ILLUSTRATIONS OF THE METEOROLOGY OF INDIA AND HIGH ASIA.

BY

HERMANN DE SCHLAGINTWEIT-SAKÜNLÜNSKI.

I. TEMPERATURE OF THE AIR: 4, STATIONS AND ISOTHERMAL PROFILES OF HIGH ASIA, GENERAL VARIATION OF TEMPERATURE, AND CHART OF INDIAN TROPICAL SANITARIA.

NUMERICAL TABLE OF THE MEAN TEMPERATURE.

1. BHUTÁN, SÍKKIM, NEPÁL; EASTERN HIMÁLAYA

	Lat. N.	Long. E. Gr.	Height	Jan.	Febr	March	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	D.J.F.	M.A.M.	J.J.A.	S.O.N.	Year
Nárigún, eastern Bhután	26 55·8	92 6·0	3,642	46·6	52	60	62	68	73	74	74	71	67	58	52	50·2	63·3	73·7	65·3	63·1
Bhután, western Provinc:																				
Dévangiri	26 51	91 50	2,150	55																
Tassgóng	27 20	91 38	3,182	—	53½															
Punákha	27 35	89 34	3,739	—	—	—	66													
Sási	27 8	91 29	4,325	47																
Lenglúng Castle	27 39	91 12	4,593	—	51															
Tassángsi Castle	27 34	91 33	5,387	—	43															
Tóngso Fort	27 30	90 19	6,527	—	—	50														
Pánkabári, in Síkkim	26 49	88 14	1,790	—	—	—	67·4	—	—	—	80·0									
Darjíling, " "	27 3·0	88 15·3	7,168	42·0	44·4	50·1	54·8	58·7	61·8	62·9	62·6	61·1	57·0	52·8	44·2	43·5	54·5	62·4	57·0	54.4
Tónglo Peak " "	27 1·8	88 3·9	10,080	—	—	—	—	48·0												
Falút Peak " "	27 13·7	87 59.8	12,042	—	—	—	—	46.9												
Kathmándu, Capital of Nepál	27 42·1	85 12·2	4,354	45·4	50·8	56·6	61·6	67·5	72·1	73·1	73·1	70·7	64·7	55·6	49·5	48·4	61·9	72·8	62·7	61·7

2. KÁMAON, GÁRHVÁL, SÍMLA; CENTRAL HIMALÁYA.

	Lat. N.	Long. E. Gr.	Height	Jan.	Feb.	March	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	D.J.F.	M.A.M.	J.J.A.	S.O.N.	Year
Lohughát, in Kámaon	29 24	80 4	5,649	44·5	45·8	52·3	60·9	66·0	71·0	71·1	70.7	68·7	63·1	51·9	46·4	45·6	59·7	70·9	61·2	59·4
Havalbágh, in Kámaon	29 38	79 37	4,114	47	55	61	66	73	76	38	79	75	69	60	52	50·8	66·6	77·6	68·0	65·8
Almóra, in Kámaon	29 35·2	79 37·9	5,546	47·5	54·8	58·4	65·3	71·3	75·2	73·2	72·6	72·4	66·4	59·8	53·2	51·8	65·0	73·7	66·2	64·2
Nainitál, in Kámaon	29 23·6	79 30·9	6,634	42·5	46·4	55·5	59·3	64·1	69·6	65·3	66·0	63·2	58·1	53·0	48·4	45·8	59·6	67·0	58·8	57·9
Milum, in Kámaon	30 34·6	79 54·8	11,265	—	—	—	—	—	63·5											
Déra, in Garhvál	30 18·9	78 1·0	2,240	54·5	59·6	65·7	74·3	80·7	83·9	80·4	78·4	77·2	70·5	61·5	55·1	56·4	73·6	80·9	69·7	70·2
Landáur, in Garhvál	30 27	78 8	7,511	37·8	43·2	48·6	56·5	63·0	67·5	64·5	63·9	62·8	54·6	49·3	41·7	40·9	56·0	65·3	55·6	54·5
Masúri, in Garhvál	30 27·6	78 3·0	6,715	45·2	48·2	52·5	65·1	69·2	64·7	66·7	64·2	64·9	62·0	(53)	(46)	46·5	62·3	65·2	60·0	58·5
Jhósimath, in Garhvál	30 34	79 29	4,724	—	—	—	—	—	—	(59·8)										
Bádrinath, in Garhvál	30 46	79 20	10,124	—	—	—	—	—	—	—	58·0									
Niti, in Garhvál	30 48	79 34	11,464	—	—	—	—	—	—	65·4										
Sabáthu, in Simla	30 58·5	76 58·5	4,205	—	—	—	—	—	81·2	77·6	74·6	75·3	70·2	64·1						
Dágshai, in Simla	30 53·1	77 2·2	6,025	39	53·6	58	63·4	69·0	74·3	68·6	67·8	66·6	63·6	56·5	46·7	46·4	63·5	70·2	62·2	60·6
Kotghár, in Simla	30 19	77 28	6,412	42·4	49·9	54·1	60·5	69·1	71·0	69·5	68·0	66·4	57·7	49·4	46·5	46·3	61·2	69·2	57·8	58·6
Kasáuli, in Simla	30 54	77 3	6,650	39·6	39·6	54·8	54·2	64·2	69·3	67·2	65·9	66·1	61·1	53·8	45·6	41·6	57·7	67·5	60·3	56·8
Simla, in Simla	31 6·2	77 9·4	7,057	45·0	50·2	52·5	56·9	65·9	70·1	66·0	64·2	63·8	59·3	52·0	45·8	47·0	59·1	66·8	58·4	57·8

3. KÚLU, CHÁMBA, LAHÓL, KASHMÍR, MÁRRI; NORTHWESTERN HIMÁLAYA.

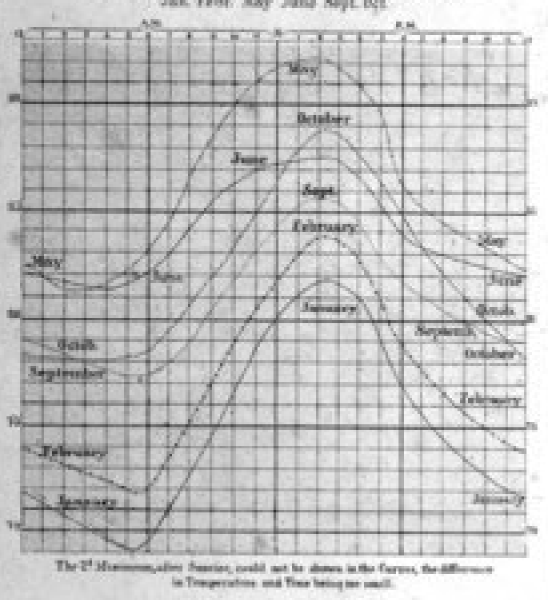
	Lat. N.	Long. E. Gr.	Height	Jan.	Feb.	March	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	D.J.F.	M.A.M.	J.J.A.	S.O.N.	Year
Sultánpur, in Kúlu	31 57·8	77 5·6	3,945	—	—	—	—	70·8	72·7	75·2	78·1	70·8	58·9	55·6	—	—	—	75·3	61·8	
Kángra, in Chámba	32 5·2	76 14·4	2,553	49·7	55·4	62·6	68·4	79·0	85·7	78·2	76 0	75·0	67·6	60·6	53·7	52·9	70·0	80·0	67·7	67·6
Dalhausie, in Chámba	32 32	76 0	6,650	40	46	52	(60)	(70)	76.2	75.3	70·7	65·6	56·8	(54)	(45)	43·7	(60·7)	74·1	58·8	59·3
Kárdong, in Lahól	32 33·8	77 0·6	10,242	24	36	44	47	49	54	63	60	52	46	37	27	29·0	46·6	59·0	45·0	44·9
Srináger, Capital of Kashmír	34 4·6	74 48·5	5,146	40	45	50	56	60	70	73	71	63	57	54	42	42·3	55·3	71·3	58	56·8
Márri, in Márri	33 51·0	73 22·7	6,963	37·9	44·0	50·6	55·7	63·3	71·1	67·7	65·9	67·0	60·2	49·6	43·2	41·8	56·5	68·2	59·2	56·4

4. WESTERN TÍBET, AND TURKISTÁN.

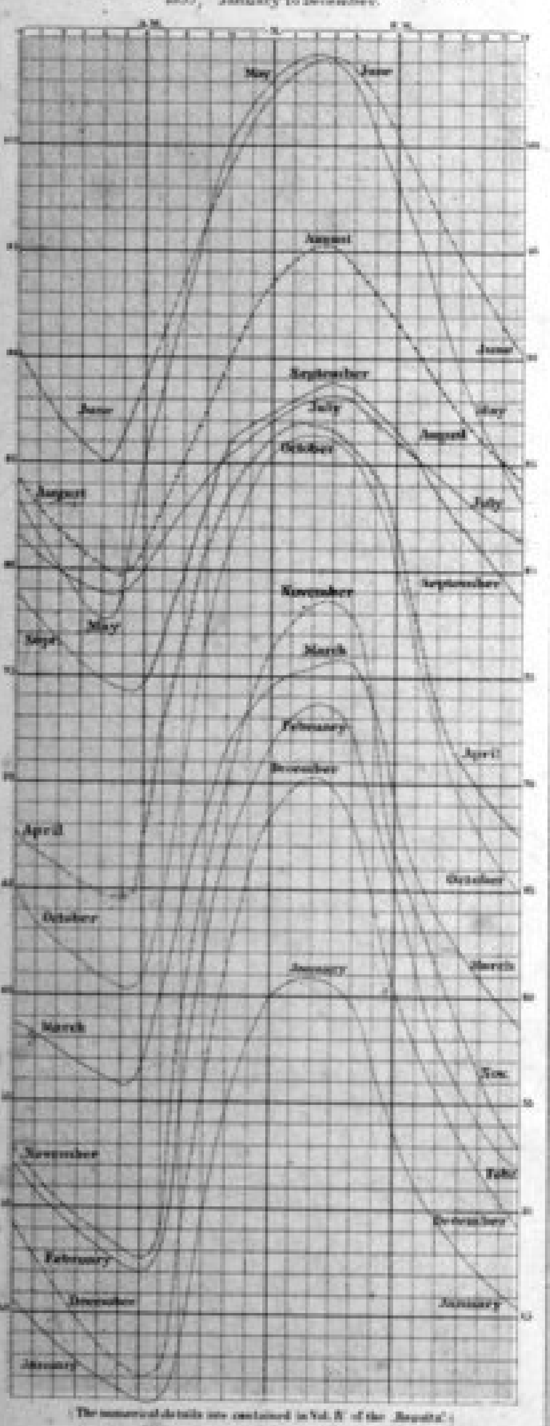
	Lat. N.	Long. E. Gr.	Height	Jan.	Feb.	March	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	D.J.F.	M.A.M.	J.J.A.	S.O.N.	Year
Kánam, Monastery in Kanáur	32	78½	9,296	34	36	40·5	49·9	59·8	66·3	69·2	67·7	63·9	56·2	43·9	37·3	35·8	50·1	67·7	54·8	52·1
Língti-Tódi-ju, in Spiti	32 9	78 12	11 316	—	—	—	—	—	70·4											
Mud, " "	33 51·6	78 1·3	12,421	—	—	—	—	—	53·6											
Spiti, upper valley " "	32 10	78	13,000	19·2	18·7	24·5	40·9	49·0	59·5	63.6	56·6	55·5	40·1	22·8	14·9	17·4	38·1	60·6	39·5	39·4
Tsomoríri Saltlake, in Rúpchu	32 45·4	78 16·6	15,130	—	—		—		49·8											
Leh, Capital of Ladák	34 8·3	77 14.6	11,532	20	26	36	44	50·1	56·2	66·4	65·2	56·5	39·5	34	21	22·3	43·4	62·6	43·3	42·9
Skárdo, Capital of Bálti	35 20·2	75 44·0	7,255	32	39	45	51	58	66	69	68	59	52½	43	33	34·7	51·3	67·6	51·5	51·3
Búshia, in Khótan, Turkistán	36 26	78 19	9,310	—	—	—	—	—	—	—	—	—	—	—	—	(22)	(45)	(63)	(45)	(43)
Yárkand, Cap. of Turkist.	38 10	74 0	4,200	—	—	—	—	—	—	—	—	—	—	—	—	(38)	54	(69)	(56)	(54)

ISOTHERMAL PROFILES FOR THE YEAR AND THE SEASONS.

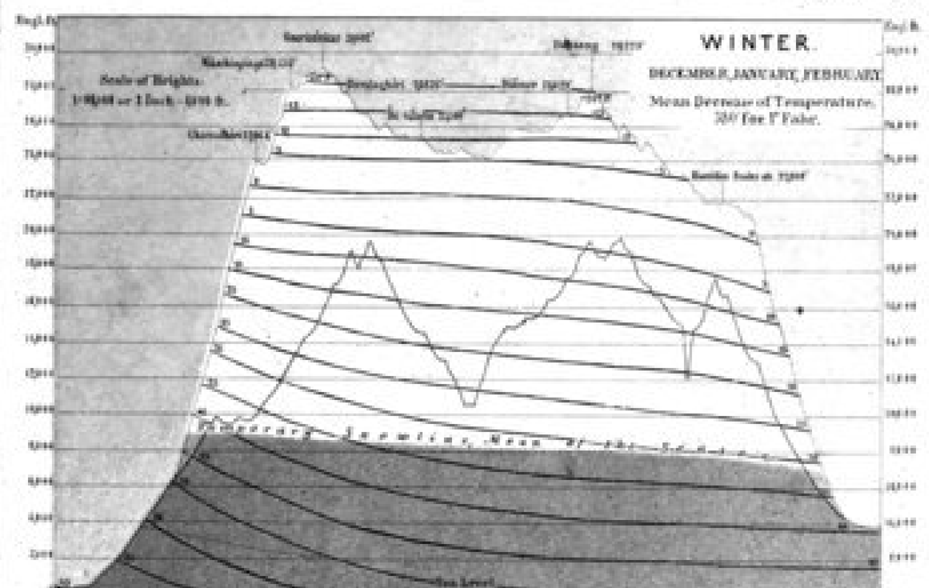
DAILY VARIATION OF TEMPERATURE.
I. Bombay, Lat. N. 18° 53' 38" Long. E. Gr. 72° 48' 5" Height 32 ft.



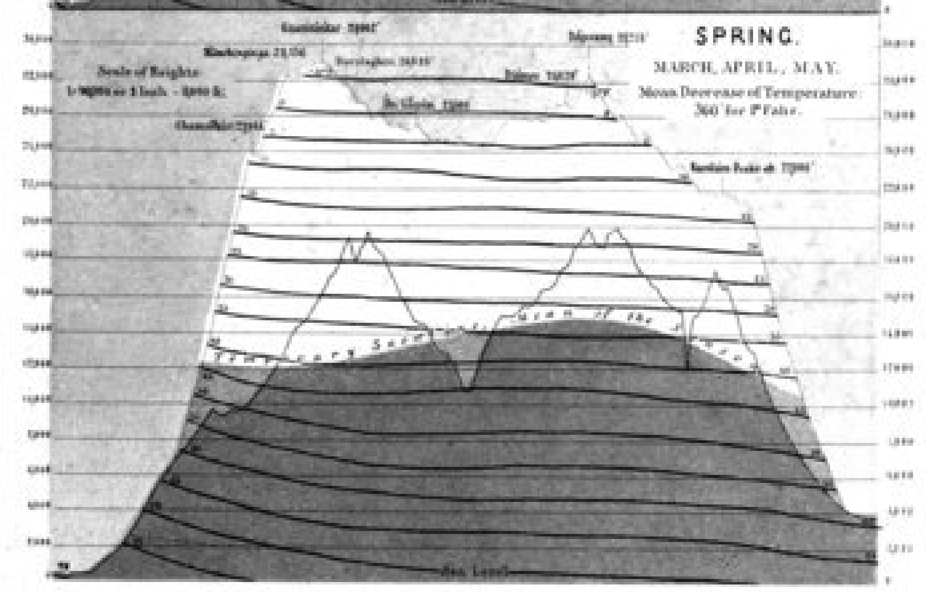
DAILY VARIATION OF TEMPERATURE.
II. Ambála.



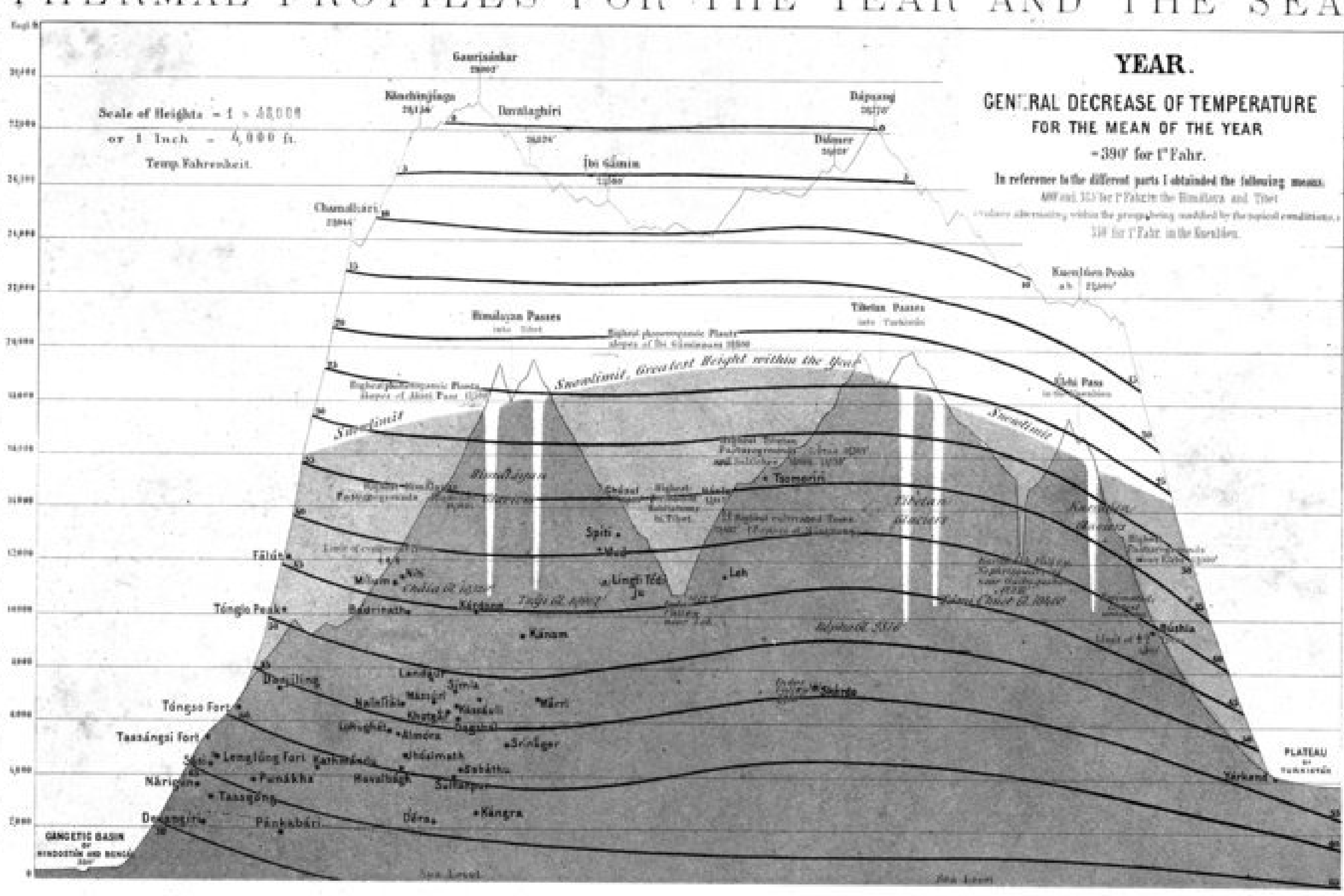
WINTER.
DECEMBER, JANUARY, FEBRUARY.



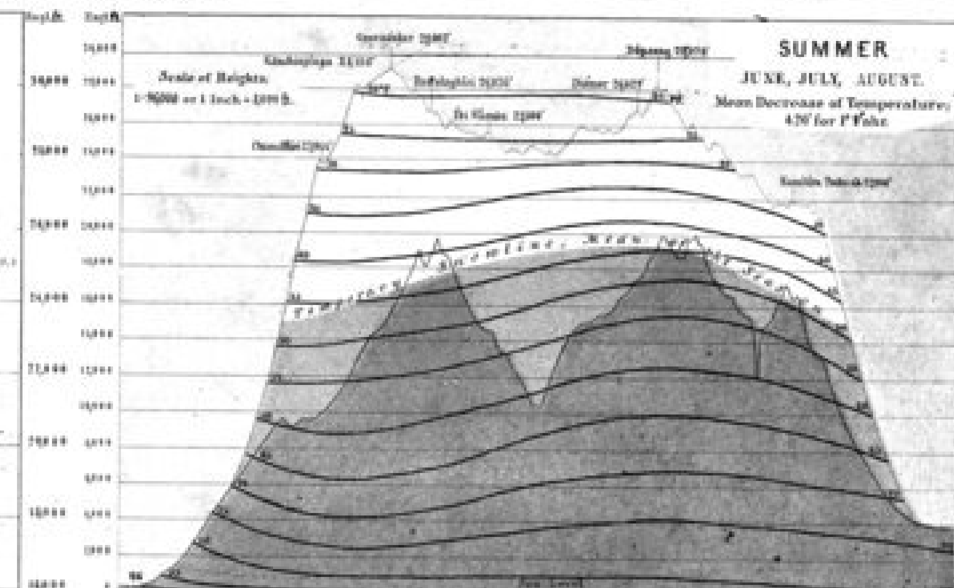
SPRING.
MARCH, APRIL, MAY.



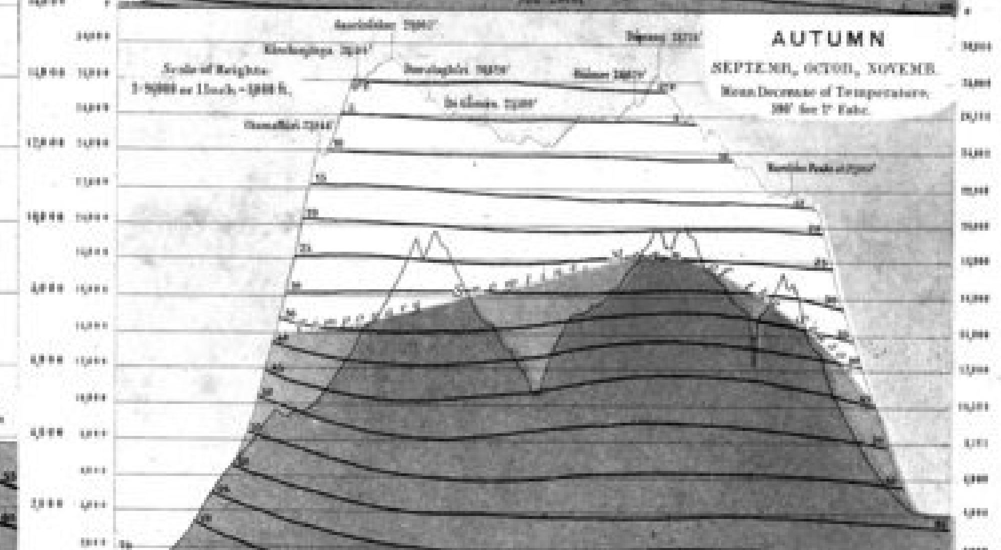
YEAR.
GENERAL DECREASE OF TEMPERATURE FOR THE MEAN OF THE YEAR



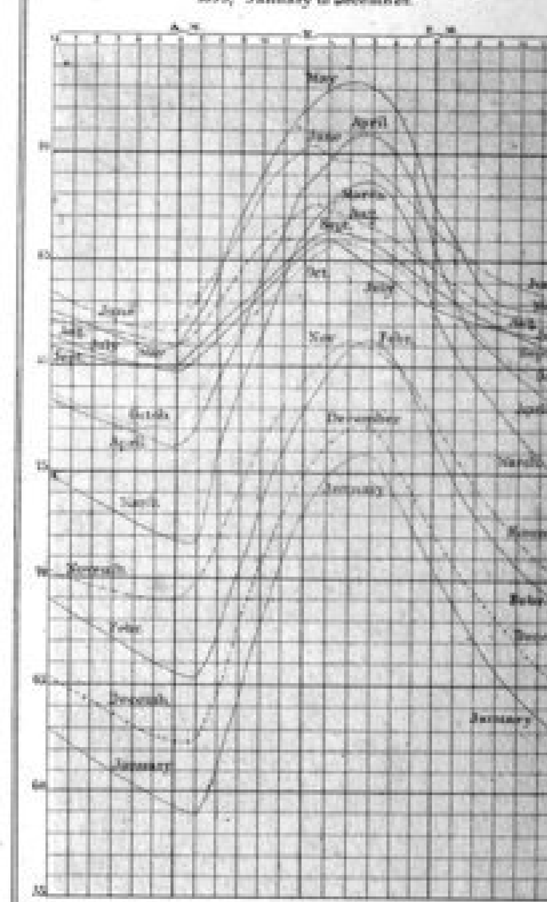
SUMMER
JUNE, JULY, AUGUST.
Mean Decrease of Temperature: 426' for 1° Fahr.



AUTUMN
SEPTEMB., OCTOB., NOVEMB.



DAILY VARIATION OF TEMPERATURE.
III. Calcutta, 1853, January to December.



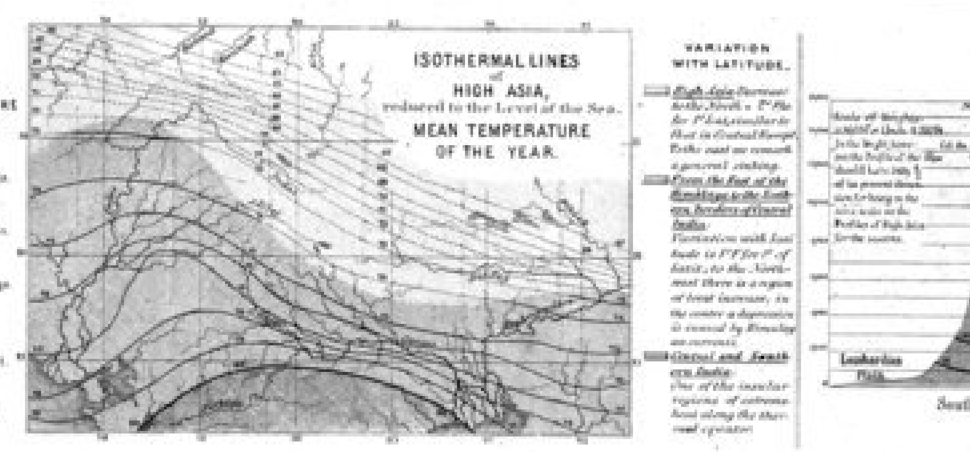
TYPES OF CLIMATE.

YEAR. The temperature of the Indian borders of the Himálaya up to 10000 Feet is raised by the vicinity of the Plains. In Tibet the heating influence of its general elevation and central position is felt up to 17000 Feet.

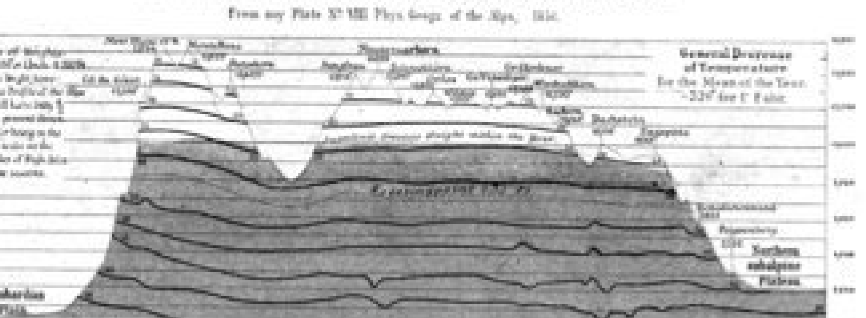
WINTER. All the southern side of the Himálaya has a Winter comparatively mild in consequence of currents ascending from India which are no more felt, however, to the north of the crest, in Tibet. — Turkistán is colder still in the same height and this is not caused by the difference of Latitude only; here we observe already that remarkable depression of temperature characteristic in winter for all Central Asia.

SPRING. This period, though the hot dry season for India, varies much less in temperature and moisture within the Himálaya, heavy rains are not unfrequent in May. In Tibet March and April are still cold and very rough at many of the inhabited places.

ISOTHERMAL LINES OF HIGH ASIA, MEAN TEMPERATURE OF THE YEAR.



ISOTHERMAL PROFILE OF THE ALPS FOR THE YEAR.



Southern Alps. Central Alps. North & East Alps.

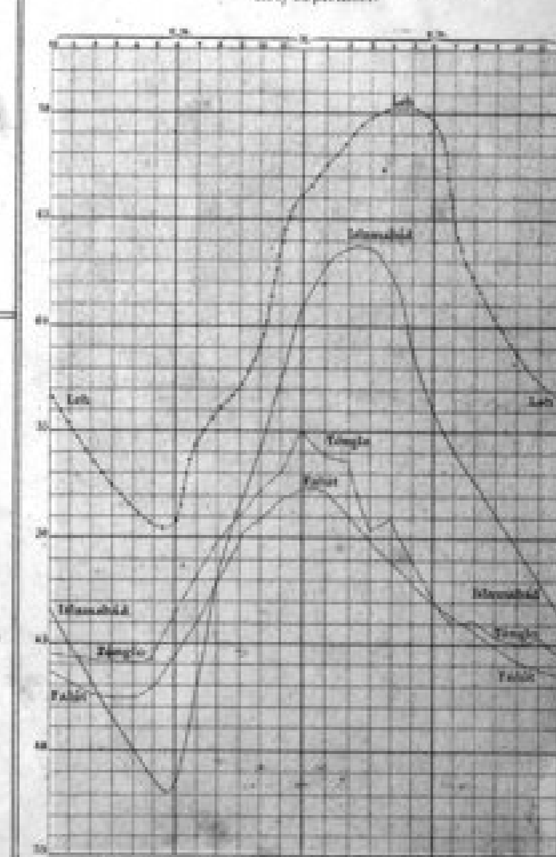
TYPES OF CLIMATE.

(CONTINUED.)

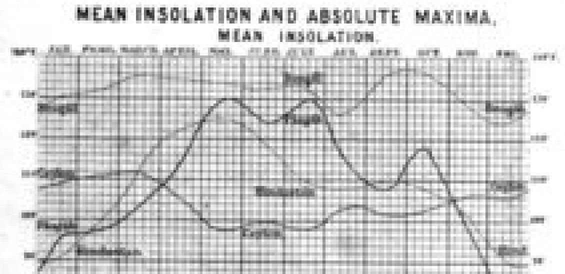
SUMMER. The heavy rains in the Himálaya limit the increase of heat otherwise corresponding to the season, whilst in Tibet an unexpected accumulation of heat is observed; it is partly the consequence of a cloudless state of the sky, but that it is felt in heights as very great is not less the effect of the general elevation of soil. The higher parts of the atmosphere too are thoroughly affected by the tropical winds and by the currents of heated air rising from the Tibetan Highlands. In India the decrease of temperature with height during the rains is throughout the most rapid when compared with the other seasons, in High Asia this season has the slowest decrease.

AUTUMN. In Autumn too the central parts of High-Asia are still comparatively too warm; an accumulation of cold air is produced in the lower parts.

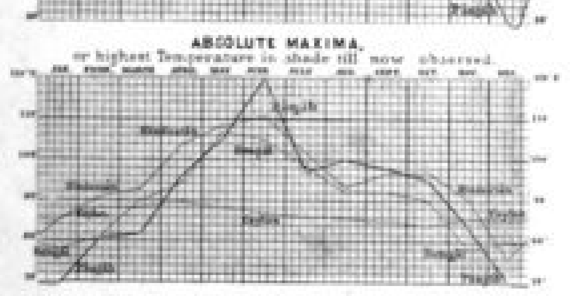
DAILY VARIATION OF TEMPERATURE.
HIGH ASIA.



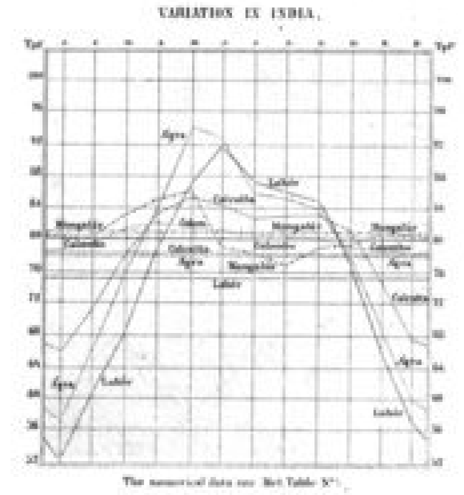
MEAN INSOLATION AND ABSOLUTE MAXIMA.
MEAN INSOLATION.



ABSOLUTE MAXIMA.

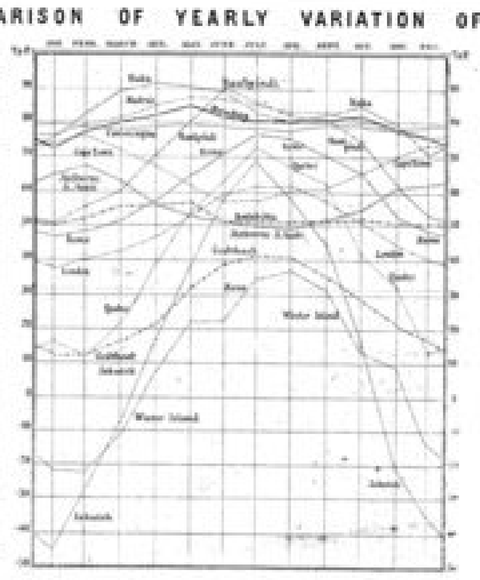


VARIATION IN INDIA.



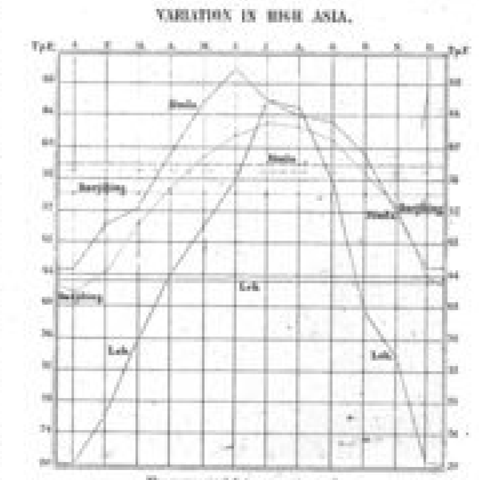
GENERAL COMPARISON OF YEARLY VARIATION OF TEMPERATURE.

Station.	Westisland	Godthaab	Jakutsk	London	Quebec	Rome	Ranipled
Latitude	66°12'N	64°10'N	62°2'N	51°30'N	46°49'N	41°54'N	33°21'N
Longitude	83°11'W	52°28'W	129°44'E	0° 5'W	71°16'W	12°28'E	73°6'E
Height	(—)	(—)	285 ft	(—)	(—)	170 ft	1,337 ft
January	-23·1	12·5	-43·8	37·6	11·0	45·1	51·5
February	-26·1	12·7	-32·1	40·0	14·9	47·3	56·4
March	10·8	15·1	-9·4	45·3	28·5	51·6	68·4
April	6·5	22·1	16·7	48·6	39·5	57·8	72·0
May	23·2	32·2	36·9	55·6	55·5	65·2	81·5
June	23·3	39·9	54·9	61·0	65·5	71·1	90·1
July	35·3	41·9	62·1	64·2	71·4	75·8	86·1
August	36·9	39·8	56·5	63·2	70·6	75·6	83·3
Septemb.	31·6	35·6	39·5	58·2	52·5	70·6	81·0
October	15·5	29·8	15·7	52·0	43·1	64·2	76·0
Novemb.	1·9	21·9	-20·1	44·2	34·5	53·3	63·1
Decemb.	-14·1	17·8	-36·5	40·6	17·7	41·7	54·3
Year	8·8	26·5	11·6	51·0	14·8	60·5	71·4



Bombay	Madras	Dodabetta	Kaka	Fernandpo	Cape Town	Melbourne	Station
18°56'N	13°4'N	11°23'N	13°10'N	3°30'N	33°56'S	38°18'S	Latitude
72°49'E	80°14'E	76°44'E	14°30'E	54°42'W	18°28'E	144°30'E	Longitude
(—)	(—)	8640 ft	(—)	(—)	(—)	(—)	Height
74·5	75·9	50·8	75·6	78·5	71·5	64·0	January
76·2	77·8	52·7	83·1	77·2	75·8	66·0	February
80·0	81·1	55·1	89·0	77·6	72·7	54·6	March
83·5	84·5	56·0	97·5	78·2	62·1	56·5	April
85·6	87·2	57·7	90·8	78·2	62·1	54·2	May
83·5	87·6	52·9	89·5	78·1	52·6	50·2	June
81·5	85·6	52·7	83·7	77·8	52·6	48·2	July
80·7	84·4	52·9	80·5	78·1	60·6	46·0	August
79·4	83·9	52·2	83·3	78·3	61·5	52·7	Septemb.
82·1	81·7	53·0	85·3	79·7	64·5	54·9	October
79·1	78·4	54·0	79·6	76·8	70·0	75·2	Novemb.
76·5	76·5	50·8	76·2	76·8	72·2	62·8	Decemb.
81·5	82·6	55·2	83·2	78·1	66·4	58·2	Year

VARIATION IN HIGH ASIA.



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