The greatest number of fatalities at a single stroke was five. There was a single case of four deaths from a single stroke, two cases of three deaths and quite a number of cases of two deaths per stroke.

At least a dozen persons, mostly women, were killed either in the act of stripping clothes from a wire clothesline or by coming in close proximity thereto during a thunderstorm. The existence of a wire clothesline joining a neighboring tree and the corner of the house is a source of danger. If wire is used at all, it should not, under any circumstances, be stretched within 50 feet of a dwelling house.

Persons in a house during a thunderstorm should avoid chimneys and open windows. The middle of the room is probably the safest part. In the open, persons should never seek the shelter of trees. Wire fences and live stock should be avoided. If on horseback, it would be well to dismount and wait until the storm passes.

The number of deaths by lightning for each month of 1899, in each State and Territory, is shown by the figures of Table 1. The greatest number of fatalities in a single State, 56, occurred in Pennsylvania; the next greatest, 41, in Illinois. The greatest number of injuries in a single State, 124, also occurred in Pennsylvania; the next greatest, 103, in New York. In the last-named State the ratio of killed to injured was 1:4.5. In Illinois, on the other hand, more people were killed than injured, the ratio being 1:0.83. The ratio of killed to injured for the whole country was 1:1.46.

The greatest increase in the number of fatal cases in 1899, as compared with 1898, occurred in Illinois. There were also material increases in Pennsylvania, Ohio, North Carolina, Minnesota, and Michigan. The largest decreases were noted in Texas, New York, and Alabama.

TABLE 1.—*Deaths in the United States by lightning in* 1899.

States and Territories.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Annual.
Alabama					1	1		4			1		7
Arizona						1	1	1	1				4
Arkansas					5	6	1	2					14
Colorado					1	5	2	1					9
Connecticut			1			1							2
Delaware						2							2
Florida						1	1		1				3
Georgia					3	3	4	2					12
Idaho								1					1
Illinois				1	18	6	4	9	3				41
Indiana					3	9	10	1	4	1			28
Indian Territory					1	2							3
Iowa						8	3	6			1		18
Kansas					2			3	2				7
Kentucky			2		3	3	1	5	1				15
Louisiana			1	1		1	1	4					8
Maine							5						5
Maryland		1			3	1	2	7					14
Massachusetts			1	1	6	2	1						11
Michigan				3		6	9	1	2				21
Minnesota					1	4	6	10	3				24
Mississippi					3			1					4
Missouri					5	4	2	3	2				16
Montana						2	4	2	1				9
Nebraska					5	4	7			1			17
New Hampshire								1					1
New Jersey							2	2	1				5
New Mexico							3	1					4
New York				1		5	8	7	2				23
North Carolina			3			6	5	1	4				19
North Dakota						2	2		1				5
Ohio					7	9	6	9	3				34
Oklahoma					3	2	2	2	1				10
Pennsylvania					17	13	9	13	4				56
South Carolina			1			3		7	1				12
South Dakota						1	3	9					13
Tennessee			1		2	4	4	5	1				17
Texas	3		1	3	1	4	3	2		2			19
Vermont						1	2	1					4
Virginia					7		3		1				11
West Virginia				2	5	2	2	2	1				14
Wisconsin				1	4	4	1	7	1				18
Wyoming						2							2
Cuba						1							1
Total	3	1	10	11	108	128	120	133	43	2	4		563

No definite conclusions can be reached as to the cause of the increase in one region as compared with another. The number of thunderstorm days in Nebraska, Iowa, Minnesota, Wisconsin, and Michigan, in 1899 was considerably greater than in the preceding year, and there was also an increase in the number of deaths by lightning. In Pennsylvania, however, where the increase in deaths in 1899 over 1898 was about 140 per cent, there was a less number of thunderstorm days in 1899 than in 1898. In 1898 the number of fatalities in New York State was 36; thunderstorm days, 135. In 1899 the fatalities were 23; thunderstorm days, 121. The fatalities for Pennsylvania in 1898 were 23; thunderstorm days, 142. The fatalities in 1899 were 56; thunderstorm days, 129. It would seem, therefore, that the number of fatalities by lightning in any region is not a direct function of the number of thunderstorm days.

In both Pennsylvania and Illinois, where the increase in deaths in 1899, as compared with 1898, was most pronounced, there was an exceptionally large number of fatal cases in May, as may be seen by Table 1. In Illinois there was a large number of severe storms during that month; in Pennsylvania there were two severe storms in the western part of the State, but the month as a whole was not unusually productive of thunderstorms.

TABLE 2.—*Number of persons in the United States injured by lightning in* 1899.

States and Territories.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Annual.
Alabama			1				2	2					5
Arkansas					2	4							6
California										1			1
Colorado							1	1					2
Connecticut			3			7	14	3	1				28
Dist. of Columbia								2					2
Florida						3			1				4
Georgia		2			2	1		1					6
Illinois					7	4	3	18	2				34
Indiana			3			17	12	6	9				47
Iowa						10	8	5		2			25
Kansas						1	2	4					7
Kentucky			4			3	2	2					11
Louisiana			1			1							2
Maine			1		1	11	13	1					27
Maryland					2	4	5	3	1				15
Massachusetts			3	2		14	5	2					26
Michigan				1	6	17	9	4	2	2			41
Minnesota							4	1		1			6
Mississippi							4	3					7
Missouri		2			3	9	7	3	1				25
Montana						2	2						4
Nebraska					2	3	6						11
New Hampshire						8	1	1	1				11
New Jersey	2				1	5	24	8					40
New York				2	4	23	56	18					103
North Carolina			4			1	4	3					12
North Dakota							1	5					6
Ohio			8	1	23	21	18	14	4				89
Oklahoma						7		2					9
Pennsylvania			1	9	20	30	33	23	8				124
Rhode Island								1					1
South Carolina								1					1
South Dakota				2			3	6					11
Tennessee		3	5			4		2					14
Texas					12		1						13
Utah							1	1					2
Vermont							4		1				5
Virginia					1	3		2					6
West Virginia						2	5	1	3				13
Wisconsin				2	3	4		6	1				16
Wyoming								2					2
Total	2	7	34	19	91	222	247	157	35	6			820

Injured.—In houses, 453; in the open, 161; in barns, 82; under trees, 45.

HURRICANES OF 1895 AND 1896 IN THE PHILIPPINE ARCHIPELAGO.

By F. O. STETSON.

The Manila Observatory has published a volume of 112 folio pages (Tifones del Archipiélago Filipino y Mares Circunvecinos, 1895 y 1896. Estudio de los Mismos por el P. Juan Doyle, S. J., Sub-Director Del Observatorio, Manila, 1899) containing a careful account of the cyclones of the Philippines and adjacent waters during 1895 and 1896. While there is no attempt