A CONTRIBUTION TO THE ANTHROPOLOGY OF THE RECENT EGYPTIAN POPULATION

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PART I

THE ANTHROPOLOGY OF ABUSIR AND QIFT

CONTENTS OF PART I

PREFATORY NOTE

The programme of the Second egyptian Expedition of the Czechoslovak Institute of Egyptology of the Charles University of Prague in 1961 included also an anthropological investigation of a smaller group of contemporary Egyptians. The research consisted in the completion of the present data on the physical and physiological characteristics of contemporary Egyptians, namely of the inhabitants of the Nile valley proper.

Because of technical difficulties it was necessary to reduce the number of those examined to 100 persons, and to make use of the concentration of workers working at our archaeological investigation of the Ptahshepses Mastaba at Abusir near Cairo. I undertook my research directly in the field in a course of the investigations in October and November 1961. From the materials obtained there have been selected male samples of the inhabitants of the Abusir village, situated in Middle Egypt and of Qift, lying in Upper Egypt. Besides this some juveniles and two Sudanese Negroes have been studied.

I am glad to express my thanks to those who have helped to achieve the good results of the anthropological research work. I am most grateful to Professor Dr. Z. Žába, Director of the Czechoslovak Institute of Egyptology of the Charles University of Prague and leader of the Second Expedition for his acceptance of my investigation as part of the Institute Research Plan; to Docent Dr. K. Šilink, Director of the Endocrinological Research Institute in Prague for making possible the stistic elaboration of the results in the Biostati-Mathematical Department of his Institute; to Professor Dr. Ali Hassan, Head of the Medical Department of the National Research Centre of the U.A.R. in Cairo for his kindness in lending us their pigmentation scales and to Professor Dr. Achmad Mahmoud El-Batrawi, Head of the Department of Anatomy of the Cairo University for introducing me to the problematics of Egyptian anthropology. Some missing anthropological instruments were lent us by our various institutions and for this reason I am indebted to Dr. L. Crhák, Head of the Anthropological Institute of the Palacký University of Olomouc and to his assistant Dr. M. Černý, to Docent Dr. T. Magrot, C. Sc., Chief of the Biological Institute of the Medical Faculty of the Charles University in Plzeň; to Dr. J. Wölf, assistant of the Faculty of Arts of the Charles University of Prague and to Ing. V. Lorenc of the Physical Culture Research Institute. I owe many thanks for valuable comments to Professor Dr. J. A. Valšík, Head of the Chair of Anthropology and Genetics of the Comenius University of Bratislava, to Dr. R. Kalivoda C. Sc., Head Physician of the Centre for Tropical Medicine in Prague and to Dr. E. Vlček, C. Sc., anthropologist of the Archaeological Institute of the Czechoslovak Academy of Sciences in Prague. I extend my thanks to all my collaborators for their excellent co-operation (technically helped by V. J. Bačkovský, B. Černá, M. Knížková, S. Kratinová, Z. Novotná, Z. Pobišová, H. Svobodová and V. Špirková) and to all members of the Second Expedition of the Czechoslovak Institute of Egyptology for their support in my work.

Prague, January, 1963. E. S.

MATERIALS AND METHODS

Out of the total number of 100 men examined there were formed two groups of adult men, one of the natives of ABUSIR in Middle Egypt (n — 64, 4 of them inhabitants of the nearby village of

Saqqara) and the second of the natives of QIFT in Upper Egypt ($n = 28$, one of them from the nearby Qena).

Abusir is a typical Egyptian country village with a relatively lower standard of hygiene, not yet much influenced by the nearby city of Cairo (about 20 km). The examined men from Abusir gave in majority of cases their occupation as agriculture (fellaheen). They cultivated their own small fields or work on a local big farm. One man besides his main occupation was also country musician, one was working as a helper and in one further case the man was employed as a watchman (gafir). From the social point of view the group forms a homogeneous unity.

Qift is a little Upper-Egyptian town where the principal hygienic requirements (drinking-water, sale of foodstuffs) and some social institutions (e. g. hospitals) have already been provided. Members of our group are in the majority of cases employed at the archaeological investigations organized by the Department of Antiquities or by various foreign expeditions, also in the very distant regions of the country. Their equipment consisting only of modest objects for their personal use and of foodstuffs, they often live months separated from their homes and families under primitive conditions. They are skilled workers much in demand, possessing the principal knowledge of field research work and having a rare sense for the fine digging techniques. The length of their employment in archaeological research varies from 1 to 41 years with an average of 13 years. One man from Qift works mostly in agriculture and a native from the nearby Qena as a bricklayer. The group of Qift inhabitants is also socially fairly homogeneous.

All individuals forming the two above-mentioned groups belong by origin to these places for at least two generations. Two settlers from Abusir, Sudanese negroes by birth, were eliminated from the group. In a small number of the examined men there was slight evidence of an ancient distant origin in their names (Arabi, Kurdi, Hindi, Berberi, and others). We took this into consideration in the chapter concerning individual analysis.

Only adults, aged 20—60 years, were classified in these two groups. The average age in the Abusir group was 30.4 years and that of the Qift group 35.3 years. In the Abusir group the number of younger individuals largely prevails; 85.9 % have not yet reached their 40th year of age. Among the Qift inhabitants more than one third of the total number of examined persons are aged over 40. The results of the investigations of juveniles and of abovementioned two Abusirians — Sudanese by origin, are dealt with in the chapter concerning individual analysis.

Each of the examined persons was free from acute illness during the time of investigations. The data on medical anamnesis, small accidental findings and some notes on intercurrent illness are to be found in the results of the group analysis.

The examined men are Arabs by nationality, of U.A.R. citizenship and of Muslim religion.

In the selection of characteristics we have attempted to present the principal characteristics of individuals' physical features, namely as regards the racial component as well as from the constitutional and alimental points of view. Some physiological data have been also included.

Because of difficult research conditions we have chosen technically easily determinable characteristics and of these only the most essential.

We determined the following characteristics:

I. METRICAL CHARACTERISTICS

A. Morphological Measurements

In order to characterize the entire body mass and the main proportional relationship we determined:

1. Body weight (decimal weight, weighted with a precision of 0.5 kg).

2. Stature (precision 0.5 cm).

3. Sitting height (according to Martin's [1928] technique, the height of the bench 30 cm, precision 0.5 cm).

From the head dimensions there were taken (according to Martin's technique, precision 0.1 cm):

4. maximum head length (Martin, dimension No. 1),

5. maximum horizontal breadth of the head (No. 3),

6. minimum frontal breadth (No. 4),

7. total morphological height of the face (No. 18),

8. bizygomatic breadth of the face (No. 6),

9. bigonial breadth of the mandible (No. 8),

10. nasal height (No. 21),

11. nasal breadth (No. 13).

For the estimation of robustness of skeletal system there was determined:

12. bistyloid radio-ulnar breadth of the left hand (No. 52, No. 2).

B. Morphological Indices

13. Rohrer's index (Martin, p. 176) is chosen for the characteristics of the body build type.

14. Cormic index (according to Vallois in Olivier 1960, p. 19), i. e. sitting height in percentage of stature, is to illustrate the relation of trunk lenght and of the length of lower extremities.

Of the cephalometric indices we have determined (according to Martin 1928):

15. cephalic index (Martin, p. 198),

16. fronto-parietal horizontal index (p. 199),

17. total morphological index of the face (p. 200),

18. zygo-frontal index (p. 201),

19. zygo-gonial index (p. 201),

20. nasal index (p. 202),

21. zygo-nasal index (the nasal breadth in percentage of the bizygomatic breadth of the face).

22. Relative bistyloid radio-ulnar breadth of the left hand (bistyloid breadth in percentage of the stature), to enable comparison of these dimensions in persons of various body heights.

C. Physiological Values

23.—24. Maximal pressure force of the right and of the left hand (measured with dynamometer with a precision of 1 kg) was adopted as an indicator for the muscle force of the upper extremities.

25.—26. Skinfold thickness in the left tricipital area (horizontal skinfold in the dorsal area of arm — between the acromion and olecranon points) and underleft scapula (oblique fold under the lower angle of the scapula) was measured to show the state of nutrition (Brožek and Keys 1951, Pařízková 1961). We were using a special spreading caliper according to Best (1954) and to Pařízková in the Lorenc's modification (pressure approximately 7 gr/mm^2).

27. Pulse value (per minute) was felt under absolute repose in sitting position. There was a 15 minutes' rest-break before starting the investigation.

28.—29. Systolic and diastolic blood pressure (tonometre Erkaplex, precision of measuring 5 mm Hg) were taken under the same repose conditions as the pulse value.

II. DESCRIPTIVE CHARACTERS

1. Skin colour was ascertained on places of the lightest pigmentation (in hair, on the back or nabel) according to the paper scale by B. K. Schultz (1935),

2. eye colour according to Martin's glass eye scale (made in Poland),

3. hair colour according to the Fischer-Saller hair scale.

4. Hair shape was estimated according to a simplified Martin scheme in the arrangement of Prokopec and others (1958).

5. Beard density was classified in three degrees (scanty, moderate, fair),

6. beard localisation was according to J. A. Valšík's suggestion divided into eight categories, resulting through enlarging of the Roginski-Levin (1955, p. 44) scheme (as quoted in Table IV).

7. Nasal root depression was classified into four degrees (shallow, middle, deep, very deep).

8. Shape of nasal bridge was divided into six groups. Besides the three basic categories there were distinguished some shapes differing only very slightly from the straight form.

9. Position of the nasal base was entered according to Weninger's scheme (Martin, fig. 252: 2—4),

10. nasal wings as flaring, middle, or compressed,

11. shape of nostrils according to Topinard's scheme (Martin, p. 559).

12. Integumental lip thickness was classified according to Martin (p. 545) as thin, middle, full, and negroid.

The remaining five characters were taken from photographs:

13. On the left auricle there was marked existence of Darwin's tubercle, strikingly large helix, very narrow helix, isolated enlarging in the upper area of helix (folded or so-called Hottentot ear). The rest are forms without any special interest.

14. When grouping the outline of the face we used the Pöch-Birnbach scheme (Martin, p. 220).

15. Besides the usual shape of the profile of the face (orthognathic, slightly prognathic and prognathic) it was necessary to distinguish also an orthognathic form with a retruding chin and an orthognathic form with a protruding chin.

16. Vault of the vertex was distinguished on the basis of relationship between the projectional auricular height and the projectional head length. A low vault was stated when the height arrived at 55 % of head length, a middle with this relation at 60 %, a high vault at 65 %, and very high at 70 %.

17. Profile of the occiput was arranged also empirically in categories of not arched, slightly arched, and protruding shape, either round or flattened.

III. PATHOLOGICAL FINDS

We observed constantly the enlarging of the thyroid gland according to K. Šilink's R-system (1949). The other finds were discovered during the general physical examination of health condition.

IV. ARTIFICIAL DEFORMATIONS

were recorded in cases of their occurrence.

V. DERMATOGLYFICS

were taken from the right hand fingers of 44 Abusir men.

METHODS OF STATISTICAL WORK

For evaluation of the results obtained we used methods of mathematical statistics. The principal characteristics were computed according to the formulae:

the sample mean $\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$

sample standard deviation:

$$s = \sqrt{\frac{1}{n}\sum_{i=1}^{n}(x_i - \bar{x})^2}$$

the estimation of the standard deviation of the population:

$$\hat{\sigma} = s\sqrt{\frac{n}{n-1}}$$

the estimation of the standard deviation of the sample means:

$$\hat{\sigma}_{\bar{x}} = \frac{s}{\sqrt{n-1}}$$

99.73 percentual confidence interval of sample means:

$$\bar{x} \pm 3\hat{\sigma}_{\bar{x}}$$

the coefficient of variation:

$$V(\%) = 100\frac{s}{\bar{x}}$$

As nearly in all cases one can rely upon a normal distribution of the population we used the *t*-tests for testing the significance of the differences of sample means. For all these tests we have fixed a level of significance $p = 0.05$.

As far as the paired values are concerned we used a test criterion:

$$t = |\mathrm{d}|\frac{\sqrt{n-1}}{s_d}$$

at $n - 1$ being the degrees of freedom, where

$$\bar{\mathrm{d}} = \frac{1}{n}\sum_{j=1}^{n}(x_i - y_i)$$

$$s_d = \sqrt{\frac{1}{n}\sum_{i=1}^{n}(x_i - y_i - \bar{\mathrm{d}})^2}$$

When non-paired values occur, we have primarily verified the null hypothesis by means of the *F*-test

$$\left(F = \frac{\hat{\sigma}_1^2}{\sigma_2^2}\right)$$

that there is no significant difference between the variances of the populations, i. e.

$$\sigma_1^2 = \sigma_2^2$$

In the positive case the test criterion was as follows:

$$t = \frac{|\bar{x}_1 - \bar{x}_2|}{\sqrt{\frac{n_1 + n_2}{n_1 n_2} \times \frac{n_1 s_1^2 + n_2 s_2^2}{n_1 + n_{2-2}}}}$$

at $\vartheta = n_1 + n^2 - 2$ degrees of freedom.

In the contrary case (i. e. $\delta_1^2 \neq \delta_2^2$) we used

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{s_1^2}{n_1 - 1} - \frac{s_2^2}{n_1 - 1}}}$$

with critical value

$$t_p = \frac{t_{,}\frac{s_1^2}{n_1 - 1} + t'p'\frac{s_2^2}{n_2 - 1}}{\frac{s_1^2}{n_1 - 1} + \frac{s_2^2}{n_2 - 1}}$$

at $\vartheta\ 1 = n_1 - 1$ and $t_p'\ \vartheta\ 2 = n^2 - 1$ degrees of freedom (for t_p').

For looking up critical values we made use of current tables of Student's *t*-distribution and Snedocorov's *F*-distribution.

Statistically significant values are framed in all tables.

RESULTS OF GROUP ANALYSIS

I. METRICAL CHARACTERISTICS

The summary of results of statistic analysis of metrical characters of the two groups is shown in Table 1. The last column contains the values of *t*-tests by help of which we determined the significance of the differences of the sample means of each characteristics between the group of Abusir and of Qift. Statistically significant values are framed.

Graphic representation of frequencies of individual values in each metrical character was carried out by means of the polygon frequencies in diagrams 1—29, which follow. The distribution of some metrical characters into quantitative categories is summarized in Table 2. Some characters of physiological importance were worked up cumulatively in both groups, the juveniles included, into five age groups to demonstrate changes by aging (Table 3).

In the following text we shall use the symbol A for the group from Abusir and the symbol Q for that from Qift.

TABLE 1

Metrical Characteristics of Two Samples of Contemporary Egyptians
(Men, 20—59 Years old)

Nr.	Characteristic	Author of the Method, event. Computation	Unit	Abusir (Middle Egypt)					Qift (Upper Egypt)					t
				n	P	$\bar{x} \pm 3\sigma_{\bar{x}}$	s	V (%)	n	R	$\bar{x} \pm 3\sigma_{\bar{x}}$	s	V (%)	
1	Weight	Martin nr. 71	kg	64	48.0—73.0	58.22 ± 2.07	5.49	9.4	28	45.5—66.0	55.75 ± 3.03	5.25	9.4	1.99
2	Stature	Martin nr. 1	cm	64	152.5—184.0	165.81 ± 2.18	5.76	3.5	28	145.0—179.5	166.11 ± 4.25	7.36	4.4	0.21
3	Sitting height	Martin nr. 23	cm	64	78.0—96.0	85.75 ± 1.32	3.48	5.1	28	75.0—90.5	84.57 ± 2.21	3.82	4.5	1.44
4	Maximum glabello-occipital length	Martin nr. 1	cm	64	16.4—21.4	19.15 ± 0.27	0.71	3.7	28	18.0—20.1	18.95 ± 0.36	0.63	3.3	1.27
5	Maximum horizontal breadth of the head	Martin nr. 3	cm	64	13.2—16.1	14.21 ± 0.19	0.49	3.4	28	13.3—15.0	14.16 ± 0.27	0.46	3.2	0.45
6	Minimum frontal breadth	Martin nr. 4	cm	64	9.6—11.8	10.81 ± 0.18	0.48	4.4	28	9.3—11.4	10.48 ± 0.22	0.39	3.7	3.17
7	Total morphological height of the face	Martin nr. 18	cm	64	10.4—13.3	11.79 ± 0.26	0.68	5.8	28	10.4—12.5	11.51 ± 0.38	0.66	5.7	1.81
8	Maximum bizygomatic breadth	Martin nr. 6	cm	64	12.2—14.5	13.45 ± 0.17	0.46	3.4	28	12.6—14.0	13.32 ± 0.24	0.42	3.2	1.27
9	Bigonial breadth of the lower jaw	Martin nr. 8	cm	64	8.8—11,7	10.49 ± 0.21	0.57	5.4	28	9.0—11.4	10.11 ± 0.33	0.56	5.5	2.93
10	Nasal height	Martin nr. 21	cm	64	4.0—5.9	4.96 ± 0.13	0.34	6.9	28	4.3—5.5	4.90 ± 0.19	0.33	6.7	0.78
11	Nasal breadth	Martin nr. 13	cm	64	2.9—4.5	3.74 ± 0.12	0.32	8.6	28	3.4—4.4	3.96 ± 0.14	0.25	6.3	3.20
12	Bistyloid radio-ulnar breadth of the left hand	Döbeln	cm	64	5.0—6.1	5.51 ± 0.10	0.27	4.9	28	5.0—6.0	5.41 ± 0.13	0.22	4.1	1.71
13	Rohrer's index	$\frac{(1)}{(2)^3} \cdot 100$	—	64	0.99—1.53	1.28 ± 0.04	0.10	8.1	28	0.99—1.51	1.22 ± 0.07	0.12	10.0	1.99
14	Cormic index (Relative sitting height)	$\frac{(3)}{(2)} \cdot 100$	—	64	46.7—56.6	51.79 ± 0.61	1.63	3.1	28	47.8—53.9	51.00 ± 0.82	1.41	2.8	2.20
15	Cephalic index	$\frac{(5)}{(4)} \cdot 100$	—	64	67.5—83.5	74.31 ± 1.26	3.33	4.5	28	68.5—82.0	74.66 ± 1.56	2.71	3.6	0.48
16	Fronto-parietal horizontal index	$\frac{(6)}{(5)} \cdot 100$	—	64	69.5—83.6	76.17 ± 1.18	3.12	4.1	28	67.9—80.6	74.06 ± 1.63	2.82	3.8	3.04
17	Total morphological index of the face	$\frac{(7)}{(8)} \cdot 100$	—	64	79.3—103.2	87.80 ± 2.24	5.93	6.8	28	77.0—97.6	86.41 ± 3.19	5.53	6.4	1.04
18	Zygo-frontal index	$\frac{(6)}{(8)} \cdot 100$	—	64	71.9—89.4	80.50 ± 1.20	3.18	4.0	28	71.0—85.0	78.63 ± 1.74	3.01	3.8	2.58
19	Zygo-gonial index	$\frac{(9)}{(8)} \cdot 100$	—	64	69.1—84.9	78.12 ± 1.47	3.90	5.0	28	64.8—84.4	76.06 ± 2.61	4.52	5.9	2.19
20	Nasal index	$\frac{(11)}{(10)} \cdot 100$	—	64	57.4—97.5	75.83 ± 3.10	8.21	10.8	28	72.3—93.6	81.34 ± 3.37	5.83	7.2	3.17
21	Zygo-nasal index	$\frac{(11)}{(9)} \cdot 100$	—	64	23.0—33.1	27.79 ± 0.83	2.19	7.9	28	26.6—34.9	29.77 ± 1.13	1.96	6.6	4.07
22	Relative bistyloid radio-ulnar breadth	$\frac{(12)}{(2)} \cdot 100$	—	64	2.93—3.67	3.33 ± 0.06	0.16	4.8	28	3.01—3.64	3.27 ± 0.09	0.15	4.6	1.67
23	Maximal pressure force of the right hand	—	kgm	62	26—47	36.2 ± 2.0	5.2	14.3	28	23—46	36.6 ± 3.8	6,6	18,0	0.25
24	Maximal pressure force of the left hand	—	kgm	63	24—47	34.0 ± 2.0	5.2	15.4	28	23—43	34.3 ± 3.5	6.1	17.8	0.20
25	Skinfold thickness in the left tricipital area	Allen,	cm	64	0.2—0.7	0.38 ± 0.04	0.12	31.0	28	0.2—0.7	0.44 ± 0.07	0.12	27,1	2.16
26	Skinfold thickness in the subscapular area	Pařízková	cm	55	0.3—1.3	0.66 ± 0.07	0.16	24.8	28	0.3—1.2	0.68 ± 0.11	0.19	27.7	0.59
27	Pulse	—	per min.	64	52—108	74.0 ± 3.9	10.2	13.8	28	60—90	76.9 ± 4.7	8.2	10.6	1.34
28	Systolic blood pressure	—	mm Hg	64	85—155	121.9 ± 5.3	13.9	11.4	28	105 —145	121.8 ± 6.1	10.6	8.7	0.03
29	Diastolic blood pressure	—	mm Hg	64	40—105	78.5 ± 4.5	11.9	15.2	28	70—100	82.7 ± 4.3	7.5	9.1	1.69

The explanation of symbols:
n = the number of cases
R = the range of sample
$\bar{x} \pm 3\sigma_{\bar{x}}$ = the confidence interval of the sample mean ($p = 0.9973$)
s = the sample standard deviation
V = the coefficient of variation
t = the Student's test ($t_{00.05} = 1.99$)
□ = statistic significant values of t are framed

TABLE 2

Distribution of Some Metrical Characteristics into quantitative Categories

Nr.	Characteristic	Author of the Classification	Category	Unit	Limits of the category	Abusir (Middle Egypt)		Qift (Upper Egypt)	
						Frequency		Frequency	
						absolute	relative (%)	absolute	relative (%)
1	Weight	According to Martin's figures, p. 306	Very small	kg	—49.9	4	6.2	5	17.9
			Small		50.0—59.9	36	56.3	18	64.2
			Medium		60.0—69.9	22	34.4	5	17.9
			Heavy		70.0—79.9	2	3.1	—	—
			Very heavy		80.0—	—	—	—	—
			Total		—	64	100.0	28	100.0
2	Stature	Martin, p. 246	Very low	cm	130.0—149.9	—	—	1	3.6
			Low		150.0—159.9	9	14.1	4	14.3
			Below average		160.0—163.9	10	15.6	4	14.3
			Average		164.0—166.9	18	28.1	6	21.4
			Above average		167.0—169.9	14	21.9	5	17.8
			Tall		170.0—179.9	11	17.2	8	28.6
			Very tall		180.0—199.9	2	3.1	—	—
			Total		—	64	100.0	28	100.0
4	Maximum glabello-occipital length	Scheidt, p. 15	Short	cm	—18.1	1	1.6	3	10.7
			Medium		18.2—18.9	23	35.9	10	35.7
			Long		19.0—19.9	36	56.3	14	50.0
			Very long		20.0+	4	6.2	1	3.6
			Total		—	64	100.0	28	100.0
5	Maximum horizontal breadth of the head	Scheidt, p. 15	Very narrow	cm	x—13.8	13	20.3	9	32.1
			Narrow		13.9—14.9	47	73.4	18	64.3
			Medium		15.0—15.8	3	4.7	1	3.6
			Wide		15.9—x	1	1.6	—	—
			Total		—	64	100.0	28	100.0
6	Minimum frontal breadth	Mitwalli, p. 116	Narrow	cm	x—10.1	4	6.3	4	14.3
			Medium		10.2—10.6	23	35.9	14	50.0
			Wide		10.7—x	37	57.8	10	35.7
			Total		—	64	100.0	28	100.0
7	Total morpho-logical height of the face	Scheidt, p. 17	Short	cm	x—11.7	34	53.1	16	57.1
			Medium		11.8—12.6	22	34.4	12	42.9
			Long		12.7—13.5	8	12.5	—	—
			Very long		13.6—x	—	—	—	—
			Total		—	64	100.0	28	100.0
8	Maximum bizygomatic breadth	Scheidt, p. 17	Narrow	cm	x—13.3	22	34.4	15	53.6
			Medium		13.4—14.1	39	60.9	13	46.4
			Wide		14.2—15.0	3	4.7	—	—
			Very wide		15.1—x	—	—	—	—
			Total		—	64	100.0	28	100.0
9	Bigonial breadth	Analog. to 6	Narrow	cm	x—10.1	14	21.9	15	53.6
			Medium		10.2—10.6	21	32.8	9	32.1
			Wide		10.7—x	29	45.3	4	14.3
			Total		—	64	100.0	28	100.0
10	Nasal height	Mitwalli, p. 115	Low	cm	x—4.6	9	14.1	5	17.8
			Medium		4.7—5.2	43	67.2	19	67.9
			High		5.3—x	12	18.7	4	14.3
			Total		—	64	100.0	28	100.0

Continuation of Tab. 2

Nr.	Characteristic	Author of the Classification	Category	Unit	Limits of the category	Abusir (Middle Egypt) Frequency		Qift (Upper Egypt) Frequency	
						absolute	relative (%)	absolute	relative (%)
11	Nasal breadth	Mitwalli, p. 116	Narrow	cm	x—3.6	23	35.9	2	7.1
			Medium		3.7—4.1	35	54.7	19	67.9
			Wide		4.2—x	6	9.4	7	25.0
			Total		—	64	100.0	28	100.0
13	Rohrer's index	Pignet in: Olivier, p. 46	Very feeble	—	x—1.12	2	3.1	5	17.9
			Feeble		1.13—1.19	10	15.6	7	25.0
			Medium		1.20—1.25	11	17.2	6	21.4
			Good		1.26—1.32	20	31.3	5	17.9
			Strong		1.33—1.39	14	21.9	2	7.1
			Very strong		1.40—x	7	10.9	3	10.7
			Total		—	64	100.0	28	100.0
14	Cormic index (Relative sitting height)	Vallois in: Olivier, p. 19	Brachycormic	—	x—50.9	13	20.3	16	57.1
			Metriocormic		51.0—52.9	38	59.4	11	39.3
			Macrocormic		53.0—x	13	20.3	1	3.6
			Total		—	64	100.0	28	100.0
15	Cephalic index	Martin, p. 198	Hyperdolichocephalic	—	x—70.9	11	17.2	2	7.1
			Dolichocephalic		71.0—75.9	33	51.5	17	60.7
			Mesocephalic		76.0—80.9	19	29.7	8	28.6
			Brachycephalic		81.0—85.4	1	1.6	1	3.6
			Hyperbrachycephalic		85.5—x	—	—	—	—
			Total		—	64	100.0	28	100.0
16	Fronto-parietal horizontal index	Olivier, p. 53 modif.	Relatively narrow forehead	—	x—68.9	—	—	1	3.6
			Relatively medium forehead		69.0—70.9	2	3.1	1	3.6
			Relatively wide forehead		71.0—74.9	20	31.3	18	64.3
			Relatively very wide forehead		75.0—x	42	65.6	8	28.5
			Total		—	64	100.0	28	100.0
17	Total morphological index of the face	Martin, p. 200	Hypereuryprosopic	—	x—78.9	—	—	2	7.1
			Euryprosopic		79.0—83.9	23	35.9	7	25.0
			Mesoprosopic		84.0—87.9	13	20.3	7	25.0
			Leptoprosopic		88.0—92.9	16	25.0	9	32.2
			Hyperleptoprosopic		93.0—x	12	18.8	3	10.7
			Total		—	64	100.0	28	100.0
18	Zygo-frontal index	Olivier, p. 56 modif.	Relatively narrow forehead	—	x—75.9	6	9.4	5	17.8
			Relatively middle forehead		76.0 77.9	9	14.1	7	25.0
			Relatively wide forehead		78.0—81.9	26	40.6	12	42.9
			Relatively very wide forehead		82.0—x	23	35.9	4	14.3
			Total		—	64	100.0	28	100.0
19	Zygo-gonial index	Olivier, p. 57	Relatively narrow jaw	—	x—75.9	18	28.1	15	53.6
			Relatively middle jaw		76.0—77.9	11	17.2	2	7.1
			Relatively wide jaw		78.0—x	35	54.7	11	39.3
			Total		—	64	100.0	28	100.0
20	Nasal index	Martin, p. 202	Hyperleptorrhin	—	x—54.9	—	—	—	—
			Leptorrhin		55.0—69.9	17	26.6	—	—
			Mesorrhin		70.0—84.9	40	62.5	21	75.0
			Chamaerrhin		85.0—99.9	7	10.9	7	25.0
			Hyperchamaerrhin		100.0—x	—	—	—	—
			Total		—	64	100.0	28	100.0

TABLE 3

Characteristis of Physiological Importance in Relation to Age

Nr.	Character	Unit	14—17 years old			20—29 years old		
			n*)	R*)	$\bar{x}$*)	n	R	$\bar{x}$
1	Weight	kg	6	36.0—58.0	46.33	47	48.0—72.0	57.57
2	Stature	cm	6	143.0—169.0	157.58	47	153.5—184.0	166.16
13	Rohrer's index	—	6	1.08—1.31	1.17	47	0.99—1.53	1.26
23	Maximal pressure force of the right hand	kgm	6	22—30	27.1	47	27—46	37.4
24	Maximal pressure force of the left hand	kgm	6	20—30	25.8	47	23—44	34.8
25	Skinfold thickness in the left tricipital area	cm	6	0.3—0.6	0.40	47	0.2—0.6	0.39
26	Skinfold thickness in the left subscapular area	cm	6	0.4—0.7	0.50	42	0.5—1.3	0.68
27	Pulse	per. min.	6	72—108	88.6	47	54—108	75.1
28	Systolic blood pressure	mm Hg	6	95—125	110.0	47	85—155	122.3
29	Diastolic blood pressure	mm Hg	6	60—95	75.8	47	50—105	77.7

*) Symbols as in Table 1.

A. Morphological Measurements

1. Body weight is rather low in both groups with the mean of 58.22 kg in A-group, and 55.75 kg in Q-group. Martin gives (p. 306) the average weight of 65 kg with a range of 42—84 kg for adult

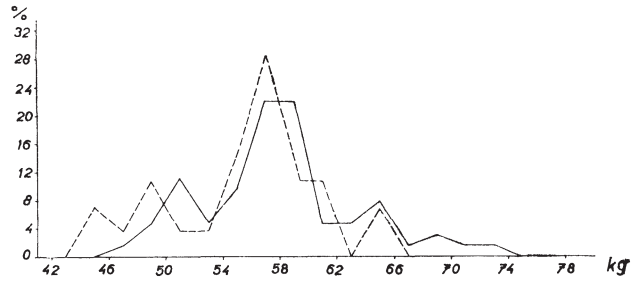


Diagram 1. Distribution of frequencies of weight in Abusir group (————) and in Qift group (— — — —).

Europeans. In his table (p. 314) our results are similar to those of one Polish group (55 kg) and to the Roumanians (58.4 kg). The African groups presented by Martin have a lower average than ours do. At the same time the weight was higher in A-group than in Q-group, the difference being on the border of significance. Graphic representation shows that the difference is caused by a shifting of the entire distribution of frequencies. We have found out that in both groups the highest value of the coefficient of variation was in the body weight. Age division shows a slight drop in weight after the 50th year of age.

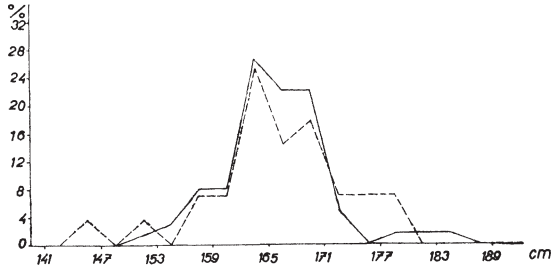


Diagram 2. Distribution of frequencies of stature in Abusir group (————) and in Qift Group (— — — —).

2. Stature shows a mean of 165.81 cm in A-group and 166.11 cm in Q-group, falling into the average stature category according to Martin, Montadon or Scheidt; according to distribution by Vallois it is slightly above the average. The difference is not significant, the characteristics of variability are higher in Q-group. The stature in individuals aged over 40 is a little lower, over 50 years significantly lower than in individuals of 20 to 39 years old.

3. Sitting height in A-group (mean 87.75 cm) is higher than in Q-group (mean 84.57 cm), but

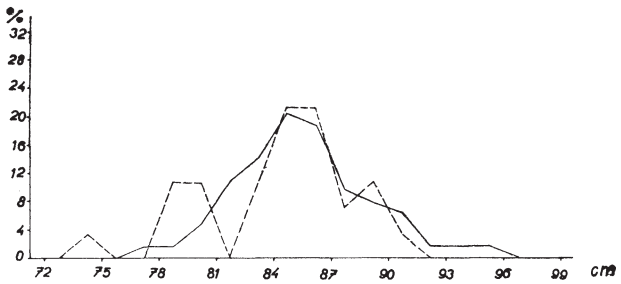


Diagram 3. Distribution of frequencies of sitting height in Abusir group (————) and in Qift group (— — — —).

the difference is not significant. In the diagram we can see that the lower values are more separated from the average values in Q-group than in A-group.

4. Maximum glabello-occipital length with a mean of 19.15 cm in A-group falls,

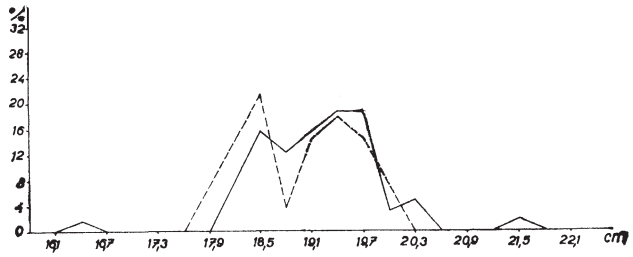


Diagram 4. Distribution of frequencies of the maximum glabello — occipital length in Abusir group (————) and in Qift group (— — — —).

TABLE 3

in Both Combined Samples af Contemporary Egyptians (n = 98)

30—39 years old			40—49 years old			50—59 years old		
n	R	$\bar{x}$	n	R	$\bar{x}$	n	R	$\bar{x}$
26	51.0—72.5	58.44	10	45.5—69.5	57.05	9	46.0—64.5	54.44
26	152.5—181.0	166.83	10	151.5—170.0	164.20	9	145.0—175.5	162.56
26	1.02—1.47	1.26	10	1.02—1.46	1.29	9	1.05—1.51	1.27
25	29—47	37.4	9	30—43	35.8	9	23—37	30.7
26	24—47	35.2	9	23—40	33.1	9	24—35	29.0
26	0.2—0.7	0.37	10	0.2—0.5	0.34	9	0.3—0.7	0.44
23	0.3—1.2	0.64	10	0.4—0.8	0.60	8	0.5—1.0	0.72
26	54—96	74.8	10	66—84	76.8	9	60—84	72.0
26	100—135	117.9	10	110—145	124.0	9	105—145	127.2
26	60—95	80.0	10	70—95	84.5	9	70—100	85.0

according to Scheidt's distribution, into the category of long heads, in Q-group with a mean of 18.95 cm it ranks on the border of the middle and short head categories. However, this difference is not significant. From the graphic representation we can infer that there is some evidence of two-top distribution of frequencies in Q-group (estimate of tops: 18.5 cm and 19.4 cm). In Q-group there are more individuals in the category of short heads.

5. Maximum horizontal breadth of the head, its mean being 14.21 cm in A-group and 14.16 cm in Q-group, belongs to Scheidt's

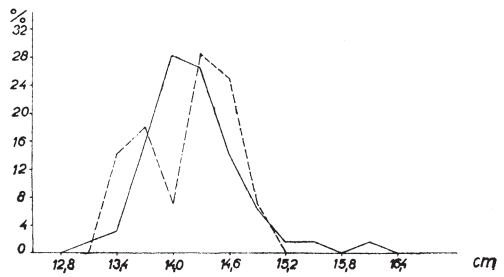


Diagram 5. Distribution of frequencies of the maximum horizontal breadth of the head in Abusir group (————) and in Qift group (— — — —).

group of narrow heads. The difference is not significant. The distribution of frequencies in Q-group is of a similar character as in the case of the head length (estimate of tops: 13.7 cm and 14.3 cm). In Q-group there are some more very narrow-headed individuals.

6. Minimum frontal breadth mean of 10.81 cm in A-group is in accordance with the range of wide foreheads according to Mitwalli, in Q-group (10.48 cm) it ranges among middle foreheads. The difference is significant. It is evident also in the graphic representation, where the frequency curve of the Q-group is shifted a little to the left. In Q-group there are more individuals with narrow and middle foreheads, in A-group wide foreheads prevail.

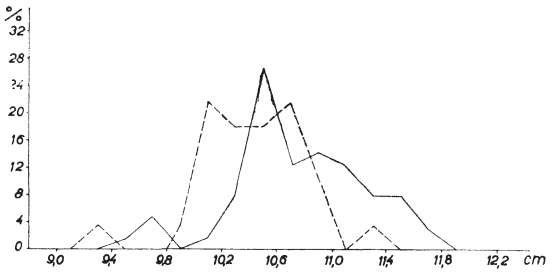


Diagram 6. Distribution of frequencies of the minimum frontal breadth in Abusir group (————) and in Qift group (— — — —).

7. Mean value of total morphological height of the face 11.51 in Q-group belongs to Scheidt's category of short faces. In A-group (11.75 cm) it ranges on the border of the categories of short and medium long faces. The difference is not significant. Also in the graph the curve of

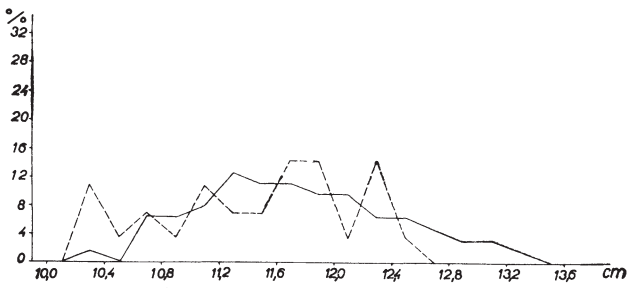


Diagram 7. Distribution of frequencies of total morphological height of the face in Abusir group (————) and in Qift group (— — — —).

the Q-group is shifted towards lower values. In A-group there are not so many individuals with medium high face, but on the contrary to the Q-group the category of high faces is represented here.

8. The face breadth with a mean of 13.45 cm in A-group, 13.32 cm in Q-group stands at the mid-point of Scheidt's category of narrow (Q) and medium (A) face, difference being insignificant. In the Q-group curve we can see two-top

distribution of frequencies again (estimate of tops: 13.1 cm and 13.9 cm). In Q-group there are more individuals with narrow faces, in A-group also some individuals with middle and even with wide faces.

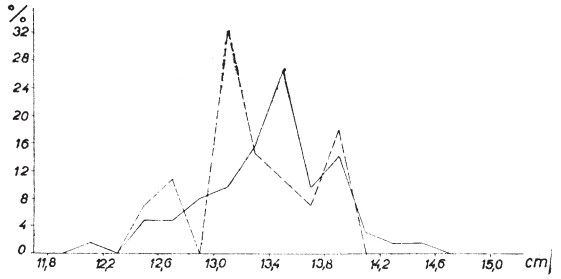


Diagram 8. Distribution of frequencies of maximum bizygomatic breadth in Abusir group (————) and in Qift group (— — — —).

9. Bigonial breadth of the lower jaw fits with its mean of 10.49 cm in Q-group into our narrow jaw category, in A-group with 10.11 cm into the category of medium wide jaws. The difference is significant. The graph shows an expressive shifting of Q-curve in the direction of lower values. In Q-groups there are more individuals with narrow, in A-group with wide jaws.

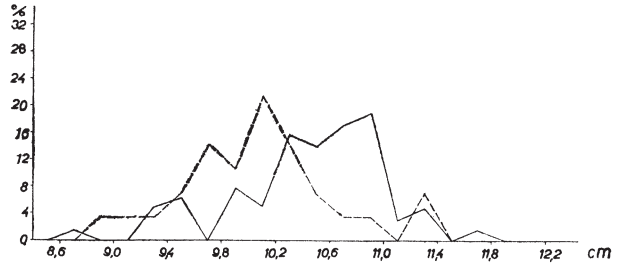


Diagram 9. Distribution of frequencies of bigonial breadth of the lower jaw in Abusir group (————) and in Qift group (— — — —).

10. Nasal height is in both groups according to Mitwalli average medium, not significantly bigger in A-group (4.96 cm) than in Q-group (4.90 cm). The diagram indicates much more homogeneity in A-group, although, because of two extreme cases in A-group, the coefficient of variation in both groups is quite the same.

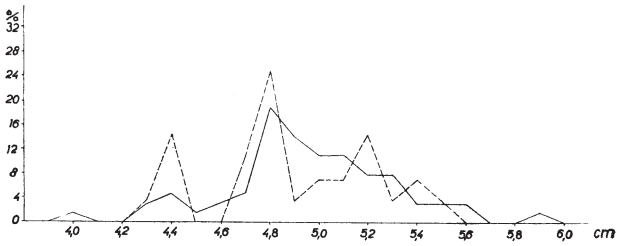


Diagram 10. Distribution of frequencies of nasal height in Abusir group (————) and in Qift group (— — — —).

11. In the nasal breadth means both groups belong to the medium category of Mitwalli, but we found a significantly higher average in Q-group (3.96 cm) than in A-group (3.74 cm).

The different frequency distribution is obvious from the Q-curve shifting contrary to A-curve,

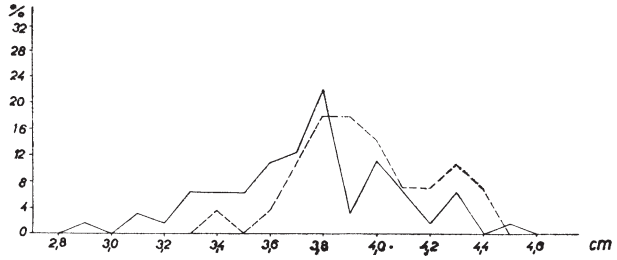


Diagram 11. Distribution of frequencies of nasal breadth in Abusir group (————) and in Qift group (— — — —).

towards higher values. In Q-group individuals with wide and medium noses prevail, in A-group the bulk of individuals with narrow noses dominates. This causes also the high values of coefficient of variation of this group.

12. Bistyloid radio-ulnar breadth of the left hand with a mean of 5.51 cm in A-group and 5.41 cm in Q-group was in both cases lower than it was given e. g. by Döbeln in a group of Swedish men. In A-group it is insignificantly higher than in Q-group and the diagrams are also simultaneously shifted. The coefficient of variation was higher in A-group.

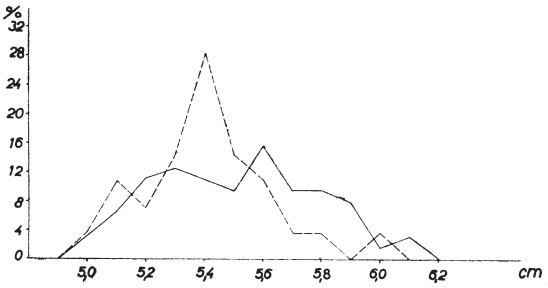


Diagram 12. Distribution of frequencies of bistyloid radio ulnar breadth of the left hand in Abusir group (————) and in Qift group (— — — —).

Summing up, we can state that all the mean values were lower in Q-group than in A-group, with the exception of the stature and nasal breadth. In Q-group it is important to point out the two-top distribution of frequencies of some characteristics.

B. Morphological Indices

13. Rohrer's index in Q-group has a mean of 1.28 belonging into the category of „good weight index" of Pignet classification. In Q-group with 1.22 it fits already into the „medium" category. The difference of both means is on the border of significance. Both groups indicate high values of coefficient of variation, especially high in Q-group. The shifting of the two frequency curves is obvious in the diagram. In Q-group, individuals with „weak" and „very weak" index values prevail, while in

A-group there are more individuals with a „good" and „strong" index, however, the number of individuals with the „medium" and „very strong" index being the same. Individuals aged over 40 have the mean index value a little higher.

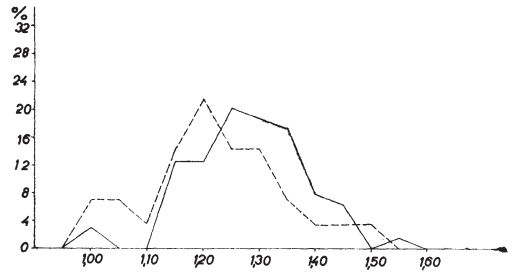


Diagram 13. Distribution of frequencies of Rohrer's index in Abusir group (————) and in Qift group (— — — —).

14. Cormic index is on the average significantly higher in A-group (51.79) than in Q-group (51.00). It is the result of combination of higher values of sitting height with lower ones of stature in A-group, in Q-group this being vice-versa. We came across the presence of metriocormic index in A-group. On the contrary to this, in Q-group the

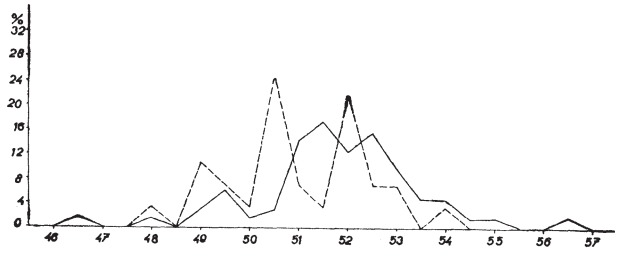


Diagram 14. Distribution of frequencies of cormic index in Abusir group (————) and in Qift group (— — — —).

average belongs according to Giuffrida-Ruggeri and Brugsch to the brachycormic category, according to Vallois it is on the lower border of metriocormy. It even corresponds to the mean values of 51.0 taken by Olivier as characteristic for the black race. From the low values of cormic index there results also the important lenght of lower extremities in Q-group. In the distribution of frequencies we can see that heterogeneity appears again in Q-group. In Q-group the majority is composed of brachycormic individuals, while in A-group the majority is formed by metriocormic and especially by marcrocormic ones.

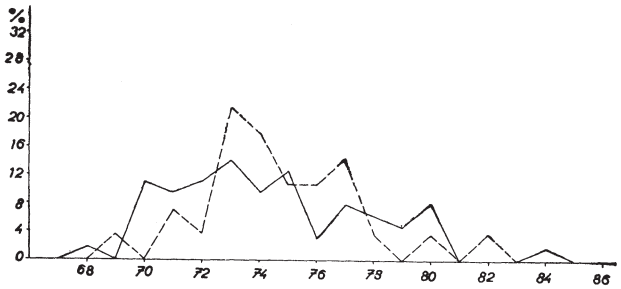


Diagram 15. Distribution of frequencies of cephalic index in Abusir group (————) and in Qift group (— — — —).

15. Cephalic index is in both groups a dolichocephalic one. A little higher mean value in Q-group (74.66) than in A-group (74.31) is not significant and it appears only in a slight shifting of curves. More than a half of the total number of individuals belongs to the dolichocephalic category (in Q-group rather more than in A-group). Less than one third consist of mesocephals. In A-group hyperdolichocephaly is much more strongly represented, which causes a higher coefficient of variation in this group. Brachycephaly is a rare event.

16. Fronto-parietal horizontal index belongs in both groups to the relatively wide forehead category according to Olivier's distri-

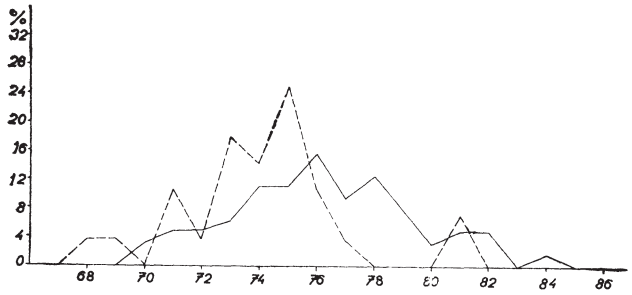


Diagram 16. Distribution of frequencies of fronto-parietal horizontal index in Abusir group (————) and in Qift group (— — — —).

bution. The relative width of the forehead is significantly smaller in Q-group (mean 74.06) than in A-group (mean 76.17). From the curves we can see clear mutual shifting. In Q-group there are more individuals with wide foreheads, in A-group with very wide foreheads.

17. Total morphological index of the face is mesoprosopic in both groups. In A-group (87.80 mean) it is rather higher than in Q-group

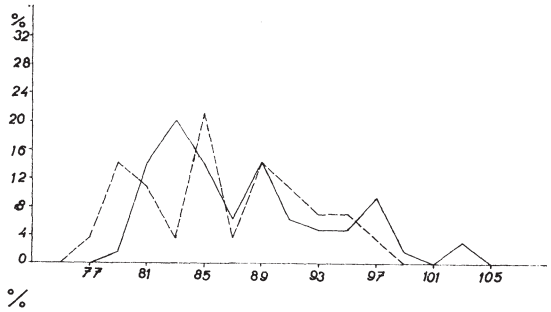


Diagram 17. Distribution of frequencies of total morphological index of the face in Abusir group (————) and in Qift group (— — — —).

(mean 86.41). The curve courses show irregularities. The strikingly high coefficient of variation values of this index in comparison with other dimensions of the head, rank after the very high coefficient of variation of the nasal and zygonasal index. In these indices we can observe the highest variability. It is also evident in wide distribution into categories. Eury-, meso-, and even leproprosopy are repre-

sented by one-third or one-fourth (event. one-fifth) of cases. The rest is composed of hyperleptoprosopy, more freguent in A-group, and also hypereuryprosopy in Q-group.

18. Zygofrontal index belongs on the average according to Olivier to the category of relatively wide foreheads. Also here, as well as in the frontoparietal index there is a significantly lower

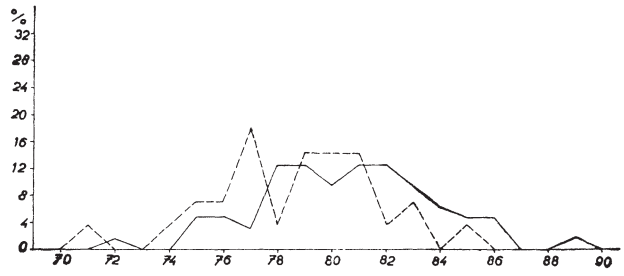


Diagram 18. Distribution of frequencies of zygo-frontal index in Abusir group (————) and in Qift group (— — — —).

value in Q-group (mean 78.63) in comparison with A-group (mean 80.50). The main difference in curve courses consists in evidence of a secondary top in lower values in Q-group. In the same group individuals with very wide foreheads are fewer but there are present many individuals with medium and narrow foreheads.

19. Zygo-gonial index shows, as well as the absolute dimension, a statistically significant difference in the average of the relative width of jaws. In A-group it belongs with its mean 78.12 to the category of relatively wide jaws, in Q-group with the mean of 76.06, it corresponds to the range of medium-wide jaws. The A-curve shows asymmetrical distribution of frequencies, while the Q-curve is certainly not one-top distribution. To this corresponds also the anomalously higher coefficient of variation in Q-group while in other measured cha-

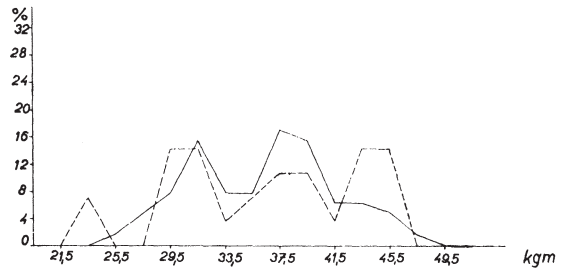


Diagram 19. Distribution of frequencies of zygo-gonial index in Abusir group (————) and in Qift group (— — — —).

racteristics it usually is the reverse. In distribution into categories we can see a very low representation of relatively medium wide jaws (especially in Q-group), on the other hand the two groups are represented by a far greater number of individuals — in Q-group by many more individuals with narrow jaws, in A-group by those with wide jaws.

20. Nasal index means of both groups are mesorrhin according to the classical distribution or that of the wide nose category of Scheidt. In Q-group, however, the mean 81.34 is statistically

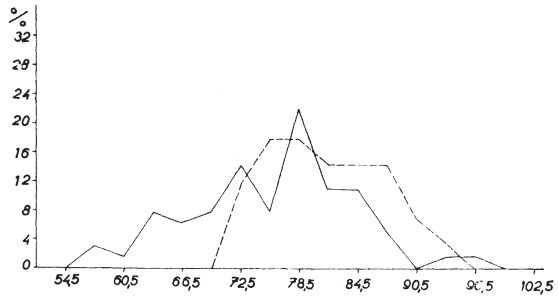


Diagram 20. Distribution of frequencies of nasal index in Abusir group (————) and in Qift group (— — — —).

higher than in A-group, being there only 75.83. In this index the coefficient of variation is the highest, while in A-group it is still higher than in Q-group. This is caused by differences of the sample standard deviations. In A-group there is also represented the leptorrhin category, which in Q-group is completely absent. On the contrary in Q-group far more individuals have chamaeorrhin noses.

21. In zygonasal index we can also see a striking difference between the two groups. In Q-group (mean 29.77) the nose is relatively much wider than in A-group (mean 27.79). In this index

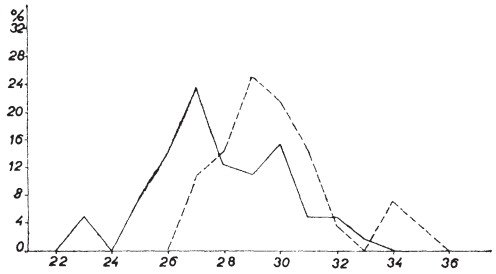


Diagram 21. Distribution of frequencies of zygo-nasal index in Abusir group (————) and in Qift group (— — — —).

the difference of the nasal breadth between the two samples is mostly stressed by the fact that in the Q-group there are wider noses related to narrower faces, in A-group this being vice-versa. One can say, that a disharmony between these two features is present in Q-group. The coefficient of variation values are very high, occupying a position just after the coefficient of variation of nasal index.

22. Relative bistyloid radio-ulnar breadth with the mean values of 3.33 in A-group and 3.27 in Q-group does not show us anything more than a similar statistic insignificant difference of absolute dimensions. However, mutual movement of the curves is evident.

Above all there is obvious in the indices a thinner body build, and a relatively shorter trunk length in Q-group. A relatively wider forehead and jaw

and a narrower nose is typical for A-group. Nose, face, and their mutual relations show the highest individual variability.

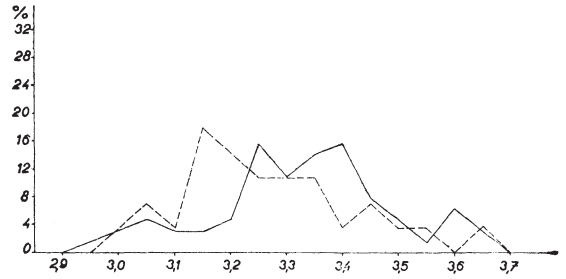


Diagram 22. Distribution of frequencies of relative bistyloid radio ulnar breadth in Abusir group (———) and in Qift group (— — — —).

C. Physiological Values

23. Maximal pressure force of the right hand was found a little stronger (mean 36.2 kgm in A-group and 36.6 kgm in Q-group) than e. g. Hrdlička's value (1912) from the

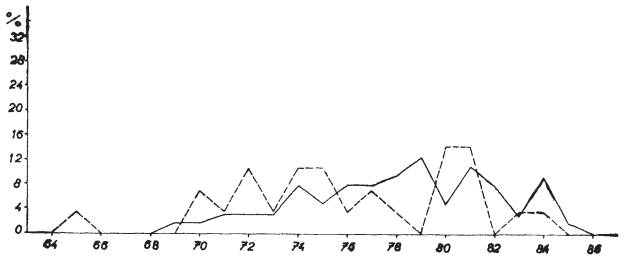


Diagram 23. Distribution of frequencies of maximal pressure force of the right hand in Abusir group (———) and in Qift group (— — — —).

Kharga Oasis (33.8). There is practically no difference between the two groups. In the diagram both curves show two-top distribution of frequencies. The A-curve shows more homogeneity. The highest mean values are at the age of 20—39 years, lower after the 50th year of age, at that age being nearer to the values in juveniles.

24. Maximal pressure force of the left hand was stronger in both groups (means

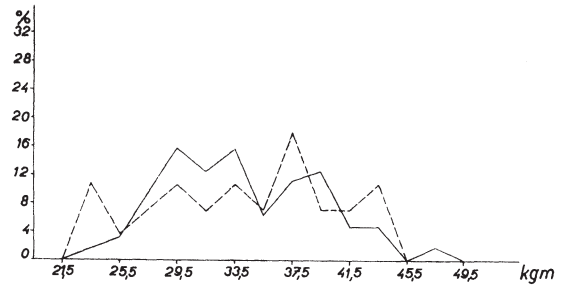


Diagram 24. Distribution of frequencies of maximal pressure force of the left hand in Abusir group (———) and in Qift group (— — — —).

34.0 kgm and 34.3 kgm) than in the Kharga Oasis (31.1) and practically equal, too. In comparison with the pressure force of the right hand both values for the left hand are statistically lower (in A-group: $t = 4.19$; t 0.05 = 1.99; in Q-group: $t = 2.16$; t 0.05 = 2.05). The distribution of frequencies shows one-top curves. Distribution into the age-categories indicates a similar course as the former measurement.

25. Skinfold thickness in the left tricipital area with the mean of 0.38 cm in A-group and 0.44 cm in Q-group, is e. g. contrary to the value of 0.85 cm in Czech adult men (Pařízková, personal communication) strikingly lower.

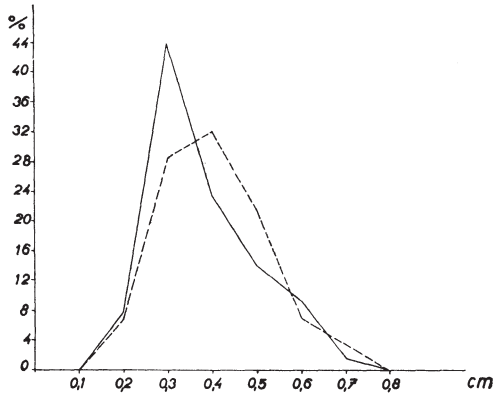


Diagram 25. Distribution of frequencies of skinfold thickness in the left tricipital area in Abusir group (———) and in Qift group (— — — —).

In Q-group, however, it reaches significantly higher values in comparison with A-group. In the diagram, being in both groups asymmetrical, (with an intense increase in the left half), it is expressed by a great shifting of modal value. High values of coefficient of variation present a lot of variability in this dimension. In individual age groups the value decreases to minimum in 40—49-year-old men. In 50—59-year-old men it is much higher again.

26. Also the means of the skinfold thickness in the subscapular area (0.66 cm and 0.68 cm respectively) are, if compared with values in Czech men (1.50—1.53 cm Pařízková), lower by more than a half. But there is no signi-

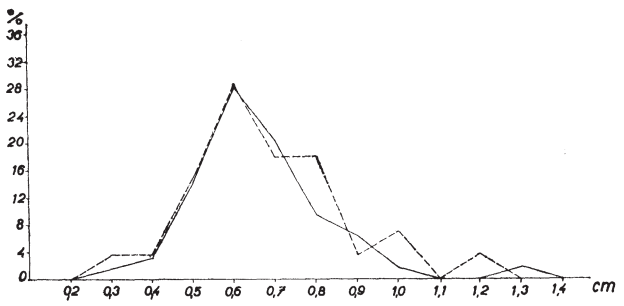


Diagram 26. Distribution of frequencies of skinfold thickness in the left subscapular area in Abusir group (———) and in Qift group (— — — —).

ficant difference between the two groups. Both curves are nearly congruent and rather asymmetrical and coefficients of variation are high, in Q-group

being higher than in A-group. The distribution into age groups is similar to that of the above mentioned skinfold.

27. Pulse values are rather higher than the usual given European mean of 72 times per minute (Netoušek). In Q-group it is even higher than in A-group. The difference is, however, not

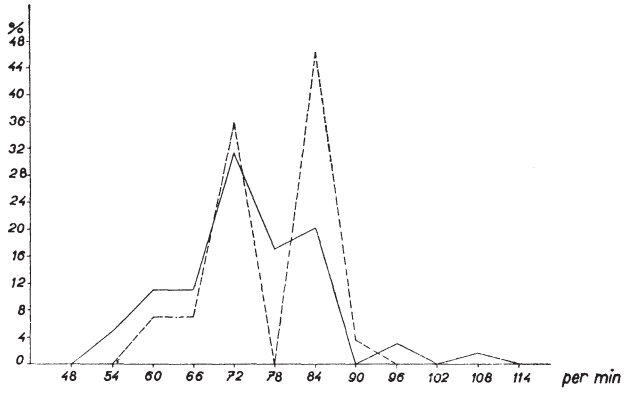


Diagram 27. Distribution of frequencies of pulse (per minute) in Abusir group (·————·) and in Qift group (— — — —).

significant. In curves there are characteristic two points — namely 72 and 84. Values higher than 84 and lower than 60 were found only exceptionally. In the juvenile group the pulse values were higher while in persons aged over 50 a little lower.

28. Systolic blood pressure is characteristic for both groups for its low mean values (121.9 and 121.8 mm Hg), if we take into consideration the rule that the ordinary blood pressure should approximately equal the years of age plus 100. Though the Q-group is a little older (35.3 years) than the A-group (30.4 years) their mean values of systolic blood pressure are practically the same. The distribution of frequencies in Q-group is rather pointed, the range being smaller and coefficient of variation lower. In juvenilles the mean value was 100 mm Hg, in persons aged 20—39 approximately 120 mm Hg and in 40—49-year-old people we noted a rather higher value, while in 50—59-year-old individuals we found a clearly higher value (127.2 mm Hg). The values 150—155 mm Hg were present only in A-group in a mere 3.1 % of individuals.

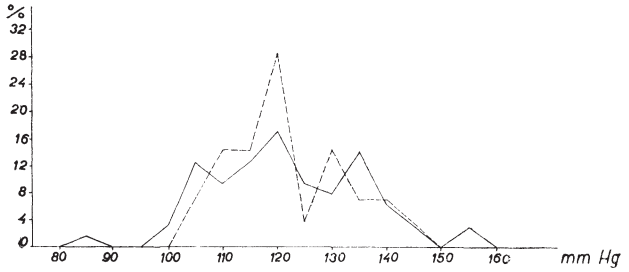


Diagram 28. Distribution of frequencies of systolic blood pressure in Abusir group (·————·) and in Qift group (— — — —).

29. Also the values of diastolic blood pressure are favourable, in Q-group insignificantly higher (mean 82.7 mm Hg) than in A-group (mean 78.5 mm Hg). Also with this characteristic the Q-curve is more peaked, the range is smaller

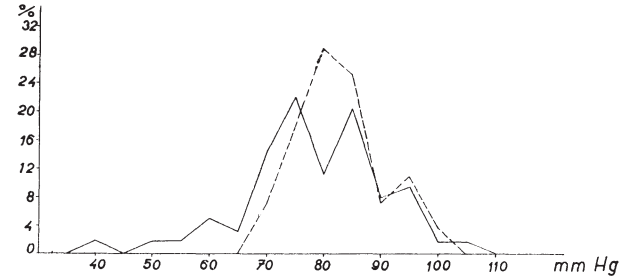


Diagram 29. Distribution of frequencies of diastolic blood pressure in Abusir group (·————·) and in Qift group (— — — —).

and the coefficient of variation lower. In individual age groups we observe an insignificant but constant increase from 75 mm Hg in juveniles up to 85 mm Hg in persons at the age of 50—49 years. The values 95—105 mm Hg appeared in A-group in 12.5 %, in Q-group in 14.3 %.

II. DESCRIPTIVE CHARACTERISTICS

The descriptive characteristics observed were distributed into individual qualitative categories, whose percentual representation is to be seen in Table 4.

TABLE 4

Descriptive Characteristics of Two Samples of Contemporary Egyptians
(Men, 20—60 Years Old)

Nr.	Characteristics	Author of the Method	Category	Abusir (Middle Egypt) Frequency absolute	Abusir (Middle Egypt) Frequency reltative (%)	Qift (Upper Egypt) Frequency absolute	Qift (Upper Egypt) Frequency relative (%)
1	Skin colour	Schultz	a) fair (Nr. 7—10)	13	20.3	1	3.6
			b) medium (Nr. 11—19)	43	67.2	15	53.6
			c) dark (Nr. 20—23)	8	12.5	12	42.8
			total	64	100.0	28	100.00
2	Eye colour	Martin	a) brown black (Nr. 1)	1	1.6	—	—
			b) dark brown (Nr. 2, 3)	23	35.9	21	75.0
			c) brown (Nr. 4)	29	45·3	6	21.4
			d) light brown (Nr. 5, 6)	6	9.4	1	3.6
			e) greenish (Nr. 8)	3	4.7	—	—
			f) dark gray (Nr. 9)	1	1.5	—	—
			g) light gray (Nr. 11)	1	1.6	—	—
			total	64	100.0	28	100.0
3	Hair colour	Fischer—Saller	a) dark brown (W, X)	4	6.2	—	—
			b) black (Y)	60	93.8	27	100.0
			total	64	100.0	27	100.0
4	Hair shape	Martin modif. Prokopec et al.	a) straight	1	2.1	—	—
			b) low wavy	15	30.6	4	44.5
			c) deep wavy	30	61.2	2	22.2
			d) curly	3	6.1	2	22.2
			e) frizzly	—	—	1	11.1
			total	49	100.0	9	100.0
5	Beard density	—	a) scanty	31	48.4	14	50.0
			b) moderate	27	42.2	13	46.4
			c) fair	6	9.4	1	3.6
			total	64	100.0	28	100.0
6	Beard localisation	—	a) subnasal	3	4.7	4	14.3
			b) subnasal and chin	11	17.2	8	28.6
			c) ib. and praeauricular	9	14.1	5	17.8
			d) ib. and lower jaw angles	5	7.8	—	—
			e) lower margin of the face and subnasal	4	6.2	1	3.6
			f) medium large, graps at mouth corners	21	32.8	7	25.0
			g) confluent, moderately large	11	17.2	3	10.7
			h) confluent, very large	—	—	—	—
			total	64	100.0	28	100.0
7	Nasal root depression	—	a) shallow	13	20.3	6	21.4
			b) medium	35	54.7	13	46.4
			c) deep	14	21.9	9	32.2
			d) very deep	2	3.1	—	—
			total	64	100.0	28	100.0

Continuation of Table 4

Nr.	Characteristics	Author of the Method	Category	Abusir (Middle Egypt)		Qift (Upper Egypt)	
				Frequency		Frequency	
				absolute	relative (%)	absolute	relative (%)
8	Shape of nasal brigde	—	a) straight	20	31.3	9	32.1
			b) slightly convex	17	26.6	8	28.6
			c) slightly concave	18	28.1	3	10.7
			d) slightly wavy	4	6.2	4	14.3
			e) convex	3	4.7	3	10.7
			f) concave	2	3.1	1	3.6
			total	64	100.0	28	100.0
9	Position of nasal basis	Weninger in: Martin, p. 561	a) upward lifted (Nr. 2)	25	39.1	5	17.8
			b) horizontal (Nr. 3)	33	51.5	18	64.3
			c) downward inclined (Nr. 4)	6	9.4	5	17.9
			total	64	100.0	28	100.0
10	Nasal wings	—	a) compressed	5	7.8	—	—
			b) middle	48	75.0	21	75.0
			c) flaring	11	17.2	7	25.0
			total	64	100.0	28	100.00
11	Shape of postrils	Topinard in: Martin, p. 559	a) narrow, sagital axes	18	29.1	3	10.7
			b) narrow, bent axes	33	53.2	13	46.4
			c) middle, diagonal axes	8	12.9	7	25.0
			d) middle, frontal axes	2	3.2	5	17.9
			e) wide, diagonal axes	1	1.6	—	—
			f) wide, frontal axes	—	—	—	—
			total	62	100.0	28	100.0
12	Integumental lip thickness	Martin, p. 545	a) thin	11	17.2	1	3.6
			b) middle	41	64.1	23	82.1
			c) full	12	18.7	4	14.3
			d) negroid	—	—	—	—
			total	64	100.0	28	100.0
13	Left auricle	—	a) Darwin's tubercle (Schwalbe 3—5)	6	9.4	4	14.3
			b) helix large	15	23.4	7	25.0
			c) helix narrow	4	6.3	2	7.1
			d) upper part of helix large	7	10.9	2	7.1
			e) other forms	32	50.0	13	46.5
			total	64	100.0	28	100.0
14	Outline of the face	Pöch—Birnbach in: Martin, p. 220	a) ellipse (Nr. I)	48	75.0	20	71.4
			b) oval (Nr. II)	3	4.6	2	7.1
			c) trapez (Nr. VIII)	1	1.6	—	—
			d) revolved trapez (Nr. IX)	1	1.6	—	—
			e) pentagon (Nr. X)	11	17.2	6	21.5
			total	64	100.0	28	100.0
15	Profile of the face	—	a) orthognathic	30	46.9	16	57.1
			b) ib. with a retruding chin	27	42.2	6	21.5
			c) ib. with a protruding chin	1	1.5	1	3.6
			d) slightly prognathic	3	4.7	2	7.1
			e) prognathic	3	4.7	3	10.7
			total	64	100.0	28	100.0
16	Vault of the vertex	—	a) low	0	0.0	0	0.0
			b) medium	12	18.7	6	21.4
			c) high	27	42.2	14	50.0
			d) very high	25	39.1	8	28.6
			total	64	100.0	28	100.0
17	Profile of the occiput	—	a) slightly arched	4	6.2	—	—
			b) semi-protruding, flattened	6	9.4	—	—
			c) protruding flattened	8	12.5	4	14.3
			d) semi-protruding, rounded	33	51.6	16	57.1
			e) protruding, rounded	13	20.3	8	28.6
			total	64	100.0	28	100.0

1. Skin colour of the more southern group (Q) is represented mostly by dark shades while in the more northern group (A) fair tints are also present.

2. Eye colour of the more southern group (Q) is, with one exception, dark, with a superiority of dark-brown shades. In the more northern group (A), in 17.2 % there are represented also middle and mixed shades of iris colour. The majority appear in the category of brown eyes.

3. In hair colour the pigmentation difference is less visible. But even here in Q-group dark hair prevails exclusively while in A-group along with this we find also a low percentage of dark brown hair.

Partly grizzled hair existed in the older group Q in 6 persons (21.4 %) namely in individuals aged over 50, only in one case in a 38-year-old man after a pathological loss of hair. Completely grey hair appeared in only one member of the group (58 years). In A-group 6 individuals (9.4 %) had partly grizzled hair, 2 of them 50-year-old, 3 at the age of 35—40 years, and even one 21-year-old man.

4. Hair shape could be observed only in a smaller number of individuals, because many workers, especially those of Qift, had their hair cut short, even entirely cut off. Predominantly it ranks among the categories of low wavy and deep wavy hair, in some cases hair was curly and in a single case (in Q-group) even frizzly. The diferences between the two groups, through the predominance of curly and frizzly hair, is obvious in the more southern group, but it is not possible to prove it because of the small number of cases.

In one case (No. 54) we found curly standing-up hair, reminding us of the hair style of Bisharin (wuzi wuzi).

5. Beard density is congruently scanty and moderate. In A-group the dense beard is represented better than in Q-group.

6. Also the beard localisation tends to a beard with a limited range (categories a—c). This is more significant in Q-group (two-thirds) than in A-group (one-third).

7. Nasal root is in the majority of cases of medium depression, in A-group one quarter and in Q-group one-third is of a deep or a very deep depression, and in one-fifth the transition is shallow.

8. Shape of the nasal bridge is either straight or only slightly crooked (convex, concave or wavy). Very crooked forms are few; in Q-group they occur twice as often as in A-group. In A-group the slight and expressive convex forms are equivalent to concave forms. In Q-group there are three times more nasal bridges with a convex character.

9. Position of the nasal base is in the bulk of cases horizontal. Other deviational forms were in A-group more frequent than in Q-group. The upwardlifted nasal base were four times more frequent than those downward inclined. In Q-group these two forms balanced.

10. Nasal wings are medium in three-quarters of both groups. The rest in A-group are compressed and flaring wings in proportion 1 : 2. In Q-group only flaring forms were present.

11. Also the shape of nostrils shows the same tendency. In A-group there are more narrow forms and in Q-group medium forms are most common.

12. In the integumental lip thickness of the two groups there are also some differences. In A-group thin lips are more strongly represented while in Q-group exclusively medium and full forms are present.

13. Signs on the left auricle are quite equal in both groups. Darwin's tubercle occurs more rarely than e. g. in the Alsasans or Ainos (Martin, p. 568—9). Helix is large (more folded) in more cases than narrow (tending to unfold). In some cases only the upper part of the helix is exceptionally folded, in one case (No. 70, plate 15) imitating the shape of so-called Hottentot ear (one-sided find on the left side).

A fused-on or a missing ear was found in A-group in 25 % and in Q-group in 32 %, which corresponds to European and some other groups (Martin, p. 574).

14. Outline of the face is mostly elliptical or pentagonal (with expressive protruding angles of the lower jaw) and oval. Other forms are rare. Often the outline is broken by a characteristic narrowing in the very narrowest forehead-width section.

15. Profile of the face is in the majority of cases orthognathic, often with a retruding chin. This form is in A-group represented twice as much as in Q-group. On the contrary to this prognathic forms were more often represented in Q-group than in A-group.

16. Vault of the vertex is in proportion to the head length high or very high. In A-group the vault of the vertex tends to a greater height. Approximately one fifth in both groups is of medium high head.

The outline of the vertex is mostly well arched. Beside this a form of an upwards and backwards elevated vertex can be also found to different degrees. This occurs more frequently in Q-group (32.8 %), in A-group less frequently (6.2 %). It is best visible in Nos. 23 and 73. In a rather different form we can see it also in a man of Sudanese origin.

17. Profile of the occiput is in the bulk of cases semi-protruding, rounded or protruding rounded. The latter form prevails in Q-group. Occasionally we succeeded in finding a protruding flattened occiput. There are only some cases of semi-protruding flattened and slightly arched (almost straight) occiput in A-group.

Further observations: The head shape, when observed from the top, is usually oval or even elliptic, rarely pentagonal (No. 53). The forehead is well arched, in profile inclined, rarely perpendicular and only exceptionally sloping (No. 65). The tendency to a bomb-shape (fusion of frontal pro-

tuberances) occurs very rarely (No. 87). Supraorbital arches are constructed mostly very faintly, only exceptionally are they more outstanding (in A-group 7.8 %, in Q-group 7.1 %) e. g. No. 34. Prominence of cheek-bones occurs three times more in A-group (20,3) than in Q-group (7,1 %). Expressively crooked nose is current (in A-group 37.5 %, in Q-group 50,0 %). Orbits are usually of an almond shape, only in less frequent cases narrower. In some cases the outer fold of the upper eyelid was found (Plate 15) or an evidence of epicanthus was also present. The off-standing auricles were found in every third case.

As far as we could observe it seems to us that in combination with a lesser intensity of beard growth, the hair density in all body parts is also usually lower. Only exceptionally we came across a strong hair density on the frontal part of the body (e. g. Nos. 58, 77) bearing in one case the character of spread groupings of frizzly hair in black and partly grey colour, reminding one of a pepper corn pattern (No. 76). The skeleton is of a medium robust construction often with sharp protrusion of elbow bones). Musculature is visible at first sight because the muscles are well-developed and covered with a very thin layer of subcutaneous fat.

If we resume the results of our study of descriptive characters we can see that the main difference between the two group consists in darker pigmentation, less developed beard a different nasal construction, fuller lips, tendency to prognathy, less frequent protrusion of cheek-bones and in some characteristics of the cerebral part of the head in the more southern group (Q).

III. PATHOLOGICAL FINDS

The anamnestical data are incomplete because of bad knowledge of hygiene, nevertheless it is of interest to say that two of the examined workers declared symptoms of urinar schizosomiasis (bilharziosis), three announced parasital worms in the defecation, two suffered from trachoma, in single case we found also chronic malaria, cystitis, and a peptic ulcer. With one exception, all the affected men were inhabitants of Abusir.

During the course of the archaeological investigation at Abusir I treated one worker from Abusir for acute dysentery and two from Qift for fresh malaria (tertiana). Beside this a series of slight injuries occurred.

We constantly observed the enlargement of the thyroid. Its presence in our groups was very low (4.7 % in A-group, and 3.6 % in Q-group). It consisted of a thyroid with a prominence of 3—5 mm. According to Šilink's R-system we can note a find which is soft, diffusial, of a maximum size of 3×5 mm, find with the symbol 102. The enlargement was not accompanied with any symptoms of disfunction.

Very frequently skin affections ocurred. Mould illness of skin of the face, in the hair, and in other parts of the body, manifesting itself in non-pigmented or with fine detritus-covered spots or depigmentation and loss of hair, affected 10.9 % in A-group and 10.7 % in Q-group.

The presence of the mould in hair is caused by the custom of wearing all day long a turban-wound carf (imma). This provides favourable conditions (humidity and warmth) for the growth of the mould. n some further cases other skin de-pigmentations were discovered, efflorescence of akne, furunculosis and others. Only one individual had a pock-marked face (No. 67) while we came across old scars of injury or of operations very often.

We also ascertained a series of affections in the eye. Nearly one half of the workers had conjunctivitis because of dusty working conditions or bad hygiene, or because of trachoma, possibly also from a combination of more causes. Besides this other pathological changes were discovered in the bulbous conjunctiva (pannus, pterygium, small ulcers, scars), probably mostly of trachomic origin. It is of great interest that these were found only in A-group, namely in 12.5 % of the number of the examined. Also the cataract of cornea, mostly central, was more current in A-group (6.3 %) than in Q-group (3.6 %). It was not only older men who suffered from it (one 50 years old, two 40-year-old men) but also two younger individuals (aged 27). Atrophy of one bulb was found in one man of A-group (No. 16) and in two men of Q-group (Nos. 83, 67). Two individuals (Nos. 50 and 69) without negroid admixture and without any symptoms of jaundice had yellow-tinged sclera. A grey ring around the iris occurred in 12.5 % in A-group and in 3.6 % in Q-group. It was also strikingly present in very young individuals (21 and 22 years old).

From some other findings we adduce asymmetry of the face (No. 57) a disorder in the development of the middle part of the face with a very short nose (Nos. 47, 50), swelling beyond the mandibular angle (No. 50) a higher cyphosis thoracica (Nos. 80, 95), right-sided scrotal hernia (No. 36) and left-sided pes equinovarus (No. 43).

Very rare was the case of a man suffering from a peptic ulcer (No. 80). In one case of the examined men there was some evidence of acromelagoid character (No. 95). Other internal diseases were not discovered.

The workers showed very good working ability and endurance, and they got used to the hard conditions of desert climate without any great trouble. The health condition in Q-group can be generally considered better than in A-group.

IV. ARTIFICIAL MUTILATIONS

These were found only exceptionally. Some of them are for example two vertical scars in the temporal region (No. 18), a vertical scar in the cheek (No. 19), tattooing on the forearm (No. 36) and often pierced aurical lobes. One man of Sudanese origin (No. 94) had in the temporal region just behind the eyes 3 vertical ritual scars.

V. DERMATOGLYPHICS OF THE LEFT-HAND FINGERS IN THE GROUP OF ABUSIR

(Worked up and written by M. F. Pospíšil)

a) Frequency of individual patterns

We studied the dermatoglyphics of the left hand of 44 individuals. Ulnar loops appeared in 36.36 %, whorls in 29.55 % lateral pocket loops in 18.18 and central pocket loops in 15.91 %.

In the forefinger ulnar loops are very current. They were found in 63.64 %, while the right whorls were found only in 15.91 %, side pocket loops in 4.54 and central pocket loops in 6.82 %. In the same number we found also radial loops (6.82 %), arches 2.27 %.

The middle finger had 68.18 % ulnar loops, 20.46 % whorls, 2.27 % side and central pocket loops, 2.27 % radial loops, and 4.54 % arches.

The ring finger is composed of 31.82 % ulnar loops, but the whorls occurred in 40.91 %. In the remaining patterns the side-pocket loops occur in 6.82 %, central pocket loops in 18.18 %, and radial loops in 2.27 %. Arches were not found.

The highest number — 68.18 % — of ulnar loops is to be found in the little finger. Right whorls I came across in 13.64 %, side pocket loops in 2.27 %, and central pocket loops in 15.91 %. Neither radial loops nor arches were ascertained in the little finger, or in the thumb.

The highest number of ulnar loops occur in finger V, and then in fingers III, II, I and IV. Radial loops are in the largest quantity in finger II and then in III and IV. In finger I and V ulnar loops were totally absent.

Right whorls are most highly represented in finger IV, where they are the most frequent pattern of all. The fingers which follow are I, III, II, and V. The side pocket loops are most frequent in finger I, and then in fingers I, II, III, and V. A rather different distribution is shown within central pocket loops. As well as the right whorls, the presence of central pocket loops is the highest in finger IV, then in finger I and V with the same frequence, then II, then III.

Arches were found only in finger III and II.

The general frequency of individual types of patterns in this material is the following: Ulnar loops in 53.64 ±3.36 %, radial loops in 2.27 % ±1.00 %, whorls in 24.09 ±2.88 %, side pocket loops in 6.82 ±1.70 %, central pocket loops in 11.82 ±2.18 %, arches only in 1,36 ±0,78 %.

b) The Computed Indices

Volocký's index (pattern intensity) is 1.41 ±0.04 in this population, Furuhata's index expressing the relation of loops with compound patterns has a value of 76.73 %, while Dankmajer's index which confronts the proportion of arches and compound patterns, gives the value of 3,18.

c) Quantitative Value of the Pattern

was computed in all possible cases.

Results for individual fingers:

I. $\bar{x} \pm 3\sigma_{\bar{x}} = 18.33 \pm 2.16$; $s = 4.65$;
II. $\bar{x} \pm 3\sigma_{\bar{x}} = 10.81 \pm 2.19$; $s = 4.78$;
III. $\bar{x} \pm 3\hat{\sigma}_{\bar{x}} = 11.41 \pm 2.22$; $s = 4.78$;
IV. $\bar{x} \pm 3\sigma_{\bar{x}} = 13.71 \pm 2.25$; $s = 4.65$;
V. $\bar{x} \pm 3\hat{\sigma}_{\bar{x}} = 16.63 \pm 1.71$; $s = 3.54$;

The highest number of lines is then in the thumb, and after that come fingers IV, V, III, and II. There are only slight differences among them. The general mean of the material makes 13.24 ±1.08 lines.

INDIVIDUAL ANALYSIS

I. PROBLEMS OF MORPHOLOGICAL TYPES

In order to discover if there exists some relation among the principal morphological characteristics in individuals and to ascertain the way in which they are combined, we used a combination of four characters, which form the basis of the morphological typologies mostly used. The characteristics concerned are stature, cephalic, facial, and nasal indices. Stature was for our purpose distributed into low (up to 163,9 cm), medium (up to 169,9 cm), and tall (from 170,0 cm). Indices are divided into the usual categories (see Table 2).

There can be found 51 combinations (Table 5) out of 144 possible combinations in both groups, two individuals of Sudanese origin included ($n = 94$).

The most frequent combination is (1) medium growth, mesocephaly, euryprosopy, and mesorrhiny, namely in 5 cases in A-group (7.8 %), and in 3 cases in Q-group (10.7 %). In other combinations dolichocephaly and mesorrhiny are always represented. These two characteristics combined (2) with low growth and euryprosopy, (3) with medium growth and leptoprosopy, and (4) with tall growth and leptoprosopy. These combinations are represented in all 4 cases Dolichocephaly and mesorrhiny occur further in combination with (5) low growth and mesoprosopy, (6) with low growth and leptoprosopy, (7) with medium growth and hyperleptoprosopy, and (8) with tall growth and euryprosopy. These combinations include always three cases, as well as the combination (9) of medium growth, dolichocephaly, mesoprosopy, and mesorrhiny. The remaining 41 combinations are represented only by one or two cases.

If we confront these combinations with the typological scheme of Henzel and Michalski (1955) using the complements of Michalski [1958 — we see that our second combination corresponds to their Berberic type (B)]. (The authors call their basic types „races".) To this type a further 10 cases of our rarely occurring combinations are similar, namely of medium or lower growth, dolichocephaly or hyperdolichocephaly, euryprosopy and meso- or chamaeorrhiny. Thus it would be re-

presented in 14 cases (14.9 %). Of our less frequent combination, 3 cases (3.2 %), namely of lower growth, dolicho- or mesocephalic, leptoprosop and leptorrhin character are rather similar to the Mediterranean type. Finally, 3 cases (3.2 %) correspond in their high growth, dolichocephaly, hyper- or leptoprosopy and leptorrhiny to the Oriental type (Q-group). There was no Armenoid combination (H). One of the Sudanese individuals (No. 94) belongs to the Sudanese type (S) very tall stature, mesocephaly, hypereuryprosopy, chamaeorrhiny, the second (No. 93) shows characteristics of the Levantine type (BH).

TABLE 5

The Combinations of Principal Characteristics in Individuals (94 cases)

	Nr.	Characteristics combined				Nr. of Individuals			Frequency absol.	Henzel—Michalski
		Stature	Cephalic index	Facial index	Nasal index	Abusir	Qift	Sudan		
More frequent combinations	1	M	M	E	M	5 7 11 60 62	81 91 67		8	BH
	2	L	D	E	M	25 57	77 69		4	B
	3	M	D	L	M	18 59	82 92		4	EK
	4	T	D	L	M	54	75 87 70		4	—
	5	L	D	M	M	4	65 89		3	BE
	6	L	D	L	M	15 41	85		3	BE
	7	M	D	H	M	49 61	73		3	—
	8	T	D	E	M	28 39	79		3	BK
	9	M	D	M	C	34	76 86		3	—
	10	M	M	M	M	1 46 56			3	BH
Less frequent combinations	11	L	M	M	M	58	90		2	—
	12	L	M	E	M	27 53			2	—
	13	L	M	H	L	16 26			2	—
	14	L	D	L	L	24 47			2	E
	15	L	D	E	C	29	78		2	B
	16	L	H	E	M	2 30			2	B
	17	M	D	E	M	44 63			2	B
	18	M	D	M	M	6 37			2	EK
	19	M	D	H	L	8 42			2	—
	20	M	H	L	M	52	74		2	—
	21	M	H	E	M	10 38			2	B
	22	T	D	M	M	21	71		2	BK
	23	T	D	M	C	43	84		2	BK
	24	T	D	L	L	17 19			2	K
	25	T	M	L	M	31	88		2	—
	26	L	M	L	L	3			1	E
	27	L	M	H	M	15			1	—
	28	L	M	H	C		68		1	—
	29	L	M	M	C	33			1	—
	30	L	M	E	C		83		1	—
	31	L	H	M	L	23			1	—
	32	L	H	L	L	32			1	—
	33	L	H	L	M	64			1	BE
	34	L	H	H	M	40			1	—
	35	L	D	H	M	48			1	—
	36	M	D	E	C	12			1	B
	37	M	D	E	L	9			1	—
	38	M	D	L	L	55			1	—
	39	M	M	L	M			93	1	BH
	40	M	M	M	L	41			1	—
	41	M	M	E	C		66		1	BH
	42	M	H	E	C	20			1	B
	43	M	H	L	L	13			1	—
	44	M	B	L	M		72		1	—
	45	T	D	E	C	22			1	BK
	46	T	D	E	L	45			1	BK
	47	T	D	H	L	50			1	K
	48	T	M	H	M	35			1	—
	49	T	M	E	C			94	1	S
	50	T	H	H	M		80		1	—
	51	T	B	H	M	36			1	—

Stature:
M medium
L low
T tall

Cephalic index:
H hyperdolichocephal
D dolichocephal
M mesocephal
B brachycephal

Facial index:
E euryprosopic (and hypereury-)
M mesoprosopic
L leptoprosopic
H hyperleptoprosopic

Nasal index:
C. chamaeorrhin
M mesorrhin
L leptorrhin

Some further of our combinations are similar to the hybrid types of the given classification. The first and the tenth would correspond to the Levantine type (BH), the third to the Suboriental (EK), the fifth and sixth to the Hamitic type (BE) and the eighth to the Kushitic type (BK). Our less frequent combinations contain also some other analogies to these hybrid types of Henzel and Michalski. When surveying the whole materials, 13 of our cases would correspond to the Levantine type, 9 to the Kushitic type, 7 to the Hamitic type, and 6 cases to the Suboriental type.

Thus according to Henzel—Michalski's typology we succeeded in arranging 21 cases into the main types (22.3 %) and 35 cases into the hybrid types (37.2 %). In spite of a very great range of variation of their diagnostic criteria (e. g. the type of Levantine face can also be leptoprosopic, mesoprosopic, or chameoprosopic, we did not succeed in placing either among the basic types or among the hybrid types our fourth, seventh, and ninth combination and the other less frequent combinations, all together 38 cases, i. e. 40.4 %.

Such a hight percentage can hardly be composed of some other, rare existing types. We are of the opinion that even these forms are current in Egypt and belong to the local population.

Main types were chosen according to only four principal characters. If we take other diagnostical points of view into consideration, as given by Henzel and Michalski, then the number of the classified individuals decreases slightly. In individuals ranged into the Berberic type we came across the disqualitative characters in No. 2 (fair skin colour and iris Martin 11), No. 10 (fair skin colour), No. 25 (very low stature and different physiognomy) and No. 63 (large dimensions of the cerebral part of the head and different physiognomy). The oriental type is very well represented by the individual No. 19 and to this type corresponds No. 17, and to a lesser degree also No. 50. Out of 3 representatives of the Mediterranean type the individual No. 3 and to a considerable extent also No. 24 are very representative of this type, while No. 47 is different, because of its small nasal dimensions. Full analysis is not possible in hybrid types because of lack of detailed data in literature. Nor, however, do the persons of Levantine type form a uniform group, as is shown by the difference between Nos. 91 and 66. The group of Kushitic type (BK) is rather clear-cut. In cases of Hamitic type (BE) some striking deviations are visible, e. g. No. 14. The suboriental type (EK) is represented much better.

This analysis shows that the proposed typological categories are not suitable for approximately one half of the individuals in our materials. We cannot even consider our own groups, which were extracted on the basis of the combination of the four main morphological characteristics, as typically representative of the population. If we consider combinations, represented by three cases at least, to be an expression of tendency to a typological coupling of basic morphological characters, than their occurrence in

38 individuals, i. e. 40.4 % out of the total material, shows a relatively low intensity of such a coupling. We suppose that the majority of characters in heterogeneous population is characterized just by a low degree of mutual typological coupling and by a variety of possible combinations.

Our conclusion is in accordance with the results of the investigations of 35 511 Swiss recruits, which was carried out by Schlaginhaufen (1946, 1959). Classical types, described by Deniker and others, were found on the basis of combinations of 6 characters only in 8.66 %. This authors, as well, is conscious of the fact that contrary to some typological categories in fact „... Die Mannigfaltigkeit der körperlichen Erscheinung der schweizerischen Stellungspflichtigen ist somit eine bedeutende". In the example of Nordic type in the population of the district of Rybnik in Poland T. Bielicki (1961) proved that it is a fragment artificially detached from the basic population from which it is separated by no natural but only conventional borders.

II. ANALYSIS OF SOME COMPOUND MORPHOLOGICAL ELEMENTS

Though the classification of individuals into type categories determined in advance does not lead to the complete analysis of population, we are of opinion that the group analysis should be completed by an analysis of some morphological elements in individuals.

We are conscious of the fact that various groups of samples of populations differ from one another in frequencies of occurrence of some characteristics, only exceptionally in their absence. It is in this that the differences of our two groups consist in. Moreover, the frequency of some characters has a clear geopraphical tendency. We are going to demonstrate this by using the example of occurrence of some elements, which we have labelled „northern" because they are more frequent in population groups of northern Egypt and the neighbouring regions, in the contrary to „southern" elements which are more current in southern Egypt and towards the heart of Africa. We decided to choose geographical terms because it is not possible to indicate unanimously their real substance, either in individual elements or in groups, in the present state of knowledge. No doubt, many of them are of an adaptive character. However, we cannot exclude the influence of hybridization either, in northern elements especially of Middle-East origin, in the southern elements of negroid origin.

As northern elements we classified: (a_1) fair skin colour (up to No. 10 of Schulz scale), (a_2) medium and mixed colour shades of iris (No. 5—11 of Martin scale), (b) straight hair, (c) strong beard, (d) convex nose with compressed wings or downward inclined top (some of these elements or all of them), (e) thin lips, (f) flattened occiput, (g) prominence of cheek bones, (h) macrosomy (over 53,0) and (i) leptorrhiny (up to 69,9).

Among southern elements we understand (a) dark skin colour shades (No 22 and higher Nos of Schultz's scale), (b) curly or frizzy hair, (c) scanty beard density, (d) nose with flaring wings, possibly with medium-sized nostrils with frontal axes or large nostrils with oblique axes, (e) full lips, (f) vault of the vertex protruding upwards and backwards, (g) slight or more expressive prognathy, (h) brachycormy (up to 50.9 %), and (i) chamaeorrhiny (over 85.0).

In A-group we found 117 northern and more than one-half, namely 64 southern elements. In Q-group we found 20 northern and three times more, i. e. 64 southern elements.

We are interested in the individual distribution of these elements. It is characteristic that the elements less frequently group in a large quantity in one individual relatively (see Table 6) but they are rather scattered in many individuals. In Abusir out of the ten quoted northern elements the largest number, namely five, are grouped in No. 2, four elements are grouped in 6 individuals, and three in 8 individuals. In 14 persons only 2 northern elements are present and in some further there is only one. Southern elements are not only less current in this group but they also appear coupled in one individual only very rarely. Only No. 44 has five southern elements, three elements can be found in 4 individuals, in 3 cases two elements are present and in a series of others only one element can be found. Of interest are some cases where some northern and southern elements are combined. In No. 21 three southern and two northern elements, in No. 50 three southern and two northern elements are present. In five more individuals two southern and two northern elements are combined. The presence of isolated elements of an opposite character is common.

In Qift in the grouping of elements there is a striking majority of southern elements. The highest number of combination of all 9 southern elements we can see in No. 84 where there are six combined elements, five elements were found in 3 individuals, four in 2 individuals, and three in 4 persons. In 8 cases two and in some others one element is present. Northern elements form pairs in this group only in two individuals, namely No. 73 (d, h) and No. 85 (d, f), otherwise they are found exceptionally. However, it is important to state that in Qift, too, southern and northern elements are combined, namely in one case three northern and two southern elements, in three cases a pair of southern and a pair of northern elements.

In the grouping of the so-called northern and southern elements we can see certain tendency to a mutual connection which is, however, not intensive.

Further, the same elements usually do not occur parallelly. Only the northern morphological characteristics of the nose (d) are combined with narrow

nasal outline in seven cases (i), southern nasal characteristics (d) in 9 cases with wide nose (i). Full lips (e) were found in 5 persons together with the evidence of prognathy (g), and southern nasal characteristics (d) in four cases together with brachycormy (h). The other coincidences are less current. Important is also the lack of parallelity between the occurrence of full lips and the southern nasal elements.

Combinational variety is evident especially in individuals with the highest number of southern characters. One of them (No. 84) has flaring nasal wings, full lips, protruding occiput, prognathy, brachycormy, and chameorrhiny, the second individual

TABLE 6

Analysis of Morphological Elements in Some Individuals

Category	NORTHERN ELEMENTS											SOUTHERN ELEMENTS										Abusir Nr.	Qift Nr.
	a_1	a_2	b	c	d	e	f	g	h	i	Total	a	b	c	d	e	f	g	h	i	Total		
	fair skin	eye colour medium	straight hair	strong beard	nose: convex, compressed wings, bases downward inclined	thin lips	flattened occiput	slightly protruding zygomatic arches	macrosomic > 53.0	nasal index < 69.0		dark skin	curly or frizzy hair	scanty beard	nose: flaring wings, wide nostrils	full lips	vault elevated backwards and up	slightly prognathic	brachycormic < 50.9	nasal index > 85.0			
More northern elements	/	/		/			/	/			5										—	2	
	/	/		/		/					4										—	7	
				/	/			/		/	4										—	8	
	/		/					/	/		4					/					1	14	
				/		/			/	/	4										—	24	
	/	/					/			/	4								/		1	45	
					/		/		/	/	4										—	47	
	/					/		/			3										—	10	
				/	/					/	3								/		1	17	
	/				/					/	3										—	19	
					/		/			/	3										—	26	
	/					/	/				3										—	35	
				/			/			/	3					/					1	42	
	/			/					/		3										—	49	
					/				/	/	3										—	55	
Mixed					/	/	/			/	3	/			/				/		3	21	
					/				/	/	3			/			/				2	50	
		/			/		/				3				/				/		2		90
							/			/	2			/					/		2	3	
		/								/	2				/	/		/			2	13	
		/					/				2				/					/	2	22	
		/						/			2				/					/	2	34	
								/	/		2					/		/			2	51	
						/			/		2				/		/				2	62	
				/		/					2				/					/	2		78
				/	/						2								/	/	2		83
	/			/							2						/		/		2		88
More southern elements				/							1				/				/	/	3	12	
							/				1				/	/				/	3	20	
										/	1						/	/	/		3	23	
								/			1					/			/	/	3	43	
											—			/				/	/		3		70
											—				/	/		/			3		75
								/			1	/	/	/							3		82
											—	/							/	/	3		86
						/					1	/			/		/			/	4	29	
											—				/			/	/	/	4		68
							/				1	/	/	/	/	/					5	44	
											—	/			/			/	/	/	5		66
											—	/	/			/		/	/		5		87
											—				/	/	/	/	/	/	6		84

(No. 44) has dark skin colour, curly hair, a low beard density, medium nostrils with frontal axes, and full lips, the third (No. 66) dark skin colour, nose with flaring wings, and medium nostrils with frontal axes, brachycormy, and chamaeorrhiny, the fourth (No. 87) dark skin colour, curly hair, full lips, prognathy, and brachycormy (moreover, the forehead of a bomb-shape), but the nose only of medium breadth, the fifth (No. 29) dark skin colour, flaring nasal wings, protruding occiput, and chamaeorrhiny, and the sixth (No. 68) nose with flaring wings, and medium nostrils with frontal axes, prognathy, brachycormy, and chamaeorrhiny. If we compare the portraits of these individuals, the different combinations are visible at first sight. The question remains whether their importance is of genealogic origin and if it is possible to compare them (Nos. 66, 61, and others) with morphology of persons from other regions (Nubia, Sudan, Ethiopia). It is not out of the question that it may be a chance grouping of characteristics which move currently in the population.

To conclude this analysis we must say that the northern elements are of a higher frequency in the Abusir group, the southern ones in the group of Qift. However, they appear in small quantities in opposite groups as well, which proves their mutual connection and is in contradiction to M i c h a l s k i's conception (1958, p. 199) that the negroid characters appear exclusively in Upper Egypt.

III. OTHER MORPHOLOGICAL PECULIARITIES AND THE QUESTION OF HETEROGENEITY

Besides the infiltration of the so-called northern and southern elements we can sort out in some individuals morphological peculiarities which appear metrically striking whether in dimensions or in indices. We shall quote characteristics lying in individuals beyond the range $x \pm 2s$ determined according to A-group. As extremes we shall label characteristics lying beyond the interval $x \pm 3s$.

In Abusir: No. 6 considerable brachycormy, No. 17 wide bigonial breadth, No. 8 considerable leptorrhiny, No. 15 a great nasal height, considerable leptoprosopy, No. 16 small facial breadth, No. 17 tall stature and great weight; extreme brachycormy, small relative bistyloid breadth, No. 19 great nasal height, high fronto-parietal index, No. 23 short sitting height, short breadth of the head, No. 24 narrow forehead, extremely narrow jaw, low zygo-gonial index, No. 25 low stature, No. 29 small nasal height and high nasal index, No. 31 tall stature, No 34 great nasal breadth and high nasal index, No. 35 extremely high stature, high weight and sitting height, wide breadth of the head, and high zygo-frontal index, No. 36 extremely short head and high cephalic index, low Rohrer's index, No. 39 high sitting height, No. 40 considerable makrocormy, No. 42 long bistyloid breadth, No. 45 narrow forehead, small facial height, No. 48 narrow forehead, No. 50 high facial index, small nasal breadth and low nasal index, No. 52 narrow forehead, low zygo-frontal index, No. 53 zygo-gonial index, No 54 long bistyloid breadth, No. 60 long breadth of the face, No. 63 extreme breadth and length of the head (with the mean cephalic index).

In Qift: No. 65 low zygo-frontal index, No. 67 considerable brachycormy, No. 68 great nasal breadth, No. 69 narrow forehead and jaw, low fronto-parietal, zygo-frontal and zygo-gonial indices, No. 70 high stature, low Rohrer's index, No. 71 low zygo-gonial index, No. 72 high cephalic index, No. 75 high stature, low Rohrer's index, No. 77 small facial height, No. 78 extremely short stature and small sitting height, low weight, small facial height and high Rohrer's index, No. 80 Rohrer's index (asthenic habitus), No. 83 small facial height, No. 84 great nasal breadth and high nasal index, No. 87 narrow jaw and extremely low zygo-gonial index, No. 88 low Rohrer's index, No. 89 low stature and small weight (other dimensions are normal), No. 91 low fronto-parietal index.

Individuals of Sudanese origin: No. 93 considerable brachycormy, No. 94 great weight and considerable nasal breadth.

Beside these particularities some individuals also differ from the others because of their physiognomy, e. g. Nos.: 1, 14, 27, 33, 43 (Mongoloid features), 20, 29, 44, 66, 84, 87 (Negroid features), 25, 35, 38, 39, 45, 46, 91 (reminding us of various Central European types) 8, 13, 17, 19, 21, 26, 32, 75, 92 (Oriental features) 36 or even No. 72 (Armenoid features), 63 (voluminous braincase), 47, 50 (small noses), 68 (acromegaloid features), 80 (meagreface-peptic ulcer). Profiles of some individuals recall the faces known from old Egyptian reliefs (e. g. Nos. 53 and 61). Two individuals of Sudanese origin differ from one another as well: No. 93 represents a "fine", No. 94 a "rougher" form. They differ, among other features, also in the shape of nostrils, in the profile of the face, in the outline of the braincase and in the shape of the auricles.

On the basis of metrical, morphological or physiological differencies it is possible to consider a foreign origin in some individuals — or is it necessary to consider even these as extreme variants of local population?

In individuals of Sudanese origin who live along with other inhabitants of Abusir, their knowledge of their genealogy is a help to us, so that there is no doubt concerning their alien origin. This is the reason why we have excluded them from the group analysis. Some other names of individuals bear evidence of a distant origin. Dasuki (No. 37) points to a locality in the Eastern Delta, not far from the Mediterranean Sea. Arabi (No. 70) suggests a Desert or a Nubian Arab, while Badawi (No. 62) does not exclude some ancient connection with the Beduins. The surname Berberi in two further individuals (Nos. 85 and 86) may point to Nubia, too, Kurdi to Kurdistan (No. 46) and Hindi (No. 38) suggest even to remote India. In this connection the name Kenawi (No. 84) is of no importance because Qena is situated a short distance from Qift. The birthplace of No. 65 (Abu Tesht near Qena) and of Nos. 16, 31, 32 and 62 (Saqqara) is not situated a long distance from Qift and Abusir respectively.

Among individuals with a surname carrying an echo of a distant origin a certain difference is evident only in individual No. 70 (Arabi) — high stature (179,5 cm) and low Rohrer's index (0,99). He does not differ in other characteristics. Individuals Nos. 85 and 86 are similar to each other morphologically (they seem to be relatives), however, the former has two northern elements the latter three southern elements. In other individuals there is no important deviation. Neither high stature nor the presence of some northern or southern elements can be a sufficient reason for considering these individuals morphologically as alien. We conclude by stating that all individuals with evidence of different origin in their surnames are morphologically clear-cut for their groups.

We are of opinion that in further individuals too it is not possible to decide on the basis of purely morphological analysis if they are a heterogeneous element in the group or not.

We would like to draw attention also to an opposite phenomenon which we could observe in the materials studied namely to morphological similarity of some individuals. These are the numbers 9 and 10 (brothers), 81 and 82 (brothers), 85 and 86 (identical surnames), 27 and 33 (not relatives). On the contrary to this the cousin Nos. 24, 25, 26 differ very much from each other.

IV. BODY-BUILD TYPES

Type of individual body-build is not considered only for an expression of constitution, i. e. inherited qualities, but also for phenotype, created under the influence of a great variety of outside causes (nutrition, occupation, climate and others).

The types were already ascertained during the field investigations and when working them out we paid special attention to Rohrer's index. The results are assembled in Table 7. We used a classification of three basic type categories.

In the category of the leptomorphs there are also two asthenic men (Nos. 36 and 80) and the category of metromorphs and pyknomorphs comprises a number of individuals with an athletic component.

A certain relation to the body-build type is found also in the value of relative bistyloid breadth which is lower in the leptomorphs than in the remaining two types.

Cormic index shows lower values in the leptomorphs and on the contrary higher value in the metriomorphs. The category of pyknomorphs shows a very low value of this index in Qift, in Abusir, however, a surprisingly hight one.

In Table 7 we can also see some evidence in the relation of body-build type to the values of skinfold thickness as indicators of nutrition status. We can see a certain dependence, but not identity. The skinfold thickness is a more suitable and more simple indicator of nutrition than the body-build type, where a number of other factors must be taken into consideration. It is of interest that in A-group we came across a constant mean value in moth skinfolds in all types, while in Q-group there was a clear trend from the leptomorphs to the pyknomorphs. With the exception of the leptomorphs, the values of skinfold thickness are emphatically higher in Qift than in Abusir.

Both groups differ in the body-build type frequcncy. In A-group there are more pyknomorphic and metromorphic types than in Q-group. On the contrary to this, Q-group shows a clear majority of leptomorphic type regardless of better state of nutrition. We suppose that in the body-build type in Q-group there is a certain ethnical difference when comparing it with A-group. It is characterized by more numerous individuals with relatively short trunk, longer lower extremities and with a fine skeletal construction.

V. INDIVIDUAL VALUES OF PHYSIOLOGICAL CHARACTERISTICS

In the results of dynamometry the following individuals differ from others in the very strong pressure force of the right hand (45—47 kgm), Nos. 13, 20, 22, 63, 67, 79, 86. High pressure force of the left hand (43—47 kgm) appears in Nos. 31, 39, 63, 70, 75, 83. These are exclusively young men (aged 22—38). The individual of Sudanese origin No. 93 (30 years old) also has a strong pressure force of the right and the second one No. 94 (42 years old) reached the highest value in the pressure force of the hand of all (the right hand 48 kgm, the left hand 50 kgm).

On the contrary low values of the right hand (23—28 kgm) are found in Nos. 6, 23, 33, 35, 65 and 68, those of the left hand (23—24 kgm) in Nos. 25, 65, 80 and 86. The last individual had a scar after operation on the distal end of the left upper arm which had a certain influence upon the left hand result, because the pressure force of his right hand was very strong. Five individuals with feeble pressure force were of the age of 46—50 years, three were young (22—30 years). In No. 38 (the right hand) and in No. 46 (both hands) we could not measure the pressure force because of fresh wounds.

From usually very low values of skinfold thickness there differ, because of a stronger development above the tricipital area (0.6—0.7 cm) or under the shoulder blade (1.0—1.3 cm), the individuals Nos. 6, 15 (both skinfolds), 29 (both skinfolds), 44, 48, 59, 61, 65 (only in the subscapular area), 67 (both skinfolds), 79 (both skinfolds) and 83 (only above the tricipital area). These are then the individuals in the best state of nutrition.

Minimal values in skinfold thickness above the tricipital area (0.2 cm, which is only the doubled thickness of skin without fat in fact) was found in individuals Nos.: 16, 22, 26, 33, 36, 66 and 80 and in the subscapular region (0,3) — Nos. 1 and 66. Low values can be explained as being caused by bad nutrition or illness (No. 80).

A very low pulse frequency (54 per minute) was taken in men Nos. 9, 18 and 63 (25—35 years old), on the contrary tachycardy (90—108 per minute)

was measured in Nos. 15, 29, 58 and 75 the same age).

In the blood-pressure values there existed only slight deviations from the normal blood pressure. Especially low values were found in 22-year-old individuals No. 13 (115/50) and No. 60 (85/40) and in relation to the age also in a 50-year-old man, No. 48 (105/70). Higher values in systolic component were found in a 23-year-old man No. 50 and a 27-year-old man, No. 56 (both 155/77). Even in the third decade the diastolic pressure sometimes appeared bordering on pathological values, namely in No. 29 (120/95), No. 4 (140/95), No. 23 (140/100) and especially in No. 64 (140/105). In the fourth decade, higher diastolic blood pressure appeared in No. 22 (125/95) and in No. 47 (135/95), in the fifth decade in No. 1 (125/95), No. 90 (140/95) and No. 46 (145/95) and in the sixth decade in No. 76 and No. 88 (both 135/95) and No. 68 (145/100).

Also the individual analysis of physiological characters shows the average muscle force, a lower level of nutrition and a favourable state of circulatory system without important deviations.

VI. NOTES CONCERNING SOME JUVENILES

Five boys of Abusir and one of Qift cannot provide sufficient material for a group study, in some details, however, they contribute to our knowledge. The age given by them was confronted with the state of dentition and secondary sexual characteristics. It had to be lowered in one case by a year. The representatives are then: a 14 year old boy (No. 100), a 15 year old boy (No. 99), 16 year old boys (Nos. 95 and 96), and 17 year old boys (Nos. 97 and 98). Individual values of their characteristics are given in appendix 1 and 2. Characteristics of physiological importance are given in means and in range in Table 3.

Though the individual absolute metrical morphological values are lower, which corresponds to the lower age and to a continuing growth (especially in Nos. 96 and 97) we can observe in all indices the values within the "normal" range of the A-group. Concerning the desriptive characters it is necessary to point out at a slight prognathy of the boy No. 96, and curly hair in No. 98. The physiognomy of the boys does not differ from the majority of other investigated men.

Values of physiological characters are lower in accordance with lower age. Though the skinfold does not reach the minimal values of the adults, nevertheless, even in boys, it is necessary to characterize the development of fat as a low one. It is similar (with the exception of a very small number of individuals) to low percentual values of the body-fat

TABLE 7

Distribution of Body-Build Types and Some of Their Characteristics

Body-build type		Leptomorphie		Metromorphie		Pyknomorphie	
Locality		Abusir	Qift	Abusir	Qift	Abusir	Qift
Number	abs.	15(*13)	14	30(*24)	9	19(*18)	5
	rel.	23.4	50.0	46.9	32.1	29.7	17.9
Rohrer's index	R	0.99—1.22	0.99—1.22	1.20—1.36	1.22—1.31	1.33—1.53	1.37—1.51
	$\bar{x}$	1,15	1,13	1.27	1.27	1.39	1.42
Cormic index	R	46.7—54.2	48.8—52.8	49.4—54.8	49.7—53.9	47.9—56.6	47.8—51.7
	$\bar{x}$	51.30	50.54	52.05	52.06	51.81	50.28
Relative bistyloid radioulnar breadth	R	2.93—3.58	3.01—3.49	3.01—3.60	3.14—3.64	3.15—3.67	3.17—3.45
	$\bar{x}$	3.22	3.21	3.35	3.32	3.39	3.33
Skinfold thickness in the left tricipital area	R	0.2—0.5	0.2—0.5	0.2—0.6	0.3—0.6	0.2—0.7	0.4—0.7
	$\bar{x}$	0.40	0.34	0.39	0.44	0.37	0.52
Skinfold thickness in the left subscapular area	R	*0.5—0.8	0.3—0.7	*0.3—1.0	0.6—1.0	*0.3—1.3	0.8—1.2
	$\bar{x}$	*0.65	0.56	*0.64	0.73	*0.63	0.92
Nr. 1 of Individuals		3 36 8 43 17 45 19 49 21 50 28 54 31 62 35	66 77 68 80 70 84 72 86 74 87 75 88 76 91	1 38 2 39 4 42 5 44 7 47 9 48 10 51 11 52 15 56 16 57 20 58 23 59 24 60 33 61 37 63	69 71 73 79 81 82 85 89 92	6 30 12 32 13 34 14 40 18 41 22 46 25 53 26 55 27 64 29	65 67 78 83 90

distribution in boys of Morocco, and even Libya (Ferro — Luzzi, 1962). Pulse values are rather a little higher than we could expect at such an age in the Central European enviroment. Netoušek (1954, p. 37) gives for boys of 7—10 years of age 85—90 throbs per minute, so that 14—17 year old boys should have cca 80 throbs per minute. Pulse values of Egyptian boys in spite of that are in accordance with higher values found in adults. Only in No. 99 a too high frequence was measured (108/min.). Blood pressure is lower than in adults with the exception of No. 95 (16 years) where it reaches in the diastolic component the border of pathological values (125/95).

NUTRITION AND LIVING CONDITIONS

(Worked up and written in co-operation with M. Fiedler)

The nutrition of the Egyptian fellah is marked in most scientific work as insufficient. E. g. Simmons et al. (1957), p. 6—7) states that in some districts from 65 up to 80 per cent of inhabitants are undernourished. It is not only shortage of calories, but above all shortage of albumens and vitamines. Only a certain amount of minerals are perhaps sufficient. (P. Schrumpf-Pierron 1932, cit. Avrout 1954.) The state of nutrition was very bad in the past, especially in regions with monoculture plants (cotton, sugar cane) or in oases. The inhabitants of Kharga Oasis ate meat (according to Hrdlička, 1912) only once a month. In the present time after two agrarian reforms habe been carried out the situation has very much improved. However the problem of sufficient and adequate nutrition of all social classes of the Egyptian people has not yet found a satisfactory solution.

To secure at least some survey of nutrition and living conditions of the examined individuals, five of them underwent an informative talk (3 of Q-group, and 2 of A-group).

It is the habit to take meals three times a day. The main meal is dinner. Only exceptionally, when people are employed even in the evening, one more meal is served — the second dinner. The daily quantity of meal amounts approximately to $1^1/_4$—$1^1/_2$ kg, in rich families up to 2 kg.

Because of the hot climate (especially in summer) they drink a great quantity of liquids, namely approximately $1^1/_2$ litres water, $1—1^1/_2$ litres milk, and $^1/_2—^3/_4$ litre tea a day. The most popular drink of Egypt fellahs is strong and well sugared tea. Ayrout says that tea consumption increased rapidly since 1914 and that this is connected with the consequences of the system of perennial irrigation of the fields. To the best of our knowledge precisely these irrigation canals are the most frequent source of spreading infection by parasite worms (schistosomiasis, ankylostomiasis). When ill, the fellah looses his strenght. To avoid a decrease in his working ability he resorts to the analeptical mean he can afford — to tea. The bulk of his income is spent on tea, even to the disadvantage of meal. Smoking has taken root among the agricultural workers as well.

The principal food is bread, which is baked in the form of pancakes of a diametre of about 30 cm and of a weight approximately of 20 dkg. Countrymen are accustomed to bake them at home from maize-flour, millet, wheat, and beans. Into the dough a few oil seeds (chelba) are added. Bread is made from whole corns and contains a high percentage of mineral stuffs, especially potassium, magnesium, calcium and others. It is said (Simmons, Ayrout) that bread covers 80 % and even more of the national diet. Our workers gave their mean consumption as 4—5 pancakes daily. Besides bread the most common food is vegetables and legumes ($^1/_4—^1/_2$ kg daily) namely beans, lentils, gourds, cucumbers, onion, radishes, red pepper. Of cereals they use for cooking millet, wheat, barley and rice. Egypt is a land of fruit (dates, melons, oranges, lemons, bananas, mango, apricots, grapes, and other fruit) and thus we were surprised at the answer of two men interrogated who said that they eat nearly no fruit, while three others stated they eat appr. $^1/_4$ kg fruit a day.

Meat has always been a food for feast days in the country. The fellaheen eat beef, mutton, camel meat and also pigeons, poultry, and fish in some regions. The inhabitants of Qift announced their mean consumption of meat as 20 dkg a day which seems to be rather exagerated even for the higher living standard of these people. The inhabitants of Abusir announced that their average consumption was 20 dkg and more (maximum 1 kg per person in rich families) weekly. Nor is the consumption of fat (butter and other vegetable fat) great. It amounts to cca 1 dkg daily (only for the well-situated man in A-group it amounts to cca 10 dkg daily). From milk sour cheese is also prepared. Egg consumption is said to be cca 20 monthly. The fellah does not nearly know the dessert in our conception of word. The sugar consumption was stated by them approximately 3 kilograms per month, which seems to be higher than it is in fact. Only one of the men of Qift made a better estimation — approximately $^1/_2$ kg monthly. Besides sugar also sugar cane is very popular, from which sweet juice can be obtained when twisting it. To improve the taste of meal they add salt, pepper, and other sorts of spices.

The level of hygiene is still very poor. The first successful achievement of recent years is the provision of irreproachable drinking water in nearly all agricultural settlements, which was carried out by the Egyptian Government.

Workers usually work 9 hours daily, during the season of agricultural work. One day weekly, the day fixed for irrigation, they work 14 hours or even more. When the season is over, they work approximately three hours daily. During the archaeological investigations they respect the working time of 7 hours given by law. It is a habit in Egypt to rest especially during the noon when the heat is unbearable for appr. 2 hours. Night rest (sleeping) lasts 9—10 hours.

The dwellings of the fellaheen are still very poor

overcrowded and unhygienical, especially at Abusir. On the contrary, the inhabitants of Qift said they had big houses with a number of rooms which was higher than the number of the dwellers living in it. According to the law every man can have 4 wives. The fellaheen, however, usually have only one or two wives. The mean number of children living in the family is estimated at five in Qift, and at seven at Abusir. The difference is explained by the men interrogated by the fact that people at Abusir marry sooner (15 years onwards) while at Qift later (appr. 18 years onwards).

After reflecting on the data on nutrition and living conditions it is obvious that the social situation in the two localities differs. The inhabitants of Qift earn their living by helping in archaeological investigations where they get wages higher by 50 % or more than the other workers. This makes clear the difference we had ascertained in the thickness of the body fat as indicator of the state of nutrition and in the health condition of some members of the two groups.

The results of our investigation of nutrition are conformable to the data quoted by M. M. El Sader (1963) on the basis of his research into nutrition carried out in Upper Egypt (Kom Ombo and environment over a period of many years).

SUMMARY

During the field-work of the Second Expedition of the Czechoslovak Institute of Egyptology of the Charles University of Prague to Egypt in 1961, the first author carried out his investigations on 100 persons. He distributed them into groups of adult men from the Middle-Egyptian village Abusir (n = 64, A-group), and from an Upper-Egyptian small town Qift (n = 28, Q-group). The rest was represented by individuals of Sudanese origin and by juveniles. 12 metrical morphological characteristics were investigated and on this basis 10 indices were computed, a further physiological characteristics and 17 descriptive characterics were studied. Besides these data there were noted also pathological findings and artifical deformations. Dermatoglyphics were taken from the right hand in 44 men in A-group. To evaluate the obtained results, some methods of mathematical statistics were used.

The results of group analysis are put into a wider frame of anthropological classification scales and at the same time attention is drawn to the differences between the two groups examined. Comparison with the results of other Egyptian population samples will be included in the second part of this work.

All the dimensions in Q-group (with the exception of stature and nasal breadth) are smaller on the average than in A-group. Values show a low body weight, especially in Q-group, average growth, favourable Rohrer's index in A-group and medium Rohrer's index in Q-group, metriocormy in A-group, and brachycormy in Q-group. The head is long and narrow with dolichocephalic index, the face short or medium long, narrow or medium wide with mesoprosopic index. The minimum breadth of the forehead is wide in A-group, middle in Q-group, in accordance with this we find also a different widht of the lower jaw — medium in A-group, narrow in Q-group — and these deviations are visible also in the respective indices. The nose is of a medium height, but its breadth has significantly higher values in Q-group which can be seen in values of nasal index belonging to the category of mesorrhiny and yet more obviously in the values of the zygo-nasal index. Bistyloid radio-ulnar breadth is in both groups very small.

Pressure force of hand is average. Skinfold thickness reaches very low values. The pulse frequency was verified as slightly above the European "normal", blood pressure values are favourably low, especially in the systolic component.

In the descriptive characteristics we observe difference in pigmentation, which is darker in the southern group (Q) and is accompanied by a tendency to lower beard development. Other differences were found in nasal characteristics, lip thickness, profile of the face, vault of the vertex, and occipital profile, while the findings in the auricle and outline of the face are similar to each other in both groups. Occasionally observed prominence of cheekbones was more frequent in A-group.

Health condition of men in Q-group is found to be better than in A-group, artificial deformations are very rare.

In dermatoglyphics we observed the frequency of individual patterns indices and the quantitative pattern values.

In individual analysis, types were stated according to the description by Henzel and Michalski only in nearly one half of cases. We tried to verify frequency of so-called northern and southern compound elements which appeared in both groups in different quantities and showed relatively low mutual combination. Extreme values in individual metrical morphological characters or deviations in physiognomy have usually nothing in common with an echo of a distant origin in the surname of some individuals. Pyknomorphic and metromorphic body composition occurs more currently in A-group, while the leptomorphy dominates in Q-group, even though the state of nutrition in values of skinfold thickness are more favourable in Q-group than in A-group. The chapter on individual analysis is concluded with a part on physiological characteristics and investigations on juveniles.

Anthropological analysis is completed with a chapter on nutrition and living conditions which leads us to the conclusion that the inhabitants of Qift have better nutrition and a higher living standard than those of Abusir.

All the metrical and descriptive characteristics of investigated persons are given in Appendices 1—2, their standard portraits in Plates 1—16.

In this work which represents the first part of the entire publication is published the material from ABUSIR in plates.

The remaining plates representing the material from QIFT will be published in the second part which will appear in the next volume of "Anthropology".

APPENDIX 1

Detailed Metrical Characters of Contemporary Egyptian Men Investigated

Nr.	Age	1*)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
	years	kg	cm	cm	cm	cm	cm	cm	cm	cm	cm	cm	cm	I	I	I	I	I	I	I	I	I	kgm	kgm	cm	cm	per min.	mm Hg	mm Hg
A. Abusir — Adults																														
1	40	57	165	83	18.9	14.5	10.9	12.1	13.9	10.3	4.6	3.6	5.6	1.27	50.3	76.7	75.2	87.1	78.4	74.1	78.3	25.9	3.39	40	32	0.3	0.3	84	125	95
2	35	55.5	160	82	19.9	13.9	10.9	11.4	13.6	10.7	4.9	4.1	5.7	1:35	51.3	69.9	78.4	83.8	80.1	78.7	83.7	30.1	3.56	38	32	0.3	0.4	72	110	85
3	25	51	162.5	81.5	18.3	14.2	10.5	11.5	12.9	10.0	5.2	3.3	5.4	1.19	50.1	77.6	73.9	89.1	81.4	77.5	63.5	25.6	3.33	36	34	0.3	—	84	135	85
4	29	55	163.5	82.5	19.2	14.1	10.4	10.9	12.9	10.8	4.7	3.4	5.6	1.26	50.5	73.4	73.8	84.5	80.6	83.7	72.3	26.4	3.43	32	30	0.3	—	84	140	95
5	22	58	165.5	84.5	18.4	14.3	11.5	11.0	13.4	11.6	4.9	3.7	5.6	1.28	51.1	77.7	80.4	82.1	85.8	82.1	80.4	27.6	3.38	38	38	0.4	—	72	140	85
6	50	64.5	167	80	19.7	14.0	11.5	11.3	13.4	10.9	4.8	4.0	6.0	1.38	47.9	71.1	82.1	84.3	85.8	81.3	83.3	29.8	3.59	26	30	0.7	—	78	135	85
7	28	60	169.5	86.5	18.4	14.7	11.4	11.6	13.9	11.7	5.0	3.8	5.8	1.23	51.0	79.9	77.5	83.5	82.0	84.2	76.0	27.3	3.42	44	34	0.3	—	72	135	85
8	38	58	169.5	89.0	18.9	13.7	11.2	13.2	13.5	10.4	5.4	3.1	5.8	1.19	52.5	72.5	81.7	97.8	83.0	77.0	57.4	23.0	3.42	32	30	0.5	—	60	105	75
9	35	57	168.0	87.0	19.6	14.1	11.5	11.1	13.5	10.3	5.1	3.5	5.9	1.20	51.8	71.9	81.6	82.2	85,2	76.3	68.6	25.9	3.52	36	36	0.4	—	54	120	85
10	25	57	165.5	87.0	20.2	14.2	10.7	11.3	13.6	10.8	5.0	3.6	5.3	1.26	52.6	70.3	75.3	83.1	78.7	79.4	72.0	26.5	3.20	36	26	0.3	—	60	115	75
11	35	60	166.0	82.0	18.3	14.6	11.5	11.2	13.7	10.7	4.9	4.0	5.0	1.31	49.4	79.8	78.8	81.7	83.9	78.1	81.6	29.2	3.01	32	32	0.3	—	72	135	90
12	40	69.5	168.5	82.5	19.1	14.3	11.1	11.4	13.8	10.6	4.8	4.2	5.6	1.45	49.0	74.9	77.6	82.6	80.4	76.8	87.5	30.4	3.32	43	40	0.3	0.6	72	145	80
13	22	59	164.0	86.0	19.6	13.9	10.4	11.7	12.9	9.6	5.6	3.8	5.5	1.34	52.4	70.9	74.8	90.7	80.6	74.4	67.9	29.5	3.36	46	43	0.3	0.9	72	115	50
14	28	58.5	163.0	87.0	19.6	14.5	10.6	12.4	13.8	10.6	4.8	3.5	5.7	1.35	53.4	74.0	73.1	89,9	76.8	76.8	72.9	25.4	3.50	42	37	0.4	0.6	84	120	75
15	29	55	163.0	86.0	18.6	14.6	11.1	13.3	13.0	9.4	4.9	4.0	5.3	1.27	52.7	78.5	76.0	102.3	85.4	72.3	81.6	30.8	3.25	34	25	0.6	1.0	108	135	80
16	34	51.5	157.5	83.0	18.4	14.2	10.5	11.7	12.2	10.3	4.8	3.3	5.1	1.32	52.7	77.2	73.9	95.9	86.1	84.4	68.7	27.0	3.24	34	29	0.2	0,5	60	105	75
17	30	72.5	181.0	84.5	19.2	13.9	11.2	12.5	13.5	10.6	5.5	3.7	5.3	1.22	46.7	72.4	80.6	92.6	83.0	78.5	67.3	27.4	2.93	34	34	0.5	0.8	78	135	85
18	27	64.5	167.0	85.5	20.4	14.5	10.9	12.3	13.5	10.7	5.3	4.3	5.7	1.38	51.2	71.1	75.2	91.1	80.7	79,3	81.1	31.9	3.41	32	32	0.4	0.7	54	130	80
19	28	60	170.0	89.5	19.5	14.0	11.7	12.5	13.9	10.8	5.9	3.8	5.7	1.22	52.7	71.8	83.6	89.9	84.2	77.7	64.4	27.3	3.35	40	32	0.3	0.7	66	125	80
20	25	62.5	169.5	88.5	19.6	13.9	11.0	10.8	13.4	11.1	4.9	4.3	5.6	1.28	52.4	70.9	79.1	80.6	82.1	82.8	87.8	32.1	3.30	46	42	0.4	0.7	66	125	75
21	22	57	170.0	84.0	18.9	14.2	11.0	11.4	13.4	10.9	5.6	4.1	5.2	1.16	49.4	75.1	77.5	85.1	82.1	81.3	73.2	30.6	3.06	40	33	0.3	0.6	84	125	90
22	35	69	170.5	88.0	19.7	14.3	11.0	11.7	14.4	10.7	5.0	4.3	5.5	1.39	51.6	72.6	76.9	81.3	76.4	74.3	86.0	29.9	3.23	47	40	0.2	0.6	72	135	95
23	25	48	153.5	78.0	19.0	13.2	10.4	11.2	13.0	10.3	5.0	3.3	5.3	1.32	50.8	69.5	78.8	86.1	80.0	79.2	66.0	25.4	3.46	27	29	0.4	0.6	72	140	100
24	36	54.5	163.0	86.5	18.5	13.6	9.8	11.2	12.6	8.8	5.3	3.4	5.5	1.26	53.1	73.5	72.1	88.9	77.8	69.8	64.1	27.0	3.37	30	29	0.3	0.8	78	120	85
25	30	52	152.5	79.0	19.1	14.4	11.0	10.7	13.3	10.0	4.4	3.4	5.0	1.47	51.8	75.4	76.4	80.5	82.7	75.2	77.3	25.6	3.28	29	24	0.4	0.6	72	120	85
26	28	54	159.5	82.5	18.4	14.2	10.6	12.5	13.1	10.6	5.2	3.3	5.2	1.33	51.7	77.2	74.7	95.4	80.9	80.9	63.5	25.2	3.26	40	33	0.2	0.6	60	130	85
27	25	55.3	158.0	81.0	18.5	14.4	11.3	10.9	13.5	11.0	4.3	3.6	5.4	1.41	51.3	77.8	78.5	80.7	83.7	81.5	83.7	26.7	3.42	32	39	0.3	0.5	72	120	90
28	50	59.5	172.0	91.0	19.3	14.1	11.2	11.7	14.2	10.4	5.2	4.0	5.8	1.17	52.9	73.1	79.4	82.4	78,9	73.2	76.9	28.2	3.37	37	28	0.3	0.7	72	120	80
29	25	65.0	162.0	83.0	19.5	14.4	11.0	10.7	13.2	10.2	4.0	3.9	5.3	1.53	51.2	73.9	76.4	81.1	83.3	77.3	97.5	29.5	3.27	38	42	0.6	1.3	96	120	95
30	21	63.0	163.0	84.5	20.3	13.7	10.5	11.0	13.7	10.4	4.8	3.8	5.2	1.46	51.8	67.5	76.6	80.3	76.6	75.9	79.2	27.7	3.19	38	31	0.3	0.6	66	130	70
31	30	64.5	177.5	91.5	18.3	14.6	10.6	12.0	13.4	11.0	5.3	4.0	5.8	1.15	51.6	79.8	72.6	89.5	79.1	82.1	75.5	29.8	3.27	42	47	0.4	0.8	84	125	90
32	40	57.3	162.5	85.5	19.5	13.7	10.4	12.3	13.4	10.8	5.5	3.4	5.9	1.34	52.6	70.3	75.9	91.8	77.6	80.6	61.8	25.4	3.63	38	32	0.3	0.7	72	125	90
33	22	50.7	156.5	82.0	18.6	14.2	11.3	11.5	13.5	11.3	4.7	4.0	5.1	1.32	52.4	76.3	79.6	85.2	83.7	83.7	85.1	29.6	3.26	28	31	0.2	0.5	78	110	60
34	32	66.5	169.5	87.0	18.8	14.1	11.0	11.6	13.6	10.0	4.8	4.5	5.8	1.36	51.3	75.0	78.0	85.3	80.7	73.5	93.7	33.1	3.43	38	40	0.3	0.6	84	115	70
35	28	72.0	184.0	96.0	19.7	15.5	11.8	12.7	13.2	11.2	5.1	3.8	5.9	1.16	52.2	78.7	76.1	96.2	89.4	84.9	74.5	28.8	3.21	28	28	0.3	0.5	60	105	75
36	35	51.0	171,0	87.0	16.4	13.7	10.6	12.8	13.3	10.2	5.1	3.7	5.6	1.02	50.9	83.5	77.4	96.2	79.7	76.7	72.5	27.8	3.27	36	30	0.2	0.5	78	110	85
37	35	56.5	167.5	87.5	19.5	14.6	11.2	11.9	13.7	11.0	5.0	4.1	5.7	1.20	52.2	74.9	76.7	86.9	81.7	80.3	82.0	29.9	3.40	34	32	0.3	0.6	84	105	80
38	35	57.5	168.0	86.5	19.5	13.7	11.1	10.7	13.5	10.5	4.3	3.6	5.6	1.21	51.5	70.3	81.0	79.3	82.2	77.8	83.7	26.7	3.34	—	40	0.3	0.6	84	115	70
39	33	62.0	171.5	94.0	19.2	13.8	10.5	11.6	14.0	9.9	4.8	3.8	5.4	1.23	54.8	71.9	76.1	82.9	75.0	70.7	79.2	27.1	3.15	32	44	0.3	0.7	72	115	75
40	23	60.0	163.5	92.5	19.9	14.0	10.6	13.1	13.5	10.3	5.1	4.3	5.6	1.37	56.6	70.3	75.7	97.0	78.5	76.3	84.3	31.9	3.43	40	33	0.3	0.6	78	115	85
41	21	60.0	164.0	85.0	18.5	14.3	10.5	12.0	14.1	11.0	5.3	3.6	5.3	1.36	51.8	77.3	73.4	85.1	74.5	78.0	67.9	25.5	3.23	40	37	0.3	0.5	84	100	70
42	40	63.5	169.5	86.5	19.8	14.3	10.6	12.9	13.3	10.4	5.3	3.7	6.1	1.30	51.0	72.2	74.1	97.0	79.7	78.2	69.8	27.8	3.60	39	33	0.3	0.4	72	120	70
43	25	58.5	172.0	85.5	19.0	14.0	10.6	12.0	14.0	11.4	4.4	3.8	5.3	1.15	49.7	73.7	75.7	85.7	75.7	81.4	86.4	27.1	3.08	32	28	0.3	0.5	84	130	80
44	22	56.5	164.5	85.5	18.7	13.9	10.8	11.1	13.3	11.0	4.9	3.8	5.4	1.27	52.0	74.3	77.7	83.5	81.2	82.7	77.5	28.6	3.29	30	36	0.6	0.5	66	110	55
45	21	49.0	170.5	83.5	19.3	14.1	9.8	10.4	12.6	9.4	4.9	3.1	5.1	0.99	49.0	73.1	69.5	82.5	77.8	74.6	63.3	24.6	2.99	29	29	0.5	0.6	72	110	70
46	40	64.5	165.0	85.0	19.4	15.2	10.6	11.8	14.0	10.6	4.8	3.8	5.9	1.44	51.6	78.3	69.7	84.3	75.7	75.7	79.2	27.1	3.58	—	—	0.4	0.8	66	145	95
47	31	51.5	158.5	84.0	19.3	14.1	10.7	12.7	13.7	11.0	4.7	3.2	5.5	1.29	53.0	73.1	75.9	92.7	78.1	80.3	68.1	23.4	3.47	36	30	0.4	0.6	84	135	95
48	50	58.5	162.5	83.5	19.0	13.5	9.6	12.3	12.8	10.7	5.1	4.0	5.7	1.36	51.4	71.1	71.1	96.1	75.0	83.6	78.4	31.2	3.51	30	28	0.6	0.7	66	105	70
49	35	52.0	166.0	88.0	19.8	14.2	10.5	12.6	12.8	10.4	4.8	3.7	5.1	1.14	53.0	71.7	73.9	98.4	82.0	81.3	77.1	28.9	3.07	34	28	0.4	0.6	72	115	85
50	23	57.5	170.0	90.5	19.3	14.1	10.4	13.0	12.6	9.6	5.0	2.9	5.2	1.17	53.2	73.1	73.8	103.2	82.5	76.2	58.0	23.0	3.06	40	34	0.5	0.8	84	155	75

51	22	48.5	158.0	85.5	18.2	13.6	10.6	12.1	13.1	10.8	4.8	3.8	5.4	1.23	54.1	74.7	77.9	92.4	80.9	82.4	79,2	29.0	3.42	32	40	0.4	0.6	78	105	70
52	37	58.0	166.0	85.0	19.1	13.5	9.7	12.0	13.5	11.0	5.2	3.8	5.6	1.27	51.2	70.7	71.9	88.9	71.9	81.5	73,1	28.1	3.37	43	39	0.3	0.5	78	120	75
53	26	48.5	153.5	83.0	18.2	14.6	10.8	11.3	13.9	9.6	4.9	3.9	5.2	1.34	54.1	80.2	74.0	81.3	77.7	69.1	79.6	28.1	3.39	38	37	0.4	0.7	60	105	75
54	29	60.0	170.5	88.0	19.7	14.2	10.6	12.1	13.5	10.6	5.2	3.8	6.1	1.21	51.6	72.1	74.7	89.6	78.5	78.5	73.1	28.1	3.58	40	42	0.3	0.7	72	130	75
55	22	60.0	165.0	88.0	19.3	14.2	10.8	12.2	13.6	10.8	5.4	3.7	5.2	1.34	53.4	74.0	76.1	89.7	79.4	79.4	68.5	27.2	3.15	32	30	0.4	0.9	66	115	70
56	27	61.0	168.0	90.0	19.6	14.9	11.4	11.9	13.9	11.0	5.0	3.6	5.6	1.29	53.6	76.0	76.5	85.6	82.0	79.1	72.0	25.9	3.34	43	38	0.3	0.6	78	155	75
57	33	53.0	161.5	83.5	19.2	14.1	10.8	11.4	13.6	10.1	4.8	3.6	5.3	1.26	51.7	73.4	76.6	83.8	79.4	74.3	75.0	26.5	3.28	42	39	0.4	0.7	72	100	60
58	35	55.0	162.5	84.5	18.7	14.8	10.7	11.5	13.1	9.3	4.4	3.5	5.4	1.28	52.0	79.1	72.3	87.8	81.7	71.0	79.5	26.7	3.32	37	34	0.5	0.7	96	120	60
59	25	61.0	169.5	89.5	18.8	13.7	10.7	12.2	13.5	11.3	4.5	3.5	5.8	1.25	52.9	72.9	78.1	90.4	79.3	83.7	77.8	25.9	3.42	31	27	0.6	0.7	78	120	65
60	22	57.0	166.5	85.0	18.7	15.0	11.3	11.8	14.5	10.6	4.8	3.7	5.2	1.23	51.1	80.2	75.3	81.4	77.9	73.1	77.1	25.5	3.12	42	36	0.5	0.9	72	85	40
61	29	58.0	164.0	86.0	18.5	13.9	10.2	12.1	12.8	9.6	5.1	3.7	5.5	1.31	52.4	75.1	73.4	94.5	79.7	75.0	72.5	28.9	3.35	38	36	0.6	0.9	60	135	75
62	46	53.7	166.0	90.0	19.4	14.9	10.6	11.4	13.6	11.0	5.1	4.1	5.4	1.17	54.2	76.8	71.1	83.8	77.9	80.9	80.4	30.1	3.26	37	37	0.5	0.7	78	110	75
63	25	60.0	167.0	91.0	21.4	16.1	11.5	11.6	13.9	10.0	4.6	3.8	5.5	1.29	54.5	75.2	71.4	83.5	82.7	71.9	82,6	27.3	3.30	45	44	0.5	0.8	54	105	65
64	27	59.0	161,0	80.0	19.7	13.8	11.2	11.7	13.2	10.5	4.9	3.8	5.9	1.41	49.7	70.1	81.2	88.6	84.6	79.5	77,5	28.8	3.67	40	38	0.5	0.6	72	140	105
B. Qift — Adults																														
65	50	55.0	159.0	81.0	19.0	14.0	10.3	11.9	13.9	10.4	5.2	4.3	5.3	1.37	50.9	73.7	73.6	85.6	74.1	74.8	82.7	30.9	3.34	23	24	0.4	1.0	72	120	70
66	35	57.0	168.5	85.5	18.6	14.3	10.2	10.9	13.7	10.3	4.8	4.2	5.1	1.19	50.7	76.9	71.3	79.6	74.5	75.2	87.5	30.7	3.03	32	29	0.2	0.3	66	105	80
67	38	65.0	166.5	79.5	19.3	14.7	10.7	11.3	13.9	11.3	4.4	3.7	5.4	1.41	47.8	76.2	72.8	81.3	77.0	81.3	84.1	26.6	3.24	45	40	0.7	1.2	72	105	80
68	50	47.5	157.5	79.5	18.6	14.4	10.2	12.3	12.6	10.2	4.9	4.4	5.5	1.22	50.5	77.4	70.8	97.6	80.9	80.9	89.8	34.9	3.49	24	26	0.3	0.6	84	145	100
69	50	49.5	159.5	81.0	19.2	13.7	9.3	10.7	13.1	9.1	4.8	4.0	5.8	1.22	50.8	71.3	67.9	81.7	71.0	69.5	83.3	30.5	3.64	35	32	0.5	0.9	72	130	85
70	25	57.5	179.5	87.5	18.6	13.4	10.8	11.7	12.7	10.3	4.8	3.7	5.4	0,99	48.8	72.0	80.6	92.1	85.0	81.1	77.1	29.1	3.01	32	43	0.3	0.6	72	120	90
71	30	66.0	175.0	87.0	19.9	14.5	10.3	11.7	13.7	9.6	5.2	4.3	5.5	1.23	49.7	72.9	71.0	85.4	75.2	70.1	82.7	31.4	3.14	40	36	0.4	0.6	84	125	80
72	20	52.0	165.0	86.0	17.8	14.6	10.7	11.9	13.2	9.8	5.0	3.9	5.3	1.16	52.1	82.0	73.3	90.1	81.1	74.2	78.0	29.5	3.21	31	37	0.3	0.5	72	130	90
73	28	61.0	168.0	90.5	19.4	14.2	10.3	12.0	12.7	10.2	5.4	4.3	5.3	1.29	53.9	73.2	72.5	94.5	81.1	80.3	79.6	33.9	3.16	44	38	0.5	0.6	84	115	85
74	36	56.5	168.5	89.0	20.1	14.2	10.3	11.9	13.4	9.6	5.1	3.8	5.7	1.18	52.8	70.7	72.5	88.8	76.9	71.6	74.5	28.4	3.38	43	34	0.4	0.5	72	120	80
75	27	59.0	179.0	90.0	18.0	13.3	10.7	12.3	13.5	11.4	5.2	4.1	5.5	1.03	50.3	73.9	80.5	91.1	79.3	84.4	78.9	30.4	3.07	43	43	0.3	0.5	90	140	85
76	50	53.0	165.0	85.5	18.2	13.6	10.0	11.1	13.2	11.0	4.8	4.2	5.2	1.18	51.8	74.7	73.5	84.1	75.8	83.3	87.5	31.8	3.15	35	31	0.4	0.6	72	135	95
77	40	48.5	163.0	85.0	19.1	14.2	10.7	10.4	13.3	9.8	4.7	3.8	5.4	1.12	52.1	74.3	75.3	78.2	80.5	73.7	80.9	28.6	3.32	32	33	0.4	0.7	84	120	85
78	58	46.0	145.0	75.0	18.3	13.5	10.1	10.4	13.1	10.5	4.3	3.9	5.0	1.51	51.7	73.8	74.8	79.4	77.1	80.1	90.7	29.8	3.45	29	27	0.5	0.8	60	120	85
79	23	61.5	170.0	90.0	18.6	14.1	10.5	11.1	13.6	10.2	5.1	3.8	6.0	1.25	52.9	75.8	74.5	81.6	77.2	75.0	74.5	27.9	3.53	46	42	0.6	1.0	84	115	75
80	46	50.0	170.0	83.5	19.7	13.5	10.3	12.4	13.1	9.9	5.0	3.8	5.4	1.02	49.2	68.5	76.3	94.7	78.6	75.6	76.0	29.0	3.18	33	23	0.2	0.4	72	110	75
81	35	59.5	168.0	87.5	19.5	15.0	11.4	11.5	13.9	10.1	4.8	4.0	5.4	1.26	52.1	76.9	76.0	82.7	82.0	72.7	83.3	28.8	3.22	46	42	0.5	0.8	60	120	75
82	26	57.5	164.0	86.5	19.5	14.6	10.9	12.1	13.2	10.3	4.8	3.7	5.4	1.30	52.7	74.9	74.7	91.7	82.6	78.0	77.1	28.0	3.30	38	27	0.5	0.6	84	115	80
83	35	58.0	163.5	83.0	18.2	14.5	10.6	10.4	13.5	9.7	4.4	3.9	5.6	1.33	50.7	79.7	73.1	77.0	78.5	71.9	88.6	28.9	3.43	43	43	0.6	0.8	84	130	80
84	29	58.5	172.5	85.0	18.9	13.8	10.5	11.5	13.1	9.4	4.7	4.4	5.6	1.14	49.3	73.0	76.1	87.8	80.1	71.8	93.6	33.6	3.25	38	38	0.5	0.7	72	130	75
85	22	54.5	163.5	85.0	18.1	13.6	10.1	11.2	12.6	10.1	4.7	3.4	5.2	1.25	52.0	75.1	74.3	88.9	80.2	80.2	72.3	27.0	3.18	42	40	0.4	0.7	84	115	75
86	23	54.5	169.0	85.0	18.6	13.7	10.2	10.7	12.7	9.8	4.4	3.8	5.3	1.13	50.3	73.7	74.5	84.3	80.3	77.2	86.4	29.9	3.14	45	23	0.4	0.7	84	120	70
87	24	58.0	172.0	86.0	19.6	14.2	10.6	12.5	13.9	9.0	5.3	3.9	5.6	1.14	50.0	72.5	74.7	89.9	76.3	64.8	73.6	28.1	3.26	40	38	0.3	0.7	84	110	80
88	58	56.5	175.5	86.0	19.2	14.8	10.7	12.4	13.4	10:8	5.2	3.9	5.4	1.05	49.0	77.1	72.3	92.5	79.9	80.6	75.0	29.1	3.08	37	35	0.3	0.5	72	135	95
89	45	45.5	151.5	79.0	19.6	14.3	10.6	11.3	13.4	9.9	4.8	4.0	5.1	1.31	52.1	73.0	74.1	84.3	79.1	73.9	83.3	29.8	3.37	30	30	0.3	0.6	84	110	85
90	40	61.0	161.0	81.0	18.5	14.5	10.9	11.8	14.0	9.9	5.4	4.1	5.1	1.46	50.3	78.4	75.2	84.3	77.9	70.7	75.9	29.3	3.17	30	38	0.4	0.8	84	140	95
91	21	55.0	165.5	84.0	19.3	14.7	10.2	10.5	13.2	10.1	4.4	3.6	5.5	1.21	50.7	76.2	69.4	79.5	77.3	76.5	81.8	27.3	3.33	30	30	0.4	0.6	66	110	80
92	25	57.0	164.5	86.0	19.6	14.2	10.9	11.8	13.2	10.5	5.5	4.0	5.4	1.28	52.3	72.5	76.8	89.4	82.6	79.6	72.7	30.3	3.29	40	33	0.3	0.8	84	120	85
C. Abusir — Adults of Sudanese Origin																														
93	30	54.5	167.5	80.5	18.4	14.0	11.4	11.8	13.3	10.9	4.9	4.0	5.4	1.16	48.1	76.1	81.4	88.7	85.7	81.9	81.6	30.1	3.23	46	36	0.3	—	84	120	80
94	42	74.5	177.0	85.5	20.1	14.8	11.6	12.1	14.3	10.8	5.0	4.5	5.9	1.34	48.3	78.4	71.6	75.5	81.1	75.5	90.0	31.5	3.33	48	50	0.4	0.7	72	130	95
D. Abusir — Juveniles																														
95	16	58.0	169.0	83.0	18.6	14.2	11.4	10.9	13.5	10.1	5.4	3.5	5.2	1.20	49.1	76.3	80.3	80.7	84.4	74.8	64.8	25.9	3.08	26	28	0.4	0.5	72	125	95
96	16	36.5	149.0	72.0	16.9	13.2	10.0	10.2	11.9	9.8	4.5	3.5	5.0	1.10	48.3	78.1	75.8	85.7	84.0	82.3	77.8	29.4	3.36	22	24	0.3	0.4	84	115	85
97	17	44.0	158.0	83.0	19.3	13.5	10.3	10.2	12.5	9.9	4.2	3.5	5.4	1.12	52.6	69.9	76.3	81.6	82.4	79.2	83.3	28.0	3.42	28	28	0.3	0.4	76	120	85
98	17	54.5	161.0	83.5	20.1	14.5	10.6	10.5	13.5	10.1	4.5	3.8	5.6	1.31	51.8	72.1	73.1	77.8	78.5	74.8	84.4	28.1	3.48	29	30	0.4	0.5	96	105	65
99	15	49.0	165.5	84.0	18.8	13.8	10.6	11.4	12.7	10.1	4.6	3.5	5.3	1.08	50.7	73.4	76.8	89.8	83.5	79.5	67.1	27.6	3.20	28	25	0.6	0.7	108	100	65
E. Qift — Juvenile																														
100	14	36.0	143.0	71.5	18.1	14.1	10.4	10.7	12.9	9.4	4.8	3.1	4.6	1.23	50.0	77.9	73.8	82.9	80.6	72.9	64.6	24.0	3.22	30	20	0.4	0.5	96	95	60

*) Titles of individual characteristics as in table 1.

APPENDIX 2

Detailed Descriptive Characters of Contemporary Investigated Egyptian men
(n = 100)

	1*)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
A. Abusir—Adults																	
1	19	4	Y	c	a	b	c	c	a	b	b	a	a	a	a	c	e
2	10	11	Y	b	b	g	b	c	b	b	b	b	e	a	a	c	c
3	20	3	Y	—	a	a	b	c	b	b	a	b	e	a	b	c	b
4	18	3	Y	c	b	g	b	b	b	b	a	b	c	a	b	b	d
5	19	4	Y	c	a	e	c	b	b	b	b	c	d	a	a	d	d
6	13	4	Y*	—	a	b	b	b	c	b	b	b	b	a	a	b	e
7	7	6	Y	c	c	f	b	b	b	b	a	a	e	a	b	d	d
8	18	4	Y*	c	a	g	a	e	b	a	a	b	e	a	b	c	d
9	18	4	Y	c	a	d	b	c	b	b	b	c	e	a	b	c	d
10	7	4	X	b	b	d	b	a	b	b	b	a	a	a	b	c	d
11	21	4	Y	c	b	g	b	a	a	b	c	c	e	a	a	d	d
12	19	3	Y	—	b	g	c	c	a	c	c	b	b	a	a	c	d
13	13	5	Y	—	a	c	b	d	b	b	b	c	e	a	e	d	d
14	10	3	Y	a	a	e	a	a	a	b	a	b	e	a	e	c	d
15	19	4	Y	c	b	e	b	b	b	c	c	b	d	a	a	b	d
16	13	2	Y	c	a	b	a	e	b	b	a	b	d	e	a	d	d
17	19	4	Y	b	b	g	b	e	b	b	b	b	e	a	a	d	d
18	19	8c	W	c	b	c	c	a	b	c	b	a	e	a	a	c	d
19	7	4	Y	c	b	f	b	b	c	b	b	b	e	a	a	c	e
20	19	2	Y	c	b	f	b	a	b	c	e	c	d	e	a	d	b
21	22	4	Y	c	a	c	a	b	c	b	d	a	b	a	a	d	b
22	16	8a	Y	—	b	f	c	b	b	c	b	b	b	e	a	b	b
23	12	2	Y	—	a	f	a	b	a	b	a	b	b	e	d	c	e
24	13	3	Y	b	c	g	b	c	b	b	b	a	d	b	b	c	d
25	13	5	Y	—	a	d	c	a	b	b	b	b	b	a	a	c	c
26	13	4	Y	c	a	d	a	b	b	a	a	b	e	a	b	d	b
27	11	5	Y	c	a	b	b	c	a	b	b	b	e	a	b	d	d
28	12	2	Y	—	c	g	b	c	a	b	b	b	e	a	a	c	d
29	23	2	Y	—	b	c	d	c	a	c	c	a	d	a	c	b	e
30	21	3	Y*	—	a	d	c	c	a	c	b	c	c	a	a	c	d
31	10	2	Y	c	c	f	b	d	b	b	c	b	e	e	a	d	a
32	11	4	Y	b	b	f	b	d	b	a	b	b	a	e	d	c	d
33	19	4	Y	c	a	c	b	a	b	b	c	b	e	a	a	d	d
34	11	8a	W	b	b	f	d	a	b	c	c	b	e	a	a	c	a
35	10	2	Y	b	b	b	b	a	a	b	b	a	e	a	a	b	c
36	13	4	Y	—	b	f	c	a	a	b	b	a	b	a	b	d	b
37	12	4	Y	c	b	g	c	a	a	b	b	b	b	a	b	d	a
38	12	4	Y	—	b	f	b	a	b	b	b	b	e	e	a	d	d
39	12	2	Y	b	b	f	c	b	c	b	b	b	e	e	a	b	d
40	18	4	Y	c	b	f	b	c	a	c	b	b	e	b	b	d	e
41	10	2	Y	c	a	e	a	c	c	b	b	c	e	a	a	d	d
42	18	4	W*	b	b	g	b	b	a	b	a	c	a	a	b	d	c
43	18	4	Y	b	a	b	b	c	a	b	a	c	e	e	b	c	d
44	22	2	Y	d	a	a	c	a	b	b	d	c	e	a	b	c	c
45	10	5	Y	c	a	f	b	a	b	b	a	b	b	a	b	d	c
46	10	9	Y	c	b	f	c	a	b	b	b	b	b	a	a	c	d
47	20	4	Y	b	a	b	a	b	a	a	a	b	e	a	b	c	c
48	18	2	Y*	c	c	f	b	b	b	b	b	b	e	a	b	c	c
49	10	4	Y*	—	b	g	a	a	a	b	a	b	a	b	b	c	d
50	12	2	Y	b	a	a	a	d	a	a	a	b	e	a	b	d	e
51	19	4	Y	—	a	b	b	f	a	b	b	c	e	a	d	c	e
52	21	4	Y	b	b	b	b	c	a	b	a	b	b	a	a	b	d
53	19	1	Y	c	a	f	b	b	b	c	c	b	e	a	b	c	d
54	8	3	Y	d	a	f	b	c	a	b	b	b	b	e	b	d	e
55	13	4	Y	c	a	f	a	b	c	b	a	b	b	a	a	c	d
56	12	4	Y	c	b	f	b	a	b	b	—	a	d	a	b	d	a
57	19	2	Y	c	b	c	b	a	a	b	b	b	e	a	b	b	e
58	19	4	Y	c	c	f	b	c	b	b	b	b	a	a	a	b	e
59	12	4	Y	b	a	c	a	c	a	b	a	b	b	c	b	d	e
60	13	4	Y	d	a	c	c	a	a	b	b	c	c	a	a	c	d
61	12	3	Y	b	a	c	a	c	b	b	—	b	c	a	e	d	d
62	12	3	Y	c	b	f	b	a	b	c	b	a	e	e	a	b	d
63	19	3	Y	c	a	b	c	f	b	b	b	b	e	d	b	d	d
64	10	6	Y	—	a	b	b	b	a	b	a	b	b	a	b	b	e

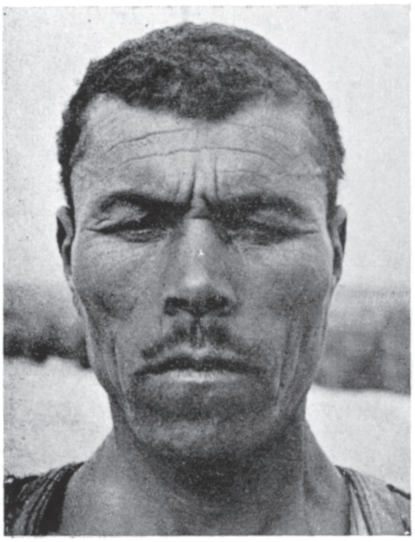
Continuation of Table 2

	1*)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
B. Qift—Adults																	
65	21	2	Y*	—	c	f	b	c	b	c	b	b	e	a	a	b	d
66	23	2	Y	—	a	b	b	f	a	c	c	b	e	a	d	c	d
67	12	3	Y*	—	b	c	b	c	a	b	b	b	b	e	a	c	d
68	20	3	Y*	—	b	b	a	b	a	c	d	b	b	b	e	c	e
69	13	3	Y*	—	b	c	c	e	c	b	b	b	b	a	b	c	e
70	18	4	Y	c	a	a	a	d	b	b	b	b	d	a	e	c	d
71	20	4	Y	—	b	e	c	b	c	b	d	b	e	a	c	b	d
72	12	4	Y	b	a	a	a	a	b	b	b	b	b	a	a	d	e
73	18	3	Y	—	a	b	c	e	b	c	d	b	e	a	a	d	e
74	19	2	Y	—	a	f	c	a	b	b	b	b	e	a	b	d	e
75	18	3	Y	b	b	f	c	b	b	b	d	c	c	e	a	d	d
76	19	3	Y*	—	b	f	b	a	b	b	b	b	e	e	a	c	d
77	21	3	Y	—	b	b	c	b	b	c	c	b	c	a	a	c	c
78	19	3	—*	—	b	g	b	b	b	c	b	a	b	a	a	b	e
79	20	2	Y	d	a	b	a	b	b	b	b	b	e	a	a	c	d
80	20	4	Y	b	a	b	b	d	b	b	b	c	d	b	b	b	c
81	20	2	Y	c	b	f	b	a	b	b	c	b	e	a	a	b	e
82	22	4	Y	d	a	a	b	a	b	b	b	b	b	a	b	c	d
83	13	4	Y	—	b	g	b	a	c	b	c	b	e	e	a	c	d
84	12	3	Y	—	a	c	c	d	b	c	c	c	e	a	d	d	d
85	19	3	Y	—	a	b	b	e	a	b	a	b	e	a	a	d	c
86	22	3	Y	—	a	b	c	b	b	b	c	b	e	a	b	c	d
87	24	3	Y	e	a	c	a	c	b	b	b	c	a	a	e	d	d
88	10	3	Y*	—	b	g	b	b	b	b	a	b	a	e	a	d	d
89	22	3	Y	—	a	f	c	a	c	b	a	b	b	a	a	b	d
90	18	5	Y	—	b	f	b	a	c	b	d	b	a	a	a	c	c
91	13	3	Y	b	b	a	b	a	b	b	c	b	a	e	a	c	e
92	11	3	Y	—	a	c	a	d	a	b	b	b	e	a	b	c	d
C. Abusir—Adults of Sudanese Origin																	
93	28	1	Y	e	b	f	b	c	a	c	c	c	c	a	e	c	d
94	28	2	Y	f	b	b	d	a	a	c	e	c	d	a	d	c	c
D. Abusir—Juveniles																	
95	20	4	Y	b	a	a	b	a	b	b	b	b	b	a	b	d	d
96	20	4	Y	a	a	a	a	a	b	b	c	b	e	a	e	d	e
97	13	2	Y	c	ø	ø	b	a	a	b	c	b	e	a	b	c	e
98	10	4	Y	d	a	a	b	d	a	c	b	b	e	a	b	d	e
99	13	3	Y	c	a	a	a	f	b	b	b	b	e	b	b	d	d
E. Qift—Juvenile																	
100	12	3	X	b	ø	ø	c	a	c	b	b	b	a	b	b	e	e

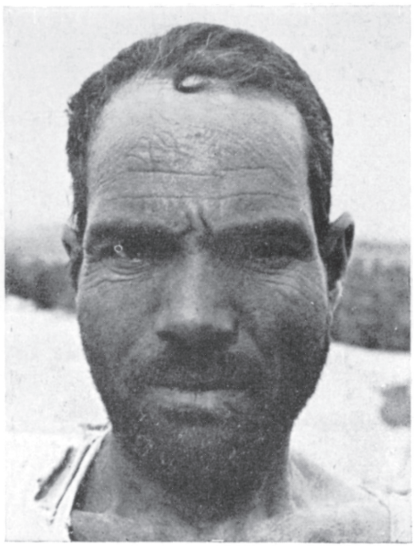
*) Titles of individual characteristics and symbols of categories as in table 4

* gray component

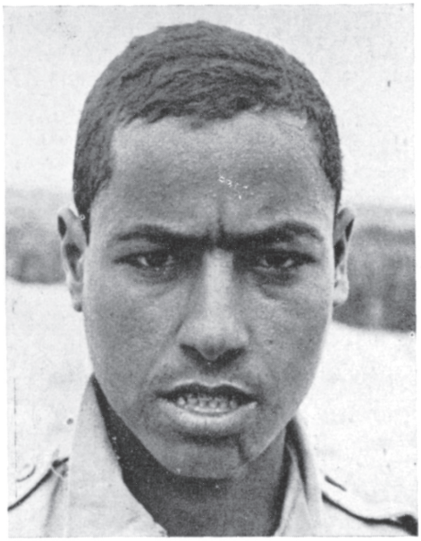
PLATE 1



Abusir Nr. 1

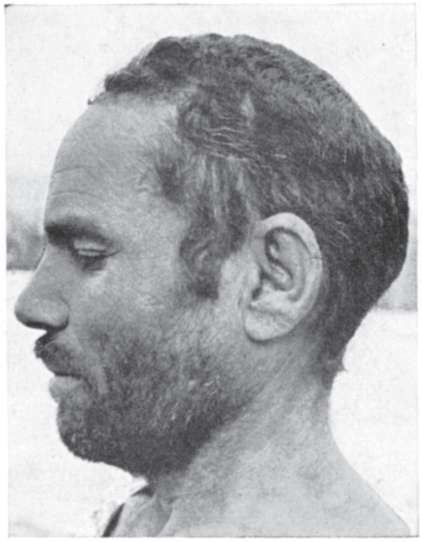


Abusir Nr. 2



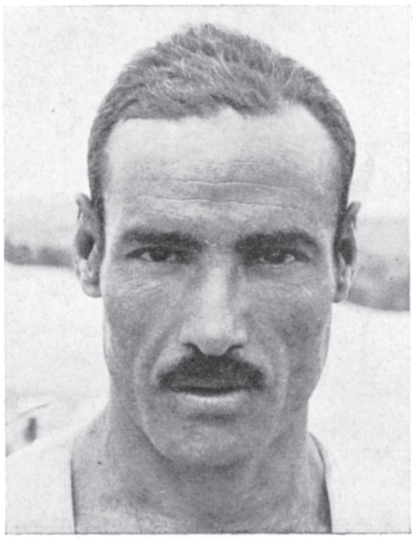
Abusir Nr. 3

Abusir Nr. 1



Abusir Nr. 2

Abusir Nr. 3



Abusir Nr. 4

Abusir Nr. 4