

Bo Madsen

The Early Bronze Age Tombs of Jebel Hafit



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Danish Archaeological Investigations in Abu Dhabi
1961-1971

by Bo Madsen

with a contribution by Margarethe Uerpmann
and Hans-Peter Uerpmann

Jutland Archaeological Society Moesgaard Museum

Abu Dhabi Tourism & Culture Authority

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Preface

This book is the first of a series of planned publications resulting from an archaeological collaboration between the government of Abu Dhabi and archaeologists from the Moesgaard Museum in Denmark.

This remarkable relationship pre-dates the foundation of the United Arab Emirates in 1971, having been established by the late Sheikh Zayed bin Sultan Al Nahyan in the 1950s, and has been recently renewed through a new cooperation between Moesgaard Museum and the Abu Dhabi Tourism & Culture Authority (ADTCA).

The collaboration with Moesgaard Museum is intended to produce a series of peer-reviewed monographs on the historic work of the Danish team in Al Ain from 1961-1971. This series complements their earlier publications on the tombs and settlement on Umm an-Nar island. This new series is informed by the overall vision of ADTCA to provide the public not only with access to the archaeological sites and historic buildings within the cultural landscape of Al Ain but also detailed scientific information about its past produced by ongoing archaeological research and the publication of previous work. This strategy is guided by the vision of Abu Dhabi Tourism & Culture Authority. One of its main components is a programme of publication aimed at increasing public awareness and access to the Cultural Sites of Al Ain, the UNESCO World Heritage Site inscribed in June 2011. The World Heritage Site is composed of 17 sites, grouped into 4 distinct assemblages – Hafit, Hili, Bida Bint Saud & the Oases – that reflect both the interaction of Man and Nature within this unique cultural landscape and the long history of settlement in Al Ain over more than 5,000 years. The original exploration of these sites was conducted by the Danish team and the results of this work are the focus of this new series.

This first book in this series deals with the discovery and exploration of the earliest features of this

sequence, the Early Bronze Age tombs clustered on the slopes of Jebel Hafit, the massive and timeless landmark of Al Ain rising 1000m above the surrounding plain. The exploration of these tombs provided important information on the pre-cursor to the Umm an-Nar civilization which was also made famous by the Danish excavations on the island of the same name off the coast of Abu Dhabi. The tombs at Jebel Hafit marked a fundamental transformation in the relationship between humans and the environment in the region and may coincide with the emergence of oasis agriculture at the nearby site of Hili 8. A wide range of artifacts was discovered and indicate long-distance trade and the exploitation of local and imported resources, such as copper. Many of these artifacts can be seen in al-Ain National Museum, the first museum opened in the UAE.

The publication of this book is particularly timely in that it coincides with ongoing ADTCA work to develop the eastern slopes of Jebel Hafit as Mezyad Desert Park, thereby preserving and presenting the diverse elements of the natural and cultural landscape of Al Ain. Some of the tombs excavated by the Danish teams will form an integral part of this project.

Aside from the detailed archaeological description of the pioneering exploration of the tombs between 1961-1971 and the discussion of their typology and the various finds made during the work, the book also showcases a fascinating series of photographs that capture a unique moment in time for Al Ain, poised between the ancient landscape and the massive urban expansion which it has experienced in the past fifty years since those first explorations by the Danish archaeologists of Moesgaard Museum.

H.E. Mohamed Khalifa Al Mubarak
Chairman
Abu Dhabi Tourism & Culture Authority

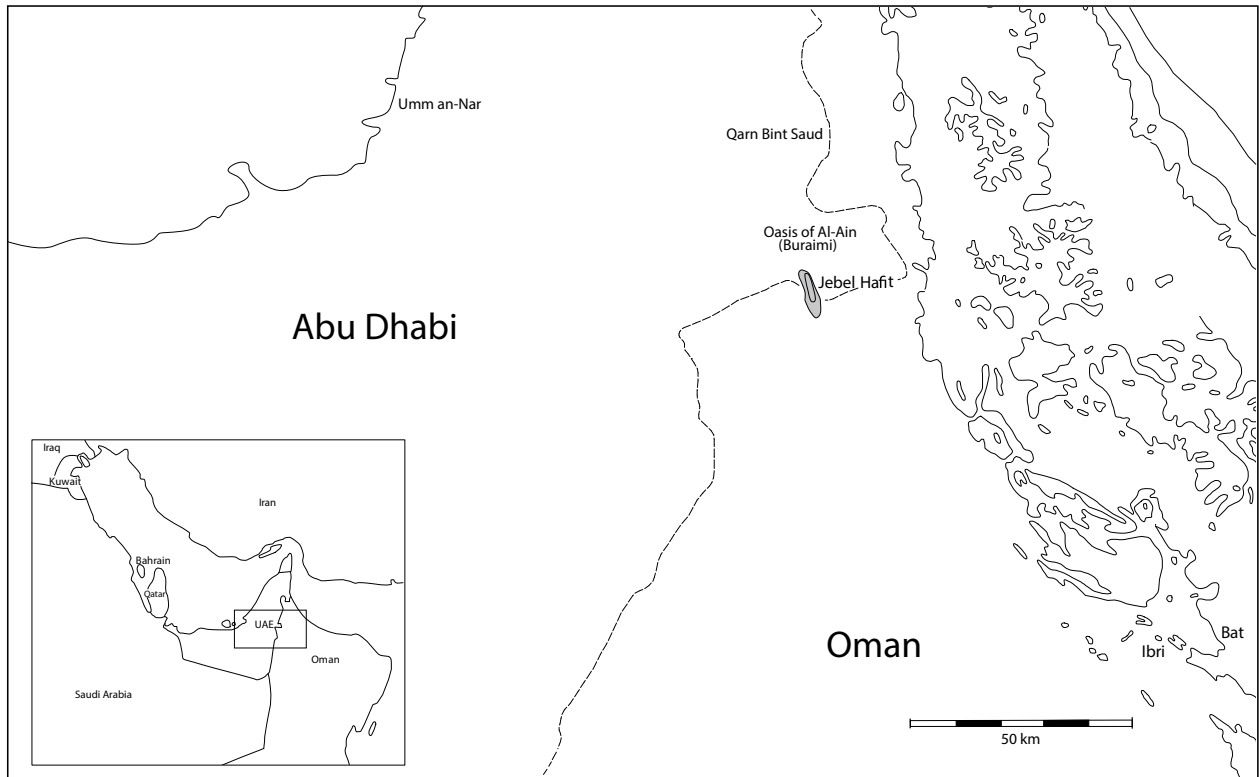


Fig. 1. Map of Abu Dhabi with excavation localities indicated.

1. Introduction

The burial monuments from Jebel Hafit published in this volume were investigated by teams from the Danish Moesgaard Museum between 1961 and 1971 (fig. 1). Through preliminary publications by Karen Frifelt (1971, 1975a-b, 1979, 1980, 2002), the finds from Jebel Hafit have become the foundation of our understanding of the beginning of the Bronze Age in South-East Arabia and it is the eponymous site of the *Hafit period*, which can be broadly dated to c. 3100-2700 BC.

The Jebel Hafit tombs consisted of “cairns of stones built up around a central corbelled chamber approached by a narrow entrance passage through the thickness of the mound, a length of up to two meters” (Bibby 1965 p. 105). Excavation of the chambers produced an assemblage of gravegoods, including pottery, copper objects and personal ornaments which alluded to the dating and cultural affinity of their occupants. Of special interest were a series of pottery vessels in shape and decoration identical to pottery from the Jemdet Nasr period in Mesopotamia. In some instances, preserved skeletal material has given an insight into the funerary practices of the monument builders. The investigations have also yielded important information on burial architecture, building techniques and materials, and the environmental setting of the tombs. The accumulation of hundreds of monuments in extensive mound fields points to the organizational capabilities of the communities responsible for the erection of these impressive monuments and is evidence of the pivotal role of tomb building in the funerary practices around 3000 BC.

The concentration of tombs around Jebel Hafit and their imported Mesopotamian gravegoods probably indicate the importance of this area in establishing the first trade in copper from the interior Oman peninsula to present day Iraq. As such, the Hafit culture stands as the precursor of the subsequent Umm an-Nar culture (c. 2700-2000 BC) that represents the flourish of Bronze Age civilization in Southeast Arabia (Carter & Tikriti 2004).

The Hafit tombs were sporadically used for secondary burials in the following periods, the Umm an-Nar period (c. 2700-2000 BC), the Wadi Suq period (c. 2000-1600 BC), the Late Bronze Age (c. 1600-1250 BC), the Iron Age and later pre-Islamic period (c. 1250 BC-c. 600 AD).

The extant volume contains 15 chapters and can be roughly divided into three parts: an introduction, chapters 1-5, which presents the historical events that led to the uncovering of such exceptional funerary remains; a second part, chapters 6-10, in which individual funerary structures are thoroughly described, and a third part, chapters 11-15 in which the components from descriptions of the individual tombs are synthesized in order to generate a more coherent interpretation of mortuary practices in early 3rd millennium BC. A camel’s burial is dealt with in an appendix.

The basic field documentation is housed in the archives of the Oriental Department, Moesgaard Museum, Denmark. It consists of field plans and note books, black- and white photos and colour-slides in different formats. The find objects have been listed and briefly described on index cards by Frifelt. A small portion of the artefacts recovered at Jebel Hafit is still stored in the collections at Moesgaard Museum, but the majority was returned to Abu Dhabi in 1969-1971 after conservation, photographing, drawing and analysis.

Subsequent to the termination of each excavation season reports as well as find lists were submitted to the Ruler’s Office in Abu Dhabi and later to the Department of Antiquities & Tourism, Al-Ain. Recently, several thousands of photos taken during the archaeological campaigns have been digitized and transferred to Abu Dhabi following a grant from the Abu Dhabi Authority for Culture and Heritage (*ADACH*), now Abu Dhabi Tourism and Culture Authority.

In 1968 Sheikh Zayed bin Sultan Al Nahyan, Ruler of Abu Dhabi, gave instructions to create a national museum in Al-Ain next to the historic Sultan Fort. This task was entrusted to the newly established Department of Antiquities & Tourism, which arranged the exhibition in cooperation with Frifelt and other staffmembers from Moesgaard Museum. In 1971 the new exhibition, including the finds from the Jebel Hafit tombs, was presented to a wider audience (Rahim 1979).

The preparation of the present manuscript by Bo Madsen took place in 2009-2010 and was made possible under the terms of an agreement of cooperation signed in 2008 between *ADACH* and Moesgaard Museum. The manuscript was edited by Flemming

Højlund in 2016. Other early excavations, e.g. the Hili-1 Bronze Age Tower, the Grand Tomb at Hili, and burials and rock art at Qarn (Bidaa) Bint Saud are also being prepared for publication (Madsen forthcoming a and b).

In 2011 Moesgaard Museum prepared an exhibition detailing the early years of archaeological exploration of Abu Dhabi. The exhibition, *The Dawn of History. Revealing the Ancient Past of Abu Dhabi*, was hosted at Al-Jahili Fort in Al-Ain and included a section dedicated to the Jebel Hafit burials (Anon. 2011). In 2011 the Hafit tombs were inscribed on UNESCO's World Heritage List as part of the *Cultural Sites of Al-Ain (Hafit, Hili, Bidaa Bint Saud and Oases Areas)*.

For the support to publish the investigations at Jebel Hafit thanks are due to Sultan bin Tahnoon Al Nahyan, Chairman of ADACH; the Late Mohammed Khalaf Al-Mazrouei, Director General of ADACH; and Dr. Sami El Masri, Deputy Director General

of ADACH. In addition, we are indebted to Muhammed Amer Al-Neyadi, Director of the Historic Environment Department of Abu Dhabi Tourism & Culture Authority, for granting the funds for editing and printing the present volume. Thanks are also due to members of the staff of Abu Dhabi Tourism & Culture Authority, Dr. Walid Yasin Al Tikriti, Head of Archaeology Section and Peter Sheehan, Head of Historic Buildings & Landscapes Section, and to an anonymous reviewer for reading the draft text and offering constructive comments.

Special thanks go to the members of the teams who excavated at Jebel Hafit and established the foundation for the study of the Hafit Culture. For all of us who participated in the expeditions to Abu Dhabi, the excavations not only opened a door to the ancient and long forgotten Hafit Culture, but equally meeting the people and the landscape of Abu Dhabi gave us magnificent experiences and lifelong memories.

2. History of investigation

Archaeological explorations in Abu Dhabi were initiated in 1958 when P.V. Glob and T.G. Bibby were invited by the Ruler, Sheikh Shakhbut Bin Sultan Al Nahyan, to conduct an archaeological survey (Glob 1959a). At that time the Danish Gulf expeditions had spent four years investigating the archaeology and documenting the vanishing traditional cultures of Bahrain and Qatar. The operational base in Denmark was the provincial museum in Aarhus, later to become Moesgaard Museum. Professor P.V. Glob was Director of the museum, and he was assisted by T.G. Bibby, who had previously worked in Bahrain. The museum also acted as the Chair of Archaeology under the University of Aarhus. This was a most fruitful arrangement that provided a framework for the ongoing projects in the Arabian Gulf.

Sheikh Shakhbut Al Nahyan had described the existence of ancient structures and idols or imagery on the island of Umm an-Nar and through a liaison with the local oil company invited the Danes that were excavating on Bahrain to come for a survey in 1958. Sheikh Shakhbut encouraged the archaeologists to take a closer look at Umm an-Nar (Glob 1959a, Frifelt 1991, Højlund 2013). By the following year excavations had commenced on the island. Glob asked Harald Andersen to be in charge of the fieldwork. He was a meticulous excavator who at the time had a reputation for developing excavation methodology (Glob 1959b, Thorvildsen 1962, Frifelt 1991, 1995).

When members of the ruling family came to see the excavation of the first uncovered tomb at Umm an-Nar, Sheikh Zayed Bin Sultan Al Nahyan, then governor of the Eastern Province of Abu Dhabi, invited Glob and Bibby to come to Al-Ain (fig. 2). Sheikh Zayed wanted them to see places with even more mounds than the already impressive mound field at Umm an-Nar (Bibby 1969).

A week later Glob and Bibby with an experienced driver advanced through the sand tracks and dunes to Al-Ain to visit the legendary governor. In the early morning the Sheikh took them out to the prehistoric grave-mounds. Sheikh Zayed's interest in the country's ancient past and his strong personality left a deep impression. Both Glob and Bibby have vividly described the significant event (Glob 1968 p. 174, Bibby 1969 p. 211).

“...promptly at seven two open jeeps roared up before (the guest house), with Zayid himself, looking spruce and wide awake, driving the leading vehicle. We climbed into our two land-rovers and followed behind, along the steep-sided wadi which skirts Al-Ain, and out on the rough track along the valley leading toward Jebel Hafit.

On our left rose steep crags, and on our right a gentler rocky slope led up to a bluff overlooking the green valley. And as we approached the bluff we could see that the whole slope was covered with burial-mounds, steep-sided cairns of stones clustering most thickly along the very edge of the bluff. Zayid's jeep turned up the slope and stopped in the middle of the largest group of mounds. We dismounted and looked around.

Zayid's boast of hundreds of mounds was not idle. Around us on the ridge stood quite that number and as our eyes accustomed themselves to the landscape we could see mounds on every crag and crest and spur, all the way to Mount Hafit itself. Zayid turned to us with a lift of his eyebrows. “Yes”, we said, “gravemounds, from the Age of Ignorance.” (Bibby 1969).

The archaeologists loosely counted some 200 stone burial cairns at a first glance (fig. 3). They noted a diameter of roughly 12 m for the largest (a very preliminary measurement) and a height of more than 2 m for the tallest. It was immediately obvious that the as yet unexplored structures looked quite different from the tombs at Umm an-Nar, which were constructed with an outer cladding wall of well hewn or pecked ashlar. These tombs were constructed from un-worked, but somewhat selected stone blocks. They were seemingly situated or had mainly been preserved in more stony terrain. The first impression was that they lay exposed on raised plateaus, on hillocks and on the adjacent mountain slopes. The tombs were soon named after Jebel Hafit, the very prominent mountain raising its silhouette almost like a whaleback some ten kilometres south of Al-Ain and representing a notable marker in the landscape (Glob 1959b) (figs. 4-5, 9 and 12).

The excavations on the island of Umm an-Nar, especially the tombs, were given first priority until 1961. Afterwards the work was concentrated on the large settlement on the island, as well as investigations of the interior of Abu Dhabi. In these years an identification of the Umm an-Nar culture was



Fig. 2. The Ruler, Sheikh Shakbut Bin Sultan Al Nahyan, Sheikh Zayed Bin Sultan Al Nahyan, and other members of the ruling family with their retainers visit the excavations on Umm an-Nar in 1959.





Fig. 3. The northern plateau as it looked in 1961 seen from the north, with “mounds on every crag and crest and spur, all the way to Mount Hafit”.

established, and it was tentatively placed within the early part of the third millennium BC on the basis of a range of grave pottery either imported from the Iranian plateau or imitating such pottery (Thorvildsen 1962, Tosi 1989). Later these dates were modified to the middle of the millennium. The next challenge lay within the Hafit tombs at Al-Ain.

During the next two campaigns, 1961/62 and 1962/63, the excavation team started digging on Umm an-Nar and at the end of the winter season moved up to Al-Ain, where the climate was cooler and less humid.

At the time of their archaeological recognition, half a century ago, many of the prehistoric tombs of Abu Dhabi were already well known to local people. For generations they had observed them while riding by or when grazing their animals on the shrubs among them. The ruined mounds looked like no more than a heap of stone blocks and rubble and were considered to be ancient ruins or graves from a time before Islam.

In those years new materials began to replace traditional mud-brick architecture. A small scale production of cement for new housing, channels and roads had begun in Abu Dhabi as a consequence of a growing economy and a rising population. An increased need for limestone blocks to use in this

industry started to take a heavy toll on monuments built from un-worked stones that most people could move and handle (fig. 6). The introduction of small trucks and the first low price pick-ups, which could drive almost everywhere, similarly made it easy for the local villagers in need of foundation stones to fetch them in still more distant areas where suitable stones were easily accessed. In consequence, the early excavations in the Hafit area were carried out not just as research but also as rescue investigations.

For the first ten years, beginning in 1958, the excavations were supported by *Abu Dhabi Marine Areas Ltd* and the *Abu Dhabi Petroleum Company*. Moesgaard Museum also provided its own budget money and the Gulf investigations were supported from a range of institutions and foundations in Denmark, with the Carlsberg Foundation as the major supporter. At the end of the 1960s the Department of Antiquities & Tourism was established by a decree from the Ruler, Sheikh Zayed bin Sultan Al Nahyan, who closely followed the archaeological research. From then on the fieldwork received additional support from the Government of Abu Dhabi and logistically by the new department.

During the early years the results of the excavations were mainly reported in *Kuml*, yearbook of the

Jutland Archaeological Society. The discoveries from Abu Dhabi and other Gulf countries at the same time reached a wide international audience with the release of Bibby's *Looking for Dilmun* in 1969. The book

became a bestseller and was translated into many languages, including Arabic. Two chapters, from one of which the above excerpt is taken, were devoted to the archaeology of Abu Dhabi.

The excavation campaign 1961/62

Knud Thorvildsen was in charge of the two major excavation campaigns on Umm an-Nar in 1960 and 1961 (fig. 7). At the end of the second season, the team moved up to Al-Ain, where they arrived shortly before New Year. Thorvildsen was an experienced archaeologist and conservator, an efficient excavator and a specialist on monumental stone tombs of the north European Neolithic. He was on secondment from the Danish National Museum and on behalf of Glob and Bibby was sent to the more unexplored part of the Gulf after excavating for a few weeks in Bahrain. The small excavation team in Abu Dhabi furthermore consisted of Arne Thorsteinsson (a Faroese archaeologist) who had worked previously in Kuwait and Bahrain and already had spent a season on Umm an-Nar. Vagn Kolstrup was in the Gulf for the first time. Elise Thorvildsen, the wife of Knud, herself an experienced excavator and organizer, had left before Christmas to take care of the family back home.

Over the course of 12 days, based in a small hotel in Al-Ain, the team excavated Hafit tombs and carried out surveys in the northern Hafit area and at

Hili where Thorvildsen made the first description of a ruined structure, Site 1059, which was later to be known as the Hili Grand Tomb.

It was a short but efficient campaign. A handful of local men assisted with the practical work. The mission charged to the team was to excavate some typical tombs, investigate the burial structure and the context of possible finds.

"Five mounds were excavated and proved to be of a completely different structure from the round sepulchral buildings of Umm an-Nar. They consisted of cairns of stones built up around a central corbelled chamber approached by a narrow entrance passage through the thickness of the mound, a length of up to two meters. The graves appear to have been plundered, but two large bronze pins were found, together with fragments of steatite bowls and two complete pottery vessels. These latter were completely different from those of Umm an-Nar, being small round-bodied vases of biscuit-colored ware with flat collar-rims. No conclusions could at this stage be drawn concerning the date of these tumuli." (Bibby 1965 p. 104-105)

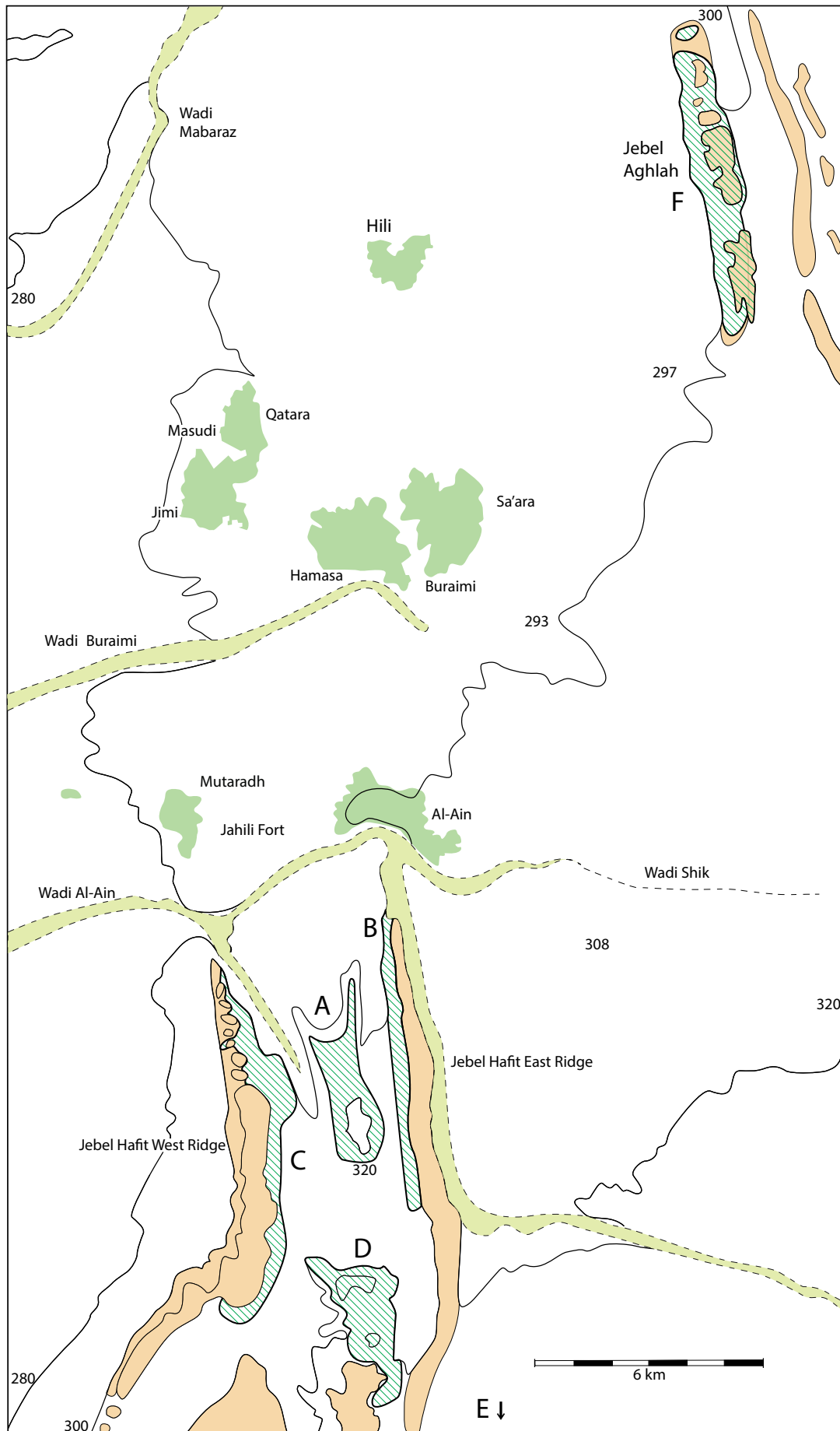
The excavation campaign 1963

The following year another excavation team arrived in Abu Dhabi after briefing and acclimatization in Bahrain. The task was to commence excavation in the settlement layers on Umm an-Nar and at the end of the season to continue the excavation of Hafit tombs.

The investigations south of Al-Ain took place in January 1963 (fig. 8). Excavation was based on the rather simple strategy of rescuing as many finds and recording as much information as possible from the tombs which were being damaged by increasing stone robbing for building purposes. Finds that could provide dating evidence and comparisons to the Umm an-Nar burials and their grave furniture were

of high interest. Also further surveys, now mainly of the eastern and western sides of Jebel Hafit formed part of the work (Bibby 1965 p. 109). The team set up their tent camp with a couple of conspicuous Scandinavian frame tents in blue and orange on the plain at the southern fringe of Al-Ain in the vicinity of the tombs they intended to excavate (fig. 9).

The young team was headed by Jens Aarup Jensen with earlier experience from Kuwait and Qatar. He was joined by Vagn Kolstrup from the previous campaign and Jørgen Lund (fig. 10), a newcomer but already a competent excavator, trained by Harald Andersen, who headed the first excavations on Umm



an-Nar in 1959. During two weeks 20 tombs were excavated with the assistance of six local workers. The archaeologists split up, so that around three tombs were in the progress of excavation at any one time. Most of the tombs that were chosen for excavation were damaged by recent stone robbing.

“... They all proved to be of the same construction as those excavated in the centre of the valley in the 1961/62 season: cairns built up of loosely heaped local stone around a false dome over a round or slightly oval chamber, constructed upon the original ground surface and approached by a narrow entrance passage on the southern side

After the completion of the excavating programme a number of reconnaissance trips were made within Abu Dhabi territory. These revealed that similar cairns, though some up to three times the size of the largest at Al-Ain, were to be found along the eastern side of Jebel Hafit, though none were to be seen along the west side. To the east of the villages of Sa'ara and Hili several hundred cairns could be counted...” (Bibby 1965 p. 109).

The role of secondary finds in the Hafit tombs was not appreciated during the first campaigns, and the discovery in one of the cairns of a bronze sword with parallels from Luristan dating to the 13th and 14th centuries BC, was taken by Bibby as an indication of the date range of the Hafit tombs (1965 p. 109. 1969 p. 215).

While working in the field, the team saw traces of fresh excavations in some of the tombs where the chambers had been emptied. In the field report from 1963 it was noted that several tombs had been opened since the previous campaign in 1961/62. “As far as we could find out some of these excavations are carried out by someone from the Trucial Oman Scouts stationed at Fort Jahili on the south side of Al-Ain. The whereabouts of the finds are unknown”, wrote Aarup Jensen.

These “amateur digs” are known from later publications of the tomb furniture (During Caspers 1971, Mitchell 1972). One of the finds, a ceramic vessel (British Museum BM 134314: 1963), is reported to have been found c. 4.5 km south of Fort Jahili. This is approximately where the Danish team observed traces of fresh digging. Another fine painted vessel has the limited provenance “Buraimi” (British

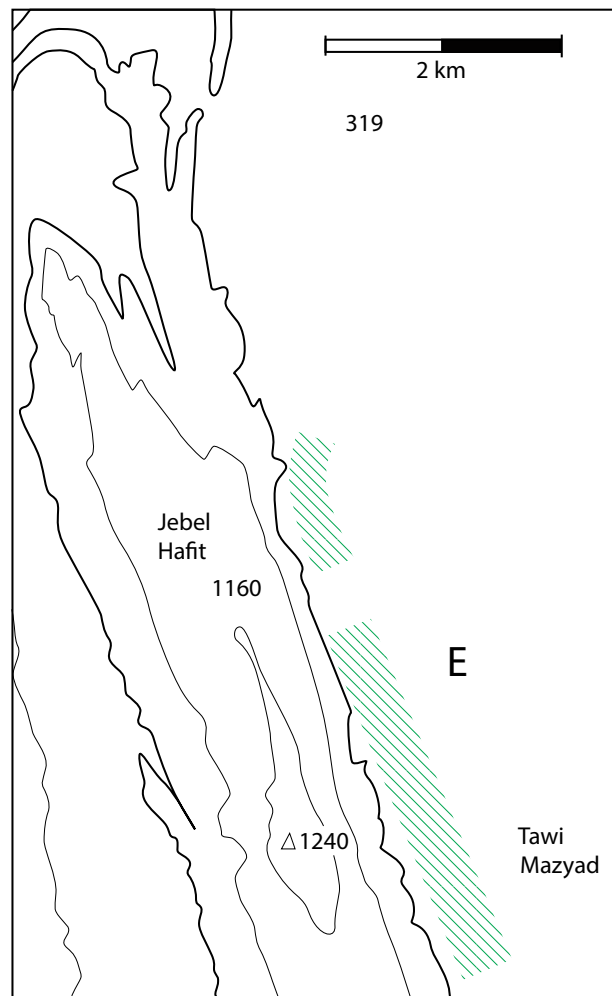


Fig. 5. Map of eastern Jebel Hafit with tomb areas north-west of Mazyad indicated in hatched lines.

Museum BM 134636). Buraimi was at the time the traditional name for all the oases including Al-Ain. Most likely the second find came from the same area where the officers of the Trucial Oman Scouts knew that there were good finds to be made. The more distant area with dense spreads of Hafit tombs east of Hili, at Jebel Aghlah in neighbouring Oman, was outside the normal domain of the Trucial Oman Scouts stationed at Fort Jahili, as noted by Frifelt (1975b p. 66).

◀ Fig. 4. Map of the northern part of Jebel Hafit and the Al-Ain oases (formerly known as the Buraimi). Areas with Hafit tombs mentioned in the text marked in hatched lines: A) Northern plateau. B) East ridge. C) West ridge. D) Southern plateau. E) Mazyad. F) Jebel Aghlah.



Fig. 6. From the southern outskirts of Al-Ain 1965. Wagon loads of stone blocks taken from nearby Hafit tombs.



Fig. 7. Field Director Knud Thorvildsen at the Umm an-Nar digging camp in 1961.

Fig. 8. The Ruler, Sheikh Shakbut Al Nahyan with Sheikh Muhammed bin Khalifa and followers visit the camp south of Al-Ain in January 1963. In front of them finds from the excavation of Hafit tombs.

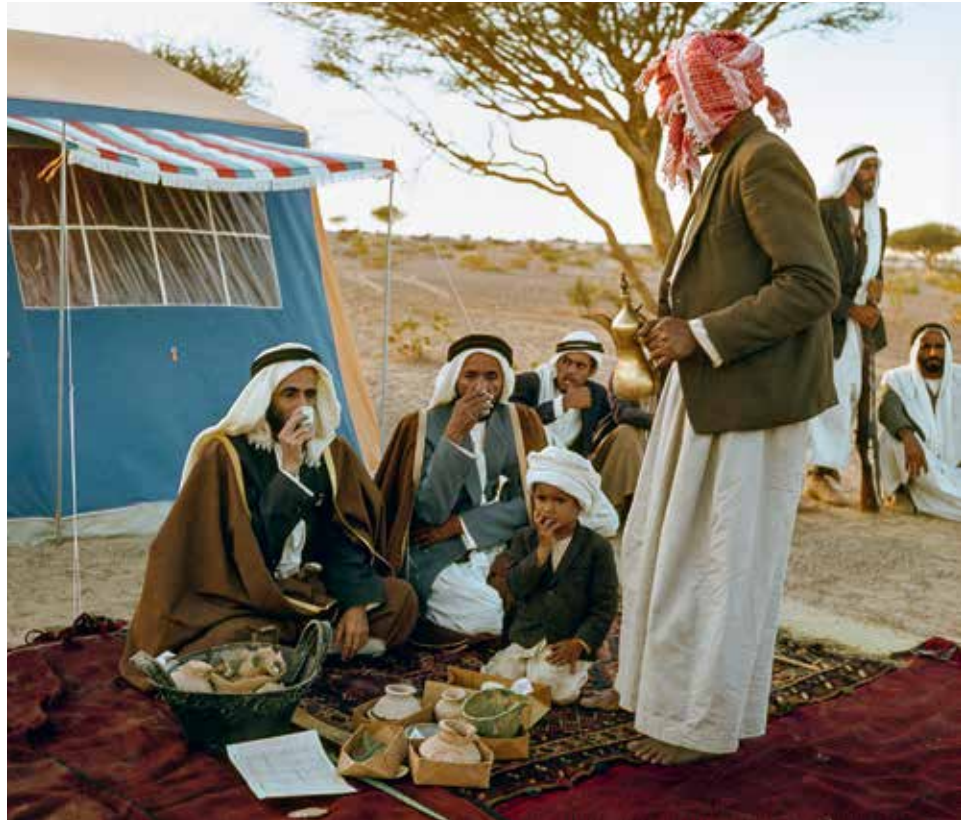


Fig. 9. The camp in 1963, near the tombs to be excavated south of Al-Ain. In the background the silhouette of Jebel Hafit.





Fig. 10. Archaeologist Jørgen Lund during a briefing with Professor P.V. Glob (with head-cloth) in Bahrain before commencing excavations in Abu Dhabi in 1962.

Discovering Jemdet Nasr in Abu Dhabi 1970

After her campaigns in Abu Dhabi 1968-1970, Frifelt began in the summer of 1970 to analyse the finds from the first 25 tombs, excavated at Jebel Hafit by Moesgaard teams in 1961 and 1963. Her purpose was to give an overview of what the Danish expedition had discovered in Abu Dhabi as her contribution to the *Festschrift* that was being prepared on the occasion of Glob's 60th birthday on February the 20th 1971. In the process of this study she identified the enigmatic pottery from the tombs as Mesopotamian Jemdet Nasr ware. She gave the following description of the most significant pots (1971 p. 378):

"They are... covered with a dark plum-coloured paint, also under the base and inside, down the neck as far as the shoulder. Beside the pronounced carination between the upper and lower parts of the body, there is a second carination just below the neck, and below that the shoulder or upper part of the body is divided up into trapezoidal panels with designs.

One jar has apparently had a creamy slip applied all over, after which it has been covered in red paint, leaving every second panel on the shoulder in reserve outlined in black and filled out with cross-hatching in black or a stylized plant motif in red and black. Circling black bands frame this ornamental frieze... Closely related, almost identical jars are known from Ur, Jemdat Nasr, Tell Uqair, and Khafajah, where they are dated to the end of the Jemdat Nasr period. The Hafit pots are in fact Jemdat Nasr ware."

The first outline of a novel typological horizon, already well-established as a distinct chronological period in Mesopotamian archaeology, was hereby introduced. More documentation was provided by During Caspers (1971) who published Jemdet Nasr types in the shape of the previously mentioned two ceramic vessels found in tombs dug by amateurs on the northern plateau south of Al-Ain in 1962.

The excavation campaign 1971

The years following the 1962-63 excavation campaign witnessed new development in Abu Dhabi as oil production quickly improved the economy, and Sheikh Zayed Al Nahyan in 1966 became ruler (Mann 1969). The excavations in Abu Dhabi were resumed in 1968, and in 1971 the archaeologists returned to the Hafit tombs prompted by the identification of the Jemdet Nasr pots (Frifelt 1971).

The new development of Al-Ain also affected archaeology with an increased pressure on the environment where archaeological sites were endangered by construction. On the organizational side, the excavations were now planned under the auspices of Sheikh Tahnoon bin Mohammed, the Ruler's Representative in the Eastern Province of Abu Dhabi, and in cooperation with the Department of Antiquities & Tourism.

Bibby appointed Karen Frifelt (fig. 11), a former student of Glob with several years of experience from Bahrain, to be in charge of the Danish fieldwork in Abu Dhabi from 1968 and the following years (Blau 2004). In 1971 Frifelt was accompanied by a team of four archaeologists. Michael Beck had previous experience from Bahrain, whereas Niels Axel Boas,

Steen Andersen and Bo Madsen brought their excavation experience from Denmark and other Nordic countries. The team was settled very comfortably in a house in the new public housing project near Al-Jimi west of Al-Ain.

During the 1971 campaign, 21 tombs were excavated and three ruined tombs recorded. In addition, surveys and field walks were conducted, and a large panel with ancient cup-marks was discovered. During the last month of the four month long season the team moved north of Al-Ain into the desert to Qarn Bint Saud. This isolated limestone outcrop was surveyed and a very rich early Iron Age tomb was excavated. Some Hafit type tombs were also identified on Qarn Bint Saud, as well as flint scatters, and inside a cave on the NE side of the outcrop rock art was discovered. Near Qarn Bint Saud an adjacent settlement with mudbrick remains was located (Madsen forthcoming b. Al Tikriti 2011b).

In 1971, it was decided to investigate some of the least damaged Hafit tombs more carefully. The purpose was to document the context of the earliest Bronze Age interments in relation to possible sec-

Fig. 11. Field Director Karen Frifelt and T.G. Bibby at Hili, spring 1969.



ondary burials. However, some rescue excavations became unavoidable. Contrary to the previous campaigns, it was decided by the team not to use any supplementary untrained labour. The excavations benefitted from more time and better practical conditions when compared with the previous campaigns. The team split in two, once in a while re-grouping, and during any one week two, or occasionally three, tombs were in the process of being excavated. The

clearing of the outer periphery of the tomb was often done by the whole team when a resolute effort was necessary. Like in 1963, the team surveyed selected parts of the plains near the mound fields in order to locate contemporary settlements, but in vain. Some minor flint parts (mainly Neolithic) were found on the eastern side of Jebel Hafit and some larger flint scatters and flint outcrops east of Umm Ghafa approximately 20 km east of Jebel Hafit.

3. The landscape and the environment

The area of investigation is situated in the Eastern Province of Abu Dhabi south of the town of Al-Ain, north and east of Jebel Hafit (figs. 1, 4-5, 12-22). This prominent mountain stretches c. 29 km north-south, c. 5 km east-west, and reaches 1260 m above sea level. Jebel Hafit and lesser mountains form a series of anticlines that are part of the westernmost foreland and high plains of the Hajar Mountains of Oman (Aspinall & Hellyer 2004).

Towards the south and west of Jebel Hafit lie vast desert stretches of Al-Khattam which merges into the Rub al-Khali in the south-west. Extensive dune formations reach the western side of the mountain. To the north, a large complex of oases, with Al-Ain and Buraimi as the most important, is situated between the desert and the plain of Al Jaww at some 280-290 m above sea level. It is a most fertile area with fresh water occurring abundantly. The British traveller, Colonel S.B. Miles, visited the area in 1875 and noted: *“there is an apparent equality of property throughout; their dwellings being mostly palm leaf and mat huts, there being very few houses constructed of stone. They are not dependent on the annual rainfall, which is small, but are able to irrigate their fields by means of their felejes or aqueducts drawn from the hills, as well as from wells, water being plentiful and at no great depth.”* (Miles 1919).

The oases were, in the era before cars, a hub with caravan routes leading across the desert to the Arabian Gulf coast or through the mountain canyons of Wadi al-Jizzi to the Gulf of Oman and the Arabian Sea. A network of trails along the mountains led north to the plain of al-Madam, to Dubai and south to Ibri. In early Islamic time the oases were described as the capital of the west as opposed to Sohar on the coast of the Indian Ocean (Williamson 1973).

The palm gardens today lie within the boundaries of the town of Al-Ain, which has engulfed part of the area where the Danish excavations took place.

The dominant feature of the plains and foothills around the mountain of Jebel Hafit are waterborne, alluvial deposits which have primarily formed since the Late Glacial. On the western side, dune sand covers these surfaces, to the east and north stretch vast

plains of alluvial material, which has been transported westward from the neighbouring Oman Mountains. On the north-western side of Jebel Hafit, at Ain al-Fayda, the alluvial deposits from Jebel Hafit reach a depth of more than 15 m below the surface as observed in a lake deposit during construction work. In other deposits investigated southwest of Ain al-Fayda the existence of ancient lakes has been proven through the dating of freshwater snails living in these during prehistoric times, 7.000-4.000 BC (Gebel et al. 1989).

The mountain of Jebel Hafit has two narrow low ridges extending north like two arms towards Al-Ain (fig. 4). The *eastern mountain ridge* stretches like a 30-80 m high wall from the massif of Jebel Hafit almost eleven km north to the Al-Ain Oasis. Here a major wadi system runs east-west leading surplus water from Wadi Shik through Wadi Al-Ain. Towards the southern end of the ridge there is a pass through the ridge.

The *western mountain ridge* consists of a row of almost separate small mountain peaks interrupted by mainly east-west orientated valleys and escarpments (fig. 4).

The two km wide valley between these two ridges rises from c. 280 m to 320 m above sea level towards the south. It separates into two plateau landscapes: The *northern plateau* is mainly eroded surfaces appearing as varied intercut gravel hills whereas the *southern plateau* has a much more rocky and composite relief. In between the plateau and the mountain ridges, ran half a century ago, two major north-south going trails. Tombs were excavated along both ridges of Jebel Hafit as well as on the northern and southern plateau (fig. 4A, B, C, and D). The tombs appear as clusters or “mound fields” inside which smaller groups and alignments occur.

A further group of tombs were investigated on the eastern side of Jebel Hafit northwest of the village of Mazyad, 12-14 km south of Al-Ain (fig. 5). Here hundreds of stone built tombs could be observed either in small groups or as irregular alignments along the foothills, on terraces as well as on more isolated rocky hillocks. Other parts of the steeper eastern side of



Fig. 12. The eastern arm of Jebel Hafit and Jebel Hafit viewed from Al Murabba Fort, from NNE in 1959. This is where P.V. Glob and T.G. Bibby slept when they first visited Sheikh Zayed. In the foreground lies the Sultan Fortress, later to become part of the Al-Ain Museum. Next to the fortress, the Department of Antiquities was established in 1968-69.

Fig. 13. The gravel terraces with tomb clusters viewed from NW.





Fig. 14. The southern plateau viewed from the north.

Jebel Hafit were searched for graves but none were discovered.

Several archaeological teams have reconnoitred the areas outside these zones repeatedly, but failed to find any sign of tombs.

When the first archaeological surveys and excavations took place the land was still exploited in the ways of the traditional subsistence economy. Herds of goats and sheep were moved around for grazing. Firewood was collected for cooking, and occasionally travellers would pass by on camel back bringing their cargo for the suq in Al-Ain or passing by on

their way to Dank and Ibri in the opposite direction.

The northern plateau and the valley were referred to as *Nudud al-Jahal* by Glob (1959b p.237 and 239) and Bibby (1969). This is where Sheikh Zayed first showed them the large cairn fields. The name is, however, not a real place name. It does not appear on early maps and has not been recorded by Al Tikriti during his survey of the area (Al Tikriti 1981 and pers. comm.). It translates into *Mounds from the Age of Ignorance* and is rather a reference to the character of the area, which had plenty of grave mounds from the earliest time.



Fig. 15. The western arm of Jebel Hafit towards Al-Ain.

Fig. 16. The western arm of Jebel Hafit viewed from NW.

