

GLACIERS OF MOUNT KENYA 1947, KENYA, 1:5000

(Aerial Photogrammetric Maps)

S. Hastenrath, Department of Atmospheric and Oceanic Sciences, University of Wisconsin, Madison

The construction of this map is documented in Rostom and Hastenrath (1995), and the ground control network is described in Hastenrath et al. (1989).

The map is based on aerial photography flown by the Royal Air Force, U.K. on 21 February 1947. The flight level was 27,000 feet, the average scale 1:25,000, and the focal length 154.2 mm. Seven ground control points used in the 1987 map (Hastenrath et al. 1989) served as basis for the evaluation of the 1947 photographs.

A glacier inventory was compiled from the map dated February 1947, and the glacier changes were evaluated with reference to the 1987 map (Hastenrath et al. 1989). This information is summarized in the following tables.

Characteristic parameters of Mount Kenya's glaciers, 1947

No.	Name	Area [10 ³ m ²]	Length [m]	Highest elevation [m]	Lowest elevation [m]
1	Krapf	43	450	4930	4600
2	Gregory	94	540	4930	4645
4	Lewis	400	1195	4980	4580
5	Melhuish	5	220	4860	4770
6	Darwin	40	260	4835	4620
7	Diamond	7	140	5150	4965
8	Forel	37	100	5190	4800
9	Heim	25	80	4800	4715
10	Tyndall	101	570	4810	4470
13	Cesar	49	395	4835	4520
14	Joseph	34	450	4795	4555
16	Northey	39	380	5060	4545

Decreases in length $\Delta L(m)$, area $\Delta A (10^3 m^2)$, thickness $\Delta Z(m)$, and volume $\Delta V(10^3 m^3)$ of Mount Kenya's glaciers during 1947–1987

No.	Name	ΔL	ΔA	ΔZ	ΔV
1	Krapf	150	20	2.8	122
2	Gregory	120	49	8.3	784
4	Lewis	245	157	11.7	4692
5	Melhuish	220	5	2.2	11
6	Darwin	60	14	9.6	385
7	Diamond	40	4	3.7	26
8	Forel	0	21		
9	Heim	0	9	0.1	3
10	Tyndall	70	23	3.3	331
13	Cesar	95	25	3.6	176
14	Joseph	250	24	5.1	172
16	Northey	230	28	5.9	228
All glaciers			379	8.6	6894