TABLE 3.—*Result of observations made at the Korean custom-house in Chemulpo, during the years 1887 to 1903, inclusive.*

Month.	Air temperature in degrees centigrade.							Number of days with—						Amount of rain or snow.
	Mean.	Absolute maximum.	Date.		Absolute minimum.	Date.		Maximum temperature. ≥ 30° C.	Maximum temperature. ≤ 0° C.	Minimum temperature. ≤ — 10° C.	Fair weather.	Cloudy weather.	Rain or snow	
			Day.	Year.		Day.	Year.							
														mm.
January	— 2.7	13.3	19	1903	—18.0	19	1897	.....	24	20	27	4	10	27.1
February	— 1.2	17.8	15	1895	—18.5	2,3	1895	.....	12	11	26	2	7	22.0
March	4.0	19.4	30	1898	—10.0	2	1898	.....	3	1	26	5	8	28.7
April	10.2	27.2	24	1901	— 7.0	11	1900	.....	.....	.....	25	5	6	63.7
May	15.6	31.1	19	1896	4.0	4	1893	1	.....	.....	26	5	7	77.9
June	20.1	33.3	30	1894	9.0	12	1902	3	.....	.....	24	6	8	117.4
July	24.1	35.7	?	1887	11.6	?	1891	20	.....	.....	22	9	12	183.8
August	25.3	36.7	1,5	1894	15.0	25	1902	26	.....	.....	24	7	13	175.9
September	21.2	32.8	4	1901	7.3	?	1888	4	.....	.....	25	5	8	103.5
October	15.1	29.9	?	1890	— 1.7	?	1889	.....	.....	.....	30	1	4	35.5
November	7.7	21.1	2	1902	—10.3	27	1891	.....	3	.....	28	2	6	38.3
December	0.0	15.0	26	1900	—17.0	29	1901	.....	15	8	27	4	11	35.0
Year	11.6	.....	.....	.....	.....	.....	.....	54	57	40	310	55	100	911.8

Manchuria. On receiving them, all the stations immediately display the warning by proper signals on the mast which is painted red and white alternately. Fuller information is obtainable at the signal stations.

The cautionary signals now employed are as follows:

A. Day signals.

a. Red ball indicates that the coast is warned of the approach of threatening weather.

b. Red cylinder indicates the expectation of stormy weather.

c. Red cone announces the approach of cyclonic storm of great intensity.

d. White double cone is hoisted when severe storm is expected in some other districts.

B. Night signals.

a. Red light is employed for a ball.

b. Green light for a cylinder.

c. Green light above a red one for a cone.

d. White light for a double cone.

NOTES AND EXTRACTS.

DR. JULIAN APARICIO.

The death of Dr. Julian Aparicio, who for the past ten years has rendered very important services to science as Director of the National Observatory, San Salvador, Central America, is announced by his successor, Dr. Santiago I. Barberena.

The annals of this observatory have been published rather irregularly. The volume for 1895 appeared in 1901, containing 53 folio pages and giving the observations in extenso. The late director, Julian Aparicio, C. E., was the successor of Dr. A. Sanchez, who seems to have begun in 1891 the regular daily publication of observations in extenso followed by an annual summary, so that the volume for 1894 included 62 pages. A summary of the observations for 1892 is given in the Meteorologische Zeitschrift for 1895, page 228. These publications seem not to be very widely disseminated and a general review of the climatology of San Salvador would be a very welcome contribution to the MONTHLY WEATHER REVIEW.

PIETRO TACCHINI.

Prof. Pietro Tacchini, Chevalier of the Civil Order of Savoy, was born March 21, 1838, at Modena and died March 24, 1905, at Spilamberto, near Modena. After a broad activity in astrophysics at the observatories of Padua, Modena, and Palermo, he was in 1878 appointed successor to Secchi as director of the Astronomical Observatory at the Collegio Romano [distinct from the Vatican Observatory] and in 1879 director of the general Italian service for meteorology, astronomy, and geodynamics. A large number of special memoirs have been published by him in addition to the important work that he did in organizing and carrying on every branch of work relating to terrestrial physics, i. e., meteorology, magnetics, seismology, vulcanology, oceanology. His personal interest was, perhaps, most especially occupied with solar physics and seismology. In 1870 Tacchini and Secchi united in founding the Society of Italian Spectroscopists.

In 1882 he succeeded Cantoni as a member of the International Meteorological Committee, and remained prominently associated therewith until the termination of his official meteorological career in 1900, when he retired from public office and devoted his time to solar observations.

Tacchini was the first organizer and director of the Ufficio Centrale di Meteorologia, to which geodynamics was subsequently added, and that institution was largely built up through his efforts. It will also be remembered that the founding of the astrophysical observatories of Catania and Etna was due to his initiative. In 1871 he first pointed out to the Italian Government the desirability of establishing an astrophysical and meteorological observatory on Etna, and the necessary authority was finally obtained in 1878. Instead of one observatory, Tacchini established two; one near the summit of Etna and the other in the city of Catania, at the foot of the mountain.

For 33 years Tacchini was the director of the Società degli Spettroscopisti Italiani, and the editor of its memoirs. In 1895 he founded the Società Sismologica Italiana.

Although not personally acquainted with Tacchini yet the Editor is able to quote the general testimony of many others as to his remarkably affable character and fairmindedness toward all with whom he came in contact. His enthusiasm was contagious and he inspired all with the desire to do their best in their chosen fields of work. His devotion to pure science influenced the Italian Government to slightly abate its hostility to the Collegio Romano.

ROBERT AUGUST BILLWILLER.

We learn with regret of the death of Prof. Robert August Billwiller on August 14, 1905, at Zurich, Switzerland.

Doctor Billwiller was born August 2, 1849. He studied in Basle, Zurich, Göttingen, and Leipsic. As the outgrowth of his enthusiastic work at the Observatory of Zurich during 1872–1881, where he had, among other things, introduced daily telegraphic reports and forecasts in 1878, there resulted the formation of the Central Meteorological Institute of Switzerland in 1881, with himself as director—an institution that represented the whole Republic—25 annual volumes of its annals have been published. Billwiller also organized the Swiss Alpine Club which, in 1882, established the famous mountain station on the summit of the Säntis, and maintained it until the expense was undertaken by the State. Since 1891 Billwiller has been an active member of the permanent committee of the International Meteorological Congress. His life and influence were devoted to the development of meteorological observations and research.

TORNADO AT CARBONDALE, PA., AUGUST 30, 1905.

Immediately after the tornado of August 30 at Carbondale, Pa., Mr. William M. Dudley, official in charge at Scranton, which is about sixteen miles southwest of Carbondale, issued a circular of inquiry and compiled a description from which we make the following extracts. He also obtained a special report, with photographs, by Mr. F. B. Hamilton. Three of the latter we reproduce. These views show the main points of interest in Dundaff or the western part of Carbondale.

Carbondale, Pa., a town about sixteen miles to the northeast of Scranton, Pa., was visited by a tornado of marked severity at about 8:30 p. m. The funnel-shaped cloud, from which vivid lightning played, moved across the northern portion of the city mostly, but its general course was from the southwest to the northeast, covering a track 2 miles in length and from 25 to 200 yards in width. Most of the damage was done in the northwest and northeast portions of the city. It is estimated that about 30 houses, barns, and sheds were blown down. A number of buildings were unroofed, some roofs being blown as far as 600 feet distant, causing the streets in the path of the storm to be littered with débris. Trees blown down fell to the eastward. From responses to a circular letter issued to the surrounding country, the information is gathered that this storm was confined to Carbondale, Pa., although rain, with high north to west winds and vivid lightning, occurred at a number of points in the vicinity. In most instances the rain was light.

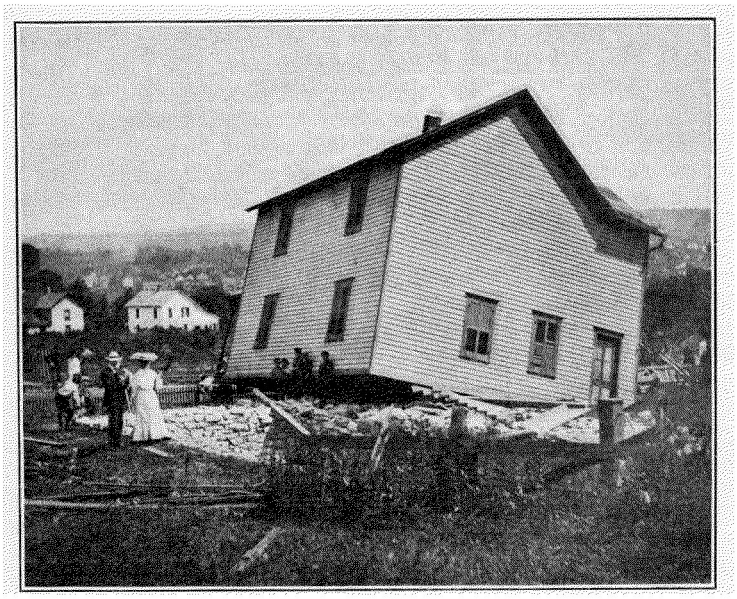

FIG. 1.—This view shows a dwelling situated on a street at right-angles to 42d street. The dwelling was moved in line with the direction of motion of the tornado. The fact that the chimney stands would suggest good construction.

FIG. 2.—This is a front view of the house shown in the preceding figure. The fronts are on the lee side, both buildings have moved in the line of storm travel, both have been moved from their foundations and both have moved toward each other. This suggests the possibility that the storm center may have passed between the houses and moved them inward by suction. The picket fence in the foreground which is overturned consisted of posts set into heavy stone anchors.

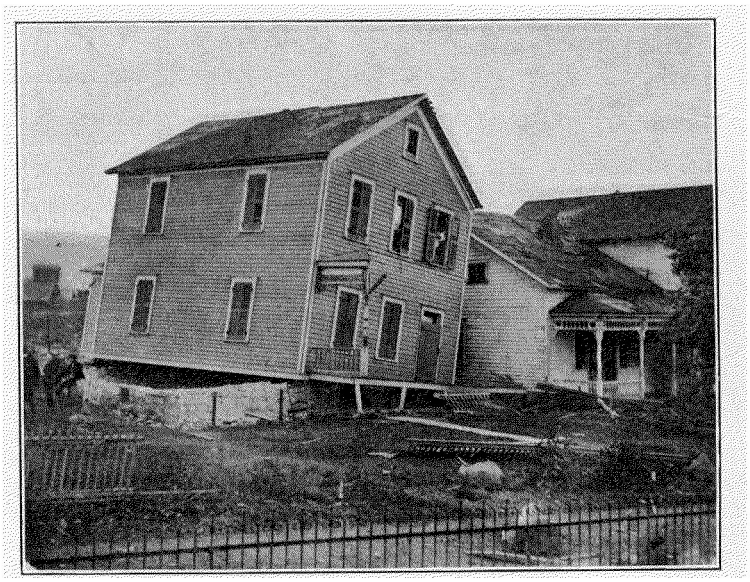

FIG. 3.—This house faces the wind and the view was taken from the side of the house on the opposite side of the street and which was damaged in a manner similar to the house at the right. This might suggest that the tornado had a bounding movement.

At Scranton, Pa., at this time, vivid lightning was observed to the north, and a light sprinkle of rain fell from 8:50 to 9:50 p. m. to the amount of .01 of an inch. No special characteristics were observed here, the barometric pressure at 8 p. m., while low, 29.64 inches, continued even, and there was no noticeable increase in the wind velocity.

Mr. W. S. Bonham, postmaster at Simpson, Pa., just a few miles to the northeast of Carbondale, Pa., writes as follows: "The tornado commenced at Old Saw Mill on Fallbrook Road, one mile west of Carbondale, Pa., tearing it down completely. Then it took an easterly course over a hill to 42d street, tearing down and completely demolishing one house, furniture and all. The storm continued eastward in its track, upsetting and taking off their foundations five or six other houses. Continuing in its eastward track to the Delaware and Hudson and Erie Railroad yards, upsetting loaded cars of coal, tearing off roofs of two box cars and upsetting same; also took roof off company's barn and two Delaware and Hudson offices in yard. The storm then crossed the Lackawanna to the