cent., or $24,000; Fireman's Fund, 17 per cent., $51,000; Home Mutual, 12 per cent., $36,000; State Investment, 24 per cent., $48,000; Union, 15 per cent., $112,000, and Western (one month's business), 1 per cent., $2,000. The Pacific Mutual Life Insurance Company, whose headquarters are at Sacramento, had 2,130 policies in force at the close of 1879, aggregating $5,760,131, upon which $159,574 in premiums had been paid. In the last year it wrote 631 new policies, insuring $1,845,801, for a premium of $95,378. The ten companies reporting (including the Pacific Mutual), had in force in this State, December 31, 1879, 14,694 policies, insuring $43,569,322 88, for a premium of $1,421,957 75.

The returns of all the companies doing a fire insurance business in this State may be summarized as follows: Seven home companies had, December 31, 1879, $60,599,084 86 risks; $838,699 premiums, and had paid during the year $264,912 losses. Fifty-nine Eastern companies, $59,082,215 15 risks; $964,995 premiums; $259,838 89 losses. Twenty-four foreign companies, $105,983,539 83 risks; $1,592,637 21 premiums; $585,592 68 losses. Doing a marine insurance business, five Callfornia companies wrote during the year, $13,597,037 risks, for $323,154 premiums, and paid $183,740 losses. The twenty-seven Eastern and Foreign companies wrote $61,717,884 risks, for $986,724 premiums, and paid $180,663 losses.

Meteorological Observations made at San Francisco, from Nov., 1850, to Jan. 1880.

BY HENRY GIBBONS, SR., M.D.

In the following tables the reader will find, in a condensed form, the results of twenty-nine years' diligent observation of the climate of San Francisco, with more particular reference to rain.

Rain has fallen in every month of the year. In July it has rained only in two years; August has furnished rain in five years; June in eight years; September in fourteen years; October in twenty-one years. No account is made of a mere sprinkle, nor of the deposit of summer mist. The greatest quantity of mist which ever falls in twenty-four hours is about three hundredths of an inch. But this quantity is very rare. Near the ocean the mist is much more copious.

The driest season was 1850–51, which gave only seven inches. Next to that was 1863–64, with eight and one-half inches. The winter of 1867–68 gave the most rain—forty inches. The average is between twenty-one and twenty-two inches.

The earliest setting in of the rainy season was October 8; the latest, January 12. An early beginning and an abundant supply are apt to go together, but there is no rule in this respect—the latest beginnings have been followed by an average supply.

The average date of the beginning of the rainy season is November 28; of the termination, April 10. March is as certain to bring rain in liberal amount as any other month. In one year out of every three there is no rain of importance after March. The last showers of the season come, with remarkable uniformity, about the third week of May.

The middle of Jauuary is the average dividing point of the rainy season. The mean quantity before January 1 is about equal to the mean quantity after January 31.

December gives the greatest average quantity; January is not far behind; February, March, and November come next, and are nearly alike; then April, May, and October, in the order named. The mean annual supply for twenty-nine years is 22 inches.

The greatest amount of rain in any one month was in January, 1862, when there fell the enormous quantity of eighteen inches.

The most extraordinary summer rain was in June, 1875, when 1.11 inches fell during a southerly storm which lasted several days. That this was an anomaly is made apparent by the fact that in the three summer months during twenty-nine years the whole quantity of rain, collectively, deducting this, was less than two inches.

It is worthy of note that in the driest seasons there has been an abundant supply for agricultural purposes, had it been distributed evenly. Three inches in December, with one inch in each of the four following months, would produce full crops.

The rain table of San Francisco may be made the basis for estimating the fall in other parts of the State. The mountains of the north have from two to three times as much, and the southern section of the State about half as much, or even much less in some localities. The valley of the Sacramento has nearly the same quantity as San Francisco; that of the San Joaquin only half as much in the northern section, and still less in the southern.

By reference to the tables showing the extremes of heat and cold, it appears that the coldest weather was in January, 1854, when the mercury fell to 25°. At that time the mud in the streets was frozen solid, and the shallow ponds were covered with ice strong enough for boys to skate on. But such weather is extremely rare, though since that time the ground has been frozen several times so as not to thaw fully in the shade for several days. The coldest noonday embraced in the record was 37°. Often the entire winter passes by without bringing the thermometer so low as the freezing point. In 1853 it fell at no time below 40°.

The extreme of heat was on the tenth and eleventh of September, 1852, when the ther-