THE SKULLS FROM NAQLUN

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The anthropological examination[1] of the skeletons from the cementery at Naqlun, which started in 1999, has yet to be completed. Nonetheless, the material analyzed up to date is sufficient for some initial conclusions to be presented.

THE CEMETERY

The cemetery under investigation was used undoubtedly by the secular[2] Coptic population inhabiting Fayum Oasis; in all probability, it was of the likes of a parish cemetery.

The deceased were buried in coffins, wrapped in mats made of palm leaves stretched over a framework of palm-leaf ribs, or else wrapped directly in mats. The coffins were made of palm tree trunks or planks, usually a few narrower or shorter pieces that were put together, this owing to the general dearth of this valuable material. Wooden pegs or big iron nails were used to join these planks together. Some of the coffins had openings cut in the lids at the end where the head of the deceased was to be found, others were additionally covered with white linen and decorated with schematically sketched crosses executed in red paint.

Most of the bodies were either robed or wrapped in shrouds; this obviously affected the partial mummification of the soft tissues, primarily the skin, hair, tendons and muscles. In many cases, the skin on the head had been mummified as a result of tight head coverings wrapped around the head. The mummification of the local burials, spontaneous beyond doubt, was conditioned by the desert environment (the salinity and dryness of the soil checked the usual processes of tissue decay).

Another phenomenon, apparent especially in the case of the less deeply deposited burials, is the precipitation of salts and gypsum on the bones wherever mummification was lacking.[3] The conditions inside the coffins provided the proper climate for salt-and-gypsum efflorescence, occasionally up to 2 cm thick, forming on the smooth, flat surfaces of the bones and hampering analysis until the material has been cleaned. Most of the coffins were made rather carelessly,

1) Fieldwork in 1999 and 2000 was carried out by the author. In 2000 Ms Elżbieta Dąbrowska, anthropologist, also participated in the work.

2) Apart from a single case of a body being arrayed in a robe suggestive of a clergyman, the remaining burials represent both sexes in equal percentage, while the share of child and adolescent burials is a relatively good reflection of the age structure typical of the period.

3) The situation of the monastery at the edge of an oasis rich in water results in more extensive condensation of water vapor on cool nights, a phenomenon common in the desert. The skeletons, even if left inside the coffins to be explored on the next day, were covered with a layer of salt efflorescence overnight!

permitting condensing water to penetrate. Cockchafers from the *Tenebrionidae* family, commonly found especially in the upper parts of the coffins, testify to the considerable ease with which water and air penetrated deep below the ground surface on the kom.[4)]

The coffins were placed in several layers (up to four), most often between the walls of earlier buildings. Some of the burials are obviously secondary. These are the putative remains of graves, disturbed during the digging of newer burial pits and consequently removed to a new spot.

COLLECTIVE BURIAL NOS. 216-217-218

One of the most interesting burials is the collective grave of three young men (burials 216, 217, 218), who were found wrapped tightly together in a single mat (*Figs. 1, 2*). Like the other burials, this tomb was oriented north-south, indicating that the burial of the deceased had followed the Christian rite.[5)]

Upon closer analysis, it became apparent that all three had died a violent death. This is evidenced by the bones of the skull, the cervical vertebrae, one of the left bones of the arm and the manubrium of one of the sterna, all of which bear patent traces of blows made with a sharp instrument, a saber in all probability. The edges of the cut bones indicate beyond all doubt that the blows were placed with precision and with a sure hand, not to mention considerable force. It is quite evident that one or more of the perpetrators of the blows were well practiced in the martial arts, and had most certainly used a saber. A straight sword would have caused the bones of the skull to crack. Furthermore, in a few cases there is evidence of what is called "twirling", possible only with a curved saber.

All three individuals were relatively young, although adult, aged between 20 and 30, in perfect health and of fairly slender build. A closer analysis of the traces on the bones permits a reconstruction of the events. The prisoners must have been kneeling tied to a post, while the blows were inflicted from the top and back.

The first man (no. 226) was hit from the back. The blow to the occiput was so strong, that it cut through half the skull and reached the mandible. A blow from the top cut the right cheek. Two other blows were inflicted to the jaw (the crowns of the teeth were cut off evenly), and only after that was the head cut off clean at the point of the third neck vertebra.

The second individual (no. 227) was treated no less cruelly. His skull is damaged to a high extent, having lost most of the facial part (only fragments have been preserved). There is also very good evidence (cut 65 by 35 mm) of a very strong, even and also somewhat "twirling" blow that chipped off a fragment of the lower part of the root of the head (not found in the grave). The mandible was cut off with

4) Interestingly, the same cockchafers were discovered during a professionally prepared investigation of the chamber of the solar bark at Giza, carried out with the help of a television micro-camera. It turned out at the time that the chamber – where scientists had anticipated being able to sample the "ancient" air – had long since stopped being airtight. The wooden elements of the bark had rotted away, and there were plenty of live cockchafers for the camera to see!

5) In all probability permission was granted after the execution for the corpses to be buried in the cemetery, but without the proper rites (or else they were buried secretly and in a hurry). It should be emphasized that this is the only collective grave discovered at the cemetery so far.

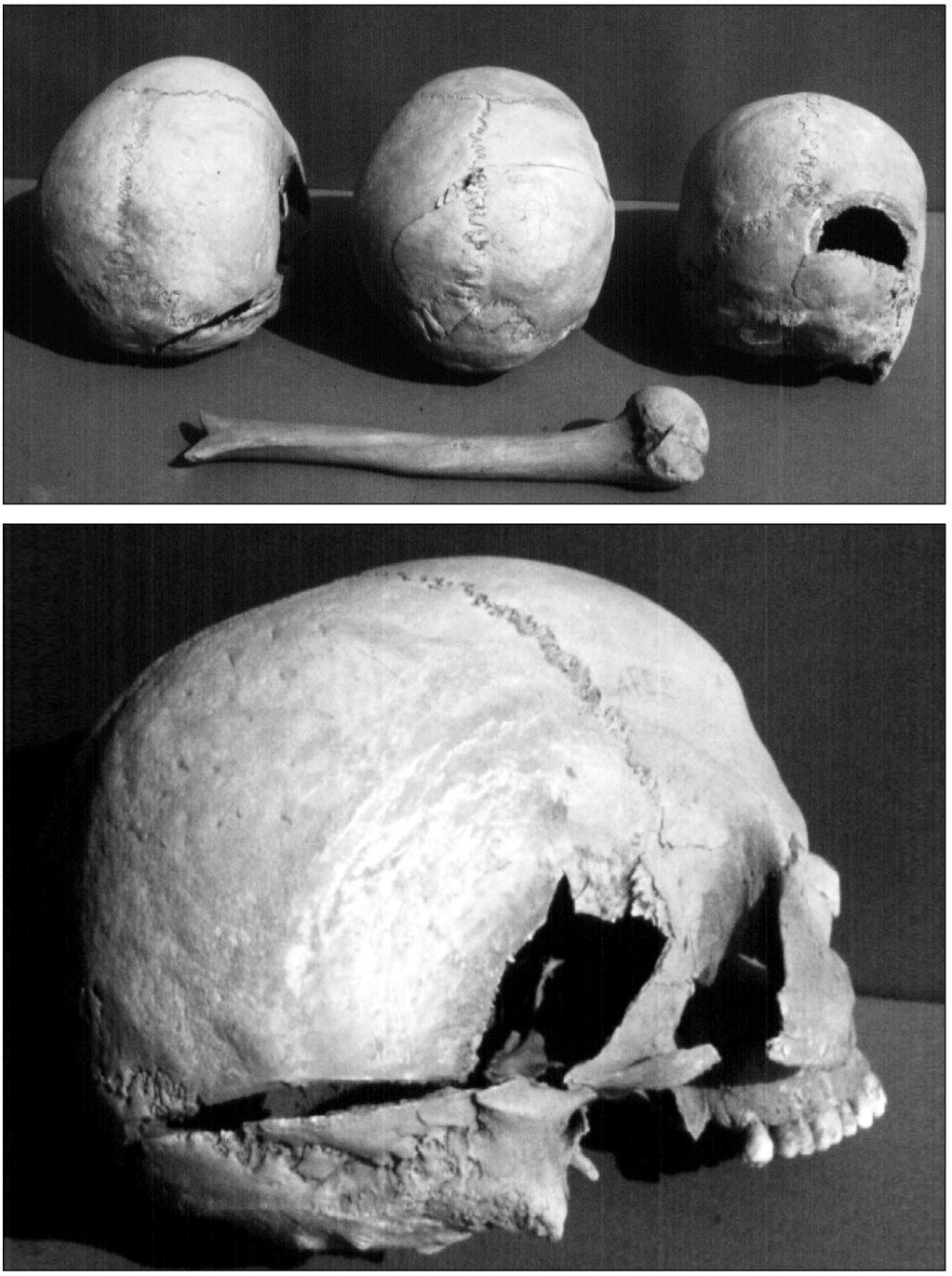

Fig. 1. Naqlun. The skulls and arm bone from burials 226/227/228 (top) and close-up of skull from burial 226 (bottom) (Photo K. Piasecki)

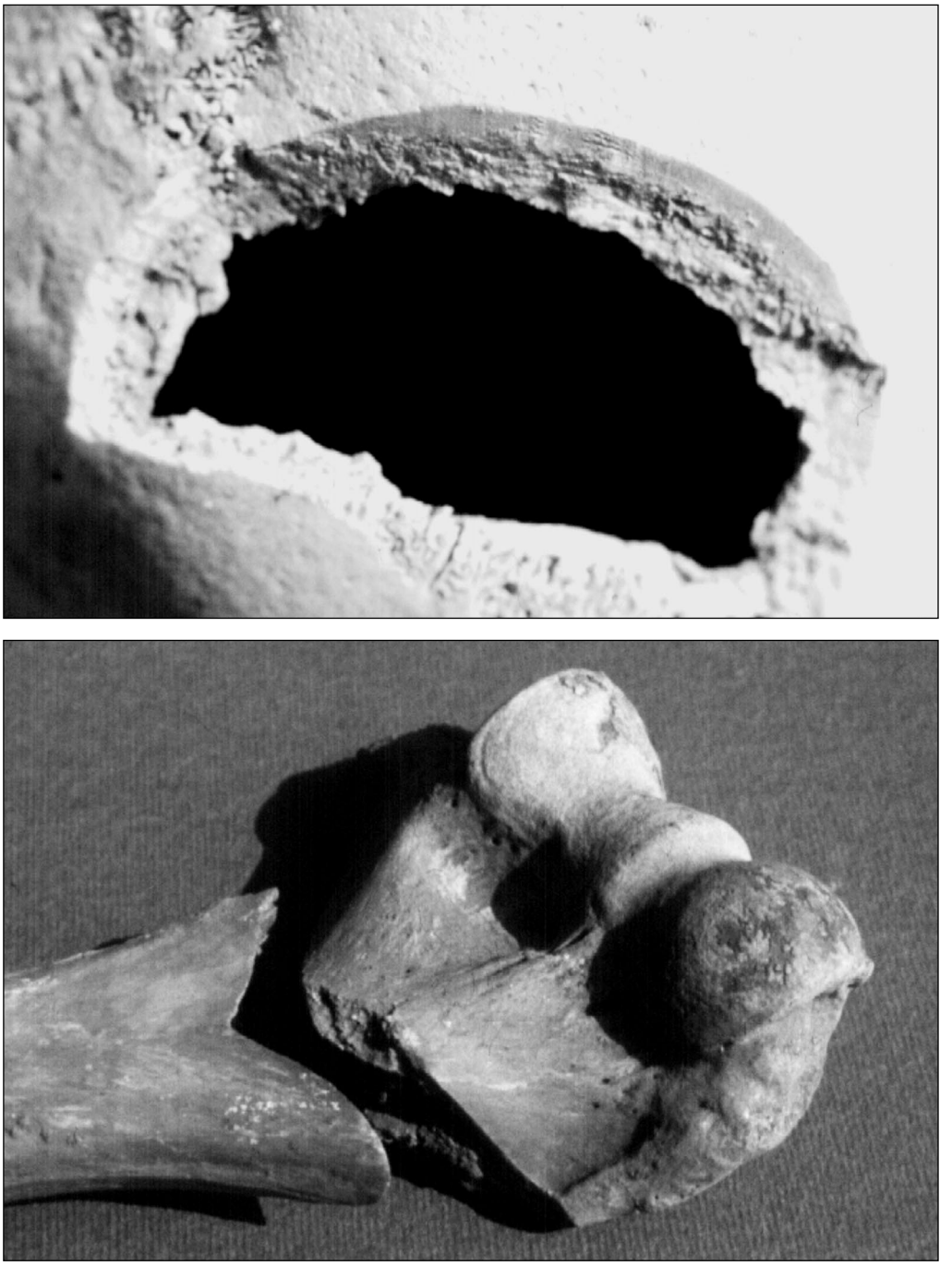

Fig. 2. Naqlun. Close-up of the damage to skull from burial 227 (top) and to the arm bone from burial 228 (bottom) (Photo K. Piasecki)

a blow from the top, which came from the right and reached from the back until the second right molar. The right part of the head was cut off with a blow that was directed downward. The arch of the left zygomatic arch bone (left cheek) was cut from the top with a vertical blow. The molars in the left jaw were broken loose by a horizontal cut. The nose was cut off with two angled blows coming from the top. The last blow cut through the fourth cervical vertebra, additionally cutting the left mandible.

The third of the victims (no. 228) suffered the least and his skull is almost completely preserved. Only the left part of the mandible is missing, it having been cut off together with the left zygomatic arch bone by two slightly angled blows (from the top) and a vertical one (from the bottom). The cuts stopped at the crown of the first left premolar, cutting it in half. The root of the skull bears a narrow cut from a blow given with a very thin point (tip of the saber?) running from the left and even with the temporal line right to the sagittal suture, and causing a splitting of the bone to either side. There is also evidence of blows inflicted other than to the head, namely, the left arm bone had been cut by a blow from the back, which started at the shoulder and stopped at the head of the bone. There was one more blow to the elbow (also from the back) and the manubrium of the sternum was cut off on the right side from the top, indicating that a stabbing blow to the heart had actually killed the victim.

Additionally, the second of the skulls has a round aperture, 5 mm in diameter, above the left eye, and a similar puncture, 3 mm in diameter, on the left vertex bone, behind the coronary suture (not fully perforating the vault). These apertures are most clearly not the effect of an illness, but rather evidence of blows made with a round metal instrument that escapes identification at present.

The absence of any other damages to the bones other than to the skull and the manner in which the blows were inflicted exclude death in battle.

REMARKS ON THE POPULATION

The people buried at this burial ground appear to represent a local population. They were relatively tall, of slender build and in fairly good health. The dentition with the exception of a few cases of caries, purulent inflammation that leaves scars, slightly bigger deposits (of tartar), infrequent cases of enamel hypoplasia and tooth occlusion, testifies to fairly good health. In the case of two female skulls both bottom incisors were found to be missing, possibly removed intentionally.[6] A few dozen of the skulls have poorly or moderately developed *cribria orbitalia* in the upper walls of the eye orbits/sockets, indicating childhood malnutrition or childhood malaria-related anemia. Degenerative changes in the joints and vertebrae are not very frequent. Neither is there a great deal of broken bones and evidence of illnesses that bring about osseous changes.

6) The teeth may have been knocked out during initiation rites or after marriage. Customs of this kind are still known from Sudan. The skulls mentioned here represent a mixed white-and-black anthropological type in the sense of racial variety, which could correspond with this custom.

On five skulls a moderately expressed deformation of the circular type was observed, while on a few others traces of deformation were poorly and very poorly visible. This deformation originates from wrapping a child's head tightly in cloth bandages.

COMPARATIVE SKULL ANALYSIS

A provisional comparative analysis based on nine key skull indicators was carried out on the most complete material (52 male and 40 female skulls).[7] The distance

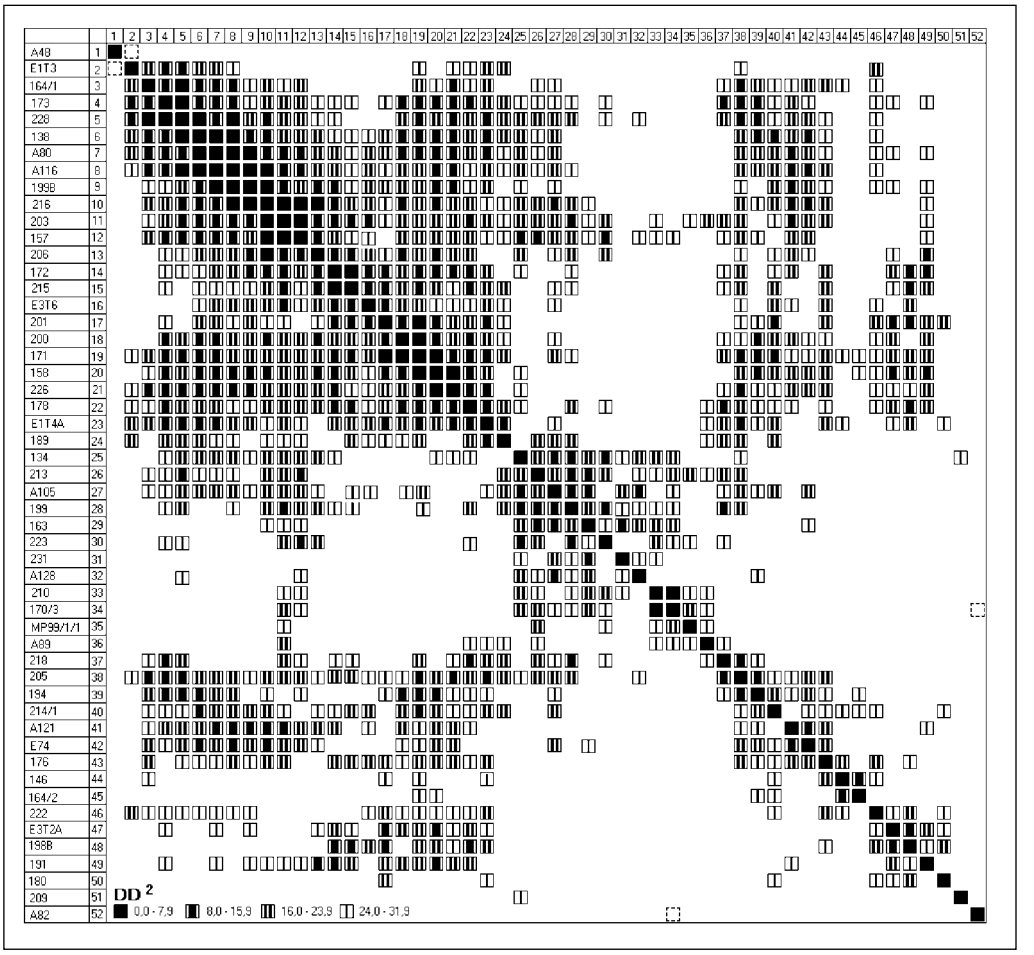

Fig. 3. The Czekanowski diagram for male skulls

7) The following indicators were used (numbers after Martin in parentheses): main (8:1), height-to-length (17:1), forehead-crown (8:17), face morphology (45:48), Kollmann's upper-facial (47:48), nasal (52:51), eye-orbital (55:54), brain size module (1+8+17)/3.

matrix was established[8] using Czekanowski's diagraphic method. The results (*Figs. 3, 4*), reveal considerable differences. The male skulls are distributed among many small groups that are more or less interconnected, plus a certain number of skulls that are not very similar. This is proof of considerable anthropological diversity. By contrast, the female skulls are much less diversified and more strongly

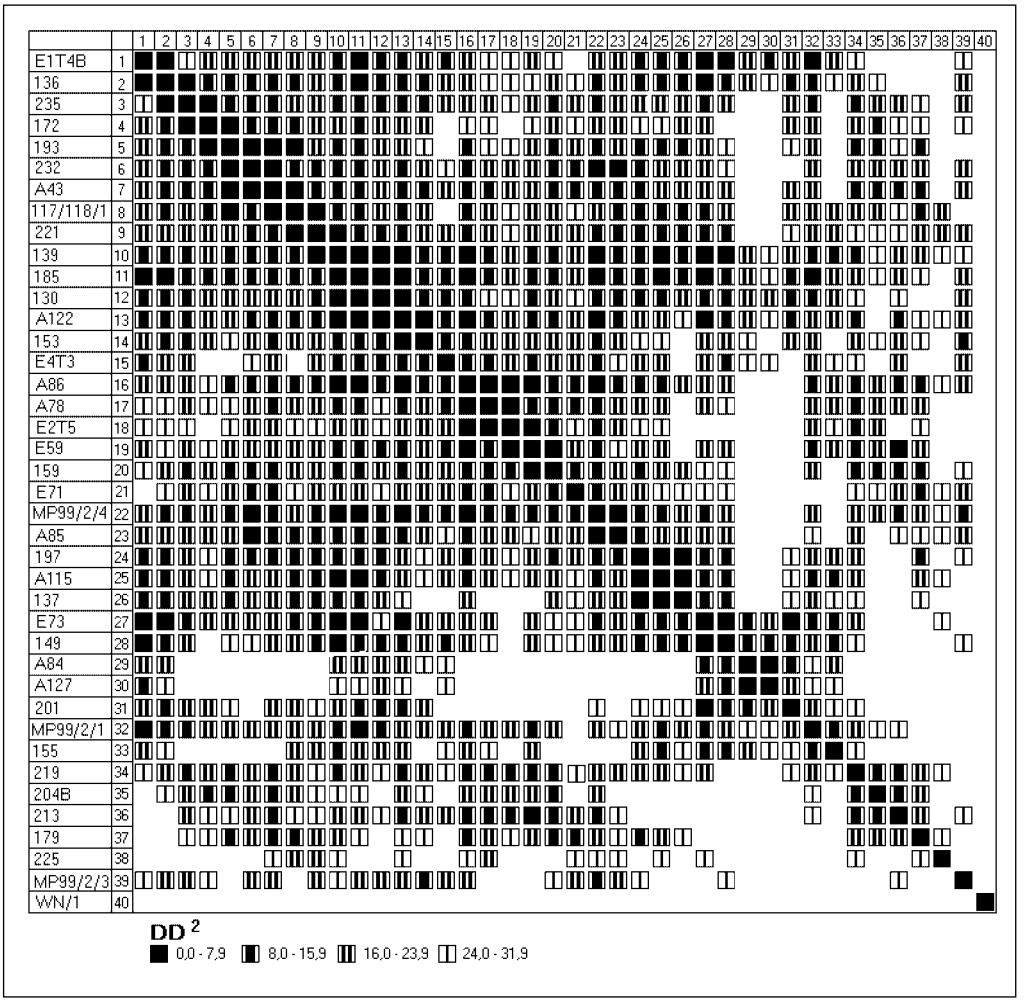

Fig. 4. The Czekanowski diagram for female skulls

8) Distances were calculated using Henzel's DD2 specification, and the matrix was articulated using MaCZek software, developed by Piotr Jaskulski and Arkadiusz Sołtysiak (A. Sołtysiak, "MaCZek1.00. Język programowania diagramu Czekanowskiego", *Biuletyn Antropologiczny* (1997), 1, 11-20; P. Jaskulski, "MaczekShell i Edytor Danych Maczka dla Windows", *Biuletyn Antropologiczny* (1997), 1, 59-60).

interrelated. Thus, while explorations have yet to be completed, it seems clear that we are dealing with a fairly typical situation where women represent a largely local population base, while the men, always the more mobile element, are naturally strongly diversified.

Variant characteristics, as well as a detailed typological analysis,[9] testify to a considerable homogeneity of the local population, which at this time, after a few centuries of Moslem/Arab domination in Egypt, was partly isolated from the foreign, incoming population. Echoes of this isolation are to be found in studies of modern Egyptians,[10] indicating the links between the modern population of the Fayum Oasis and the ancient population. Evident influence of the yellow (primarily the contribution of the Pacific element) and black variety (resulting from influence originating, typically for the period, from the south, that is, from modern-day Sudan) (cf. *Fig. 5*) complete the picture.

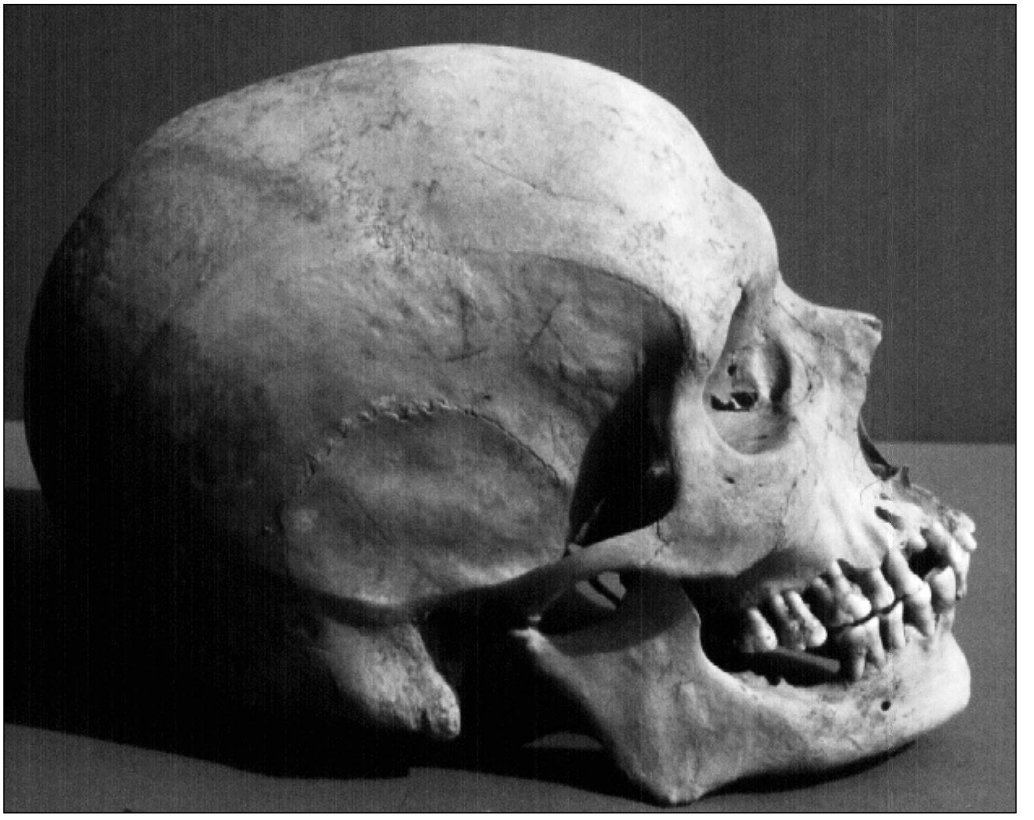

Fig. 5. Skull with evident characteristics of the black variety (Photo K. Piasecki)

9) A separate study will be devoted to this issue.

10) I. Michalski, "Remarks about the anthropological structure of Egypt", Publications of the Joint Arabic-Polish Anthropological Expedition, Part II (no date), 209-238.