

GLACIERS OF MOUNT KENYA 1993, KENYA, 1:5000

(Aerial Photogrammetric Map)

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Full documentation on this map is contained in Rostom and Hastenrath (1994). Further background information is provided in Hastenrath (1984, 1991a). The ground control network is described in Hastenrath et al. (1989).

The aerial photograph was flown on 9 September 1993 by Photomap (K) Ltd. at an average height of 1400 m above the average terrain level of 4800 m. The photographs were taken by a Wild 152 mm RC10 camera, and are at an approximate average scale of 1:10,000 with 80% forelap and 70% sidelap, to cope with the extreme local relief.

Aerial triangulation was conducted to determine the coordinates of control points. In addition to 14 ground control points a further 31 control points established from stereo models were used. Refer to Hastenrath et al. (1989) for a discussion of co-ordinate systems. A new glacier inventory was compiled from the map dated September 1993, and the glacier changes during 1987–1993 were evaluated with reference to Hastenrath et al. (1989).

Characteristic parameters of Mount Kenya's glaciers, 1987

No.	Name	Area [10 ³ m ²]	Length [m]	Highest elevation [m]	Lowest elevation [m]
1	Krapf	23	300	4800	4620
2	Gregory	45	420	4890	4713
4	Lewis	243	950	4962	4611
6	Darwin	26	200	4740	4640
7	Diamond	3	100	5120	4980
8	Forel	16	100	5000	4820
9	Heim	16	80	4800	4720
10	Tyndall	78	500	4790	4513
13	Cesar	24	300	4780	4580
14	Joseph	10	200	4775	4620
16	Northey	11	150	4930	4680
Total		495			

Characteristic parameters of Mount Kenya's glaciers, 1993

No.	Name	Area [10 ³ m ²]	Length [m]	Highest elevation [m]	Lowest elevation [m]
1	Krapf	21	275	4800	4628
2	Gregory	35	335	4920	4720
4	Lewis	203	915	4950	4620
6	Darwin	23	185	4840	4630
7	Diamond	3	100	5120	5100
8	Forel	15	100	5000	4820
9	Heim	15	80	4780	4720
10	Tyndall	65	450	4790	4518
13	Cesar	18	275	4780	4620
14	Joseph	6	200	4775	4640
16	Northey	9	150	4920	4700
Total		413			

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 1987-1993

No.	Name	ΔL	ΔA	ΔZ	ΔV
1	Krapf	25	2	5.0	115
2	Gregory	30	10	3.4	154
4	Lewis	25	40	8.6	2095
6	Darwin	15	3	1.6	42
7	Diamond	0	0	-	-
8	Forel	0	1	-	-
9	Heim	0	1	-	-
10	Tyndall	50	13	8.2	65
13	Cesar	25	6	2.9	76
14	Joseph	0	4	1.6	13
16	Northey	0	2	1.8	21
All glaciers			82	5.3	2601