

The Archaeological Survey of Nubia Season 2 (1908-9).  
Report on the Human Remains



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# The Archaeological Survey of Nubia Season 2 (1908-9)

## Report on the Human Remains

Jenefer Metcalfe

Access Archaeology





ARCHAEOPRESS PUBLISHING LTD

Summertown Pavilion

18-24 Middle Way

Summertown

Oxford OX2 7LG

[www.archaeopress.com](http://www.archaeopress.com)

ISBN 978-1-80327-636-6

ISBN 978-1-80327-637-3 (e-Pdf)

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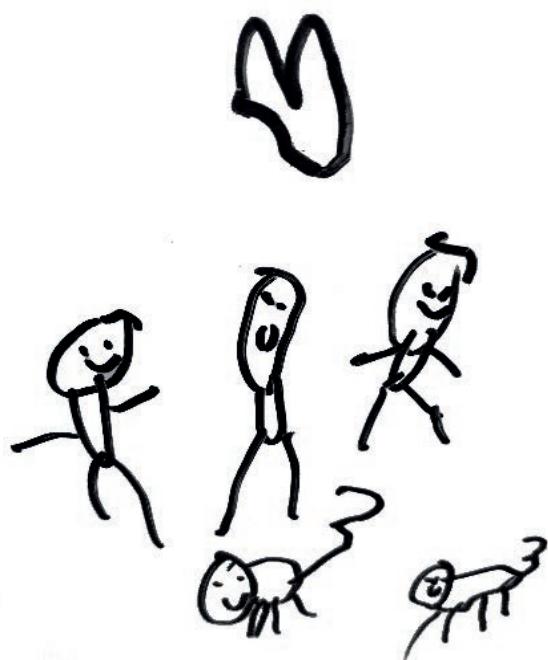
Cover: Image adapted from Firth, C.M. (1912). *The Archaeological Survey of Nubia. Report for 1908-1909 Vol. II. Plates and Plans accompanying Vol. 1.* Cairo: Government Press, Plate 21D.

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For Ryan and Alex

With All of My Love, Always





## Contents

<b>List of Figures .....</b>	<b>v</b>
<b>Acknowledgements .....</b>	<b>vi</b>
<b>Introduction .....</b>	<b>1</b>
Season Two of the ASN (1908-1909) .....	2
The Excavation and Recording of Human Remains .....	4
The Original Season Two Reporting .....	4
Sources of Evidence .....	6
The Reconstructed ‘Season Two: Report on the Human Remains’ .....	8
A Source for Researchers Today? .....	9
<b>Burial catalogue .....</b>	<b>11</b>
Cemetery 58, West bank, Ginari.....	12
Cemetery 58/100, West bank Ginari.....	18
C-group burials .....	18
New Kingdom (Dynasty 18) burials .....	23
Cemetery 59, West bank, Kalabsha.....	28
Cemetery 62, East bank, Khor Basil.....	30
Cemetery 65, East bank, Wadi Abiad.....	30
Cemetery 66, West bank, Abu Regab.....	30
Cemetery 67, West bank, Dugheish.....	31
Cemetery 68, East bank, Moalla .....	32
C-group burials .....	32
New Kingdom (Dynasty 18) burials .....	34
X-group burials .....	35
Cemetery 69/1, East bank, Moalla .....	36
A-group burials .....	36
C-group burials .....	37
New Kingdom burials.....	44
C-group/New Kingdom burials .....	53
Moslem burial .....	53
Burials of unknown date .....	53
Cemetery 69/100, Moalla, East bank.....	55
Cemetery 69/200, Moalla, East bank.....	56

Cemetery 70, West bank, situated between Faragalla and Musa Kolei .....	58
A-group burials .....	58
New Kingdom burials.....	58
Christian burials .....	58
Cemetery 70/100, West bank, situated between Faragalla and Musa Kolei.....	61
New Kingdom burials.....	61
Christian burials .....	61
Cemetery 71, East bank, Sharaf el Din Togog .....	64
Cemetery 71/100, East bank, Sharaf el Din Togog .....	64
Cemetery 72, West bank, Gerf Husein.....	65
C-group burials .....	65
New Kingdom burials.....	86
X-group burials.....	88
Christian burials .....	99
Burials of unknown date .....	105
Cemetery 73, West bank, Gerf Husein.....	108
A-group burials .....	108
C-group burials .....	112
New Kingdom burials.....	116
Ptolemaic burials .....	116
Cemetery 74, West bank, Gedekol, Gerf Husein .....	117
C-group burials .....	117
Roman-Christian burials .....	119
X-group burials .....	125
Christian burials .....	126
Burials of uncertain date (Christian/X-group).....	133
Cemetery 75, East bank, Shalub Batha.....	136
Cemetery 76, West bank, Gedekol, Gerf Husein .....	137
A-group burials .....	137
Burials of uncertain date (A to C-group) .....	144
C-group burials .....	144
New Kingdom burials.....	148
X-group burials .....	159
Roman-Moslem burials.....	159
Burials of unknown date .....	160

Cemetery 77/1, West bank, Gedekol South, Gerf Husein .....	161
A-group burials .....	161
Burials of uncertain date (A to C-group) .....	161
C-group burials .....	161
Cemetery 77/100, West bank, Gedekol South, Gerf Husein .....	162
A-group burials .....	162
Christian burials .....	163
Burials of unknown date .....	163
Cemetery 78, West bank, Mediq, Gerf Husein .....	164
Cemetery 79, West bank, Mediq, Gerf Husein .....	165
A-group burials .....	165
Christian burials .....	189
Cemetery 80, West bank, Mediq, Gerf Husein .....	190
Cemetery 81, Mediq South, Gerf Husein .....	193
Cemetery 82, Gerf Husein .....	194
Cemetery 83, Gerf Husein .....	195
A-group burials .....	195
C-group burials .....	195
Cemetery 85, Koshtamna .....	196
A-group burials .....	196
Cemetery 86, Hamadab, Koshtamna .....	199
Ptolemaic-Roman burials .....	199
Roman burials .....	199
X-group period .....	200
Burials of unknown date .....	200
Cemetery 86/500, Koshtamna .....	203
A-group burials .....	203
A to C-group burials .....	203
Cemetery 87, Koshtamna .....	204
A-group burials .....	204
C-group burials .....	204
Cemetery 88, Koshtamna .....	230
Cemetery 89/1, Awam, Koshtamna .....	231
A-group burials .....	231
New Kingdom burials .....	232

Cemetery 89/500, Koshtamna.....	233
A-group burials .....	233
Ptolemaic-Roman burials .....	245
Cemetery 90/500, Kuri .....	256
Cemetery 91, Kuri .....	256
Cemetery 92, Aman Daud.....	257
A-group burials .....	257
New Kingdom burials.....	258
X-group burials.....	258
Christian period burials.....	261
Cemeteries with no surviving human remains.....	263
Cemetery 60, East bank, Aqabaten - Roman period .....	263
Cemetery 61, East bank, Nagi-koleh - Roman period.....	263
Cemetery 63, West bank, Dendur - X-group and Christian period .....	263
Cemetery 64, West bank, Metardul - New Kingdom (early Dynasty 18) period .....	263
Cemetery 71/200, East bank, Sharaf el Din Togog - A-group to C-group period.....	263
Area 84, the fortified town of Sabagura, East bank - Byzantine period .....	264
References .....	265
Index: Pathology, trauma, non-metric traits and minor anatomical variations.....	267
Appendix I .....	274
Appendix IIa .....	277
Appendix IIb .....	300
Appendix IIIa .....	323
Appendix IIIb.....	337

## List of Figures

Figure 1:	Map of the Nile Valley showing the area covered by the 1908-1909 excavations, from Ginari ....	3
Figure 2:	Anatomical recording card produced by Derry and Smith for grave 384, cemetery 72.....	5
Figure 3:	An example of one of the anatomical recording cards used to record numerous burials from cemetery 72.....	5
Figure 4:	An example of one of the pencil notations made on the long bones in the field.....	8
Figure 5:	The female skull found in cemetery 69, grave 20 .....	46
Figure 6:	A desiccated mass preserved in the cranial cavity of body 69:20 which is potentially part of the brain .....	46
Figure 7:	An adult, male skull from cemetery 72, grave 41 that demonstrates extensive destruction of the cranial base due to a nasopharyngeal carcinoma .....	89
Figure 8:	The skull of an adult, male found in cemetery 74, grave 12 .....	128
Figure 9:	The ossified larynx of an adult, male found in cemetery 74, grave 15.....	129
Figure 10:	Part of the frontal bone of an adult male found in cemetery 76, grave 87.....	147
Figure 11:	The skull of an adult female found in cemetery 87, grave 89 .....	217
Figure 12:	The humeral head and scapula of an adult male from cemetery 89, grave 686 with a benign bony tumour .....	239
Figure 13:	A healed depressed fracture identified by Smith and Derry in an adult male from cemetery 92, grave 114 .....	260
Figure 14:	One of the original line diagrams produced by Smith and Derry, detailing three cranial injuries experienced by this adult male (cemetery 92, grave 121) .....	261

## Acknowledgements

Grateful thanks are due to the museum and university collections and archives that permitted access to their human remains collections and archives: The Natural History Museum, London; The Duckworth Laboratory, The University of Cambridge; the Museum of Fine Arts (MFA), Boston; the Royal College of Surgeons, London; The University of Manchester Special Collections, Manchester.

Particular thanks are due to Norman MacLeod and Robert Kruszynski at The Natural History Museum and Marta Lahr and Maggie Belatti at The Duckworth Laboratory for their support during my numerous visits and for enduring endless questions.

Eternal thanks are due to my husband Ryan for taking literally thousands of photographs for me whilst I tried to reconstruct the season 2 excavations, patiently reeling off long-bone measurements and for supporting me in the 10 years it has taken to write this book.

Grateful thanks are also due to those who provided financial support for this work. The initial research for this volume was carried out as a part of a Wellcome Trust funded research grant [WT090575MA]. Further financial support for permission to include several images in this work has been provided by the KNH Endowment Fund, The University of Manchester.

Finally and most importantly, I would like to acknowledge the work of Sir Grafton Elliot Smith and Dr Douglas Erith Derry. Many of the bodies excavated during the early 1900s in Egypt have no surviving burial context or provenance, often because of way in which they were excavated. The dedication of Smith and Derry to recording these burials has allowed us to re-establish some of their identities and to understand a little more about life in ancient Nubia.

## Introduction

The first Archaeological Survey of Nubia (ASN), which took place from 1907 to 1911, remains one of the largest and most significant investigations to have been conducted into the ancient population of Lower Nubia. The excavations were directed by George Andrew Reisner, whose team recorded, photographed and studied 151 cemeteries over four working seasons. In one of the first excavations of its kind the survey benefitted from the presence of on-site anatomists who assisted with the excavation and recording of any human remains found. Estimates by the author suggest that ~7500 bodies from ~20,000 graves were discovered during this period based on the archaeological reports (vagaries and inconsistencies throughout the reports do not allow for more precise estimates). At a time when human remains were often discarded by excavators unless they had artefacts associated with them or were attractive mummy bundles suitable for museum display, the ASN demonstrated a remarkable departure from the norm.

Led by the well-known anatomist, Sir Grafton Elliot Smith, a small team of anatomists studied the human remains that were excavated and carried out a systematic study of the anatomical and palaeopathological features of the Lower Nubian population. These covered a period of around 5000 years from the early A-group period to the early Christian period (4th millennium BCE through to the mid-late 1st millennium CE. The methods of study and recording used by the ASN anatomists formed an early base which later anatomists and anthropologists built upon (e.g. Batrawi 1945). The exact methods used by the ASN team have long since been developed and refined, but the use of extensive skeletal measurements is now part of an established procedure for studying ancient populations.

One of the main reasons that the ASN continues to be referenced by osteologists and palaeopathologists today was the production of a detailed anatomical report on the first season's work (Smith and Jones 1910) which took place between 1907-08. This was unlike anything published previously; few anatomists had studied such a large number of bodies and any reports that were produced tended to focus on isolated case studies or the study of bodies from a single cemetery. Only mummified remains appear to have been subject to a broader, more inter-disciplinary approach (e.g. Pettigrew 1834). Rather than focussing purely on bodies that provided evidence of a novel anatomical variation within the human population or a particular disease of interest, Elliot Smith and his colleague at the time, Frederick Wood Jones also recorded measurements of skeletal elements, assessments of age and sex, dental disease and tooth loss, evidence of medical intervention, funerary rituals (e.g. anthropogenic mummification) and trauma. The report was accompanied by a photographic appendix produced by George Reisner and a team of Egyptian colleagues expertly trained by Reisner himself (Berman 2018). The published photographic plates provide extremely clear and detailed images of many of the bodies found, as well as macro images of examples of pathology and trauma.

Osteological methodology has obviously progressed considerably since the time of the ASN; despite this the 1910 anatomical report remains important for those studying the ancient populations of Egypt and Nubia, palaeopathology and the history of excavation in the region. No complete anatomical reports were however produced for the other three seasons, 1908-09, 1909-10 and 1910-1911. The only published records detailing the human remains found are the short bulletin reports produced shortly after each excavation season finished. Unfortunately, this has meant that researchers up until the present day have only been able to focus on the excavations carried out during season one.

A research project funded by the Wellcome Trust [WT090575MA] has now made it possible to produce a reconstruction of the work carried out by the ASN anatomists during season 2 (1908-1909). This volume

is the result of that research and pieces together the numbers of bodies found per cemetery, the studies originally carried out on them and provides further context and support to the research carried out during season 1. The work also provides valuable information to modern day researchers including indications of where any known human remains from these particular excavations are located, any research carried out on the bodies that post-date the work of the ASN anatomists and the history of this material in so far as it has been possible to reconstruct.

### **Season Two of the ASN (1908-1909)**

The second season's excavation started on 1 October 1908 with the excavation of cemeteries around the village of Gennari on the east bank of the Nile and Kalabsha on the west bank. Thirty-seven cemeteries were studied in the six months until March 1909, finishing at Aman Daud on the east bank (Figure 1). As with the previous season, the excavations were directed by George Reisner and teams worked simultaneously along either side of the Nile. In contrast to the previous season however Reisner was increasingly absent from the excavations, leaving the direction of work to his deputy Cecil Firth. Firth later succeeded Reisner as director of the ASN excavations during the 1909-1910 season. Similarly, Elliot Smith was rarely present on site during this season; the in-field study and collection of human remains was instead carried out by Douglas Derry, following the departure of Wood Jones from the excavations in 1908. Derry would also remain as the on-site anatomist for the ASN throughout the subsequent two seasons.

Season two was focussed on trying to establish whether the cemeteries further down the Nile reflected a continuity of occupation, both geographically and historically, from those excavated during season one. Two major aims of both the archaeological and anatomical teams were the identification of a Predynastic (A-group) population in the area and the identification of biological distinction between the indigenous Nubian population and Egyptian colonists. The overlap between C-group and New Kingdom populations were subject to particularly intensive focus. Similarly, the discovery of the existence of the X-group as a cultural entity and its incorporation into Reisner's Nubian chronology led to both archaeological and anatomical concentration on remains from this period (Reisner 1909a). These interests affected which cemeteries were chosen for extensive, detailed excavation and which were not, and the human remains that were studied and retained from each cemetery. Some cemeteries, particularly those from the Christian period, were left largely untouched due to time constraints. The anatomists were also of the opinion that the Christian period cemeteries excavated during the previous season had already provided an adequate amount of information about the Nubian population during this time (Smith 1909, 21). Not all periods were well represented in the archaeological record however and Reisner identified no sites as belonging to the 3rd Intermediate and Late periods – the Nubian Napatan period (c. 1000-300 BCE).

Preservation was found to be a significant problem for the anatomists during this season. Sebakh digging was highly prevalent and termite and beetle activity is reported frequently. Sebakh digging is the removal of decomposed mud bricks for use as fertiliser and fuel (Quickel and Williams 2016). The activity is known to cause significant damage and occasionally total destruction of cemeteries in the Nile Valley region. It is unclear whether these problems were more prevalent in the area covered during season two or whether the issues were better recognised and recorded by the excavation team after their experiences the previous year. The impact of these problems does appear to have had a profound effect upon the number of bodies considered suitable for anatomical study. Elliot Smith reported that from 2000 graves only 300 skeletons provided full sets of measurements (Smith 1908, 21). The destruction of context by sebakh diggers was also problematic as Elliot Smith and Derry were hoping to draw comparisons between bodies from secure, dated burials. The recovery of a smaller number of

## INTRODUCTION

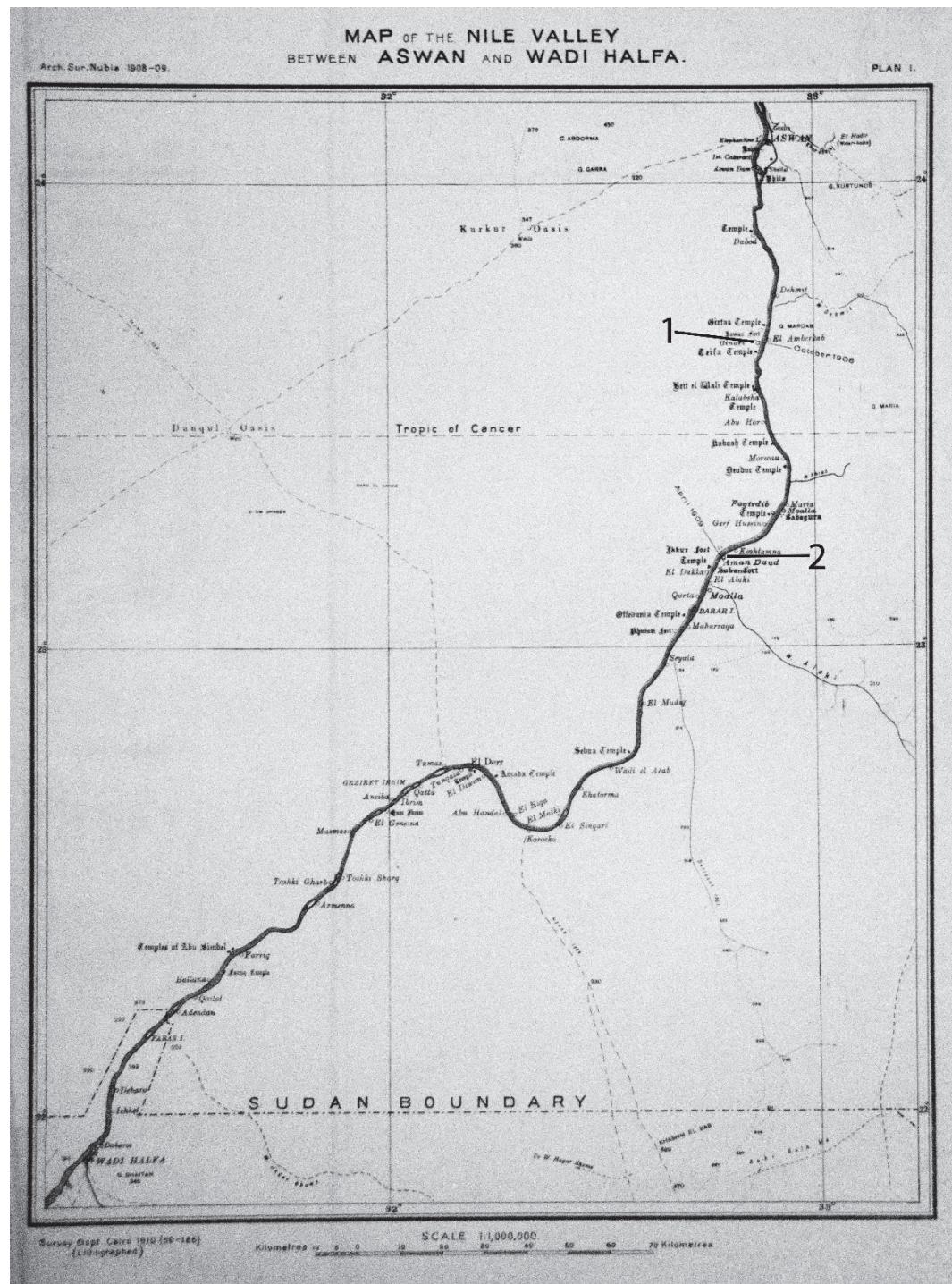


Figure 1: Map of the Nile Valley showing the area covered by the 1908-1909 excavations, from Ginari (1) down to Aman Daud (2) (Amended from Firth 1912b, Plan I).

graves during 1908-09 season than 1907-08 season meant the loss of so many bodies had an impact on the data available to the anatomists and consequently, the conclusions they were able to draw.

### **The Excavation and Recording of Human Remains**

Derry was the only anatomist present on site during these excavations as Elliot Smith remained in Cairo to focus on the development of an Anatomy Department at the University of Cairo. Many of bodies found were packed and sent to Cairo for the two of them to study in a laboratory environment. In 1909 Elliot Smith accepted the Chair of Anatomy at The University of Manchester, UK leaving Derry as the only anatomist not just on site but in Egypt. Only bodies deemed to be in 'good' condition were retained and sent to Cairo, following the protocol developed during season one (Smith 1909). The notion of good preservation seems to be highly variable depending upon the historical age of the skeleton/mummy in question and whether they were considered to be of interest to a member of the anatomical team. For example, relatively rare skeletons from the A-group period were often retained even if the bones were fragmentary and/or fragile.

Although the methods of excavation, recording and subsequent study established for the ASN material were those devised by Elliot Smith, they were maintained throughout despite the change of personnel. Individual recording cards, developed by Elliot Smith for work on an earlier Egyptian cemetery, were used for each body where a significant proportion of the body or skeleton survived. These were inspired by the archaeological recording cards devised by Reisner and used throughout his entire career. The cards recorded the skeletal elements present, skull and long bone measurements and had a free text box for recording evidence of pathology, trauma or anything further of note (see Figure 2 for example). Although well preserved bodies were allocated a detailed record card, those that were very poorly preserved and the majority of child skeletons were recorded only in terms of a grave number, the sex and age of the individual (the latter two are unfortunately recorded inconsistently). A single card may record the existence of several tens of children for example (see Figure 3 for example). Additional notes and corrections were often made to these cards when bodies were more comprehensively studied in a laboratory setting at a later date.

The identification of sex was made using soft tissue preservation in many cases. Where this was not possible the pelvis was used and failing that the skull. Records where both the pelvis and skull were studied to assign gender to a single individual are rare. Age determination was carried out using dental eruption sequences and epiphyseal fusion. These are only ever reported in detail for sub-adults in the ASN reports, but Smith and Jones note that these were assessed for all bodies where possible (Smith and Jones 1910, 7). The appearance of mummified bodies, such as the presence of white hair, was used to assign age. It is unclear how accurate this is likely to have been; most of the mummies where appearance is recorded were natural mummies not subject to the application of resins or natron during the embalming process which may have affected hair colour. However, the natural desiccation process may also have had some inadvertent effect on the body due to extreme heat, sun exposure, fungal growth or other environmental conditions (Aufderheide 2003, 341-42). Particular attention was paid to anomalies of the vertebral column, dentition and cranial sutures. Any perceived asymmetry in the cranium or the long bones was also recorded. Some examples of pathology and trauma were recorded in detail; however, any similar to those identified by Wood Jones during the season one excavations were simply reported on the recording cards (Smith 1910, 13).

### **The Original Season Two Reporting**

Two bulletins were published in 1909 to cover the 1908-09 season, covering archaeological, anthropological and pathological findings. An official full-scale report, with plates followed this

## INTRODUCTION

Figure 2: Anatomical recording card produced by Derry and Smith for grave 384, cemetery 72. The card shows the addition of later annotations by both the anatomical team (black ink) and a note by an unknown hand confirming the transfer of part of the skeleton to Thomas Strangeways (in brackets, bottom right). ©The Duckworth Laboratory, The University of Cambridge, 2023.

Grave No.	Cemetery No.	Length-breadth index	Length-height index			
Sex	Age	Locality	Race	Nasal index		
Total Height	Femur R.	L.	Tibia R.	L.	Humerus R.	L.
SKULL.	Radius R.	L.	Clavicle R.	L.	Character of Hair	
Form of cranium						
Form of face						
Form of mandible						
Max. length						
Max. breadth						
Front. height						
Bas. height						
Auricular height						
Bzygomat. breadth						
Total facial height						
Upper facial height						
Cranial base						
Facial base						
Interorbital breadth						
Right orbit						
Left orbit						
Nose						
Margins of Nasus						
Palate						
Bigonal breadth						
Height of Symphysis						
Sigmoid						
Circumference						

Figure 3: An example of one of the anatomical recording cards used to record numerous burials from cemetery 72. The numbers in the general remarks section provide the grave number of the body and comments about age, sex and condition. ©The Duckworth Laboratory, The University of Cambridge, 2023.

in 1912. However, contrary to the first season's two detailed reports on both the archaeological and anatomical discoveries made, the season two report was a slightly less extensive archaeological report only. The detailed photographic record of the bodies found, and the existence of anatomical recording cards suggest that an equivalent report for season two was originally planned but this never happened, possibly due to Elliot Smith's relocation to Manchester. There are signs that there was some input from the anatomists into the archaeological report, with a proportion of the bodies identified by sex. These assignments for the most part match those given on the surviving anatomical recording cards, making it highly likely that this is where the data was taken from. Unfortunately, the same style of reporting was not used for the ages of the bodies found and the reader is required to infer their age from the circumstances of the burial and any published photographs or sketches.

The archaeological report for season two continues to be used today as the only comprehensive record of the bodies found during these excavations. It had been assumed until recently that the lack of an anatomical report for seasons two to four was because the anatomists studied very few of the bodies and that those described in the bulletins cover the extent of those investigated. The discovery of 479 anatomical recording cards from season 2 at the Duckworth Laboratory, University of Cambridge testifies that this was not the case.

### Sources of Evidence

This report has been produced using a number of sources, most significantly the surviving ASN body cards discovered in the archive at the Duckworth Laboratory, The University of Cambridge. 495 cards from 20 cemeteries were located by the author, mixed in with the body cards produced by Douglas Derry during the 1913-16 excavations at Kerma, Sudan. The reporting cards from these excavations, which were also directed by George Reisner, are curated at the Duckworth Laboratory. Eighteen of the cemeteries covered by the cards were from the season two excavations whilst the other two came from season one. It seems likely that the cards were in the possession of Derry whilst he was at University College London (UCL) between 1910 and the outbreak of World War I. A large number of human remains and their accompanying records were subsequently transferred from UCL to Cambridge during World War II. The ASN cards appear to have been transferred as part of this. Correspondence from Elliot Smith indicates that the cards were retained by Derry, with the exception of the season one cards. The latter were originally located in the Royal College of Surgeons but were largely destroyed, along with the majority of the ASN skeletal collection deposited there when the College was bombed in 1941 (Molleson 1993, 136). These 495 cards are a fortunate survival of what must originally have been a much larger archive, covering the last three seasons of excavation.

The reports on the cards are of variable detail; well-preserved adult bodies are recorded in detail with as many skeletal measurements as possible made and a description of the body. The latter often included further measurements not included in the pre-printed boxes on the card, information on non-metric traits and anatomical variation, evidence of pathology or trauma. The bodies of children and poorly preserved skeletons were recorded in less detail. Some cards are largely empty, others contain records of multiple burials usually noting just the cemetery and grave number and the sex of the skeleton.

The cards must be viewed as working documents. The original notes were made in pencil, frequently in the field. There is often evidence of two different hands being involved in writing the reports and in a small number of cases, the pencil was written over in ink. The measurements recorded were accompanied by ticks or corrections in some instances suggesting the records were checked at a later date. There are notes to indicate that some bodies or skulls specifically were retained as they demonstrated a feature of interest. This in turn also indicates that not all of the bodies from this season were retained following excavation. Three cards contain an additional notation added at a later date by Thomas Strangeways,

## INTRODUCTION

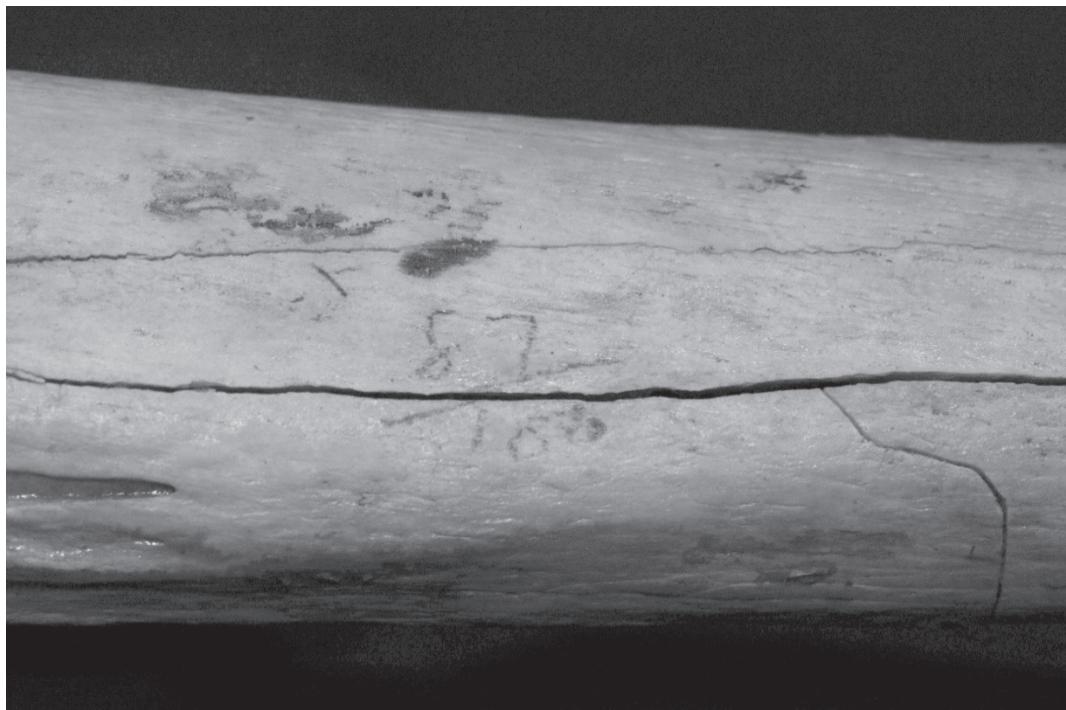
a pathologist with an interest in rheumatoid arthritis (see Figure 2). He recategorized three examples of pathology found during season two at some point prior to his death in 1926 and added notes to the relevant anatomical card. Strangeways had connections with the Royal College of Surgeons in London, so it is likely that he was able to review the ASN material there. He had in his private collection when he died at least one example of a foot with gout discovered during season one of the ASN excavation (this is now in the Natural History Museum, London) and two skulls.

The photographic record from season two is similarly incomplete; the Boston Museum of Fine Arts, USA which curates the majority of photographs produced by George Reisner during season one also curates a small number from season two. Some of these are copies of the photographs published as part of the official archaeological record and others are contact prints of unpublished images. These unpublished images include additional site photographs of cemeteries prior to excavation and occasional images of individual graves following clearance. The most valuable images however are a range of photographs of skulls – these are usually two or three skulls side-by-side, demonstrating perceived variation between sexes or different historical periods. In all but one instance, the location of the skulls in the photograph is now unknown. There are also a large number of images of artificial mummies, mostly from cemetery 89, many of which are not published. This is the best source of evidence for Lower Nubian anthropogenic mummies found during the ASN as the location of almost all of them is now unknown.

In addition to the published archaeological report and bulletins, there are a small number of published papers which refer to human remains found during these excavations (see for example Derry (1911a); Derry (1911b)). Archival documents relating to both Smith and Derry also survive in the collections of the Royal College of Surgeons, London and University College London (UCL) and the University of Manchester. These contain little discussion of actual human remains, recording instead some information about how skeletal material was brought to the UK and distributed between Smith and Derry for study. The Royal College of Surgeons also preserves a document written by one Watson and dated only to 'pre-1935'. This is a notebook containing osteological measurements carried out by the author on a number of ASN skulls which at the time were curated in The University of Manchester.

The majority of human remains from this season's excavations have sadly been lost. Small collections of material survive in The University of Manchester, The University of Cambridge, The Natural History Museum, London, the Aswan Museum and the South Australia Museum, Adelaide (see Appendix I for a full list). Most of the surviving material comprises individual skeletal elements, except for five intact mummies in Australia and Egypt. It has been possible to assess some of the original descriptions of pathologies and trauma in this small sample set. Archival documents have demonstrated that the collection of season two material originally located in the Anatomy Museum at The University of Manchester was once extensive. This was brought to Manchester by Elliot Smith when he took the Chair of Anatomy position in 1909. Parts of this collection were subsequently transferred to UCL in 1919 when Elliot Smith left Manchester, and then again to Cambridge during World War II. For an in-depth discussion of how the season two material was distributed post-excavation, see Cockitt (2014).

As it is no longer possible to identify significant numbers of bodies from the season two excavations in these collections, it appears likely that over time bodies have become separated from their provenance making it difficult to place them within their correct archaeological context. The major skeletal elements (skull, long bones) of each body were annotated with the cemetery and grave number and often a male or female symbol by the anatomists upon excavation in the field. The smaller bones and any additional tissues that were separated from the body (mummified skin, hair etc.) were not usually individually labelled. The anatomists relied on the use of dedicated packing boxes and the labelling of some bones to correctly identify a body post-excavation. Unfortunately, none of the bodies have survived in their original packing cases. Where bones were annotated, these were usually recorded in



*Figure 4: An example of one of the pencil notations made on the long bones in the field. Less than clear original notations, post-mortem fractures, handling and preservation issues have all contributed to making these difficult to read in many cases. ©The KNH Centre for Biomedical Egyptology, The University of Manchester, 2023.*

pencil which is prone to smudging or rubbing when bones are handled (see Figure 4). This has led to the loss of provenance for the majority of the bodies found during this season.

#### **The Reconstructed ‘Season Two: Report on the Human Remains’**

This report is a reasonable reflection of the work of Grafton Elliot Smith and Douglas Derry during season two, along with the inclusion of some more recent updates on individual bodies where this has been possible. A list of the graves that were excavated and the bodies found within them has been produced, using the archaeological report and bulletins as a foundation. This has been amended or adjusted as required when additional information was provided by archival documents or the anatomical recording cards. The archaeological report presents a number of issues; the most significant is that it is not always possible to determine whether a grave was empty or unexcavated. Creating an accurate tally of the number of empty graves can therefore only be considered partially successful.

A record for each body has been produced, giving the available information about the cranial, post-cranial and dental remains as reported by Smith and Derry. A publication/reference list for each body has been included, along with any information about the current location of the body. In some instances, it has been possible to link anatomical or pathological descriptions from the bulletins back to a specific body. The casual reporting style used in the bulletins has made this very difficult in many instances – bodies are often not identified by the grave number, even if they are identified as belonging to a particular cemetery or historical period. Careful evaluation of the bulletin reports, along with additional evidence provided by other documents and photographs has helped with these identifications. It has however not been possible in most cases to reproduce the detailed level of recording seen during season

## INTRODUCTION

one. The surviving recording cards are clearly not a complete set – some of the bodies recorded in the bulletin/archaeological report are not included. The terminology is now over 100 years old and the authors only intended them as a preliminary record for their own study purposes. The cards were also written in pencil, making them unclear especially where lots of numbers are used (for example, with dental records).

Records of whether a body was naturally mummified, anthropogenically mummified or skeletonised are also poor. It has been possible to improve upon the data provided by the archaeological report, but the records remain incomplete. It is well known that Elliot Smith and Derry autopsied a significant number of mummies in the field, yet only a few detailed reports of these autopsies for season two have survived. The anatomical recording cards testify that infant and child remains were recorded by the anatomists. This focus, although often lacking in detail, is in contrast to the work of many researchers in the field at the time. Sir William Flinders Petrie for example paid little attention to the remains of children found at Kahun, dismissing them almost as a distraction to the main focus of his excavations (Carruthers et al. 2021). Discussion of the mummification techniques used to preserve bodies from Koshtamna was either not produced or did not survive. The lack of detail experienced here may be a reflection of the fact that the level of laboratory study carried out posthumously was much lower after season one. There are likely to be a number of reasons for this – the anatomists were both involved in other projects that required their attention, the skeletal material from the later cemeteries was in poorer condition and much of the excitement with the discoveries made in season one had started to wear off. The number of bodies was in excess of what they had expected when the ASN began and maintaining interest and focus is likely to have been difficult long term. This does not however detract from what they did achieve – some of the surviving anatomical reports are remarkable and the examples of pathology, trauma and anatomical variation they reported is extensive.

### A Source for Researchers Today?

The importance of the ASN to both anthropologists and palaeopathologists is well documented (Aufderheide 2003; Baker and Judd 2012). This is due to a number of factors including the sheer size of the project and the high number of bodies discovered, as well as the fact that the survey is one of the earliest investigations into this region. The level of anatomical detail and the reporting of cases of pathology and trauma make the survey truly unique, even by modern standards. Despite this, the focus of scholars has always been on season one due to the existence of a comprehensive anatomical report. The other seasons' work tends to become eclipsed, probably due to the difficulties in reconstructing what excavations were carried out and what was found.

The season two report, as it has been possible to reconstruct, does not compare to season one in terms of the level of reporting or the number of bodies studied. It does however allow a more comprehensive picture of the Nubian cemeteries excavated by Reisner and his team to be built up. For those cemeteries excavated completely, there are a large number of records and the data can be reliably compared against other cemetery populations of similar date. Despite the selection criteria applied to the cemeteries discovered during season two, it does appear that the population in this region was slightly smaller than that found during the previous season. The number of cemeteries containing more than 100 bodies was much lower and there are few examples of cemeteries that remained in use over multiple historical periods.

The archaeological report for the 1908-09 season, although now widely available as a digital copy, does not provide the data required for osteological or palaeopathological studies. The focus of Firth's work was the graves themselves and any surviving grave goods. The report does record the position of the bodies and records important details about any wrappings or coffins present in the grave or tomb.

Although some of these details were recorded on the anatomical recording cards, this information has not been duplicated here. Instead, this report should sit alongside the archaeological report and provide additional, supporting information to those studying the population of Lower Nubia.

This volume contains a detailed record of a range of non-metric traits and examples of anatomical variation identified by Smith and Derry. Although these appear to have been recorded during season one, they were inconsistently recorded and reported in the published report. During season two the absence of an anatomical variation was recorded as well as the presence; features were frequently recorded as either 'normal' or the perceived abnormality was described. This was particularly the case for maxillary prognathism and occipital asymmetry. The number of non-metric traits recorded by the anatomists expanded beyond their initial interests during season one, possibly as a result of their determination to identify physical differences between communities and populations.

There is an obvious racial bias in many of the records and measurements made, in line with the interests of both the archaeological and anatomical teams and as was common at the time (Challis 2013). The supposed racial variations identified by Smith and Derry are no longer considered viable or acceptable. As such, comments such as 'evidence of negroid traits' for some individuals have not been transcribed. The records of actual osteological features and skull and long bone measurements have however been faithfully reproduced from the original records. Many of the anatomical variations recorded are important for continuing anthropological research. Studies of the surviving human remains from the ASN testify that the anatomical descriptions provided by Smith and Derry were usually accurate. The anatomical descriptions of pathologies are extremely good for example, even where a diagnosis couldn't be made. This does not however always extend to osteological measurements and researchers such as Batrawi (1945) have commented upon their inability to replicate Elliot Smith's work.

The data preserved here forms a historical record of the studies carried out – it is important to be mindful of this fact when using this volume. The focus of both the anatomical and archaeological teams on identifying physical and societal differences between the neighbouring Nubian and Egyptian populations affected the progression of the excavations, the selection of different bodies for different purposes (display, dissection, retention, disposal) and as a result, our understanding of the ancient Nubian people and their communities. It is hoped that the recognition and identification of further human remains from these cemeteries in the future will allow researchers to evaluate more comprehensively the work of Smith and Derry. This would, in turn, provide a more appropriate narrative of how the 1908-09 excavations have, and can, contribute to understanding of the ancient Nubian population.