. The background outcrop is of hard clay, presumably the remnant of the grave pit



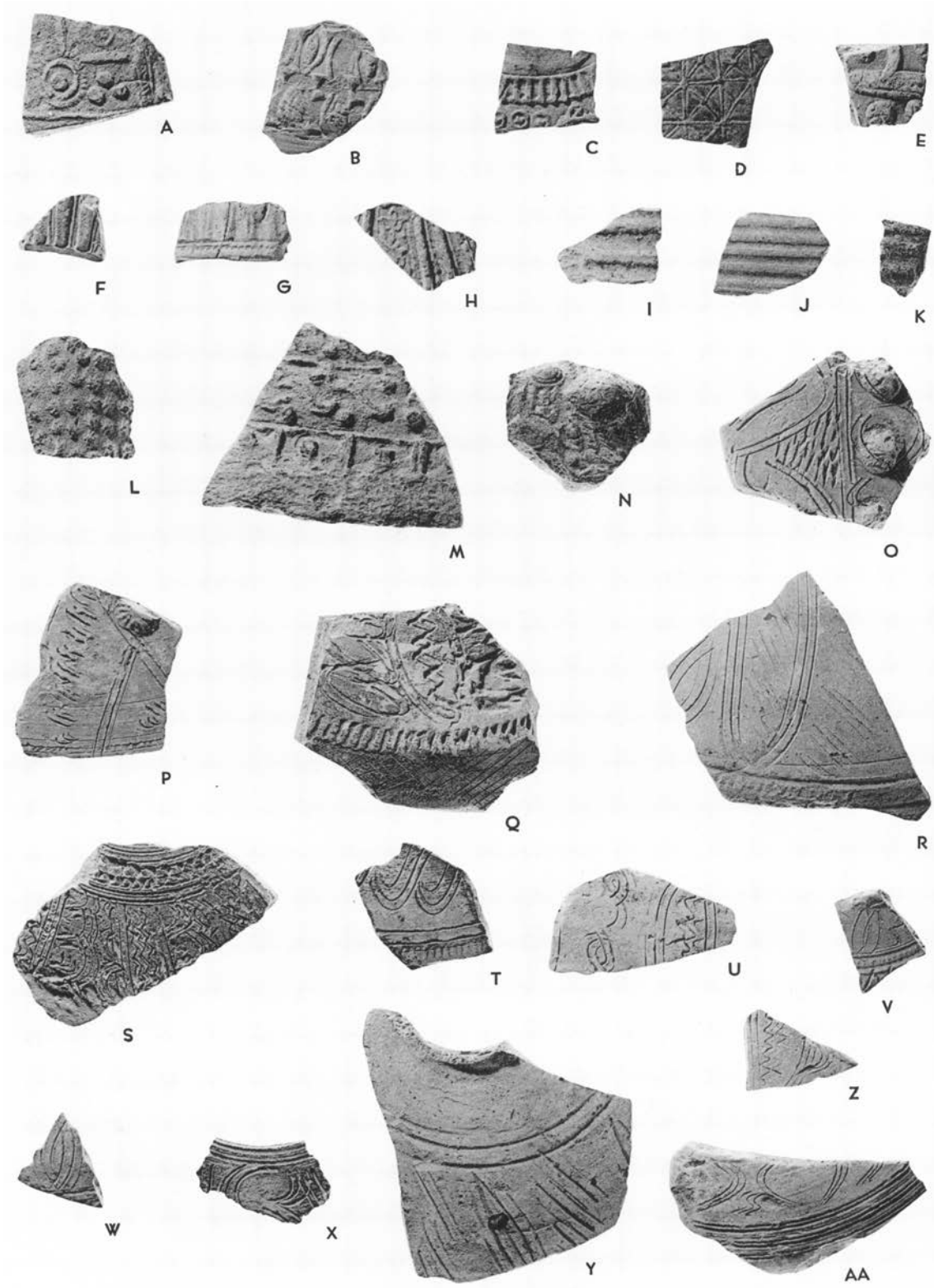
Gardan Reg, Site 109 (G.R. 6), Grave Area B. Grave 8 skull exposed in block which had obviously fallen from a higher level



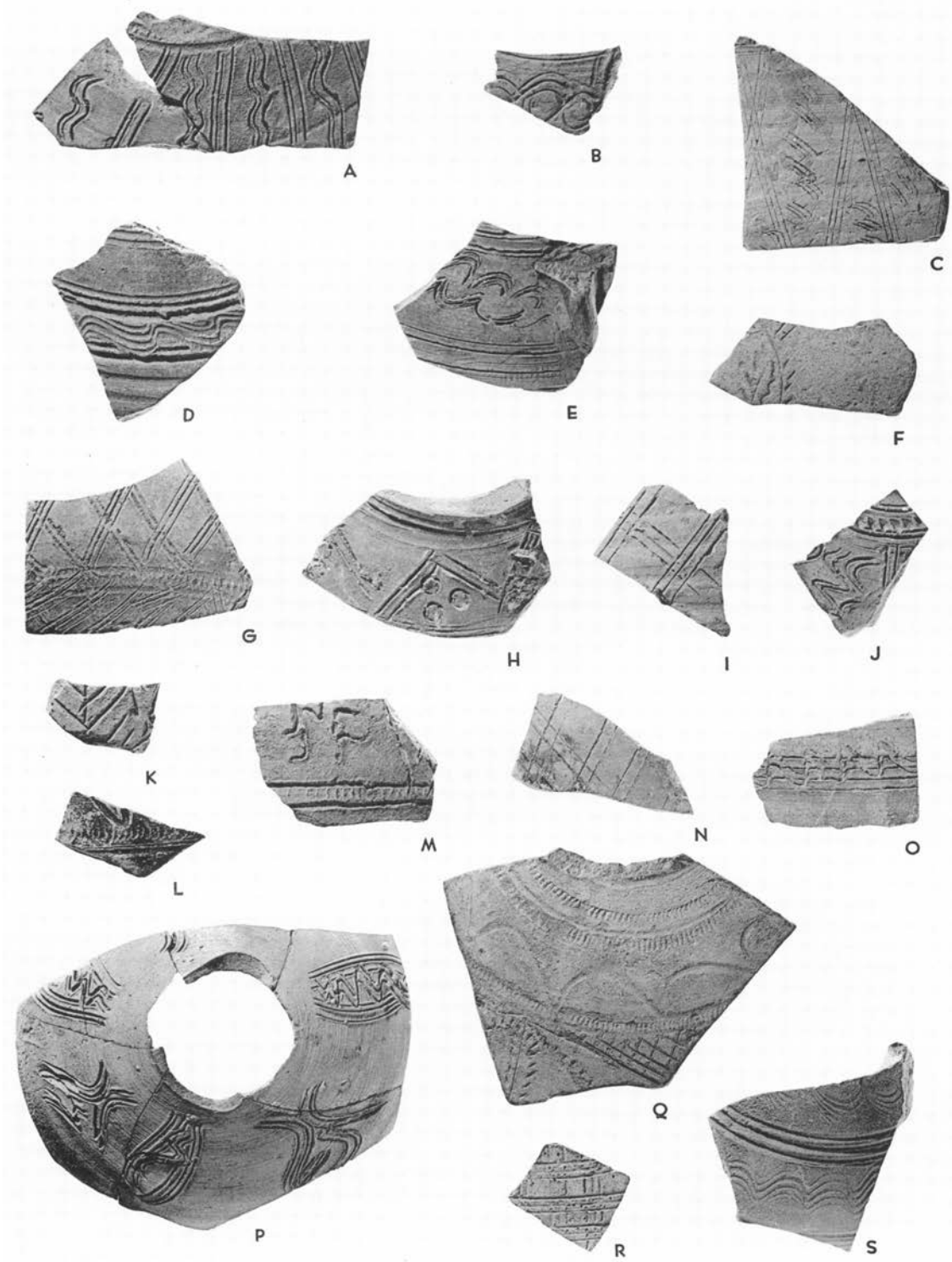
Glazed sherds, Peshawarun (Site 21). a-r. Blue-green glazed decorated ware. s-ee. White glazed decorated ware, first variety



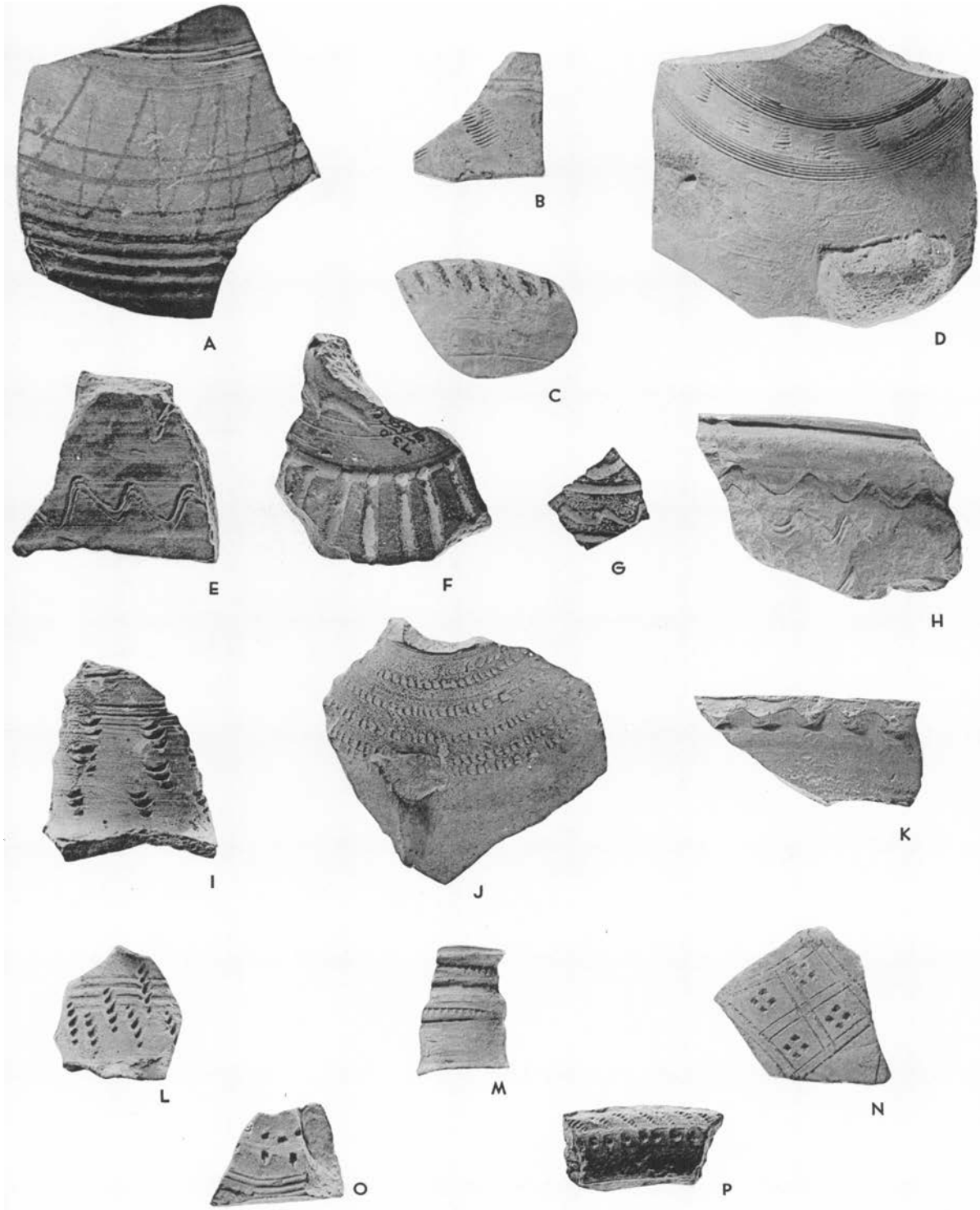
Glazed sherds, Peshawarun (Site 21). a–r. White glazed decorated ware, second variety. s–v. Brown glazed decorated ware. w–aa, cc. Green glazed decorated ware. bb, dd–hh, jj–rr. Yellow glazed decorated ware. ii. Black-on-green glazed ware. ss–uu. Red and brown glazed decorated ware



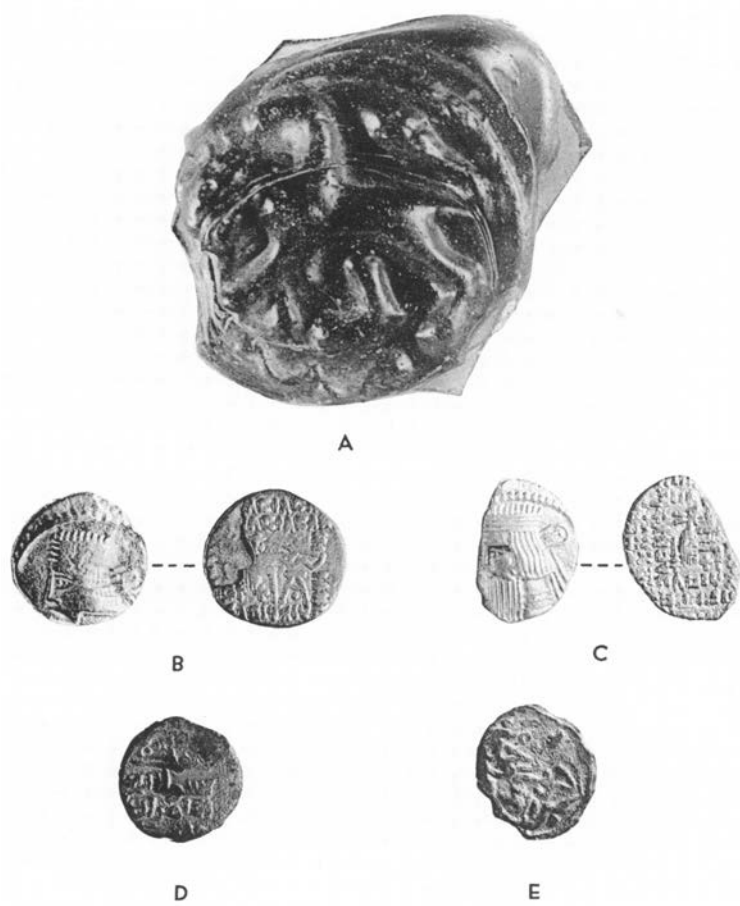
Incised and moulded wares, Peshawarun (Site 21)



Incised and moulded wares, Peshawarun (Site 21)



Miscellaneous decorated wares, Peshawarun (Site 21)



Coins and other objects. a. Green glass raised animal. b-c. Parthian coins, silver. d-e. Medieval Islamic coins from Peshawarun, copper

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Volume 48

PART 1. Archeological Studies in the Seistan Basin of Southwestern Afghanistan and Eastern Iran. Walter A. Fairservis, Jr. Pp. 1–128, 19 plates, 49 text figures, 143 designs, 7 tables. 1961. Price, $3.00.