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OBSERVATIONS
ON THE
THICKNESS OF THE HUMAN SKULL.

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THE HISTORY OF THE HEMAZ BRITISH

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OBSERVATIONS
ON THE
THICKNESS OF THE HUMAN SKULL.

THE variation in the thickness of the human skull in different individuals, and in different parts of the same skull, is well known. The causes of these varieties have been assigned to the character of the soft parts, the changing character of the brain, and are, in a great measure, due to the same causes that regulate the growth and development of the individual.

The following observations were in 154 skulls of subjects brought to the anatomical rooms. The measurements were made with callipers carefully adjusted, and in the following regions:—

- A. The superior angle of the frontal in the superior longitudinal sinus.
- B. Above the external angular process.
- C. Parietal eminence.
- D. The anterior superior angle of the parietal outside the longitudinal sinus and the Pacchionian depressions.
- E. The posterior superior angle of the parietal.
- F. Posterior inferior angle of the parietal in the lateral sinus.
- G. In the middle fossa, near the centre of the squamous part of the temporal bone.
- H. Occipital (superior angle) in the longitudinal sinus.
- I. Occipital at the middle of the inferior fossæ.
- J. Occipital protuberance.
- K. Occipital superior fossæ.
- L. Frontal eminence.
- M. Weight of brain.

Where two measurements are given, connected by a hyphen, the first indicates the size of the right, the second that of the left.

The numbers indicate sixty-fourths of an inch. Thus, in No. 1, the thickness of the frontal near the superior angle is $\frac{1}{6}\frac{6}{4} = \frac{1}{4}$ inch.

The column immediately succeeding M contains the nature of the convolution markings. These are usually best marked at the base. For the greater number they were slight or absent at the roof.

- a. Convolution markings slight.
- β. No convolution markings.
- γ. Convolution markings distinct over lower parietal part.

In a few cases casts of the interior of the skull were made to determine how far the convolution markings would indicate the position of the fissures. From a study of these it was seen that the convolutions of the temporo-sphenoidal lobe and the lower surface of the frontal were repeated in their cast, but the upper surface of the cast was nearly smooth in many cases.

The mean of the observations in each case is given. It will be seen that although in many cases the thickness on one side exceeds slightly that of the other, yet the mean of one side does not differ materially from that of the other. The thickest skull was that of a female, aged 78, No. 144; but the three succeeding were males. The thinnest skulls in the above list were those of three females. These remarks, however, do not apply to all the measurements. And it must be remembered that the number of female subjects was in excess of the number of the males. A single measurement is not an indication of the general thickness, for in No. 84 the inferior occipital fossæ have a very thin bony wall.

The weight of the brain does not seem to bear any relation to the thickness of the skull. This, however, does not affect the statement that the skull thickens when the brain diminishes.

TABLE.

No.	Sex	Age	A	B	C	D	E	F	G	H	I	J	K	L	M	-
1	M.	—	16	—	19-18	18-11	20-18	—	—	—	—	—	—	—	—	—
2	—	—	18	—	22-28	16-15	10-10	—	—	—	—	—	—	—	—	—
3	—	—	16	—	19.5-20.5	20-16	14-15	—	—	—	—	—	—	—	—	—
4	—	—	11	—	12-12	14-10	13-17	—	—	—	—	—	—	—	—	—
5	—	—	18	—	14-13	15-14	20-16	—	—	26	—	—	—	—	—	—
6	—	—	17	—	9-8	14-15	16-15	—	—	—	—	—	—	—	—	—
7	—	—	11.2	—	16-13	6-11	12-14	—	—	14	—	—	—	—	—	—
8	—	—	17	—	-11.9	12-14	14-15	—	—	19	—	—	—	—	—	—
9	—	—	19	—	17-18	18-17	22.5-20	—	—	26	—	—	—	—	—	—
10	—	—	21	—	18.5-19.5	18-15	22.5-25	—	—	24	—	—	—	—	—	—
11	—	—	13	—	12-4	12 12.3	17-17	—	—	23	—	—	—	—	—	—
12	—	—	14	—	3-4	8-10	9-7	—	—	15	—	—	—	—	—	—
13	—	—	21	—	18-13	18-16	20-17	—	—	25	—	—	—	—	—	—
14	—	—	17.6	—	18-18	16-14	20-20	—	—	30	—	—	—	—	—	—
15	—	—	18	—	13-19	15-16	20-24	—	—	27	—	—	—	—	—	—
16	—	—	22	—	16-17	17-16	16-13	—	—	19	—	—	—	—	—	—
17	—	—	20	—	15-15	17-18	15-13	—	—	20	—	—	—	—	—	—

TABLE—continued.

No.	Sex	Age	A	B	C	D	E	F	G	H	I	J	K	L	M
18	M.	56	24	18-16	12-12	16-19	—	14-18	4-3	—	3-4	34	—	—	—
19	F.	30	22	-28	-22	22-26	—	12-11	9-14	21	3-1	29	—	—	—
20	F.	39	20	20-18	24-20	17-19	—	16-14	5-7	—	11-7	48	—	—	—
21	F.	56	16	16-14	16-20	10-7	—	14-12	4-5	—	4-4	28	—	—	—
22	F.	56	15	12-10	16-5	10-9	14-16	9-10	5-5.4	15	3-3	27	—	—	—
23	F.	60	19	12-11	15-16	14-10	16-16	12-16	4-4	18	7-6	32	—	—	—
24	F.	75	20	11-8	18-21	9-14	16-16	12-13	4-3	17	3-4	23	—	—	γ
25	M.	30	17	—	17-15	14-15	18-18	14-17	6-5	26	11-8	36	—	—	γ
26	—	—	18	—	13-14	15-17	9-13	10-9	—	14	6-8	38	—	—	γ
27	F.	60	16	—	8-11	11-12	14-13	10-13	4-3	13	7-6	24	—	—	γ
28	—	—	20	6-6	12-10	20-17	12-17	16-14	4-4	—	5-5	34	—	—	γ
29	F.	57	16	14-13	12-14	11-10	14-17	10-14	4-5	16	5-5	35	—	33	γ
30	M.	52	17	11-10	16-16	16-16	18-14	12-12	6-5	20	8-7	25	—	45½	γ
31	M.	70	13	8-10	13-12	12-14	14-13	15-14	7-6	15	4-5½	41	—	44	γ
32	F.	64	22	16-13	22-20	19-17	27-29	23-25	5-6	22	6-5	25	—	43	γ
33	M.	76	18	12-8	7-8	15-19	18-11	15-	5-2	12	2-3	35	—	50	β
34	M.	45	10	15-15	10-12	12-11	13-10	8-8	5-4	13	3-3	32	—	52	γ
35	M.	72	18	17-9	15-14	14-5-16	15-14	10-12	4½-2	14	7-4	41	—	58	γ

3A	3B	45	10	15-16	10-12	12-11	13-10	8-8	5-4	13	2-3	32	52	7
3A	3B	72	18	17-9	15-14	14-5-16	15-14	10-12	4-3	14	7-4	41	56	7
38	F.	44	20	6-6	18-15	16-16	17-14	11-11	1-3	16	4 4	28	46½	α
39	F.	70	20	23-20	15-14	20-21	12-13	12-18	4-6	20	7-6	41	—	γ
40	M.	48	13	12-14	13-16	16-13	17-20	17-16	4-2	22	8-8	40	52	γ
41	M.	68	13	—	10-12	11-9	11-11	14-18	4-2	15	14-13	37	50	γ
42	F.	30	12	12-16	16-16	10-10	16-14	12-12	4-3	11	5-3	34	41	β
43	M.	70	16	5-9	18-16	13-12	12-10	8-10	3-1	9	4-2	24	52	γ
44	M.	60	17	14-16	22-17	13-17	19-20	19-16	4-3	23	8-8	42	53	γ
45	F.	35	16	9-8	12-12	11-13	13-12	6-9	1-1	14	2-1	24	45	γ
46	F.	73	19	16-14	16-18	18-14	17-15	16-16	-2	20	4-6	36	49	β
47	M.	51	19	16-16	12-16	20-18	14-12	13-16	2½-1	13	7-7	40	42	β
48	M.	70	16	8-12	16-18	14-14	14-14	14-12	6-5	17	4-3	32	53	β
49	M.	50	16	14-12	13-15	12-11	12-12	8-14	3-1	12	8-5	32	51	γ
50	M.	13	11	8-7	12-14	9-8	15-13	7-8	1-3	14	2-2	22	39	γ
51	M.	63	18	16-12	17-15	15-16	18-18	17-20	4-4	21	5-6	45	53	β
52	F.	80	15	12-12	16-16	13-12	13-12	13-14	4-5	18	3-4	12	41	β
53	F.	35	15	12-10	16-18	16-12	17-16	12-16	4-3	23	8-8	36	45	β
54	M.	74	19	10-9	20-20	17-17	13-13	23-20	4-5	19	4-5	48	45	α
55	M.	80	18	12-25	17-17	14-12	17-14	14-14	4-3	20	4-4	40	53	β

^a Lateral sinus not grooved so far as petrous portion of temporal.

^b Inner table at parts necrosed.

^c Frontal sinuses very large; two inches from side to side; ¼ inch deep.

TABLE—continued.

No.	Sex	Age	A	B	C	D	E	F	G	H	I	J	K	L	M	—
56	F.	50	20	12-10	20-19	16-16	16-16	20-17	2-1	18	4-3	25	13-10	17-	53	β
57	M.	13	12	7-8	10-10	10-10	14-14	8-18	8-8	20	8-8	27	19-11	10-8	43	α
58	M.	53	17	14-14	14-14	16-15	17-14	14-11	7-5	23	5-12	33	10-8	17-17	49	β
59	F.	60	17	17-18	21-19	14-14	21-20	11-10	11-9	27	10-12	36	16-16	15-13	42	β
60	M.	54	15	8-11	16-17	9-12	14-15	10-10	2-8	28	5-3.5	27	19-14	10-11	54	α
61	F.	55	12	10-10	14-13	14-13	14-13	11-11	1-1½	17	1-2	27	12-14	15-15	44	β
62	F.	50	15	12-10	14-14	10-12	13-16	11-9	4-4	19	4-4	37	12-24	16-14	43	α
63	M.	57	22	19-20	25-23	16-16	18-18	17-28	12-12	25	14-14	60	18-16	19-24	42	β
64	F.	55	15	12-10	13-12	14-14	16-18	13-16	3-2	23	7-6	46	10-11	12-11	51	β
65	F.	60	14	8-8	22-21	14-13	20-21	11-12	3-4	15	4-4	24	16-18	15-14	39	β
66	F.	61	15	10-9	12-12	13-12	11-13	14-19	5-3	20	4-5	30	12-12	17-16	39	β
67	F.	75	23	12-12	16-19	20-18	17-18	8-8	4-4	24	2-3	33	11-16	13-16	40	γ
68	F.	76	13	13-16	14-15	11-11	14-14	22-19	5-4	15	6-5	31	10-12	17-17	41	α
69	F.	16	10	7-8	10-4	8-9	10-9	8-6	2-3	14	3-4	28	8-8	10-7	42	γ
70	F.	50	14	8-7	13-13	10-8	16-12	11-8	1-11	18	3-2	21	10-8	13-14	43	β
71	F.	61	18	19-13	25-20	15-15	20-21	14-16	3-4	20	6-8	26	15-16	16-16	44	β
72	F.	46	16	9-9	13-13	14½-13½	16-17	10-13	2-3	20	8-9	46	11-12	16-16	45	γ
73	F.	45	17	5-11	16-19	19-18	18-19	14-16	4-4	20	6-4	37	10-9	20-19	46	γ
74	F.	60	16	21-18	17-18	14-13	16-16	13-14	3-1	19	7-0	28	12-10	10-10	40	α
75	F.	40	10	10-10	10-10	11-6	12-13	14-16	2-3	18	4-2	31	8-0	10-13	—	α

72	73	Sex	45	16	9-0	13-15	14-15	16-17	10-13	2-3	20	8-9	46	11-13	16-18	49	Sex
			45	17	5-11	16-19	19-18	18-19	14-16	4-4	20	6-4	37	10-9	20-19	40	
76		F.	60	16	21-13	17-18	14-13	16-18	8-14	3-1	19	7-6	28	12-10	9-10	49	α
77		F.	40	12	12-12	18-16	11-6	12-13	14-15	2-3	18	4-2	31	8-9	18-18	—	α
78		F.	38	19	13-14	11-13	12-13	14-14	13-14	3-4	25	11-11	41	8-6	19-20	—	β
79		M.	56	19	—	7-8	12-12	13-12	14-	2-	20	7-6	38	12-10	9-9	—	α
80		F.	40	12	11-10	14-10	11-12	12-12	6-7	2-2	13	1-2	25	6-8	16-16	—	α
81		M.	36	19	19-19	18-20	18-18	19-18	15-14	1-3	24	4-4	43	10-11	21-23	—	β
82		F.	38	20	8-12	18-18	15-16	19-19	12-12	2-2	31	1-2	57	19-20	19-22	—	α
83		M.	50	16	16-15	13-15	12-12	16-15	7-9	1-1	18	6-5	38	9-8	15-12	—	α
84		F.	19	12	11-13	12-13	10-9	13-14	7-7	1-1½	10	½-½	33	6-4	11-13	—	γ
85		F.	20	12	17-12	15-14	12-11	15-15	12-10	8-6	20	4-2	34	12-11	16-16	—	γ
86		F.	70	14	7-10	15-12	14-12	12-12	8-10	3-4	18	1-2	35	7-5	12-10	—	γ
87		F.	68	16	16-15	18-19	15-14	16-15	9-8	½-1	18	1-½	28	8-10	15-14	—	β
88		F.	55	16	9-12	10-11	16-15	17-17	9-18	½-1	23	7-7	40	5-11	15-16	—	β
89		F.	65	15	16-16	12-13	14-12	9-10	10-10	4-5	14	4-4	26	8-8	16-14	—	α
90		M.	25	15	6-6	15-15	14-10	16-18	12-20	2-3	22	1-2	39	9-8	18-18	—	α
91		F.	27	10	6-6	15-14	11-8	14-14	8-8	3-3	19	6-6	40	—	10-12	—	β
92		M.	71	15	16-16	13-12	13-14	12-12	16-16	2-2	14	1-6	33	9-10	8-10	—	α
93		M.	55	14	9-5	13-12	12-11	13-13	7-11	3-3	18	4-2	40	6-2	12-13	—	α
94		F.	80	17	2-8	12-14	19-12	10-9	5-12	1-1	20	3-3	33	9-7	10-16	—	β

^a Irregularity of frontal.

^b Cerebellar fossæ large.

TABLE—continued.

No.	Sex	Age	A	B	C	D	E	F	G	H	I	J	K	L	M	—
95	F.	55	12	13-16	9-11	14-10	19-19	15-13	2-2	17	4-3	28	9-10	16-14	—	γ
96	M.	75	12	12-8	8-8	12-12	10-10	8-12	1-½	16	4-3	31	4-6	8-9	—	γ
97	F.	40	20	10-11	14-16	13-13	17-17	11-10	1-2	20	5-4	34	24-16	16-17	—	α
98	M.	45	20	14-14	16-16	14-13	14-13	9-8	2-3	18	10-10	32	6-10	16-17	—	β
99	M.	60	17	24-25	22-21	18-16	18-20	14-15	4-5	28	3-2	45	9-10	32-31	—	β
100	M.	45	18	12-12	17-17	15-16	14-14	11-11	4-4	22	1-2	38	10-9	17-16	—	α
101	M.	30	22	11-11	16-16	15-13	14-14	4-6	2-2	21	3-3	29	4-5	14-14	—	α
102	F.	48	18	10-8	19-20	14-13	16-17	9-13	3-4	24	4-3	40	12-10	15-18	—	β
103	M.	60	24	10-12	19-18	28-24	20-24	17-19	3-2	28	3-6	46	16-16	20-20	—	α
104	M.	50	21	12-10	8-10	14-20	10-9	10-6	2-2	13	4-3	34	5-6	9-9	—	γ
105	M.	61	12	12-12	12-13	11-12	11-12	12-12	2-2	16	3-3	48	8-9	12-14	—	β
106	F.	61	14	16-17	22-21	18-20	16-13	12-11	4-4	24	3-3	36	8-6	24-22	—	α
^a 107	F.	61	23	16-17	18-20	18-16	25-21	12-13	4-8	32	4-2	45	24-24	20-22	—	α
108	F.	50	18	12-10	16-18	16-12	13-13	12-12	3-4	32	3½-4	40	16-15	14-18	—	β
109	F.	50	15	12-12	12-13	9-8	11-12	12-14	6-6	23	4-4	36	9-8	16-18	—	α
110	M.	48	22	22-24	17-20	22-18	15-14	12-12	3-4	16	12-13	52	15-15	16-16	—	α
111	F.	40	22	16-15	20-10	15-17	15-15	13-14	3-2	15	4-3	40	14-12	18-17	—	α
112	F.	60	20	17-18	18-20	19-19	18-18	7-12	2-3	23	3-3	40	14-12	18-20	—	β

111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500
115	F.	46	16	12-14	18-13	12-12	16-13	16-14	2-2	20	2-4	32	9-8	13-13	α																																																																																																																																																																																																																																																																																																																																																																																						
116	F.	49	16	12-10	15-15	13-12	16-16	11-14	4-4	22	4-5	29	12-11	16-15	α																																																																																																																																																																																																																																																																																																																																																																																						
117	F.	40	9	9-7	16-16	9-9	11-10	13-8	2-1	17	5-4	28	9-8	15-15	α																																																																																																																																																																																																																																																																																																																																																																																						
118	F.	48	20	11-11	16-14	15-13	14-15	14-10	2-1	18	2-1	28	11-11	10-10	β																																																																																																																																																																																																																																																																																																																																																																																						
119	F.	70	16	13-12	12-13	15-15	14-14	8-13	2-2	17	—	40	9-8	14-12	α																																																																																																																																																																																																																																																																																																																																																																																						
120	F.	45	6	11-11	15-16	15-15	12-12	8-8	1½-1	16	—	34	6-5	16-18	α																																																																																																																																																																																																																																																																																																																																																																																						
121	M.	72	13	15-17	14-14	14-13	14-13	16-16	2-2	17	—	42	4-6	16-17	α																																																																																																																																																																																																																																																																																																																																																																																						
^c 122	F.	67	20	14-13	3-6	14-14	14-15	9-11	1-2	21	—	31	9-8	16-16	γ																																																																																																																																																																																																																																																																																																																																																																																						
^d 123	F.	50	18	8-8	14-16	16-15	18-16	9-16	1-1	21	—	32	7-8	11-12	β																																																																																																																																																																																																																																																																																																																																																																																						
124	F.	54	18	15-20	16-20	16-15	14-12	6-7	½-2	24	—	36	11-10	24-25	α																																																																																																																																																																																																																																																																																																																																																																																						
125	M.	40	20	16-14	14-16	20-15	17-16	12-13	2-4	18	—	48	10-11	12-13	α																																																																																																																																																																																																																																																																																																																																																																																						
126	M.	70	17	13-13	10-14	16-11	15-15	19-19	4-3	17	—	48	11-13	11-13	α																																																																																																																																																																																																																																																																																																																																																																																						
127	F.	68	21	15-14	18-17	16-15	19-21	12-12	3-3	28	—	36	12-15	16-17	α																																																																																																																																																																																																																																																																																																																																																																																						
128	F.	70	18	9-10	13-16	13-12	15-13	10-11	2-2	18	—	39	8-8	10-12	α																																																																																																																																																																																																																																																																																																																																																																																						
129	M.	65	17	12-12	13-15	13-12	16-17	18-16	3-4	25	—	41	12-12	16-18	β																																																																																																																																																																																																																																																																																																																																																																																						
130	M.	69	24	17-18	25-26	19-16	24-24	19-22	2-4	32	—	55	15-14	21-23	α																																																																																																																																																																																																																																																																																																																																																																																						
131	F.	60	14	9-9	10-12	14-14	12-12	9-10	5-6	16	—	32	12-11	16-17	β																																																																																																																																																																																																																																																																																																																																																																																						

^a Frontal sinuses extend high up into bone.

^b A large depression at internal occipital protuberance, with foramen in the centre.

^c The outer occipital protuberance higher up than the inner.

^d Six Wormean bones in upper left, 7 in upper right suture; superior longitudinal sinus continuous with right lateral large frontal sinus.

TABLE—continued.

No.	Sex	Age	A	B	C	D	E	F	G	H	I	J	K	L	M	—
132	M.	40	22	14-15	8-12	14-14	18-16	16-17	6-6	27	4-2	52	13-9	12-18	—	γ
^a 133	M.	40	15	15-15	16-18	12-13	15-15	11-12	4-5	20	4-4	38	5-9	14-21	—	β
134	F.	30	12	12-10	12-16	9-10	16-14	4-4	1-1	16	3-3	34	12-10	15-17	—	α
135	M.	28	16	20-18	16-15	15-14	18-16	13-17	4-4	20	2-2	32	11-12	15-16	—	α
^b 136	F.	32	12	17-18	12-14	11-12	14-14	12-9	1-1	18	4-4	28	9-8	12-13	—	α
137	F.	45	20	14-9	14-16	13-13	16-15	14-14	2-	22	4-4	31	8-8	19-16	—	α
138	M.	42	16	16-12	6-8	12-10	8-17	9-12	2-1	16	4-2	28	6-4	11-12	—	α
139	M.	65	15	10-10	10-10	14-14	13-14	14-11	2-1	19	2-2	37	12-10	12-13	—	α
^c 140	F.	40	20	15-12	12-14	20-20	13-12	9-11	2-3	17	4-4	36	8-10	10-12	—	γ
^d 141	M.	75	18	10-12	12-14	20-18	16-15	11-13	1-2	20	2-2	28	8-9	13-11	—	α
142	F.	78	15	10-10	12-12	20-16	15-15	16-8	1-1	21	1-1½	40	10-10	14-12	—	α
143	F.	75	16	9-12	12-12	10-12	11-10	6-9	2-2	18	3-1	30	9-7	15-14	—	α
144	F.	78	26	21-20	26-28	21-23	24-28	18-14	4-4	28	4-4	40	16-16	24-27	—	α
145	M.	60	16	16-17	12-11	12-11	14-15	14-14	4-4	24	6-6	50	11-10	13-15	—	α
^e 146	M.	70	15	18-19	12-12	16-13	13-15	10-6	2-3	24	1-1	22	7-12	19-15	—	α
^f 147	M.	40	20	4-8	11-11	12-13	12-12	13-16	1-4	20	3-2	34	8-8	13-13	—	γ
148	M.	74	20	10-11	12-17	14-14	12-14	18-18	3-2	19	4-2	44	10-9	11-11	—	α

149	F.	70	10	6-8	20-12	14-16	10-16	11-10	1-1	33	1-2	36	12-13	11-10	—	α
151	M.	65	19	13-16	14-17	13-13	11-16	12-14	10-7	13	6-6	68	12-13	13-13	—	α

Age	Sex	74	20	10-11	12-17	14-14	12-14	18-18	3-2	30	4-2	4-4	8-8	10-10	11-11	18-18	7
150	F.	70	16	5-8	20-12	14-15	16-16	11-10	1-1	32	1-2	38	12-13	11-10	—	—	α
151	M.	65	19	13-16	14-17	13-13	11-16	12-14	10-7	18	6-6	58	12-13	18-18	—	—	α
152	M.	70	20	11-14	16-17	17-17	14-16	14-9	4-5	23	1-1	26	8-8	12-11	—	—	—
153	M.	68	18	8-8	8-11	10-13	12-16	18-16	4-3	25	5-6	50	13-13	15-14	—	—	—
154	F.	84	20	14-13	9-10	13-13	20-18	15-16	1-3	19	2-3	44	16-13	14-16	—	—	—

SUMMARY.

Age	A	B	C	D	E	F	G	H	I	J	K	L	M
	2598.8	1642-1675	2224-2307.9	2218-2126.8	2298.5-2283	1664-1772	437-431.9	2883	567-550.5	4102	1115-1098	1529-1568	2172
	154	131-132	153-154	154	150	137-135	136-134	143	124-123	137	105	103	48
53.5	16.87	12.5-12.7	14.5-14.3	14.4-13.7	15.2-15.2	11.4-13.1	3.2-3.16	20.1	4.57-4.4	23.3	16.6-10.4	14.8-15.2	45.2

The first column represents the mean of the ages—*i.e.*, 53.5.

The first line represents the sum of the measurements.

The third line represents the mean of the measurements.

^a Outer occipital protuberance higher than the inner.

^b Large frontal sinuses.

^c The inferior longitudinal sinus passes to right lateral.

^d The outer occipital protuberance higher than the inner.

^e The outer occipital protuberance much higher than the inner.

^f A well-marked ridge sinus across the inferior fossa of the occipital bone.





