

1383  
13

# INDEX.

---

PAGE	PAGE		
Air, The Winds in the Free, C. J. P. Cave on .....	66	Hydrography, 144 ; Winter Fluctuations of Temperature in England and Scotland .....	142
Aitken, John, F.R.S. The Steven- son Screen.....	232	Bort, Léon Philippe Teisserenc de (obituary) .....	11
Ajo, Argentine Republic, Monthly and Annual Rainfall at, from 1858 to 1912 .....	120	Boutflower, H. C., Rainfall com- parisons .....	140
Antarctic, The Australian Expedi- tion, 81, 101 ; Disaster in the, 21 ; Synoptic Meteorology of, M. W. Campbell Hepworth, C.B., R.D. (review) .....	102	Boys, H. A., Heavy Rain in France Braby, H. W., on the Harmattan Wind of the Guinea Coast ...	143
April, 1913, The Weather of ...	64	Brighton, Heavy Rainfall at .....	107
Archibald, Edmund Douglas, M.A. (obituary) .....	221	British Association, Luncheon at the, by E. Gold, 159 ; Meteoro- logy at the, by E. Gold.....	129
Atmospheric Cooling .....	13	British Empire, Climatological Tables for the, 20, 40, 60, 80, 100, 116, 136, 156, 176, 196, 220, 240	177
Atmosphere, The "Upper," W. Godden on .....	27	British Rainfall, 1911, 67 ; 1912 ...	117
August, 1913, The Weather of ...	139	Brooks, C. E. P., B.Sc., on the Meteorological Conditions of	
Australia, Upper air Exploration in Autumnal Warmth, Unusual .....	150	an Ice Sheet, and their Bear- ing on the Dessication of the	
Autumn, Mildness of the ... .....	197	Globe .....	223
Backhouse, T. W., Thunderstorm of September 16th Newcastle- on-Tyne .....	185	Brooks, C. F., on Snowfall of the United States .....	7
Balloon Ascents, International, by W. H. Dines, F.R.S., 15, 33, 49, 66, 111, 129, 151, 189	165	Carpenter, F. A., The Climate and Weather of San Diego, California (review) .....	131
Balloons, rate of ascent of pilot....	32	Cartwright, E. H., Thunderstorm of July, 14th-15th, 1913 .....	126
Bamford, A. J., Heavy Rains in Ceylon .....	212	Cave, C. J. P., on the Winds in the Free Air .....	66
Barbados, Pilot Balloon observa- tions in .....	107	Ceylon, Topical Rainfall in, 26, 61, 212	
Barometer, lowest on Record in New York .....	50	Chree, Dr. C., F.R.S., and others, on Physical Observations	
Berry, A. J., The Atmosphere (review) .....	149	during Solar Eclipse of April 17th, 1912 .....	65
Bjerknes, Professor, on Dynamic Meteorology and Hydro- graphy, by L. C. W. Bonacina	144	Church, J. E., Jun., PH.D., on Recent Studies of Snow.....	223
Bonacina, L. C. W., Frozen Pre- cipitation, 188 ; on Some observations and Reflections upon the Weather, 23 ; on the Weather of January 11th, 1913, 10 ; Professor Bjerknes on Dynamic Meteorology and		Clare, J. F. Leigh, Mildness of the Autumn .....	185
		Clark, J. E., Partial Drought— Halo... .....	141
		— Temperature Variations in Fog	211
		— and R. H. Hooker, on Phenom- enological Observations .....	65

	PAGE		PAGE
Climate of Rome, by Dr. Fillippo Eredia (review).....	35	Drought, Partial .....	109, 141
Climatological Tables for the British Empire, 20, 40, 60, 80, 100, 116, 136, 156, 176, 196, 220, 240		Eclipse, Solar, of April 17th, 1912, Physical Observations during the, by Dr. Chree, and others	65
Cloud Form Frequencies at Epsom, 1903-1910— .....	85	Editor, From the.....	157
Corless, R., and others, on Physical Observations, during Solar Eclipse of April 17th, 1912 ...	65	Edwards-Moss, Sir John, The Climate of Torquay ...	129, 164, 212
Correlation of Rainfall .....	107	Eredia, Dr. Fillippo, The Climate of Rome (review), 35 ; the Diurnal Variation of Temperature in Italy (review).....	131
Correlations, Southern Hemisphere, Seasonal, by R. C. Mossman, 2, 44, 82, 104, 119, 160, 200,	226	Errata .....	10, 215
Cox, Lieut. F. A. D., Waterspouts at the Chatham Islands .....	50	Espinier, Jas. B., on "Rainfall" or "Precipitation".....	10
Craig, J. I., on a Rainfall Query..	8	Exceptional Rainfall at Bishop's Castle, 26th May, 1913 .....	92
Curtis, R. H., Weather Fallacies... December, 1913, The Weather of Dechevrens, Rev. Marc., S.J., The Warm and the Cold Winds ...	209	Expedition, The Australian Antarctic .....	81
Decker, C., on the Lowest Barometer on Record in New York — Temperature Vagaries in New York .....	50	Fallacies, Weather, by A. O. Walker, F.L.S. ....	167, 184, 233
Denning, W. F., on Meteoric Streaks and Velocities of Upper Air Currents .....	28	February, 1913, The Weather of Filldyke .....	34
Determination of Radiation of the Air from Meteorological Observations .....	85	Floods in North-west Wales.....	187
Dew, the Genesis of .....	163	Field Crop, Meteorological Conditions in a .....	128
Dines, J. S., on Pilot Balloon Observations in Barbados, 1910-1912.....		Foster, Mabel, Rainfall comparisons .....	32
— on the Rate of Ascent of Pilot Balloons.....	32	France, A Heavy Rain in.....	140
Dines, W. H., F.R.S., Frozen Precipitation .....	210	Free Air, Winds in the .....	143
— International Balloon Ascents, 15, 33, 49, 66, 111, 129, 151, — Meteorological Nomenclature... — Thunderstorms on April 29, 1913 — on the Vertical Distribution of Temperature in the Atmosphere .....	189	Froc, Louis, s.j., Rainfall in China during a period of eleven years (review) .....	66
Dobson, G., and others, on Physical Observations during Solar Eclipse of April 17th, 1912 ...	65	From the Editor .....	94
Doncaster, Exceptional Rainstorm at .....	180, 222	Germany, the daily march of Air Temperature in, by Dr. H. Henze (review) .....	157
Dover, John, Long Dry Periods at Totland Bay .....	212	Gilbert, J. J., Origin of the Snowden Gauge.....	54
Drought, Great .....	141	Glazed Frost .....	108
— in India, Liability to as compared with that in other countries, by G. T. Walker, F.R.S. (review) .....	54	Godden, William, on the "Upper" Atmosphere .....	123
		— The Genesis of Dew .....	27
		Gold, E., M.A., Glazed Frost .....	163
		— Meteorology at the British Association .....	233
		— Meteorological Luncheon at Birmingham .....	177
		— on Determination of Radiation of the Air from Meteorological Observations .....	158
		Grenander, Sven, On the appearance of the Sea-breeze on the east coast of Sweden (review) .....	85
		Guinea, Coast, Harmattan Wind of Hall, Maxwell, on the Wind Instruments and the November Hurricanes in Jamaica.....	35
		Hall, W., Summer Temperature...	107

PAGE		PAGE
129	Hamlin, G. B., Heavy Rainfall at Brighton .....	10, 26, 55, 111, 179
107	Harmattan Wind of the Guinea Coast .....	71
94	Hellmann, G., Results of ten years' Rainfall Registration in North Germany (review) .....	19, 39, 59, 79, 99, 115, 135, 155, 175, 195, 219, 239
54	Henze, Dr. H., on the daily march of Air Temperature in Germany (review) .....	6, 31, 42, 65, 85, 107, 198, 222
102	Hepworth, M. W. Campbell, C.B., R.D., National Antarctic Expedition, 1901-1904, Meteorology, Part II. (review) .....	— — Council of the, 7 ; Dinner of the..... 12, 226
88	High May Temperatures in London .....	86
65	Hooker, R. H., and J. E. Clark on Phenological Observations .....	12, 226
221	Howard, William Dillworth, F.I.C. (obituary) .....	186
95	Ice-Age, The, and Variation of Latitude, Prof. R. Spitaler (review) .....	28
42	Ice Observations in North Atlantic International Balloon Ascents, by W. H. Dines, F.R.S. .... 15, 33, 49, 66, 111, 129, 151, 189	185
13	January, 1913, The Weather of .....	142
109	Jones, J. R. Gethin, Floods in North-West Wales, 128 ; The Latest Snow Spot .....	72
125	July, 1913, The Weather of .....	186
106	June, 1913, The Weather of .....	13
70	Kilner, H. I., Thunderstorm and Black Rain .....	222
190	Knoche, Dr. W., Chilian Meteorological Annual, 1911 (review). — Hourly Meteorological Values at Santiago during 1911 (review) .....	2, 44, 82, 104, 119, 160, 200, 226
42	Lempfert, R. G. K., on British Weather Forecasting, Past and Present .....	221
53	— Weather Science (review) .....	221
89	London, High May Temperatures in .....	11
187	MacDowall, A. B., Our Winters, 234 ; The Climate of Torquay 141,	11
140	Mace, J. E., Rainfall Comparisons March, 1913, The Weather of ...	181
47	Martin-Smith, A. S., Curious Phenomenon .....	111
51	May, 1913, The Weather of.....	29
87	— Temperatures in London, High Mellish, H., Sunshine and Rain of Past Twelve Months .....	141
88	Partial Drought .....	141
71	Peck, J., and Dr. E. C. Snow, Correlation of Rainfall .....	107
158	Phenological Observations, by J.E. Clark and R. H. Hooker .....	65
	Phenomenon, Curious .....	51

## INDEX.

	PAGE		PAGE
Photography in Natural Colours...	10	REVIEWS—(con.) :—	
Pilot Balloon Observations in Barbados .....	107	La Pluie en Chine durant une	
Platt, E. J., Thunderstorm on April 29th, 1913 .....	68	Periode de onze années 1900-1910, by Louis Froc, S.J. ....	94
Precipitation, Note on Frozen, by L. C. W. Bonacina .....	188	Ergebnisse Zehnjähriger Registrierungen des Regenfalls in Nord-deutschland, by G. Hellmann .....	94
Public Spirit, An Example of .....	70		
Rainbow, A White.....	93	Die Eiszeiten und Polschwankungen der Erde, by Prof. Rudolf Spitaler .....	95
Rain Days in 1913 .....	93, 142	National Antarctic Expedition, 1901-1904, Meteorology, Part II., by M. W. Campbell Hepworth, C.B., R.D. ....	102
— Heavy, in France .....	143	The Climate and Weather of San Diego, California, by F. A. Carpenter .....	131
Rainfall of the Months of 1913, 16, 17, 18, 36, 37, 38, 56, 57, 58, 76, 77, 78, 96, 97, 98, 112, 113, 114, 132, 133, 134, 152, 153, 154, 172, 173, 174, 192, 193, 194, 216, 217, 218, 236, 237, 238		La Variazione diurna della Temperatura in Italia, by Filippo Eredia .....	131
— of the Winter Six Months, 1912-1913, 52; of 1913 .....	230	The Atmosphere, by A. J. Berry, M.A.....	149
— at Santiago, Chile, 1867-1911, 5; Heavy, at Brighton, 129; Heavy, in short periods in India, by G. T. Walker, F.R.S. (review), 55; in China during a period of Eleven Years (review), 94; Reported Heavy Fall at Tunbridge Wells, 108; Results of Ten Years' Registration in North Germany, by G. Hellmann (review), 94; Tropical, in Ceylon.....	26, 61, 212	Weather Bound, by Rupert T. Smith .....	149
— Comparisons, 140; or "Precipitation," 10; Query a .....	8	The Realm of Nature, by Hugh Robert Mill, D.Sc., LL.D. ....	170
Rain Gauge, The "British" .....	183, 211	Anuario Meteorologico de Chile, 1911 (Chilian Meteorological Annual, 1911, by Dr. Knoche, Director) .....	190
Rainstorm at Doncaster, Sept. 17th, 1913, 180, 222; at Kingston on 6th October, 1913.....	186	Valores Horarias de los Elementos Meteorologicos en Santiago 1911 (Hourly Meteorological Values at Santiago during 1911, by Dr. Knoche, Director) .....	190
REVIEWS :—		Indian Meteorological Memoirs, Vol. 22, Part II., by Gilbert Walker .....	191
Il Clima di Roma esame delle osservazioni meteorologiche eseguite dal 1782 al 1910, by Dr. Filippio Eredia.....	35	Robins, A. G., Thunderstorm of July 14th-15th, 1913 .....	127
Ueber das Erscheinen der Seesbrise an der Schwedischen Ostküste. Inaugural-Dissertation, by Sven Grenander .....	35	Robinson, W. H., on Periodical Variations of the Velocity of the Wind at Oxford .....	31
Weather Science, by R. G. K. Lempfert, M.A. ....	53	Russell, S. C., on Results of Monthly and Hourly Cloud Form Frequencies at Epsom, 1903-1910 .....	85
Der tägliche Gang der Lufttemperatur in Deutschland, by Dr. H. Henze .....	54	— Thunderstorm on April 29th, 1913 .....	68
The Liability to Drought in India as compared with that in other Countries, by Gilbert T. Walker, F.R.S. .....	54	Salter, Carle, and R. C. Mossman, on the Great Rainstorm at Doncaster on September 17th, 1913.....	222
Data of Heavy Rainfall over Short Periods in India, by G. T. Walker, F.R.S. .....	55	Santiago, Chile, Monthly Rainfall at, from 1867-1911 .....	5
		Scottish Winter, The.....	93

PAGE		PAGE	
Sea-breeze on the East Coast of Sweden, by Sven Grenander (review) .....	35	Volume, The New .....	1
September, 1913, The Weather of Shaw, Dr. W. N., F.R.S., Forecasts .....	166	Walker, A. O., on Weather Fallacies .....	167, 184, 233
Shower, Definition of a .....	207	Walker, G. T., F.R.S., Data of Heavy Rainfall over Short Periods in India (review), 55 ; Monthly and Annual Normals of Number of Rainy Days (review), 191 ; the Liability to Drought in India as compared with that in other Countries (review) .....	54
Smith, R. T., Weather Bound (review) .....	29	Ward, Col. M. F., Origin of the Snowdon Gauge .....	52, 235
Snowdon Gauge, Origin of .....	149	Waterspouts at the Chatham Islands .....	50
Snowfall of the United States, C. F. Brooks on .....	7	Watt, A., M.A., on Glazed Frost .....	13
Snow, Dr. E. C., and Peck, J., Correlation of Rainfall .....	107	— The "British" Rain Gauge .....	211
Snowspot in Wales, The Latest ...	109	Weather, an early Note on the .....	67
Southern Hemisphere Seasonal Correlations, R. C. Mossman on, 2, 44, 82, 104, 119, 160, 200, 226	95	— Fallacies, A. O. Walker, on Forecasting, British, Past and Present .....	167, 184, 233
Spitaler, Prof. Rudolf, The Ice Age and Variations of Latitude over the Earth's Surface (review) .....	137	— of January 11th, 1913 .....	42
Stevenson Screen, The, by John Aitken, F.R.S. ....	232	— Science, R. G. K. Lenepfert on (review) .....	10
Summers of 1912 and 1913, The ...	137	— Some Observations and Reflections upon the, by L. C. W. Bonacina .....	53
Sunshine and Rain of Past Twelve Months .....	71	— The Magnificent, of May, 23rd —30th, 1913 .....	23
Tabor, H. S., February Filldyke..	187	Wedderburn, Dr. E. M., on the Appearance of the Surface of Fresh-Water Lochs in Calm Weather .....	90
Tawney, E. M., Thunderstorms on April 29th, 1913.....	68	Weston, G., Reported Heavy Rainfall .....	226
Temperature Vagaries in New York .....	108	Wettest First Quarter on Record, The .....	108
— Winter Fluctuations of, in England and Scotland.....	142	Wilson, Albert, The Doncaster Rain Storm .....	92
Teneriffe, The High-Level Observatory in.....	55	Williams Dr. Charles Theodore (obituary) .....	235
Thunderstorm and Black Rain....	70	Wind Instruments and the November Hurricanes in Jamaica, by Maxwell Hall .....	11
— of April 29th, 1913, 68 ; May 27th, 1913, 91 ; May 30th, 1913, 92 ; July 14th - 15th, 1913, 126 ; Sept. 16th, 1913, at Newcastle-on-Tyne.....	165	Wind, Periodical Variations of the Velocity of, at Oxford .....	30
Torquay, Climate of .....	129, 141, 164, 187, 213	31	
Upper Air Exploration in Australia .....	150		
Vertical Distribution of Temperature in the Atmosphere..	65		
Visibility, S. Miller on .....	213		

## LIST OF ILLUSTRATIONS.

Centres of Action of the Atmosphere .....	<i>Frontispiece.</i>
Rainfall at Santiago from May to August and Nile Flood.....	p. 3
Rainfall of the Months of 1913 in the Thames Valley— <i>face p. 13, 34, 48, 63, 87, 106, 125, 139, 166, 181, 213, 229</i>	
Barometric Pressure in May at Stykkisholm and South Orkneys .....	<i>p. 44</i>
Waterspouts at the Chatham Islands .....	,, 51
Rainfall of January, 1913, in Ceylon (map).....	<i>face p. 62</i>
Temperature at Alice Springs and Cordoba .....	<i>p. 82</i>
Temperature at Perth (W. Australia), Santiago, and Valparaiso .....	,, 84
Rainfall at Malden Island and Temperature at Punta Arenas, May to August ,	104
Rainfall Departure from Normal, 1876-1894, at Trinidad, W. Indies, and Ajo, Argentine Republic.....	,, 123
Rainfall in Scotland, West, and Temperature at St. Helena .....	,, 160
Temperature at St. Helena, and Pressure at Punta Arenas .....	,, 161
Temperature at St. Helena, and Rainfall at Mexico City.....	,, 162
Rainfall of September 17th, 1913 (map)..	<i>face p. 180</i>
Mean Temperature from May to August in South America .....	<i>p. 202</i>
Mean Temperature at Sydney, N S.W., and Rain at San Francisco .....	,, 204
Mean Temperature, South Orkneys and at Kimberley .....	,, 205
Pressure at the South Orkneys and Height of the Parana.....	,, 206