

Toner (J. M.)

CONTRIBUTIONS TO THE STUDY OF YELLOW FEVER,

A PAPER READ BEFORE

THE AMERICAN PUBLIC HEALTH ASSOCIATION,
NEW YORK, NOVEMBER 12, 1873,

ON THE

NATURAL HISTORY AND DISTRIBUTION

OF

YELLOW FEVER

IN

THE UNITED STATES,

WITH

CHART SHOWING ALL THE LOCALITIES, AND THE ELEVATION OF EACH PLACE ABOVE SEA-LEVEL,
WHERE IT HAS APPEARED,

FROM

A. D. 1668 to A. D. 1874,

BY

J. M. TONER, M. D.



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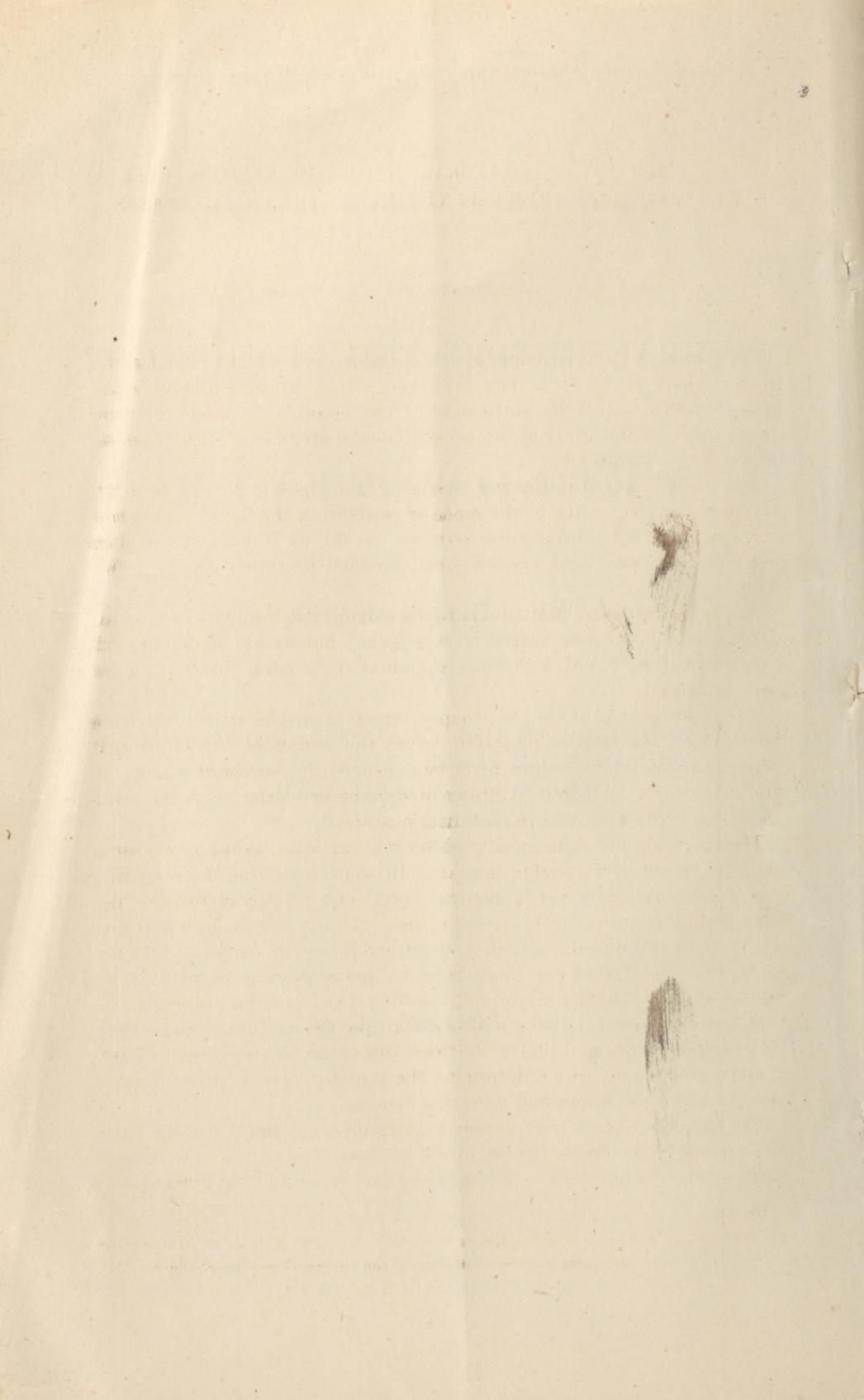
FROM

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THE DISTRIBUTION AND NATURAL HISTORY OF YELLOW FEVER AS IT HAS OCCURRED AT DIFFERENT TIMES IN THE UNITED STATES.

BY J. M. TONER, M. D.,
President of the American Medical Association, Washington, D. C.

THE map which accompanies this paper, and which indicates the region where yellow fever has prevailed, either in an epidemic or in a sporadic form since the settlement of our country, is made up from notes taken in the study of the geographical distribution of the diseases of the United States.*

No special opportunities for studying the disease in question are claimed, nor originality in the mode of presenting the facts. Nevertheless, the map is believed to be accurate as far as it goes, if the data derived from past and contemporary medical literature can be relied upon.

Nor is it pretended that this paper is exhaustive, localities not named having, no doubt, been visited by this fever; but we are confident such localities will be found within the region of its general distribution, as here indicated.

The table accompanying this paper, which furnishes mainly the data upon which the map is projected, gives the names of the cities and other localities where yellow fever has occurred in our country from its first settlement, arranged by States in alphabetical order, with the years and dates of its appearance and disappearance.

The elevation of each locality above the sea-level, as far as possible, has been given from reliable sources. In some instances the elevation of a place is assumed from a general knowledge of the altitude of the surrounding country. The errors in these, if any, will be unimportant.

The influence upon localities of elevation above the sea-level, with the exemption from yellow-fever they seem to thence possess, is the view we here wish to call to the attention of sanitarians and of the profession.

We are inclined to give much weight to the theory that diseases have geographical areas and limits, modified somewhat by topographical and climatic conditions, which determine the types of disease as do climate and elevation the fauna and flora of a locality.

The fact has always been patent to the profession, that there are parts of the earth in which particular forms of disease occur, to the almost entire exclusion of others. The study of the causes of this difference is

* The map herewith published is projected from a large one, 8 by 10 feet in size, for the execution of which Dr. TONER desires to express his indebtedness to the kindness of the Hon. WILLIS DRUMMOND, Commissioner of the United States Land Office.—W.

as important as any that can engage the attention of the physician. As a simple factor elevation will, we apprehend, be found to possess qualities both preventive and curative.

We shall in this paper studiously avoid discussing the questions whether yellow fever is a specific disease or not; whether it is always imported; or whether under certain conditions it may originate within our own country.

Nor do we aim to speak as an expert, never having seen a case of yellow fever, but rather appear as a collator of facts in its history. At the present time the natural history of disease, if we may so use the term in describing the special characteristic distribution of diseases that exist in limited geographical areas, is attracting much attention. There can be no doubt that an accurate knowledge of the climate and other physical peculiarities, and of the prevailing meteorological conditions of a region, will greatly aid the sanitarian and physician in preventing sickness, and in treating successfully the diseases incident to a locality.

The more exact and extended this information becomes, the more definitely can physicians mark out the boundaries and the distribution of diseases over the globe, and suggest measures of relief.

The chief factors usually and most naturally taken into account in the study of the salubrity of a State, or even a city, are latitude, longitude, the extremes of heat and cold and mean annual temperature, the prevailing direction of the winds, the general humidity of the air, and the annual precipitation, drainage, etc.

These undoubtedly furnish most valuable information, but there is another important element, that of elevation, which has the power to intensify or counteract the influence of most of them.

The most insalubrious regions are, confessedly, the savannas and tide-water lands of the tropic and temperate zones. The impression is quite general that persons of the same nationality, living on mountains or high table-lands are more rugged and healthy, as a general rule, than their friends engaged in similar occupations on the low lands in the same latitude.

The accompanying map enables us, in a comprehensive way, to consider the question whether elevation has presented any barrier to the progress of yellow fever in the United States, by bringing all localities where it has prevailed, with their altitudes, before the eye at one time.

The fact will be patent to any one that the low lands of the Gulf States and the Atlantic coast, with the water-courses emptying into them, are the regions of its most frequent visitations in the United States.

The conceded home of yellow fever is in the West Indies and the Bahamas, with a portion of the adjacent continents of North and South America. A square formed by the forty-fifth and the one hundredth degrees of longitude, and the thirty-fifth north and the fifth south latitude, will include the favorite region of this disease.

Although originating within the square named, history shows that it may prevail on the sea-coast in any locality within the tropics, north and south of the equator, where malarial fevers prevail, and the daily average of the thermometer is over 75° or 80° with a high dew-point for weeks or months together.

If these latter conditions, however, were the only ones necessary to the development of this disease, it should prevail much more widely; for they exist, during parts of the summer at least, in almost all of our Atlantic cities, as may be seen by reference to the record of temperature shown by the admirable isothermal maps in Lorin Blodgett's *Climatology*.

There are, no doubt, other climatic conditions essential to its origin, if not to its propagation and spread. Once the disease has become epidemic in a place, it can exist at a much lower average daily range of the thermometer than seems to be required for its development.

It is, however, always controlled in its severity and checked in its spread, or entirely arrested by storms, heavy rains, and, most effectually, by frost. This has been exemplified by the polar waves, or "northerns," that occasionally blow from the Arctic regions down over Texas, and by long-continued rains.

Yellow fever does not prevail in the East Indies nor in China. It has appeared in most of the maritime cities of the United States on the Atlantic coast, as far north as Boston, and indeed has been chronicled at Quebec and Halifax. But while it is true that it has thus visited many of the cities and towns on the sea-coast, it has, fortunately, never extended far into the interior of our country.

In the United States, it seems to prevail in the large sea-ports and in localities along the navigable water-courses having their outlet in the Gulf of Mexico. Dr. Drake, many years ago, observed that while the disease had appeared at almost every town on the Mississippi, as far up as Vicksburg, that Woodville, twelve miles from the river, was the most remote inland point it had reached. During the late epidemic at Shreveport, a number of deaths occurred, according to the report of the Howard Association, at points outside the city limits—distances from the city not given. The places named are Caddo Parish, Marshall, Greenwood, and Summer Grove.

The same accurate observer (Dr. Drake,) remarks that yellow fever is eminently a disease of cities rather than of rural districts, and of villages rather than of scattered country dwellings. It has been shown that towns of small population are less liable to suffer than larger ones, and the same town within the yellow-fever zone, as its population increases, is more likely to suffer than when its population was less. Hence density of population, or proximity of numerous individuals approaching to crowding, is believed to be a factor of no small influence in the propagation and spread of the disease.

Its appearance in a locality is generally coincident with bilious intermittents, and the first cases are said always to occur near the water in the lowest and most insalubrious places.

It has been observed that its epidemical limits coincide with the range of the growth of the live-oak, the cypress, and the long mosses. Certainly the regions of our country most frequented by this disease are particularly low and flat, with numerous rivers and much marsh and swamp lands, as may be inferred from the localities and their elevations marked on the map. These low lands are to a considerable extent covered with the cypress, long-leaved pine, and other indigenous trees, with thick undergrowth when in an unredeemed or natural state. The northern limit of the growth of the cypress is not much north of Norfolk.

Yellow fever has been considered by nearly all writers a distinct disease from the autumnal remittent fevers of the temperate zone. All agree that it is indigenous at Vera Cruz on the Gulf of Mexico. When we examine into the climatic conditions of this locality, nothing special or satisfactory as an explanation of the peculiarities and origin of the disease has been discovered.

Protracted average high temperature is a constant factor there, but this of itself is deemed insufficient. The time has, perhaps, not come, if it ever does, for the discovery of all the elements entering into its development.

No doubt there are numerous undiscovered factors and conditions, essential to its existence and present in varying intensity, in different years, and which greatly add to its rapid spread and virulence. The mortality from the disease at the same place is much greater in some seasons when the conditions of heat and moisture are apparently the same. Again, extreme heat and dryness stop the epidemic, as do heavy and protracted rains.

As we have already stated, the conditions of long-continued heat, averaging over 75° throughout the twenty-four hours, and great humidity exist almost constantly during the summer in the Gulf States. Occasionally during the summer season, for months together, this condition of high temperature, but with less moisture, may exist in many of the coast cities of our country, as far north as Boston, and yet rarely ever are these cities visited by this disease in an epidemic form.

Is the exemption of these more northern coast cities due alone to climatic conditions, or are they in part exempted by sanitary and quarantine regulations? Yellow fever is almost annually reported on vessels at the quarantine stations, where it is fortunately arrested and prevented from entering the cities. In the table of the localities where the disease has prevailed, no distinction has been made between the city proper and the quarantine stations which, in a more careful study, should be made.

The average annual distribution of moisture throughout our country is made manifest by a glance at Chas. A. Schott's Tables and Results of

the Precipitation in Rain and Snow, published in 1872 by the Smithsonian Institution, a most valuable contribution to knowledge in this direction. The humidity in the atmosphere is relative to the season, and, as is well known, the absolute humidity is greater in the summer than in the winter, warm air having a greater capacity to contain moisture than cold air, as the following table from Professor Guyot will show. This table expresses, in troy grains, the weight of vapor contained in a cubic foot of saturated air at the stated temperatures of Fahrenheit:

Temperature of air.	Vapor in grains.	Temperature of air.	Vapor in grains.	Temperature of air.	Vapor in grains.
0°	0.545	63°	6.361	80°	10.949
5	0.678	64	6.575	81	11.291
10	0.841	65	6.795	82	11.643
20	1.298	66	7.021	83	12.005
30	1.968	67	7.253	84	12.376
32	2.126	68	7.493	85	12.756
40	2.862	69	7.739	86	13.146
45	3.426	70	7.992	87	13.546
50	4.089	71	8.252	88	13.957
55	4.860	72	8.521	89	14.378
56	5.028	73	8.797	90	14.810
57	5.202	74	9.081	91	15.254
58	5.381	75	9.372	92	15.709
59	5.566	76	9.670	93	16.176
60	5.756	77	9.977	94	16.654
61	5.952	78	10.292	95	17.145
62	6.154	79	10.616	96	17.648

To see how far the conditions of a higher than ordinary average of temperature and a greater degree of humidity may have existed in Memphis and Shreveport during the prevalence of the epidemic of the past summer, we have been enabled, through the courtesy of General Myer, to tabulate the returns, nearly complete, made from Memphis to the United States Signal Bureau for the months of August, September, October, and November, 1872 and 1873. The former year, being healthy at this place, is included for the purpose of contrast. The meteorological tables for Shreveport are compiled from the observations furnished by Dr. J. L. Moore, of Shreveport, the regular observer for the Smithsonian Institution at that point. In addition to the ordinary observations, Dr. Moore gives the daily number of deaths occurring from yellow fever, which, for convenience, is placed in a parallel column on the side of the meteorological table, and on the line of the other daily observations. For Shreveport we are not able to give the observations in 1872 for contrast:

TABLE SHOWING THE METEOROLOGICAL CONDITIONS OBSERVED AT SHREVEPORT,
LA., DURING THE YELLOW-FEVER EPIDEMIC OF 1873.

Compiled from the Register of Meteorological Observations under the direction of the Smithsonian Institution, J. L. Moore, M. D., Observer, to which is added the daily Number of Deaths from Yellow Fever.

[SHREVEPORT: County of Caddo, State of Louisiana; latitude, $32^{\circ} 30'$ north; longitude, $93^{\circ} 45'$ west; height above the sea-level, 228.52 feet.]

Day of month.	Thermometer in the open air.	Amount of cloudiness.	Winds.*									Barometer re- duced to freez- ing-point.	Relative hu- midity or frac- tion of satura- tion.†	Deaths from yellow fever.		
			7 a. m.			2 p. m.			9 p. m.							
			7 a. m.	2 p. m.	9 p. m.	7 a. m.	2 p. m.	9 p. m.	Direction.	Force.	Direction.	Force.				
Aug. 1	79	88	81	82 $\frac{1}{2}$	.....	4-4	1-2	3-4	S.W.	5	S.	5	0	0	30.111 .86 .55 .83 ..
2	80	89	84	84 $\frac{1}{2}$	.....	1-4	4-4	0	S.W.	6	0	0	0	30.068 .82 .53 .79 ..	
3	80	90	85	85	.01	1-2	3-4	1-4	S.W.	7	N. W.	5	N.	1	30.083 .82 .53 .79 ..	
4	80	80	79	79 $\frac{1}{2}$	.40	3-4	4-4	1-4	E.	6	N. E.	12	0	0	30.132 .78 .78 .87 ..
5	74	84	76	78 $\frac{1}{2}$	.....	3-4	3-4	0	N. E.	8	N. E.	7	N. E.	5	30.135 .76 .53 .69 ..
6	74	87	81	80 $\frac{1}{2}$	.....	1-4	1-2	1-4	N. E.	6	N. E.	7	N.	5	30.065 .72 .45 .70 ..
7	80	81	80	80 $\frac{1}{2}$	.....	4-4	4-4	1-2	0	0	E.	5	0	0	29.996 .78 .55 .82 ..
8	78	88	77	81	.....	13	0	4-4	S.E.	1	0	0	E.	2	29.994 .73 .52 .77 ..
9	77	87	81	81 $\frac{1}{2}$	.11	1-4	3-4	3-4	E.	5	E.	7	E.	1	30.055 .82 .55 .78 ..
10	76	87	80	81	.....	4-4	3-4	4-4	E.	2	E.	8	E.	1	30.103 .91 .58 .82 ..
11	81	90	83	84 $\frac{1}{2}$	.....	1-2	3-4	0	N. E.	4	S.E.	8	N.	4	30.031 .78 .00 .71 ..
12	82	91	81	84 $\frac{1}{2}$	.....	3-4	3-4	4-4	N.	2	E.	5	E.	4	30.038 .79 .57 .78 ..
13	78	91	85	84 $\frac{1}{2}$	.....	3-4	3-4	1-2	S.W.	6	S.W.	7	S.W.	2	30.014 .86 .54 .72 ..
14	80	90	76	82	.60	3-4	3-4	1-2	0	S.W.	7	0	0	29.971 .82 .56 .91 ..		
15	76	91	77	81 $\frac{1}{2}$	.24	3-4	3-4	4-4	N.	4	S.E.	8	S.E.	8	29.895 .94 .00 .91 ..
16	75	89	79	79 $\frac{1}{2}$	.....	4-4	4-4	3-4	N. E.	4	N. E.	4	0	0	29.939 .90 .68 .87 ..
17	76	82	79	79	.05	4-4	4-4	1-2	N.	8	N.	5	N. E.	5	29.937 .91 .83 .78 ..	
18	78	85	79	80 $\frac{1}{2}$	.....	1-2	1-4	0	N. E.	5	N. E.	6	0	0	30.062 .69 .41 .70 ..
19	77	85	79	80 $\frac{1}{2}$	.....	1-4	1-2	1-4	N. E.	1	E.	4	0	0	30.043 .69 .44 .66 ..
20	76	85	81	80 $\frac{1}{2}$	.....	3-4	1-2	1-4	E.	1	S. E.	4	S. E.	4	29.961 .73 .47 .67 ..
21	76	82	79	79	.....	1-4	1-4	0	S.W.	1	N.	7	E.	2	29.969 .77 .43 .78 ..
22	79	86	79	81 $\frac{1}{2}$	.....	1-2	3-4	0	0	E.	7	N. E.	2	30.029 .74 .46 .74 ..	
23	76	86	79	80 $\frac{1}{2}$	.....	3-4	3-4	0	E.	2	E.	5	0	0	30.076 .88 .58 .82 ..
24	81	88	84	84 $\frac{1}{2}$	.....	0	1-2	1-4	S.	2	N. W.	5	0	0	30.107 .70 .49 .75 ..
25	81	90	83	84 $\frac{1}{2}$	.....	0	1-2	1-2	S.	1	N. E.	4	0	0	30.037 .74 .50 .75 ..
26	79	90	77	82	.....	3-4	3-4	3-4	W.	6	N.	4	S.W.	2	30.020 .78 .53 .82 ..
27	78	91	85	85	.....	0	1-2	0	S.W.	1	N. E.	1	0	0	30.016 .78 .51 .68 ..
28	78	91	81	83 $\frac{1}{2}$	.....	1-4	1-4	1-4	W.	4	N. W.	2	S. E.	2	30.053 .73 .54 .70 ..
29	79	84	80	83	.05	0	3-4	0	S.W.	1	0	0	S. E.	4	30.118 .74 .08 .87 ..	
30	80	91	84	85	.....	0	1-2	0	S.	2	S.	5	S.W.	6	30.175 .82 .48 .64 ..
31	80	89	82	83 $\frac{1}{2}$	.....	0	1-2	1-4	0	0	0	0	S. E.	1	30.133 .74 .50 .71 ..

REMARKS.—Normal summer-heat for this latitude prevailed during the month; mean temperature $82^{\circ}.36$; highest at 2 p. m., 91° on the 12th, 13th, 15th, 27th, 28th, and 30th; lowest, 80° on the 4th. Force of wind remarkably uniform and moderate, scarcely rising at any time above the degree of "gentle." *Yellow fever*: The first death from yellow fever in Shreveport this summer was observed on the 20th day of August, which date proved the beginning of the epidemic of 1873. Total deaths from the disease during the month, 29.

* The force is estimated and registered by figures from 1 to 10, as in the first column of the following table. The figures in the last column, expressing the number of miles per hour, are used in the above.

1. Very light breeze.....	2 miles per hour	6. Gale.....	45 miles per hour.
2. Gentle breeze.....	4 do.	7. Strong gale.....	60 do.
3. Fresh breeze.....	12 do.	8. Violent gale.....	75 do.
4. Strong wind.....	25 do.	9. Hurricane.....	90 do.
5. High wind.....	35 do.	10. Most violent hurricane.....	100 do.

† The numbers under the head of "Relative humidity" denote the percentage of saturation; full saturation being indicated by 1, and half saturation by 0.5.

Table showing the Meteorological Conditions observed at Shreveport, La., during the Yellow Fever Epidemic of 1873—Continued.

Day of month.	Thermometer in the open air.	Amount of cloudiness.	Winds.												Barometer reduced to freezing point.	Relative humidity or fraction of saturation.	Deaths from yellow fever.				
			7 a. m.				2 p. m.				9 p. m.										
			Rain-fall, inches.	7 a. m.	2 p. m.	9 p. m.	Direction.	Force.	Direction.	Force.	Direction.	Force.	Direction.	Force.							
Sept. 1	79	86	83	82	82	82	S. W.	4	S. S. W.	5	S. S. E.	0	S. E.	0	30.071	.78	.58	.71	6		
2	78	91	81	83	83	82	1-2	1-2	4-4	5	N. E.	6	N. E.	7	30.042	.82	.45	.70	5		
3	79	93	83	84	84	84	3-4	3-4	1-4	10	N. E.	12	N. E.	8	30.022	.82	.45	.60	5		
4	78	92	84	84	84	84	3-4	1-2	0	10	N. E.	10	N. E.	4	30.052	.82	.43	.63	12		
5	79	91	85	85	85	85	1-4	1-4	1-2	5	N. W.	5	N. W.	0	30.127	.82	.36	.64	4		
6	77	91	79	82	82	82	3-4	1-2	3-4	1-2	N. E.	6	N. E.	14	30.167	.77	.45	.74	7		
7	74	83	72	76	76	76	01	1-2	3-4	3-4	N.	7	N. E.	8	30.214	.76	.67	.71	10		
8	68	79	71	72	72	72	1-2	1-2	1-4	8	N. E.	10	N. E.	4	30.158	.70	.58	.62	11		
9	67	85	77	76	76	76	1-4	3-4	3-4	5	N. E.	5	N. E.	0	30.074	.69	.51	.73	8		
10	75	87	79	80	80	80	1-2	1-2	1-4	1-2	N. E.	1	N. E.	2	30.065	.77	.69	.70	15		
11	77	87	81	81	81	81	1-4	1-2	1-2	1-2	N. E.	1	E.	4	30.050	.73	.65	.59	18		
12	77	76	73	75	75	75	4-4	4-4	4-4	0	S. W.	6	S. E.	5	29.999	.75	.82	.90	15		
13	69	76	70	71	71	71	1.56	4-4	1-4	0	N. E.	1	N. E.	10	30.076	.90	.64	.80	26		
14	61	69	64	64	64	64	.06	0	0	0	N. E.	7	N. E.	4	30.140	.71	.56	.78	24		
15	64	81	69	71	71	71	0	0	0	0	N. E.	2	S. E.	4	30.121	.68	.41	.85	31		
16	67	83	73	74	74	74	0	1-4	0	0	E.	2	E.	6	0	0	30.107	.74	.30	.67	24
17	69	85	74	76	76	76	0	1-4	0	0	E.	1	N. E.	1	0	0	29.978	.70	.41	.76	18
18	70	87	79	78	78	78	0	1-4	0	0	E.	1	N. E.	0	29.899	.80	.45	.74	19		
19	75	87	72	78	78	78	0	1-2	0	0	N. E.	2	N. E.	1	29.939	.72	.49	.76	16		
20	63	77	69	69	69	69	0	1-4	0	0	N. E.	6	E.	7	30.028	.62	.46	.56	14		
21	63	80	69	70	70	70	.01	3-4	3-4	0	E.	4	E.	7	N. E.	6	30.021	.67	.51	.75	15
22	65	71	68	68	68	68	.05	4-4	1-2	1-4	0	N. E.	10	N. E.	2	30.002	.78	.85	.95	18	
23	66	78	68	70	70	70	0	3-4	0	0	N. E.	5	N.	7	29.970	.89	.54	.84	11		
24	62	83	74	73	73	73	0	1-2	0	0	S. E.	2	S. W.	8	29.866	1.00	.47	.76	10		
25	70	87	75	77	77	77	0	1-2	0	0	S.	4	S. E.	4	29.935	1.00	.62	.77	14		
26	73	83	76	77	77	77	1-4	3-4	4-4	S. E.	6	S.	5	S. E.	5	29.958	.85	.83	.82	15	
27	75	82	74	77	77	77	.48	4-4	4-4	1-2	S. E.	10	S. E.	4	S. E.	5	29.981	.90	.73	1.00	20
28	77	87	80	81	81	81	3-4	1-2	1-2	S. E.	2	S.	4	S.	6	29.928	.91	.62	.82	11	
29	72	76	69	72	72	72	1-2	4-4	4-4	N. E.	13	N. W.	6	N. E.	13	30.066	.95	.82	.95	7	
30	64	74	64	67	67	67	4-4	1-4	0	N. E.	7	N. E.	6	N. E.	7	30.146	.73	.76	.73	7	

REMARKS.—Extremes of temperature during this month : Highest at 2 p. m., 92°, on the 4th; lowest, 69°, on the 14th; mean for the month, 76°.14. Humidity appears much greater than last September. Wind variable in force and direction. *Yellow fever*: Heavy mortality from yellow fever during this month, proving most fatal about the middle of the month, averaging seventy-five per cent. Total deaths from the disease, 406.

Table showing the Meteorological Conditions observed at Shreveport, La., during the Yellow-Fever Epidemic of 1873—Continued.

Oct.	Day of month.	Thermometer in the open air.				Amount of cloudiness.	Winds.						Barometer reduced to freezing-point.	Relative humidity or fraction of saturation.	Deaths from yellow fever.						
		Rain-fall, inches.					7 a.m.	2 p.m.	9 p.m.	Force.	Direction.	7 a.m.	2 p.m.	9 p.m.							
		7 a.m.	2 p.m.	9 p.m.	Mean.																
1	61	75	67	67	67	.....	0	2-4	1-2	N. E.	5	N.	N. E.	7	30.083	.55	.44	.69	8	
2	65	79	71	71	71	.....	3-4	0	N. E.	2	E.	N. W.	1	30.090	.73	.43	.80	11		
3	69	84	77	76	76	.....	0	1-2	0	N. E.	2	S. E.	1	30.028	.75	.54	.69	16		
4	73	88	80	80	80	.....	0	1-2	0	S.	1	W.	0	29.953	.72	.40	.70	7		
5	74	88	80	80	80	.....	0	3-4	1-4	0	0	N. W.	0	29.915	.72	.43	.70	11		
6	61	66	57	61	61	.....	1-4	0	0	N.	18	N. E.	14	N.	10	30.137	.61	.32	.47	12
7	54	64	59	59	59	.....	0	0	0	N.	4	N.	5	0	0	30.136	.55	.34	.70	6
8	54	63	63	61	61	.....	3-4	3-4	0	0	0	E.	6	S. E.	2	30.116	.74	.56	.67	12
9	55	77	69	67	67	.....	0	1-2	1-2	S. E.	1	S. E.	7	S. E.	2	30.129	.81	.61	.75	10
10	64	79	69	70	70	.....	0	3-4	0	0	0	E.	5	0	0	30.178	.78	.47	.75	2
11	65	87	75	75	75	.....	4-4	1-2	0	0	0	N. W.	8	0	0	30.184	.78	.45	.68	3
12	66	74	65	68	68	.....	0	0	0	0	0	N. E.	10	N. E.	1	30.217	.54	.29	.49	8
13	57	73	61	63	63	.....	0	0	0	N. E.	1	E.	2	E.	5	30.163	.63	.34	.71	7
14	56	74	65	65	65	.....	0	0	0	0	0	E.	10	S. E.	4	30.186	.69	.36	.68	7
15	62	79	73	71	71	.....	3-4	1-2	1-4	S. E.	1	S. E.	10	S. E.	4	30.277	.72	.51	.63	8
16	70	77	73	73	73	.....	4-4	4-4	1-2	S. E.	2	S.	4	S. E.	1	30.190	.90	.77	.81	5
17	69	80	75	74	74	0-1	1-2	3-4	4-4	S. E.	4	S. W.	8	S. E.	8	30.040	.80	.87	.78	7
18	67	73	59	65	65	L. 17	4-4	1-2	1-4	N.	12	N.	8	N.	14	30.106	.95	.53	.70	2	
19	50	60	52	54	54	.....	0	0	0	N.	5	N.	18	N. W.	2	30.253	.65	.29	.60	7
20	46	70	56	57	57	.....	0	0	0	W.	2	N. W.	7	N. E.	2	30.073	.77	.36	.81	5
21	49	71	65	61	61	.....	0	1-2	0	S. E.	2	S.	18	S.	7	29.860	.78	.49	.63	3
22	63	68	50	60	60	L. 00	4-4	4-4	4-4	S. E.	2	S. W.	13	N. W.	7	29.969	.89	.95	L. 00	4	
23	41	49	47	45	45	L. 06	4-4	4-4	0	N.	8	N. E.	8	N. E.	4	30.193	.91	.93	.85	6	
24	39	53	48	46	46	.....	0-1	1-4	1-4	N. E.	4	S. E.	4	E.	6	30.246	.91	.80	L. 00	3
25	48	63	63	57	5785	4-4	4-4	4-4	E.	5	S. E.	4	S. E.	4	30.133	1.00	.83	.94	2
26	68	78	61	69	69	.....	4-4	4-4	4-4	S.	5	S. W.	5	N. W.	12	29.936	1.00	.91	.77	5
27	45	60	54	53	53	.....	3-4	1-4	0	N. W.	4	N.	5	S. W.	4	30.083	.84	.39	.61	5
28	37	47	40	41	41	.....	0	0	0	N.	7	N. W.	19	N. W.	8	30.454	.62	.28	.56	4
29	33	55	47	45	45	.....	0	0	0	.....	.....	S. W.	2	S.	4	30.376	.89	.62	.48	3
30	42	67	53	54	54	.....	0	0	0	S. W.	4	W.	10	N.	1	30.170	.74	.60	.86	3
31	45	57	47	49	49	.....	0	0	0	N.	8	N. E.	10	N. E.	4	30.341	.61	.31	.62	4

REMARKS.—Extremes of temperature: Highest at 2 p.m., 88°, on the 4th; lowest, 47°, on the 28th; mean for the month, 62°.68. Variable winds; fluctuating barometer; thunder-storm on the 26th of the month; greatest force of the wind sixty miles an hour. *Yellow fever*: An abatement of the yellow fever, as shown by mortality, was noticed about the middle of September and continued through this month, making a difference of 210 in deaths. Total deaths from yellow fever for November, 196.

Table showing the Meteorological Conditions observed at Shreveport, La., during the Yellow-Fever Epidemic of 1873—Continued.

Day of month	Thermometer in the open air.			Amount of cloudiness.			Winds.						Barometer reduced to freezing-point.	Relative humidity or fraction of saturation.	Deaths from yellow fever.				
	7 a. m.		2 p. m.	9 a. m.		7 a. m.	7 a. m.		2 p. m.	9 p. m.	7 a. m.								
				Mean.			Direction.	Force.	Direction.	Force.	Direction.	Force.							
Nov. 1	44	66	58	56	1.18	1.2	3.4	4.4	4.4	4.4	S. E.	1	30.313	.60	.59	.70			
2	53	56	58	55 ^{1/2}	.25	3.4	4.4	4.4	N. E.	5	S. E.	6	30.162	.80	1.00	1.00			
3	54	57	54	55	.25	4.4	4.4	4.4	N. E.	7	N. E.	6	30.182	1.00	.87	.93			
4	54	60	58	57 ^{1/2}	.32	4.4	4.4	4.4	N. E.	6	N. W.	2	30.074	1.00	.88	.94			
5	56	60	58	58	.07	4.4	4.4	4.4	N.	4	0	0	4	30.106	1.00	.88	.94		
6	55	68	61	61 ^{1/2}	3.4	3.4	0	0	N. W.	6	N.	0	30.042	.93	.65	.88			
7	51	73	62	62	0	0	0	0	W.	2	S. W.	6	2	30.016	1.00	.46	.77		
8	55	71	56	60 ^{1/2}	0	0	0	0	N.	4	N.	4	30.230	.80	.37	.81			
9	47	74	60	60 ^{1/2}	0	0	0	0	0	0	W.	0	30.224	.92	.29	.65			
10	51	78	66	65	0	0	0	0	0	0	W.	5	2	.80	.29	.50			
11	56	79	62	63 ^{1/2}	1.4	0	0	0	S. W.	7	S. W.	8	30.116	1.00	.88	.94			
12	47	54	48	49 ^{1/2}	1.4	0	0	0	N.	15	N. W.	16	N. W.	4	31.271	.48	.32		
13	35	59	50	48	0	0	0	0	0	S. W.	4	S. W.	7	30.179	.70	.47	.80		
14	42	67	58	55 ^{1/2}	1.4	3.4	3.4	3.4	S.	2	S.	1	S.	4	30.171	.74	.33	.58	
15	55	69	64	62 ^{1/2}	3.4	4.4	4.4	4.4	S.	4	S. W.	6	S.	6	30.135	.87	.65	.83	
16	65	74	66	68 ^{1/2}	4.4	1.2	0	0	S. W.	5	S. W.	8	N. W.	30	29.966	.99	.59	.19	
17	51	73	68	64	1.2	0	1.4	N. W.	6	N. W.	20	S. W.	4	29.623	.52	.17	.22		
18	53	68	48	53	3.4	0	3.4	N. W.	5	N. W.	30	N.	20	30.033	.67	.26	.51		
19	54	53	58	55	0	0	0	N. W.	1	N. W.	13	0	0	30.271	.45	.24	.64		
20	35	60	53	49 ^{1/2}	.05	0	3.4	4.4	S. E.	2	S.	5	S.	4	30.179	.70	.20	.73	
21	49	64	61	58	8.50	4.4	3.4	4.4	E.	2	S. E.	2	S. E.	6	33.135	.92	.67	.77	
22	60	66	64	63 ^{1/2}	3.85	4.4	4.4	4.4	S. E.	4	S. E.	2	N. E.	2	29.853	.94	.84	1.00	
23	62	63	59	61	4.4	4.4	4.4	4.4	N. E.	10	E.	11	N.	4	29.808	.88	.94	.94	
24	47	50	48	48 ^{1/2}	4.4	4.4	4.4	0	N.	11	N. W.	5	W.	4	30.119	.98	.72	.85	
25	66	63	55	61 ^{1/2}	1.4	3.4	1.2	W.	4	N. W.	11	0	0	30.168	.69	.33	.50		
26	45	63	55	54 ^{1/2}	3.4	3.4	1.2	S. E.	2	S.	6	S.	12	29.930	.76	.47	.68		
27	52	63	57	57 ^{1/2}	4.4	1.2	4.4	S.	5	S.	1	0	0	29.985	1.00	.67	.81		
28	45	46	45	45 ^{1/2}	4.4	4.4	4.4	N. E.	11	N. E.	5	E.	4	30.345	.53	.47	.53		
29	40	59	53	50 ^{1/2}	4.4	0	1.2	E.	0	S. E.	4	S. E.	2	30.355	1.00	.48	.73		
30	51	70	63	61 ^{1/2}	0	4.4	1.4	S.	6	S.	6	S.	8	30.275	1.00	.61	.78		

REMARKS.—Mean temperature for the month, 57.45°; highest at 2 p. m., 79°, on the 11th; lowest, 46°, on the 28th; first frost, night of the 12th and 13th. *Yellow fever:* Yellow fever continued to abate, until the 10th of the month, when the last death occurred; total deaths from yellow fever for the month, 10.

TABLE OF THE METEOROLOGICAL CONDITIONS OBSERVED AT MEMPHIS, TENN.

Compiled from the Reports of the Signal-Service, U. S. A., for Comparison

[MEMPHIS: County of Shelby, State of Tennessee; latitude 35° 07' north;

1872.	Thermometer.			Rain-fall, inches.	Amount of cloudiness.*				Wind.				Humidity, per cent.			
	Aug.	7.35 a.m.	4.35 p.m.		Lower.	Upper.	Lower.	Upper.	Direction.	Velocity.	Direction.	Velocity.	Barometer, †	7 a.m.	9 p.m.	
									N. W.	N. N. W.	E.	N. E.	Mean.			
1	72	89	50	50	0	2-4	0	2-4					39.07	.85	.56	
2	76	85	77	79.66	0	1-4	0	1-4	2-4	0	N. E.	5 N. W.	11 N. W.	.12	.46	.64
3	73	81	70	74.66	0	0	0	1-4	0	0	N. E.	4 N. W.	11 N. E.	.4	.39	.63
4	72	71	76.59								N. W.	4 N. E.	6	.30	.45	.70
5	69	70	90	76.33	0	1-4	0	1-4	0	0	N.	4 N.	6	.30	.15	.50
6	74	88	78	80.00	0	0	0	2-4	0	0	N. E.	4 N. E.	4 N. E.	.30	.14	.77
7	78	90	85	84.33	0	1-4	0	2-4	1-4	0	N. E.	4 N. E.	4 N. E.	.30	.11	.77
8	70	63	78	82.00	1-4	0	0	2-4	0	0	S. E.	4 E.	4 S. W.	.30	.16	.55
9	78	94	75	82.33	0	1-4	0	1-4	4-4	0	S. E.	4 S. E.	4 E.	.30	.10	.81
10	77	90	80	82.33	0	2-4	0	1-4	0	0	S. W.	4 S. E.	4 S. E.	0	.30	.72
11	60	93	83	85.33	0	0	0	2-4	1-4	0	S. E.	4 S. E.	4 S. E.	.30	.05	.78
12	81	78	70	73.33	1-4	0	2-4	1-4	3-4	0	S. W.	4 S. E.	4 S. E.	.30	.05	.77
13	77	85	70	80.33	0	1-4	2-4	1-4	1-4	2-4	S. E.	4 N. W.	4 W.	.30	.06	.81
14	79	88	73	82.60	0	2-4	0	1-4	0	0	W.	10 N. W.	4 N. E.	.30	.02	.46
15	75	85	70	76.66	0	0	0	4-4	0	0	N. W.	4 N. W.	4 N. W.	.30	.07	.61
16	74	88	77	79.66	0	0	0	2-4	0	0	0	0	0	.30	.05	.64
17	75	91	73	81.33	0	0	0	1-4	0	0	S. W.	1 S. E.	4 0	.0	.30	.60
18	78	92	80	83.33	0	1-4	0	1-4	0	0	S. E.	1 N. E.	5 0	0	.30	.37
19	78	93	82	84.33	0	0	0	1-4	0	0	S. E.	4 S. E.	4 S. E.	.30	.18	.66
20	60	93	82	85.00	0	0	0	2-4	0	0	E.	4 0	0	.30	.20	.70
21	81	93	83	85.66	0	0	0	2-4	1-4	0	0	0	0	.30	.22	.43
22	59	94	84	86.00	S.	2-4	0	1-4	0	1-4	0	0	0	.30	.17	.67
23	82	94	82	86.00	0	0	0	2-4	1-4	1-4	0	0	0	30	.03	.74
24	78	96	84	86.00	0	0	0	1-4	1-4	0	N. E.	1 S. W.	5 S. W.	.7	.29	.64
25	83	98	87	89.33	0	1-4	0	1-4	1-4	0	0	0	0	.30	.02	.65
26	82	97	84	89.33	0	1-4	1-4	1-4	2-4	0	S. E.	1 N. E.	4 S.	1	.30	.06
27	80	93	82	85.00	0	0	0	2-4	0	0	S.	1 W.	4 0	0	.30	.08
28	60	95	84	86.33	S.	1-4	0	1-4	1-4	0	S.	1 W.	6 S. W.	2	.29	.78
29	79	87	74	76.66	0	2-4	0	2-4	2-4	0	N. W.	4 N. W.	12 N. E.	.8	.29	.58
30	68	80	66	71.33	0	1-4	0	1-4	1-4	0	N.	6 N. E.	10 N. E.	4	.30	.08
31	62	78	66	68.66	1-4	2-4	0	1-4	1-4	0	N. E.	4 N. E.	8 N. E.	4	.30	.09
Sept.																
1	60	83	69	70.66	0	0	0	0	0	0	N. E.	3 N. E.	6 N.	4	.30	.17
2	64	85	73	74.00	0	0	0	1-4	1-4	0	E.	1 N. W.	8 N.	1	.30	.16
3	65	87	75	75.66	0	0	0	1-4	1-4	0	E.	1 N. W.	6 0	0	.30	.10
4	69	89	75	77.66	0	1-4	0	0	0	0	S. W.	8 0	0	.30	.01	
5	69	91	79	79.66	S.	H.	S.	H.	0	0	S. W.	10 S.	4 9	.29	.96	
6	74	92	79	81.66	0	0	0	2-4	0	0	S.	5 S. W.	9 S.	3	.30	.01
7	75	93	82	83.33	1-4	0	0	1-4	0	0	S.	1 S.	6 S. W.	1	.30	.04
8	76	93	80	83.00	0	0	0	1-4	0	0	S. W.	10 S.	3 29.99	.08	.40	
9	76	89	75	80.33	0	1-4	0	2-4	0	0	S.	4 S. W.	7 S.	2	.30	.02
10	71	91	81	81.00	S.	0	0	1-4	1-4	1-4	0	W.	4 S. E.	6 3	.30	.02
11	76	.....	76.60	1.10	0	2-4	.....	.....	N.	1	.....	.....	.....	30.02	.72	.....
12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
13	59	74	65	66.00	0	0	0	0	0	0	N. W.	5 N. W.	10 N.	4	.30	.20
14	60	75	65	66.66	0	0	0	0	0	0	N.	4 W.	12 N. W.	4	.30	.20
15	60	77	65	67.66	0	0	0	0	0	0	W.	8 N.	8 N.	1	.30	.13
16	60	79	71	70.00	S.	0	0	2-4	0	2-4	N. W.	1 N. W.	8 N.	8	.30	.07
17	60	77	63	67.33	0	1-4	0	0	0	0	N. E.	6 0	0	0	.30	.61
18	58	84	75	72.33	S.	1-4	0	0	0	0	S. W.	5 S. W.	6 29.98	.77	.40	
19	61	74	61	65.33	0	0	0	0	0	0	N.	5 N. E.	4 N. E.	2	.30	.11
20	73	86	77	73.66	H.	2-4	0	2-4	0	0	S. E.	6 S. W.	6 S.	1	.30	.07
21	72	89	79	80.00	H.	2-4	0	2-4	1-4	2-0	S.	4 S. W.	6 S.	2	.30	.05
22	72	89	79	80.00	2-4	1-4	0	2-4	1-4	2-0	S.	4 S. W.	6 S.	6	.30	.06
23	70	87	75	77.66	1-0	2-4	0	2-4	1-4	2-0	S.	5 S.	8 S.	2	.30	.03
24	75	87	83	81.66	2-4	1-4	2-0	2-4	0	4-4	S.	8 S.	12 S.	12	.29	.93
25	61	70	60	63.66	1.88	4-4	0	4-4	.....	4-4	S.	8 S.	8 S.	8	.30	.13
26	61	75	63	66.33	3.34	4-4	0	3-4	.....	3-4	S. E.	4 N.	6 S. W.	4	.29	.92
27	56	77	66	66.33	1-4	0	0	1-4	4-4	0	N. E.	4 N. E.	6 L.	8	.30	.01
28	70	73	67	66.66	.31	4-4	0	3-4	1-4	0	S.	8 S. W.	16 W.	8	.29	.87
29	61	73	61	65.00	-1-4	0	-1-4	2-4	1-4	0	W.	2 W.	8 N. W.	2	.30	.14
30	55	67	57	59.66	0	0	0	2-4	1-4	0	N. W.	6 N. W.	10	0	.30	.17

* The letters "F," "H," and "S," indicate foggy, hazy, and smoky, respectively.

† The barometer-readings here given, and in the subsequent tables, are at the temperature given for the corresponding days, and not, as in the preceding tables, reduced to freezing-point.

DURING THE AUGUSTS, SEPTEMBERS, OCTOBERS, AND NOVEMBERS OF 1872 AND 1873.
of Conditions during the Absence and the Prevalence of Yellow Fever.
longitude 90° 07' west; height above the sea-level, 260 feet.]

1873.	Thermometer.		Rain-fall, inches,	Amount of cloudiness.			Wind.			Humidity, per cent.			
				7.35 a.m.	4.35 p.m.	11 p.m.	7.35 a.m.	4.35 p.m.	11 p.m.				
	Aug.	Mean.	Lower.	Upper.	Lower.	Upper.	Velocity.	Direction.	Velocity.	Direction.	Velocity.	Mean.	
52	70	85	69	74.66	2.94	4.4	3.4	1.4	4.4	S. W.	5	30.06	
52	70	89	79	79.33	1.4	1.4	1.4	1.4	1.4	S. W.	2	30.03	
3	82	72	77.00	1.4	1.4	1.4	1.4	0	0	N.	6	59	
4	68	79	69	72.00	0	1.4	0	1.4	0	N. E.	10	59	
5	69	82	72	74.33	0	1.4	1.4	1.4	0	N. E.	5	59	
6	71	87	76	74.66	0	1.4	2.4	1.4	1.4	N. E.	12	59	
42	72	81	74	75.66	2.4	1.4	2.4	1.4	0	S. E.	5	59	
8	75	88	73	80.33	0	1.4	1.4	0	1.4	S. E.	2	59	
9	77	91	78	82.00	1.3	S.	1.4	1.4	0	N. W.	5	59	
10	72	89	85	86.09	.23	1.4	2.4	2.4	0	N. W.	6	59	
11	81	91	82	84.66	0	S.	1.4	1.4	0	E.	6	59	
12	79	93	82	84.66	1.4	2.4	2.4	1.4	0	W.	5	59	
13	78	86	76	80.60	1.09	2.4	2.4	1.4	0	S. W.	4	59	
14	75	85	73	78.33	0	S.	0	1.4	1.4	0	N. E.	1	59
15	72	87	79	79.33	0	S.	1.4	2.4	1.4	0	N. E.	1	59
16	73	79	74	75.33	4.4	4.4	4.4	4.4	4.4	W.	4	59	
17	82	74	78.60	1.4	1.4	1.4	1.4	0	0	N. W.	11	59	
18	71	81	71	74.00	0	S.	0	0	0	N.	5	59	
19	69	85	75	76.33	H.	1.4	1.4	2.4	1.4	N.	12	59	
20	71	86	74	77.00	S.	2.4	1.4	1.4	1.4	N. E.	8	59	
21	71	88	76	78.33	1.4	1.4	1.4	2.4	1.4	N. W.	6	59	
22	71	85	75	77.33	2.4	1.4	2.4	1.4	1.4	S. E.	2	59	
23	73	89	79	80.33	1.4	1.4	1.4	1.4	1.4	E.	6	59	
24	78	92	81	83.66	S.	1.4	H.	2.4	1.4	S. E.	1	59	
25	80	92	82	84.66	0	0	1.4	1.4	0	N. E.	1	59	
26	79	94	83	85.33	0	1.4	1.4	1.4	0	S.	8	59	
27	77	93	75	81.66	2.4	1.4	0	2	4.4	N.	2	59	
28	75	88	77	80.00	S.	1.4	1.4	1.4	0	N.	4	59	
29	72	83	73	79.33	S.	1.4	1.4	1.4	1.4	N. E.	3	59	
30	77	92	78	82.33	0	1.4	1.4	1.4	0	S.	5	59	
31	77	93	82	84.00	0	0	1.4	1.4	0	S. W.	7	59	
Sept.													
1	80	92	81	84.33	1.4	1.4	2.4	1.4	1.4	H.	8	49	
2	78	82	73	77.66	.48	0	1.1	H.	1.4	4.4	S. W.	1	49
3	76	77	76	76.33	.40	2.4	1.4	2.4	1.4	S.	3	49	
4	76	89	79	81.33	II.	1.4	2.4	0	2.4	S. W.	6	49	
5	77	86	76	79.66	4.4	2.4	2.4	1.4	H.	S. V.	1	49	
6	74	84	72	76.66	S.	1.4	0	2.4	H.	H. N. E.	3	49	
7	66	65	65	65.50	2.4	4.4	1.4	1.4	0	N.	3	49	
8	60	67	65	67.33	0	1.4	S.	0	0	N.	6	49	
9	63	83	73	73.00	0	1.4	1.4	2.4	0	1.4	N.	10	49
10	69	86	76	77.00	0	2.4	1.4	2.4	1.4	N. E.	3	49	
11	72	86	76	78.00	S.	1.4	1.4	1.4	1.4	0	N.	1	49
12	77	83	70	76.66	0	1.4	4.4	4.4	4.4	S. V.	1	49	
13	67	71	58	65.33	10	4.4	1.4	2.4	0	N. E.	4	49	
14	53	68	58	59.66	S.	0	0	0	0	N.	5	49	
15	55	76	64	65.00	S.	0	0	0	0	E.	2	49	
16	63	82	71	72.66	0	S.	1.4	0	0	N. W.	8	49	
17	66	86	75	75.66	S.	1.4	S.	1.4	0	0	W.	0	49
18	70	85	75	76.66	S.	1.4	1.4	1.4	1.4	S. E.	4	49	
19	63	69	56	62.66	4.4	S.	1.4	S.	0	N. W.	6	49	
20	33	64	58	58.33	1.4	1.4	4.4	4.4	4.4	N. E.	4	49	
21	56	73	63	65.33	1.4	2.4	3.4	1.4	4.4	N. E.	2	49	
22	65	70	63	65.00	.51	1.4	2.4	4.4	1.4	0	W.	3	49
23	60	70	61	63.66	4.4	1.4	1.4	0	0	N. E.	6	49	
24	56	73	68	65.66	F.	2.4	1.4	4.4	1.4	S. E.	3	49	
25	66	79	74	73.00	0	4.4	1.4	2.4	0	N. W.	6	49	
26	70	87	76	77.66	0	1.4	1.4	0	0	S.	4	49	
27	72	78	76	75.33	.82	4.4	4.4	4.4	4.4	E.	4	49	
28	73	84	71	75.66	.24	1.4	4.4	4.4	4.4	S. E.	2	49	
29	71	63	59	64.33	L 18	4.4	1.4	2.4	4.4	S.	9	49	
30	54	66	56	58.66	0	1.4	0	0	0	N. E.	8	49	

The foregoing record of the meteorological conditions observed during the period of the prevalence of the epidemic yellow fever at Memphis and Shreveport in 1873, undoubtedly furnish important facts which are essential to a correct study of the habits and climatic conditions under which this disease exists. Yet we are unable to deduce from them, or to recognize any positive factor or factors that can satisfactorily account for the outbreak and the prevalence, for months, of a specific fever which is very generally believed by physicians to have been imported from New Orleans, where, however, it was not recognized as being epidemic or even extensively prevalent during any part of the summer.

We may here remark, that in the study of this disease as seen in the United States, it is to man himself, and his neglect of the laws governing health and the sanitary conditions of his abode, that we must look for at least some of the exciting causes.

That the disease has limits varying its boundaries during particular seasons, will be readily conceded. One of the limiting causes assigned by most observers, is low temperature. We believe that elevation and a comparatively dry atmosphere may be added.

We ask the question if, from the facts furnished by the different visitations of yellow fever within the United States, elevation is entitled to be credited in any degree with controlling the spread of the disease to interior towns; and if so, does the elevation control it in any other mode than by the effect of a cooler and drier atmosphere than prevails in the low lands in the same vicinity?

Nothing is truer than that man's health is affected by his surroundings. Where a rapid vegetable growth and decay go on, as in the tropical and semi-tropical regions, these localities must always have conditions peculiar to themselves, which influence powerfully both health and disease, although their modes of action may escape our observation.

Humboldt long ago observed that this fever did not exist at high altitudes. A. Keith Johnson, in his valuable *Physical Atlas*, says: "At Xalapa, in Mexico, on the same parallel with Vera Cruz, but 4,330 feet above the sea, yellow fever is unknown." In Jamaica, Maroontown and the Phoenix Park, at an elevation of 2,000 feet, are noted for their healthfulness, while yellow fever rages along the coast, cutting off many hundreds annually. In this island, however, it has been known to exist in a mild form on Stony Hill, elevated 1,360 feet.

Major Tullock, of the British army, remarks that this disease has never been known in any climate at an elevation of 2,500 feet. Mount Desmoulin, near Roseau, in the island of Dominica, 1,500 feet above the sea, is always free from fever, even while it is epidemic at the water-line. The same exemption is observed in the northern and elevated parts of San Domingo, whatever may be the character of the soil.

Dr. Drake, in his work, fixes a limit to this fever in the United States at 400 feet. These figures would seem to be not far out of the way.

This view of the limitation to the spread of yellow fever by elevation has been observed in Cuba and elsewhere.

Fort Smith, in Arkansas, 460 feet above the sea, is the highest point at which this fever has prevailed as an epidemic in the United States. Although Winchester, Va., at an altitude of 700 feet, is placed upon the map, the cases reported to have occurred there in 1802 are not well authenticated. A correspondence with Dr. G. Miller, an old and intelligent physician of that place, was opened to verify the report, but nothing could be learned that would give credibility to the statement. As a faithful chronicler, however, we do not feel at liberty to omit the mention of the disease at this place, with the authority, and the less so since a person *en route* from the South died there shortly after his arrival, in 1871, of what was supposed to be yellow fever. There is much room for doubt, also, as to the correctness of the diagnosis that recognized yellow fever at Gallipolis, in Ohio, in 1796, and in Bald Eagle Valley and Nittany, in Pennsylvania, in 1799.

The cases at Cincinnati in 1871 and 1873 were strangers, reported to have been brought there on boats from New Orleans and Memphis, which renders it probable that they were yellow fever, but contracted before sailing. No new cases occurred at Cincinnati. Those reported at Winchester, Gallipolis, Bald Eagle Valley, Nittany, and other points, not here questioned, may have been only aggravated cases of bilious fevers.

But lest we be misled, and attribute too much influence to elevation, we should not forget the remark of the late Dr. La Roche, who notices how securely a stranger may live in the near vicinity of the epidemic, provided he does not enter the infected district. This fact suggests that the stratum of air, in which the infection peculiar to yellow fever exists, is heavier than air free from the poison, and which therefore seeks the lowest and dampest localities.

If this view should be verified by careful and repeated observations, it would suggest that houses and hospitals, in districts particularly liable to yellow fever, should be built upon columns or supports 10 or 12 feet high, with the space beneath paved and left open for the free circulation of air. The occupants might thus, to some extent, escape breathing the heavier and more noxious stratum of air.

It is clear, as shown by this map, that the disease has, in the United States, never in an epidemic form reached an elevation of 500 feet. If elevation, then, can exempt the inhabitants of a place from such a terribly destructive disease, the profession should, and will, avail itself of this means of protecting life, namely, the removal of all susceptible persons out of the infected district to an elevation above 500 feet if practicable. So far as we could collect facts bearing upon the point in question as to each locality we have done so, and they are given in the following table:

TABLE OF LOCALITIES IN THE UNITED STATES WHERE YELLOW FEVER HAS APPEARED SINCE A. D. 1668.

With their Elevations above the Sea-level; Dates of Commencement and Suspension of the Disease; Mortality; and Authorities for the Statements.

State.	Locality.	Situation.	Elevation, in feet. above sea-level.	Year.	Month.	Year.	Month.	Year.	Month.	Year.	Mortality.	Authority.
Alabama.....	Blakely; Baldwin Co.	On Tenasaw River.....	25	1822	.....	.....	.....	.....	.....	.....	.....	Drake, Principal Diseases of Interior Valley, North America, p. 225.
	Cahawba, Dallas Co.	On Alabama River.....	175	1833	.....	.....	.....	.....	.....	.....	.....	E. H. Barton, Report Sanitary Commission of New Orleans, 1857, p. 63.
	Citronelle, Mobile Co.	On Mobile and Ohio Railroad, Five miles from Mobile.....	65	1833	Aug. 8	.....	.....	.....	.....	.....	.....	J. C. Nott, N. O. M. & S. J., 1854, p. 571.
	Dog River, Mobile Co.	On Tombigbee River.....	30	1853	.....	.....	.....	.....	.....	.....	.....	C. Whittleworth, Ch. M. J. & Rev., 1859, p. 479.
	Demopolis, Marengo Co.	On Tombigbee River.....	125	1853	.....	.....	.....	.....	.....	.....	.....	E. D. Fenner, History of Epidemic Yellow Fever, 1853, p. 49.
	Fort Claiborne, Monroe Co.	Alabama River.....	75	1819	July 4	1819	Dec. 1	.....	.....	.....	.....	Harvey E. Brown, (ass't. surg., U. S. A.) Quarantine, on the southern and Gulf coasts, 1872.
	Fort Morgan Island.	Mobile Bay.....	30	1867	Aug. 13	.....	.....	.....	.....	.....	.....	Brown, Quarantine, p. 44.
	Fort Saint Stephens, Washington Co.	Tombigbee River.....	75	1819	July 4	1819	Dec. 1	.....	.....	.....	.....	Dowler, Yellow Fever of 1833, p. 16.
	Fulton, Sumpter Co.	Tombigbee River.....	120	1853	.....	.....	.....	.....	.....	.....	.....	N. O. Med. and Surg. Jour., vol. 11, 1854, p. 32.
	Hollywood.	Tombigbee River.....	75	1853	.....	.....	.....	.....	.....	.....	.....	E. H. Barton, Report San. Com. of N. O. 1857, p. 65.
	Mobile, Mobile Co.	Mobile Bay.....	30	1705	.....	.....	.....	.....	.....	.....	.....	P. H. Lewis, N. O. M. J., 1856, vol. 1, No. 4, p. 283.
	Tombigbee River.	Tombigbee River.....	175	1825	Sept. —	.....	.....	.....	.....	.....	.....	Drake, Dis. Int. Valley of N. A., p. 216.
	Tombigbee River.	Tombigbee River.....	125	1827	Aug. —	.....	.....	.....	.....	.....	.....	P. H. Lewis, N. O. M. J., 1856, vol. 1, No. 4, p. 283.
		Mobile Bay.....	175	1828	Sept. 14	.....	.....	.....	.....	.....	.....	P. H. Lewis, N. O. M. J., 1856, vol. 1, No. 4, p. 284.
		Mobile Bay.....	125	1837	Sept. 20	1837	Nov. —	.....	.....	.....	.....	Drake, Dis. Int. Valley of N. A., p. 191.
		Mobile Bay.....	175	1838	.....	.....	.....	.....	.....	.....	Do.	Do.
		Mobile Bay.....	125	1839	Aug. 11	1839	Oct. 20	.....	.....	.....	.....	Drake, Dis. Int. Valley of N. A., p. 219.
		Mobile Bay.....	175	1841	Aug. —	.....	.....	.....	.....	.....	.....	Drake, Dis. Int. Valley of N. A., p. 191.
		Mobile Bay.....	125	1842	Aug. 30	.....	.....	.....	.....	.....	.....	Drake, Dis. Int. Valley of N. A., p. 219.
		Mobile Bay.....	175	1843	Aug. 18	1843	Nov. 5	.....	.....	.....	.....	J. H. Lewis, N. O. M. J., 1844, p. 31.
		Mobile Bay.....	125	1844	.....	.....	.....	.....	.....	.....	.....	Drake, Dis. Int. Valley of N. A., p. 219.
		Mobile Bay.....	175	1847	.....	.....	.....	.....	.....	.....	.....	Brown, Quarantine, and Fenner's South Med. Reports, vol. 2, p. 304.
		Mobile Bay.....	125	1848	.....	.....	.....	.....	.....	.....	.....	Fenner, South Med. Reports, vol. 2, p. 304.

Montgomery, Montgomery Co.	1849	1851	July 13	1853	Nov. 1	115	Dr.
	1853	1854	.....	.....	.....	N. O. M. & S. J., 1852, p. 43.	Brown, Quarantine, 1852, p. 43.
	1858	1858	Aug. 13	1870	Nov. 19	13	N. O. M. & S. J., 1852, p. 51.
	1867	1870	Aug. 22	1870	Nov. 19	13	Ed. Nash, J. M. & S., 1854, p. 44.
	1873	1873	Aug. 21	1873	Nov. 29	27	Ed. Va. M. J., 1852, p. 517.
	150	1833	Sept. —	.....	Nov. —	—	Brown, Quarantine, 1872, p. 44.
	1854	Sept. —	.....	.....	Nov. —	—	G. A. Keichlin, Trans. A. M. S., 1871, p. 269.
	1855	Sept. —	.....	.....	Nov. —	—	O. L. Cranmer, Report Supervising Surgeon, U. S. Marine Hospital Service, 1873.
	1873	Sept. 4	.....	.....	Nov. —	—	R. F. Michel Charleston Med. Journal and Review, vol. 1, No. 4, 1874, p. 45.
	Do.	Do.	Do.	Do.	Nov. —	—	R. F. Michel, Charleston Med. Journal and Review, vol. 1, No. 4, 1874, p. 289.
On Alabama River.	60	1873	Sept. 17	1853	Nov. 13	32	J. C. Marks, N. O. M. & S. J., 1854, p. 88.
	200	1833	.....	.....	.....	.....	J. C. Nott, Ch. M. J. & Rev., 1850, p. 476.
	50	1833	June —	.....	.....	.....	Trans. A. M. A., 1854, p. 526.
	135	1833	.....	.....	.....	.....	Dowler, Tableau of Yellow Fever, p. 24.
	460	1833	.....	.....	.....	.....	D. N. Jones, N. O. M. & S. J., 1853, p. 328.
	130	1833	.....	.....	.....	.....	Washington Republican, vol. 13, No. 280, p. 1.
	350	1873	.....	.....	.....	.....	E. D. Yancey, His Fiji Yellow Fever, 1853, p. 49.
	1452	1853	.....	.....	.....	.....	Miner and Tully on Fevers, p. 357.
	200	1796	Aug. 29	.....	.....	.....	Brown, Quarantine, p. 8.
	1708	1800	.....	.....	.....	.....	M. Repos, 1800, p. 197.
Pollard, Escambia Co.	On Alabama River. ....	.....	.....	.....	.....	.....	.....
	On six miles west of Mobile. ....	.....	.....	.....	.....	.....	.....
	Spring Hill, Mobile Co. ....	.....	.....	.....	.....	.....	.....
	Columbia, Chickasaw Co. ....	.....	.....	.....	.....	.....	.....
	Fort Smith, Sebastian Co. ....	.....	.....	.....	.....	.....	.....
	Grand Lake, Chicot Co. ....	.....	.....	.....	.....	.....	.....
	Little Rock, Pulaski Co. ....	.....	.....	.....	.....	.....	.....
	Napoleon, Desha Co. ....	.....	.....	.....	.....	.....	.....
	Chatham, Middlesex Co. ....	.....	.....	.....	.....	.....	.....
	Hartford, Hartford Co. ....	.....	.....	.....	.....	.....	.....
Arkansas.	On Connecticut River.	25	1736	Aug. —	9	N. Y. M. & P. J., 1822, p. 133.	Do.
	On Connecticut River.	40	1730	June —	9	W. Tully, N. Y. M. & P. J., 1822, p. 133.	Dowler, Tableau of Yellow Fever, p. 13.
	On Connecticut River.	35	1794	.....	.....	W. Hume, Ch. M. J. & Rev., 1860, p. 24.	Daily Shreveport Times, vol. 2, No. 34, 1873.
	On Connecticut River.	60	1798	.....	.....	Brown, Quarantine, 1853, p. 9.	E. Paschal's, M. Repos, 1820, p. 239.
	On Connecticut River.	200	1790	.....	.....	.....	Ed. M. Repos, 1793, p. 211.
	On Connecticut River.	200	1790	.....	.....	.....	Do.
	On Connecticut River.	40	1790	.....	.....	.....	J. Gotham, Jr., M. Reporter, 1856, p. 563.
	On Connecticut River.	40	1790	.....	.....	.....	J. Comstock, M. Repos, 1807, p. 23.
	On Connecticut River.	35	1794	.....	.....	.....	J. Vangham, Med. Repos., 1800, p. 372.
	On Connecticut River.	35	1794	.....	.....	.....	J. Stephens, Med. Mus., 1809, p. 153.
Connecticut.	On Thames River, 3 miles from ocean.	95	1798	Aug. 26	81	.....	Do.
	On Norwalk River.	35	1798	.....	.....	.....	Do.
	On Long Island Sound.	20	1745	.....	.....	.....	Do.
	On Long Island Sound.	20	1798	.....	.....	.....	Do.
	On Christiana Creek.	20	1798	.....	.....	.....	Do.
	Near Delaware Bay.	20	1798	.....	.....	.....	Do.
	Near Delaware Bay.	20	1798	.....	.....	.....	Do.
	On Delaware River.	35	1798	.....	.....	.....	Do.
	On Christiana Creek, 2 miles from Delaware River.	45	1798	.....	.....	.....	Do.
	On Christiana Creek.	45	1798	.....	.....	.....	Do.
New London, New London Co.	On Apalachicola, Franklin Co.	15	1802	.....	.....	.....	Do.
	Fairfield, Fairfield Co.	20	1798	.....	.....	.....	Do.
	Stonington, New London Co.	20	1798	.....	.....	.....	Do.
	Christiana, Newcastle Co.	20	1798	.....	.....	.....	Do.
	Duck Creek, Newcastle Co.	20	1798	.....	.....	.....	Do.
	Newcastle, Newcastle Co.	20	1798	.....	.....	.....	Do.
	Wilmington, Newcastle Co.	35	1798	.....	.....	.....	Do.
	On Christina Creek, 2 miles from Delaware River.	45	1798	.....	.....	.....	Do.
	On Christina Creek.	45	1798	.....	.....	.....	Do.
	On Christina Creek.	45	1798	.....	.....	.....	Do.
Florida.	On Apalachicola, Franklin Co.	15	1802	.....	.....	.....	Do.
	Cedar Keys, Levy Co.	15	1871	.....	.....	.....	Do.
	Gainesville, Alachua Co.	160	1871	Aug. —	.....	.....	Do.
	Jacksonville, Duval Co.	14	1857	.....	.....	.....	Do.
	Key West, Monroe Co.	15	1824	.....	.....	.....	Do.
	On Apalachicola Bay.	15	1803	.....	.....	.....	Drake, Diseases Int. Valley, N. A.
	Isles of the Ocean.	15	1871	.....	.....	.....	Brown, Quarantine, 1853, p. 42.
	On Saint John's River.	160	1871	Aug. —	.....	.....	E. M. Robertson, Ch. M. J. & Rev., 1858, p. 45.
	On an island in the sea.	15	1824	.....	.....	.....	B. Ticknor, N. A. M. & S. J., 1827, p. 213.

Table of Localities in the United States where Yellow Fever has appeared since A. D. 1668, &c.—Continued.

State.	Locality.	Situation.	DATE OF COM-MENCEMENT. Year.	DATE OF SUS-PENSION. Year.	Mortality.	Authority.
Florida	Milton, Santa Rosa Co Pensacola, Escambia Co.	On Blackwater River, near Pensacola Bay. On Pensacola Bay.	1829 1841 1853 1862 1864 1865 1867 1869 1870 1873	June 6 Aug. — Aug. — June 20 Oct. — Oct. — Oct. — Oct. — Oct. — Oct. —	26 112 112 71 71 71 71 71 71 71	C. C. Dupré, Am. J. of Med. Sci., 1841, p. 380. Army Medical Statistics, p. 322. Ed. N. O. M. & S. J., 1854, p. 423. Ed. M. and S. Reporter, 1862, p. 513. E. B. Hunt, Med. Reporter, 1864, p. 340. Brown, Quarantine, p. 40. Surgeon-General's Office, Circular No. 1, 1868, p. 152. Brown, Quarantine, p. 41. Brown, Quarantine, p. 38.
			1853 1855 1764 1765 1811 1822 1825 1827 1834 1839	Aug. 23 Aug. 23 Oct. 10 Oct. 10 Oct. 12 Aug. 12 Aug. 23 Aug. 23 Aug. 23 Aug. 23	125 125 125 125 125 125 125 125 125 125	P. S. Townsend, N. Y. M., and Ph. J., 1823, p. 315. Drake, Dis. Int. Valley of N. A., p. 190. Do. Drake, Dis. Int. Valley of N. A., p. 190. Do. Drake, Dis. Int. Valley of N. A., p. 239. Brown, Quarantine, p. 36. Med. Statistics, United States Army, p. 58. Drake, Dis. Int. Valley of N. A., p. 232. Drake, Dis. Int. Valley of N. A., p. 233. Do.
			1841 1842 1843 1844 1845 1846 1847 1848 1853 1854 1858 1863 1867 1873	July 9 July 9 July 9 July 9 July 9 July 9 July 9 July 9 July 9 July 9 Aug. 25 Aug. 25 July 24 Aug. 6	125 125 125 125 125 125 125 125 125 125 125 125 125 125 125 125	S. C. Lannason, Maryland M. & S. J., 1843, p. 393. Dr. Wedderburn, Report of San. Com., p. 125. R. B. S. Hargis, N. O. M. N., 1859, p. 737. Do. Brown, Quarantine, p. 36. Do. Dr. Wedderburn, Report of San. Com., p. 125. Dr. Wedderburn, Report of San. Com. of N. O., p. 125. E. D. Fenner, His. of Yellow Fever, N. O., 1853, p. 49. R. B. S. Hargis, N. O. M. N., 1859, p. 737. Do. B. F. Gibbs, A. J. M. Sc., 1866, p. 340. M. Reporter, 1868, p. 227. R. F. Michel, Charleston M. J. and R., 1874, vol. 1, No. 4, p. 260. Brown, Quarantine, p. 32.
			1867 1871 1873 1877 1881 1889	Aug. — Aug. — Aug. — Aug. — Aug. — Aug. 15	140 140 140 140 140 140	J. Gotham, M. Reporter, 1856, p. 564. C. C. Dupré, A. J. Med. Sci., 1841, p. 384. Do.
			On Matanzas Sound, two miles from the sea.			
			St. Augustine, St. John's Co.			

Saint Joseph's, Calhoun Co.	On Saint Joseph's Bay, near Gulf of Mexico.	1841 1841	26	B. M. and S. J., 1841, p. 17.
Suwanee, Columbia Co.	On Stowance River.	50	1836	T. Lawson, Surg. Gen. Report, 1840, p. 308.	
Tampa, Hillsborough Co.	Head of Tampa Bay, forty miles from the Gulf of Mexico.	20	1871	Med. and Surg. Reporter, No. 17, p. 377, vol. 25. Drake, Dis. Int. Valley of N. A., p. 191.	
Tortugas	Gulf of Mexico.	12	1853	Sept. —	Army Medical Statistics, p. 323. Circular No. 1, Surgeon General's Office, 1869.	
Pensacola Bay.	Gulf of Mexico.	1862	July 4	4	Brown, Quarantine, p. 46.	
Do.	Do.	1867	Aug. 14	38	John M. Woolworth, Supervising Surgeon, U. S. Marine-Hospital Service, Report 1873.	
Georgia.....	On Savannah River	1854	Nov. 19	62	John M. Woolworth, Supervising Surgeon, U. S. Marine-Hospital Service, Report 1873.	
Bainbridge, Decatur Co.	On Flint River.	120	1873	.....	.....	.....	Ed. Nash, J. M. and S., 1854, p. 345.
Saint Mary's, Camden Co.	On Saint Mary's River, nine miles from the sea.	15	1808	Sept. 5	Oct. —	84	Washington Republican, Oct. 25, 1873, p. 1.	
Savannah, Chatham Co.	On Savannah River, eighteen miles from its mouth.	30	1807	.....	.....	.....	J. Seagrove, M. Rep., 1810, p. 135.
Do.	Do.	1819	.....	.....	.....	.....	Dowler, Tableau of Yellow Fever, p. 14.
Do.	Do.	1808	.....	.....	.....	.....	Do.
Do.	Do.	1820	.....	.....	.....	.....	A. M. Ree, 1830, p. 212.
Do.	Do.	1827	.....	.....	.....	.....	N. A. M. and S. J., 1827, p. 1.
Do.	Do.	1852	.....	.....	.....	.....	N. A. Med. & S. J., vol. 10, p. 145.
Illinois.....	At junction of Ohio and Mississippi Rivers.	322	1858	Sept. 1	Sept. 25	17	R. C. Mackall, Ch. M. J. and Rev., 1855, p. 150.	
Louisville.....	On the Ohio River.	450	1873	Sept. 22	Oct. 15	5	Hume, Charleston M. J., vol. 10, p. 212.	
Louisiana.....	On Red River.	75	1819	.....	.....	.....	S. Chaillé, Va., M. J., 1858, p. 401.
Algeria.....	On Mississippi River, opposite New Orleans.	10	1847	.....	.....	.....	H. Wardner, Report Supervising Surgeon U. S. Marine-Hospital Service, 1873.
Ascension	On Mississippi River.	25	1823	.....	.....	.....	P. H. Baillache, <i>Ibid.</i>
Baton Rouge.	On Mississippi River.	50	1817	.....	.....	.....	G. S. D. Anderson, N. O. M. J., 1839, p. 508.
Do.	Do.	1819	.....	.....	.....	.....	Do.
Do.	Do.	1822	.....	.....	.....	.....	Do.
Do.	Do.	1827	.....	.....	.....	.....	Do.
Do.	Do.	1831	.....	.....	.....	.....	Do.
Do.	Do.	1837	.....	.....	.....	.....	Do.
Do.	Do.	1839	.....	.....	.....	.....	Do.
Do.	Do.	1847	.....	.....	.....	.....	Do.
Do.	Do.	1853	.....	.....	.....	.....	Do.
Do.	Do.	1854	Aug. 5	.....	.....	.....	Do.
Do.	Do.	1858	.....	.....	.....	.....	Do.
Do.	Do.	1873	.....	.....	.....	.....	Do.
Do.	Do.	75	1819	.....	.....	.....	Do.
Do.	Do.	1822	.....	.....	.....	.....	Do.
Do.	Do.	1827	.....	.....	.....	.....	Do.
Do.	Do.	1831	.....	.....	.....	.....	Do.
Do.	Do.	1837	.....	.....	.....	.....	Do.
Do.	Do.	1839	.....	.....	.....	.....	Do.
Do.	Do.	1847	.....	.....	.....	.....	Do.
Do.	Do.	1853	.....	.....	.....	.....	Do.
Do.	Do.	1854	.....	.....	.....	.....	Do.
Do.	Do.	1855	Sept. 13	.....	.....	.....	E. D. Fenner, N. O. M. and S. J., 1848, p. 192.
Do.	Do.	1853	.....	.....	.....	.....	P. C. Gaillard, Ch. M. J. and Rev., 1859, p. 481.
Do.	Do.	1858	.....	.....	.....	.....	N. O. M. J., 1859, p. 506.
Do.	Do.	1823	.....	.....	.....	.....	Drake, Dis. Int. Valley of N. A., p. 191.
Do.	Do.	1827	.....	.....	.....	.....	Do.
Do.	Do.	1839	.....	.....	.....	.....	Drake, Dis. Int. Valley of N. A., p. 231.
Do.	Do.	1843	Oct. —	.....	.....	.....	Brown, Quarantine, p. 48.
Do.	Do.	1837	.....	.....	.....	.....	N. O. M. and S. J., 1868, p. 536.
Do.	Do.	1847	.....	.....	.....	.....	S. Chaillé, Va., M. J., 1858, p. 491.
Do.	Do.	1858	.....	.....	.....	.....	Do.

Table of Localities in the United States where Yellow Fever has appeared since A. D. 1668, &c.—Continued.

Name.	Locality.	Situation.	Above sea-level, in feet.	Year.	Month.	Date of COMMENCEMENT.	Date of SUSPENSION.	Mortality.	Authority.
Louisiana.....	Bay of Saint Louis.....	Mouth of the Mississippi River.	10	1830	Aug.	—	—	—	A. P. Merrill, N. O. M. and S. J., 1851, p. 1. N. O. M. and S. J., 1850, p. 79.
	Bayou Sara, West Feliciana Parish.	On Mississippi River.....	75	1847	—	—	—	—	E. D. Fenner, N. O. M. and S. J., 1848, p. 19.
	Burat Settlement, (coast below New Orleans), Carrollton, Jefferson Parish.	On Mississippi River.....	10	1834	Sept.	22	—	—	P. C. Gaillard, Ch. M. J. and Rev., 1859, p. 181. Brown, Quarantine.
	Centreville, Saint Mary's Parish, Clinton, East Feliciana Parish, Cloutierville, Natchitoches Parish, Covington, Saint Tammany Parish, Donaldsonville, Ascension Parish, Franklin, Saint Mary's Parish, Gretna, Iberville Parish.	On Mississippi River.....	15	1847	—	May 18	—	—	E. D. Fenner, N. O. M. and S. J., 1848, p. 192. D. Warren Breckell, N. O. M. N., 1850, p. 167. W. B. Wood, N. O. M. N., 1850, p. 433.
		On Teche River, 60 miles from the Gulf of Mexico. 32 miles N. of Baton Rouge.	20	1833	Sept.	18	Nov. 18	—	Do.
		On Old River, branch of Red River, 45 miles north of New Orleans.	85	1835	Sept.	—	Oct.	—	Do.
		On Mississippi River.....	85	1833	Sept.	1	Dec.	—	B. Dowler, Tableau of Yellow Fever, 1853, p. 28.
		On Old River, branch of Red River.	175	1833	Aug.	14	Dec.	14	Brown, Quarantine.
		On Old River, branch of Red River.	25	1847	—	—	—	—	E. D. Fenner, N. O. M. and S. J., 1848, p. 192.
		On Mississippi River.....	30	1827	—	—	—	—	—
		On Teche River, 65 miles from the Gulf of Mexico.	15	1833	Oct.	19	Nov. 24	—	Drake, Dis. Int. Valley of N. A., p. 247. J. W. Lyman, N. O. M. and S. J., 1854, p. 670. W. B. Wood, N. O. M. N., 1850, p. 453. N. O. M. J., 1859, p. 506.
		On Mississippi River.....	18	—	—	—	—	—	—
		Settlement on coast below New Orleans.	10	1834	Oct.	7	—	—	Brown, Quarantine.
		Near New Orleans.	19	1847	June	22	—	—	Brown, Quarantine.
		On Mississippi River.....	100	1833	—	—	—	—	Brown, Quarantine.
		On Lake Pontchartrain	15	1847	—	—	—	—	—
		On Red River	180	1838	—	—	—	—	—
		Southern part of Louisiana.	20	1839	—	—	—	—	—
		New Iberia, Saint Martin's Parish.	1870	1867	—	—	—	—	Report New Orleans Board of Health, 1872, p. 68. Brown, Quarantine, p. 58.

1791	Do.	S. Chaillé, Va. M. J., 1858, p. 498.
1793	Do.	Trans. A. M. A., vol. 2, p. 654.
1794	Do.	Stethoscope, vol. 3, No. 11, 1853, p. 665.
1795	Do.	Do.
1796	Do.	Do.
1797	Do.	Do.
1799	Do.	Do.
1800	Do.	Do.
1801	Do.	Do.
1802	Do.	Do.
1804	Do.	Dowier, Tableau of Yellow Fever, 1853, p. 19.
1809	Do.	Chaillé, Va. M. J., 1858, p. 498.
1811	Do.	Do.
1812	June 18	Do.
1817	June 18	Do.
1818	July 1	Do.
1819	July —	Do.
1820	Sept. 1	Do.
1822	Aug. 23	Do.
1823	Aug. 4	Do.
1824	June 23	Do.
1825	May 18	Do.
1826	July 19	Do.
1827	June 18	Do.
1828	May 23	Do.
1829	July 15	Do.
1830	June 9	Do.
1831	Aug. 15	Do.
1832	July 12	Do.
1833	Aug. 28	Do.
1834	Aug. 23	Do.
1835	Aug. 24	Do.
1836	July 24	Do.
1837	July 25	Do.
1838	Aug. 25	Do.
1839	July 23	Do.
1840	July 25	Do.
1841	July 27	Do.
1842	July 30	Do.
1843	July 5	Do.
1844	July —	Do.
1845	Sept. —	Do.
1846	Aug. —	Do.
1847	Aug. —	Do.
1848	June —	Do.
1849	Aug. —	Do.
1850	July —	Do.
1851	July —	Do.
1852	July —	Do.
1853	May —	Do.
1854	July —	Do.

Table of Localities in the United States where Yellow Fever has appeared since A. D. 1663, &c.—Continued.

E.	Locality.	Situation.	DATE OF COM- MENCEMENT.			DATE OF SUSPEN- SION.	MORTALITY.	Authority.
			Year.	Month.	Year.			
Louisiana.....	New Orleans.....	On Mississippi River.....	10 1855	June	—	Dec. —	2,670 74	Challé, Va. Med. J., 1856, p. 499. S. Challé, Va. M. J., 1856, p. 499. Do.
			1856	Aug.	—	Nov. —	199	Ed. Med. Rep. 1858, vol. 1, No. 4, p. 72.
			1857	June	—	Dec. —	199	Fenner, S. J. of M. S., May, 1866.
			1858	June	—	Oct. 10	3,889	Challé, p. 8.
			1862	—	—	—	—	Harris, Sanitary Commission, p. 264.
			1863	—	—	—	—	Ed. N. O. M. J., 1868, p. 104.
			1864	—	—	—	—	J. C. Fruget, N. O. Med. & S. J., vol. 1, No. 2, 1873.
			1867	June	10	Dec. 22	3,093	Report N. O. Board of Health, 1871.
			1870	May	16	Dec. —	587	Report N. O. Board of Health, 1872, p. 17.
			1871	Aug.	4	Oct. —	55	Orsonus Smith, Report Supervising Surgeon, U. S.
			1872	Aug.	28	Nov. 30	40	Marine Hospital Service, 1873.
			1873	July	4	Nov. 18	925	D. R. Fox, N. O. M. N., 1855, p. 409.
			10 1854	—	—	—	—	Carpenter, Sketches, p. 26.
			1855	—	—	—	—	T. A. Cooke, N. O. M. J., 1846, p. 27; Drake, p. 243.
			60	1837	Oct.	Nov. —	—	Do.
			1839	Aug.	—	Nov. —	—	Do.
			1842	—	—	—	—	T. A. Cooke, South Med. Rec., vol. 34, 1873, No. 4, p. 199.
			1853	—	—	—	—	Do.
			1867	Aug.	8	Dec. —	45	J. S. Grant, M. D., Report San. Com., 1853, p. 43.
			1853	Sept.	—	—	—	W. B. Wood, N. O. M. N., 1856, p. 483.
			1854	Sept.	—	—	—	Drake, Dis. Int. Valley, N. A., p. 191.
			1855	Sept.	—	—	—	Do.
			6 1837	—	—	Oct. —	—	N. O. M. and S. J., 1848, p. 536.
			1839	—	—	—	—	J. B. Hacken, N. O. M. and S. J., 1854, p. 668.
			1847	—	—	—	—	S. Challé, Va. M. J., 1853, p. 491.
			1853	Sept.	—	—	—	Brown, Quarantine.
			1854	Oct.	—	—	—	T. A. Cooke, South Med. Rec., vol. 3, 1873, No. 4, p. 193.
			8	—	—	—	—	Drake Dis. Int. Valley, N. A., p. 252.
			1870	—	—	—	—	Do.
			75	1839	Oct.	13	—	Saint Francisville West.....
			1841	—	—	—	—	On Mississippi River.....
			1843	—	—	—	—	Port Hudson, East Feliciana Parish.....
			80	1811	—	—	—	On Mississippi River.....
			1817	—	—	—	—	Feliciana Parish.....

Saint John Baptiste	1819	Sept. —	Do.
Saint Martinsville, Saint Martin's Parish.	1823	Do.	Do.
Saint Martin's Parish, Judge Baker's plantation.) Shreveport, Caddo Parish.	1827	Do.	Do.
Thibodeaux, La. Fourche, interior parish.	1827	Do.	Do.
Trenton, Washita Parish. Vidalia, Concordia Parish. Ville Platte, Saint Landry Parish. Washington, Saint Landry Parish.	1829	Sept. 22	B. Dowler, Tableau of Yellow Fever, 1853, p. 26.
On Mississippi River.	1830	Aug. 28	C. Delery, N. O. M. and S. J., 1853, p. 403.
On Teche River.	1830	Aug. 28	Drake, Dis. Int. Valley, N. A., p. 191.
On the Gulf of Mexico	1830	Sept. —	Do.
On Red River	1830	Sept. —	Do.
On Bayou la Fourche	1833	Sept. —	B. Dowler, Tableau of Yellow Fever, 1853, p. 26.
On Washita River	1833	Sept. 13	John M. Woodworth, Supervising Surgeon U. S. M.H. S., Report 1873.
On Mississippi River	1834	Sept. 13	B. Dowler, Tableau of Yellow Fever, 1853, p. 26.
On Teche Bayou	1834	Sept. 30	M. A. McLeod, N. O. M. and S. J., 1853, p. 454.
Head of navigation on the Canebrake Bayou.	1834	Sept. 30	W. A. Booth, N. O. M. and S. J., 1849, p. 65.
T. A. Cooke, South Med. Rec., vol. 3, No. 4, p. 199.	1834	Oct. —	H. B. Richardson, Report San. Com., p. 42.
T. A. Cooke, South Med. Rec., vol. 3, No. 4, p. 197.	1834	Oct. —	H. B. Shaw, Report San. Com., p. 57.
T. A. Cooke, South Med. Rec., vol. 3, No. 4, p. 197.	1834	Oct. —	T. A. Cooke, South Med. Rec., vol. 3, No. 4, p. 197.
T. A. Cooke, South Med. Rec., vol. 3, No. 4, p. 199.	1834	Oct. —	T. A. Cooke, N. O. M. and S. J., 1854, p. 602.
T. A. Cooke, South Med. Rec., vol. 3, No. 4, p. 196.	1834	Dec. —	Do.
W. Hume, Ch. M. J. and Rev. 1860, p. 24.	1834	Nov. —	W. Hume, Ch. M. J. and Rev. 1860, p. 24.
On Patapsco River	1834	Nov. —	J. H. Griscom, Visitations of Yellow Fever, p. 8.
Baltimore, Baltimore Co.	1834	Nov. —	W. Hume, Ch. M. J. and Rev. 1860, p. 24.
Maryland	1834	Nov. —	Do.
Near Chesapeake Bay	1834	Nov. —	M. Reps, 1803, p. 100.
Head of Massachusetts Bay	1834	Nov. —	J. H. Griscom, Visitations of Yellow Fever, p. 13.
West River, (near Anapolis, Anne Arundel Co. Boston, Suffolk Co.	1835	July 21	D. M. Reese, Yellow Fever 1819, p. 27.
	1835	Oct. 30	H. G. Jameson, A. J. M. C., 1856, p. 372.
	1835	Oct. 30	Do.
	1835	Oct. 30	Brown, Quarantine, p. 14.
	1835	Oct. 30	Stewart, Med. Mus., 1805, p. 362.
	1835	Oct. 30	B. Dowler, Tableau of Yellow Fever, 1853, p. 7.
	1835	Oct. 30	Ed. N. Y. J. M., 1836, p. 278.
	1835	Oct. 30	J. H. Griscom, N. Y. J. M., 1856, p. 369.
	1836	Aug. —	Do.

Table of Localities in the United States where Yellow Fever has appeared since A.D. 1668, &c.—Continued.

State,	Locality,	Situation.	DATE OF COM- MENCEMENT.	DATE OF SUS- PENSION.	MORTALITY.	Authority.	
			Year.	Month.	Year.		
Massachusetts	Boston, Suffolk Co.	Head of Massachusetts Bay.	45	1798 1800 1805 1810 1853	..... ..... ..... ..... .....	900 60 15	J. H. Griscom, N.Y.J.M., 1848, p. 360. S. Emelin, N.A.M. and S.J., 1823, p. 321. J. Gotham, Med. Rep., 1836, p. 303. J. H. Griscom, Visitations of Yellow Fever, p. 13. S. Emelin, N.A.M. and S.J., 1828, p. 321. F. E. Oliver, B.M. and S.J., 1858, p. 140. Med. Rep., 1853, p. 107. — <i>See N. Webster, I. p. 411 (with notes)</i>
	Holliston, Middlesex Co.	Inland, 25 miles from Boston.	75	1744 1763 1800	..... ..... .....	..... ..... .....	Brown, Quarantine-p. 9. B. Dowler, Tableau of Yellow Fever, 1833, p. 11.
	Nantucket, Nantucket Co.	On an island in the ocean.	20	1801	.....	.....	J. H. Griscom, N.Y.J.M., 1856, p. 369.
	New Bedford, Bristol Co.	On Buzzard's Bay.	20	1796	.....	.....	J. Gotham, J.R., Med. Rep., 1836, p. 363.
	Mississippi	On Merrimac River.	20	1708	.....	.....	Drake Dis. Int. Valley, N.A., 191.
		On an inlet of the sea.	20	1702	.....	.....	Do.
		On Biloxi Bay.	10	1839	.....	.....	E. D. Fenner, N.O.M. and S.J., 1848, p. 192.
			1847	.....	.....	.....	J. C. Neff, N.O.M. and S.J., 1854, p. 571.
			1853	.....	.....	.....	S. Chaillé, Va. M.J., 1858, p. 49. 1853, p. 77.
			1858	Sept. 15	.....	.....	Report Sanitary Commission, 1853, p. 77.
	Brandon, Rankin Co.	Inland, 12 miles from Jackson, on branch of Pearl River.	300	1854	Sept. 23	Nov. 18	Trans. A. M. A., 22, p. 201.
	Canton, Madison Co.	Inland, 25 miles from Jackson, near branch of Pearl River.	320	1855	.....	.....	A. P. Jones, N.O.M.N., 1856, p. 189.
	Clifton, Jefferson Co.	10 miles from Pearl River.	175	1833	Aug. 28	Oct. —	A. P. Jones, N.O.M.N., 1856, p. 151.
	Cooper's Wells, Hinds Co.	On Mississippi River.	275	1853	Aug. 23	Oct. —	I. S. Beasley, N.O.M.N., 1856, p. 151.
	Grand Gulf, Clatsburn Co.	On Yazoo River.	200	1853	.....	E. McAllister, N.O.M. and S.J., 1854, p. 675.	
	Greenwood, Carroll Co.	On Pearl River.	140	1853	.....	Trans. A. M. A., 154, p. 325.	
	Jackson, Hinds Co.		275	1853	.....	S. C. Farras, Stethoscope, 1853, p. 584.	
	Natchez, Adams Co.	On Mississippi River.	150	1817	.....	Do.	
			1810	Sept. —	Nov. 9	9	Drake, Dis. Int. Valley, N.A., p. 263.
			1823	Aug. —	Dec. —	180	Brown, Quarantine-p. 50.
			1825	Aug. —	Oct. 18	312	H. Tooly, History Yellow Fever 1823, p. 25.
			1827	Sept. 30	Nov. 1	150	Drake, Dis. Int. Valley, N.A., p. 209.
			1829	Sept. 1	Nov. 25	90	A. P. Merrill, Galv. M.J., 1867, p. 861.
			1837	Sept. 8	Nov. 25	280	Drake, Dis. Int. Valley, N.A., p. 191.
			1839	Sept. —	Nov. —	235	Do.
			1844	June —	Nov. —	235	Carwright, N.O.M. and S.J., 1848, p. 225.
			1848	July 17	Nov. —	—	C. H. Shatto, N.O.M. and S.J., 1849, p. 59.
			1853	July 17	.....	—	B. Dowler, Tableau of Yellow Fever, 1853, p. 26.

Pascagoula, Jackson Co.	On Pascagoula Bay	1853	H. M. and S. J., 1855, p. 275.
	Near Saint Louis Bay	1853	S. Chaille, Va. M. J., 1856, p. 401.
Pas Christian, Harrison Co.	On Mississippi River	200	E. D. Fenner, N. O. M. and S. J., 1858, p. 192.
Petit Gulf Hills, Jefferson Co.	On Bayou Pierre	200	J. C. Nott, N. O. M. and S. J., 1858, p. 571.
Port Gibson, Claiborne Co.	On Mississippi River	175	E. D. Fenner, N. O. M. and S. J., 1858, p. 192.
Rodney, Jefferson Co.	On Mississippi River	1843	J. G. Cott, N. O. M. and S. J., 1854, p. 571.
Shieldsborough, Hancock Co.	On Saint Louis Bay	10	W. H. Calvert, N. O. M. and S. J., 1856, p. 80.
Vicksburg, Warren Co.	On Mississippi River	1853	S. Chaille, Va. M. J., 1858, p. 461.
Washington, Adams Co.	Inland, near Natchez	1853	A. P. Jones, N. O. M. N., 1854, p. 180.
White's Landing	Twenty miles below Natchez	1825	E. McAllister, N. O. M. N., 1854, p. 676.
Woodville, Wilkinson Co.	Fifteen miles east of the Mississippi River	1825	A. P. Jones, N. O. M. N., 1854, p. 180.
Missouri	On Yazoo River	175	C. B. New West Lane, 1854, p. 301.
Saint Louis, Saint Louis Co.	On Mississippi River	1853	A. P. Jones, N. O. M. N., 1854, p. 180.
New Design, Saint Louis Co.	Twenty miles below Saint Louis	1854	Do.
Portsmouth, Rockingham Co.	On Piscataqua River, three miles from the ocean	40	Drake, Dis. Int. Valley N. A., p. 214.
Bridgeton, Cumberland Co.	On Colhansey Creek, twenty miles from Delaware Bay	30	Do.
Gloucester City, Camden Co.	On Delaware River	30	A. L. C. Macruder, N. O. M. J., 1848, p. 689.
Port Ambro, Middlesex Co.	On Raritan Bay	30	Ed. West Lancet, 1853, p. 375.
Port Elizabeth, Cumberland Co.	On Maurice River	1853	Drake, Dis. Int. Valley N. A., p. 191.
Woodbury	On Hudson River	1798	S. Chaille, Va. M. J., 1858, p. 492.
Albany	On Hudson River	1746 Aug. 7	Med. and Surg. Rep., vol. 23, No. 16, p. 354.
New Jersey	Bay Ridge, Long Island	1798	J. W. Monnett, A. M. Soc., 1852, p. 243.
New Hampshire	A seaport	1856 July —	J. W. H. West Lance, 1854, p. 190.
New York	Brooklyn, Kings Co.	1860	P. C. Gaillard, Ch. M. J. and Rev. 1859, p. 490.
			A. C. Holt, N. O. M. N., 1856, p. 194.
			Do.
			S. Chaille, Va. M. J., 1854, p. 491.
			Trans. A. M. A., 1854, p. 325.
			Ed. Nash, Jr. B. M. and S., 1854, p. 315.
			W. Webb, N. O. M. N., 1856, p. 52.
			Dr. Watkins, M. Repos., 1850, p. 74.
			J. H. Griscom, Visitations of Yellow Fever, p. 9.
			G. Lee, M. Repos., 1850, p. 216.
			J. H. Griscom, Visitations of Yellow Fever, p. 9.
			J. H. Griscom, Visitations of Yellow Fever, p. 4.
			J. H. Gotham, Jr. M. Rep., 1856, p. 563.
			G. D. Griswold, B. M. and S., 1858, p. 214.
			Gillespie, Amer. Med. and Philo. Reg., vol. 3, p. 101, Ed. N. Y. J. M., 1850, p. 278.

Table of Localities in the United States where Yellow Fever has appeared since A.D. 1668, &c.—Continued.

State.	Locality.	Situation.	Elevation sea-level, in feet.		DATE OF COM- MENCEMENT.		DATE OF SUSPEN- SION.		Mortality.	Authority.
			Year	Month.	Year	Month.	Year	Month.		
New York	Brooklyn, Kings Co	A seaport.	40	1823	July	14	Sept.	28	8	Carpenter, Sketches of Yellow Fever. 3d Natl Quarantine and Sanitary Convention, p. 41.
Catskill, Greene Co	On Hudson River	50	1794	Aug.	10	Oct.	36	49	B. W. Dwight, M. Reps, 3d Natl Quarantine and Sanitary Convention, p. 41. Report Board of Health, New York, 1850, p. 29. Vt. M. J., 1856, p. 328.	
Governor's Island	New York Harbor	25	1803	July	29	Do.	Do.	Do.	J. G. Scott, M. Reps, 1807, p. 291.	
Gowanus, Kings Co	On Gowanus Cove, near New York Harbor.	15	1856	Sept.	—	Sept.	30	570	J. H. Griscom, M. Rep., 1856, p. 561. — <i>See</i> , <i>Visitations of Yellow Fever</i> , p. 2. J. H. Griscom, Visitations of Yellow Fever, p. 3. Ed. N. Y. J. M., 1856, p. 278.	
Greenfield, Saratoga Co	Fair Island, Huntington Bay	150	1798	Do.	Do.	Do.	Do.	217	J. H. Griscom, Visitations of Yellow Fever, p. 3. Do.	
Huntington, Suffolk Co.	Huntington Bay	20	1795	Do.	Do.	Do.	Do.	Do.	J. H. Griscom, Visitations of Yellow Fever, p. 4. Daily Shreveport Times, vol. 2, No. 81, 1873.	
New York, New York Co	A seaport.	35	1668	Do.	Do.	Do.	Do.	Do.	W. Hinne, Ch. M. J. and Rev., 1860, p. 24. Ed. N. Y. J. M., 1856, p. 278, and Brown, Quarantine, p. 6. Ed. N. Y. J. M., 1856, p. 278.	
			1702	Do.	Do.	Do.	Do.	Do.	Do.	
			1732	Do.	Do.	Do.	Do.	Do.	Do.	
			1741	Do.	Do.	Do.	Do.	Do.	Do.	
			1742	Do.	Do.	Do.	Do.	Do.	Do.	
			1743	Do.	Do.	Do.	Do.	Do.	Do.	
			1745	Do.	Do.	Do.	Do.	Do.	Do.	
			1747	Do.	Do.	Do.	Do.	Do.	Do.	
			1748	Do.	Do.	Do.	Do.	Do.	Do.	
			1762	Do.	Do.	Do.	Do.	Do.	Do.	
			1790	Do.	Do.	Do.	Do.	Do.	Do.	
			1791	Aug.	—	Oct.	15	Do.	Do.	
			1792	Do.	Do.	Do.	Do.	Do.	Do.	
			1793	Do.	Do.	Do.	Do.	Do.	Do.	
			1794	Do.	Do.	Do.	Do.	Do.	Do.	
			1795	July	10	Do.	Do.	Do.	Do.	
			1796	Do.	Do.	Do.	Do.	Do.	Do.	
			1797	Do.	Do.	Do.	Do.	Do.	Do.	
			1798	Aug.	—	Nov.	—	2,080	Do.	
			1799	July	—	Nov.	—	76	Do.	
			1800	Sept.	—	Oct.	14	*21	Do.	
			1801	Sept.	—	Oct.	—	*16	Do.	
			1802	July	—	Oct.	—	*82	W. Hinne, Ch. M. J. and Rev., 1860, p. 24. Ed. N. Y. J. M., 1856, p. 278.	
			1803	July	18	Oct.	—	6-700	J. H. Griscom, M. Rep., 1856, p. 561. Ed. N. Y. J. M., 1856, p. 278.	
			1805	June	—	Oct.	—	340	Ed. N. Y. J. M., 1856, p. 278.	
			1806	June	—	Nov.	—	*0	Ed. N. Y. J. M., 1856, p. 278.	

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1807	*3	J. H. Grisewon, M. Rep., 1856, p. 561.
1808	*1	Ed. N. Y. J. M., 1856, p. 284.
1809	*2	Do.
1810	*1	Do.
1815	*7	Do.
1816	.....	*0	Do.
1817	.....	*4	Ed. N. Y. J. M., 1856, p. 281.
1818	Aug. —	*4	Do.
1819	.....	37	Do.
1820	.....	*2	Do.
1821	July 10	*16	Do.
1822	.....	230	Do.
1823	.....	*5	Do.
1824	.....	*8	Do.
1825	.....	*1	Do.
1826	.....	*2	Do.
1827	.....	*4	Do.
1828	.....	*0	Do.
1829	.....	*0	Do.
1830	.....	*1	Do.
1832	.....	*1	Do.
1833	.....	*2	Do.
1834	.....	*1	Do.
1835	.....	*2	Do.
1838	.....	*8	Ed. N. Y. J. M., 1856, p. 284.
1839	.....	*8	Do.
1843	.....	*4	Do.
1844	.....	*5	Do.
1846	.....	*2	Do.
1847	.....	*0	Do.
1848	Aug. 13	*12	Do., and Trans. A. M. A., vol. 7, p. 162.
1852	.....	*1	Ed. N. Y. J. M., 1856, p. 284.
1853	.....	*14	Do.
1854	.....	*20	Do.
1855	.....	*5	Do.
1852	May 23	Oct. 30	B. M. and S. J., vol. 80, No. 23, p. 357.
1873	.....	18	Heber Smith, Report Surg. U. S. M. H. S., 1873.
1801	.....	.....	J. G. Scott, M. Repos., 1807, p. 202.
30	1856	.....	Va. M. J., 1856, p. 328.
30	1848	.....	A. B. Whiting, Ch. M. J. and Rev., 1848, p. 613.
20	1848	Aug. 23	.....
1873	.....	.....	Do.
1804	.....	.....	Dr. D. Hosack, M. and Philos. Reg., 1813, p. 191.
25	1856	.....	J. G. Scott, M. Repos., 1807, p. 212.
20	1856	.....	Va. M. J., 1856, p. 328.
8	1854	Sept. 24	.....
1864	.....	.....	Official Report, U. P. Rice, 1864.
1671	.....	Nov. 17	68
Queensborough, Orange Co.	On Hudson River	.....	.....
Bed Eook, Dutchess Co.	On Hudson River	.....	.....
Staten Island, New York Bay	.....	.....	.....
Richmond Co.	.....	.....	.....
Tompkinsville, Staten Isl.	.....	.....	.....
and Richmond Co.	.....	.....	.....
West Neck, Suffolk Co.	On Hudson River	.....	.....
West Point, Orange Co.	.....	.....	.....
Yellow Hook	.....	.....	.....
Newport River, near the sea.	.....	.....	.....
North Carolina .....	.....	.....	.....

* Star indicates the reports of deaths at the Marine Hospital, N. Y. for the respective years. Ed. N. Y. J. M., 1856, p. 284.

Table of Localities in the United States where Yellow Fever has appeared since A. D. 1663, &c.—Continued.

State,	Location.	Situation.	Elevation, in feet, above sea-level.			Date of com- mencement.	Date of sus- pension.	Mortality.	Authority.
			Year.	Month.	Year.				
North Carolina . . .	New Bern, Craven Co . . .	On Neuse River	20	1799	Sept. —	Nov. —	700	M. Repos, 1800, p. 197. Report Medical Inspector U. S. A., Dec. 31, 1864.	
	Smithville, Brunswick Co . . .	On Cape Fear River, near the ocean.	15	1864	.....	.....	.....	W. T. Wragg, N. Y. M. J., vol. ix, No. 5, 1869, p. 49.
	Washington, Beaufort Co . . .	On Tar River, 40 miles from Panlico Sound.	35	1800	.....	.....	.....	M. Repos, 1800, p. 197.
	Wilmington, New Han- over Co.	On Cape Fear River, 34 miles from the sea.	25	1796	.....	.....	.....	J. H. Griscom, N. Y. J. M., p. 360.
			1800	.....	.....	.....	.....	M. Repos, 1800, p. 197.
			1821	Aug. 9	.....	.....	.....	J. Hill, A. M. Rec., 1822, p. 86, and Brown, Quar- antine, p. 18.
Ohio	Cincinnati, Hamilton Co . . .	On Ohio River	550	1862	Aug. 6	Nov. 17	446	W. T. Wragg, N. Y. J. M., 1869, p. 478, and 1869, p. 225.	
	Gallipolis, Gallia Co	do	550	1871	.....	.....	.....	Health Office Report, vol. 25, No. 16, p. 354.
	Bald Eagle Valley, Clin- ton Co.	Center of Pennsylvania, on West Branch of Susque- hanna River.	520	1796	.....	.....	.....	A. Elliott, M. Repos., 1801, p. 74.
		On Delaware River.	550	1799	.....	.....	.....	W. Harris, M. Repos., 1801, p. 75.
Pennsylvania	Chester, Delaware Co	15	1798	.....	.....	50	J. H. Griscom, Visitations of Yellow Fever, p. 9. Dowler Tables of Fev., p. 13.	
	Chester County	1803	Aug. —	.....	.....	.....	La Roche, Yellow Fever, p. 68.	
	Kensington, Philadelphia Co.	15	1793	.....	.....	.....	W. Baldwin, Med. Mus., 1805, p. 601.	
	Lisburn, Cumberland Co . . .	On Yellow Breeches Creek, 9 miles from Harrisburgh.	250	1803	Aug. —	.....	.....	J. Rush, Med. Mus., 1805, p. 62.
	Marcus Hook, Delaware Co.	On Delaware River.	15	1798	.....	.....	.....	W. Harris, M. Repos., 1860, p. 75.
	Nittany, Centre Co.	Fair inland	550	1799	.....	.....	.....	J. N. Schoolfield, Va. M. J., 1857, p. 358.
	Philadelphia, Philadelphi- a Co.	On Delaware River	35	1865	Aug. 1	.....	.....	R. La Roche, Ch. M. J. and Rev., 1852, p. 58.
			1859	.....	.....	.....	.....	Daily Shreveport Times, vol. 2, No. 31, 1873.
			1732	.....	.....	.....	.....	B. Dowler, Tableau of Yellow Fever, p. 3.
			1741	.....	.....	.....	.....	Do.
			1742	.....	.....	.....	.....	R. La Roche, Ch. M. J. and Rev., 1852, p. 458.
			1743	.....	.....	.....	.....	Do.
			1744	.....	.....	.....	.....	J. H. Griscom, Visitations of Yellow Fever, p. 5.
			1747	.....	.....	.....	.....	Carey, Account of the Malignant Fever, p. 116.
			1762	Aug. —	.....	Nov. —	.....	Do.
			1791	.....	.....	.....	.....	Do.
			1793	Aug. 15	[.....]	Dec. — [4, 04]	Do.	Do.	

				La Roche, Board of Health Rep., Phila., 1870, p. 53. J.H. Griscom, N.Y.J.M., 1856, p. 369, and 1856, p. 368, Rush, Epidemic of 1797.
1794				Do.
1796	Aug. 1	Oct. 15	1,300	R. La Roche, Ch. M. J. and Rev., 1852, p. 458.
1797	Aug. 1	Nov. 1	3,500	W. Hunne, Ch. M. J. and Rev., 1860, p. 24.
1798	Jul. —	Nov. —	1,000	Do.
1799				Do.
1800				Do.
1801				Do.
1802			307	Do.
1803			195	Do.
1805			3-400	Do.
1807			3	B. Dowler, Tableau of Yellow Fever, 1853, p. 14.
1808				Do.
1810				Do.
1811				Do.
1813			5	Do.
1814			6	Do.
1815			7	Do.
1816			2	Do.
1819			2	S. Emelin, N. A. M. and S. J., 1828, p. 321.
1820	July 24	Oct. —	83	S. Jackson, A. M. Rec., 1829, p. 689.
1823	July 19	Oct. —	128	W. Jewell, N. Y. J. M., 1854, pp. 149, 246, and Brown, Quarantine, p. 10.
1834			18	Ed. Nash, J. M. and Surg., 1854, p. 345.
1870	June 29			La Roche, Yellow Fever, 1870, pp. 20, 26.
30	1793			La Roche, Yellow Fever, p. 65.
30	1801	June —		Aaron C. Willsey, M. Repos., 1863, p. 123.
30	1795			W. Hunne, Ch. M. J. and Rev., 1860, p. 24.
	1796			Do.
	1797			Do.
	1798			Do.
	1799			Do.
	1800			Do.
20	1806			Do.
35	1794			Do.
	1795			Do.
	1797	Aug. 13	Aug. —	Simons' Trans. S. C. Med. Ass'n, 1851, p. 37, and Trans. A. M. A., vol. 23, p. 201.
	1800			T. Harris, Phil. M. and P. J., No. 5, p. 21.
	1805	July 19	Aug. —	W. Hunne, Ch. M. J. and Rev., 1854, p. 145.
25	1798			Do.
	1805			Do.
	1805			Do.
	1798			Do.
	1799			Do.
	1803			Do.
	1798	May —	Sep. or Oct. 8-12	Do.
	1798			Do.
	1734			Do.
	1739			Do.
	1745			Do.
	1748			Do.
	1753			Do.
	1755			Do.
	1761			Do.
	1762			T. Harris, Phil. M. and P. J., 1865, p. 21.
				Dawson & De Saussure, Census of Charleston.

* Died daily.

Table of Localities in the United States where Yellow Fever has appeared since A. D. 1668, &c.—Continued.

State,	Locality,	Situation,	Elevation, in feet, above sea-level.	Year.	Month.	Year.	Month.	DATE OF COM- MENCEMENT.	DATE OF SUS- PENSION.	Mortality.	Authority.
South Carolina ...	Charleston, Charleston dis- trict.	A seaport.	.....	10	1768	.....	.....	.....	.....	.....	M. M. Dowler, N. O. M. J., 1859, p. 305.
				1770	.....	.....	.....	.....	.....	.....	T. Harris, Phil. M. and Ph. T., 1805, p. 21.
				1792	.....	.....	.....	.....	.....	.....	W. Hume, Ch. M. J. and Rev. 1852, p. 145, and Si- mons' Trans. Med. Ass'n S. C., 1851, p. 38.
				1794	.....	.....	.....	.....	.....	.....	Do.
				1795	.....	.....	.....	.....	.....	.....	Do.
				1796	.....	.....	.....	.....	.....	.....	Do.
				1797	.....	.....	.....	.....	.....	.....	Do.
				1798	.....	.....	.....	.....	.....	.....	T. Y. Simons' Ch. M. J. and Rev. 1851, p. 79.
				1799	.....	.....	.....	.....	.....	.....	W. Hume, Ch. M. J., and Rev. 1854, p. 145, and Si- mons' Trans. Med. Soc. S. C., 1851, p. 38.
				1800	.....	.....	.....	.....	.....	.....	Do.
				1802	.....	.....	.....	.....	.....	.....	Do.
				1803	.....	.....	.....	.....	.....	.....	Simons' Trans. S. C. Med. Ass'n, 1851, p. 37.
				1804	.....	.....	.....	.....	.....	.....	Do.
				1805	.....	.....	.....	.....	.....	.....	Do.
				1807	.....	.....	.....	.....	.....	.....	Do.
				1812	July	.....	.....	.....	.....	.....	162 Simons' Trans. S. C. Med. Ass'n, p. 38.
				1817	July	—	—	Nov.	—	—	W. Hume, Ch. M. J. and Rev. 1854, p. 145.
				1819	Aug.	—	—	Oct.	—	—	Dowler, N. O. M. J., 1859, p. 597.
				1820	June	—	—	Aug.	—	—	Do.
				1824	Aug.	—	—	Nov.	—	—	Do.
				1825	Aug.	—	—	Sept.	—	—	Do.
				1827	Aug.	—	—	Nov.	—	—	Do.
				1828	Aug.	—	—	Sept.	—	—	Do.
				1829	Sept.	—	—	Nov.	—	—	Do.
				1834	Aug.	—	—	Oct.	—	—	Do.
				1835	Aug.	—	—	Sept.	—	—	Do.
				1838	Aug.	—	—	Nov.	—	—	Do.
				1839	June	—	—	Oct.	—	—	Do.
				1840	Aug.	—	—	Oct.	—	—	Do.
				*1841	—	—	—	—	—	—	Simons' Trans. S. C. Med. Ass'n, p. 59.
				1843	—	—	—	—	—	—	Dowler, N. O. M. J., p. 597.
				1849	Aug.	—	—	Nov.	—	—	Do.
				1852	Aug.	—	—	Nov.	—	—	Do.
				1854	Aug.	—	—	Nov.	—	—	Do.
				1856	Aug.	—	—	Nov.	—	—	Do.
				1857	Sept.	—	—	Nov.	—	—	Do.

		July —	Dec. —	
	1858			717
	1862			Do.
Beaufort, Beaufort district.	1864	July 27		Brown, Quarantine, p. 29.
Columbia, Richland dist.	1871	July 19	Nov. —	Trans. A. M. A., vol. 23, p. 292.
Fort Moultrie	1854	Aug. 6	Nov. 21	Simons' Trans. A. M. A., vol. 23, p. 293.
On an arm of the sea.	10	1871	7	Trans. A. M. A., vol. 23, p. 331.
On Congaree River.	10	1871		Ed. Nash, J. M. and S., 1854, p. 345.
In Charleston Harbor	15	1854		M. M. Dowler, N. O. M. J., 1854, p. 305.
On Winyaw Bay	15	1852		Ch. M. J. and Rev., 1858, p. 64.
On Winyaw Bay	10	1858	Aug. 15	W. C. Miller, Ch. M. J. and Rev., 1856, p. 19.
Georgetown, Georgetown district.	10	1854	Sept. 20	W. C. Miller, Ch. M. J. and Rev., 1856, p. 30.
Hilton Head	10	1862	Sept. 8	Brown, Quarantine, p. 30.
Mont Pleasant, Charles-ton Co.	10	1817	Oct. 25	R. A. Kinloch, Ch. M. J. and Rev., 1858, p. 793.
	1848			Do.
	1852			Do.
	1854			Do.
	1856			Do.
	1857			Do.
	1853			Do.
	1855			W. J. Tuck, N. O. M. and S. J., 1854, p. 662.
Memphis, Shelby Co.	260	1866		A. P. Merrill, Galv. M. J., 1867, p. 861.
On Mississippi River	1866			Ed. Amer. Pract., vol. 8, 1873, p. 319.
	1873	Sept. 14	Nov. 9	Memphis Board of Health. See G. B. Thornton, in Report of Supervising Surgeon U. S. Mar. Hos. Service, 1873.
	250	1867	Sept. 4	Gelv. M. J., 1867, vol. 2, No. 10, p. 930.
Alerville, Colorado Co.	290	1867	Dec. —	Trans. A. M. A., vol. 19, p. 289.
Anderson, Grimes Co.	140	1867		Trans. A. M. A., vol. 19, p. 275.
Austin	140	1867		
Bastrop, Bastrop Co.	30	1863		
Beaumont, Jefferson Co.	30	1855		
Bellville, Austin Co.	110	1850		
Brazoria, Brazoria Co.	30	1867	Oct. 31	J. Stephens, N. O. M. and S. J., 1856, v. 601.
Near Austin, near Brazos River.	30	1850	Dec. 23	B. Dowler, N. O. M. J., 1860, p. 443.
On Neches River.	30	1853	Nov. —	Trans. A. M. A., vol. 19, p. 275.
10 miles east-southeast of Austin, near Brazos River.	30	1858		Army Medical Statistics, p. 353.
Brenham, Washington Co.	25	1858		S. Chaillé, N. O. M. and S. J., 1858, p. 811.
20 miles from Brazos River.	1862	Oct. 12	Jan. 10	Gelv. M. J., 1866, p. 170.
Brownsville, Cameron Co.	325	1867	Oct. 12	
On Rio Grande River		1873		
Calvert, Robertson Co.		1867		
Between the Brazos and Navasota River.		1867		
Near Brazos River		1867		
Chapel Hill, Washington Co.		1867		
Columbus, Colorado Co.	290	1873	Dec. —	Newspapers, Trans. A. M. A., vol. 19, p. 275.
Columbia, Brazoria Co.	25	1833		
Corsicana, Navarro Co.	305	1873		Newspapers, Galv. M. J., 1866, p. 163.
150 miles north northeast of Austin, near the Pecan River.				Newspapers.
Corpus Christi, Nueces Co.	15	1862		Galv. M. J., 1866, p. 170.
On Corpus Christi Bay	15	1867	Aug. —	Brown, Quarantine, p. 70.
		1873		Newspapers.

* Not within the incorporated limits of Charleston, South Carolina.

Table of Localities in the United States where Yellow Fever has appeared since A. D. 1668, &c.—Continued

State.	Situation.	DATE OF COM- MENCEMENT. Year.	DATE OF SUS- PENSION. Year.	MORTALITY, Month.	Authority.	
Texas	Cypress City, Harris Co	60 Elevation above sea-level, in feet.	1853 1859 1867	1853 July 12 Oct. 11	Galv. M. J., 1866, p. 169.	
Danville, Montgomery Co	Near Cypress Bayou, a branch of the San Jacinto River.	160 On branch of the San Jacinto River.	1859 1867	1859 July 12	B. Dowler, N. O. M. J., 1860, p. 443. Trans. A. M. A., vol. 19, p. 406.	
Edinburg, Cameron Co.	On Rio Grande River	100 On San Antonio River	1859 1867	1859 July 12	B. Dowler, N. O. M. J., 1860, p. 443. Trans. A. M. A., vol. 19, p. 284.	
Goliad, Goliad Co.	On an island in Galveston Bay	50 5 1859	1859 Sept. 30	1859 July 12	Galv. M. J., 1867, p. 856.	
Galveston, Galveston Co.	On an island in Galveston Bay	1844 1847 1853 1854	1844 July 5 Oct. 1 Aug. 16	1844 Oct. 1 Nov. 25 Nov. 28	13 23 250 400	Galv. M. J., 1867, p. 838.
Hempstead, Austin Co.	On Buffalo Bayou near Brazos River.	1858 1859 1863 1866 1869 1870 1870	1858 Aug. 27 Sept. 17 June 26 Aug. 9	1858 Nov. 14 Nov. 30 Nov. 30 Nov. 26 Nov. 26	344 Do. Do. Do. Do. Do. Do.	Galv. M. J., 1866, p. 338. S. M. Welch, Galv. M. J., vol. 1, No. 2, p. 83. Trans. A. M. A., vol. 19, p. 289. Trans. A. M. A., vol. 19, p. 275.
Hockley, Harris Co.	Near Buffalo Bayou	55 50 1853 1859 1864 1847 1848 1853	1859 Aug. 9	1859 Aug. 9	151	Galv. M. J., 1866, p. 169.
Houston, Harris Co.	On Buffalo Bayou	200 1859 1864 1847 1848 1853	1859 Aug. 9	1859 Aug. 9	Do.	W. McCraven, N. O. M. N., 1860, p. 105.
Huntsville, Walker Co.	200 miles east by north of Austin.	200 1864 1870 1867	1864 Aug. 9	1864 Oct. 19	1	Galv. M. J., 1866, p. 163. Galv. M. J., 1870, p. 296. Trans. A. M. A., vol. 19, p. 275.
Independence, Washington Co.	80 miles east of Austin, near Brazos River.	250 1867	1867	130	Trans. A. M. A., vol. 19, p. 289.	

Indiana, Calhoun Co.	On Matagorda Bay	Sept. —	.....	Indiana, Bulletin, Dec. 16, 1870.
	On Colorado River .....	.....	.....	Brown, Quarantine, p. 68.
La Grange, Fayette Co.	On Trinity River .....	.....	.....	Heard, Rep. Epid. of Texas, p. 15.
	On 36 miles west of Galveston, near Chocolate River.	.....	.....	B. Dowler, N. O. M. J., 1860, p. 443.
Liverpool, Liberty Co.	On Matagorda Bay	June 20	.....	Brown, Quarantine, p. 68.
	On Matagorda Co.	Aug. —	.....	Trans. A. M. A., vol. 19, p. 298.
Matagorda, Matagorda Co.	On Brazos River	1867	.....	Trans. A. M. A., vol. 19, p. 975.
	Near Brazos River	1867	.....	Trans. A. M. A., vol. 19, p. 289.
Millican, Brazos Co.	On the Navasota River	1863	.....	Galv. M. J., 1860, p. 109.
	Oldtown, near Indianola Co.	1862	.....	Galv. M. J., 1860, p. 170.
Narvatoa, Grimes Co.	On Lavaca Bay	1864	Oct. 15	Trans. A. M. A., vol. 19, p. 296.
	On Brazos River	1863	Aug. 19	Galv. M. J., 1860, p. 175.
Richmond, Fort Bend Co.	On Rio Grande River	1867	Aug. 13	Trans. A. M. A., vol. 19, p. 275.
	On Sabine Lake	1867	Oct. 13	A. R. Kilpatrick, Galv. M. J., 1868, vol. 1, No. 3, p. 182.
Rio Grande City, Starr Co.	On Matagorda Island	1863	July 3	Trans. A. M. A., vol. 19, p. 208.
	On Guadalupe River	1867	—	Trans. A. M. A., vol. 19, p. 283.
Sabine City, Jefferson Co.	On Matagorda Island	1863	—	Galv. M. J., 1860, p. 163.
	On Matagorda Island	1863	—	B. Dowler, N. O. M. J., 1860, p. 443.
Sulphur, Calhoun Co.	On Matagorda Island	1863	—	Heard, Epidemic diseases of Texas.
	Sugarland, Fort Bend Co.	1869	—	Galv. M. J., 1866, p. 170.
Victoria, Victoria Co.	On Rio Grande River	1867	Aug. 1	B. Dowler, N. O. M. J., 1860, p. 443.
	On Guadalupe River	1867	Aug. 1	Trans. A. M. A., vol. 19, p. 294.
Alexandria, Alexandria Co.	On Potomac River	1863	Aug. 1	Dr. Dick, Med. Repos., 1804, p. 190.
	On James River	1798	—	Currie, Memoirs of Yellow Fever, p. 109.
Gosport, Norfolk Co.	On Elizabeth River	1855	—	J. A. Manning, Va. M. J., 1867, p. 288.
	Hampton Roads	1869	—	Brown, Quarantine, p. 15.
Norfolk, Norfolk Co.	On Elizabeth River	1794	—	Daily Shreveport Times, vol. 2, No. 311, 1873.
	On Elizabeth River	1795	—	J. H. Griscom, N. Y. J. M., 1856, p. 369.
Virginia	On Appomattox River	1796	—	Va. M. J., 1857, p. 95.
	On Elizabeth River	1804	—	J. H. Griscom, N. Y. J. M., 1866, p. 369.
Petersburg, Dinwiddie Co.	On Elizabeth River	1798	—	Va. M. J., 1857, p. 95.
	On Appomattox River	1800	—	Do.
Portsmouth, Norfolk Co.	On Elizabeth River	1801	—	Do.
	On Elizabeth River	1802	—	Do.
	On Elizabeth River	1803	—	Do.
	On Elizabeth River	1804	—	Do.
	On Elizabeth River	1805	—	Do.
	On Elizabeth River	1821	Aug. 1	Va. M. J., 1857, p. 95.
	On Elizabeth River	1830	Sept. 1	Committee's Report, p. 14.
	On Elizabeth River	1832	Aug. 7	Va. M. J., 1857, p. 95.
	On Elizabeth River	1834	Oct. 30	Do.
	On Elizabeth River	1835	June 30	Portsmouth Relief Association Report.
	On Elizabeth River	1798	—	Currie, Memoirs Yellow Fever, p. 109.
	On Elizabeth River	1852	—	Portsmouth Relief Association Report.
	On Elizabeth River	1854	—	Do.
	On Elizabeth River	1855	Aug. 1	Portsmouth Relief Association Report, p. 77.
		Oct. —	| 1,600	

Petersburg, Dinwiddie Co.
Portsmouth, Norfolk Co.

Indiana, Bulletin, Dec. 16, 1870.

Brown, Quarantine, p. 68.

Heard, Rep. Epid. of Texas, p. 15.

B. Dowler, N. O. M. J., 1860, p. 443.

Brown, Quarantine, p. 68.

Heard, Rep. Epid. of Texas.

Brown, Quarantine, p. 68.

Heard, Epidemic diseases of Texas.

Brown, Quarantine, p. 15.

Daily Shreveport Times, vol. 2, No. 311, 1873.

J. H. Griscom, N. Y. J. M., 1856, p. 369.

Va. M. J., 1857, p. 95.

Committee's Report, p. 14.

Va. M. J., 1857, p. 95.

Portsmouth Relief Association Report.

Currie, Memoirs Yellow Fever, p. 109.

Portsmouth Relief Association Report.

Do.

Table of Localities in the United States where Yellow Fever has appeared since A. D. 1668, &c.—Continued.

State.	Locality.	Situation.	DATE OF COM- MENCEMENT.		DATE OF SUS- PENSION.		Mortality.	Authority.
			Year.	Month.	Year.	Month.		
Virginia	Richmond, Henrico Co.— Scott's Creek, near Ports- mouth. Winchester, Frederick Co.	On James River..... 20 miles from the Blue Ridge Mountains.	50 15 70	1806 1853 1804	1806 June 29 July —	..... ..... .....	.....	M. Repos., 1807, p. 215. J. A. Manning, <i>V. a. M. J.</i> , 1857, p. 29. R. Dunbar, <i>Med. Repos.</i> , 1805, p. 232.

**CHART
OF
YELLOW FEVER
IN THE
United States**

*Giving Elevations above Sea-Level of Localities where
Yellow Fever has appeared since A.D. 1668.*

Prepared by

DR. J. M. TONER

*to accompany his paper on
and Natural History of Yellow Fever in the United States
in the Report of the
Supervising Surgeon
-John M. Woodworth-
United States Marine-Hospital Service*

(Figures accompanying Names of Localities indicate Elevation above Sea-Level in Feet.)

