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Short Fieldwork Reports

Nag el-Qarmila, Aswan (Egypt), season 2007

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Site surveys carried out between 2005 and 2006 in the Aswan-Kom Ombo region of Egypt by the British Museum and the University of Rome “La Sapienza” revealed the presence of two cemeteries and a settlement in the locality of Nag el-Qarmila, north of Kubbaniya (Gatto & Giuliani 2006–2007, 2007). The 2007 field season at the site of Nag el-Qarmila, directed by Dr. Maria Carmela Gatto, took place between January 24 and March 13. The purpose of this excavation was to rescue a Pan-Grave cemetery and two Predynastic/A-Group sites, all of which are in danger of being destroyed by building activities in the area. In addition to rescuing the sites, the overall research goals of the project were to define the extent of interaction between Egyptians and Nubians in the region over time and to determine the location of the political boundary that existed between them. This report includes a summary of the excavation of the cemeteries and a discussion of the findings of the preliminary in-field osteological analysis performed by Pitre.

Pan-Grave Cemetery (WK11). At the Pan-Grave cemetery, designated WK11 and located at 24°14'23.16" N latitude and 32°51'41.95" E longitude, surveys and excavations led by Giuliani revealed 30 potential burials as well as several potholes and offering places in an area approximately 20×30 m. Many diagnostic Pan-Grave ceramics, together with Egyptian pottery were collected, dating the site to the late XII–early XIII Dynasty (Late Middle Kingdom–Early Second Intermediate Period). A surface collection was carried out of the entire Pan-Grave cemetery. Following this, a long central trench measuring 7×14 m was excavated; this area was selected in order to include the largest stone tumuli. Excavations revealed the presence of three main burials (9, 17 and 22) and two smaller ones (21 and 36), as well as several potholes and offering places (**Figure 1**). Unfortunately, the Pan-Grave cemetery had been extensively and most likely repeatedly plundered in the past. Although no complete burials were discovered, a large quantity of fragmented and poorly preserved bone and several funerary offerings such as ostrich-shell beads, animal bones, painted horn, mother-of-pearl plaque beads, and water-worn pebbles were recovered. Little organic material in the form of leather, matting, or linen was found.

One of the main characteristics of the WK11 cemetery is its remarkable stone tumuli, one of which is up to 7 m in diameter. Each tumulus is composed of two concentric rows of stone slabs that surround a deep pit which is cut into the bedrock. The stone rings are fixed



Figure 1. Location of burials in the 7×14 m excavation area of WK11 (plan by R. Zineldeen).

in a prepared soil composed of mud and cobbles, at the top of which sheep/goat horn, some still bearing traces of red paint, is found. It was likely this visible superstructure that reminded Petrie of a frying pan, a characteristic that he later used to name the burials and the Pan-Grave culture itself. The Pan-Grave culture remains a mystery even though their cemeteries have been found at several sites in Egypt and their pottery has been found throughout Egypt and Sudan. When compared to the discoveries at Hierakonpolis (Friedman 2001), the Nag el-Qarmila site revealed a wider distribution of burial pits in the excavation area, larger stone tumuli, and a different pottery assemblage, demonstrating the existence of regional variation in Pan-Grave cemeteries and shedding new light on intra-cultural dynamics.

Following the excavation, Pitre conducted a preliminary osteological analysis of the Pan-Grave material, which is currently stored in Kom Ombo. This examination involved a fragment count, a basic description of the remains including sex and age, and a preliminary investigation for pathological conditions. Since no intact burials were found, three minimum number of individual (MNI) estimates were calculated; an MNI of the material collected on surface, in the 7×14 m excavation area, and for a combination of the two. With regards to the preservation of the skeletal material, few skeletal elements were intact, and those that did preserve were very brittle. Fragments ranged in size from <1 mm to complete bones. In general, poor preservation limited the osteological analysis by decreasing the accuracy of sex determinations and age estimations and significantly reduced the probability of identifying disease since the destruction of bone surfaces made the recognition of subtle changes associated with many types of pathological conditions impossible.

The skeletal analysis followed protocols described in Buikstra and Ubelaker (1994). Sexually dimorphic areas such as the pelvis and the cranium were rarely preserved, and long bones were seldom complete enough to take measurements, limiting sex determination. Whenever possible, age was assessed using age-related changes of the auricular surface (Lovejoy et al. 1985) and pubic symphysis (Brooks & Suchey 1990), as well as dental wear (Lovejoy 1985). In order to determine the age of the juvenile skeletal material from the Pan-Graves, tooth

eruption rates, the degree and pattern of epiphyseal fusion, and long bone lengths were used following the standards presented by Scheuer and Black (2000, 2004) and Baker and colleagues (2005). Stature was estimated following the modified formulae presented by Robins and Shute (1986). Pathological conditions were recorded following the standards outlined in Buikstra and Ubelaker (1994).

3224 fragments/elements of human bone were collected on the surface of the entire Pan-Grave cemetery and throughout the 7×14 m excavation area. 1168 (36%) of these were collected from the surface. Overall, 73% (2343) of the material was not identifiable. An MNI of four adults including individuals of both sexes was calculated based on the material recovered from the surface. No juvenile material was noted, most likely a result of poor preservation. With regards to the skeletal material recovered within the 7×14 m excavated area, an MNI of six individuals, which included elements from both sexes, was calculated. This includes at least four adults, and two juveniles, one having died around the time of birth. Taking all of the recovered skeletal material into consideration within the 20×30 m Pan-Grave cemetery, there were at least seven individuals, including five adults of both sexes and two juveniles of undetermined sex. Unfortunately it is not possible to discuss the number of males versus females present because discrete individuals could not be identified; the same situation exists with regards to juveniles versus adults.

On average, the fragmented remains of three individuals were found within each of the five burials excavated; no doubt the result of extensive human intervention. For example, Burial 9, the largest of the entire cemetery, contained portions of three individuals. To provide an idea of preservation, 136 of the 204 elements/fragments found in Burial 9 were identifiable and ten presented bioarchaeological information concerning sex, age, and stature. Within the entire cemetery, ten instances of disease were recorded. Five examples of arthritis/degenerative joint disease were noted, usually occurring on vertebrae and foot bones. Three cases of healed trauma were recorded as well as two cases of non-metric traits including a septal aperture and a metopic suture. In two instances it was possible to calculate stature. Using Robins and Shute's (1986) female formula, a stature estimate of 167.6 cm was calculated from an ulna whereas an estimate of 172.1 cm was calculated using the male formula. Similarly, a stature estimate of 164.5 cm was calculated based on a femur using the female formula and 168.6 cm for the femur of a male.

Despite the state of preservation of the material, information concerning the demographic structure of the burial population at WK11 was revealed. Both males and females were identified, suggesting the use of the small graveyard by a family group. From what was identified, it can be said that both the young and old were placed within this Pan-Grave cemetery. Although little juvenile material was recovered, it was most likely the result of poor preservation rather than differential placement. Few pathological conditions were noted; the most common conditions recorded on individual elements include arthritis and trauma in the form of healed fractures. In the end, the condition of the material precluded a comprehensive study concerning biological and ethnic identity (e.g. Buzon 2006) and as a result, future comparisons with other, better preserved collections will be difficult. However, it is hoped that future isotopic analysis will prove useful in determining the diet and geographic identity of individuals buried within this cemetery.

Predynastic/A-Group Cemetery (WK14). The Predynastic/A-Group cemetery, located at 24°14'10.28" N latitude and 32°51'39.61" E longitude, covers an area approximately 30×25 m and is mainly dated, based on pottery, to the Naqada IIa-b periods (~3700–3600 BCE). The site (WK14), not far from the settlement (WK15, to be described elsewhere), is located on top of a Middle Pleistocene river terrace composed of a sandy sediment. An area approxi-

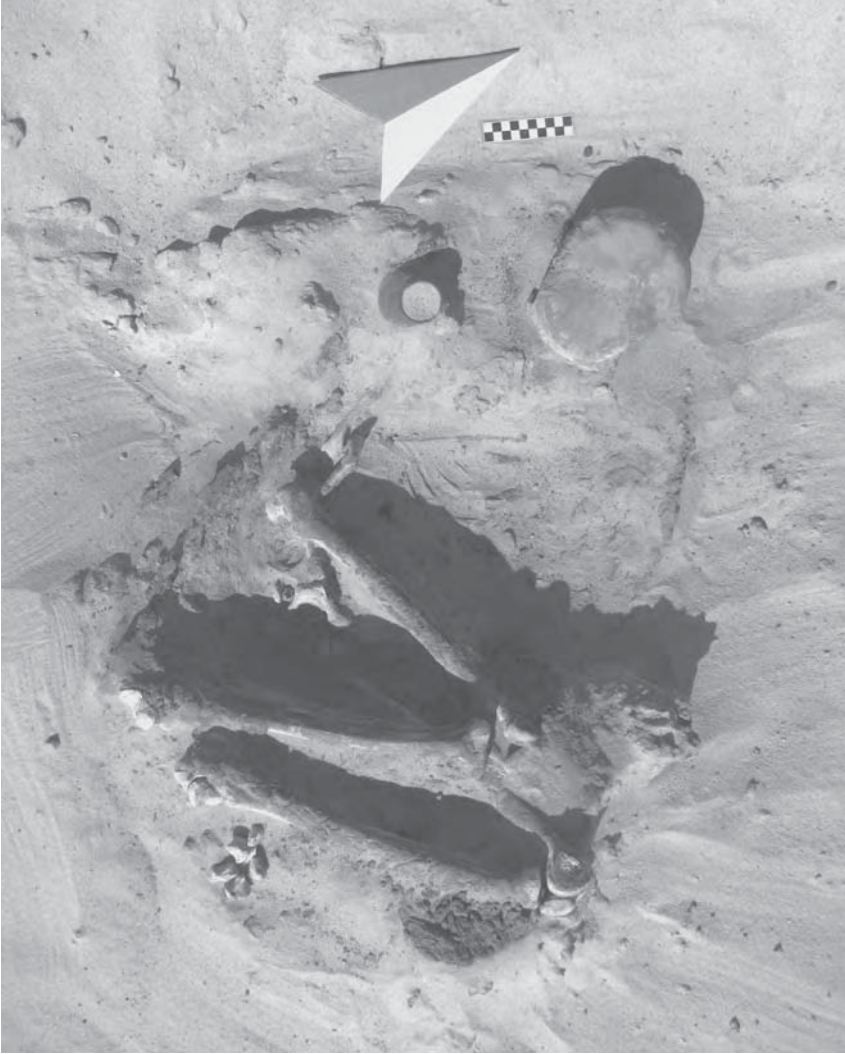


Figure 2. Intact burial of a young woman from WK14, Burial 14.

mately 4×16 m was excavated under the direction of Gatto. This long and narrow trench oriented N–S was selected in order to outline the extent of the burial ground. Both human intervention and environmental factors affected the original integrity of the ancient burial area. All that was visible, including human bone and funerary offerings, was collected from the surface. During most of the excavation, only clusters of disarticulated skeletal material were found, few *in situ*. However, the complete skeleton of a young female was discovered below almost 2 m of sand. The intact burial (#14) was found in the northern section of the trench and was placed in a very tightly contracted position (**Figure 2**). There was organic preservation of soft tissue, leather, linen, and matting. Funerary offerings recovered include an intact black-top jar, malachite, and a water-worn pebble and pieces of malachite found near the chin, and the remains of a small leather bag containing malachite fragments found near the left hip.

Mortuary practices dictating the position of the body in the ground and the orientation of articulated skeletal elements were analyzed in the field. The body was oriented NW–SE and their head was pointing southeast, or upstream of the Nile, a position documented in several Predynastic cemeteries including Hierakonpolis (Friedman et al. 1999). The individual was lying on the left side; however the pelvis was slightly supine. The legs of this individual were semi-flexed with the right arm extended towards the left shoulder and both hands resting on the left shoulder. The skeleton was placed in a very small concave oval area, measuring 80×53 cm. The sides of the burial were plastered with mud and perhaps leather. The body, resting on the sand, was covered by matting and linen (the latter most likely on the lower limbs), which were both very badly preserved.

Of the WK14 skeletal material, including surface finds and that removed during the excavation, only Burial 14 was fully analysed by Pitre in Kom Ombo, the present storage location of the collection. As with the Pan-Grave cemetery, the skeletal analysis of Burial 14 followed the protocols described in Buikstra and Ubelaker (1994). Overall, the skeleton was very gracile. Based on pelvic morphology, the individual was determined to be female. With regards to skeletal age at death, epiphyseal fusion and pubic symphyseal aging methods were most useful. Using all of the available data, this individual was most likely between the ages of 20–25±2 years. Long bone measurements revealed that the individual would have stood approximately 151 cm tall during life, based on the female regression formula presented in Robins and Shute (1986).

Burial 14 was visually examined for the presence of disease. The teeth were in excellent health and very lightly worn. There were no visible signs of physiological stress. The most visible non-metric features were two wormian bones in the lambdoid suture. With regards to more subtle defects, the right transverse foramen of the second cervical vertebra was clefted, both hypoglossal canals exhibited a Type I spicule, and the first sacral segment presented a cleft spinous process. Even more so, there was evidence of a subtle cranial shift at the thoracolumbar border, as the inferior articular facets of the eleventh thoracic vertebra were splayed (see Barnes 1994). Recognizing these shifts is important because their direction has been shown to vary between populations. Only once the entire WK14 cemetery is excavated and perhaps other intact burials discovered will a more comprehensive study of these developmental conditions be possible. None of these pathological errors in development would have been of any clinical significance. There was no other visible evidence of disease, nor was there any indication of how this young female died.

While few individuals are represented within both cemeteries, the remains are of considerable interest as they offer insight into the health and social lives of the Pan-Grave and Predynastic/A-Group populations in the area. Future excavations and further laboratory investigations are required of both cemeteries to reveal information concerning burial structures, demographic profiles, and burial inclusions. Although both collections are poorly preserved, there is the possibility of performing stable isotopic analysis in the future in order to further understand group differences in the area. The discovery of an intact Predynastic/A-Group burial provides hope that other individuals remain within the cemetery. However, these individuals are at risk of building activities in the area. These preliminary observations underscore the importance of further research concerning both skeletal collections. Only once both cemeteries are excavated and fully studied will information be available to further understand intercultural dynamics between Egyptians and Nubians.

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