

Vernacular Architecture and the Assessment of Demographic Patterns within the Recent Environment in Relation to the Evidence from Tall Iktanū

Introduction

Throughout the periods of work at Iktanū and al-Hammām in the south Jordan Valley, from 1965 to 1992, the patterns of land use and demography have been the subject of at first interest and observation, and finally more focussed recording and analysis. It has been evident that the local people had much information to provide on subsistence survival in the landscape, in traditional and other ways that reflected both directly and indirectly on the information being retrieved by our excavation and survey work.

The modern ethnographic data was relevant to the ways in which our archaeological evidence should be perceived, but more than that, provided models which challenged traditional interpretations of archaeological evidence. The processes of observation and recording have been pursued steadily, and have led to assessments of transhumant elements in the ancient and modern populations (Prag 1985 and 1991a); and to the assessment of the balance in the environment between settled and pastoralist communities (Prag 1992 and 1995). Increasingly also the processes of sedentarization and flexible settlement patterns have been observed. Latterly studies of local traditions in architecture have contributed to understanding the limitations imposed on ancient and modern building by the use of locally available materials in the region, and to assessing the speed from abandonment to collapse of buildings in local conditions.

The observation of multiple traditions in construction techniques, and of changes in function during the life span of a building, have also provided relevant data. It has been observed that the demographic patterns and dynamics within the largely post-1948 refugee settlements in the vicinity of Iktanū also challenge the archaeological record with a large number of similar parameters. These are particularly apposite when patterns in the sudden appearance of the town at Iktanū in the later third millennium and the recent appearance and rapid development of nearby modern ar-Rawḍa are juxtaposed, with the rapid demographic growth reflected in expansion of housing and housing infill at both sites.

The general architectural styles can also be compared within the local landscape. Obviously we are not talking

of identical circumstances and patterns, nor attempting to produce absolute explanations which might lead from recent history to a much more ancient period. The recording of data in all periods however, leads to challenging models of interpretation for the past.

The following data is derived from diaries and records beginning in 1965 when the writer first conducted archaeological surveys in the area (see Prag 1974, 1989, 1990, 1991b); from figures provided by the Department of Statistics of Jordan, and from the copies of the Community General plans of ar-Rawḍa and of an-Nahda provided by the Jordan Valley Authority.

The Township of ar-Rawḍa (FIG.1)

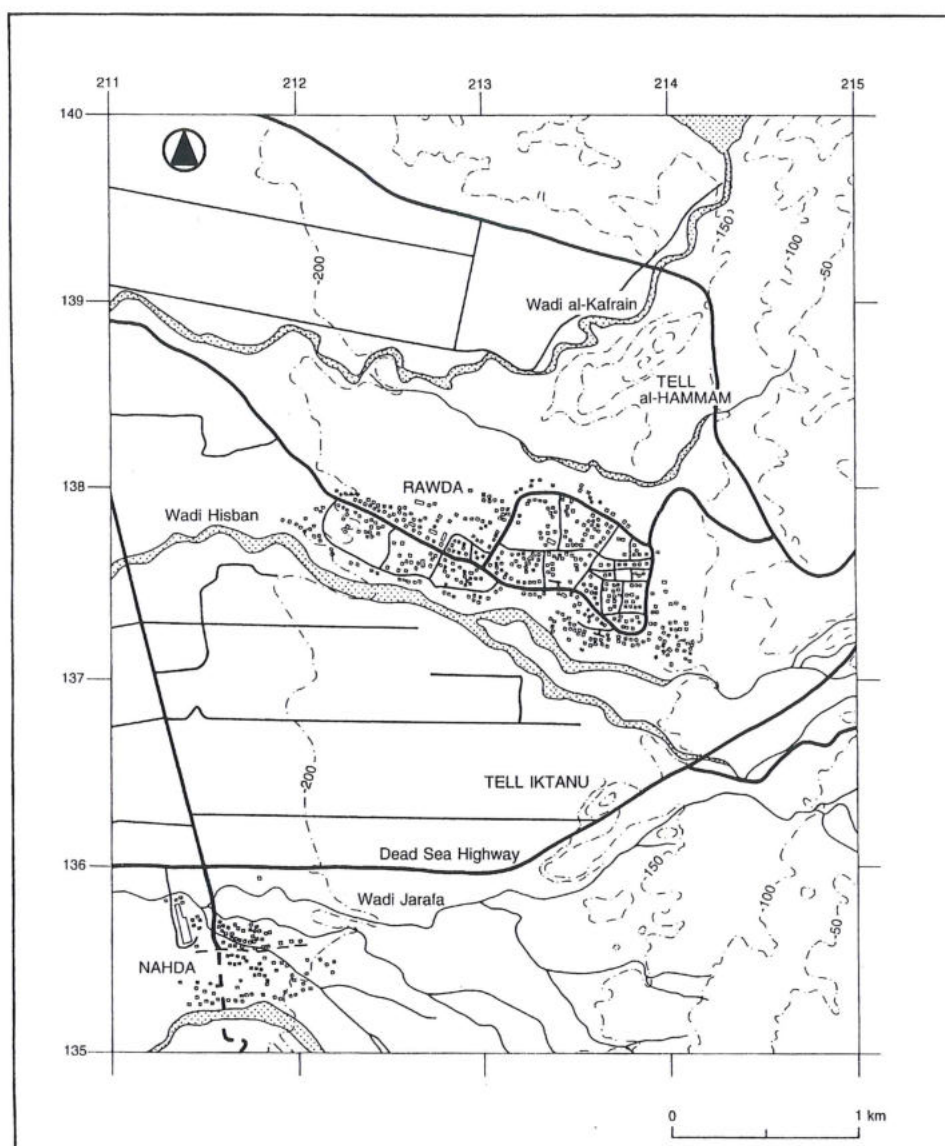
History and Statistics

Ar-Rawḍa lies in the al-Balqā' Governorate, in the sub-district of ash-Shūna aj-Janūbiyya. Present residents say the township of ar-Rawḍa (Arabic = the garden) was first settled in 1957 though it may have been earlier. When the writer first visited the village in 1965/6 it consisted of a ribbon strip of mudbrick houses built by Palestinian refugees along a dirt road; there was a small school house.

In 1992 ar-Rawḍa was reaching the status of a municipality, with a population of between 5000 and 6000. Most of the roads within the town are now laid out in accordance with the community plan and are surfaced. The main east/west road is partly lined with shops. The rapid population growth is reflected in the number and size of schools both operational and planned (TABLE 1). An open plot of land in 1992 was occupied by another large new school building in 1994.

It can be seen that the population growth in ar-Rawḍa was very fast; between 1975 and 1979 it grew by over one third, roughly at a rate of 276 per annum; between 1979 and 1992 it had almost doubled, approximately at an average growth rate of 225 per annum.

The population is mainly descended from a number of tribes from both the east and west banks of Palestine. The population of the ash-Shūna sub-district as a whole is composed mainly of the local land-owning tribe, the 'Adwān; of the Ghawārni (tribes inhabiting the al-Ghawr before 1948); and of refugees coming mainly from the northern an-Naqab after 1948, including the 'Azāzma, the



1. Map of the localities of ar-Rawḍa and Tall Iktanū, indicating the proximity and similar environments of the ancient and modern sites.

Table 1. Population Statistics

Year	ar-Rawḍa	ash-Shūna aj-Janūbiyya sub-district
1961 ¹	not recorded	1078
1974/5 ²	1961	?
1979 ³	3068	18093
1992 ⁴	c. 5000/6000	?

¹ Source: 18 November 1961, first census of population and housing; Department of Statistics, Jordan. In the 1961 census ar-Rawḍa is not listed.

² Source: 1974/5 census; "Roda", Department of Statistics, Jordan.

³ Source: 1979 census; Department of Statistics, Jordan. The municipality building in ar-Rawḍa was constructed in this year (local informant).

⁴ Source: 1992; according to the Municipality in South ash-Shūna, the present population is between 5000 and 6000 people.

Amarin, the Beshash and the Jabarat tribes (Prag 1992; Oppenheim 1943: 81-90). There are also immigrant workers from Egypt and from Syria. The population within ar-Rawḍa itself has a generally higher proportion of people of Bi'r as-Saba' origins.

The Environment of the Town

Ar-Rawḍa lies between contours -150 and -200 m. below Mediterranean Sea Level (grid.ref. 213138), on a flat strip of land bounded on the north by a minor wadi, and on the south by the Wādi al-Quṣayb and Wādi Ḥisbān: the two wadis unite south of the centre of the town. The Ḥisbān is perennial, the al-Quṣayb, though deep, is not. To the east the houses extend almost to the line of faulted cliffs which mark the edge of the Rift; and to the west the houses end at the edge of irrigated fields and orchards. The area receives an average annual rainfall of 164 mm but this varies drastically from one season to another. Rainfall is

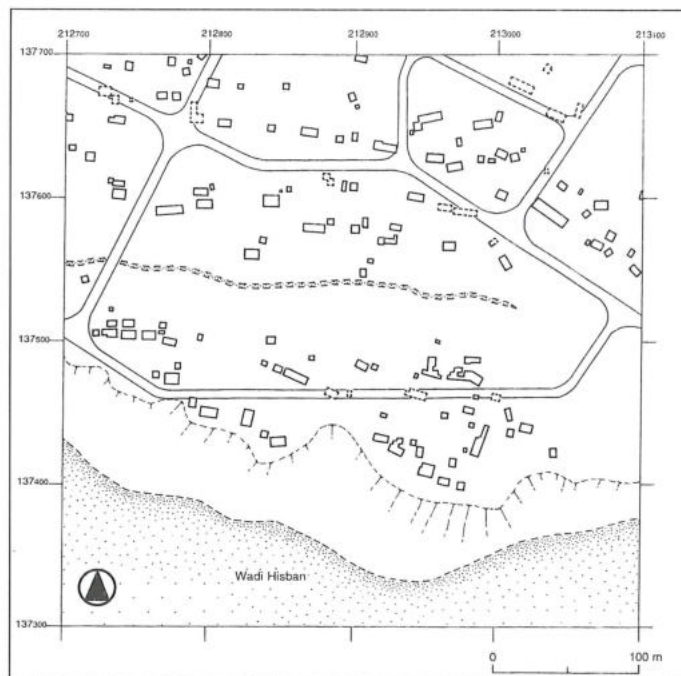
restricted to the winter and spring months; occasional torrential rain turns the alluvium into deep mud, puts the wadis into impassable spate, and for an hour or two creates impressive waterfalls on the cliffs to the east of the town. When this happens it is easy to understand the problems of erosion in the area, attested by the deeply eroded wadi beds, and the rapid collapse of any mudbrick houses which are not annually and carefully maintained. The land around in summer and autumn is bare and very arid; after good rain in winter and spring it turns green and blossoms with flowers. Crops of cereals can be dry-farmed on the alluvial soils thanks to this rainfall and to seepage from the high ground to the east. Nearly all vegetation is burnt up and dies away by late April (when cereal harvest normally takes place), and from May onwards only the irrigated zones of alluvial soil remain green.

A number of the inhabitants leave the town during the very hot summer months; some migrate to the cooler temperatures of the plateau; some take a tent and go only a short distance to slightly higher ground, away from the houses to obtain the relief of any breezes. Many of the inhabitants have animals; a donkey, small flocks of goats, a few cows or sheep being the most common; these are often kept in pens or stables in a yard around the house and taken out to graze. Hens and pigeons are also kept in these circumstances. Around some houses are yards with trees, such as figs and olives, and fruit or vegetables such as prickly pear and onions.

The Layout of ar-Rawḍa (FIG. 2)

The first houses in the 1950s and 1960s were laid out along the line of the north banks of the Wādī Ḥisbān and Wādī al-Qūṣayb. The wadis provided the only source of water for the inhabitants in the 1950s, which was carried to the houses by people, sometimes with donkeys. The distribution of the houses in the older settlement shows this functional relationship. The houses also indicate a loose social structure, with little other evidence for planning. The houses were laid out in an almost tent-like pattern, not too close to each other, in more or less regular rows, with backs to the south-east which is the direction of the fierce easterly gales (the *sharqiya*) which are an unpleasant and not infrequent feature of the area, and probably a factor to be considered in damage and collapse patterns for housing. The house doorways usually face the north, on the cooler side of the house, and the normal north-western breezes. There are relatively few windows, and many are blocked up. There is no evidence for an earlier village on the site that might influence the modern layout.

The houses are simple in plan, normally made of locally available materials. They are rectangular, have one or two rooms, occasionally three. They are built of rectangular sun-dried mudbrick, set on a single row of wadi stones laid directly on the ground surface. They usually have slightly sloping roofs, of poles, reed-canes, thatch and



2. Central-south area of ar-Rawḍa, showing original layout of row housing parallel to the Wādī Ḥisbān, overlaid by the modern road system. Based on the ar-Rawḍa Community General Plan, Sheet 2, 1976.

clay. There are indications of more than one building tradition. Many of the houses now are enclosed within yards, often with gardens; but there seem to have been very few yards around houses in the early years of the settlement.

It is clear from the municipality map of this section of ar-Rawḍa drawn in 1976 that the modern road system, municipal amenities and a civic plan have been overlaid on the simpler earlier system, and there are clear indications of recent attempts to rationalize property boundaries in a systematic way in relation to these civic plans. Some houses have been demolished to accommodate the roads now required in the developing town. Others are scheduled for demolition to make way for future development as areas have been designated for schools, commercial or industrial use. This recent development does not form part of our study.

There is, particularly on the northern and eastern sides of the town, a proportion of winterhomes for citizens of as-Salt and people from elsewhere on the plateau, some of whom come on Friday or for holidays during the winter to escape the cold wetness of the highlands. Nearly all these buildings are modern, in both plan or materials. In this part of the town a number of buildings are either empty or only occasionally occupied. This area has little to offer a study of traditional demographic patterns, apart from noting the continuing practice of using al-Ghawr as a favoured winter living zone.

A group of empty houses in the old centre of the town, scheduled for demolition, was the subject of a survey in 1992 to be described by A. McQuitty; the plans, construc-

tion materials, building traditions and collapse patterns were recorded, along with some ethnographic data.

These houses were built in the 1950s, planned in 1976 and had been demolished by 1994. At the same time, a second survey, concerned with changing patterns of occupation, was begun in the south-east corner of the town. It is this survey which is outlined below.

The South-East Corner of ar-Rawda (FIG. 3)

A survey of the houses in the south-east corner of ar-Rawda has provided catalogue of structures and records changes through time. This is based on four successive levels of recording. Level I is provided by the municipality map drawn up for this area in 1987. Level II is based on a series of air photographs taken March, 1990. This information has been supplemented by two further levels (Levels III and IV) of informal interviews and ground-checking on 22nd April, 1992 and on the 18th February, 1994. Levels III and IV are not comprehensive. The type of information recorded is illustrated below.

House 1 at south-east corner of Block 1

I : pre 1987. Mudbrick structure, lean-to roof; no yard.

II : 1990. Roof intact, no yard.

III : 1992. Two rooms, two doors facing north. The east room has an internal buttress in east wall, two small windows on either side of the door in the north wall, both of which are blocked with mudbricks; there are two small ventilation holes above the windows; this room has fallen in. The west room is still intact, has windows on the south and west sides, which are blocked. House stands in an unfenced waste ground. Probably abandoned?

IV : 1994. Completely collapsed in unfenced waste ground, brick debris max. 0.50m high. According to the Jabarat family living opposite, this house was built by a Jabarat family in 1956. The Jabarat who owned this building were living in it (the west end?) until three months ago, but they have now built a house in the hills and are not coming back to ar-Rawda.

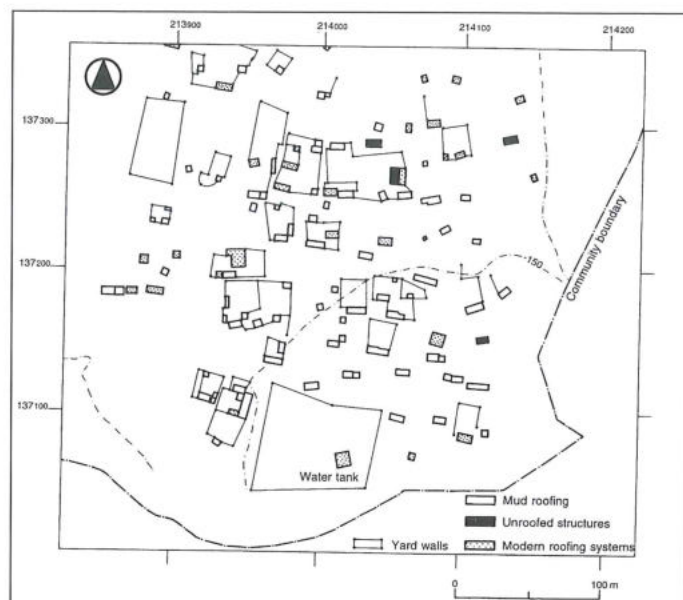
Summary: traditional mudbrick two room lean-to, built by Jabarat in 1956, east end abandoned between 1987 and 1992; west end abandoned in 1993 when the owners moved away; completely collapsed by February 1994.

House/complex 7 at east end of ar-Rawda in centre east of Block II

I : pre 1987. Mudbrick structure with yard wall on west side only.

II : 1990. Two-room, lean-to, mudbrick house in the south side of a fenced yard, converted to use as stable; new concrete house to north with second fenced concrete yard on north side. No plants.

III: 1992. A neat and well-maintained house at the extreme east end of the village. Near the centre of the yard is a new L-shaped concrete house (three years



3. The survey in the south-east area of ar-Rawda. Traditional mud-roofed houses/storage buildings are left blank; houses with modern roofing systems are stippled; unroofed structures are indicated in solid black. Based on the ar-Rawda Community General Plan, Sheet 5, 1987.

old, built c.1989), with attached concrete lean-to on the east side. Against the south perimeter of the yard is a mudbrick two-room lean-to, with two north-facing entrances. This was built around 20+ years ago (c.1972 or earlier). There is a low open-fronted shed with stone pillar at the east side. The new concrete house is the family dwelling; the old house is used as stabling for cows and calves, goats and sheep. There are pigeon houses made from tin cans on the north wall above the door.

There is a new concrete breeze-block wall around the south yard; the single entrance to the yard is on the east side, and is blocked by sheets of tin, and tin barrels. The south yard is used by the animals and is dark with dung. The front yard is a garden with fig and prickly pear well-established on the central west side. The fence is used for drying washing and airing bedding. Most of the dung from the stables is carried out in sacks, put in a heap against the minefield fence about 50m to the east, and subsequently taken out to the fields and placed around fruit trees. Outside the house on the south-east were six feeding troughs for flocks.

The inhabitants are Palestinians; they go up to the plateau for two months every year.

Analysis

As can be seen in FIG. 2, the dominant pattern in the original layout of ar-Rawda consists of rows of rectangular dwellings and small storehouses in alignments roughly parallel to the wadi on the south. Near the top right is the small block of houses surveyed in 1992, all of which were constructed of mudbrick with pole/reed /thatch/clay roofs.

None have yards.

In FIG. 3 (also based on the plan of the Municipality) in the plan of the south-east area, the basic pattern is similar, with a loose alignment of rectangular dwellings and smaller storehouses. The plan is however more complex, even without the overlay of the modern road system, and this reflects more complex developments in recent years. In this area of ar-Rawḍa, there are about 45 dwellings, approximately 56 store/stable buildings, and 22 yards. Of the c. 111 structures, 76 have a traditional mud roof, 31 are roofed with other materials, and 4 are unroofed. The great majority of structures in 1987 were still mudbrick houses, and the larger number appear to be in use as stores or stables.

In the more detailed survey of two blocks of this area higher figures for dwellings as opposed to stores are offset by the number of dwellings which are being abandoned.

The processes observed in Levels III and IV of the project are i) abandonment and collapse of some dwellings and storehouses; ii) a simultaneous process of infill with mudbrick houses being replaced by one or more concrete dwellings, on the same site or on a site adjacent to the original house, which is often then used as a stable; iii) increase in the number of paved roads in accordance with the civic plan, which involves some demolition of traditional style houses; iv) increase in the number of walled yards, also laid out (sometimes rebuilt) in accordance with the civic plan and defined property boundaries.

Both processes – of abandonment, and of growth, are linked with a high degree of population mobility, both long and short term. People move to the plateau for as little as two months in the summer, or permanently, abandoning houses in the town. Economic and demographic growth is indicated by housing infill; and by the increased numbers of animals kept. Permanent occupation is reflected in the increase in gardens. The pattern of enclosed units laid out in accordance with the civic plan, in which the land is generally planted with fruit trees and flowers, dominates the north side of the town.

Conclusions

When the morphological patterns of modern ar-Rawḍa and late third millennium Iktanū are compared, both contrasts and parallels are very marked.

1. Iktanū was a planned settlement from the outset; its courtyard houses enclosed by walls, and its clear street layout, were in place from the beginning of construction of the settlement (Prag 1974: 97; 1993: 267-270). By contrast, ar-Rawḍa initially had a loose, functional layout, with walled yards and civic organization only developing later. The historical, economic and ethnographic background of the modern inhabitants accords with this pattern. The contrast suggests that the late third millennium inhabitants of Iktanū arrived on the site bringing with them more urban traditions.
2. On both sites the materials used were the products of

the local environment and in use in similar conditions. Rectangular structures of mudbrick walls set on stone bases, with poles, reeds, thatch and clay used for roofing materials. These structures can be built quickly, but must be maintained regularly. Such houses in ar-Rawḍa collapse very swiftly as soon as winter rainwater penetrates the roof; and in some cases walls fall even before the roof, perhaps due to the ferocity of the local gales, or to seismic activity or simply the poor construction methods. The collapse of such houses can follow within months, rather than years, of abandonment. The assessment of the occupation interval between Phase 1 and 2 at Iktanū may be even shorter than the 5 to 50 years originally proposed (Prag 1974: 81), especially when the length of many stretches of the Iktanū walls is considered. With the latter factor in mind, it may also be necessary to consider many of the walls on Iktanū as low yard walls, rather than higher structures.

3. Storage and stabling play a large part in the town at ar-Rawḍa, as does storage in other villages in modern Jordan (Köhler-Rollefson 1987:536, 538) and in Palestinian villages in the past. It is clear that the houses at Iktanū had significant storage capacity (Prag 1993: 270), and it seems likely that the large courtyards were originally linked to animal ownership (Prag 1974: 98). This pattern may have changed through time, as infill of new rooms in the courtyards displaced animal pens. The quantities of pottery in the rooms suggest they were used as dwellings and/or stores, not as stables.
4. Both ar-Rawḍa and Iktanū appear on fresh sites, and grow very rapidly to considerable size. The population of ar-Rawḍa has grown from zero to 6000 in less than forty years. Although ar-Rawḍa covers a larger area, the layout is much less dense than that at Iktanū. The estimated minimum population of Iktanū in Phase 2 is 2000-2500; but the minimum area occupied even in Phase 1 was 18 hectares. Even if many of the houses were used principally for storage, the production and storage facilities indicate a sizeable community. Ar-Rawḍa and other villages in the vicinity illustrate the patterns of rapid demographic growth in a locality affected by adverse environmental factors. Factors in the establishment of these modern villages were more political than environmental or demographic, and suggest that we should not necessarily restrict our interpretation of the past to economic and environmental factors.
5. The population of ar-Rawḍa has mixed origins, which may be reflected in varied traditions in the modern vernacular architecture. This will require careful assessment of the vernacular architecture and the ethnographic data. The material from excavation should be equally carefully assessed for intrasite variation.
6. On both sites, demographic growth appears to be indicated by patterns of housing infill.

This aspect of the work in the vicinity of Iktanū and al-Ḥammām is part of an on-going project of regional archaeology in the Shu'ayb-Ḥisbān region.

Acknowledgements

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