Dimensions of the Nile and Its Basin

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Source: *The Geographical Journal*, Vol. 26, No. 2 (Aug., 1905), pp. 198-201

Published by: geographicalj

Stable URL: <http://www.jstor.org/stable/1776212>

Accessed: 24-06-2016 23:29 UTC

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The Mic-macs came over from Cape Breton in 1782, after the war with America, when they were given a grant of land in Bay St. George. They are nearly all gone now, Michel being one of the few remaining. A fierce feud existed between them and the Beothuks, the aborigines, for whose extermination they were even more responsible than the settlers—an extermination that is to be in every way regretted. They would have been invaluable in the development of the island, for the early colonists speak of them as friendly and tractable, quick in apprehension, and of an ingenious and subtle disposition; and the interior, instead of being the desolate wilderness it now is, might have been filled with flocks and herds. With their knowledge of woodcraft, they might, and probably would, have taken in Newfoundland the place of the Forest Laps in Lapland.

DIMENSIONS OF THE NILE AND ITS BASIN.

By Captain H. G. LYONS.

THE length of the Nile is usually given * as 5400 kilometres (3355 stat. miles) to the centre of Lake Victoria, or 6000 kilometres (3728 stat. miles) for the continuous waterway from the source of the Kagera to the sea; the area of its basin is given as about 2,900,000 square kilometres (1,119,737 square miles). These measurements have hitherto been made on small-scale maps, but since a considerable part of the upper Nile has been recently surveyed on 1 : 250,000 or a larger scale, and numerous points in its course have been fixed astronomically and by triangulation, it is now possible to measure its length sufficiently accurately to furnish a value which later surveys probably will not materially alter.

In the opposite table the results of such a measurement are set forth together with the maps used. The measurements were made with the curvimeter,† and the mean of four concordant readings were taken. The centre line of the river was followed as far as possible, and round islands the wider arm. The measurements were made in kilometres, and were corrected for instrumental errors and map shrinkage.

The distances below Wadi Halfa are those generally accepted.‡ A new triangulation has just been completed from Damietta to Wadi Halfa, and the publication of a general map of the Nile valley and delta on the scale of 1 : 50,000, based on the Revenue Survey maps of 1 : 2500 and 1 : 4000, will be commenced forthwith; as soon as these map sheets are ready, improved values for this distance will be

* Wagner, 'Lehrbuch der Geographie,' p. 417. Hanover : 1903.

† By Coradi, of Zürich.

‡ Willcocks, 'The Nile in 1904,' Tables vii., viii. London : 1905.

TABLE OF DISTANCES ON THE RIVER NILE.

	Place.	Distance.		From Ripon falls.		Authority.	Scale.
		Km.	Miles.	Km.	Miles.		
Victoria Nile.	Ripon falls ...	—	—	—	—	Intell. Dept. W.O., Map No. 1429. Survey by Captain R. Owen. Cf. <i>Geogr. Jour.</i> , March, 1905. Colonel Delmé-Radcliffe, <i>Geographical Journal</i> , Feb. 1903.	1 633600
	Kakoji ...	61	40	64	40		
	Mruli ...	135	84	199	124		
	Foweira ...	75	47	274	170		
	Murchison falls ...	77	48	351	218		
Bahr el Jebel.	Albert lake ...	38	24	389	242	Sir W. Garstin, 1903.	1 100000
	Bahrel Jebel entrance	3	2	392	244		
	Wadelai ...	64	40	456	283		
	Nimule ...	152	94	608	378		
	Asua river ...	21	13	629	391		
White Nile.	Fort Berkeley ...	126	78	755	469	Captain H. G. Lyons, 1901 and 1903, adjusted to positions determined by Colonel Hon. M. G. Talbot, R.E.	1 50000
	Gondokoro ...	32	20	787	489		
	Lado ...	12	7	799	496		
	Mongalla ...	29	18	828	515		
	Bor ...	134	83	962	598		
Nile.	Kenisa ...	117	73	1079	670	Topographical Division, General Staff. Map of Africa.	1 350000
	Ghaba Shambé ...	80	50	1159	720		
	Hellet Nuer ...	181	112	1340	833		
	Lake No ...	208	129	1548	962		
	Taufikia ...	132	82	1680	1044		
Nile.	Dueim ...	630	391	2310	1435	Total length, 5589 kilometres or 3473 miles.	
	Khartum ...	200	124	2510	1560		
	Shendi ...	186	116	2696	1675		
	Atbara river ...	139	86	2835	1762		
	Berber ...	40	25	2875	1786		
Nile.	Abu Hamed ...	208	129	3083	1916		
	Merowe ...	240	149	3323	2065		
	Dongola ...	272	169	3595	2234		
	Wadi Halfa ...	445	277	4040	2510		
	Aswan ...	345	214	4385	2725		
Nile.	Luxor ...	219	136	4604	2861		
	Qena ...	64	40	4668	2901		
	Girga ...	124	77	4792	2978		
	Assiut ...	141	88	4933	3065		
	Cairo ...	397	247	5330	3312		
Nile.	Delta Barrage ...	23	14	5353	3326		
	Rosetta mouth ...	236	147	5589	3473		

SOURCES OF KAGERA RIVER TO RIPON FALLS.

Place.	Distance.		From source.		
	Km.	Miles.	Km.	Miles.	
Source ...	—	—	—	—	{ Karte von Deutsch Ost-Afrika. Reimer, 1895. 1 : 300,000 Chart of Lake Victoria, by Com. B. Whitehouse, 1900-1.
Kagera mouth ...	590	367	590	367*	
Ripon falls ...	218	135	808	502	

Length of continuous waterway, 5589 + 808 = 6397 kilometres or 3975 miles.

obtainable, but it is not anticipated that those given above will be much altered.

The area of the Nile basin is given by Bludau† as 2,803,000 square

* As shown by Dr. Kandt, the length of the Kagera will be somewhat greater.—
[Ed. G. J.]

† *Pet. Mitt.*, 1897, p. 184.

kilometres (1,082,284 square miles), composed of 2,660,000 square kilometres (1,027,069 square miles), representing the area known to drain to the Nile, and 143,000 square kilometres (55,215 square miles) to the west of Lake Rudolf and south of the Sobat river, which was then unexplored. Taking this as the most recent value, it may be compared with a more complete estimate, which the recently published maps of the Sudan permit.

For determining the area of the catchment basin, the larger-scale maps which were used in measuring the length of the river are not necessary, for over almost all the basin there is a very small amount of topographical detail, so that the watershed between the different river-basins can only be approximately indicated. The area has therefore been calculated from a map on the scale 1:4,000,000* for the Sudan and Uganda, and from one of 1:2,000,000† for Egypt. The proportion of each square degree belonging to each basin was determined by measurement on the maps, and the area in square kilometres deduced from it. The results are given in the following table:—

AREAS OF CATCHMENT BASINS.

Name of basin.	Area in square kilometres.	Area in square miles.
Victoria lake	238,900	92,243
West valley ‡	54,100	20,889
Victoria Nile	75,600	29,190
Bahr el Jebel §	190,700	73,632
Bahr el Ghazal	552,100	213,175
Sobat river	244,900	94,560
White Nile	353,500	136,492
Blue Nile	331,500	127,998
Atbara	220,700	85,216
Nile	605,600	233,832
Nile basin	2,867,600	1,107,227

The area of the basin will vary according to the distance to which its limits are considered to extend on the west of the Nile northwards of Khartum. It has here been taken as far as the cliff of the desert plateau, or the first marked rise of the desert where the cliff is absent, probably, on the average, about 3 to 4 kilometres (2 to 2½ miles) from the edge of the cultivation. The whole of the Nile basin below Khartum, and practically all the White Nile basin, are non-effective in increasing the river-supply, since the occasional local cloud-bursts may

* I.D.W.O. Map, No. 1856, extended southwards to include the Victoria lake and its catchment basin.

† Topog. Div. Gen. Staff, 1905.

‡ Including the basins of Albert Edward and Albert lakes, and the Semliki river.

§ Including the Bahr el Zaraf.

be neglected. The Bahr el Ghazal, as has been shown by recent measurements of the volume discharged, is also practically non-effective.

All measurements have been made in the metric system, and the "rounded off" values converted to miles and square miles.

THE BAROTSE BOUNDARY AWARD.

By the award of the King of Italy, given in June of the present year, one of the last outstanding boundary questions between European powers in Africa, which has been awaiting solution now some fifteen years, has at last reached a settlement; and though the result has been to give this country a much smaller portion of the territory in question than had been claimed by those responsible for the preparation of the British case, it is, no doubt, well that the uncertainty which has so long prevailed as to the ultimate destination of the territory should once for all have been removed.

Owing to the length of time during which the question has been pending, it may be of interest to recapitulate the principal phases through which it has passed. The first attempt to reach a settlement was made in 1890, the year in which so many of the conventions determining the partition of Africa among the Powers were signed. In that year an agreement had been arrived at between the two Governments, but, owing to strong opposition in certain quarters, never received the necessary ratification. By this agreement, the course of the upper Zambezi and of its eastern branch, the Kabompo (then still by some regarded as the main headstream), was chosen as the dividing line between the two spheres. In the following year, after lengthened negotiations, a revised treaty was signed, and in due course ratified, according to which a basis for the final delimitation of the territory was arrived at, the actual work of fixing the boundary being left to a joint commission acting on behalf of the two powers. This was owing to the somewhat peculiar conditions under which the treaty was negotiated, neither contracting party possessing any definite knowledge of the greater part of the territories and tribes dealt with. Dr. Livingstone, then the principal authority on the upper Zambezi basin, had not left the immediate neighbourhood of the river until much further north; while at the time of his journey the normal tribal relations were suspended owing to the temporary supercession of Barotse sovereignty by the Makololo, a distinct and foreign people. Shortly before the convention was signed, however, Lewanika, paramount chief of the Marotse and neighbouring tribes, had gratuitously placed himself under the protection of the "Great White Queen," hoping thereby to best preserve the integrity of his dominions. This