

tude exceeding 6 miles, and fell about 60 miles southeast of Strassburg, where it was found the next day. Unfortunately the shock caused by the breaking loose of the balloon stopped the clocks of the thermographs and prevented records of temperature from being obtained.

An official account of this Conference will be published in the French and German languages, together with the special reports prepared by the experts.

THE EIGHTH GENERAL MEETING OF THE GERMAN METEOROLOGICAL SOCIETY.

By A. LAWRENCE ROTCH.

The triennial meeting of this society, which was held at Frankfort on the Main this year between April 14 and 16, was attended by about twenty-five members. In the absence of the president, Prof. Dr. von Bezold, the vice-president, Prof. Dr. Neumayer, director of the Deutsche Seewarte, presided, and delivered an address on the progress of meteorology during the past twenty-five years, in which he advocated antarctic exploration as a means of advancing meteorology and terrestrial magnetism. Prof. Hergesell summarized the proceedings of the recent International Aeronautical Conference at Strassburg; Dr. Bergholz, of Bremen, spoke on the form of meteorological annuals and advocated the form adopted by the Potsdam Observatory; Mr. Polis, of Aix-la-Chapelle, discussed the circulation in areas of high and low pressure; Prof. Dr. Börnstein, of Berlin, with the aid of a model showing the monthly and daily periods, described the temperature conditions of that city, remarking that the mean of the daily extremes differed only 0.035° C. from the mean of the twenty-four hours; and Dr. L. Meyer, of Stuttgart, spoke on the daily changes of cloudiness in Hohenheim. Dr. Erk, of Munich, discussed the movements of the air in cyclones, as exemplified in Bavaria; Prof. Dr. Hellmann, of Berlin, recommended at secondary stations exposing the thermometers with no screens outside of the windows, but this was dissented from by other speakers; Prof. Hergesell described a sensitive recording metallic thermometer, constructed by M. Teisserenc de Bort. Dr. Knipping, now in charge of ocean meteorology at the Deutsche Seewarte at Hamburg, proposed a more extensive publication of extracts from ships' logs, which should help to equalize the much greater amount of data published for the land; and Prof. Max Möller, of Brunswick, discussed the relation of the pressure distribution to the horizontal temperature differences and friction. Prof. Dr. Sprung, of the Potsdam Observatory, described two of his new instruments; one was for taking, automatically and simultaneously, at two stations a series of photographs of clouds, in order to determine their height; the other was a rain and snow gauge, which weighed the precipitation and recorded it on the principle of his balance barograph. Prof. Dr. van Bebber, of Hamburg, in an analysis of the duration of sunshine in North America, stated that the amount of sunshine increases rapidly toward the south, as in Europe, and reaches a maximum in Arizona. Like Europe, the mountains receive the most morning sunshine, but, unlike Europe, the annual maximum in America occurs in the north in July and in the south in June. The speaker inferred that the characteristics of the northern and southern people are to be attributed to climatic conditions, and especially to the duration of sunshine. Prof. Dr. Neumayer exhibited charts of terrestrial magnetism and pointed out where observations were desired; Dr. Gerstmann, of Berlin, said that the importance to fruit growers of being able to predict frosts at night demanded that suitable dew-point tables be prepared.

No reports of the proceedings were published, except in the newspapers, but it is probable that many of the papers will appear in the Meteorologische Zeitschrift. Prof. Dr.

Neumayer, having resigned his position as vice-president of the Society, which he helped to create in 1883, was chosen an honorary member. The same honor was conferred on General Rykatcheff, director of the Physical Central Observatory at St. Petersburg. The following meteorologists were elected corresponding members of the society: Paulsen, of Copenhagen; Snellen, of Utrecht; von Konkoly, of Budapest; Hepites, of Bucharest; Rotch, of Boston; Pernter, of Vienna; Sapper, of Guatemala; and Lancaster, of Brussels.

CLIMATIC DATA BEARING UPON THE CULTURE OF THE DATE PALM.

By A. J. HENRY, Chief of Division.

Mr. Alfred A. Wheeler, of 1220 Jackson street, San Francisco, Cal., writes to the Chief of Weather Bureau, under date of May 20, 1898, requesting certain climatic data for Arizona for use in a comparative study of the climates adapted to the culture of the date palm. Mr. Wheeler states, among other things, that—

It is not sufficient for date culture that one should know the minimum temperature of any month. The facts of importance are: (1) the minimum, (2) the mean of minima, (3) the times of temperatures at 32° or below. This record for the six months from November 1 to May 1 gives a Night Frost Table that is all sufficient; for everybody knows there is no duration of low temperature lasting into daytime in the horticultural parts of either California or southern Arizona. Similarly, from May 1 to November 1, the converse record, giving the coefficient of heat, is what the date grower will require, viz, (1) the maximum, (2) the mean of maxima, (3) the times of temperature at 90° or above. The date blooms in Arizona and California from April 15 to May 15, according to season and locality, and this Heat Table would cover its whole period from blooming to ripening. As date culture is on the verge of becoming an industry in Arizona and California, both of these tables would be of great value there; and the utility of the frost table would apply equally to Florida, since there, as in California, the growing of citrus fruits is the object of an established commerce. I hope the Weather Bureau will agree with me that it is important to tabulate climatic facts for regions like California, Arizona, and Florida, different from those which are of interest elsewhere, where the forms of horticulture are determined by other conditions.

The information collected for Mr. Wheeler is published herewith for the benefit of readers of the REVIEW.

Table of maximum temperatures at Phoenix, Ariz.

Year.	Month.	Maximum.	Mean maxima.	No. of hours with temperature 90° or above.	Year.	Month.	Maximum.	Mean maxima.	No. of hours with temperature 90° or above.
1895 ...	August	110	101.4	268.0	1896 ..	October	98	89.3	39.5
1895 ...	September ...	107	97.0	321.0	1897 ..	May	104	93.2	175.5
1895 ...	October	93	85.9	36.5	1897 ..	June	107	98.6	247.5
1896 ...	May	110	89.6	79.0	1897 ..	July	107	108.1	379.5
1896 ...	June	115	105.1	396.5	1897 ..	August	110	102.0	339.0
1896 ...	July	109	100.2	300.5	1897 ..	September ...	102	95.2	173.0
1896 ...	August	108	100.7	323.0	1897 ..	October	100	82.1	32.5
1896 ...	September ...	104	95.5	197.5					

Table of minimum temperatures at Phoenix, Ariz.

Year.	Month.	Minimum.	Mean minima.	No. of hours with temperature 32° or below.	Year.	Month.	Minimum.	Mean minima.	No. of hours with temperature 32° or below.
1895 ...	November ...	34	44.6	0.0	1897 ..	February	30	39.4	6.0
1895 ...	December ...	23	34.8	72.0	1897 ..	March	31	41.3	1.5
1896 ...	January	30	39.2	16.5	1897 ..	April	38	51.6	0.0
1896 ...	February	28	41.1	17.5	1897 ..	November ...	31	44.0	2.5
1896 ...	March	34	48.4	0.0	1897 ..	December ...	23	33.6	56.0
1896 ...	April	38	48.7	0.0	1898 ..	January	23	36.5	76.5
1896 ...	November ...	22	55.8	1.0	1898 ..	February	36	43.8	0.0
1896 ...	December ...	33	39.7	0.0	1898 ..	March	33	43.2	0.0
1897 ...	January	27	40.5	10.5	1898 ..	April	41	56.8	0.0