

Project „Oasis settlements in Oman“  
Survey campaigns at Ṭīwī in 2002

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## **Introduction**

A new interdisciplinary cooperation project about the oasis settlements in Oman started in 1999. It was conducted by members of the Sultan Qaboos University (Department of Archaeology and Department of Agriculture), the University of Tübingen (Oriental Institute), the University of Stuttgart (Institute for Urban Planning), the University of Kassel (Institute of Crop Sciences) and the German Institute of Archaeology in Berlin (Orient Department). The head of the cooperation project is Prof. Dr. Heinz Gaube from the University of Tübingen.

After three survey campaigns in Wādī Banī ‘Awf and in the al-Ḥamrā’ region in the years 1999 and 2000 and one campaign for preparing the finds in 2001 a second phase of the project started in 2002. The German Research Foundation, the Sultan Qaboos University and the German Institute of Archaeology finance this second project phase. It should last two years and enclose an area from Ṭīwī at the coast to Ibrā’ in the inland. The aim of the archaeological part is the investigation of the development of the oasis settlements from their beginning until modern times.

The archaeological team started in Ṭīwī and Wādī Ṭīwī in spring 2002. Since Wādī Ṭīwī has a perennial water flow we expected to find remains of an ancient occupation. However, the survey showed that the existing oases were established in the early Islamic period (9th-10th AD). Only at one find spot (WTW07) two Iron Age sherds were found. Therefore, we have to assume that the settlement activities only started in the early Islamic period in Wādī Ṭīwī. After the establishment of the oases they were continuously inhabited, since we have found pottery of all following periods there.

The Survey at the coast between Ṭīwī and ash-Shāb showed a different picture. Here we found archaeological remains from the Hafit period until the late Islamic period<sup>1</sup>. Since the results as well as the finds of the survey in spring 2002 were very interesting we decided to continue the work in Ṭīwī in autumn 2002.

The autumn campaign started on October 5th and lasted until December 15th. The survey at Ṭīwī was conducted between October 10th and 31st. The remaining time was used by Jürgen Schreiber and me to work with the finds and to prepare the next survey campaign at Ibrā’ planned for January 2003.

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<sup>1</sup> More ancient archaeological remains have already been reported by Paolo Biagi in East and West NS 38 (1988), 273. An Italian team was excavating at the site GAS1 close to ash-Shāb, when we were working in that area.

Participants of the campaign in autumn 2002 were:

Dr. Jutta Häser, head of the expedition (archaeologist)	8th Oct.-13th Nov.
Jürgen Schreiber, M.A. scientific assistant (archaeologist)	4th Oct.-15th Dec.
Nikola Schreiber, assistant (archaeologist, draftswoman)	4th Oct.-04th Nov.
Dipl.-Ing. (FH) Jana Schwerdtfeger, technical assistant (surveyor)	8th Oct.-04th Nov.
Frank Voigt, assistant (archaeologist)	8th Oct.-04th Nov.

## Results

The oldest datable remains are about 130 Hafit tombs (marked with blue dots in the map). They are situated at the entrance of Wādī Ṭīwī, at the edges of some smaller wadis, which are running from the terraces above Ṭīwī, as well as along the cliffs of the coast.

In some of these Hafit tombs we discovered finds of secondary burials of the Umm an-Nar period, the Wadi Suq period and the early Iron Age. These finds include pottery sherds of black painted gray and red ware (Umm an-Nar period), fragments of softstone vessels and a softstone lid (Wadi Suq period, early Iron Age period), two bronze arrow heads (early Iron Age) and the first Iron Age stamp seal in Oman. However, only these secondary burials give a hint at the occupation of that area in these periods (except some pottery sherds of early Iron Age date in settlement context, to what I will come back later).

An intensive sedentary use of the area between Ṭīwī and ash-Shāb is recognizable for the late Iron Age. We discovered a cemetery with about 950 tombs of that period, which is situated from the settlement area of Ṭīwī and ash-Shāb to the natural terrace above these settlements (marked with red dots in the map). It stretches from Ṭīwī to ash-Shāb; however, it is more densely occupied at Ṭīwī than at ash-Shāb. The tombs are built overground and of a simple layout with some variations. The basic layout is a round or oval double wall of large, irregular, corbelled stones. The roof consists of large flat stones and small stones are piled on top of them. The dimensions range from 1.8 m to 4.6 m in length, 0.8 m to 2.5 m in width and 1.0 m to 1.7 m in height. The chambers are also round or oval and the dimensions vary between 1.1 m to 2.8 m in length, 1.5 m to 0.5 m in width and 1.0 m and 0.4 m in height. One of these tombs (TW0406) was drawn as example. In many cases the tombs are built at the slope using it as backside. There are also many tombs, which are constructed in front of large boulders, which lie on the terrace above Ṭīwī. Very often these boulders were used for more than one tomb. The tombs are not oriented, but their directions depend on the topographical situation. To show the variety of these tombs, about 100 of them were photographed. All tombs were registered with a Global Positioning System. Since the tomb chambers are not very large, we assume that they were occupied by one or maybe two persons. However, the state of preservation of the bones is very bad and only excavations could clarify this situation. Pottery sherds of late Iron Age were found sometimes inside the grave chambers, however in most cases outside the tombs, since all of them were opened, probably already in ancient times. The pottery is of late Iron Age date and could be assigned to the assemblage that is known from Samad. Additionally, various kinds of molluscs and fishbones were found. Only outside two tombs one carnelian and one alabaster bead respectively were found. Also in this

case, only excavations could show if there are more finds left in the tombs or if the burials were equipped with pottery, molluscs and fishbones only.

However, we discovered not only this large cemetery dating to the late Iron Age, but also the settlement (TW0002). It is situated on the southeastern side of Wādī Ṭīwī above the settlement of Ṭīwī/ Jurayf. It covers an area from the clearly visible Islamic tower on the north to the plateau on the south. We discovered this settlement already in spring 2002, then recognizing different occupational phases. Therefore, we decided to make an architectural plan (see enclosed plan) and a detailed description of the architectural remains. Based on these studies, we assume, that the oldest part of the settlement is situated at the northwestern slope of the area. There are houses and terraces recognizable that are built with very large stones in a special building technique. These differ slightly from the later architectural remains. Additionally, the distribution of the pottery sherds gives a hint at the oldest occupation in the northwest.

Presumably, this is not the oldest occupational phase, since we found also some early Iron Age pottery sherds. However, the amount of pottery sherds of this period is not very high, therefore, the occupation could not be very intensive.

The other house and terrace remains are also built with stones, but mostly with smaller ones. Presumably, also Iron Age walls were re-used in later times. The second intensive occupational phase can be dated to the middle Islamic period based on the pottery sherds. However, also some early Islamic sherds were found, so that the occupation can be assumed as continuously with various intensification phases. During the middle Islamic period a citadel was constructed just below the tower, though this tower is clearly of late Islamic date and no older foundations were found. In the late Islamic period the settlement was only used peripheral. Some badly built walls were added to existing walls and terraces probably as shelters or stables. The only fundamental addition was the tower, mentioned above. Only few sherds of late Islamic date were distributed in the area.

Many terraces were built at the site (marked green in the map). They were used as foundations of the houses, but in some cases probably for agriculture. Since there is no falaj, they must have been used in years when there was enough rain. The water for the daily need was probably brought from the wells in the Wādī Ṭīwī to the settlement. The question of water management is still under study by the agriculturalists of our cooperation team.

In conclusion we can assume an occupation of that settlement area from the early Iron Age to the late Islamic period with two main occupational phases in the late Iron Age and the middle Islamic period.

The early and middle Islamic period is represented at the destroyed settlement at Ṭīwī/ Jurayf (TW0015). It is situated at the coast and stretches to the foot of the mountain on the southeastern side of Wādī Ṭīwī<sup>2</sup>. It is this settlement, that was mentioned by Ibn Baṭṭūṭa in 1331 AD. It was destroyed during the Portuguese invasion in 1507 AD. Only houses at the foot of the mountain (TW0012) were re-built in later times. In contrast, the coastal part of this settlement was never re-occupied. Some walls are still visible on the surface to give insight in

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<sup>2</sup> This site has already been mentioned by Moawiyah Ibrahim and Ali Tigani ElMahi in their report on their coastal survey in: Proceedings of the Seminar for Arabian Studies 30 (2000), 127.

the plan of the site. The pottery sherds give us a date for the occupation from the 9th to the 16th century AD. Only few sherds are of late Islamic date. The early and middle Islamic pottery assemblage shows a broad variety of different imports from Persia as well as China and links Ṭīwī with the Indian Ocean trade. Since the site is very important for the understanding of the trade connections of Oman with the Islamic world as well as for the relations between coastal and inland sites at that period, it would be worth to protect this area, since it is very much endangered by modern building activities.

A large Islamic cemetery with approximately 3000 to 4000 graves is situated southeast of Ṭīwī/ Jurayf (marked green on the map). A lot of middle Islamic pottery sherds were found on the tombs. It is probable, that this cemetery was used by the inhabitants of the middle Islamic town of Ṭīwī/ Jurayf.

After the destruction of the settlement at Ṭīwī/ Jurayf in the early 16th century AD the main building activities seem to shift to the north side of Wādī Ṭīwī, where the old town and also the modern town of Ṭīwī is situated. Several large Islamic cemeteries are located also on this site of the wadi (marked green on the map).

The plan of the existing town with its various extension phases was produced by the urban planners, architects and orientalists of our cooperation team in autumn this year, so that it is possible to show the development of that area from the beginning of occupation until modern times.

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