

# The 1954 Excavation of Tombs at Tauchira and Euesperides, Libya

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**Abstract:** In 1954, Walter Beasley, the founder of the Australian Institute of Archaeology (the Institute), financially supported a young Australian archaeologist, G.R.H. Wright, to excavate tombs at Tauchira, near modern Tocra, and Euesperides, in present day Benghazi, Libya. Excavations produced artefacts some of which were sent to the Institute for its museum collection. This paper alerts scholars to the Institute's holdings from the excavations at Tauchira and Euesperides.

## Introduction

A young Australian field archaeologist, G.R.H. (Mick) Wright, was undertaking the excavation of tombs on Cyprus for the Museum in Nicosia in 1953 when he was asked to escort Walter Beasley, founder of the Institute, about the island (Wright 2006: personal communication; Davey 2013a). During the course of their travels Wright mentioned to Beasley his intention to excavate at Tauchira<sup>1</sup> in Libya. Beasley was promoting the study of ancient world archaeology in Australia and believed that to foster an interest in the subject it was necessary to display artefacts (Davey 2014). He had been involved in the appointment of an archaeologist, James Stewart, at the University of Sydney and knew how important the Nicholson Museum had been for the creation of that position (Davey 2013b).

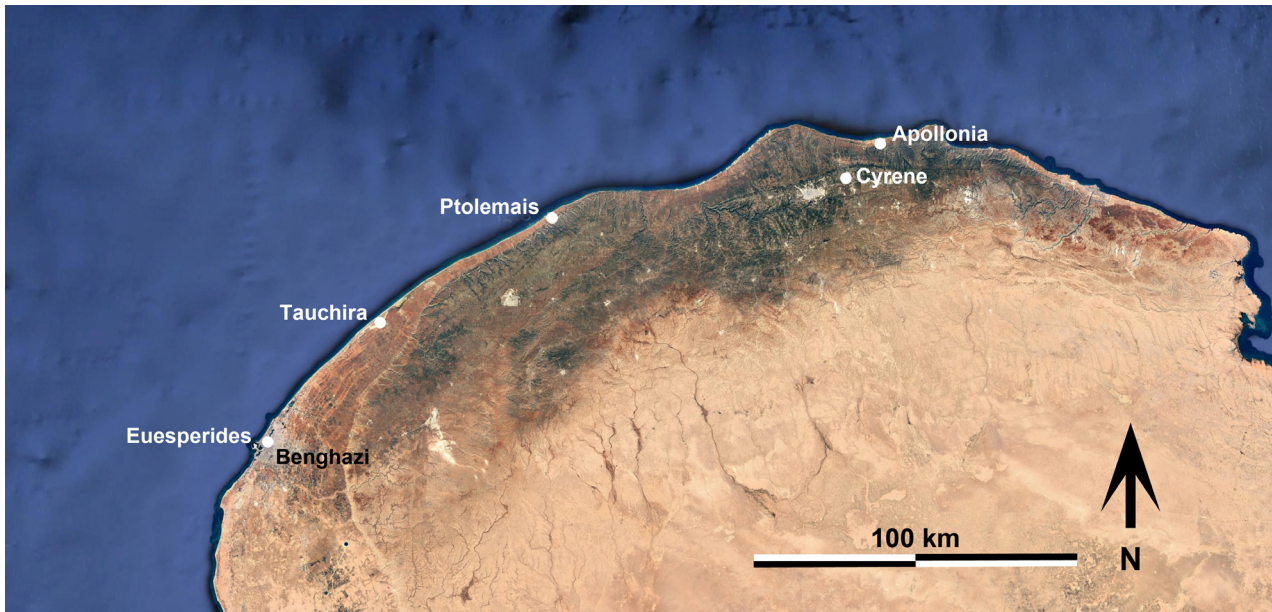
The Australian Institute of Archaeology was a significant supporter of the Ashmolean-sponsored 1950-51 excavations at Myrtou Pigadhes, Cyprus, and subsequently Donald Harden of the Ashmolean was seeking further funding from the Institute for excavations near Benghazi. The news that Wright also intended to excavate at another city of the Cyrenaican pentapolis was therefore of considerable interest to Beasley. In a letter to Wright, who was then excavating with Seton Lloyd in Turkey, Beasley indicated that Harden required significantly more funding than Wright and that previous experience at Myrtou Pigadhes indicated that Harden was unlikely to offer a satisfactory division of finds (7 June 1954 AIA Doc 763). Beasley went on to explain how, at the time, the Institute had financial obligations associated with the establishment of an exhibition at Ancient Times House in Melbourne and how finds from Tauchira would help the Institute's lecturing program at the University of Melbourne, which he hoped would follow The University of Sydney and 'break away from the usual narrow viewpoint', that limited ancient history to the Classics (AIA Doc 763).

A subsequent letter from Beasley to Wright on 15 June 1954 implies that Wright had also been in touch with Harden and that he would need to manage that relationship if he were to excavate on his own behalf (AIA Doc. 762).

The Institute holds a copy of the Excavation Permit issued to Wright on 26 October 1954 authorising him to excavate during November 1954 (AIA Doc. 5408). It was signed by Richard Goodchild, Controller of Antiquities in Cyrenaica. Wright wrote to Beasley four times during the excavations giving accounts of progress and on 26 April 1955 he sent from London hand-written and typed reports, which were subsequently published in *Palestine Exploration Quarterly* (Wright 1963, AIA Doc. 5408).

The Wright Archive, held by the Institute, contains a letter from Richard Barnett to Wright written on 15 December 1954. Barnett had been with Wright in Turkey earlier in the year. He congratulated Wright on the 'successful digging' and then wrote, 'I don't suppose old Rowe will be very pleased to find you have beaten him to the target of Tocra'. He then went on to give Wright advice and references to assist in the preparation of the publication. Wright's excavation of a significant site sought after by significant archaeologists, such as Alan Rowe, and Museums, such as the Ashmolean, is worthy of comment. Rowe was the Egyptian Antiquities Service's Inspector of the Prohibited Military Area, Western Desert, and Conservator of the Graeco-Roman Museum in Alexandria during World War II and was called upon to assess the wartime damage to North African antiquities (Desplat, 2016). He was therefore well established in the area by the time Wright came on the scene.

Wright had excavated with C.N. Johns at Euesperides for three seasons, the last coinciding with his season at Tauchira (Wright 1993). Johns had been the first Controller of Antiquities in Cyrenaica after World War II. Wright's experience with Johns gave him standing in the Libyan Department of Antiquities and afforded him the local knowledge to conduct an excavation economically and efficiently. Wright's resources were limited and he initially lacked transport as Pauline, his wife, had crashed her Morris Minor in Turkey and it did not arrive in Libya until November (per. comm. via C.J. Davey). Wright's experience and enthusiasm and no doubt the organisational ability of Pauline brought the project to fruition. Wright later dug with Professor Carl Kraeling of the Oriental Institute, University of Chicago, at Ptolemais



**Figure 1:** A map of eastern Libya, ancient Cyrenaica, showing the cities of the Pentapolis.  
Map: adapted from Google Earth.

in 1956-8 (Kraeling 1962) and at Apollonia in 1965-6 with the University of Michigan (White 1966), which meant that he eventually worked at four cities of the Cyrenaican pentapolis (Figure 1).

Many of the finds from Tauchira were sent to Australia and are listed below with their registration details. Wright also excavated at Euesperides at the site of es-Selmi. The manuscript of this excavation was mislaid and a 'rescue account' of Euesperides was eventually published in *Libyan Studies* (Wright 1995). Objects from this excavation also found their way to Melbourne.

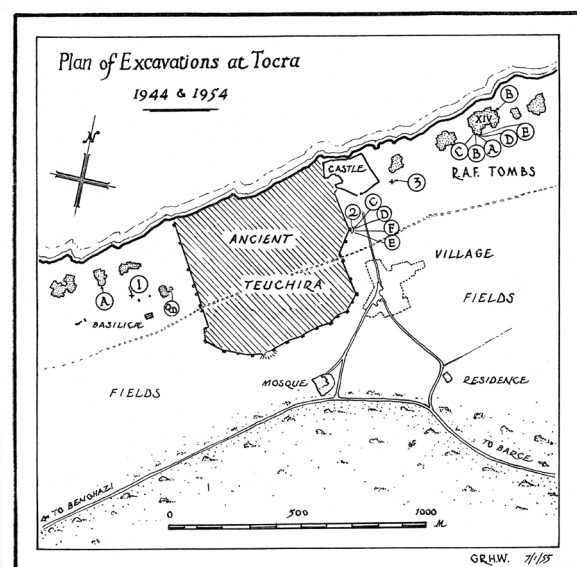
Wright's work at Tauchira intersected the unpublished excavation by the British Royal Air Force (R.A.F.) personnel during WWII (Anon 1970). Finds from these earlier excavations are included in Wright (1963). The Institute received a human skull from Tomb C and a lamp from Tomb E of the 1944 R.A.F. excavations. The skull is the subject of a second part of this paper. A letter from Wright to Beasley on 24 November 1954 (AIA Doc 762) implies that, as he had left skeletal remains in one of the tombs, objects from the earlier R.A.F. excavations were intended to be substitutes so that displays in Australia may be comprehensive.

Despite these intentions, the material from Tauchira and Euesperides was never exhibited and Wright's reports made no reference to the Institute. The existence of the finds at the Institute has therefore been unknown to the archaeological community. This paper provides details of the material held by the Institute.

### Excavations at Tauchira

The ancient city of Tauchira lies on the coast of Libya, some 67 km east of Benghazi. The modern village of Tocra is situated south of the ruins of an Italian fort,

which was built upon an earlier Turkish castle. Ancient Tauchira is walled on three sides and is thought to have been founded from the Greek colony of Barce. Evidence of occupation has been found from the Greek, Hellenistic, Roman and Byzantine periods through to modern times (Boardman & Hayes 1966). Notable studies of the area include the mapping and exploration by the Beechey Brothers (1828), which remains a standard text, and excavations by the British School in Athens between 1963 and 65, which revealed archaic Greek pottery dating to the 7th century BC in deposits within the city walls (Boardman 1965-66). Adjacent to the walls is a series of disused quarries containing chamber tombs and cyst graves. It is these tombs that were the subject of investigation by Wright in 1954.



**Figure 2:** Plan of Tauchira. From Wright (1963: 27).



**Figure 3:** A selection of lamp wasters from the kiln dump, 1 IA6.96, 2 IA6.94, 3 IA6.98, 4 IA6.93, 5 IA6.92, 6 IA6.91. 7 IA6.107.

### R.A.F. Excavations 1944

Information gained from previous excavations conducted by the R.A.F. in 1944 suggested that the site would yield information on the mortuary history of a typical Cyrenaican settlement (Wright 1963). The R.A.F. excavated five chamber tombs east of the city in Quarry XIV and three cyst graves from a large cemetery located between the east wall and Quarry XIV (Barnett 1945). Barnett also mentions the cyst graves, two being dated to the fourth century BC and the third containing two burials dating to the fifth century BC and later. It is assumed the dates were based on objects found within the graves. The chamber tombs in Quarry XIV were adjacent to one another and, on the basis of finds, were dated to AD 100 by both Barnett (1945) and Wright (1963). The human skull comes from this group of chamber tombs. Material from the R.A.F. excavations was set out in a room in the village but by the 1963-65 excavations it was housed by the Department of Antiquities in a more formal museum (Boardman & Hayes 1966).

### 1954 Excavations

A detailed account of the 1954 excavations and the objects is presented in Wright (1963). What follows is a brief overview extracted from that publication together with lists of the objects identifying their current location.

### Kiln Dump Q.D.

A small quarry (marked on Figure 2 as 'QD') on the outside of the west wall was found to have no tombs. There was however a solid mass of potsherds in the fill at the bottom of the east wall of this quarry, comprising plain domestic ware and lamps (Table 1). An area immediately

above the potsherds had a small mound with ash and 'wasters' and this was presumed to have been the location of the kiln itself. The material is the same as found in the R.A.F. Roman tombs and the lamps were dated to around AD 100. The Institute received lamp samples from the kiln dump (Figure 3)

Reg No.	H mm	W mm	Description
IA6.91	20	40	Secutor and Retarius
IA6.92	18	47	Thraex and Hoplomachus
IA6.93	10	47	unidentified animal
IA6.94	23	50	Bed scene
IA6.95	30	60	Bed scene
IA6.96	28	55	Astarte
IA6.97	27	20	outer rim with handle
IA6.98	10	80	Cupids playing
IA6.99	48	70	Cupids playing
IA6.100	43	82	Cupids playing
IA6.101	50	60	
IA6.102	27	20	
IA6.103	8	39	Medusa's head
IA6.104	10	48	
IA6.105	8	70	winged humanoid
IA6.106	4	42	Secutor and Retarius
IA6.107	32	60	Secutor and Retarius
IA6.108	28	88	Secutor and Retarius
IA6.109	23	39	

IA6.110	8	48	crossed legs
IA6.111	10	60	crossed legs
IA6.112	10	50	
IA6.113	25	50	human figure
IA6.114	15	60	
IA6.115	25	40	animals
IA6.116	25	40	animals
IA6.117	25	70	pattern around rim
IA6.118	10	70	fruit
IA6.119	25	40	

*Table 1: Lamp fragments from the kiln dump.*

### Quarry of Tomb A

Another sanded-up quarry west of the kiln dump had a large unsealed chamber tomb on the south scarp. Two of the three entrances were cleared, leading to interconnecting chambers. A third chamber was half-full of sand and contained a quantity of bones. One crude lamp was received by the Institute from this tomb. The façade of the tomb had carved niches, a seven-branched candlestick (a Menorah) and inscriptions suggesting that it was a Jewish tomb from the Greco-Roman period.

### R.A.F. Quarry 1954 Tomb B

A large chamber tomb on the north-east side Quarry XIV, diametrically opposite the 1944 tombs, was excavated. It was a large rectangular chamber with six niches carved into the walls. There were 26 objects in total, predominantly ceramic but also glass, shell and bronze (Table 2). The bowls were identical with those found in the kiln dump and this, together with the glass ware, indicated that it belonged the Roman period of the first and second centuries. It was therefore contemporaneous with the five chamber tombs excavated in the same quarry by the R.A.F. in 1944.

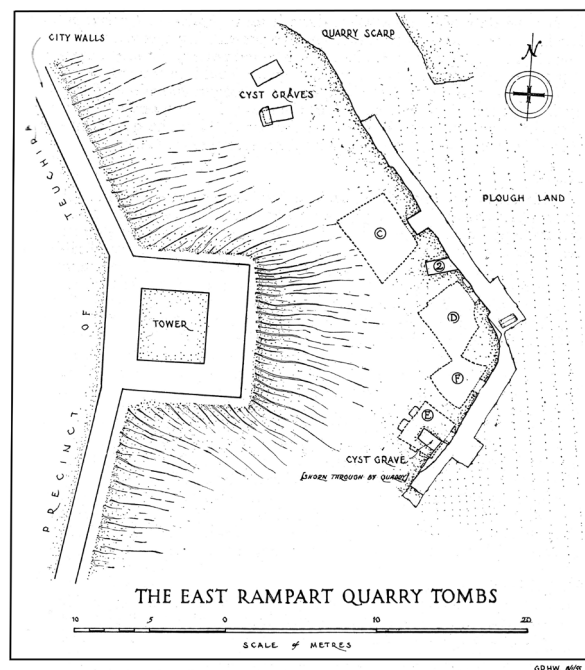
PEQ No	Name	Reg No.	H mm	W mm
1	Amphora	IA6.25	500	320
6	Glass frags	IA6.31	0	0
7	Glass frags	IA6.32	0	0
10	Jar	IA6.35	530	320
11	Ostrich Egg frags	IA6.36	0	0
12	Tear Bottle frag.	IA6.39	0	0
13	Glass Handle	IA6.38	8	2
14	Amphora	IA6.40	0	0
18	Unguentarium	IA6.43	95	17.5
19	Glass Button	IA6.44	10	25
20	Glass Button	IA6.45	10	25
21	Beads	IA6.46		

22	Bronze Mirror	IA6.47	0	0
23	Bowl	IA6.48	20	4
24	Sherd	IA6.49	28	125
25	Bowl	IA6.50	40	5

*Table 2: Objects held by the Institute from Tomb B.*

### East Rampart Quarry Tombs

The area in front of what appeared to be two entrance shafts was cleared to the bedrock, a depth of 2.5 metres. This was the quarry scarp into which chamber tombs had been cut (Figure 4). The two ‘shafts’ were probably earlier cyst graves from the third century BC that were undercut by the later excavation of the tombs, the cyst graves thus becoming openings in the roof of the chamber tomb.



*Figure 4: East Rampart Quarry Tombs. From Wright (1963).*

### East Rampart Quarry Tomb C

Tomb C was intact, the stonion stone still being in place with its original surrounding packing material. Six inhumations were present, two on the floor at the back and side of the tomb, three in loculi carved from a bench along one wall and two in broken amphora ossuaries in a corner. There was a total of five pottery and bronze funerary objects, three of which are in Melbourne (Table 3). The bronze cymbals associated with the ground burial along the side wall were traditionally associated with female burials. The amphorae in the tomb have been dated to c AD 100.

PEQ No	Name	Reg No.	H mm	W mm
3	Bronze Cymbals	IA6.53	10	40
4	Bronze strap	IA6.54	10	40
5	Bronze tack	IA6.55	10	40

*Table 3: Objects held by the Institute from East Rampart Quarry Tomb C.*

### East Rampart Quarry Tomb D

Tomb D had elaborate funerary arrangements comprising a small stone sarcophagus just outside the door, another inside and three cysts cut into the floor, two with capstones. Aside from one crude lamp just inside the door, most of the 15 grave goods found were beneath the sarcophagus in the tomb, which was raised 20cm on boulders (Table 4). The range of lamps together with the colourless glass tumbler, suggest a continued period of use of a century or more from around AD 100.

PEQ No	Name	Reg No.	H mm	W mm
3	Lamp	IA6.56	45	85
4	Lamp	IA6.57	45	100
5	Cooking Pot	IA6.58	105	125
7	Lamp	IA6.59	50	84
9	Lamp	IA6.60	38	104
10	Lamp	IA6.61	65	130
11	Lamp	IA6.62	60	105
12	Juglet	IA6.63	104	95
15	Bronze Pin	IA6.65	0	0

*Table 4: Objects held by the Institute from East Rampart Quarry Tomb D.*

### East Rampart Quarry Tomb E

Tomb E was neat, squarely cut and had been emptied of its contents in antiquity. All four niches in the wall and one cyst in the floor were empty. A crude inscription above the door indicated it was the tomb of '... the brothers Philokalos and Eutyichides'. The stonion stone was broken and piled just inside the doorway allowing the quarry fill to tumble down into the chamber and almost filling it.

### East Rampart Quarry Tomb F

Tomb D broke into what appears to be an earlier tomb. The lower portion of fill in the tomb consisted of a mixture of bones and earth from earlier burials, the top layer comprising the red earth of the quarry seeping in the open doorway. Objects found along the north wall were in situ and are listed in Table 5. The lamps are the same as those found in the kiln dump, dating this tomb to *c* AD 100.

PEQ No	Name	Reg No.	H mm	W mm
1	Lamp	IA6.66	50	99
2	Cooking Pot	IA6.67	68	82
3	Lamp	IA6.68	45	90
4	Bowl	IA6.69	125	165

*Table 5: Objects held by the Institute from East Rampart Quarry Tomb F.*

### Cyst Graves 1954

These were simple graves cut into the rock measuring 2m length by 0.4m width and 0.4m depth and were ubiquitous at Tauchira, sprawling to the east and west of the city walls. They were often found near the edge of the quarries and some were cut into the quarry. It thus seems that many graves may have disappeared as the quarries were enlarged. All six cyst graves excavated in 1944 and 1954 pre-date the Roman period and are thought to belong to the classic Hellenistic Tauchira era.

#### Cyst Grave 1, 1954

Cyst Grave 1 was situated between Chamber Tomb A and the Kiln Dump QD west of the city walls. It was a simple cyst grave containing several objects which dated it to the middle of the third century BC (Table 6).

PEQ No	Name	Reg No.	H mm	W mm
b	Unguentarium	IA6.2	205	38
c	Unguentarium	IA6.3	100	35
d	Unguentarium	IA6.4	74	37
e	Unguentarium	IA6.5	130	37
f	Unguentarium	IA6.6	102	35
g	Unguentarium	IA6.7	137	35

*Table 6: Objects held by the Institute from Cyst Grave 1, 1954.*

#### Cyst Grave 2, 1954

Cyst Grave 2 was on the edge of the East Rampart Quarry above Chamber Tombs C and D and was sheared through by the quarry in ancient times. Attic pottery dated this grave to early fourth century BC however glass unguentaria and later styled pottery date to the first and second centuries AD (Table 7). This intrusion of later objects could have been introduced when the grave was disturbed by quarrying.

PEQ No	Name	Reg No.	H mm	W mm
a	Askos	IA6.8	67	105
b	Lamp	IA6.9	102	74

c	Bowl	IA6.10	28	95
f	Lagynos	IA6.12	204	125
g	Unguentarium	IA6.13	78	35
h	Bowl	IA6.14	40	75
i	Tear Bottle	IA6.15	115	20

**Table 7:** Objects held by the Institute from Cyst Grave 2, 1954.

### Cyst Grave 3, 1954

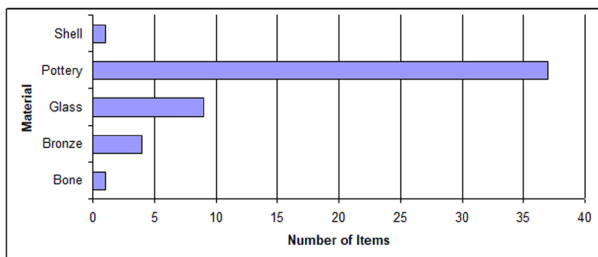
Cyst Grave 3 was between the East Rampart Quarry and Quarry XIV and is thought to have been near the tombs excavated by the R.A.F. in 1944. The finds date this grave to the second half of the fourth century BC (Table 8).

PEQ No	Name	Reg No.	H mm	W mm
b	Bowl	IA6.18	35	114
c	Lamp	IA6.19	94	65
d	Bottle	IA6.20	108	49
e	Jar	IA6.21	114	90
g	Juglet	IA6.22	134	90
h	Juglet	IA6.23	105	50

**Table 8:** Objects held by the Institute from Cyst Grave 3, 1954.

### Overview

The chamber tombs in quarries east of the city appear to have been the favoured form of burial during the Roman period in the first and second centuries AD. Often several interments are found in each tomb varying from simple placement on the tomb floor, in carved niches in the walls or cysts in the floor and the use of large amphora as ossuaries. As can be seen in Figure 5, the predominant material for grave goods is pottery followed by glass and a few bronze items.



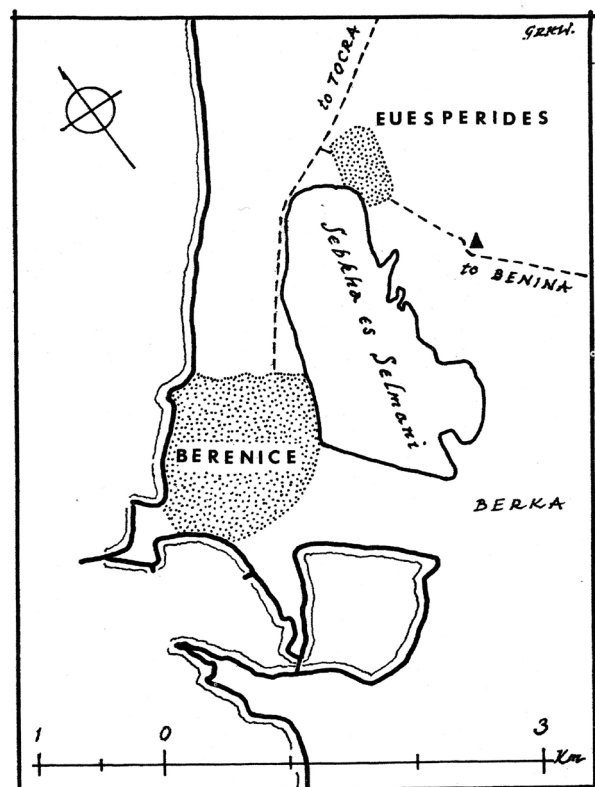
**Figure 5:** Chamber Tombs material.

Simple cyst graves are ubiquitous throughout the landscape to the east and west of Tauchira's walls, often near quarries and sometimes disturbed by the expansion of a quarry. The six graves excavated, three by the R.A.F. in

1944 and three by Wright in 1954, contain predominantly pottery grave goods dating to the Hellenistic period in the second through early fourth centuries BC. The inclusion of glassware and later pottery forms in Cyst Grave 2 date to the first and second centuries AD and these items are thought to have intruded into this grave when it was sheared by quarry works in ancient times.

### Euesperides, Site: Sebka es-Selmani

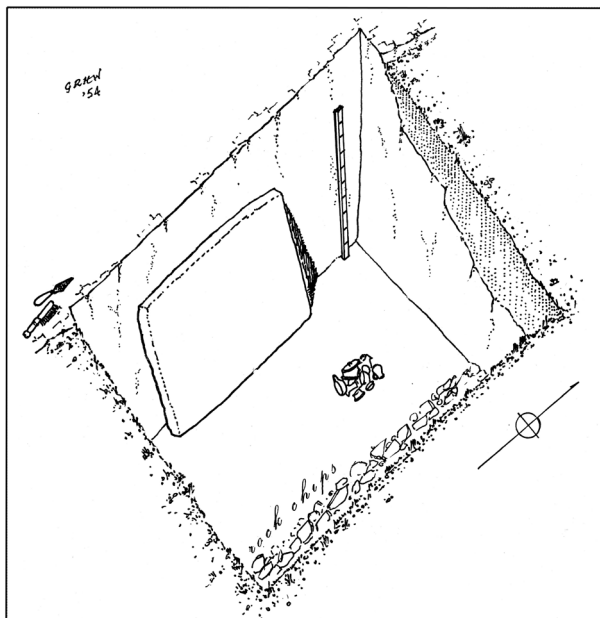
Another area of interest was the ancient city of Euesperides, a Greek city founded in the 6th century BC and today located in the immediate area of Benghazi, the second largest city in Libya. The later Ptolemaic, then Roman city of Berenice is situated further south of Euesperides, both bordering the large salt lagoon known as Sebka es-Selmani (Figure 6). Advice from the then Controller of Antiquities led Wright to investigate an area southeast of Euesperides along the road to Benina, thought to contain intact graves (Wright 1995). Soundings against the rocks uncovered the presence of an unusual rock-cut grave containing funerary offerings. Results from this excavation were sent for publication but lost en-route, a brief 'rescue account' being published in *Libyan Studies* in 1995, the original photographs and drawings of the objects being lost along with the original report. The Institute holds eleven of the seventeen objects in its collection and is therefore able to provide plates and drawings in the following pages. Four of the objects were retained by the Department of Antiquity presumably for their museum and the remaining two objects are presently unaccounted for.



**Figure 6:** Plan of Euesperides. From Wright (1995).

Because a description of the grave was published by Wright (1995) a brief account only will be given here, followed by some thoughts as to its purpose. At first glance the grave appears to be a dromos for a chamber tomb and the presence of a stonion stone leaning against the back wall of the shaft with a Medusa's head pendant wedged behind appears to confirm this (Figure 7). There was, however, no chamber behind it, only some tool marks suggesting the beginnings of a chamber. The fill was a dry loose brown earth containing rock fragments and chips, the lower levels containing some charcoal and a small piece of coccyx.

The grave goods were found in a neat undisturbed pile resting almost on the rock floor and these have been dated to the Hellenistic period in the second half of the fourth century BC. As further investigations were not possible the purpose of the shaft and the grave goods is unknown.



**Figure 7:** Euesperides Tomb drawing. From Wright (1995).

One suggestion could be that the carving out of a small chamber tomb had commenced, evidenced by the dromos, stonion stone and incipient chipping in the back wall where the entrance to the main chamber would have been. For reasons unknown, work was discontinued on the tomb at this stage so the grave goods and interment were placed in the dromos and covered in. The presence of a small piece of coccyx with charcoal is unusual but could indicate a hurried cremation prior to interment, perhaps due to disease or invasion.

The dating of the objects renders the grave almost contemporaneous with the cyst graves excavated in Tauchira 67 km east of Euesperides. As this grave dates to the later half of the fourth century BC and the Tauchira graves the second to early fourth century BC it could demonstrate a transitional funerary period in Cyrenaica from simple cyst

graves to small rock cut chamber tombs as a reflection of emerging Roman influences in the region. These are of course speculative interpretations only as its original purpose may now never be known.

PEQ No	Name	Reg No.	H mm	W mm
2	Juglet	IA6.73	77	0
3	Pot Stand	IA6.74	26	46
4	Juglet	IA6.75	62	44
5	Lamp	IA6.76	26	60
6	Bowl	IA6.77	0	31
8	Bowl	IA6.79	44	107
11	Alabastron	IA6.82	90	0
12	Pendant	IA6.83	40	44
14	Pendant	IA6.84	32	35
15	Pendant	IA6.86	35	35
17	Bronze Pin	IA6.88	52	20

**Table 9:** Objects held by the Institute from Sebkh es-Selmani.

## Human Skull – R.A.F. Tomb C

The human skull sent to the Institute (Figure 8) came from Tomb C of the R.A.F. excavations in 1944 in Quarry XIV, which was dated from the grave goods to about AD 100 (Wright 1963). The inscription containing Jewish names and images of the suppression of Cyrenaican Jews suggests the date may in fact be AD 115-118 (Wright 1963). The stonion stone was secured at the base but leant outwards at an angle at the top, which had allowed two distinct layers of fill to enter the chamber over a period of time. The top layer was of relatively loose material whilst the lower level was of hard concrete consistency, making excavation of objects difficult. An oriented primary burial was discovered lying on the floor but proved impossible to lift due to the hard-compacted lower fill. Ossuaries were also discovered in this lower fill but it is not mentioned whether they contained bones, as is the case with the wall niches. A cyst covered with slabs and sealed by pinkish coloured cement was found at the bottom of the fill and, upon removal of the slabs, it was found to contain three skulls and other bones.

The skull held at the Institute was listed on the original inventory as coming from R.A.F. Chamber Tomb C and described as follows:

*Skull c150 AD Graeco-Libyan provincial Greek colonists mainly Dorian – some admixture of blood with natural Libyans – a hamitic?? Race akin to the modern Berber.*

It is very clean with no encrustation of sand as would be expected if it were the skull from the oriented primary burial on the floor of the tomb enveloped within the hard cement-like sand. The published detail that ‘... impossible...lifting of the skeleton...’ also indicates that the burial was left in the tomb and therefore could not be the skull held at the Institute (Wright 1963). The ossuaries and wall niches were not reported to have contained any human remains, so the skull is unlikely to have come from them. Its most likely location was the sealed cyst in the floor of the tomb. The lack of fill in the cavity indicates that the seal was probably intact. It is therefore assumed that the skull held by the Institute is one of the three found in the cyst with other bones.



**Figure 8:** Right anterio-lateral view of the skull from R.A.F. Tomb C, IA6.90.

### Ancestry

The morphology of the cranium includes a lack of keeling, relatively complex sutures, rectangular orbits, ovoid external auditory meatus; pronounced cheek bones, average nasal opening, projecting nasal bones (although partially damaged post-mortem), ambiguous nasal spine, and a relatively pinched nasal root. While these features indicate a person of mixed ancestry, a metric assessment of the cranium (Appendix 1) using CRANID (Wright

2002; 2007) suggests, however, that the individual was more than likely of European/Mediterranean ancestry.

### Sex

The morphology of the skull (Table 10) indicates the individual was more than likely male.

Skull (Score 1-5)	Left	Right
Glabella	5	5
Supraorbital Margin	5	5
Mastoid Process	5	5
Suprameatal crest	5	5
Nuchal Crest	5	5
Mental Eminence	5	5
Gonial angle flare	5	5
Estimated Sex Skull	M	M

**Table 10:** Scoring of cranium morphology for the determination of sex.

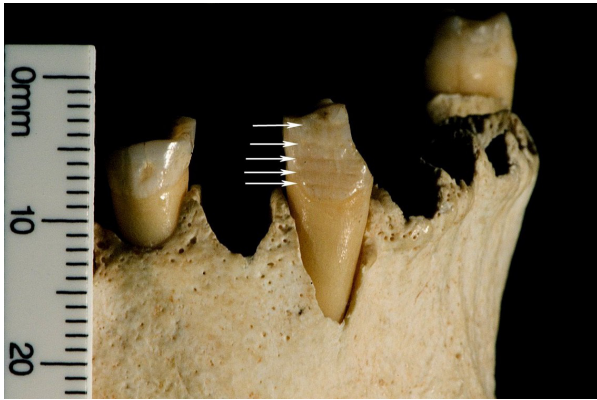
### Age

The skeletal remains are those of an adult. The third molars have erupted, indicating that the individual was at least over 25 years of age. Assessment of the degree of closure of the cranial sutures (Meindl and Lovejoy 1985) suggests that the individual was more than likely to have been aged within the 50-60 year age range. It must be noted, however, that compared to other ageing techniques (which involve assessment of the post-cranial skeleton), the use of ectocranial suture closure is not a reliable method (Cox 2000: 67-68).



**Figure 9:** Inferior view of the cranium. Image: VIFM.





**Figure 10:** The buccal surface of the mandibular right canine showing evidence of enamel hypoplasia (white arrows). Image: VIFM.

### Dentition

Some teeth have been lost post-mortem, while the left second premolar, first and second left molars, right canine and right second premolar have evidence of post-mortem damage. Those that are present show a significant degree of attrition. The left and right first mandibular molars, for example, have lost the entire enamel on the mesial/buccal surface (Figure 9). This corresponds to extreme wear on the mesio-lingual surface of the right first maxillary molar (see Figure 10).

The mandibular right canine has been broken post-mortem, however, it is still possible to observe evidence of enamel hypoplasia on the buccal surface (Figure 11).

There is also evidence of small deposits of calculus (mineralised plaque) on the buccal surfaces of the left second mandibular premolars and the first left mandibular molar.



**Figure 11:** View of the left mandibular teeth showing evidence of small deposits of calculus on the buccal surfaces. Image: VIFM.

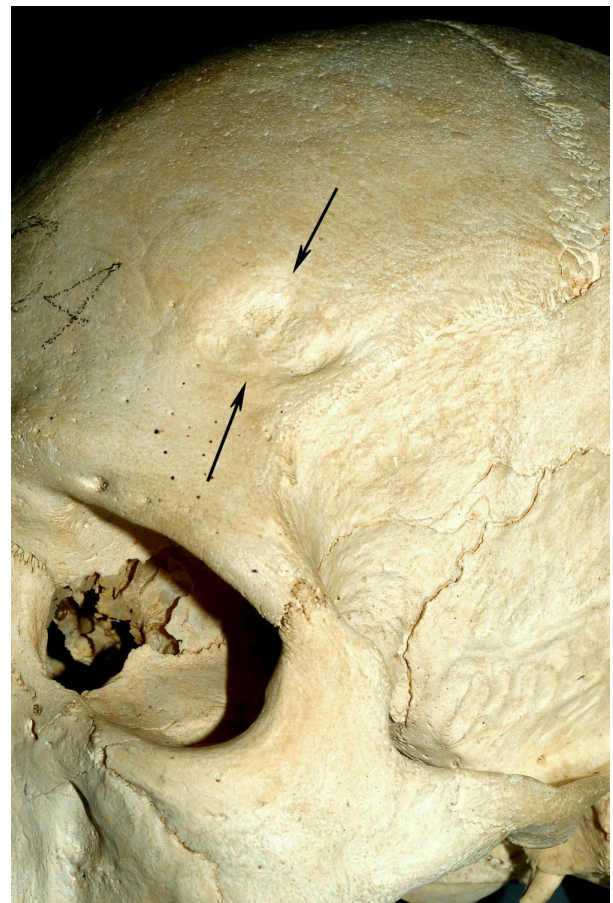
### Pathology/Trauma

There is evidence of fine capillary-like lesions on the left and right orbits (Figure 12) suggesting early stages of cribra orbitalia (Stuart-Macadam 1991).



**Figure 12:** Detail of left orbit showing fine capillary-like lesions. Image: VIFM.

There is also a healed depressed fracture on the left side of the frontal bone, approximately 27 mm superior to the superior border of the orbit (Figure 13).



**Figure 13:** Close up view of the left frontal bone showing evidence of the healed depressed fractured (black arrows). Image: VIFM.

## Discussion

The individual from Tauchira had alterations to the dentition, orbits and frontal bone.

### **Dental Attrition**

It is difficult to ascribe a single aetiology to wear patterns (Foley and Cruwys 1986: 16) because factors which potentially influence dental wear are multi-factorial: age (and possibly sex in terms of differential food acquisition), diet, size of teeth, as well as paramastication (non-dietary use of teeth as tools) are all contributors. The wear patterns observed on the skull from Tauchira suggest the individual's diet consisted of foodstuffs with a relatively high amount of grit. This may have included food which naturally has grit in it such as marine foods, or was perhaps a result of the ways in which food was prepared (e.g., foods were inadequately cleaned, butchering techniques in which meat was prepared on the ground. Cooking techniques which incorporated particles of sand and ash into the food could also have contributed to this abrasion (Townsend *et al.* 1994: 40).

### **Enamel hypoplasia**

Enamel hypoplasias are the most common form of enamel defects (Roberts and Manchester 1995: 58) and are characterised by a reduction in enamel thickness due to a disruption of ameloblast activity during the early stages of tooth crown formation (Lukacs 1989: 267; Skinner and Goodman 1992: 155; 159). These defects tend to occur most frequently on both the permanent and deciduous maxillary central incisors and the mandibular canine (Goodman *et al.* 1980: 526), and manifest as "irregular horizontal linear grooves or pits in the enamel surface" (Lukacs 1989: 267).

The disruption of ameloblast activity results from a hereditary anomaly, localised trauma, or systemic metabolic stress, the most common in archaeological situations being the latter (Goodman and Rose 1991: 281). While many illnesses are known to cause metabolic stress (particularly infectious disease and malnutrition), which in turn may result in enamel hypoplasias, the exact aetiology of this defect is unknown (Skinner and Goodman 1992: 160). Thus, enamel hypoplasias have been described as non-specific markers of physiological stress (Ibid: 162; Goodman and Rose 1990: 59; Hillson 1996: 166).

### **Cribræ Orbitalia**

The skeletal change observed in the orbits (eye sockets) on the skull from Tauchira is indicative of the early stages of cribræ orbitalia. Cribræ orbitalia is a skeletal change indicative of anaemia, either a genetic form (such as thalassaemia and sickle-cell anaemia) or that caused by iron deficiency, often associated with dietary changes (Klepinger 1992: 122) and/or diseases such as gastro-intestinal or parasite infections (Mays 1998: 142; *cf.* Holland and O'Brian 1997). Based on the skeletal evidence alone, it is impossible to determine the exact type of anaemia because of the similar ways the different types are expressed on the bones.

## Trauma

Trauma represents extrinsic influences on the skeleton (such as physical force, cold, heat, chemicals and irradiation) which can be the result of either natural or cultural acts (Zimmerman and Kelley 1982: 7, 42). The presence of head trauma on the individual from Tauchira perhaps indicates some kind of inter-personal violence. However, without knowledge of the wider context of the individual's habitational environment it is impossible to comment in any detail.

## Conclusion

Excavations conducted in 1944 by the British R.A.F. and in 1954 by Wright at the site of ancient Tauchira in Libya provided information on mortuary practices during the Hellenistic and Roman periods in that region. The objects found by both excavation projects were listed, described and interpreted by Wright (1963). Many of the objects from the 1954 excavations were sent to the Institute for inclusion in its museum collection. Two types of burial were common at Tauchira, simple cyst graves dating to the earlier Hellenistic period and rock cut chamber tombs dating to the later Roman period *c*100 AD. An investigation at the site of Euesperides 67 km west of Tauchira led to the discovery of an unusual rock-cut shaft with grave goods and perhaps the remains of the intended inhumation and some charcoal. This shaft grave is contemporaneous with the Hellenistic cyst graves at Tauchira but of a slightly later date, possibly reflecting a change in funerary practices and external influences, although this can be conjecture only.

The Roman period chamber tombs contained human bones located in wall niches, amphora ossuaries, sarcophagi, oriented ground burials or cysts. It is the latter of these from which the human skull held by the Institute is thought to originate. The skull belonged to an adult Caucasoid male, possibly Jewish, with evidence of enamel hypoplasia, early stages of cribræ orbitalia and healed head trauma.

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### Endnotes

1. There are a range of spellings used for the ancient site. Tauchira is the form used on the excavation permit and is used herein.

## Appendix 1

Tauchira Skull: Cranial Measurements

	CODE ID		Mean (mm)		Result (mm)
1.	Maximum cranial length	GOL	179	g-op	192
2.	Nasio-occipital length	NOL	177		189
3.	Cranial base length	BNL	99	ba-n	103
4.	Basion-bregma height	BBH	132	ba-b	139
5.	Maximum cranial breadth	XCB	137	eu-eu	143
6.	Maximum frontal breadth	XFB	114		121
7.	Biauricular breadth	AUB	121	au-au	126
8.	Biasterionic breadth	ASB	107		115
9.	Basion-prosthion length	BPL	97	ba-pr	96
10.	Upper facial height	NPH	66	n-pr	77
11.	Nasal height	NLH	50	n-ns	54
12.	Orbital height	OBH	34		30
13.	Orbital breadth	OBB	39	d-ec	43
14.	Bijugal breadth	JUB	115		125
15.	Nasal breadth	NLB	26	al-al	26
16.	Maxillo-alveolar breadth	MAB	63	ecm-ecm	67
17.	Bimaxillary breadth	ZMB	95		106
18.	Zygomaxillary subtense	SSS	23		24
19.	Upper facial breadth	FMB	97	fmt-fmt	103
20.	Nasion-frontal subtense	NAS	16		21
21.	Biorbital breadth	EKB	97	ec-ec	103
22.	Interorbital breadth	DKB	22	d-d	23
23.	Cheek height	WMH	23		28
24.	Frontal chord	FRC	110	n-b	116
25.	Nasion-bregma subtense	FRS	26		25
26.	Parietal chord PAC 9	PAC	111	b-l	116
27.	Bregma-lambda subtense	PAS	24		28
28.	Occipital chord	OCC	95	l-o	106
29.	Lambda-opisthion subtense	OCS	28		32