

Buried History

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Cover: The child mummy held by the Institute

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Christopher J. Davey

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Editorial

This issue of *Buried History* brings the journal's publishing schedule almost up to date. Volume 40 will be published toward year end and will, like this volume, include papers of lectures delivered during the year.

The Institute was honoured to have the 2003 Petrie Oration delivered by Prof Rosalie David. The paper presented at the lecture begins this issue. Rosalie is a prolific author and her stature as an Egyptologist was recognized in 2003 with the award of an Order of the British Empire (OBE) in the Queen's Honours List. She is the KNH Professor of Biomedical Egyptology, and Director of the KNH Centre for Biomedical Egyptology at the University of Manchester. Rosalie has been responsible for reviving the scientific analysis of Egyptian mummies and it is therefore fitting that a couple of later papers in this issue deal with two of the Institute's mummies. In her paper Prof David describes the establishment of the KNH Centre for Biomedical Egyptology at the University of Manchester in November 2003 made possible by the benefaction of Kay N. Hinckley.

The 2003 Beasley Lecture sponsored by the Institute and delivered in both Sydney and Melbourne was given by Right Reverend Dr Paul Barnett. His topic is current and he presents forceful arguments to support his position. Paul has had a distinguished career as an educator and bishop within the Australian Anglican community. He was Master of Robert Menzies College at Macquarie University and most recently was on the Faculty at Moore College, Sydney. Paul is known for his research in early New Testament history, especially as it relates to Asia Minor, where he has also travelled extensively.

The paper describing the analysis of the mummified child's head focuses on the dental evidence. Pamela Craig is a dentist who has a special interest in Forensic Dentistry. She teaches Oral Anatomy and Radiology at the School of Dental Science, The University of Melbourne and is an honorary forensic Odontologist at the Victorian Institute of Forensic Medicine. Janet Davey, who incidentally is no relation, teaches ancient Egyptian history at the Council of Adult Education in Melbourne. She has studied Egyptology at the University of Manchester and is soon to

return there for a post-graduate program in Biomedical and Forensic Egyptology. She is the founder of the Melbourne Mummy Project which has marshaled scientific expertise in Melbourne for the study of ancient remains.

The paper about the Institute's child mummy presents some of the findings of the Melbourne Mummy team. In addition to those already mentioned the authors are Dr David Ranson, a Forensic Pathologist, Victorian Institute of Forensic Medicine, Lee Coleman, Pediatric Radiologist, Royal Children's Hospital and Alan McKenzie, a Diagnostic Radiologist. Other members of the team are acknowledged at the conclusion of the paper. The Institute has been delighted to have such a distinguished panel of experts studying its collection. Some of the material in the paper was presented during a demonstration inquest held at the Victorian Coroner's Court during Professor David's visit in 2003.

The report on the survey expedition to the Kharga Oasis in the Western Desert of Egypt was prepared by a group of Melbourne based scholars working on Coptic material. Dr Matthew J Martin is at the Melbourne College of Divinity, Simone Rickerby has a position at Whitley College and Dr Geoffrey Jenkins is an Honorary Fellow at Deakin University.

We are again pleased to have material from Matthew Whincop. Matthew is at Durham University where he is completing a doctorate on Syrian Iron Age pottery. He is therefore well placed to review the recently published volume on the archaeological record of Syria.

Mary Dolan, a one time member of the Institute staff and a regular contributor to *Buried History*, sadly died recently. The next issue will carry a tribute to her and a paper that she was writing at the time of her death

The revised format of *Buried History* represented by the last issue was welcomed and we trust that this volume receives similar endorsement. We acknowledge all our authors and the referees who have assisted in the task of preparation.

Christopher J Davey
July 2004

William Flinders Petrie and the Egyptology Collection at the Manchester Museum, England

A.Rosalie David

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Abstract: Sir William Flinders Petrie (the grandson of Captain Matthew Flinders who explored the coast of Australia between 1797 and 1803) had a brilliant career as an archaeologist that spanned five decades, and his contribution to the subject in developing scientific methodologies for excavation is unparalleled. Initially, it was Amelia B. Edwards, a founder of The Egypt Exploration Fund in London, who recognised Petrie's genius, and ensured that he was recruited as one of the Fund's first archaeologists. However, disagreements with the Committee led to a parting of the ways, and in 1886, he had no excavations in view and his career faced premature extinction. Amelia Edwards then introduced Petrie to Jesse Haworth, a textile manufacturer with an interest in Egyptology who lived in Manchester, England. He took up the support of Petrie's work and, for many years, he financed his excavations. Finds from these sites came to form the basis of two major collections: at The Petrie Museum, University College London, and at The Manchester Museum, University of Manchester. The recent establishment of the endowed KNH Centre and Chair for Biomedical Egyptology at the University of Manchester has fulfilled Jesse Haworth's hope that the university would establish a professorship in Egyptology.

When, in 1925, Winifred Crompton, then Curator of Egyptology at the Manchester Museum, was asked the question: "How does Manchester come to possess so fine a collection of Egyptological material?" she replied:

"It is due to the interest taken by one Manchester man, the late Dr. Jesse Haworth, in ancient Egypt. For years, he and Mr. Martyn Kennard financed the excavations of Professor Petrie. After the results of his work had aroused public interest all over the country, excavation societies were formed whose members subscribed to the work. The most important of these are the British School of Archaeology in Egypt directed by Sir Flinders Petrie, and the Egypt Exploration Fund. The rules of these societies provide that all objects found go to public museums, in proportion to the amount subscribed from various localities. As Dr. Haworth continued to subscribe largely, Manchester has always received a goodly share." (Crompton 1925: 37).

The establishment of this collection at The Manchester Museum, University of Manchester, England, is in fact the result of the interaction of four individuals who played a crucial and significant role in the beginnings of Egyptology in Britain. The first of these is William Flinders Petrie.

William Flinders Petrie

Petrie was born in 1853, the only child of William and Anne Petrie. He was thought to be too delicate to go to school

and was therefore educated by his parents. His father was a chemist, civil engineer and surveyor, and his mother - a daughter of Matthews Flinders, the explorer of Australia - was a geologist and collector of ancient coins. As a child, William Flinders Petrie "ransacked marine store shops of Woolwich for coins, thus beginning archaeology at the age of eight." (Drower 1985: 17).

Encouraged by his father, he began his work in Egypt in 1881 with a survey of the Great Pyramid, and this inspired him with enthusiasm for ancient Egypt, but what he saw in Egypt filled him with alarm because of the rate at which the monuments and archaeological evidence were being destroyed.

Amelia Blandford Edwards

The second significant individual is Amelia B. Edwards who, in 1882, was a founder of the Egypt Exploration Fund in London, established to promote and finance excavation in Egypt. The Fund largely owed its inception to her energy, enthusiasm and zeal; she contacted influential people and secured the interest of the Press, and, once the society was launched, it recruited archaeologists, sponsored annual excavations, and published reports. It was also necessary for the Fund to secure contributions, and in order to capture public attention and support, sites connected to Biblical narratives were chosen for the society's first excavations.

Amelia Edwards was born in London in 1831. She came into Egyptology by chance - in fact, as the result

of inclement weather - but she was to have a profound effect upon the way in which the subject developed in Britain. As a young woman, she had joined the staff of the *Saturday Review and Morning Post* and became a successful novelist. Also, between 1855 and 1858, she wrote five novels.

In 1873, she went on a walking tour of France; it rained heavily, and she and her companion decided therefore to go on to Egypt:

"The thing was no sooner decided than we were gone...without definite plans, outfits or any kind of Oriental experience." (Rees 1998: 36).

On this visit to Egypt, she and a party of friends hired a *dahabeeyah* and visited the major sites. It was an overwhelming experience and, brought face to face with the monuments and the antiquities, she wanted to learn as much as possible. This visit resulted in Amelia Edwards writing her famous book, *A Thousand Miles Up the Nile*, which recounted this voyage of discovery, but even more importantly, she discovered a sense of her own mission and responsibility to try to help to save the monuments. This became her lifelong campaign,

Another founder of the Egypt Exploration Fund was R.S.Poole, the Keeper of Coins and Medals at the British Museum, and Amelia Edwards introduced Flinders Petrie to him. She recognised Petrie's genius, and promoted and developed his career. He excavated for the Egypt Exploration Fund between 1884 and 1886, making the spectacular discovery of the Delta city of Tanis, and was launched on a brilliant career. However, his impatient personality and ways of going about things soon brought him into conflict with the Committee of the Egypt Exploration Fund. In particular, he strongly disliked Poole, and in 1886, his association with the Fund ended. Therefore, when he went to Egypt at the end of 1886, he had no excavations in prospect, but by the time he reached Aswan, he received good news: a telegram saying that an anonymous friend in England had placed a considerable sum at his disposal for excavation. This anonymous patron was Jesse Haworth, a Manchester textile manufacturer.

The biography of Amelia Edwards (Rees 1998: 56) describes relations in the Egypt Exploration Fund at that time, and Miss Edwards' part in alleviating the problems:

"The record of jealousy, self-seeking and stabbing-in-the-back among distinguished Egyptologists must rank high even in the annals of academic rivalries. Among this turbulence, Amelia cultivated an expertise as mediator and soother of fevered male egos without which it would hardly have been possible for work to continue and prosper."

Amongst her greatest contributions, however, must rank her role in introducing Petrie to Haworth, since this undoubtedly saved the young archaeologist's career from premature extinction.

Jesse Haworth

Jesse Haworth was born near Manchester (a major industrial city in the north of England) to a family of modest means. On leaving school, he was employed by yarn merchants in Manchester, and through his own hard work, he eventually became a partner in the firm. As a young man, he was interested in Sunday School work and became superintendent of the Eccles Congregational Sunday School. Although he was never prominent in the political life of Manchester, he was held in the highest esteem in business and was one of the longest established members of the Royal Exchange in Manchester. As he gradually acquired wealth, his main interest lay in the direction of the arts and he collected Wedgwood china and paintings.

Jesse Haworth's interest in Egypt probably began as early as 1877 when he and his wife read Amelia Edwards' book *A Thousand Miles Up the Nile*. They enjoyed it so much that they decided to make the same Nile journey in 1882, and from this time onwards, they never ceased to take a very great interest in Egyptology.

A subsequent meeting with Amelia Edwards inspired Jesse Haworth to give financial support to the subject, and in 1887, he secured the throne and gaming board of Queen Hatshepsut which had been discovered in Egypt the previous year. The throne was exhibited at the Jubilee Exhibition in Manchester in 1887, and at its close, presented by Jesse Haworth to the British Museum. (Petrie 1932: 22).

However, it was Amelia Edwards' intervention that now persuaded Jesse Haworth to begin to support practical excavation in Egypt. Petrie (1932: 79) recalls that he learnt who his anonymous sponsor was:

"While in England, I heard that the offer of help in excavating came from Jesse Haworth of Manchester, through the kind intervention of Miss Edwards. Just at the same time, I had an offer of assistance from Martyn Kennard, who had a family interest in Egypt. Nevertheless, I did not wish to pledge my time to be entirely at the service of anyone. The plan, which worked very smoothly, was that I drew on my two friends for all costs of workmen and transport, while I paid all my own expenses. In return, we equally divided all that came to England. Thus it was in my interest to find as much as I could."

Haworth put his money at Petrie's disposal without any reservation, to do as he liked with it in the cause of science. Miss Edwards wrote to Petrie (Petrie Papers 9(iv): 26; Drower 1985: 127) that:

"Jesse Haworth is a religious man and if you could throw any light on the Bible, he would be gratified. But he does not want plunder, and he wishes to keep quite out of sight and not be mentioned in any way."



Figure 1: William Flinders Petrie (centre), at the excavations at Kahun; he is accompanied by his wife, Hilda, and a visitor, Mr. Cameron. (Copyright: The Manchester Museum, University of Manchester, Manchester, England)

In August 1887, Petrie visited Manchester to meet the Haworths and stayed with them at their home, The Grange in Altrincham, a town near Manchester. Thus began a warm friendship which lasted until Jesse Haworth's death many years later in 1921.

The Site of Kahun

Petrie now had the financial backing but he needed a major site to excavate. The Egypt Exploration Fund had laid claim to the sites in the Delta, and the Egyptian Antiquities Organisation offered Petrie the Fayoum. Here, he set out to survey the pyramids of Hawara and Lahun. However, as he records (Petrie's Journal, February 24 - March 2, 1887), it was the townsite of Kahun which attracted his attention:

"The great prize at Illahun was unknown and unsuspected by anyone. On the desert adjoining the north side of the pyramid-temple, I saw evident traces of a town, brick walls, houses and pottery. Moreover, the pottery was of a style as yet unknown to me.

The town wall started out in a line with the face of the temple; and it dawned on me that this could hardly be other than the town of the pyramid builders. A little digging soon put it beyond doubt, as we found cylinders of that age and no other. So that it was evident that I actually had in hand an unaltered town of the XIIth Dynasty, regularly laid out by the royal architect for the workmen, and stores required in building the pyramid and its temple."

Petrie continued his clearance of Kahun until the end of 1889, by which time he had emptied and planned more than 1,800 rooms; at that date, it was the first and only time that a complete lay-out of an Egyptian town had been obtained.

Excavation of the Site

Petrie cleared the rooms systematically (David 1986: 101-113). He formed the workmen in a line along the outermost street. They cleared this first line of rooms, turning the debris into the street behind. Then, they worked the next row of rooms, and so on. In this way, the buildings were mostly filled up again, to prevent decay and destruction of the brick walls, while every object was certain to be uncovered. Thus, Petrie measured and planned each chamber as it was cleared, so that it was possible to see the original scheme of the architect and the subsequent expansion of the town.

He kept journals giving some details of his work, but the exact find spot of most objects are not recorded. Sometimes, he comments on his more unusual discoveries, such as the babies he found buried amongst the houses (Petrie's Journal April 8 -15, 1889):

"Many newborn infants are found buried in the floors of the rooms, and, strange to say, usually in boxes made for other purposes, evidently, by their form. In short, unlucky babes seem to have been conveniently put out of the way by stuffing them into a toilet case or clothes box and digging a hole in the ground for them....I fear that these discoveries do



Figure 2: A fire-stick discovered at Kahun (c.1890 BC). Such items of domestic use are rare from Egypt, since most evidence is derived from funerary sites. (Copyright: The Manchester Museum, University of Manchester, Manchester, England).

not reflect much credit on the manners and customs of the small officials of the 12th Dynasty.”

Aegean Pottery

One of Petrie’s most interesting discoveries at Kahun was the so-called “Aegean” pottery. He began excavating the site in April 1889, and the Khamasin wind brought blinding sand, and he was temporarily blinded by ophthalmia. He considered closing the dig down, but cured himself with quinine and went on digging.

Now, a few sherds of quite a different type turned up - delicate, polychrome ware. He had never seen anything like it, and with great intuition, he recognised and identified it as “Aegean.” Copies of his journal were sent to his parents, Miss Edwards, his sponsors Haworth and Kennard, and his colleagues Griffith and Spurrell. They were urged to keep this information secret, and not to tell the Press, as this might prevent the sherds from being allowed back to England for study. He sent 101 boxes to Cairo, where the Antiquities Director made his division, but he was not interested in the Kahun material, and let most of the finds and all the papyri leave Egypt.

The End of the Excavation

In the Fayoum, Petrie had carried out the simultaneous excavation of the sites of Lahun, Kahun and Gurob. He wrote (Petrie’s Journal, 8 -15 April, 1889) :

“On my Illahun days, I have my wash, before I go out, carry my breakfast tied up in a towel, look over this place (Kahun) on my way, and get to Illahun about 10 or 11....After seeing the work there, I have breakfast about noon: go over to Tell Gurob, look over that and pay up, and then come back.”

Petrie’s final record of the site (Petrie’s Journal, 30 - 31 December, 1889) states:

“I do not expect that my friends will hear anything more now from Kahun and Gurob; the places are done for, and well have they repaid us, by the insight we have gained in the life and manufactures of the 18th and 12th dynasties. I have now really outlined the greater part of the long blank of hitherto undefined history of domestic and personal objects which had been such an attractive unknown region to me.”

The Manchester Collection

It had been agreed that Haworth, Kennard and Petrie would each take one-third of what Petrie discovered at these sites, and back in England, the objects were mainly divided between Petrie’s own collection (now held in the Petrie Museum at University College London, England), and Haworth and Kennard who presented them to the Manchester University Museum in 1890. Over the next nine years, Haworth and Kennard were the main supporters of Petrie’s excavations, and a succession of gifts of antiquities continued to be made to The Manchester Museum by Haworth over many years.

The museum had acquired its first major Egyptian antiquity in 1825, with the gift of the mummy and coffins of Asru, a Chantress of Amun at Karnak. However, by 1911, Haworth’s generous donations persuaded the University to consider a scheme to extend the Museum, to provide suitable accommodation to house and properly display this outstanding collection (Anon 1912).

A public fund was opened for this, but it was Jesse Haworth’s generosity which enabled this scheme to be put into effect. In 1912, he gave two-thirds of the funds to establish the Jesse Haworth Building, which he opened on October 30th, 1912 (Crompton 1925: 39). The Petries were present at the Opening, and on the previous day, Petrie had marked the occasion by giving a lecture. In 1913, the University conferred on him the honorary Degree of Doctor of Laws in recognition of his services to the cause of learning, and as one of the first patrons of scientific excavation.

In 1920, Jesse Haworth approved plans for a second extension to the Museum, intended to provide further



Figure 3: *The Egyptian Gallery in The Jesse Haworth Building, Manchester Museum, when it was first opened in 1912. The central case displays the tomb group of the Two Brothers. (Copyright: The Manchester Museum, University of Manchester, Manchester, England).*

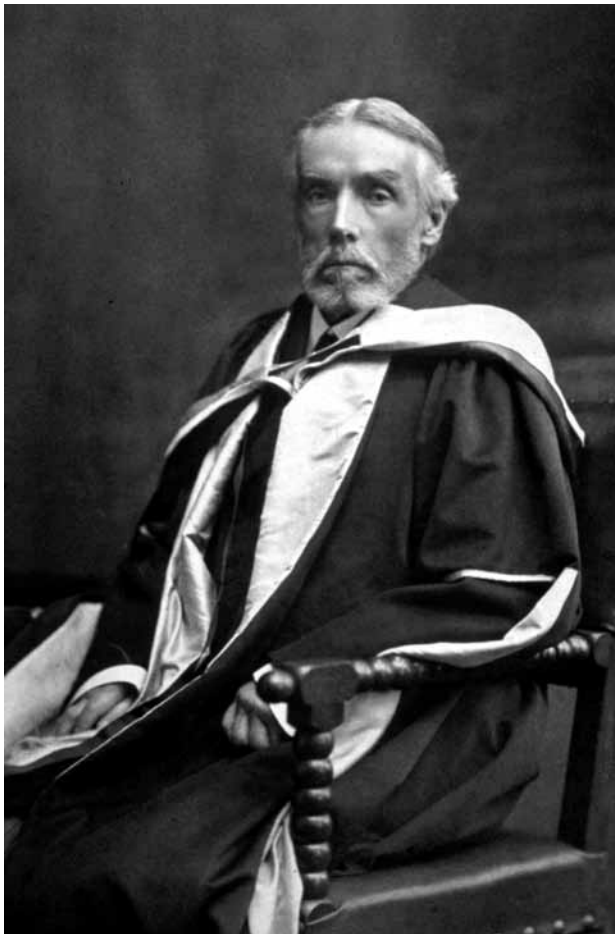


Figure 4: *Jesse Haworth when he received (1913) the honorary Degree of Doctor of Laws from the University of Manchester, in recognition of his patronage of scientific excavation. (Copyright: The Manchester Museum, University of Manchester, England).*

display areas and much needed workrooms and storage space for the Egyptian collections. He gave a further £10,000 for this in 1919 and, under the terms of his Will, another £30,000 and his private collection of Egyptian antiquities were donated to the museum. Unfortunately, he died in 1921 and did not see this second extension which was opened by his widow in 1927.

Continuing Links Between Manchester and Petrie

The association between Petrie, Haworth and Manchester was to prove a lasting relationship. Under the terms of Amelia Edwards' Will, an endowed Chair of Egyptology was established at University College London; this was held by Petrie who became Britain's first professor of Egyptology.

In 1906, a major event took place in Manchester when he was invited to address a large audience in the Chemical Theatre of the University on the subject of "The Hyksos and Israelite Cities." Newspaper cuttings describe how, for an hour and a half, the audience listened with rapt



Figure 5: Dr Margaret Murray (third from left) and some of her team, unwrapping the mummy of Khnum-Nakht, one of the Two Brothers, at the University of Manchester in 1908. (Copyright: The Manchester Museum, University of Manchester, England).

attention to his account of this discovery. Finally, Petrie appealed for public support for the work of exploration, which depended entirely upon the financial assistance of persons interested in Egyptology. From then onwards, the people of Manchester took up the active support of the subject. Petrie's suggestion that a local society operating on the lines of the Egyptian Research Students Association in London be set up was acted upon, and the Manchester Egyptian Association was immediately founded. This was to further the study of Egyptology in the area in every possible way. Jesse Haworth was elected its first president, and it held regular meetings. A highlight for the Association was the annual Museum Lecture which was given by Petrie and described by his wife Hilda as "Our usual fantasia in Manchester." In later years, Lady Petrie herself gave this lecture.

The Manchester collection continued to grow apace. When the 1912 extension was opened, some of the highlights which were displayed on the public galleries for the first time, included, in addition to the material from Kahun and Gurob, the complete tomb-group of the Two Brothers, excavated at Rifeh in 1905-6. At the time of its discovery, this was described as one of the finest collections of its kind that had ever been found in Egypt. This group was purchased for the museum by public donation in 1907, for the sum of £500, of which Jesse Haworth contributed £150

(Murray 1910). Other significant material now placed on display included finds from predynastic and Old Kingdom sites, particularly stone objects and tomb wall reliefs; a unique collection of soul houses; and mummies and painted panel portraits from the Fayoum site of Hawara.

Margaret Murray

In order to catalogue and organise the rapidly expanding collection, Petrie seconded his assistant Margaret Murray to Manchester for five years; her remarkable contribution included cataloguing and organising the objects that arrived annually at the museum from Petrie's excavations. Born in Calcutta, the daughter of an English businessman, she had intended to take up a career in nursing, and acted as sister-in-charge of Calcutta Hospital in an epidemic when she was only 21. However, she could not qualify as a nurse in England, because she was too small in stature for acceptance.

She therefore began a career in Egyptology, entering University College London in 1894. She trained under Petrie, and took up a post in his department as junior lecturer in 1898, thus becoming the first full-time woman in Egyptology in Britain. From 1924 - 1935, she was Assistant Professor at University College London, where she obtained her doctorate in 1935. She not only assisted

Petrie at University College London and on his excavations, but she also excavated in her own right in Egypt.

During her time in Manchester, Margaret Murray's most significant work was undoubtedly her pioneering studies in palaeopathology. She brought together an interdisciplinary team of scientists to study the mummies of the Two Brothers. In 1908, on May 6th, instead of holding their usual meeting, members of the Egyptian Association and their friends were invited by the Chairman and Committee of the Museum to attend the "unrolling" of one of the mummies. From the contemporary report (The Manchester Guardian, May 7, 1908):

"The ceremony took place in the Chemical Theatre of the University, Miss Margaret Murray conducting the proceedings, with the assistance in the unrolling of Mr. Standen, Mr. Wilfred Jackson, Miss Wilkinson and Miss Hart-Davis. The unrolling was witnessed by 500 people and lasted one and a half hours. At the close of the ceremony, members of the audience who wished to have a piece of the mummy wrappings as a memento were invited by the Chairman of the meeting to leave their names and addresses."

The Manchester Museum archives preserve the continuing correspondence between the Petries and the Haworths, and the Petries and Margaret Murray, providing information about fund-raising, excavation, and domestic details of visits to Manchester. The Petries also kept in close contact with Winifred Crompton, Margaret Murray's successor in Manchester. She often stayed with them in London, and went for two weeks to Petrie's camp in Egypt to learn about techniques employed in finding and preserving at their source the objects that were to come into her care.

Future Development of Egyptology at Manchester

The Petrie Museum at University College London and The Manchester Museum share complementary collections - the fruits of Petrie's unparalleled career. The lives of the people who were instrumental in creating these collections were also closely interwoven - without Petrie's discoveries, Haworth's funding, Amelia Edwards' patronage and intervention, and Margaret Murray's dedicated and pioneering work, they would not exist today. It was these people's vision and determination that ensured that these collections exist to be used for teaching, research and public enlightenment.

In November 2003, the KNH Centre for Biomedical Egyptology, headed by the KNH Chair in Biomedical Egyptology, was established in the School of Biological Sciences at the University of Manchester. This unique Centre, which will focus on research and teaching in the areas of biomedical and scientific Egyptology, has been made possible through the generous benefaction of Kay N. Hinckley, whose enthusiasm for Egyptology developed as the result of a Nile cruise she undertook in the 1990s. The establishment of the Centre provides the means to

continue the development of the research first initiated by The Manchester Egyptian Mummy Research Project in 1973, and brings to fruition, after a hundred years, the vision for Egyptology in Manchester that was held by Dr Jesse Haworth, who hoped that his example of supporting Egyptology would be followed, and that someone would offer to endow a Chair of Egyptology in the University.

The KNH Centre, with its emphasis on the application of scientific techniques in Egyptology, provides the opportunity to take forward the immense contribution made to Egyptology in Manchester by Petrie, Haworth and Margaret Murray.

The history of Egyptology in Manchester is the result of a series of individual, apparently insignificant decisions: Amelia Edwards' choice to travel on to Egypt because of inclement weather in France, Jesse Haworth's random purchase of her book, and Kay Hinckley's choice of a Nile cruise on which a lecture about the Manchester Mummy Project first aroused her interest in our work. Nevertheless, these personal choices regarding travel options and reading matter have not only profoundly influenced the development of the subject in Manchester; they have ultimately changed the whole course of Egyptology.

Professor Rosalie David, OBE

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Bibliography:

- Anon, 1912 *An Account of the Extension of the Museum, The Jesse Haworth Building*, Manchester Museum Publication, Manchester.
- Crompton, W.M. 1925 *The Egyptian Collection, The Old Owensian Journal* 3, no.1.
- David, A.R. 1986 *The Pyramid Builders of Ancient Egypt*, Routledge, London.
- Drower, M.S. 1985 *Flinders Petrie: A Life in Archaeology*, Victor Gollancz, London.
- Edwards, A.B. 1877 *A Thousand Miles Up the Nile*, Routledge, London.
- Murray, M.A. 1910 *The Tomb of Two Brothers*, Manchester Museum, Manchester.

Petrie, W.M.F. 1932 *Seventy Years in Archaeology*,
Henry Holt, New York.

The Petrie Papers (held at the Petrie Museum, University
College London) (see Drower 1985: xv).

The Petrie Journals (held at the Griffith
Institute Ashmolean Museum, Oxford).

Rees, J. 1998 *Amelia Edwards: Traveller, Novelist and
Egyptologist*, The Rubicon Press, London.

The Birth of Christianity

Paul Barnett

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Abstract: - Crossan and Casey are examples of those who say that in the first twenty years of the apostolic era Jesus was re-defined as 'Son of God' and 'Lord'. These and other accounts make inquiry into those two decades quite critical. We are able to affirm the broad lines of the narrative of Acts by undisputed information in Paul's earliest letters and by the data in the 'we' passages in Acts. Case studies in Rom 1:1-4 and in the recorded teaching of Philip point to the pervasive influence of the 'teaching of the apostles', Peter's in particular. The pre-history of the underived Gospels of Mark and John, as well as the Synoptic sources Q, L and M are to be sought in this critical two-decade period immediately 'after Jesus'.

The historic Christian faith is no stranger to criticism and attack from outside or from within. Celsus attacked it without and Arius undermined it from within. The butt of attack from without and the point of subversion within are the same – the identity of Jesus.

To illustrate the point let me mention three examples from the modern era.

J.D. Crossan: The Jesus' Movement Hijacked.

Crossan believes Jesus was a social reformer who formed a movement in Galilee that aimed to overturn the existing power structures (Crossan 1988). Jesus' movement emphasised 'life' issues, in particular justice for the marginalised. After Jesus' death in Jerusalem, however, the movement bifurcated and a parallel 'death' movement arose.

Crossan argues that the truest expression of Jesus' 'life' movement survived in 'Q' a document said to underlie the Gospels of Matthew and Luke. The 'death' movement intervened in Paul and the Gospel of Mark and all but eclipsed evidence of the 'life' movement. As a result Jesus and his programme are lost to us unless we are able to recapture it by reading 'Q'.

Crossan's work is an erudite but a bizarre interpretation based on conjecture about the bifurcation of the Jesus movement after the first Easter. He bypasses NT evidence in Acts, James and the Pre-Pauline tradition preferring instead the so-called 'Q' document and the Gospel of Thomas, a Gnostic work from the third century. Wright provides a trenchant review of Crossan's 'Birth' (Wright 2000).

So what did happen in Jerusalem in the two decades between Jesus and the appearance of Paul's letters? Is Crossan right? But there are other accounts of what might have happened.

W. Bousset: The Hellenization of Jesus.

W. Bousset was a leader in the 'history-of-religions' school of the nineteenth century. He said post-exilic Judaism had become weak allowing a developing interest in angels and impersonal forces (hypostases) (Bousset 1926). Early Christianity must look for alternative thought forms to express its beliefs about Jesus. It found that alternative expression in pagan Hellenistic religion in Antioch (Bousset 1926).

Bousset saw the Greek-speaking Jews, the 'Hellenists' of Acts 6, who fled to Antioch as the vital link between the original Palestinian Jewish disciples, the 'Hebrews' of Acts 6, and the pagan Greeks of Antioch in Syria. It was in that milieu that Jesus the Jew came to be seen as 'Lord' (kyrios) and '[Son of] God'.

Bousset's explanation has been criticised by M. Hengel as 'a syncretistic paganization of primitive Christianity' (Hengel 1976:18) and by L. Hurtado as 'a clumsy crossbreeding of Jewish monotheism and pagan polytheism' (Hurtado 1988:100).

M. Casey: From Jewish prophet to Gentile God

According to Casey (1991: 42-43) the term 'the Messiah' was not current among the Jews until after Jesus passed from the scene so that he could not have applied it to himself. Passages like Mark 8:29-30 and 14:61-62, therefore, and other titles found in the Gospels ('Son of Man', 'Son of [God]') were created by the early church (Casey 1991:54).

How, then, did Jesus come to be regarded as such in the early church? Casey's solution is that the original disciples with Jesus formed a distinctive and separatist Jewish sect that saw in Jesus after his death 'the embodiment of Jewish identity' (Casey 1991:57-75). That death proved to be the

‘catalyst’ that immediately led to the new interpretation of Jesus in the early church. Here Casey finds existing ready-made vehicles of thought within Judaism for the terms like ‘Lord’, ‘Messiah’ and ‘Son of God’ to be applied to Jesus as an ideal martyr figure. Under Paul, but more particularly John, this Jewish prophet became a Gentile god.

There are several problems with Casey’s reconstruction. First, through intense study of Jewish history we are more conscious now of various other messianic and prophetic figures of the era like Judas the Galilean, Theudas or Simon bar Gioras. Yet none of these men were made ‘Messiahs’ posthumously, despite being more ‘nationalistic’ than Jesus. Secondly, many decades, even centuries, would be needed for a prophet to become regarded as ‘God.’ Yet by the time Paul’s letters appear two decades after Jesus he is being proclaimed as ‘Lord’, the name of God in the OT.

The First Twenty Years – A ‘Blank’ Space?

Clearly, then, the first twenty years are important. By that milestone Paul’s first letter, First Thessalonians, had appeared, proclaiming Jesus as ‘Son of God’, ‘Lord’ and ‘Christ’.

Logically, one of two things happened. Either Jesus was in fact ‘Son of God’, ‘Lord’ and ‘Christ’ or during that period the early Christians decided they would portray him in those terms, despite the fact that he wasn’t really.

Twenty years are, however, too brief a space in which a merely human Jesus would evolve into a divine figure. For that reason alone, explanations like those of Crossan, Bousset and Casey are unsatisfactory.

Yet – and here we face a problem – this twenty-year period is sparsely documented. Our knowledge is limited. Some have called it a ‘blank’ space. Is this true?

No letters from this period have survived. The Letter of James may be early, but there is no way to date it, except that it is earlier than AD 62 when James was killed. The Gospels most likely are later. The Book of Acts clearly post-dates AD 62 when the curtains close on the imprisoned Paul in Rome. In any case, it is argued, the book of Acts is biased and unreliable.

The Problem of Acts.

I don’t subscribe to the current negative view of Acts among so many scholars. Luke’s use of Mark for his own Gospel is open to simple comparison and proves to be prudent and restrained. His book of Acts teems with trivial detail that wins the approval of ancient historians like A.N. Sherwin-White against the jaundiced but often ill informed opinions of theologians.

- It cannot be denied that the author of Luke-Acts ties his narrative into world-history at a number of points.

- Jesus was born when Augustus was emperor;
- John the Baptist began prophesying in the fifteenth year of Tiberius;
- Jesus was executed under Pontius Pilate;
- Apostles are interrogated under the High Priests Annas and Caiaphas;
- Saul and Barnabas come to Jerusalem in the famine under Claudius;
- Jews Priscilla and Aquila were expelled from Rome under Claudius;
- Gallio became governor of Achaia while Paul was in Corinth;
- Paul was mistaken for the Egyptian prophet, was tried under High Priest Ananias and was imprisoned under Felix the governor.

I think Luke-Acts is a fine achievement that locates the author among the great history writers of antiquity. He has an eye for detail and he ties his particular narrative into world history at many points.

Yet there is a problem. He gives us little information about Jewish Christianity in Palestine in the first twenty years. True, Luke tells us about the birth of Christianity at the Feast of Pentecost (in AD 30 or 33), of the difficulties with the authorities in Jerusalem, of the earliest community’s bifurcation as ‘Hebrews’ and ‘Hellenists’, of the death of Stephen, of Saul’s assaults and the scattering of believers throughout the land beyond its borders in Damascus and Antioch.

As we will see, Jewish Christianity developed throughout the Land of Israel – in Judaea, Galilee and Samaria, not just in Jerusalem. It was *within* this Jewish Christianity *within* these twenty years that we must look for the origins of formulated beliefs about Jesus and the origins of the written Gospels. Here we have many questions but Luke gives us some assistance in Luke 1:1-4.

Luke wants us to know how the word of God spread from Jerusalem to Rome, world heartland of the Gentiles. Accordingly he traces the ministry to the Samaritans and the Ethiopian eunuch and Peter’s preaching and to the Roman Cornelius. There are hints of indigenous Jewish churches, but little information. It is as if Luke can’t wait to bring Paul and his Rome-wards missions into his narrative.

The Importance of Paul for Acts

Let me return to the question of the usefulness of Acts to the historian of early Jewish Christianity in Israel. Among the scholars the ‘politically correct’ line is that Acts is so late (80’s, it is claimed) and so far removed from the period AD 30-50 to be of little use, historically speaking.

Let us put another viewpoint. It is based on those unusual passages in Acts where the narrative changes from the third person 'he' or 'they' to 'we' or 'us'. The doubters say this is just stylistic, though no one has ever satisfactorily explained how it is therefore 'stylistic'. The most natural explanation is that in other passages the author is depending on other sources for his narratives, oral or written, but that in the 'we' – passages (as they are called) he is depending on his own sources (a diary perhaps). That is, the author of the book of Acts himself chimed into the narrative at certain points. Significantly one of those points was Philippi in Acts 20 in c. 56/57 when he travelled with Paul back to Palestine where he remained while Paul was in prison until with Paul he travelled to Rome c. 60. In short, the last of the 'we' - passages puts Paul and Luke together for five or more years.

Do we see what this means for the usefulness of the book of Acts? Luke had Paul as his oral source for anything he wrote about Paul during that twenty year long so-called 'blank' space. Luke knew from Paul about his early life in Tarsus, his life in Jerusalem under Gamaliel, his involvement in the death of Stephen, his attacks on believers in Jerusalem, his journey to Damascus, his conversion and preaching there, his return to Jerusalem, his sojourn in Damascus and his partnership with Barnabas in Antioch and their subsequent visit to Jerusalem ahead of the first west-wards mission.

But there is more. Paul himself tells us (Gal 1:18) that three years after his conversion he stayed with Peter and met James, the Lord's brother. So, through Paul Luke knew about Peter and James in the early years. Through those Paul met Luke would also have known about other key figures in the early Jewish church. If only he had told us what he knew!

But the point is, based on the 'we' – passages and his lengthy companionship with Paul this author had oral access to Paul's early years and the people and events of the early years. So we must reject the line that because Acts is said to be late (which is unproven) it is unreliable (which is unlikely) those early years are blank. The truth is they are not altogether blank, as we will now indicate.

Windows into the First Twenty years.

Churches in Judaea (Galatians 1:22; 1Thessalonians 2:14-15)

Then I went into the regions of Syrian and Cilicia.

And I was still not known by sight to the churches of Christ in Judaea; they only were hearing it said, 'He who persecuted us once is now proclaiming the faith he once attempted to destroy'.

For you, brothers became imitators of the churches of God in Christ Jesus in Judaea, because they same things as you from their own countrymen even as

they did from the Jews who killed both the Lord Jesus and drove us out...

From these texts we learn the following important information. Within three years of Paul's conversion, that is, only about four years on from Jesus, there were churches – Jewish churches - in Judaea. Those who belonged to these churches had been persecuted by Paul who had attempted to destroy 'the faith' they held to be true. When Paul returned to Judaea the Jews drove Paul out (back to Tarsus). These Jewish churches continued to suffer at Jewish hands.

Peter was 'apostle' to the Jews (Galatians 2:1, 7-8)

Then after fourteen years I went up again to Jerusalem...

When [James, Cephas and John] saw that I had been entrusted with the gospel to the uncircumcised, just as Peter had been entrusted with the gospel to the circumcised for he who worked through Peter for the apostolate to the circumcised worked through me also for the Gentiles....

For the past fourteen years, that is, almost right back to Jesus himself there had been two 'apostolates' or 'missions' – one to Gentiles led by Paul, the other to Jews by Peter. God had worked through both men as they preached the gospel to their respective ethnic constituencies. In Peter's case, this was to Jews in the land of Israel.

The Spread of Christianity in Judaea, Galilee and Samaria (Acts 9:31-32)

So the church throughout the whole of Judaea and Galilee and Samaria had peace and being built up and walking in the fear of the Lord and the comfort of the Holy Spirit was multiplied.

Now it happened as Peter was travelling through them all he came to Lydda...Joppa...Caesarea...

Following Saul's conversion near Damascus there was 'peace' so that the members of the church of Jerusalem who had been 'scattered' and taken root as churches throughout Judaea, Galilee and Samaria were 'built up and multiplied'.

This confirms Paul's references noted above to 'churches in Judaea', adding the detail about churches in Galilee and Samaria. Luke tells us that these churches were multiplied and grew up from the seeds of those scattered by persecution from Jerusalem. It is likely that these churches were both 'Hebrew', Aramaic-speaking, as well as 'Hellenist', Greek-speaking, in character, reflecting the respective religious cultures of both.

Easily missed is the comment that Peter 'went to and fro among them all'. The verb *dierchomai* is semi-technical for 'going on a preaching tour'. Who are the 'all' among whom Peter travelled as an itinerant preacher? Clearly, they are the churches of Judaea, Galilee and Samaria that

had sprung up as a sea of green wheat spouts from the seed scattered by Saul's attack in Jerusalem.

This is Luke's version of Galatians 2:7-9 where Paul speaks of Peter's God-given apostolate among the Jews.

John 21 may obliquely refer also to this. Peter was to 'feed' and 'shepherd Christ's sheep', that is, Jewish believers in Israel in the first instance.

It is clear from the passages following Acts 9:31-32 that these churches were by then well established. The members of the churches in Lydda and Joppa knew one another. Dorcas belonged to an 'order' of widows in Lydda as in Jerusalem, among both the 'Hebrews' and the 'Hellenists'. Although Peter was leader among the 'Hebrew' believers in Jerusalem it is likely that he encountered Greek speakers on the Hellenized coastal plain in Lydda, Joppa and Caesarea.

The Creation of Written Texts (Luke 1:1-4).

Seeing that many have taken it in hand to compile a narrative concerning the matters that have been fulfilled among us even as they handed them over to us, that is, by those who from the beginning had become eyewitnesses and ministers of the word, I decided also – who had followed all things closely from the beginning – to write to you an orderly account, O Excellent Theophilus, so that you may know the certainty of the things in which you have been instructed.

This is an extraordinarily important statement, whose significance is easily missed on account of its rather formal nature. We know that rabbis instructed their disciples by means of oral transmission, that is, by rote teaching and learning. It is equally clear that the apostles taught and responding believers learned, in ways not dissimilar from the rabbis' methods. For example, Paul 'handed over' to the Corinthians various teachings that they 'received', for example in regard to the Lord's Supper (ch 11) and the outline of the gospel (ch 15). This 'orality', however, was not the endless telling and retelling of stories by village raconteurs. Rather, it was structured 'top down' teaching from a teacher to pupils.

The book of Acts refers to 'the apostles' teaching' (e.g. 2:42) and most likely this took the form of such oral instruction. Doubtless this became part of the intellectual and spiritual formation among Jewish believers in the churches of Judaea.

This, however, is not what Luke means by saying that 'many... a narrative' had been 'handed over' to him. Luke is pointing to *written texts*. Luke is saying that before he came to write Luke-Acts 'many' had also but (previously) *written* a 'narrative' or account of the 'matters' now 'fulfilled' among them. By this he means 'matters' relating to Jesus and the early church.

These *written* documents have been 'handed over' to Luke by those who from the beginning (i.e., from the time of John the Baptist) had been 'eye-witnesses-then-catechists of the word.' In other words, the original disciples of Jesus who post-resurrection became preachers and teachers were the guarantors of the texts that they and others had written.

When did these eyewitnesses and teachers 'hand over' the texts to Luke? Most likely it was when Luke was in Palestine, c. 57-60, as in the final 'we' – passage in the book of Acts.

Do we see what this means? It shows that by (say) A.D. 60 written texts had been created. By means of a little detective work it has been possible to ascertain the texts that were 'handed over' to Luke and which he combined in his own 'orderly account' written for the catechumen Theophilus. These texts included (1) the Gospel of Mark, (2) Infancy Stories, (3) Resurrection stories, (4) a collection of parables and other teachings, and (5) a mainly teaching collection (also employed by Matthew).

In other words, at some point between Jesus' resurrection in AD 30 and the 'handing over' of these texts in AD 60 (?) 'many' persons had put in hand the compiling of various accounts relating to the ministry of Jesus. Most likely these texts were chiefly used for reading in the Jewish churches and there is no reason why they might not have been written soon after the birth of Christianity in AD 30 (or 33).

The Letter to the Hebrews and the Letter from James.

Are there any other windows through which we can look at Jewish Christianity in these early decades?

Possibly the Letter to the Hebrews is one such window. Reference to 'Timothy' locates it perhaps to the fifties and from either Corinth or Ephesus, cities where Timothy was active. The readers are Jews, Greek-speaking Jews and most likely Greek-speaking Jews in Israel, struggling to hang in with Jesus as the Christ. Perhaps they were 'Hellenists' (Greek-speaking Jewish Christians) who did not flee from Israel, but remained. The writer is one who was taught by the original disciples of Jesus (2:3). Barnabas is one possible candidate.

The Letter of James is another, though written from Israel to Jewish believers in the Diaspora. Most likely, too, it is early, earlier than AD 62 when James bar Yosef was killed. Arguably James' letter pre-dated Paul's first letters, making it the oldest surviving document of Christianity. Regrettably neither Hebrews nor James give us any way of fixing their dates so as to secure their usefulness for our purposes.

The Witness of Peter.

Let us now turn to reflect on three passages that point to the earliness of the tradition about Jesus. In each case we

may trace the presenting teaching back to Peter and to the earliest times in early Christianity.

I. *Romans 1:1-4*

By way of background we note Paul's affirmation of the faith of the Roman believers. In a context of mission baptism in chapter 6 he thanks God that they had been 'obedient from the heart to the pattern of *teaching* to which they were handed over' (v17). In chapter 16 he refers once more to 'the *teaching* you learned' (v17). I think it likely that the teaching in question approximated to that Paul rehearses at the head of the letter. That would make good sense, pointing to a fundamental teaching that he and they shared. Paul writes about:

- ...the gospel of God which he promised beforehand through his prophets in the Holy Scriptures concerning his Son
- who came from the seed of David according to the flesh
- who was set apart as Son of God in power according to the Spirit of holiness
- through his resurrection of the dead Jesus Christ our Lord...

It is understandable that many have seen in Rom 1:1-4 a creed or confession, for example, the two balancing yet contrastive statements:

concerning his Son

who came from the seed of David according to the flesh

who was set apart as Son of God in power according to the Spirit of holiness

through his resurrection of the dead

This text has the marks of a pre-formed teaching that Paul received at an earlier time and which he made his own.

It may also have been a teaching known to the believers in Rome. It is not unreasonable to conjecture that Roman Jews in Jerusalem at the Feast of Pentecost received this teaching at the time of their baptism. This would have been a quarter of a century earlier.

Upon further thought we see connections between this text and the Acts summary of Peter's preaching on the day of Pentecost (Acts 2). Both affirm Scriptural fulfilment:

- Jesus' descent from David
- Jesus' special relationship with God (in Acts is 'the Christ'; in Romans he is 'his [God's] Son')
- the resurrection
- that Jesus is Lord
- the coming of the Spirit

The connections between Rom 1:1-4 and Acts 2 are strong, especially when we remember that baptism was likely common to both. As well, we note that the Acts refers many times to 'the teaching of the apostles'. It is reasonable to assume a close connection between Peter's Pentecost sermon and this teaching to baptisands and that such teaching was cast in summary form similar to that reproduced by Paul in the opening lines of Romans. Furthermore, there are linkages between Paul's synagogue preaching in Damascus, Pisidian Antioch and Thessalonica - centred as it was Jesus as the Christ, son of David, Son of God - and Rom 1:1-4.

In short, the critical 'teaching' at the very head of Romans bears close connection between the preaching outlines first of Peter and then Paul in the Acts of the Apostles. The linkages are too close to be coincidental and point to christological formulations in the first weeks and months after Jesus' historical life span.

II. *Philip the 'Evangelist'*

The book of Acts calls the Greek-speaking Jew Philip, the 'Evangelist.' Scattered from Jerusalem as a fugitive from Paul's attacks we see Philip first in Samaria, second, on the road from Jerusalem to Gaza speaking to the Ethiopian and third, preaching to all the towns on the coastal strip from Azotus to Caesarea.

We hear echoes of his preaching. To the Samaritans he said that Jesus was 'the Christ' (8:4) and in response to the Ethiopian reading Isaiah 53 he preached to him Jesus.

It is surely no coincidence that Philip's preaching echoed the teaching of Peter in Jerusalem. In the summaries of sermons in Acts we hear Peter say many times that Jesus is 'the Christ' (2:31, 38; 3:18, 20); that Jesus is of the 'seed of David' (2:30), the Lord's 'anointed' (4:26). We can see why Philip preached Jesus as 'the Christ.'

Furthermore, we know why he identified the Servant of Isaiah 53 with Jesus. The Greek text of Isaiah 53 uses the word *pais* ('servant') the very word Peter uses for Jesus - God's 'holy servant - *pais* (4:27, 30). In Isaiah 53:13 God says 'my servant (*pais*) will be glorified'; Peter says 'God glorified his *pais*' Jesus (3:13). In other words, Peter understands that Jesus is the Lord's vicariously suffering *pais*. Since the 'apostles teaching' led by Peter impacted on a disciple like Philip it is no surprise that he immediately identified the *pais* the Ethiopian read about in Isaiah 53 with Jesus.

This suggests that the early apostles based on their involvement with Jesus and his death and resurrection and their Spirit-led reflection of OT texts.

Paul's Tradition about Christ (1Cor 15:3-5/Acts 10:40-41,43)

One of the major examples of oral tradition pre-dating Paul, that was 'handed over' to him and that he in turn 'handed over' is the teaching about the death and resurrection of Christ.

I remind you...the gospel that I preached to you that you also received...

For I handed over to you that which I also received, namely that Christ died for our sins

according to the scriptures that he was buried

that he was raised on the third day according to the scriptures

that he appeared to Cephas then to the twelve

then to more than 500 brothers, etc.

Of the various occasions Paul may have 'received' this critical tradition the most likely is at his baptism in Damascus soon after the Lord's confrontation with Paul on the road there.

Most likely this carefully crafted statement of belief was formulated in Jerusalem beforehand by the first apostles. This seems likely based on similarities with Peter's message to Cornelius, the Roman God-fearer.

Luke records a summary of Peter's sermon in his house including these extracts:

To [Jesus] all the prophets bear witness that everyone who believes in him receives forgiveness of sins through his name.

God raised him on the third day

God gave him to be manifest...to us...as witnesses.

If we were listening carefully we would have heard echoes from Paul's words in 1Cor 15:3-5.

Peter's words:

To [Jesus] all the prophets bear witness that everyone who believes in him receives forgiveness of sins through his name

are echoed in Paul's words to the Corinthians:

Christ died for our sins according to the Scriptures.

Peter's words:

God raised him from the dead on the third day

are echoed almost exactly in Paul's words:

He was raised from the dead on the third day.

Peter's words:

God gave him to be manifest...to us...witnesses

are echoed in Paul's:

He appeared to Cephas ... the Twelve etc.

In other words, Peter's formulated message to Cornelius has critical elements, even exact words, as in the pre-formulated summary Paul handed over to the Corinthians, which he in turn had received many years earlier, most likely at his baptism in Damascus. Most likely, therefore, Paul is depending upon a tradition of Peter's teaching about Christ.

So we have briefly touched on Rom 1:14, Acts 8-9 and 1Cor 15:1-5. In each case we are able to trace back critical Christological elements to the 'apostles' teaching' originating in Jerusalem and led by Peter in the narrow corridor of time after the resurrection of Jesus.

This means that Christology was 'high' from the beginning, that this 'high' Christology launched Christianity. The notion that a 'low' view of Jesus existed at the beginning, that incrementally increased by a series of evolution-like mutations cannot be sustained.

The Gospels: Pre-History

It is important to state the obvious. It is not known when or where the Gospels were written. Clearly they arose after Jesus and before the end of the century when they begin to be quoted in the early church writings.

Because they are written in Greek it is assumed that they did not arise in Israel, where Aramaic was the common language. Because, as it now appears, they are sophisticated literary works it is assumed that they could not have been written by 'mere fishermen'. Both these assumptions – that they could not have arisen in Israel nor be the works of Jesus' original circle – must be questioned. This we will do shortly.

The following observations about the Gospels can be made:

First, each of the finished Gospels had a pre-history that (a) went back through the prior years into the ministry of Jesus himself, and (b) occurred in Israel among Jewish Christians.

Second, Paul's citation of various 'traditions' that had been 'handed over' to him suggests that he had been subjected to oral instruction, most likely at the time of his conversion/baptism (1Cor 11:23; 15:3). In this case, the oral formulation must have been early in the history of earliest Christianity.

Third, Paul's letters also refer to 'word[s] of the Lord' (1Thess 4:15; cf. 1Cor 7:10, 12) and there are numerous echoes of Jesus' teaching (e.g., Rom 13:7; 14:14). Since Paul was mostly away from Israel apart from his early

years as a believer and had been not recently subject to local catechetical teaching it seems likely that these teachings of the Lord existed in written form.

This is confirmed in Luke's preface. It indicates that at the stage preceding his own writing various written texts were in circulation, among them the Gospel of Mark, the Infancy and Resurrection stories, and the teaching sources 'Q' and 'L'.

Fourth, to the five or so sources evident in Luke we must add the source called 'M' that Matthew employed, along with Mark and 'Q.'

In total then, there are no less than six texts that were extant for Luke and Matthew to amalgamate in their Gospels. These we must assume were written in Israel regardless of the destination Matthew and Luke may have had in their minds.

To summarise, in the years following Jesus there was among his followers in Israel intense scholarly activity (a) in establishing catechetical formulations, (b) in committing the teachings of the Lord to writing (though when this happened we cannot be sure), and (c) the assembling of OT texts now seen have been fulfilled in Jesus.

The Underived Gospels: Mark and John

The Gospels of Mark and John differ from Matthew and Luke. It is not possible to establish sources underlying Mark and John. Source criticism has been applied to John, notably by Bultmann and Fortna. Many if not most, however, remain unconvinced that separate strands have been woven together to form the Fourth Gospel.

Likewise many, though perhaps not most, find no evidence that John has depended on the text of Matthew, Mark or Luke. My own conviction is that the Gospels of Mark and John are the end-products of their own separate traditions that have run parallel with one another.

Leaving aside the question where and for whom Mark and John were finally published I argue that the pre-history of each occurred in mission work among Jews and in Jewish mission churches in Israel and that this pre-history stretched back to the earliest preaching after the first Easter.

The Gospel of Mark bears a close relationship with the outline of Peter's preaching to Cornelius summarised in Acts 10. The correspondence between the two is striking. Peter characterises his sermon as 'the word [God] sent to Israel.' Like the Gospel of Mark the sermon begins with John's baptism and the Spirit's 'anointing' of Jesus for his preaching of 'good news' accompanied by 'doing good' in healing all oppressed by the devil. Again, like the written Gospel, the sermon asserts that Jesus did these things both 'in the country of the Jews and in Jerusalem'. The sermon, like the Gospel of Mark, states that in Jerusalem they put him to death but God raised him the third day and manifested him to chosen witnesses. Both sermon

and written material begin and end at the same point and follow the same country-city sequence, with an uneven emphasis on Jerusalem.

Clearly, there is a connection between the two. The most likely explanation is that Peter established a format for preaching and that Mark followed that format as the skeletal framework for his written text. To that outline Mark has attached the numerous shortish episodes that narrate the teachings, healings and encounters Jesus had.

For its part, the Gospel of John does not have so clear a narrative outline as the Gospel of Mark. Unlike Mark the Fourth Gospel is predominantly set in Judaea/Jerusalem with occasional periods in Galilee. Both, however, reach their climax in the Holy City, Jerusalem. The Gospel of Mark, like Peter's sermon, is an entity in itself, an evangelistic presentation from start to finish.

We do not read the Gospel of John that way. Rather, in John, the critical elements are (1) the various 'signs' plus accompanying discourses, and (2) the geographical movements between Galilee and Samaria where respectively he is welcomed and acclaimed and Judaea/Jerusalem where he is rejected and finally killed.

To whom are these Gospels directed? In my opinion, the Gospel of Mark is directed towards readers who were impressed with Rome and Roman rule, who needed to understand that Jesus was the true 'Son of God.' The Gospel of John, on the other hand, appears to me to be directed towards Jewish readers who needed to understand that Jesus is the Christ who has superseded and eclipsed Judaism.

Again - in my view - there is no reason to doubt that both Gospels were written in Palestine in the milieu of Jewish Christianity by AD 60, quite possibly during the fifties. I propose that Peter and John had parallel, non-competing missions among Jews, and that each issued in written texts primarily for reading in the churches. Peter's Gospel was committed to writing by his amanuensis Mark.

The Gospel of John was written by John Zebedee, second mentioned apostle in the book of Acts, companion of Peter's and the third 'pillar' of the church in Jerusalem. I accept the tradition that John moved to Roman Asia (c. AD 60?). I feel strongly, though, that the Gospel of John was in principal written in Palestine. The tone of this Gospel is Jewish and Palestinian.

Interestingly it seems that material from the Gospel or from the Johannine tradition has found its way into Luke's text. There are examples of information in Luke that is also in John but not in Matthew and Mark, for example, (1) the woman's anointing of Jesus' feet with costly perfume and her wiping his feet with her hair, (2) Pilate's declaration 'I find no crime in this man', and (3) the post-resurrection appearances that emphasise his wounds and his eating with the disciples. It has been demonstrated that Luke

has depended on John and not vice-versa (Anderson 1996:275-6).

Nagging Questions

Several nagging questions, however, conceivably inspire doubt about this reconstruction.

One is the 'Roman' character of Mark's Gospel. This Gospel is noted for its several 'Latinisms' (e.g., *spekoulator*/executioner; *kenson*/tribute) and also for its 'imperial' sounding beginning, 'The Gospel of Jesus Christ, Son of God.' The latter is matched by the Roman captain's assertion that Jesus was 'truly Son of God.' 'Gospel' and 'Son of God' were deeply embedded in Roman vocabulary for the Emperor found on coinage and in inscriptions.

Is this really a problem? Palestine was significantly 'Romanised' as we recognise in (1) place names like Caesarea, Tiberias, Sebastos = Augustus, Bethsaida Julia, (2) prominent buildings like the Antonia or Caesareium and (3) Roman names like Agrippa given to the son and grandson of Herod. Roman engineers designed and built the Jerusalem Temple and the great harbour at Caesarea. Roman coins were in everyday use. Roman legionary troops were regularly seen. It is now established that Latin inscriptions and papyri were by no means unknown.

That Mark was written out of and against Roman imperialism is entirely imaginable in a setting in Palestine. It is not necessary to posit an Italian provenance.

Another question relates to both Gospels, that is, they are written in Greek. Half a century ago it was widely believed that the Land of Israel was a Pharisaic enclave and that Hebrew was the language of the scribes and its cousin Aramaic the language of the common man. This almost demanded that these Greek gospels were written outside Palestine. That 'Hebraic' view of Palestine may have been true in the years prior to Alexander's dazzling campaigns in Anatolia, the Levant, Egypt and Mesopotamia. In the years following under the kingdoms of Alexander's 'Successors' those regions were penetrated and in some cases permeated by Hellenistic culture, borne on the wings of Koine Greek. This is true of Israel, as we now know.

The principalities in which Jesus chiefly moved – Galilee and Judaea – were ringed by Greek centres. These included the independent city states on the coast (Gaza, Agrippias, Ascalon, Dora, Tyre and Sidon) and their inland counterparts (Hippos, Gadara, Scythopolis, Gerasa and Philadelphia). Though governed by a Herodian, the tetrarchy of Philip to the north west of Lake Galilee was predominantly Greek in character including the principal cities Bethsaida Julia and Caesarea Philippi.

As well, cities within Judaea and Galilee were hellenised, including Jerusalem itself as well as Azotus, Jamnia, Joppa, Sebaste, Caesarea, Tiberias and Sepphoris. The upper echelons of society - landowners, courtiers, senior military officers, bureaucrats – were linked with those who

held power in the cities, whether a Herod, a High Priest or leader in the Regional Council. These persons would be capable of writing and reading Greek, a factor that tended to cascade the value of Greek learning downwards towards the upwardly mobile, the 'wannabes' of those times.

Furthermore, many belonging to the lower orders would have been able to converse in Greek, especially those buying and selling from the streams of travellers and merchants streaming along the Via Maris or crossing over from the thirty or so Greek city states into Judaea and Galilee to buy and sell.

From the book of Acts we learn of Greek-speaking Jews – the Hellenists – some of whom became disciples, led by Stephen and Philip. The same book points to at least seven Greek-speaking synagogues in Jerusalem; there may have been many more. One of the most prized archaeological finds in Jerusalem is the Theodotus Inscription written in Greek, pointing to a synagogue and guest-house for Diaspora Jews. Needless to say numerous other Greek remains have been found – whether funerary inscriptions in Jerusalem or texts on papyrus in Qumran, Masada and Muraba'at.

In short, the world of Jesus and the missionaries in Israel was a bi-lingual world in which Greek was highly significant. It appears that many of the OT texts quoted by Jesus were from the Septuagint, the Greek OT. Evidently Jesus was familiar with the Greek OT. The incident with the Syro-Phoenician woman in Tyre and Sidon implies a conversation in Greek. Likewise, Pilate's interrogation of Jesus implies a Greek conversation.

It is striking, though not altogether surprising in view of the above, that these Gospels and indeed sources used in Matthew and Luke should be in Greek. True, Mark has Jesus speaking in Aramaic on several occasions (Talitha Koumi, Ephthatha, Abba, Eloi Eloi Sabacthani) and John mentions some places by their Aramaic names (e.g., Bethzatha, Gabbatha, Golgotha) and uses the Aramaic words Messiah and Rabbouni. Mostly these are translated into Greek, implying that the readers are not Aramaic speakers.

So did Jesus always speak Aramaic, in which case the first missionaries fairly soon translated his words into Greek? Alternatively, did he speak Greek or Aramaic dependent on the situation? Or did he chiefly teach in Greek and only occasionally revert to Aramaic? This would explain why the Gospel tradition is uniformly Greek, perhaps in this language from the beginning? If the Aramaic and Hebrew culture proved hostile and resistant it might further explain the Greek direction taken by the early missions to Israel.

A further tantalising possibility is worth mentioning. It is that one or more of Jesus' disciples may have written down his acts and words. We now know of the existence of palm sized writing tablets of wood and wax in use at that time, including in Israel. If, for example, a Levi kept records of

passers by it is not impossible to conceive of such a person noting the teachings of their rabbi.

At this stage certainty is not attainable. But it is possible, quite possible in fact, that some of Jesus' teaching was in Greek and that it was written down at the time. This would explain the universal use of Greek in the Gospels of Mark and John and in various 'narratives' used by Luke and sources underlying Matthew.

Yet a third question sits at the back of the mind. Surely the original disciples of Jesus were too backward to produce documents like John and Mark that are increasingly seen as quite sophisticated literary forms? That they were 'only fishermen' and spurned by the chief priests as *agrammatoi kai idiotai* is the frequently unspoken assumption of the sometimes 'spiffy' modern day 'chief priests' of the theological academies. 'How could such men write such works? They must have been written late, by much cleverer, though unknown people.'

It is not recognised, as it should be, that the further one moves on from Jesus toward the end of the first and into the second century, the richness of understanding and articulation diminishes. Do we really stack the Didache, the Letters of Clement, Barnabas, Ignatius and Polycarp next to the Gospels and the Letters of our canon? These are long-winded, boring texts when set alongside the succinct treasures of the canonical writings from generations closer to Jesus.

Furthermore, it is worth remembering that not infrequently God raises up people from obscurity. This is true of Jesus in particular, whose home was a tiny and remote mountain village that suffered from a local proverb that said no good thing could come from it. The scholars in Jerusalem mocked him. 'How is it that this fellow has *letters* having never studied?' – that is 'with us'! Yet the existence of the Gospels and the rise and spread of Christianity is testament to his unique genius.

John Zebedee had been a disciple of this 'rabbi' as he had (most likely) been of 'rabbi' John the Baptist beforehand. In any case, originally from hellenised Bethsaida he was part owner in a fishing co-op in Capernaum shared with his brother James and Simon and Andrew bar Jonah. Intelligence and relative affluence with it is implied, and some level of education. His mother kept company with leading women like Joanna, wife of the tetrarch's estate manager. Some connection with the High Priest is also implied. The impression of a 'mere fisherman' begins to diminish.

John Mark has two names, one Jewish the other Greek or Roman, implying a family that spanned several cultures. The mother's house – most likely where the 'upper room' was located – ran to a servant and was sufficiently large to accommodate the group praying for Peter's release. This man accompanied Barnabas (his cousin) and Paul in the mission to Cyprus and Pamphylia. He was called *hyperetes*,

'catechist.' Peter calls him 'my son' and he is connected with Peter as his 'interpreter' by Papias, an early authority connected by only one remove from the apostles. Is there any good reason this John Mark might not have written the Gospel that bears his name?

Jesus and the Rise of Christianity.

Regrettably, Luke is so passionately concerned to tell Theophilus how the good news came from Israel to Rome it did not occur to him that people like us would love to know more about the first missionaries in Israel itself. For in that mission to the Jews of Israel lies the long-lost secret of the formation of the Gospel, both as to its skeletal outline and its numerous component stories.

Questions like: Was that tradition mainly oral or in writing? Was it initially in Aramaic? Or did Jesus teach substantially in Greek anyway? Did the tradition arise solely orally or did scribes record Jesus' utterances?

Answers are not yet certainly forthcoming, though the more we know about Palestine in that era the closer we may be getting to knowing. It would come as no surprise to me to discover that Jesus mainly taught in Greek and that his words were recorded. That at least sits well with the emergence of collections of teachings and indeed entire Gospels within two or three decades of Jesus.

So much, then, for these windows into early Christianity. Not all the details are necessarily as I have sketched them. But they are close enough. But do we see what this means?

Earliest Christianity has a high Christology and is historically back-to-back with Jesus. Earliest Christology is the Christology of the first Christians. Logically the Christology of the first Christians articulated the Christology of Jesus himself, authenticated by the powerful realities of the resurrection and the coming of the Spirit.

The attempts of re-definition offered by Crossan and Casey, for example, and before them of Bousset have at least one thing in common, whatever their differences. They refuse to face the facts - the historical facts – about Jesus, that he was in fact the Son of God, the Lord and the Christ. To go down one or other of those tracks is to embark on a journey into fantasy, not a journey into historical reality. Those journeys seem attractive to the post-modern mind as it twists and turns to escape personal commitment. On the other hand, the documents of the New Testament bring us face to face with the historical Jesus who is now the risen and living Christ, with the summons to bow the knee and the heart to him as Lord of all, as Peter told Cornelius.

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Bibliography

- Anderson, P.N. 1996 *The Christology of the Fourth Gospel*, Tübingen:
- Bousset, W. 1921 *Kyrios Christos* Gottingen: Vandenhoeck & Ruprecht, (ET 1970)
- Bousset, W. 1926 *Die Religion des Judentums im späthellenistischen Zeitalter* Tübingen: Mohr.
- Casey, M. 1991 *From Jewish Prophet to Gentile God*, Cambridge, T & T Clarke.
- Crossan, J.D. 1988 *The Birth of the New Testament*, San Francisco: Harper.
- Hengel, M. 1976 *The Son of God* London: SCM.
- Hurtado, L. 1988 *One God One Lord* Philadelphia: Fortress.
- Wright, N.T. 2000 *A New Birth?*, *SJT*, 53/1 pp72-91.

A Radiographic Study of the Head of a Child from Graeco-Roman Egypt

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Abstract: In the case described, a request to ascertain the age at death of a Graeco-Roman mummified head by dental radiographic means revealed some unexpected and interesting information. The radiographic study revealed extensive dental caries, an unexpected low level of wear on the teeth, and evidence of possible interceptive orthodontic treatment having been carried out on the child's teeth prior to death. The authors argue that the latter may have contributed to the death.

Key words: Orthodontics radiography mummification CT scanning diet

Introduction

The mummified head of a Graeco-Roman child belonging to the Australian Institute of Archaeology was to be prepared for exhibition purposes. The curators contacted the Forensic Odontology Unit at the University of Melbourne, Australia, requesting assistance. A facial reconstruction of the child's head as it would have appeared in life was to be made to enhance the exhibition. For an accurate reconstruction, it was necessary to know the age of the child at death. Plain and tomographic radiographs of the head enabled the developmental stages of several teeth to be examined and allowed a reliable estimation to be made. During the investigation, some interesting dental aspects of the specimen were observed which warranted further study. Computerised tomographic studies were conducted and the resultant images combined to form a three dimensional model. (Craig & Davey 1997: 37–39)

Description of the Specimen

The specimen was purchased or acquired by the founder of the Australian Institute of Archaeology Walter Beasley, possibly in the 1960's, and is of unknown provenance. Beasley began collecting antiquities of Egypt in the early part of the Twentieth Century and is known to have purchased ancient Egyptian artefacts from Lady Hilda Petrie the widow of William Matthew Flinders Petrie (Crocker 1990:65-67). Unfortunately records of the acquisition of the child's remains have not been found in the Institute's archives to date. The head had been on display in the Egyptian Gallery at the Institute's museum, Ancient Times House, for many years.

Initial non-invasive, non-destructive investigations of the unwrapped, mummified head show a child of seven to eight years old from the pre Christian, Graeco-Roman Period when the standards of mummification were believed to be declining (Walker 1997:12). The child's fringed hairstyle, the liberal application of resin and the flakes of gold leaf on the facial skin, possibly in lieu of a gold mask, are typical of the period when the Greeks and later the Romans influenced the burial practices of ancient Egypt. (Corcoran 1995: 2–3).



Figure 1: Head of a mummified child with post mortem damage to the nose and face. Flakes of gold leaf are still visible on the skin

The child's hair is relatively short with a fringe over the forehead, but it is not known whether this was a male or female hairstyle. Henna appears to have been used to dye the hair giving it a deep ginger hue. The condition of the existing hair provides a clue to the time of mummification after death. If decomposition had begun hair could be easily pulled out at that time or later, particularly during removal of linen bandages. In fact the child's hair is almost totally intact and in places where the resin is missing in small sections, the hair moves if exposed to circulation of air. (Figure 2)



Figure 2: Close up view of loose strands of henna coloured hair that have not been covered with resin.

A tiny oval shaped object is attached to the hair by the resin and has not been identified. Initially it was incorrectly thought to have been insect remains or insect infestation. The object does not appear to be jewellery or any other identifiable adornment. (Figure 3)

Two other observations worthy of note are on the skin of the mummy. Firstly, the facial skin shows a number of tiny holes that are perfectly round. Pathological investigation has determined that insect infestation of the body has not caused the holes. Secondly one of the ears has a dry powdery white substance near the ear canal that may have been residue left from the mummification process or due to recent fungal infestation. The substance has not yet been scientifically analysed. (Figure 4)

The specimen is in excellent condition with the features remarkably well preserved which also confirms little decomposition before mummification. The skin has the



Figure 3: Unidentified object trapped in resin on the mummified child's hair.



Figure 4 Left profile showing a facial split and a dry white substance near the ear canal. The disarticulation and cutting of the neck are obvious.

appearance of leather due to the application of resin, a practice used extensively in the Graeco/Roman Period to facilitate the preservation of tissue (Ikram & Dodson 1998:106). Remnants of linen adhere to the back of the mummified head. (Figure 5)

Large facial splits in the skin of the cheek and damage to the lips possibly occurred during subsequent drying of tissue after burial and are not considered to be pre-mortem injuries. There is a possibility that the damage to the upper lip, below the nose, was caused during the removal of the brain as part of the mummification process. The pressure of the mummy bandages on the nose appears to have caused some damage to the soft tissue and cartilage, post mortem. (Figure 6)

The neck is angled forwards indicating that the odontoid peg of the second cervical vertebra had been fractured post-mortem. This allowed the head to be forced into an unnatural position, probably retained by tight bandaging. The purpose of this procedure is unknown, but may have been for ritual purposes to allow the deceased to look towards the East side of the River Nile and the living. The head has been severed from the torso by a machete type blade in recent times, possibly to facilitate sale to a collector of ancient Egyptian mummified remains.



Figure 5: Back of the child's head showing a piece of linen attached to the resin on the hair.



Figure 6: Post mortem damage to facial area.

Radiographic Survey

Radiography is an excellent imaging modality for the investigation of hard tissue, although it must be always borne in mind that one is viewing a two dimensional image of a three dimensional structure. Plain radiographic films utilise a unidirectional beam and a film placed at right angles to the central ray of the beam. Normal anatomy, any variations, and the relationship of the structures can then be interpreted by varying the angle from which the image is taken and comparing the images.

Tomography utilises a moving x-ray beam and film arranged in such a way as to blur out all structures other than those of interest. The field of interest is termed the focal trough. Computerised tomography uses a computer to collate the results of multiple digitised tomographic scans. Results can then be viewed at an apparent right angle to the direction of the beam. The multiple images can be arranged digitally to form three-dimensional images by stacking them one on top of one another. This reconstruction can, with the aid of appropriate computer software, be rotated, cut in sections or segmented.

An x-ray of the teeth, known as an orthopantomogram (OPT), was taken to facilitate the estimation of the age of the specimen at death. Several technical difficulties faced the operator during the exposure of these films due to the extreme state of desiccation of the tissues.

The orthopantomogram posed further difficulties insofar as it was impossible to remove the cervical spine from the path of the x-ray beam and the view of the anterior region

was somewhat obscured as the beam passed through this area. Additionally, the machine did not allow sufficient adjustment of the kilo-voltage or milli-ampere in order to get a film of sufficient contrast to reveal all the structures. A satisfactory contrast was finally obtained by using a single sided mammography film placed backwards in the cassette, a medium intensifying screen and an exposure time of 13.3 seconds at 60 Kilovolts, and 9 milliamps.

Three plain skull films were exposed. These comprised a lateral cephalogram, an antero-posterior cephalogram and a modified antero-posterior view (occipito-mental). The lateral cephalogram was taken using a dental cephalostat, an x-ray machine attached to a gantry designed to produce standardised images that are used to measure facial growth for orthodontic purposes. The lateral cephalogram was then analysed according to the method of Bolton. Measured angles and distances were compared with published norms (Rakowski 1982).

Finally a computerised tomographic (CT) Helical scan was conducted, which provided further information as to the position of the structures seen in the plain films. The specimen was arranged in a supine position and the gantry of the machine altered to allow the x-ray beam to pass approximately parallel to the dental arch. The resultant images were examined visually and subsequently processed on a Toshiba 3D Alatoview workstation to produce a multi-planar reconstruction and movable 3D image (Pratt 1991). Subsequent 3D reconstructions



Figure 7: 3D reconstruction produced using a GE Light Speed Plus CT scanning machine and a workstation equipped with a GE Advantage Windows 4.0 program.

were produced using a GE Light Speed Plus CT scanning machine and a workstation equipped with a GE Advantage Windows 4.0 program. (Figure 7)

Interpretation of the Radiographs

The orthopantomograph (OPT) was the best source of information as to the age of the child at death. The radiograph shows an expanded view of the entire dentition including both erupted and unerupted teeth. The child was in the “mixed dentition” stage of development, as both primary and permanent teeth are present in the mouth. The teeth are in varying stages of development and the age at death can be estimated by comparing these stages of development with that of a contemporary population

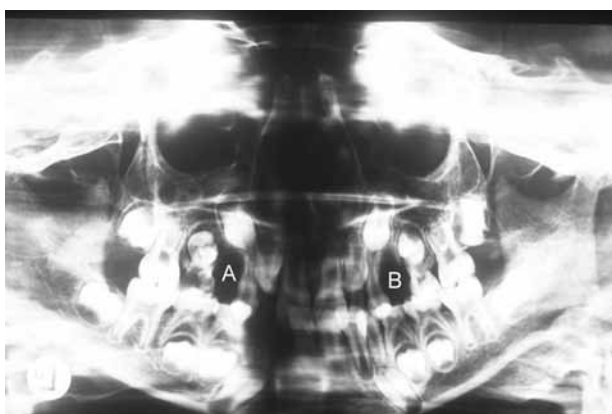


Figure 8: Orthopantomographic (OPT) image of the complete dentition of the unwrapped child's head. Note the dark spaces (A and B) where teeth have been removed from both sides of the upper jaw. Features in the midline were obscured by the abnormal position of the neck.

of children (Moorees, Fanning & Hunt 1963:490-1502). (Figure 8)

In this case, the stage of development of the first permanent molar teeth, the lower permanent canines and the lower second permanent molar teeth was consistent with that of a modern child of approximately 7 to 8 years of age (Ciaparelli 1963:22-44). For the purposes of facial reconstruction, the age of this child at death was estimated at somewhere around eight years of age. (Figure 9)

Several teeth were missing from the dentition. The lower left lateral incisor tooth was missing and the socket was intact. The upper first primary molars and the underlying first permanent pre-molars were missing with no evidence of either the sockets of the molars or the crypts of the developing pre-molars. There was no bone present in the area. Dental decay was present on the occlusal surfaces of the first permanent molars and the proximal surfaces of several of the primary molars.

There was very little wear on the primary molars. Primary teeth wear rapidly due to the relative thinness of the enamel and it is not uncommon for a primary tooth to be worn almost away by the time of exfoliation. Given the differences in diet between the Graeco-Roman times and the modern era, one would expect the wear rate to be higher, not lower than that of a modern child (Berkovitz 1977:313).

Discussion

Although an age of 8 years was thought to be the most reliable for the purposes of facial reconstruction, it is always difficult to extrapolate contemporary statistical information and relate it to a growth situation that existed 2000 years ago. Factors such as heredity, maternal and

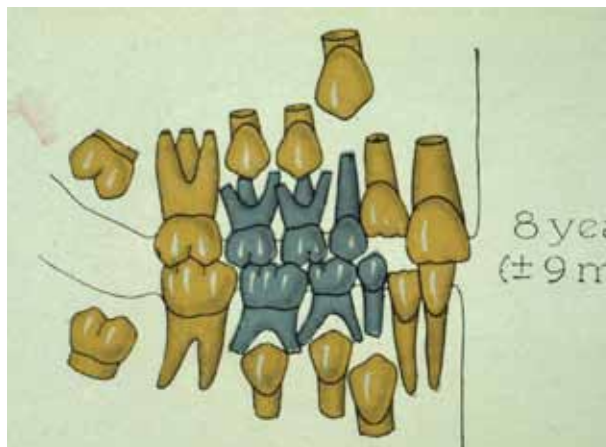


Figure 9: Diagram of teeth of an eight-year-old child as seen from a lateral aspect. Permanent teeth are numbered, primary teeth are labelled alphabetically. 1, 2 incisors; 3, C permanent and primary canines; 4, 5 premolars; D, E, primary molars; 6, 7 permanent molars. The teeth missing from the specimen are unshaded. The condition is identical on the other side of the child's mouth. (Diagram adapted from Schour I., & Massler, M. 1941).



Figure 10: Computer enhanced model of the child's head using forensic cranio-facial reconstruction techniques. Eye and hair colour were chosen before research into the original colour of the child's hair was completed. Forensic Sculptor Ronn Taylor.

infant nutrition, environment, the incidence of acute chronic disease and infestation, and climatic conditions, all have an influence on the rate of growth and development. For that reason, a standard deviation above the modern mean was used, but if two deviations were used, the age could be increased further. For the purposes of the reconstruction, eight years was deemed appropriate.

It can be seen from the OPT that several teeth are missing from the dentition. (Figure 10) The lower left lateral incisor tooth is missing and the socket is intact. An intact socket with no evidence of bone regrowth suggests that the tooth was lost peri-mortem. It would not be unreasonable to assume that the lower incisor tooth may have fallen or been knocked out prior to, or during the mummification process. This is a common occurrence with single straight rooted teeth, as decomposition of the soft tissue allows the tooth to simply drop out. (Figure 11)

An examination of the plain radiographs for the missing incisor failed to find it, but did reveal an odd object in the neck adjacent to the second cervical vertebra, which exhibited the same radio-opaque qualities as a tooth. It was not until a CT scan of the area was conducted that the object was identified as the missing tooth that was revealed lying horizontally and medially in the back of the pharynx.

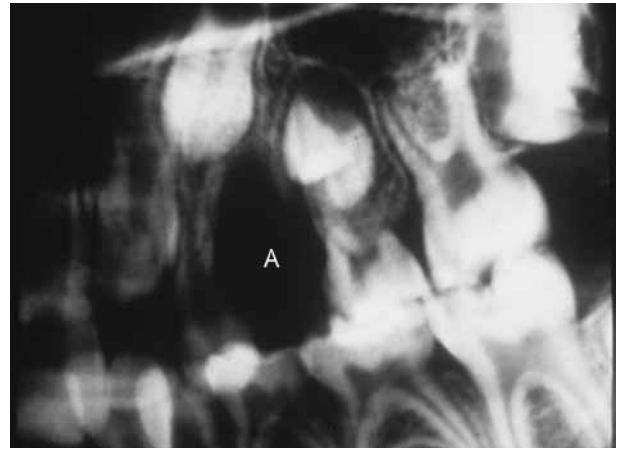


Figure 11: An enlargement of the OPT on the right hand side showing the area where the teeth are missing (A) and dark areas where dental decay is present (arrows).

A most unusual feature is the absence of the first upper primary molars and their unerupted permanent successors, the first premolars. The loss of a primary tooth prematurely from the arch due to decay or root resorption is not an uncommon occurrence. It is more difficult to explain the loss of the two upper first primary molars given the fact that the first permanent premolars are also missing. (Figure 12)

At the age of 8 years, the developing tooth bud lies between the three flared roots of the primary predecessor. The congenital lack of a developing permanent tooth beneath a primary tooth is rare. When this does occur it is confined to the last member of each group of teeth, whether it be the second incisor, or second pre-molar. This condition, known as hypodontia, mainly affects the permanent third molar, the second pre-molar and the lateral incisor in the population worldwide (Reprecht, Batniji & el Neweithi



Figure 12: 3D AlatoView Workstation reconstruction of unwrapped child's head with missing lower left lateral incisor.

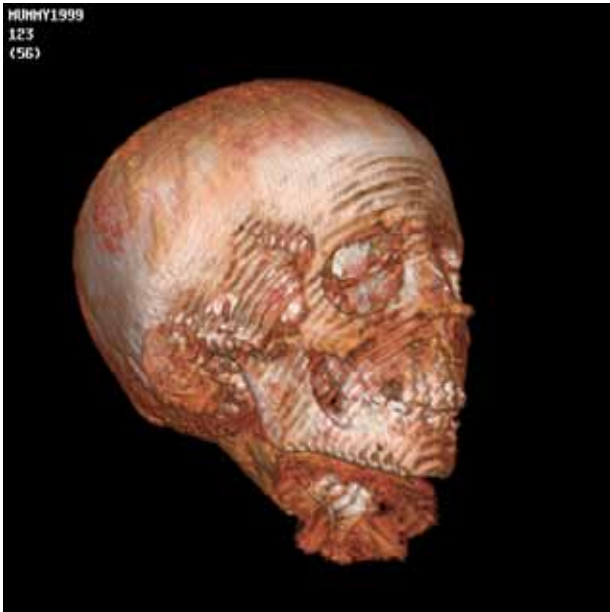


Figure 13: 3D AlatoView Workstation reconstruction of unwrapped child's head showing missing upper first primary molar and unerupted first premolar.

1986:43-46). As there are no published figures citing the incidence of missing upper first pre-molars, nor are there any reports in the literature describing such a case, it may be concluded that this would be extremely rare.

If the tooth buds had not developed, alveolar bone would be present in the area in their place. The lack of bone indicates that something else had occupied the space some short time prior to death. Subsequent to the presumed loss, there had been insufficient time for the healing process of reparative infill of bone to occur prior to death. Examination of the CT scans confirmed the lack of alveolar bone in the area of the first pre-molar tooth buds. There was no evidence of the walls of the bony crypts in which they would have developed. The edges of the defects appeared rough and jagged, the shape of the defect corresponding roughly to that of the first primary molar and the underlying first permanent pre-molar together. (Figure 13)

The occipito-mental skull view provided a better image of the upper and lower anterior teeth than was possible on the OPT. The central incisors are erupted, the lateral incisors are erupting and the unerupted permanent canines can be seen within their crypts. The four upper incisor teeth are somewhat imbricated and the erupting upper lateral incisors are rotated. The unerupted upper canines are well forward of their expected position at 8 years of age. The angulation of the crowns would indicate that had eruption occurred some 4 years later, the canines would have occupied a labial and anterior position, giving the child a "vampire" appearance. (Figure 14)

The overall appearance of these anterior teeth is that of severe crowding of the upper dental arch. This theory was borne out by the results of analysis of the lateral cephalometric image. Cephalometric analysis measures

the relationship of the teeth and their supporting bones to the base of the skull. It demonstrated mathematically that the child had an extremely crowded dentition set back somewhat from the base of the skull. The length of the upper and lower jaws is extremely short and would have been unable to accommodate a full complement of 32 teeth without some of the teeth being pushed out of the arch as they erupted into the mouth. Even though the jaw grows in length, there would never have been enough room for all the teeth. Therefore had the child grown to adulthood the facial complex could not have accommodated all the teeth, the child's physical appearance would have been compromised and the teeth would not have occluded correctly. (Figure 15)

The usual form of treatment for tooth crowding in modern times is to selectively reduce the number of teeth in the arch by extraction, thereby allowing the remaining teeth to fit into the available arch length. Although tooth banding to assist the teeth to move into their final position usually follows this initial treatment, satisfactory results can be obtained without this if the timing of the extractions is correct.

There is no evidence from the literature that physicians of the Graeco-Roman Period practiced cosmetic procedures of any kind, let alone preventive orthodontics. A decision to deliberately remove these teeth in order for the canine teeth to fit into their proper place during development implies knowledge of tooth development patterns and the likely results to be expected from treatment. In the days before modern anaesthesia and aseptic techniques, this would have been a serious undertaking.

The removal of primary first molar teeth together with the developing tooth buds beneath them is a surgical procedure. It requires sterile operating conditions if healing is to occur without complications. The most common complication is localised osteitis, an inflammatory process that is self-limiting; the familiar "dry socket" that occasionally follows

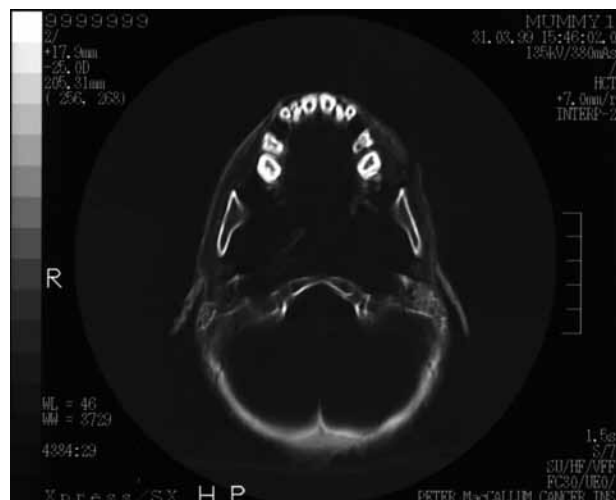


Figure 14: CT scan slice through the upper teeth. The outline of the empty sockets can be seen bi-laterally.

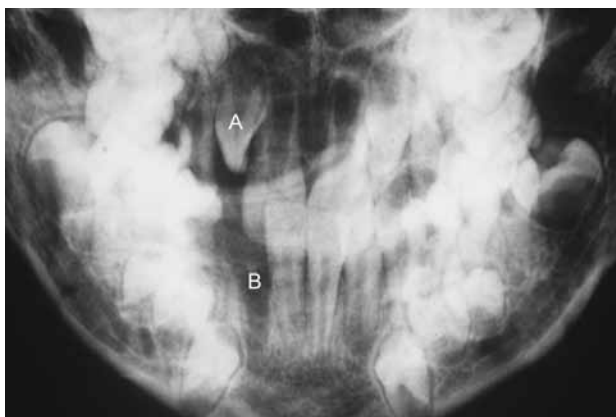


Figure 15: Angled (occipito-mental) view of the anterior teeth shows the upper lateral incisor (A) and the socket of the missing lower incisor (B).

tooth extraction. If an individual is immunologically compromised for any reason, or the invading bacteria are particularly virulent, osteomyelitis may result. This is an acute condition characterised by high fever, prostration and pain. If left untreated, general septicaemia may result in death. This unfortunate consequence of surgery was a common cause of death in the days before antibiotics.

The sockets do not appear to have healed, and therefore it can be assumed that the operation occurred shortly before death. Whether or not it contributed to death is uncertain. It is only possible to say that there is a consistency between the evidence from the radiographs and the known course of complications following surgery in a non-sterile environment.

It was observed that the child suffered from dental decay. Decay appears on a radiograph as a radiolucent (dark) area within the tooth structure either in the contact area between the teeth or beneath the enamel on the crowns where the grooves have harboured bacteria and sugars. Dental decay is a disease reliant on both the presence of bacteria and a very high frequency of fermentable carbohydrate in the diet. From a review of the literature (Filce Leek 1972:126) it would appear that dental decay was somewhat of a rarity in Pharaonic Egypt where the cleaning of teeth was practiced and the diet was relatively sugar free (David & Tapp 1992:118; Filce Leek 1967:53). By the Graeco-Roman Period the incidence of dental decay had increased significantly and the diet was such that fermentable carbohydrate was unusual but not unknown. This was partially due to the foreign influence on the ancient Egyptian diet (Nunn 1997:203). Evidence of the consumption of beer, wine, honey, fruit juices and dried fruits has survived in tombs indicating their use in daily life (Poole 2001:177). The use of honey as a sweetener and for medicinal purposes is well documented. Sugar cane had been known in the Greek world since the fourth century BCE although it was not grown in Egypt until the Arab Conquest in the seventh century CE (Lucas 1989:24-25; Bowman 1986:40).

As was the case in Pharaonic Egypt, severe dental conditions were prevalent in the community as a whole. These included pulpal necrosis and periapical abscesses, which occurred subsequent to the rapid wear of the dentition (David & Tapp 1984:104-131). Tooth wear has been attributed to two factors: firstly the habit of grinding grain in stone quern thus accidentally incorporating particles of stone in the flour, and also to the general sandy environment which would have permeated the food eaten by the entire community. The fact that this child exhibits no wear on the erupted permanent molars may not be an unusual occurrence given the fact that the teeth had been in function in the mouth for only 2 years. However, one would have expected a great deal more wear on the occlusal surfaces of the primary molars. Wear on the primary molars is not an uncommon occurrence amongst modern children. This occurs due to the relative thinness of the primary tooth enamel, abrasive food in the diet and the tooth grinding habits of many young children.

Therefore this child can be assumed to have consumed a diet that was somewhat out of the ordinary for the time. In all probability it was a diet that was low in abrasive qualities and high in fermentable carbohydrates, which caused decay in the teeth. There may have been a medical condition that precluded the consumption of some forms of solid food.

In addition, the child may have been breast fed for a prolonged period. Prolonged breastfeeding for convenience and supplementary birth control was not uncommon in ancient Egypt and occurred among all classes either by the natural mother or by a wet nurse until the period of weaning was reached. After infancy, breast milk alone contains insufficient calories for growth, and



Figure 16: Lateral cephalogram showing the disarticulation of the cervical spine and the missing lower incisor (A) that has fallen into the back of the pharynx. The anterior position of the canine teeth (B) and the areas where the teeth have been removed are clearly visible.

the child would have required other sources of nutrient to aid his development (Short 1992:12).

Conclusion

From a radiographic study of the mummified head of a child, a number of inferences can be made concerning the composition of childhood diet in Graeco-Roman Egypt, and the treatment of dental malocclusions among the more affluent classes. It is unfortunate that the literature does not contain further information from which it was possible to quote precedent. It will not be until further specimens that have been subject to a similar radiographic study to be sure whether or not cosmetic dentistry in the form of interceptive orthodontics was an established practice in Graeco-Roman Egypt.

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Bibliography

- Berkovitz B.K.B., Holland, G.R. & Moxham, B.J. 1997 *Oral Anatomy Histology & Embryology*, 2nd ed. London: Wolfe Medical.
- Bowman, Alan K. 1986 *Egypt after the Pharaohs 332 BC - AD 642*, London: BMP.
- Carlton, Richard 1992 *Principles of Radiographic Imaging*, New York: Albany.
- Ciapparelli, L. 1992 The Chronology of Dental Development and Age Assessment, *Practical Forensic Odontology*, Butterworth-Heinemann (Ed.) chap. 3 pp. 22-44.
- Corcoran, L 1995 *Portriat Mummies from Ancient Egypt*, Chicago, Oriental Institute of Chicago
- Craig, P & Davey J, 1997 Possible Evidence of ancient Egyptian Orthodontics, *Egyptian Archaeology* 18
- Crocker, P 1990 The Egyptian Collection at Ancient Times House, Merrillees R, *Living with Egypt's Past in Australia, Melbourne, Museum of Victoria*
- David, Rosalie & Tapp, Eddie 1984 *Evidence Embalmed Modern Medicine and the Mummies of Ancient Egypt*, Manchester: MUP.
- David, Rosalie & Tapp, Eddie 1992 *The Mummy's Tale*, London: Michael O'Mara Books.
- Doxiadis, Euphrosyne 1995 *The Mysterious Fayum Portraits: Faces from Ancient Egypt*, London: H.N. Abrams.
- Filce Leek, F. 1967 The Practice of Dentistry in Ancient Egypt, *Journal of Egyptian Archaeology* 53 pp. 53-57.
- Ikram, Salima & Dodson, Aidan 1998 *The Mummy in Ancient Egypt*, London: Thames & Hudson.
- Lucas, A. 1989 *Ancient Egyptian Materials and Industries*, London: Histories and Mysteries of Man.
- Moorees, C.F.A., Fanning, E.A. & Hunt E.E. 1963 Age Variation of Formation Stages for Ten Permanent Teeth, *Journal of Dental Research* 42, pp. 1490-1502.
- Nunn, John F. 1996 *Ancient Egyptian Medicine*, London: BMP.
- Poole, Fredrico 2001 Cummin, set milk, honey: an ancient Egyptian medicine container (Naples 828), *Journal of Egyptian Archaeology*, 87 p. 177.
- Pratt, W.K. 1991 *Digital Image Processing*, 2nd ed. New York: Wiley.
- Rakosi, T. 1982 *An Atlas and Manual of Cephalometric Radiography*, London: Wolfe Medical.
- Reprecht, A., Batniji, S. & el-Neweithi, E. 1986 Incidence of Oligodontia, *Journal of Oral Medicine* 41, No 1 pp. 43-46.
- Schour I., & Massler, M. 1941 *The Development of Human Dentition*.
- Short, Roger 1992 Breastfeeding, Fertility and Population Growth, *Nutrition and Population Links Papers from the United Nations ACC/SCN 18th Session Symposium* pp. 33-46.
- Walker, S. (et al) 1997 *Ancient Faces: Mummy Portraits from Roman Egypt*, London: BMP.

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A Mummified Child

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Abstract: The investigation of the mummified child from the Graeco-Roman Period, as part of the Melbourne Mummy Project, has produced some interesting results that may offer an explanation for its poor condition. The body wrapped in linen and decorated with mismatched cartonnage coverings shows signs of being interred for some time before mummification. Although removal of the brain and internal organs has occurred post mortem, there is other evidence suggesting that the body has suffered unexplained injuries and damage not necessarily due to poor mummification techniques.

Key Words: Mummification; radiology; cartonnage

Introduction

Publications on the subject of mummification in the Graeco-Roman Period in ancient Egypt generally indicate a decline in the standards of mummification. Recent studies of mummies (Filer 1997:121-124) pose a number of questions about the theory of poorly mummified bodies of the Graeco-Roman Period. Reproductions of the x-rays show that the skeletons in two out of seven of the mummies studied (Filer 1997: pls 44, 45 & 46) were in some disorder or poor anatomical order. The poor condition of one was possibly caused by decomposition after wrapping (Filer 1997:12) and extremely tight bandaging, causing the dislocation of bones, in the other mummy (Filer 1997:124). The remaining five mummies' skeletons were in good to excellent anatomical condition, which suggests some level of competence in the mummification process.

Recent investigation of unwrapped children's mummies in

the British Museum collection show that all are extremely well mummified and in excellent condition. (Dawson 1968:pl XIX, a. 71, b. 72, and c. 73) A mummified child's head from the same period, that is held in the collection of the Australian Institute of Archaeology, is also in excellent condition.

Questions must be asked about how representative of the period were the specimens that were originally published and how accurate is the assumption that poor mummification techniques were universal in the Graeco-Roman Period. The only way to challenge this assumption is to investigate more mummies and mummification practices from all eras and areas of ancient Egypt, using modern medical technology.

When a complete mummy of a child featuring an early Graeco/Roman style mask was examined, the question of whether the mummification practices of the period



Figure 1: Mummified child with cartonnage mask and body panels over linen wrappings.

have been accurately published was originally not a consideration for the investigating team. Questions about the condition of the body, cause of death and the age of the child prompted the investigation by a multi-disciplinary team of experts and associates.

Description of the Specimen

The complete fully wrapped mummy, of unknown provenance, is described in a Sotheby and Company's 1965 catalogue as that of a child from the Ptolemaic Period, however, recent studies suggest a more general description of being from the Graeco-Roman Period is more appropriate. (Crocker 1990:70) The Australian Institute of Archaeology purchased the specimen at Sotheby's auction house in London on the twenty sixth of April 1965 for one hundred and thirty pounds sterling (Sotheby & Co. 1965:26). (Figure 1)

After arriving in Australia amidst much media attention, the Institute displayed the mummy in the small Melbourne museum, Ancient Times House, until 1999 when it closed this part of its operations. The specimen and a mummified head of a child were moved to forensic storage at The University of Melbourne's School of Dental Science Forensic Odontology Unit to enable the current research. Photographic slides of the mummy have provided images for further investigation of the cartonnage coverings and linen wrappings. The mummy requires extensive conservation as the linen is brittle and paint on the cartonnage needs to be stabilised. (Figure 2)

Linen and Cartonnage

The specimen is fully encased in linen wrappings and bindings with a cartonnage mask covering the face, neck and upper chest. Two separate cartonnage panels have been placed over the remainder of the front of the body extending



Figure 2: British Museum conservator, Dr Jenny Potter and Janet Davey examining the polychrome paintings on the child's mummy at the University of Melbourne's School of Dental Sciences. Damage to the mummy is clearly visible where the body panels of cartonnage meet.



Figure 3: Linen wrappings around the mummified child's feet showing varying thicknesses and types of weaving.

from mid thorax to just above the ankle area. The mask and the body panels show different styles of decoration and paint colours.

Investigations of the cartonnage decoration suggest that it may have been originally designed to fit an adult mummy, but were later cut to size to partially enclose this mummified child. Another possibility is that the mask and panels may have been added later for commercial reasons. The British Museum has at least one example of a mummy from the Graeco-Roman Period with pieces of cartonnage that are of different styles and construction (Dawson 1968:23 & plate a. 43 (6694)). These unexplained variations may have existed at the time of burial because the pieces were taken from other mummies, or they may have been added in more recent times to make the specimen more attractive for sale.

It is also possible that the panels and mask are original and for some reason have been painted in different styles, then partially enclosed by fine linen strips wound around the body on the diagonal in rhomboidal binding. There is an excellent example of this style of binding on the British Museum mummy (EA 24800) that does not entirely cover the mummy but is wound sparingly over the cartonnage panels to expose the decoration. In places it hides some of the artwork on the cartonnage panels and beautiful gold mask of the Graeco-Roman mummy (Taylor 1999:23); however, unlike the Melbourne mummy the mask and panels have the same decorative style and colours.

The child's mummy wrappings are of reddish brown unbleached linen, of varying qualities and thicknesses that is coarse in comparison with the finest linen from ancient Egypt but cannot be considered to be of poor quality. The warp and the weft are almost the same in the plain one over one under weave and the linen fabric is S spun in both directions, which is an indigenous weave of ancient Egypt. Inner bandages visible around the foot area, are of a coarse or possibly *tabby* weave. (Figure 3)

Many layers of linen impregnated with glue and plaster (Ikram & Dodson 1998:308), form the basis of the solid cartonnage mask. The mask has been roughly cut to cover the presumed facial area and upper chest. It does not extend beyond the ears or above the forehead. The eyes are clearly delineated with black paint in the typical ancient Egyptian style. (Figure 4)

The top of the mask reaches up to the mid crown level leaving the linen on the remainder of the crown area exposed. Below this area, the brow section is decorated



Figure 4: Mummified child with a solid cartonnage mask and fine cartonnage panels decorated with funerary images. The Four Sons of Horus can be seen facing toward the polychrome djed pillar that has deteriorated significantly. Damage to the linen caused by poor storage conditions is visible.

with brown stripes on a white background, giving the appearance of a broad fillet or headband. The facial area shows two different colours including a yellowish flesh tint resembling gold, from just below the mouth up to the eyebrows. Extensive research to find a mask with similar decorations in international museum collections has been unsuccessful.

Gods and Goddesses

The two panels on the body are relatively thin compared with the more solid mask, however, they have been prepared in a similar manner. The upper cartonnage panel extends down and abuts the lower panel. Its shape follows the form of the mummification bandages and features four poorly executed Sons of Horus: Qebsennuef, Imsety, Hapi, and Duamutef. Each rectangular section is divided by two vertical stripes and the central section is decorated with small vertical marks. The purpose or significance of the small marks was unknown until a recent discovery of an old photograph of the mummy in the State Library of Victoria's collection, that shows a Djed pillar which has deteriorated so badly, it is unrecognisable.

Fine paintings on the adjacent lower panel are decorated with religious iconography. The upper central section shows canopic jars placed underneath a lion shaped bier on which a mummy reclines. Below the funerary scene lie five, white, perfectly formed eight-petalled flowers on a viridian ground. Two images of women possibly representing the protective goddesses Isis and Nephthys, with their arms upraised in the pose of mourning, sit on either side of an offering table in the middle panel. The lower panel features a falcon, presumably representing the god Horus. The lower end of this panel is damaged and its edge appears to have been roughly cut. The finely executed paintings of the lower panel are more luminous and brilliant than the upper section and the mask.

CT Scans and X-rays

The child's mummy was x-rayed and CT scanned in 1995 and again in 1999. These investigations were to search for any clues as to how the child died, the age at death, any medical or congenital conditions and the type of mummification used for preserving the body. A small sample of tissue was also taken and sent to the University of Manchester Tissue Bank for DNA testing. The studies began with the assumption that poor mummification practices were common in the Graeco-Roman Period and that resin continued to be extensively used to accelerate and facilitate preservation of flesh. (Aufderheide et al 99: 202 – 203)

A number of medical experts have viewed the plain films and the CT scans to assist with the identification of medical conditions and forensic pathology. The CT scans were particularly valuable in identifying foreign objects, their positions and parts of the skeleton that appear abnormal or damaged. The x-rays show that the small child's



Figure 5: X-ray of complete child's mummy showing extreme distortion of the bones and the surviving teeth.

The intrusive adult metatarsal is visible on the right hand side of the child's cranium. A modern screw sits level with T8/T9 and posterior to the right humerus. A small artefact sits above and behind the screw.

skeleton suffered from extreme distortion from the skull down to the pelvis with bones lacking correct anatomical alignment. (Figure 5)

The lateral view of the child's skull show that it is disarticulated from the cervical vertebra, with the face pointing down towards the chest. The reason for the unusual position is unknown but it may have been disarticulated for ritual purposes or to reshape the body to fit within the cartonnage mask. Another suggestion is that by forcing the head into an unnatural position it would allow the forehead to give a solid foundation for a portrait board (Filer 1997:121 & 125). This would require unnecessary effort when extra padding of bandages would give the same result to support a board or a cartonnage mask. (Figure 6)

Under the mask area the calverium is deformed and fractured in several places with an overlap of the flat bones. The suture lines have opened up post mortem, inside the

wrappings and the right petrous temporal bone and the maxilla zygoma are not identifiable within the skeleton. There is a large deficiency in the posterior cranium through which folded membranous material is protruding. As the skull plates are not aligned, it was originally thought that the child might have suffered a major trauma causing a fatal head injury, possibly the result of a fall from a high structure. This hypothesis has since been discarded as it has become evident that decomposition caused the facial skin and scalp to partially deteriorate after the child's body had been wrapped in linen.

CT scans showed that the cranial cavity appeared large in proportion to the size of the face and the bones of the calverium appeared thinner than expected. The possibility of the child suffering from hydrocephalus was hypothesised. This was later discounted, as there was not any scalloping on the inner table of the bone and no enlargement of the pilituary fossa, which are both signs of hydrocephalus in children. (Gray 1994:35) If the skull had remained intact it would have appeared normal on x-rays.

To determine the age of the child it was necessary to determine the stage of development of the dentition in the mandible. Even though the mandible is fractured and dislocated, the developing crown of the lower left and right permanent molars can be seen clearly. The deciduous dentition in the mandible is complete with the exception of the lower right secondary and primary molar. The secondary dentition is unerupted. An estimate of four to four and a half years was determined by the stage of development of the first primary molar teeth. Several opaque objects resembling teeth can be seen elsewhere on

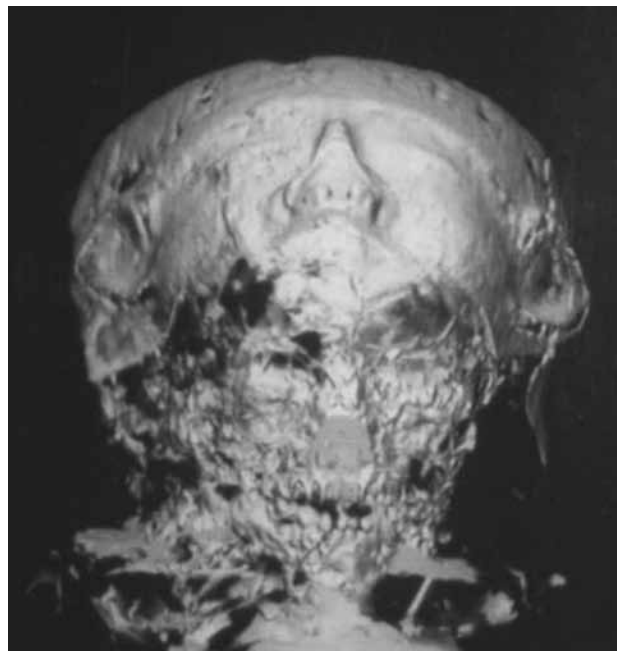


Figure 6: 3D reconstruction produced by a Toshiba X Press/SX with a workstation extension program of the complete mummy's head and mask.

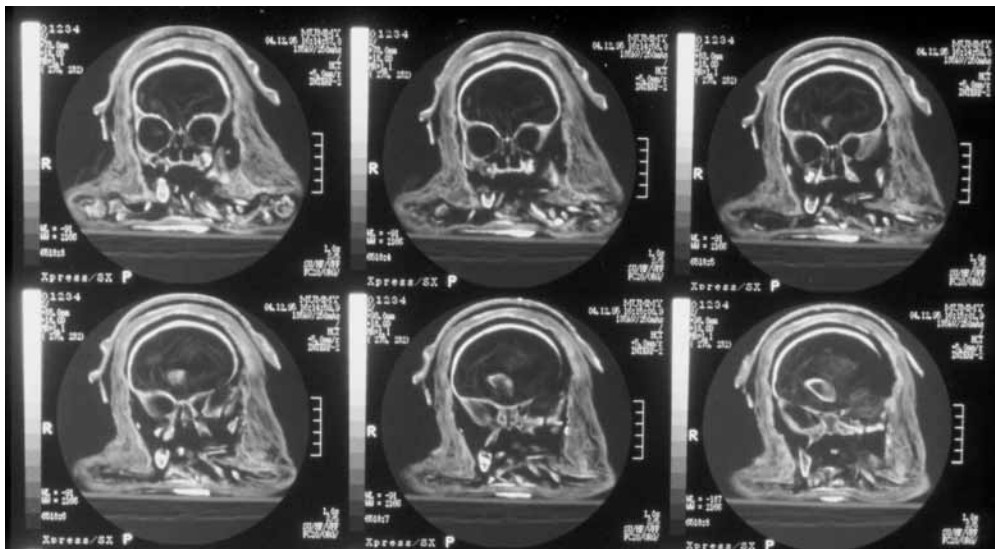


Figure 7: CT-scans of the head of the complete mummified child showing the mask, the abnormal position of the damaged skull and the adult metatarsal in the cranium.

the radiograph notably in the area of the left middle cranial fossa, the anterior cranial fossa and in the thorax. These objects sit adjacent to the temporal bone and behind the mastoid air cells and have been identified as the child's teeth that have fallen out after death.

Within the cranial vault there is fabric, presumed to be linen and an extraneous bone that has been identified as an adult metatarsal. (Figure 7) The reason for the inclusion of the metatarsal is unknown but one possibility is that it was used as a tool to push the fabric into the space that was originally occupied by the brain. The most elaborate and costliest mummification process included removal of the brain usually via the nasal passages and occasionally this may have been done through an opening near the base of the skull. Brain tissue deteriorates extremely quickly, especially in hot climates and may be removed relatively easily by manipulating a long hooked instrument up into the decomposing tissue. (Brier 1998)

The ancient Egyptians did not view the brain as an important part of the body and was therefore disposable and on a practical level it would have been almost impossible to preserve unless it was removed immediately after death. The ancient Egyptians believed that the heart, not the brain, to be the centre of intelligence and the organ that motivated good and bad behaviour. The retention of the heart in the body for the symbolic judgement in the *Hall of Two Truths* was absolutely necessary if the deceased was to pass the *Weighing of the Heart* test and go to the afterlife (Faulkner 1985:27-36).

No preserved organs are identified within the abdominal cavity. The treatment and storage of internal organs, during the mummification procedure, varied throughout ancient Egyptian history. In this case it is impossible to speculate about the fate of the child's internal organs. The child's spine shows cervical abnormalities and damage with multiple vertebrae between T1 and T12 absent or unidentifiable in the x-rays. The ribcage is collapsed and the bones in the thorax are compressed posteriorly and flattened to a height of less than five centimetres. The pelvis

is similarly flattened and deformed with a fracture in the right iliac crest (Gray 1994:118). To cause such a fracture, direct force would be required on the area and it is possibly post-mortem damage. If this injury occurred during the child's life, the iliac artery may have been severed, causing death. (Figure 8)

Above the flattened bones of the torso and below the



Figure 8: X-ray of child's mummy with a Y shaped fracture in the right iliac crest of the pelvis, cervical abnormalities and no preserved organs in the compressed thorax.

cartonnage decoration, linen wrappings with a thickness of approximately eight centimetres are clearly visible on the CT scans. The fabric directly over the chest appears to have been folded in places and also wrapped around the body. Strips of linen are clearly visible with the outer ones appearing to have been pulled taut over the inner wrappings that may have adjusted to the settling of the body after the wrapping process. Linen bandages underneath the torso are relatively thin, measuring approximately one and a half centimetres in width, which may have been caused by the weight of the body pressing on the linen. Wrappings around the legs are more evenly balanced with approximately the same amount of linen above and below the legs.

The humerus, radius and ulna in both arms are in good condition with the left arm turned in towards the body and slightly bent but not broken. The left hand is squashed right down against the sacrum and is level with the mid-thorax. Level with T8/T9 and immediately posterior to the right humerus and above the radius and ulna is a modern screw of unknown origin. The screw lies near to where the linen wrappings and possibly some of the mummified tissue have parted causing fine particles of dirt to fall from the mummy. The dirt may have accumulated because the mummy had been interred in a communal, underground burial gallery. (Hawass: 36-41) The damage to this tissue and linen suggests ancient or modern post mummification damage, possibly caused by movement. Sitting above and behind the screw is a small object or artefact, of unknown origin.

The long bones of the lower limbs are preserved in normal anatomical relationships common in bodies that have begun to decompose, the legs being the last part of the body to lose their integrity. Both tibiae are slightly bowed anteriorly. One knee is slightly lower than the other with the left patella present however the right patella is not obviously visible as there is a gap between the lower extremity of the femur and tibia. The feet are slightly crossed with the left foot in the uppermost position. There are growth arrest lines on the leg bones that may indicate malnutrition or disease. Growth arrest lines may also be non-specific as they record spurts of growth and of non-growth and have been identified in healthy children. Clearly visible on the plain films near the left patella is an area of opaque spots of varying shapes, which have the consistency of adipocere commonly known as “grave wax”. Adipocere, which becomes rancid, is caused by hydrolysis of body fat associated with the decomposition of the body. (Figure 9)

Investigation of the long bones, wrists and epiphyses confirmed the previous dental estimation of age. Radiologists, to estimate children’s ages, routinely use the stages of development of the epiphyses and apophyses. The epiphyses are of cartilaginous material that grow separately from the shaft of the bone, ossify during childhood then fuse during puberty (Sutton 1987:191). Between the ages of five and six years the radial head is in place below the capitellum, one of the bones that form the elbow joint, which develops between the ages of one to three years. At

the head of the femur, the greater trochanter becomes visible between the ages of three to five years but not more than five years (Keats & Smith 1977:218). This hat-shaped apophysis is a secondary growth centre and is visible in the x-rays of the mummified child as is the capitellum. The proximal epiphysis is visible at the top end of the tibia, along with the distal tibial epiphysis. The distal fibula epiphysis is present in the right ankle. Both epiphyses confirm the age of the child as between four and four and a half years of age.

Extreme Trauma

The child’s body has suffered more than expected severe damage even if the mummification practices were sub-standard. The condition of the body is similar to that of bodies found in shallow graves where the weight of earth or sand has forced the skeleton to collapse. Therefore it is possible that the child may have been buried shortly after death, either to hide the body or to temporarily preserve it



Figure 9: X-ray of the child’s mummy’s legs showing the long bones with both tibiae bowed anteriorly, “grave wax” near the left patella and the feet crossed.

until mummification could take place. The usual method of determining if a body has been moved from one site to another after death is to look for *hypostatic morbidity*. Hypostasis occurs if body weight presses on a particular area and the blood cannot drain down causing a clearly visible whiter area on the flesh. Since the child's remains clearly show evidence of being mummified, if hypostatic morbidity were present all evidence has been lost due to the absorption properties of natron. As there is no conclusive evidence of foul play from the surviving remains it is more likely that temporary preservation was the motivation for the interment and the damage to the body was not necessarily all caused by poor mummification practices.

Conclusion

After extensive research into this mummy and comparison with other similar mummies it is impossible to ignore the evidence in regard to the varying standards of mummification that may challenge current beliefs and theories. The research suggests that mummification practices in the Graeco-Roman Period were indeed of a higher standard than is generally believed. At first glance the child's mummified body described here appears to have suffered from undergoing a poor mummification procedure. Further research has suggested that the child was buried in a shallow grave for some time before mummification and this may account for its poor condition. There is also some evidence of post mummification damage to the skull possibly caused by post mortem drying, which is a separate issue to the damage to the torso. Without the observations of a forensic pathologist, who distinguished the difference between the two different areas of the body, the theory of poor mummification would probably not have been questioned.

This allows the accepted notion that the quality of mummification was sub-standard in the Graeco-Roman Period to be challenged, even though there are many other specimens that are in poor condition. Perhaps the comparative number of bodies being mummified increased during that period, thus accounting for the survival of so many specimens in varying states of preservation. The recent discoveries of large numbers of mummies in subterranean galleries in the Western Desert of Egypt (Hawass 2000: 23) suggest that possibly more people in the Graeco-Roman Period could afford elaborate burials. If a similar number of New Kingdom mummies were found there may be some revision of the notion that New Kingdom mummification practices were superior or more widely available.

The ongoing study of mummification, bandages, cartonnage masks and adornments will add to the understanding of the crafts associated with burials, mummification practices and rituals. As more specialists become involved in mummy research there are more likely to be significant discoveries in many areas associated with the living and the dead in ancient Egypt. The rapid advancement of technology will

allow for more new methods of non-invasive investigation to be practiced. The reason that new evidence is being found is because experts in many diverse fields are prepared to give their time to study the ancient mummies and their burials.

The development of the Melbourne Mummies Project and its investigations into ancient Egyptian mummified human remains is in response to medical, dental and provenance questions in regard to mummies and mummification practices. Its findings will expand the body of knowledge on the subject. The team is just one of many groups of specialists who are contributing to research into mummies and challenging previously held beliefs on ancient Egyptian health and funerary practices.

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Bibliography

- Aufderheide, A. C. et al 1999 Human Mummification Practices, *Journal of Egyptian Archaeology* 85
- Brier, Bob 1998 Mummification video
- Crocker, P 1990 The Egyptian Collection at Ancient Times House, *Merrillees et al Living with Egypt's Past in Australia, Melbourne, Museum of Victoria*
- Dawson, W.R. & Gray, P.H.K. 1968 *Catalogue of Egyptian Antiquities in the British Museum I: Mummies and Human Remains*, London: BMP.
- Faulkner, R.O. 1985 *The Ancient Egyptian Book of the Dead*, London: BMP
- Filer, Joyce 1995 *Disease* London: BMP.
- Filer, Joyce 1997 If the Face Fits: A Comparison of Mummies and their Accompanying Portraits Using

- Computerised Axial Tomography, Bierbrier, M *Portraits and Masks, Burial Customs in Roman Egypt*, London: BMP.
- Gray, Henry 1994 *Gray's Anatomy*, London: Magpie Books.
- Hawass, Zahi, 2000 *Valley of the Golden Mummies*, London: Virgin.
- Ikram, Salima & Dodson, Aidan 1998 *The Mummy in Ancient Egypt*, London: Thames & Hudson.
- Keats, Theodore E. & Smith, Thomas H. 1977 *An Atlas of Normal Development Roentgen Anatomy*, Chicago: Year Book Medical Publishers.
- Lichtheim, Miriam 1976 *Ancient Egyptian Literature Vol. II The New Kingdom*, Berkeley: UCP.
- Sotheby & Co 1965 *Catalogue of Egyptian, Greek, Near Eastern and Roman Antiquities. African, Oceanic, South American and Indian Art*, London: Sotheby & Co.
- Sutton, David (Ed.) 1987 *A Textbook of Radiology and Imaging Fourth Edition Paediatric Radiology, Vol. 2*, Edinburgh: Churchill Livingstone.
- Taylor, John 1994 CT Scanning of a Mummy, *Egyptian Archaeology* Vol 4, 15-16.
- Taylor, John 1999 Funerary Archaeology in the British Museum, *Egyptian Archaeology* Vol 15, 23.
- Walker, S. (et al) 1997 *Ancient Faces. Mummy Portraits from Roman Egypt*, London: BMP.

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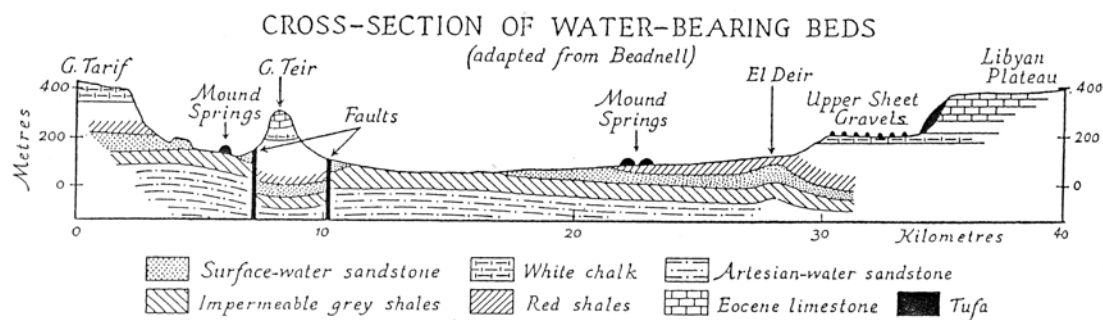


Figure 2: An illustration of the hydrology of the spring mounds (after Beadnell 1900)

oasis is mentioned in official documents of the Pharaonic period originating in the Nile valley, little evidence has yet to come to light in the oasis itself concerning this period.¹ This is in contrast to the neighbouring Dakhleh Oasis where extensive Old Kingdom remains have been discovered.² There is considerable evidence of Persian presence in Kharga, most notably the Temple of Amun at Hibis (the ancient capital of the oasis, slightly north of the modern town of Kharga), completed by Darius I in 522 BCE (Cruz-Uribe 1988; Evelyn-White & Oliver 1939; Winlock 1941). The temples of Ghueita and Qasr al-Zayyan testify to Ptolemaic presence in the region (Cruz-Uribe 1999; Sauneron 1955), but it is for the Roman – and later Christian Byzantine – period in the oasis that we possess the most information. A series of substantial military installations across the oasis speak of a formidable official Roman presence in the region (Reddé 1999).³ This is not a situation which should cause much surprise. The oases of Egypt's Western Desert formed part of the southernmost frontier of Roman presence in Northern Africa and movement of barbarian peoples in this border region required close monitoring. Furthermore, the chain of Western Desert oases were important parts of a network of African trade routes, both east-west between Libya and the Nile valley, and north-south between Egypt and the Sudan, and Kharga occupied a key position in this network (Morkot 1996).

From the fourth century CE onwards, a predominantly Christian presence is to be found in the Kharga Oasis. The extensive necropolis of Bagawat, although apparently of pre-Christian origin (Hauser 1932: 50), appears to have become a wholly Christian cemetery and demonstrates the presence of a large Christian population in the oasis, many of them people of means and social pretension – so their elaborate tomb chapels would seem to indicate (Fakhry 1951). Similarly, numerous monastic establishments were founded throughout the oasis, bespeaking a sizeable monastic population. Many of these monastic communities established themselves in structures which had served as pre-Christian temples or as fortresses. This phenomenon is indicative of important and far-reaching social transformations. In particular, the conversion of military installations into monasteries and churches indicates profound changes in the nature of the presence of the Romano-Byzantine state in the Western Desert oases.

The site of Ain Sa'af represents an example of such a Christian monastic site in the north of the Kharga Oasis.

Ain Sa'af and its Surrounds

There are a number of sites of archaeological interest in quite close proximity to Ain Sa'af. The nature of the relationship between Ain Sa'af and these other sites quite clearly deserves investigation. A longer-term goal of the current mission is to develop a model of the regional relationships between the various occupation sites on the plain to the north of modern Kharga, looking in particular at issues like hydrology, water usage and agriculture, military installations and their intervisibility, and the transformations in architectural structures reflecting changes in the religious traditions of the local populations.

The plain upon which Ain Sa'af stands is today desiccated and devoid of vegetation, with dunes encroaching from the scarp across the landscape. It is clear, however, that at various periods in the past, much of the plain in the vicinity of Ain Sa'af was under cultivation. Irrigation channels bringing water to fields are clearly visible around most of the occupation sites on the plain. The age of these irrigation works is not entirely clear and it is possible that some of them may be of twentieth century origin. However, some of them must be ancient. In general, ancient monastic communities exercised self-sufficiency in food production, just as they continue to do in Egypt today. Agriculture was an important part of a monastery's activities. The monastic communities of Ain Sa'af undoubtedly engaged in farming, and we might reasonably expect to find some evidence for such activities, including irrigation works.

Irrigation of course requires water. A feature of the region between the Gebel al-Tarif and the Gebel al-Teir is the occurrence of spring-mounds. These occur where faults in the impermeable grey shale layers allow artesian water from the water-bearing sandstone layers beneath to percolate to the surface, forming a characteristic mound on the plain (Figure 2). These spring-mounds were exploited as water sources in antiquity, the water being allowed to collect in a surface pool from where it could be channelled off into irrigation (Parsons 1971:173-174).

On the plain, some 300m to the west of Ain Sa'af, stands a large mound with clearly visible architectural remains. These include what appear to be substantial mud-brick



Figure 3: *Ain Sa'af II*

fortifications, as well as a small church. In 2002-2003, a sand dune was progressing across the southern side of this mound, rendering detailed investigation of the surface architectural remains impossible (Figure 3). However, a sketch plan was made of the church (Figure 4). As both the site of Ain Sa'af proper and the mound on the plain fall within the limits of the concession granted by the Supreme Council of Antiquities, it was decided to conventionally name the site at the foot of the Gebel al-Teir, Ain Sa'af I and the mound on the plain, Ain Sa'af II. Initial indications are that Ain Sa'af II, with its evidence of substantial mud brick fortifications encircling the upper part of a large earthen mound rising above the level of the plain, may be built on

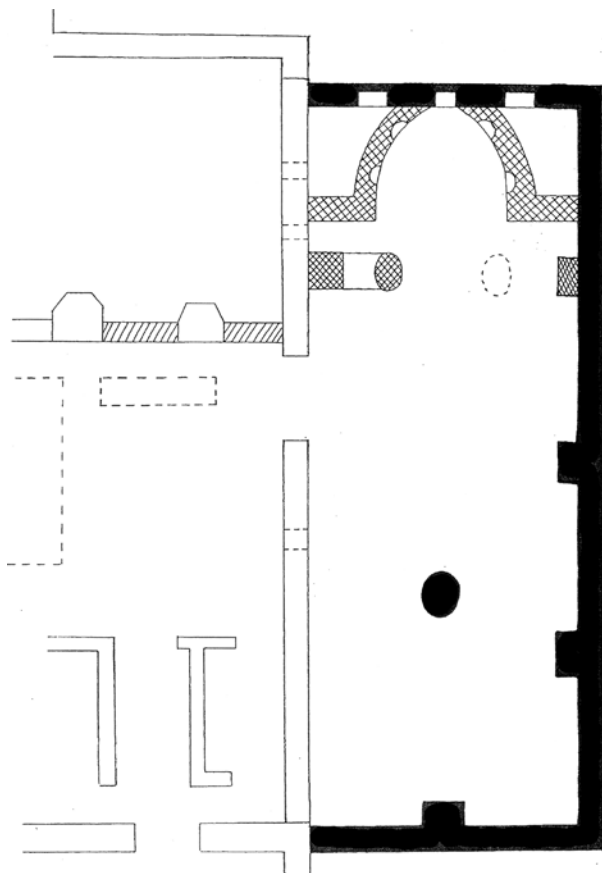


Figure 4: *A sketch plan of the Church of Ain Sa'af II*



Figure 5: *Tahunet al-Hawa*

such a spring mound. This accords well with the remains of irrigation channels visible on the plain surrounding Ain Sa'af II, but the presence of fortifications around the spring mound suggest that control of the water source may have been an issue of significance.

Another kilometre west of Ain Sa'af II, there stands a fortified mud-brick tower, known locally as Tahunet al-Hawa, "the wind tower" (Figure 5). The tower rises through four storeys and is approximately 11.5m tall (Wagner 1987: 170). Of Roman origin (Gascou & Wagner 1979: 13-14), the tower is now a hollow shell, although the sockets in the walls wherein sat the wooden support beams for the (presumably wooden) internal floors of the tower can be clearly seen. The function of this tower and its relationship to the other sites in the region is not wholly clear and will be the subject of future investigation. However, the clear line of sight which exists between the tower and the nearby fortress of Deir Mustafa Kasheph hints at its function as a watch-tower, providing a visual relay point between the fortress and other sites to the north of Kharga.

The fortress of Deir Mustafa Kasheph itself is a substantial mud-brick structure preserved to at least five storeys in height, situated in an elevated position above the plain, approximately two kilometres north of the Bagawat Necropolis and one kilometre south of Ain Sa'af I. The structure appears to have functioned for a long time as a fortified monastery, but its origins as a Romano-Byzantine period military installation seem clear. Wagner suggests that the fortress is to be identified with the *kastron* of Hibis spoken of by John Moschus in *The Spiritual Meadow* and mentioned in a fourth century ostracron from Doush in the

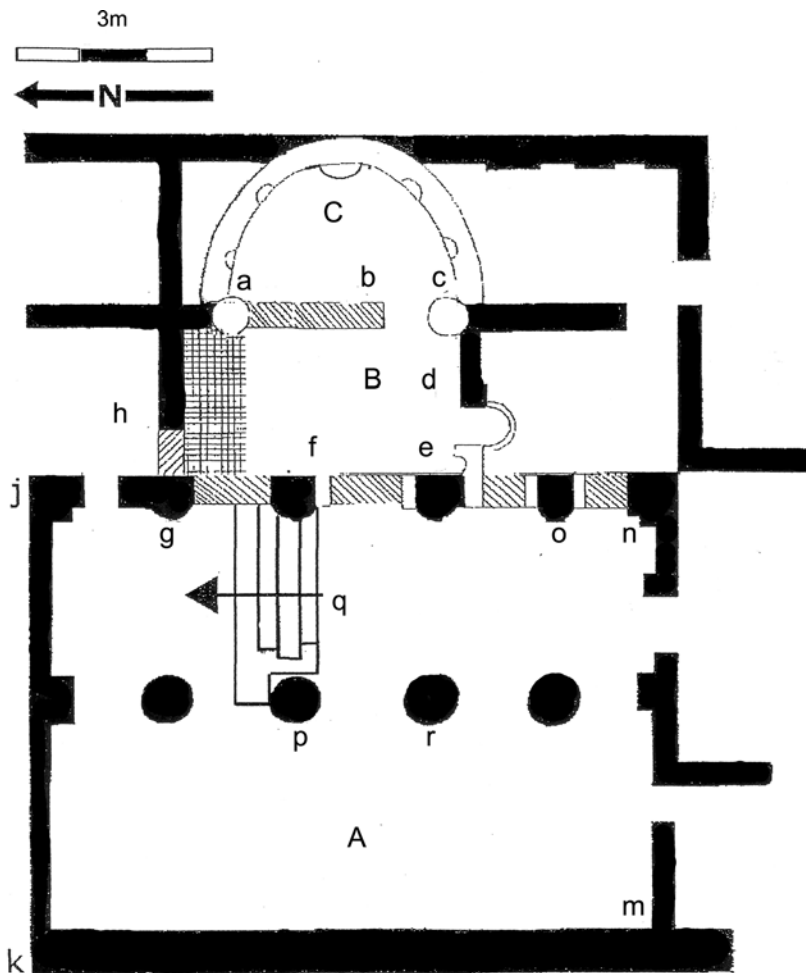


Figure 6: A sketch plan of the Church of Ain Sa'af I

a structure which, in construction and architectural style, is clearly related to the mud-brick funerary chapels of the Bagawat Necropolis.

As a part of the preliminary description of the site, a survey of surface pottery sherds was carried out in 2003. Diagnostic sherds were collected from the surface within and around the site of Ain Sa'af I and photographed. Much of this material had clearly been brought to the surface by the excavations carried out by the Kharga Antiquities Inspectorate and no context was recoverable. In 2004, study periods in the Al-Wady Al-Gadid Museum in Kharga allowed the comparison of these ceramic materials with materials from other sites excavated in the Oasis and held in the museum's collections. This comparison revealed the presence at Ain Sa'af I of ceramic material from the late Ptolemaic period, through the Roman and Coptic periods and into the early Islamic period. The nature of the collection and the mode of recording allowed no comment to be made on proportion of pottery present from any particular period relative to any other period, but the range of periods evidenced at the site is clearly indicated – late Ptolemaic through to early Islamic.

south of the oasis (Wagner 1987: 171).⁴

Also in the general vicinity of Ain Sa'af, about one kilometre west of the Bagawat necropolis and two and a half kilometres south of Ain Sa'af, lie the remains of the extensive *laura* of Deir el-Bagawat. This monastic complex contains, within its perimeter wall, numerous monks' cells, kitchens, a refectory and a church with a complex architectural history, containing a large number of Coptic inscriptions. The complex is preserved to two storeys in height in some parts.

Ain Sa'af I

The surface architectural remains at Ain Sa'af I were cleared by the Kharga Antiquities Inspectorate over a number of seasons during the 1980s and 1990s.⁵ The visible remains consist of an extensive complex of mud-brick walls, generally preserved to around one metre in height. At the northern end of this complex there is a church. The presence of a mud-brick stairway indicates that at least a part of the complex originally possessed one or more further stories. Directly to the east of the church is

The Church of Ain Saaf I (Figure

6)

The church of Ain Sa'af I evidences three clear occupation phases. An original large rectangular room, its long axis oriented North-South, appears to have had a screen wall with engaged columns added to form a nave and a *haikal* on the east side, with a semi-circular mud-brick apse added to the sanctuary. At some later point, when the church was clearly no longer functioning as a place of community worship, access between the nave and the *haikal* was closed off to form a self-contained unit consisting of the former *haikal* and apse. This small architectural unit appears to have been put to use as an hermitage. Its interior, including floor, was finished in fine white plaster and outside access was provided by a small, south-facing doorway. The plastered interior of the apse contains a number of Coptic inscriptions in red-brown paint, though these have suffered considerable deterioration due to exposure. Whether all of these inscriptions are to be associated with the phase when the apse functioned as part of the church, or whether some may derive from the period when the apse formed a part of the monastic cell is not yet clear.⁶



Figure 7: A view of the stairs in Room A of the Church of Ain Sa'af I

The nave of the church of Ain Saaf I reveals an anomalous architectural feature in the form of a short flight of stairs (Figure 7). The stairs, marked *q* on the plan, do not seem to relate architecturally in any clear fashion to the rest of the room around them. The stairs are on a north-south orientation, descending from north to south. The stairs are of stone ashlar construction (Figure 8), contrasting with the mud brick construction of the later alterations to the church.

Further detailed investigation of the floor levels in the nave A is required, but preliminary observations suggest that there is no abrupt change in floor level between the north and south ends of this room that would require the presence of a stairway. More important, however, is the fact that the eastern end of the stairs lies beneath the level of the wall with engaged columns *gfeo*. This can be seen clearly in Figure 7. The wall section *gfeo* clearly belongs to a phase of the building's use later than that of the stairs. The visible bases of the engaged columns *e* and *f* appear to be at approximately the same level as the top of the stairway. There is currently no clear indication that any sort of step has existed at the secondarily blocked doorway *fe*. It would appear that, during the phase when the doorways ornamented by engaged columns in the wall section *gfeo* were in use, the stone stairway *q* might well have been at least partially, if not wholly, concealed beneath the floor.

The presence of the stairway *q* within the church of Ain Sa'af I raises some interesting questions. The stairway obviously predates the construction of the screen wall *gfeo*, and therefore also predates the phase of use of the building when rooms *A*, *B* and *C* functioned as a church. Its position within room *A* suggests that this room has, at some point, extended further in an easterly direction, encompassing in part, or in whole, the area which now forms rooms *B* and *C*. Moreover, the stairway does not appear to serve any clear function in room *A* during the phase when this room served as the nave of the church. If one were to omit from consideration the later uses of rooms *B* and *C*, the

presence of the stone stairway *q* would seem to indicate that, in an earlier phase, room *A* has been a larger room, extending further to the east than it does now, with a north-south primary orientation. This is all highly suggestive of a pre-existing structure, potentially of pre-Christian origin, which has been taken over and modified for use as a place of Christian worship at a later date.

This scenario provides a good fit with the pattern of Christian appropriation of earlier pre-Christian structures observed throughout the Kharga Oasis—for example, the series of monastic foundations established in structures which have quite clearly been military installations of Roman period construction.

The probable north-south orientation of room A in its earlier form, together with the use of stone in the construction, associated in the oasis with construction elements of the Roman period fortresses and Temples and the funerary chapels of the Bagawat necropolis (Fakhry 1951: 23), lends weight to the suggestion that the church of Ain Sa'af I may well have been built into a structure which was not originally built as a Christian place of worship and which, in addition, may have been possessed of some pre-Christian religious function. That the building may always have had some religious association is suggested by its location—an isolated position, away from the ancient town of Hibis, at the western foot of the Bagawat hill with its large and impressive necropolis.

Inscriptions from Ain Sa'af I and II

A number of inscriptions, in both Greek and Coptic, have been recorded at Ain Sa'af I and Ain Sa'af II. Preliminary readings of a number of these have been made. The most interesting of the Coptic inscriptions, found on the wall of the plastered apse of the church of Ain Sa'af I, includes a list of the names of the apostles. The inscriptions found to date evidence an interesting distribution of languages employed. The inscriptions from Ain Sa'af I are in Coptic, the inscriptions from Ain Sa'af II in Greek. Whether this has significance for the liturgical language of the communities employing these two churches is not, as yet, clear. It has not been possible to date any of the inscriptions as yet, although a Copto-Greek graffito from Ain Sa'af II includes a *Xi Rho* monogram which is of a form similar to one to which Leclercq attributes a 4th century date (Leclercq 1907-1939: Col.2516).

Regional Relationships and Future Research

The plain lying between the Gebel al-Tarif and the Gebel al-Teir to the north of ancient Hibis is distinguished by the presence of a large number of occupation sites,

clearly indicated by visible surface remains, including both architectural structures and pottery scatters. An important question for future investigation is the relationship between the various sites in the region of Ain Sa'af. Already, the relationship between Ain Sa'af I and Ain Sa'af II, sites located only 300m apart and both possessed of churches, raises intriguing questions. The two churches evidence quite different floor plans and both are clearly possessed of complex architectural histories. It is of note that, to date, whilst Coptic inscriptional material has been recorded in Ain Sa'af I, the inscriptions discovered in the church of Ain Sa'af II are Greek. Imperative is to establish the relative dating of these two churches. This is an essential preliminary to determining what, if any, significance the internal renovations to these churches might have in terms of reflecting changes in the liturgies enacted within them. It is also necessary to consider whether the notable differences in the floor plans of the two buildings might reflect differences in the character of the liturgies which took place therein, and therefore, theological and/or ecclesiological differences between the groups who used the buildings. That there might have been various Christian groupings with their own distinctive theological orientations present in the oasis at any given time between the fourth and eighth centuries should not surprise us. It must be borne in mind that the Great Oasis served the Byzantine state as a favoured place of exile for heretical ecclesiarchs and other political opponents of the court (Schwartz 1966). Amongst the notable exiles to have sojourned in the Oasis, mention might be made of the Patriarch of Constantinople, Nestorius and, at various times, the Alexandrian Patriarch, Athanasius.⁷ The addition to the church of Ain Sa'af I of a screen wall creating a choir, or *khurus*, between the nave and the apse indicates a transformation in the liturgical life of the church. This particular architectural transformation is a phenomenon encountered in Christian churches throughout Egypt, beginning in the seventh century CE (Capuani et al 2002: 44). Herein may lie a dating criterion for the renovation of the church of Ain Sa'af I. By contrast, it may be noted that there is no clear evidence for the creation of a *khurus* in the church of Ain Sa'af II. Renovations to the church appear to have been carried out to form a semi-circular apse, screened by two columns supporting small arches from the nave, but there is no indication of a separate choir having been created. This suggests that, either the church of Ain Sa'af II had fallen out of use before the period of the seventh century, or that the liturgical life – and hence, ecclesiastical community – of the church of Ain Sa'af II remained distinct from that of the church of Ain Sa'af I (and the majority of the Egyptian church) in the period of the seventh century. This relationship will be a focus of future investigation.

A further focus of future investigation will be the inter-site relationship between the monastic settlements and the military installations on the plain. The monastic settlements all appear to be in line of sight of the various

military structures, and protection from brigandage, a common problem of the period, may be a motivation for this arrangement. But the fortifications at Ain Sa'af II, which may be associated with a water source, suggest that the function of the military installations may have involved more than simply the protection of local populations and that water supply and irrigation for agriculture may have been of sufficient concern to attract military protection. This potential connection between the positioning of the fortified structures and agricultural activity on the plain is reinforced by the fact that one of the small “watch-towers” on the plain to the north of Ain Sa'af incorporates a columbarium. A primary function of columbaria was – and is, to this day in Egypt – the collection of *guano* to be used as fertilizer. The location of this columbarium suggests that cultivation on the plain was taking place in the immediate vicinity of this structure.

As part of a comprehensive investigation of the inter-relationship between monastic structures, military installations and agriculture and water-use in the region in late antiquity, a thorough examination of ancient environmental factors will be undertaken, including paleobotanical investigation of the sites in the region and a plotting of water sources and remains of ancient irrigation systems.

The site of Ain Sa'af in the Kharga Oasis clearly possesses the potential to provide important insights into the social processes and ramifications of Christianisation on the Roman frontier in Egypt's Western Desert. Christianisation was a complex phenomenon with far more than simply intellectual or philosophical implications. The appropriation of earlier architectural structures, and the creation of new ones, imprinted Christianity on the local urban landscape. The foundation of monastic communities wrought, and reflected, significant social change in the broader oasean population and clearly impacted on local economic life. This must have had concomitant effects on agriculture and resource management. The role of the Great Oasis as a place of exile served to bring this distant frontier zone into direct contact with the political and theological wrangling of the imperial capital. The oasean peoples cannot have been untouched by these intellectual disputes being thrust right into their very midst. We find all of these aspects of ancient Christian presence in the Kharga Oasis represented in some fashion or another at Ain Sa'af and the sites in its immediate vicinity. The hope of our mission is that future investigation of this site will allow us to cast some light on these complex issues.

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Bibliography

- Beadnell, H.J. 1909 *An Egyptian Oasis: An Account of the Oasis of Kharga*. London
- Capuani, M., Meinardus, O., Rutschowskaya, M-H. & Gabra, G. 2002 *Christian Egypt. Coptic Art and Monuments through Two Millennia*, Cairo: American University in Cairo Press.
- Caton-Thompson, G. 1952 *Kharga Oasis in Prehistory*, London: The Athlone Press.
- Cruz-Uribe, E. 1998 Kharga Oasis, Late period and Graeco-Roman sites, K.Bard (ed) *Encyclopedia of the Archaeology of Ancient Egypt*, New York: Routledge, 407.
- Cruz-Uribe, E. 1988 *Hibis Temple Project I: Translations Commentary, Discussion and Sign List*, San Antonio
- Evelyn-White, H.G. & Oliver, J.H. 1939 *The Temple of Hibis in El Khargeh Oasis. Part 2, The Greek Inscriptions*, New York: Metropolitan Museum of Art.
- Fakhry, A. 1951 *The Necropolis of El-Bagawat in Kharga Oasis*, Cairo: Government Press.
- Gascou, J. & Wagner, G. 1979 Deux Voyages archéologique dans l'Oasis de Khargeh, *BIFAO* 79, 1-20.
- Hauser, W. 1932 The Christian Necropolis in Khargeh Oasis, *Bulletin of the Metropolitan Museum of Art* 27, 38-50.
- Leclercq, G. 1907-1939 *Dictionnaire d'archéologie chrétienne et de liturgie*, Paris: Letouzey.
- Minault-Gout, A., Deleuze, P. 1992 *Balat II. Le mastaba d'Ima-Pépi*, Paris: IFAO
- Morkot, R. 1996 The Darb el-Arbain, the Kharga Oasis and its forts, and other desert routes, *Archaeological Research in Roman Egypt*, Journal of Roman Archaeology Supplementary Series, 19, Ann Arbor, MI, 82-94.
- Parsons, P. 1971 The Wells of Hibis, *JEA* 57, 165-171.
- Reddé, M. 1999 Sites militaire romains de l'Oasis de Kharga, *BIFAO* 99, 377-396.
- Rossi, C. & Ikram, S. 2002 Petroglyphs and Inscriptions along the Darb Ayn Amur, Kharga Oasis, *Zeitschrift der Ägyptischen Sprache* 129, 142-51.
- Sauneron, S. 1955 Les temples gréco-romains de l'Oasis de Khargéh, *BIFAO* 55, 23-31.
- Schwartz, J. 1966 In Oasin relegare. *Mélanges d'archéologie et d'histoire offerts à André Piganiol*, Paris: S.E.V.P.E.N., 1481-1488.
- Soukiassian, G., Wuttmann, M., Pantalacci, L., Ballet, P., Picon, M., 1990 *Balat III. Les ateliers de potiers d'Ayn Asil. Fin de l'Ancien Empire, Première Période intermédiaire*, Paris: IFAO.
- Wagner, G. 1987 *Les oasis d'Égypte à l'époque grecque, romaine et byzantine d'après les documents grecs*. Paris: Institute Français d'archéologie orientale du Caire.
- Valloggia, M. 1986 *Balat I. Le mastaba de Medou-Nefer*. Fasc. 1. Texte. Fasc. 2. Planches, Paris: IFAO.
- Winlock, H.E. 1941 *The Temple of Hibis in El Khargeh Oasis. Part I, The Excavations*, New York: Metropolitan Museum of Art.

Endnotes

- ¹ Although see now Rossi, C. & Ikram, S. 2002 Petroglyphs and Inscriptions along the Darb Ayn Amur, Kharga Oasis, *Zeitschrift der Ägyptischen Sprache* 129, 142-51, for recently published Old Kingdom Grafitti in Kharga Oasis.
- ² The IFAO has excavated at Balat, with its impressive mastabas of the Old Kingdom governors of the oasis, since 1977. See Valloggia, M. 1986 *Balat I. Le mastaba de Medou-Nefer*. Fasc. 1. Texte. Fasc. 2. Planches, Paris: IFAO; Minault-Gout, A., Deleuze, P. 1992 *Balat II. Le mastaba d'Ima-Pépi*, Paris: IFAO; Soukiassian, G., Wuttmann, M., Pantalacci, L., Ballet, P., Picon, M., 1990 *Balat III. Les ateliers de potiers d'Ayn Asil. Fin de l'Ancien Empire, Première Période intermédiaire*, Paris: IFAO.
- ³ This may be compared with the far less obvious military presence in Dakhleh
- ⁴ *O.Doush* 220,3: κάστρα ἰβεως
- ⁵ The details of these excavations have yet to be published.
- ⁶ It may be noted that a recently published plan of the church of Ain Sa'af I gives absolutely no indication of the complex sequence of building phases clearly evidenced for the structure: Capuani, M., Meinardus, O., Rutschowskaya, M-H. & Gabra, G. 2002 *Christian Egypt. Coptic Art and Monuments through Two Millennia*. Cairo: American University in Cairo Press, 255.
- ⁷ Nestorius: Socrates Scholasticus *Ecclesiastical History* 7.34; Athanasius: *Apol.ad Const.*,32; *Apol. de fuga mea*, 7.

Review

Peter M.M.G. Akkermans, Glen M. Schwartz,
The Archaeology of Syria: From Complex Hunter-Gatherers to Early Urban Societies (ca. 16,000-300 BC), Cambridge World Archaeology Cambridge: Cambridge University Press, 2004 Pp xv, 476. ISBN 0-521-79230-4. \$110.00 (hb). ISBN 0-521-79666-0. \$40.00 (pb).

Review by Matthew Whincop

This much anticipated synthesis of recent developments in Syrian Archaeology is, as its back cover reminds us, the “[f]irst book to present a comprehensive review of the archaeology of Syria from the end of the Paleolithic period to 300 BC.” With such a broad period and diverse cultural history in mind, this book is certainly a good introduction to the archaeology of the region.

Previous attempts at an ‘Archaeology of Syria’ have been generally inadequate, often taking the form of mere addenda to the study of neighbouring regions, Mesopotamia, Anatolia, or the Southern Levant. In these studies Syria tended to be discussed only when deemed relevant. Admittedly, ‘Syria’ is a region of cultural overflow, or, as the authors themselves recognise, a ‘crossroads of civilization,’ which leads them, and I would hope also the reader, to question whether Syria is “a discrete geographical or cultural entity?”

While Akkermans and Schwartz answer both yes and no to this question, the brevity with which this issue is discussed, two paragraphs in the introductory chapter (page 2), is disappointing. One may have expected more explanation for the definition of the study’s boundaries. On the one hand, the rainfall-farming plains of the Syrian interior support larger populations than the coastal plains of Lebanon and Palestine, justifying its independent consideration, but then does not Syria also have a coastal plain? On the other hand, Syria boasts a different cultural horizon to the alluvial farming of Mesopotamia and the

highland culture of Anatolia. However, these two points ignore the fact that not all Syria lies within the 200mm annual mean rainfall belt. In the end the reader is left still asking the question, ‘does Syria host an homogenous cultural horizon, and therefore warrant our exclusive attention?’

This is the main fault with the book. Some discussion of the actual term ‘Syria’ may have alleviated the confusion. Is the reader to reconcile the term ‘Syria’ with the modern ‘Syrian Arab Republic’? There is obviously an awareness of the term’s ambiguity, but there is no real discussion, no presentation of an argument as to why we might consider Syria separately from Lebanon, Palestine, south-eastern Anatolia or northern Iraq. One might argue that the Syrian coast, particularly during the early Iron Age, bears more resemblance, comparatively speaking, to the coast of Lebanon and northern Palestine. Or again, should we consider the Amuq merely an area of cultural overlap, or a coherent component of the ‘Syrian’ cultural horizon?

This work is a survey of archaeological work, and as a result some areas of discussion are somewhat brief, but this is not a fault. We could hardly expect more from a single-volume publication. Peter Akkermans is the author of chapters 2-5, in which he deals in an insightful and thorough fashion with the ‘Neolithic transformation’ and the onset of sedentary and agricultural life, and then the development of private property, social inequality and economic specialisation. The later periods are not dealt with in the traditional culture-historical approach and instead, Glenn Schwartz, the author of chapters 6-11, shows a clear awareness of the complex relationship between material culture and text. This book is clearly not a history of Syria. It is a synthesis of the archaeological record and current interpretations of that record and represents a good introduction to recent archaeological work of the region. It is a timely contribution and fills a conspicuous gap in current archaeological literature.

Matthew Whincop is a doctoral student at the University of Durham.

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