THE CAUSATION OF

INTERMITTENT FEVER;

INCLUDING

A RECORD OF 118 CASES OF INTERMITTENT FEVER AND OF COINCIDENT METEOROLOGICAL AND OTHER CONDITIONS.

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CAUSATION OF INTERMITTENT FEVER.

HOW METEOROLOGICAL CONDITIONS MAY CAUSE SICKNESS; AND METEOROLOGICAL AND OTHER CONDITIONS INFLUENCING THE PRODUCTION OF INTERMITTENT FEVER.

BY A. W. NICHOLSON, M. D., OF OTISVILLE, MICH.

All investigators after scientific truths, and especially those working in the field of pathological research, must entertain respect for the recent systematic efforts of Prof. Klebs, and of Dr. Tommasi-Crudeti to discover the nature of the causation of periodic fevers in certain organisms existing in the soil, and in the atmosphere above the ill-famed Roman Campagna and Pontine Marshes. Yet the wavering conclusions arrived at by these earnest workers as a sequence of their labors, and the absence of positive knowledge as to the nature of the *causa sine qua non* of the development of the so-called malarial disorders, still leaves open the opportunity for further earnest work in this direction, further labor for the microscopist, and further labor upon the part of those other investigators who doubt the constant presence of a definite organism in the soil, to propagate and diffuse itself in the atmosphere, where that alone would be sufficient to produce the phenomena of periodic fever.

The sanitarian is still unable to point out, and adopt determinate means to exorcise this *ignis fatuus* and thereby offer a blessing to the State and to mankind, though great are the results consummated by him in the removal of *many* conditions that often appear to perform the parts of elements of causation.

Whatever channel of research the etiologist or pathologist may pursue, his exertions ought to be influenced by a thorough knowledge of all those common circumstances liable to cause a disturbance of a physiological state. He should not ignore the apparent relations that alterations in atmospheric pressure, that hygrometric changes, that temperature, and other meteorological conditions bear to these disturbances. The existence of the phenomena of fever needs not always be accounted for through a co-existence of a specific poison. Nor has the periodicity of fevers been explained by the presence of a "*bacillus malariæ.*"

I would not wish to offer any theory of my own to supplant the theories that have arisen as results of the admirable speculations of the many who have tried to fathom the nature of the cause of these fevers; but several years' observations of these fevers, with an effort to be systematic in a careful analysis of individual cases, as to their relations to immediate meteorological condi-

tions and sanitary surroundings, may justify me in presenting the results of these observations.

The study of the relation of meteorology to pathology is every day assuming greater importance. That there are some factors that meteorology already has demonstrated bear a truthful relation of cause and effect in regard to sickness, does not justify one in anticipating that to atmospheric changes may sometime be traced the causation of all diseases. Yet we cannot but conceive that the conditions of the air exert an influence on all sicknesses and all physiological conditions.

The prevalence of periodic fevers in this region, especially during the Summer months, induced me to prepare a schedule of inquiries bearing upon the subjects of sanitation and meteorology in their relations to these fevers. I therefore commenced a history of these cases, as they occurred in my practice, on the 1st day of May, 1877, and according to the requirements of the schedule. At this date I did not have a complete meteorological equipment, but one including ozonometry. Upon the 18th of the succeeding month my apparatus accorded with the requirements adopted by the State Board of Health. The plan was to ascertain the date of attack, and consider each case in its relation to every meteorological fact possible pertaining to the forty-eight hours preceding the attack, and for the day of the attack. Also to secure facts relating to sanitary surroundings, to the health of the individual immediately preceding his present sickness, and facts relating to all exposures, excesses, and deprivations. Such a record, when tabulated, might enable me to arrive at some valuable conclusions.

In examining the facts recorded in the table one is impressed with the apparent relation of causation some of these facts bear to the individual cases.

Temperature, moisture, barometric pressure, and other atmospheric conditions assist in sustaining or occasioning perturbations in the physiological equilibrium of every individual. Yet, each state of the air never can exhibit its own influence separable from the combined influence of other atmospheric conditions, and our study of their relations to organic life should be governed by a knowledge of this fact. If humidity modifies the effects of temperature it also modifies the influence of barometric pressure, and of the wind. In speaking of the separate effects of temperature, the late Geo. B. Wood says:—

"The effect of heat is to excite its own peculiar sensation in the seat of application. In a moderate degree this may not be displeasing; indeed, when the temperature has been depressed below the normal standard, it is often highly grateful; but, if increased it begins at length to become painful, and in the highest degrees is often extremely so.

"The secretions are promoted, all of them probably at first, under a gentle operation of the stimulant; but when the heat is considerable and continued, the mucous membranes and the kidneys appear to be irritated beyond the point of free secretion, as indicated by a dryish state of the mouth and diminished discharge of urine; while the secretory function of the liver and skin are augmented so that there is usually a freer flow of bile and a greater or less increase of perspiration.

"Along with the exaltation of the organic functions the nervous also becomes excited. A moderate influence of the cause is usually attended with agreeable effects. But these functions under a higher degree of excitation become deranged, and at a still higher are impaired. This result is simply in conformity with the general law that, by moderate over-excitation or irritation, the functions are increased in a normal direction, by a greater amount of it are deranged, and by a still greater are diminished or suppressed."

In a recent work on "Sanitary Examination of Water, Air, and Food," by Cornelius B. Fox, he writes of moisture:—

"An excess of aqueous vapor in the atmosphere has not only a depressing effect on the nervous system, but it interferes with the cutaneous and pulmonary exhalations. If the temperature is high (65° to 80° Fahr.), saturated air is sultry and offensive; if low (*e. g.*, a Scotch mist of 36° Fahr.), its chilling influence penetrates all clothing. Above 80° Fahr. air of excessive humidity becomes injurious, and it has been doubted as to whether life can be prolonged in such air at a temperature of between 90° and 100° Fahr."

The practical researches of Dr. Bowditch, and of Dr. Baker of our own

State Board of Health, clearly demonstrate a marked relation between moisture and temperature and pulmonary affections.

The 19th of July of the year 1878 may well be remembered by the working population in this State, and especially by those at that time living in this vicinity. The morning opened with a temperature of nearly 70° Fahr. and the atmosphere saturated with humidity. At 2 o'clock P. M. the thermometer read 93° in the shade with a relative humidity amounting to eighty-five per cent. The highest temperature amounted to 96.5° Fahr. in the shade. The air was quiet, or moving at the rate of from two to four miles per hour. The record of atmospheric pressure was one of the highest during the month. The per cent of clouds was not sufficient to protect the laborer from the torrid heat of the sun. In the test for ozone for the preceding night there was but a trace, though this circumstance might have been due to decolorization by excess of moisture. The rate of ozone was, during the day, a discoloration of three degrees, on a scale of ten, according to Schönbein's test.

The great majority of the laborers working in the harvest-field during the most oppressive portion of the day, wisely, or instinctively, left the field, while among those who injudicously disregarded the warning the oppressive air gave to all, some were seized with sudden and excessive nausea and depression, others with vertigo, and many by attacks of typical periodic fevers whose paroxysms were repeated for several days. In two instances of insolation (sunstroke) occurring among those cases coming under my own observation, a lingering illness was followed by insanity terminating in death.

What was the cause of these differing disturbances when all were subjected to selfsame atmospheric conditions? While in the same field one was the prey of abdominal spasms with fluxes and nausea, another of ague, and another the victim of a coup-de-soleil (sunstroke), can we, when we know of the varying susceptibility of the nervous system of differing individuals to the influences of external impressions, and the ease with which discomfort overbalances a physiological condition, expect to discover the presence of one individual, septic, or cryptogamic element that alone will produce one of these sicknesses while the others are produced by known, obtaining atmospheric states, all being subservient to the same apparent causes?

It is difficult to declare what influence each meteorological element exerted upon those placed in relation to it. The most marked, probably, was the combined influence of temperature and moisture. Evaporation of the perspiration from the skin was almost absolutely prevented, and it was rendered impossible for the body to sustain the temperature of health. Disturbances in the digestive and circulatory and other functions were the result.

Another illustration of the apparent effects of elevated temperature and excess of moisture, came under my observation in the Summer of the year 1876. The locality was in a pioneer settlement and adjoining a pine forest. The floor of the house where the subjects resided was constructed of rough boards which were movable. The rooms of the house were practically as one. Beneath the house was stagnant water to the depth of two feet. A hot fire in a large stove was a frequent necessity, and the artificially heated atmosphere greatly served to attract the moisture from below. This humid air, subject to sudden fluctuations of temperature, was the apparent cause of the extreme sickness that followed. One of the inmates of this habitation died of colliquative diarrhea, and four others, after removal, slowly recovered from fevers of a periodic and a typhus type.

Experiments made with the psychrometer by the writer since the occurrence of the instance recorded last, demonstrate that where conditions exist to freely admit moisture where the air is artificially heated, as with stove above mentioned, there is excess of moisture in the air thus heated over that in the air not immediately subjected to such heat. Experiments conducted over a swamp with the view of ascertaining the varying amount of moisture in different situations, discovered that where there was free circulation of the air or a rapid motion the temperature and moisture were less than in situations where the air was more confined and the temperature higher.

The influence of barometric pressure on the phenomena of life is not yet well known. It is stated that a man of ordinary stature, subjected to a normal pressure of fourteen tons, suffers no great inconvenience, as the body, being permeable to the atmosphere, is subjected to equal pressure in all directions. Yet, the aeronaut, as he ascends into rarer atmosphere, experiences hemorrhages from nose, lips, and eyes, a fact ascribable to the absence of the customary atmospheric pressure exerted upon the blood-vessels. Although the change is sudden in these instances producing these effects, it is not improbable that the barometric fluctuations in the lower stratum of the atmosphere when associated with other favorable conditions, effect changes in the circulatory system and in the nervous system, that may excite discomfort and disease.

What the *exact* relations may be between the weight of the atmosphere and co-inciding sickness, only multiplied observations in this direction can demonstrate. Other co-existing factors must be considered at the same time. Strict accuracy in this relation requires that the observer should not wholly rely upon averages of months in regions isolated from the case of sickness, but that he should make the time of his observation correspond simultaneously with the date of attack, and that the observations should be in close proximity to the location of the case. The same accuracy should be observed in respect to every other meteorological condition when studied in relation to prevailing disease.

The effects of the prevalence of clear or cloudy skies as factors in the prevention or production of disease is little studied and, perhaps, too greatly disregarded. It is generally believed that sunshine is conducive to the perpetuity of a healthy state of the body and mind. Although this proposition is generally true, an exception often occurs when, after rains, the effects of high temperature and a humid air are ameliorated by an over-clouded sky. The invigorating influence of showers, increasing, as it usually does, the quantity of active oxygen, and washing impurities from the air, more than equals the evil a cloudy sky would cause.

If ozone is the "scavenger" of the atmosphere, it has an ally in the wind that dilutes the air containing local impurities with fresh supplements of purer air, thus enabling this great disinfectant to better seize upon its poisonous particles. Although the wind often is the agent that transports the contagia of virulent disease, it often acts as a factor to prevent disease. High temperature and extreme humidity of the air, with a still circulation, prevent cutaneous and pulmonary exhalations to such an extent as to occasion diarrhea and other disorders, especially those apt to occur where nervous depression already obtains. A change happens when a breeze puts into circulation the motionless air. Then the surface of the body experiences cooler and more agreeable sensations by an augmented evaporation from the skin, and its salutary influence is reflected to the nerve-centers.

How great may be the influence of active oxygen upon the animal economy is, also, yet a question for extensive observation and speculations. Notwithstanding so little positive information has been obtained relating to its agency in preventing or producing disease since its discovery in 1839 by Prof. Schönbein, and so discouraging have been the results arrived at by most observers, the present unabating enthusiasm exhibited by many investigators in relation to this subject renders an eventual solution of the problem probable.

The State Board of Health of Michigan considered the subject worthy of study, and has adopted a systematic course of investigation in regard to it. In a communication to the writer, the Secretary of the Board emphasized the importance he placed upon the study of the etiological relations of ozone.

The following table exhibits the monthly averages of the principal meteorological data. It is inserted to assist in the study of the cases recorded in the table succeeding it.

MONTHS, 1877.	Temp. Degrees F.*	Grains of Vapor in Cubic Foot of Air.*	Atmospheric Pressure. Inches.*	Velocity of Wind. Miles per Hour.* †	OZONE.		Rainfall. Inches.	Per Cent of Cloudiness.*
					Day. 7 A. M. to 2 P. M.	Night. 9 P. M. to 7 A. M.		
May	57.8	----	------	4.4	3.5	2.7	1.75	33.6
June	67.0	5.62	29.068	6.5	3.0	2.7	3.77	37.5
July	72.5	6.03	29.084	3.5	3.0	1.9	1.97	32.1
August	69.9	5.99	29.066	2.2	3.4	1.8	3.58	32.9
September	62.5	5.56	29.153	2.7	3.1	1.9	2.59	24.7
October	50.7	5.11	29.114	2.9	3.4	3.2	4.33	80.1
November	33.9	2.53	29.143	3.9	4.6	5.2	3.03	65.0
December	36.0	2.60	29.221	6.0	3.4	3.9	1.68	68.0

* Average of observations, at 7 A. M., 2 P. M., and 9 P. M. daily.
† Estimated.

The altitude of the place where these observations were taken is 820 feet above the level of the sea; the latitude, 43°13′, and longitude, 83°31′. Topographically the country consists of level tracts succeeded by sandy elevations, and abounds in small lakes. The soil varies greatly in short distances, consisting of clay, clay loam, sand and sandy loam.

TABLE.—*Record of 118 Cases of Intermittent Fever*

CASE.	Date of Attack.	Date of first Visit.	Date of Meteorological Observation.	TEMP. 7 A. M.	TEMP. 2 P. M.	TEMP. 9 P. M.	GRAINS OF VAPOR IN A CUBIC FOOT OF AIR. 7 A. M.	GRAINS OF VAPOR IN A CUBIC FOOT OF AIR. 2 P. M.	GRAINS OF VAPOR IN A CUBIC FOOT OF AIR. 9 P. M.	BAROMETRIC PRESSURE, REDUCED TO 32° F. 7 A. M.	BAROMETRIC PRESSURE, REDUCED TO 32° F. 2 P. M.	BAROMETRIC PRESSURE, REDUCED TO 32° F. 9 P. M.	BAROMETRIC PRESSURE, REDUCED TO 32° F. Mean.	PER CENT OF CLOUDINESS. 7 A. M.	PER CENT OF CLOUDINESS. 2 P. M.	PER CENT OF CLOUDINESS. 9 P. M.	PREVAILING DIRECTION AND VELOCITY OF WIND. Direction.	Miles per Hour. *	Ozone, Night, 9 P. M. to 7 A. M.
1	1877 May 2	May 5	May 1...	31	40	37	.....	.....	.....	.....	.....	.....	.....	100	100	100	N. W.	4-2	----
			" 2...	30	49	41	.....	.....	.....	.....	.....	.....	.....	00	5	00	N. W.	4-2	----
2	1	5	.....	...	...	...	.....	.....	.....	.....	.....	.....	.....	...	...	...	.....	.....	----
			May 1...	31	40	37	.....	.....	.....	.....	.....	.....	.....	100	100	100	N. W.	4-2	----
			.....	...	...	...	.....	.....	.....	.....	.....	.....	.....	...	...	...	.....	.....	----
3	7	7	" 5...	46	60	47	.....	.....	.....	.....	.....	.....	.....	20	75	5	E.	4	----
			" 6...	49	60	48	.....	.....	.....	.....	.....	.....	.....	00	Smo	00	N. E.	12-4	4
			" 7...	47	61	47	.....	.....	.....	.....	.....	.....	.....	75	50	00	N. E.	12-4	4
4	12	13	" 10..	45	51	47	.....	.....	.....	.....	.....	.....	.....	90	90	90	N. & E.	2-4	2
			" 11..	57	62	44	.....	.....	.....	.....	.....	.....	.....	90	90	00	S. E. & N. E.	2	3
			" 12..	50	67	52	.....	.....	.....	.....	.....	.....	.....	00	25	00	N. E. & S. E.	4-2	3
5	18	20	" 16..	69	72	60	.....	.....	.....	.....	.....	.....	.....	50	20	00	S. E. & S. W.	2-12	2
			" 17..	62	72	69	.....	.....	.....	.....	.....	.....	.....	100	75	00	S. E. & S. W.	2-4	1
			" 18..	69	82	70	.....	.....	.....	.....	.....	.....	.....	50	50	5	S. W.	4-2	2
6	18	20	" 16..	69	72	60	.....	.....	.....	.....	.....	.....	.....	50	20	00	S. E. & S. W.	2-12	2
			" 17..	62	72	69	.....	.....	.....	.....	.....	.....	.....	100	75	00	S. E. & S. W.	2-4	1
			" 18..	69	82	70	.....	.....	.....	.....	.....	.....	.....	50	50	5	S. W.	4-2	2
7	19	21	" 17..	62	72	69	.....	.....	.....	.....	.....	.....	.....	100	75	00	S. E. & S. W.	2-4	1
			" 18..	69	82	70	.....	.....	.....	.....	.....	.....	.....	50	50	5	S. W.	4-2	2
			" 19..	69	88	67	.....	.....	.....	.....	.....	.....	.....	50	25	10	S. W.	12-2	
8	17	21	" 15..	50	72	59	.....	.....	.....	.....	.....	.....	.....	100	75	5	E.	4-2	3
			" 16..	69	72	60	.....	.....	.....	.....	.....	.....	.....	50	20	00	S. E. & S. W.	12-2	2
			" 17..	62	72	69	.....	.....	.....	.....	.....	.....	.....	100	75	00	S. E. & S. W.	2-4	1
9	11	21	" 9...	46	50	43	.....	.....	.....	.....	.....	.....	.....	75	75	10	N. W. & N.	4-2	3
			" 10..	45	57	47	.....	.....	.....	.....	.....	.....	.....	90	90	90	N. & E.	2-4	2
			" 11..	57	62	44	.....	.....	.....	.....	.....	.....	.....	90	90	00	S. E. & N. E.	2	3
10	20	21	" 18..	69	82	70	.....	.....	.....	.....	.....	.....	.....	50	50	5	S. W.	4-2	2
			" 19..	69	88	67	.....	.....	.....	.....	.....	.....	.....	50	25	10	S. W.	12-2	1
			" 20..	72	88	72	.....	.....	.....	.....	.....	.....	.....	50	50	100	S. E. & E.	2-4	1
11	3	29	" 1...	31	40	37	.....	.....	.....	.....	.....	.....	.....	100	100	100	N. W.	4-2	----
			" 2...	30	49	41	.....	.....	.....	.....	.....	.....	.....	00	00	00	N. W.	4-2	----
			" 3...	39	57	47	.....	.....	.....	.....	.....	.....	.....	00	10	5	S. W. & N. W.	2-4	----
12	20	J'ne 1	" 18..	69	82	70	.....	.....	.....	.....	.....	.....	.....	50	50	5	S. W.	4-2	2
			" 19..	69	88	67	.....	.....	.....	.....	.....	.....	.....	50	50	10	S. W.	12-2	1
			" 20..	72	88	72	.....	.....	.....	.....	.....	.....	.....	50	50	100	S. E. & E.	2-4	1
13	J'ne 1	4	" 30..	66	80	63	.....	.....	.....	.....	.....	.....	.....	25	25	00	S. W.	4-2	3
			" 31..	71	81	67	.....	.....	.....	.....	.....	.....	.....	10	5	10	S. W. & S.	12-4	3
			June 1...	72	83	69	.....	.....	.....	.....	.....	.....	.....	5	75	5	S. E.	12-4	3
14	2	4	May 31..	71	81	67	.....	.....	.....	.....	----	.....	.....	10	5	10	S. W. & S.	12-4	3
			June 1...	72	83	69	.....	.....	.....	.....	.....	.....	.....	5	75	5	S. E.	12-4	3
			" 2...	69	80	61	.....	.....	.....	.....	.....	.....	.....	00	00	5	N. W. & S. W.	12-4	4
15	4	10	" 2...	69	80	61	.....	...	.....	.....	.....	.....	.....	00	00	5	N. W. & S. W.	12-4	4
			" 3...	69	80	61	.....	.....	.....	.....	.....	.....	.....	75	10	10	N. W. & W.	25-2	3
			" 4...	69	75	59	.....	.....	.....	.....	.....	.....	.....	5	25	haze	W. & E.	4	3
16	11	11	" 9...	69	67	58	.....	.....	.....	.....	.....	.....	.....	100	100	100	S. W. & N. W.	12-4	4
			" 10..	50	58	50	.....	.....	.....	.....	.....	.....	.....	100	75	10	W.	12-2	3
			" 11..	53	59	52	.....	.....	.....	.....	.....	.....	.....	10	95	75	E. S. W.	12-2	4
17	7	14	" 5...	55	71	59	.....	.....	.....	.....	.....	.....	.....	100	95	100	N. E.	4	4
			" 6...	59	74	61	.....	.....	.....	.....	.....	.....	.....	10	haze	00	N. E.	4-2	1
			" 7...	64	79	65	.....	.....	.....	.....	.....	.....	.....	5	25	00	N. E. & S. E.	2-12	2

* Estimated, by observations at 7 A. M., 2 P. M., and 9 P. M. The figures separated by hyphens denote the greatest and the least velocity; in some cases the velocity is given for the three observations, thus, 2-12-4.

and Coincident Meteorological and other Conditions.

Ozone, Day, 7 A. M. to 2 P. M.	Rainfall, Inches.	Character of Surrounding Country, and Nature of Soil.	Sanitary Surroundings of Habitation.	Age, in Years.	Sex and Social Condition.*	Recent Exposures, Excesses, and Deprivations.	Type of Disorder.
---- ---- ----	Light Snow. ------	Village. Low lands partly drained. Forests ⅓ mile distant. Soil sandy.	House in village, low on ground. Ground cold and wet at this time. Well 27 ft. deep; iron pipe. Water becomes yellow on standing; has bad taste.	27	Fe. M.	Patient says cause of her sickness might be due to her having taken off underclothing.	Tertian.
---- ---- ----	Light Snow.	Level well cultivated farming country. Soil clay and sandy loam.	Ground cold and wet on May 1. Sanitary surroundings fair. Well-water good.	23	Ma. M.	Only such exposures as working hard in field would occasion.	Tertian.
1 4 4	------ ------ ------	Level and well cultivat'd. Soil sand, clay and loam. Soil dry at this time.	House low on ground. No cellar. Good water.	83	Ma. M.	Deprived of rest by taking care of sick wife.	Tertian.
4 3 3	------ ------ ------	Land'rolling. Ponds and marshes near. Soil mixed and dry.	House, rough boards. No cellar. Stagnant pond near. House in settlement with population of 75. No other case near. Water good.	10	Ma.	Has a very impressionable nervous system and is subject to convulsions; no apparent unusual cause why sickness should occur.	Quotidian.
3 3 2	------ .77 ------	Slight elevations surrounded by swamps. Elevations sandy.	Low, filthy, unfinished house. Well-water good.	77	Fe. M.	No unusual exposures, etc....	Tertian.
3 3 2	.08 .77 ------	Elevated farm'g country. Small lake 100 rods from house. Soil sandy.	Low, small house; no cellar. Water good. Soil wet from rain of previous day.	1 & ½	Ma.	No unusual exposures, etc., excepting the air was nearly saturated with moisture.	Quotidian.
3 2 2	.77 ------ ------	Same as in case 1.....	Same as in case 1.....	3	Ma.	Went bare-footed on the 17th and 18th, for first time this year.	Quotidian.
4 3 3	.46 .08 .77	Soil sandy. Woods. Low lands and swamps near.	Low board house; ground wet. No cellar under house. Spring-water; Some organic matter in it.	1	Fe.	Went bare-footed on 17th, and had then first marked chill.	Tertian.
4 4 3	.01 ------ ------	Woods. Low lands and swamp lands. Soil sandy.	Low log house. Use spring-water containing organic matter. Bad taste to water.	1 & ½	Ma.	Child's health affected by period of dentition.	Tertian.
2 2 3	------ ------ .24	In village of Otisville. Soil sandy. Land rolling.	Small house with no cellar. Well 15 feet deep, containing surface water.	39	Ma.	Occupation, blacksmithing. Left shop and went fishing, remaining out until 2 A. M. of 19th.	Tertian.
---- ---- ----	Light Snow.	Land rolling. Swamp and low land 40 rods from house. Soil sandy.	House low and uncleanly; no cellar. Well 44 ft. deep; metallic taste. Ground moist.	43	Fe. M.	Been working unusually hard and exposed to all kinds of weather up to date of first visit.	Tertian, Quotidian, Double Quoti'dn
2 2 3	------ ------ .24	Open rolling farm'g country. Low swamp land 40 rds frm house. Sandy loam.	House in good condition; rather low. Water good.	11	Fe.	No unusual exposures.....	Tertian.
3 3 3	------ ------ ------	Country level. Soil sandy and sandy loam.	Log house completely inclosed with trees and shrubs. Great amount of moisture about house. Well-water good.	30	Fe. M.	Much worn from caring for sick in her own house.	Quotidian.
3 3 4	------ ------ ------	Rolling farming country. Soil sandy.	Cellar damp. Much decaying vegetable debris about house. Well-water good.	70	Ma. M.	Childish, and subjects himself to all kinds of exposures without reason.	Tertian.
4 4 4	------ .10 ------	Rolling farm'g lands. Soil clay and clay loam.	Good house, but 2 ft. of water in the cellar. Been water in the cellar for 2 months. Well-water good.	40	Fe. M.	No unusual exposures, etc....	Tertian.
3 3 4	.89 ------ .11	Same as in case 10.....	Ground wet. Very wet unfinished cellar. Well-water good.	32	Fe. M.	No unusual exposures, etc....	Tertian.
4 3 3	.11 ------ ------	Same as in case 10.....	Ground damp. House low on ground; no cellar; bad air. Water not good; used continually.	10	Ma.	No unusual exposures, etc. ..	Tertian.

* Ma.—Male. Fe.—Female. M.—Married.

TABLE.—CONTINUED.—*Cases of Intermittent*

CASE.	Date of Attack.	Date of first Visit.	Date of Meteorological Observation.	TEMP.			GRAINS OF VAPOR IN A CUBIC FOOT OF AIR.			BAROMETRIC PRESSURE. REDUCED TO 32° F.				PER CENT OF CLOUDINESS.			PREVAILING DIRECTION AND VELOCITY OF WIND.		Ozone, Night, 9 P. M. to 7 A. M.
				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.	Mean.	7 A. M.	2 P. M.	9 P. M.	Direction.	Miles per Hour. *	
18	J'ne 16	J'ne 17	June 14.	60	76	69	-----	-----	-----	-----	-----	-----	-----	50	20	25	W. & S.	2-4	3 2 2
			" 15.	76	75	70	-----	-----	-----	-----	-----	-----	-----	25	100	10	S. W.	2-25-2	
			" 16.	65	76	67	-----	-----	-----	-----	-----	-----	-----	100	20	10	S. W. & E.	4-2	1
19	15	17	" 13.	67	73	61	----	-----	-----	-----	-----	-----	-----	50	75	25	S. & S. W.	12-4	3
			" 14.	60	76	69	-----	-----	-----	-----	-----	-----	-----	50	20	25	W. & S.	2-3	3 2
			" 15.	76	75	70	-----	-----	-----	-----	-----	-----	-----	25	100	10	S. W.	2-25-2	
20	15	18	" 13.	67	73	61	-----	-----	-----	-----	-----	-----	-----	50	75	25	S. & S. W.	12-4	3
			" 14.	60	76	69	-----	-----	-----	-----	-----	-----	-----	50	20	25	S. W.	2-3	3 2
			" 15.	76	75	70	-----	-----	-----	-----	-----	-----	-----	25	100	10	S. & S. W.	2-25-2	
21	1	19	May 30.	67	80	63	-----	-----	-----	-----	-----	-----	-----	25	25	00	S. W. & S.	4-2	3
			" 31.	71	81	67	-----	-----	-----	-----	-----	-----	-----	10	5	10	S. W. & S.	2-12-4	3
			June 1..	72	83	69	-----	-----	-----	-----	-----	-----	-----	5	75	5	S. E.	4-12-4	3
22	5	19	" 3..	69	75	61	-----	-----	-----	-----	-----	-----	-----	75	10	10	N. W. & W.	4-25-2	3
			" 4..	62	73	59	-----	-----	-----	-----	-----	-----	-----	5	25	haze	W. & E.	4.	3
			" 5..	55	71	59	-----	-----	-----	-----	-----	-----	-----	100	95	100	N. E.	4.	4
23	18	22	" 16.	65	76	67	-----	-----	-----	-----	-----	-----	-----	100	20	10	S. W. & E.	4-2	1
			" 17.	70	81	59	-----	-----	-----	-----	-----	-----	-----	00	10	10	E.	1-4	3
			" 18.	68	85	72	5.77	6.73	6.33	29.10	28.95	28.98	29.01	10	75	10	S. & S. W.	12.	3
24	23	24	" 21.	64	76	55	6.28	6.81	4.18	28.99	28.93	29.08	29.00	100	30	00	S. & W.	2-12	3
			" 22.	55	68	51	4.18	3.94	3.30	29.22	29.26	29.26	29.25	30	20	00	N. E.	12-4	3 2
			" 23.	52	77	57	3.23	4.50	1.05	29.25	29.20	29.00	29.15	00	20	00	S. W. & S.	2-4-2.	3
25	24	24	" 22.	55	68	51	4.18	3.94	3.30	29.22	29.26	29.26	29.25	30	20	00	N. E.	12-4	3 2
			" 23.	52	77	57	3.23	4.50	1.05	29.25	29.20	29.00	29.15	00	20	00	S. W. & S.	2-4-2	3 2
			" 24.	62	85	65	4.98	6.07	6.87	28.91	28.82	28.88	28.87	5	40	20	S. & S. W.	2-4-2	2
26	24	30	" 22.	55	68	51	4.18	3.94	3.30	29.22	29.26	29.26	29.25	30	20	00	N. E.	12-4	3 2
			" 23.	52	77	57	3.23	4.50	1.05	29.25	29.20	29.00	29.15	00	20	00	S. W. & S.	2-4-2	3 2
			" 24.	62	85	65	4.98	6.07	6.87	28.91	28.82	28.88	28.87	5	40	20	S. & S. W.	2-4-2	2
27	25	30	" 23.	52	77	57	3.25	4.50	1.05	29.25	29.20	29.00	29.15	00	20	00	S. W. & S.	2-4-2.	3
			" 24.	62	85	65	4.98	6.07	6.87	28.91	28.82	28.88	28.87	5	40	20	S. & S. W.	2-4-2	3 2
			" 25.	65	86	60	6.68	6.25	4.90	29.00	29.02	28.97	29.00	00	15	100	S. W. & S. E.	2-12.	3
28	20	J'ly 4..	" 18.	68	85	72	5.77	6.73	6.33	29.10	28.95	28.98	29.01	10	75	10	S. & S. W.	12	3
			" 19.	67	76	53	5.30	5.08	3.58	29.14	29.22	29.32	29.33	10	25	10	N. E. & N. W.	12-4	3
			" 20.	56	80	69	4.02	6.02	6.25	29.31	29.19	29.04	29.18	20	30	75	S. W.	4-12	2
29	25	10	" 23.	52	77	57	3.25	4.50	1.05	29.25	29.20	29.00	29.15	00	20	00	S. W. & S.	2-4-2	3
			" 24.	62	85	65	4.98	6.07	6.87	28.91	28.82	28.88	28.87	5	40	20	S. & S. W.	2-4-2	3 2
			" 25.	65	86	60	6.68	6.25	4.90	29.00	29.02	28.97	29.00	00	15	100	S. W. & S. E.	2-12.	3
30	J'ly 6.	8.	July 4..	62	84	65	5.27	6.55	6.07	29.28	29.22	29.19	29.23	15	50	10	S. E. & S. W.	2.	2
			" 5..	67	87	66	6.93	7.48	5.42	29.16	29.08	29.09	29.12	10	30	90	S. & N. W.	2-4	1
			" 6..	65	82	59	3.79	5.52	4.79	29.20	29.19	29.21	29.20	5	5	00	E. & N. E.	2.	3
31	10	15	" 8..	73	87	72	7.57	7.85	7.00	29.04	28.97	28.95	28.99	10	20	25	S. W.	4-2.	3
			" 9..	71	84	71	7.86	6.18	5.03	28.90	28.83	28.90	28.88	100	50	35	W. N. W.	2-4.	2 2
			" 10..	62	73	59	5.27	4.84	4.28	28.99	29.00	29.07	29.02	00	90	5	N. W.	2.	2
32	18	19	" 16..	75	88	68	6.62	8.50	5.47	28.95	28.87	28.97	28.93	100	50	90	S.	2-4	3 2
			" 17..	66	86	71	5.73	5.38	5.03	29.01	28.96	28.93	28.96	100	60	50	S. W.	2-4-2	3
			" 18..	68	83	63	6.10	5.15	6.45	28.88	28.75	28.74	28.79	90	80	100	S. & E.	2-12-2	3
33	20	21	" 18..	68	83	63	6.10	5.15	6.45	28.88	28.75	28.74	28.79	90	80	100	S. & E.	2-12-2	3
			" 19..	61	69	60	5.40	5.37	4.95	28.78	28.80	28.87	28.81	50	50	75	W. & N. W.	2.	2 2
			" 20..	58	67	59	4.64	5.04	5.08	28.93	28.98	29.09	29.00	40	90	50	S. W. & N. W.	2.	2
34	21	27	" 19..	61	69	60	5.40	5.37	4.95	28.78	28.80	28.87	28.81	50	50	75	W. & N. W.	2.	2 2
			" 20..	58	67	59	4.64	5.04	5.08	28.93	28.98	29.09	29.00	40	90	50	S. W. & N. W.	2	2
			" 21..	58	81	68	4.64	5.92	5.20	29.20	29.19	29.23	29.21	00	5	50	N. W.	1-4	1
35	25	27	" 23..	67	86	68	6.55	6.58	5.78	29.44	29.40	29.40	29.42	5	5	5	N. W. & E.	2.	2
			" 24..	77	89	67	6.71	5.35	5.60	29.42	29.29	29.24	29.32	5	10	5	E. & S.	2.	2 2
			" 25..	71	84	75	6.14	7.17	8.05	29.20	29.09	29.05	29.11	50	50	90	S. E.	1-4	2

* Explained in foot-note on page 198.

Fever and Coincident Conditions.

Ozone, Day, 7 A. M. to 2 P. M.	Rainfall, Inches.	Character of Surrounding Country, and Nature of Soil.	Sanitary Surroundings of Habitation.	Age, in Years.	Sex and Social Condition.*	Recent Exposures, Excesses, and Deprivations.	Type of Disorder.
3 3 3	------ .39 ------	Rolling farming country. Soil clay and clay loam.	Ground damp. Well-water good. Sanitary surroundings fair.	6	Fe.	Tonsilitis preceded attack a few days.	Tertian.
3 3 2	------ ------ .39	Level farming country. Soil sandy loam.	Log house; no cellar. Well-water not good, but used by all continually.	22	Fe. M.	Been about, but troubled with diarrhea for two weeks.	Remittent.
3 3 2	------ ------ .39	Hilly farming land. Soil sandy loam.	Sanitary surroundings fair. Well-water good.	12	Ma.	Been ailing for some time. Chills appeared first on 15th.	Tertian.
3 3 3	------ ------ ------	Rolling farming country. Small stream near house. Sandy soil.	House poor and low on ground. Well contains mostly surface-water. Water used by whole family.	7	Fe.	No unusual exposures, etc....	Tertian.
4 4 4	.10 ------ .11	Same as 21.....	Same as 21.....	9	Ma.	No unusual exposures, etc....	Tertian.
3 3 3	------ ------ ------	Same as case 10.....	Same as case 10.....	16	Ma.	Had been living in another county until a few days preceding attack. Was well when he arrived here.	Tertian.
3 4 4	.12 ------ ------	Wild rolling land. Soil sandy. In forest.	House of rough boards built in opening in a forest. Coal pits near for making charcoal. Water used mostly surface-water.	16	Fe.	Girl of dissolute habits. No known unusual exposure, etc.	Tertian.
4 4 3	------ ------ .56	Same as case 10.....	Low board house on border of small lake. Cleanliness disregarded. Water not good.	2	Fe.	Nothing unusual.....	Congestive chill.
4 4 3	------ ------ .56	Good rolling farm'g country. Soil sandy loam.	House low on ground. Water generally good. Ground wet on day of attack.	2	Ma.	Nothing unusual.....	Tertian.
4 3 3	------ .56 .21	Same as case 26.....	Same as case 26.....	4	Ma.	Nothing unusual.....	Tertian.
3 3 4	------ ------ ------	Boll'g land near swamps. Soil sandy loam.	House a low log. Damp dug-out under house. Well-water, good.	3	Fe.	Nothing unusual.....	Tertian.
4 3 3	------ .56 .21	Same as case 10.....	House on low land. Water good.	4	Fe.	Nothing unusual.....	Tertian.
3 2 4	------ ------ ------	Same as case 10.....	House low on ground. Water in cellar. House surrounded with thickly standing trees and shrubs. Well-water good.	1 & 2/3	Fe.	Had diarrhea for 2 weeks previous to attack.	Tertian.
2 3 4	------ .02 ------	Level farming land. Soil sand and clay loam.	Old house low on ground. Well water not good.	14	Fe.	Been troubled with toothache for some time, and was sick from being up nights and from the pain from tooth.	Quotidian.
3 3 4	.10 ------ 1.19	Level farming lands. Soil clay loam.	Sanitary surroundings fair. Well-water good.	29	Fe. M.	Worked harder than usual, and has been reduced by Leucorrhea.	Remittent.
4 2 3	1.19 .05 ------	Good farming country.—Soil sandy loam.	Unfinished house resting on blocks of wood. Well-water good.	24	Fe. M.	Been bilious, and has suffered with headache for some time.	Tertian.
2 3 3	.05 ------ ------	Hilly country, soil sandy.	House rests on slope of sandy hill. Water good.	60	Fe. M.	Been subjected to unusual labor within a few days.	Tertian.
3 4 4	------ ------ ------	Fine open farming country. Soil sandy loam.	Surroundings good.....	37	Ma. M.	Been accustomed to work in a saw-mill. Was taken sick immediately on going into the harvest field.	Tertian.

* Ma.—Male. Fe.—Female. M.—Married.

TABLE.—CONTINUED.—*Cases of Intermittent*

CASE.	Date of Attack.	Date of first Visit.	Date of Meteorological Observation.	Temp. 7 A. M.	Temp. 2 P. M.	Temp. 9 P. M.	Grains of Vapor in a Cubic Foot of Air. 7 A. M.	Grains of Vapor in a Cubic Foot of Air. 2 P. M.	Grains of Vapor in a Cubic Foot of Air. 9 P. M.	Barometric Pressure, Reduced to 32° F. 7 A. M.	Barometric Pressure, Reduced to 32° F. 2 P. M.	Barometric Pressure, Reduced to 32° F. 9 P. M.	Barometric Pressure, Reduced to 32° F. Mean.	Per Cent of Cloudiness. 7 A. M.	Per Cent of Cloudiness. 2 P. M.	Per Cent of Cloudiness. 9 P. M.	Prevailing Direction and Velocity of Wind. Direction.	Prevailing Direction and Velocity of Wind. Miles Per Hour. *	Ozone, Night, 9 P. M. to 7 A. M.
36	July 25	July 27	July 23.	67	86	68	6.55	6.58	5.78	29.44	29.40	29 40	29.42	10	5	50	N. W. & E.	2	2
			" 24.	77	89	67	6.71	5.35	5.60	29.42	29.29	29.24	29.32	5	10	5	E. & S.	2-2	2
			" 25.	71	84	75	6.14	7.17	8.05	29.20	29.09	29.05	29.11	50	50	90	S. E.	1-4	2
37	24	29	" 22.	66	86	68	5 72	6.26	5.20	29.31	29.31	29.40	29.34	00	30	95	N. W.	1-4	1
			" 23.	67	86	68	6.55	6.58	5.78	29.44	29.40	29.40	29.42	10	5	50	N. W. & E.	2	2
			" 24.	77	89	67	6.71	5.35	5.60	29.42	29.29	29.24	29.32	5	10	5	E. & S.	2	2
38	30	31	" 28.	72	90	76	8.10	8.20	7.90	29.08	29.00	28.96	29.02	90	40	90	S.	2	1
			" 29.	73	91	71	7.57	6.29	6.14	29.04	29.03	29.05	29.04	90	25	20	N.	2-4	4
			" 30.	69	90	69	5.97	5.25	5.80	29.14	29.12	29.17	29.14	00	5	00	N.	2	1
39	28	31	" 26.	77	92	73	8.57	7.90	8.35	29.07	29.02	29.05	29.05	30	80	90	S. W.	2	2
			" 27.	72	86	72	8.10	6.58	8.00	29.08	29.06	29.09	29.08	90	90	50	S.	2-4-2	2
			" 28.	72	90	76	8.10	8.20	7.90	29.08	29.00	28.96	29.02	90	40	90	S.	2	1
40	29	31	" 27.	72	86	72	8.10	6.58	8.00	29.08	29 06	29.09	29.08	90	90	50	S.	2	2
			" 28.	72	90	76	8.10	8.20	7.90	29.08	29.00	28.96	29.02	90	40	90	S.	2	1
			" 29.	73	91	71	7.57	6.29	6.14	29.04	29.03	29.05	29.04	90	25	20	N.	2-4	4
41	Aug 2	Aug 4.	" 31.	72	87	73	6.66	6.14	5.92	29.22	29.19	29.18	29.20	5	30	00	E.	4-2	1
			Aug. 1..	70	91	75	6.25	5.99	6.30	29.22	29.17	29.17	29.19	25	80	20	S. E. & S. W.	2	2
			" 2..	75	92	68	6.95	6.79	5.78	29.16	29.10	29.12	29.13	50	10	00	W.	1-4	1
42	4	6	" 2..	75	92	68	6.95	6.79	5.78	29.16	29.10	29.12	29.13	50	10	00	W.	1-4	1
			" 3..	66	82	60	5 72	4.99	4.68	29.20	29.14	29.18	29.18	00	10	00	N. W.	2	1
			" 4..	57	81	56	4.76	4.60	4.11	29.26	29.22	29.20	29.23	00	25	00	W. & N.	2	00
43	9	13	" 7..	68	85	73	5.11	6.37	6.87	28.89	28.84	28.85	28.86	100	75	10	W.	2-4	2
			" 8..	64	88	66	5.61	4.47	4.28	28.91	28.82	28.86	28.87	5	50	00	S. W.	2-12-2	3
			" 9..	61	81	61	4.83	5.31	5.72	28.88	28.84	28.92	28.88	90	90	00	W.	2	2
44	12	14	" 10.	61	82	61	5.24	4.51	5.11	29.00	28.99	29.08	29.02	00	90	00	N. W.	1-4	3
			" 11.	59	83	74	5.08	4.66	5.24	29.15	29.11	29.06	29.10	00	30	90	N. & S.	2	00
			" 12.	66	87	70	6.72	5.56	5.66	29.00	28.98	28.95	28.98	80	15	00	W. & N.	2	4
45	12	14	" 10.	61	82	61	5.24	4.51	5.11	29.00	28.99	29.07	29.02	00	90	00	N. W.	4-2	3
			" 11.	59	83	74	5.08	4.66	5.24	29.14	29.11	29.05	29.10	00	30	90	N. & W. & S.	2	0
			" 12.	66	87	70	6.72	5.56	5.66	29.00	28.97	28.95	28.97	80	15	00	W. & N.	2	3
46	7.	14	" 5..	59	86	71	4.53	5.95	4.78	29.19	29.12	29.08	29.13	10	00	10	N. W.	1	1
			" 6..	63	82	63	5.15	5.35	6.10	29.05	29.06	28.94	29.02	5	90	00	W.	2	4
			" 7..	68	85	73	5.11	6.37	6.87	29.88	28.84	28.84	28.86	100	75	10	W.	2	2
47	10	14	" 8..	64	88	66	5.61	4.47	4.28	28.91	28.82	28.86	28.87	5	50	00	W.	2-12-2	3
			" 9..	61	81	61	4.83	5.31	5.72	28.89	28.84	28.91	28.88	90	90	00	W.	2	2
			" 10.	61	82	61	5.24	4.51	5.11	29.00	28.99	29.07	29.02	00	90	00	N.	2-4-2	3
48	15	16	" 13.	65	65	62	6.51	6.51	5.91	28.98	28.95	28.92	28.95	60	100	95	N. E.	2	3
			" 14.	62	70	62	6.25	6.25	5.91	28.88	28.85	29.00	28.90	100	95	40	N. W.	2	2
			" 15.	61	66	63	6.06	6.72	6.10	28.98	28.98	28.99	28.98	100	100	100	N. E.	2	3
49	15	18	" 13.	65	65	62	6.51	6.51	5.91	28.98	28.95	28.92	28.95	60	100	95	N. E.	2	3
			" 14.	62	70	62	6.25	6.25	5.91	28.88	28.85	29.00	28.90	100	95	40	N. W.	2	2
			" 15.	61	66	63	6.06	6.72	6.10	28.98	28.98	28.99	28.98	100	100	100	N. E.	2	3
50	16	18	" 14.	62	70	62	6.25	6.25	5.91	28.88	28.85	29.00	28.90	100	95	40	N. W.	2	2
			" 15.	61	66	63	6.06	6.72	6.10	28.98	28.98	28.99	28.98	100	100	100	N. E.	2	3
			" 16.	62	73	61	5.91	6.87	6.06	29.00	28.99	29.01	28.99	100	100	20	N. W.	2	1
51	16	18	" 14.	62	70	62	6.25	6.25	5.91	28.88	28.85	29.00	28.90	100	95	40	N. W.	2	2
			" 15.	61	66	63	6.06	6 72	6.10	28.98	28.98	28.99	28.98	100	100	100	N. E.	2	3
			" 16.	62	73	61	5.91	6.87	6.06	29.00	28.99	29.01	28.99	100	100	20	N. W.	2	1
52	11	17	" 9..	61	81	61	4.83	5.31	5.72	28.89	28.84	28.91	28.88	90	90	00	W.	2	2
			" 10.	61	82	61	5.24	4.51	5.11	29.00	28.99	29.07	29.02	00	90	00	N.	2-4-2	3
			" 11.	59	83	74	5.08	4.66	5.24	29.14	29.11	29.05	29.10	00	30	90	N. & W. & S.	2	0
53	18	23	" 16.	62	73	61	5.91	6.87	6.06	29.00	28.99	29.01	28.99	100	100	20	N. W.	2	1
			" 17.	58	84	64	5.21	4.81	5.94	29.08	29.05	29.10	29.07	25	30	00	N. & E.	2	1
			" 18.	60	82	63	5.54	5.81	6.10	29.14	29.11	29.14	29.13	00	50	10	N. W.	2	0

* Explained in foot-note on page 198.

Fever, and Coincident Conditions.

Ozone, Day, 7. A. M. to 2. P. M.	Rainfall, Inches.	Character of Surrounding Country, and Natnre of Soil.	Sanitary Surroundings of Habitation.	Age, in Years.	Sex and Social Condition.*	Recent Exposures, Excesses, and Deprivations.	Type of Disorder.
3 4 4	------ ------ ------	Same as 35	Same as 35	12	Fe.	Has had a hard cold for two weeks.	Tertian.
3 4 4	.18 ------ -----	Same as 33	Same as 33	4	Fe.	Nothing unusual	Tertian.
2 3 3	.05 ------ ------	Same as case 10	Much woods about house. House poor. Water fair.	14	Fe.	Has had diarrhea for 2 weeks	Tertian.
2 3 2	------ ------ .05	Same as case 33	Good house and good surroundings.	26	Ma.	Nothing known	Tertian.
2 2 3	-- --- .05 ------	Rolling and good farming country. Soil sandy loam	House low on ground and open. Well-water good.	.8	Fe.	Child teething. Changed long clothes for short one week ago.	Quotidian.
4 4 2	------ ------ ------	New land near ponds. Soil sandy.	House situated among other houses built for mill hands. Houses of rough boards. Water good.	11	Fe.	Not used to being in sunshine. Went berrying and was taken sick.	Remittent.
2 4 3	------ ------ ------	Same as case 10	House low on ground. Well-water good.	34	Fe. M.	Out all the night previous and became exhausted, and was exposed to night air.	Tertian.
3 3 4	------ ------ ------	----------	Surroundings fair. Well-water good.	27	Ma.	Nothing unusual	Quotidian.
4 2 00	------ .04 ------	Rolling farming country. Soil sandy loam.	House low on ground. Well-water bad.	26	Fe. M.	Worked hard at moving. Nursing babe at same time.	Tertian.
4 3 4	----- .04 ------	Level farm land. Soil clay loam. Small swamp near.	House placed recently on site of old house torn down. Present house on blocks of wood. Well 15 ft. deep, contains surface water.	38	Ma. M.	No unusual exposure, etc., unless to those referring to habitation.	Quotidian.
4 4 3	------ ------ ------	Same as case 45	Same as case 45	29	Fe. M.	Reduced by nursing child. Otherwise same as case 45.	Tertian.
3 4 4	------ ------ ------	Same as case 45	Same as case 45	10	Ma.	Same as case 45	Tertian.
4 4 4	.87 .06 .23	Rolling farm'g land. Soil sandy. Large swamp ½ mile from house.	House on blocks of wood. No cellar. Well recipient of surface water.	2	Ma.	Been having diarrhea for some time. Other members of family had been having ague and diarrhea.	Quotidian.
4 4 4	.87 .06 .23	Same as case 1	House low on ground. Well recipient of surface water.	26	Ma. M.	Been ailing all summer	Tertian.
4 4 2	.06 .23 ------	Farming land. Land rolling. Soil sandy.	House old and built of logs. Small swamp near. Water good.	27	Ma. M.	Been ailing all summer. Resided in Ohio until the preceding May.	Tertian.
4 4 2	.06 .23 ------	Rolling farm'g land. Soil sandy.	House, on border of pond of still water, is a rough board house. Well-water good.	25	Ma. M.	Been used to mill work and went into the harvest field to work. Worked in rain.	Tertian.
4 4 3	------ ------ .04	Same as case 1	House low and sanitary surroundings not good. Well-water not good.	¼	Ma.	Mother not well. Child recently had diarrhea.	Tertian.
2 3 4	------ ------ .22	Same as case 48	House an old log house with a damp cellar beneath. Everything about the house damp. Surface water in well.	33	Ma. M.	Been at work on marsh. Had been exposed to night air a good deal.	Tertian.

* Ma.—Male. Fe.—Female. M.—Married.

TABLE.—CONTINUED.—*Cases of Intermittent*

CASE.	Date of Attack.	Date of first Visit.	Date of Meteorological Observation.	TEMP.			GRAINS OF VAPOR IN A CUBIC FOOT OF AIR.			BAROMETRIC PRESSURE. REDUCED TO 32° F.				PER CENT OF CLOUDINESS.			PREVAILING DIRECTION AND VELOCITY OF WIND.		OZONE, NIGHT, 9 P. M. TO 7 A. M.
				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.	Mean.	7 A. M.	2 P. M.	9 P. M.	Direction.	Miles per Hour. *	
54	Aug 20	Aug 23	Aug. 18.	60	82	63	5.54	5.81	6.10	29.14	29.11	29.14	29.13	00	50	10	N. W.	2.	0
			" 19.	64	87	71	6.29	5.85	6.45	29.17	29.14	29.14	29.15	00	30	25	N. W. & E.	2.	1
			" 20.	62	84	69	5.91	6.50	7.37	29.18	29.12	29.12	29.14	25	50	20	S. E.	2.	1
55	20	23	" 18.	60	82	63	5.54	5.81	6.10	29.14	29.11	29.14	29.13	00	50	10	N. W.	2.	0
			" 19.	64	87	71	6.29	5.85	6.45	29.17	29.14	29.14	29.15	00	30	25	N. W. & E.	2.	1
			" 20.	62	84	69	5.91	6.50	7.37	29.18	29.12	29.12	29.14	25	50	20	S. E.	2.	1
56	21	23	" 19.	64	87	71	6.29	5.85	6.45	29.17	29.14	29.14	29.15	00	30	25	N. W. & E.	2.	1
			" 20.	62	84	69	5.91	6.50	7.37	29.18	29.12	29.12	29.14	25	50	20	S. E.	2.	1
			" 21.	70	87	72	6.91	5.85	6.03	29.10	29.02	29.04	29.05	15	60	25	S. E.	2.	2
57	24	24	" 22.	70	85	67	7.26	5.77	7.30	28.98	28.93	29.06	28.99	100	95	100	S.	2.	3
			" 23.	66	69	67	6.72	7.00	7.30	29.03	28.98	28.96	28.99	100	100	100	N. & S. E.	2.	1
			" 24.	63	68	63	6.45	6.77	6.45	28.98	29.02	29.07	29.03	100	95	100	N. W.	2.	3
58	21	25	" 19.	64	87	71	6.29	5.85	6.45	29.17	29.14	29.14	29.15	00	30	25	N. W. & E.	2.	1
			" 20.	62	84	69	5.91	6.50	7.37	29.18	29.12	29.12	29.14	25	50	20	S. E.	2.	1
			" 21.	70	87	72	6.91	5.85	6.03	29.10	29.02	29.04	29.05	15	60	25	S. E.	2.	2
59	19	25	" 17.	58	84	64	5.21	4.81	5.94	29.08	29.05	29.10	29.07	25	30	00	N. & S.	2.	1
			" 18.	60	82	63	5.54	5.81	6.10	29.14	29.11	29.14	29.13	00	50	10	N. W.	2.	0
			" 19.	64	87	71	6.29	5.85	6.45	29.17	29.14	29.14	29.15	00	30	25	N. W. & E.	2.	1
60	23	26	" 21.	70	87	72	6.91	5.85	6.03	29.10	29.02	29.04	29.05	15	60	25	S. E.	2.	2
			" 22.	70	85	67	7.26	5.77	7.30	28.98	28.93	29.06	28.99	100	95	100	S.	2.	3
			" 23.	66	69	67	6.72	7.00	7.30	29.03	28.98	28.96	28.99	100	100	100	N. & S. E.	2.	1
61	25	25	" 23.	66	69	67	6.72	7.00	7.30	29.03	28.98	28.96	28.99	100	100	100	N. & S. E.	2.	1
			" 24.	63	68	63	6.45	6.77	6.45	28.98	29.02	29.07	29.03	100	95	100	N. W.	2.	3
			" 25.	64	81	69	5.61	6.22	6.29	29.10	29.03	29.06	29.06	15	50	5	N. W. & S. W.	2-4	3
62	26	26	" 24.	63	68	63	6.45	6.77	6.45	28.98	29.02	29.07	29.03	100	95	100	N. W.	2.	3
			" 25.	64	81	69	5.61	6.22	6.29	29.10	29.03	29.06	29.06	15	50	5	N. W. & S. W.	2-4	3
			" 26.	63	83	67	5.76	6.29	6.55	29.16	29.08	29.19	29.15	5	50	00	S. W.	2.	1
63	24	27	" 22.	70	85	67	7.26	5.77	7.30	28.98	28.93	29.06	28.99	100	95	100	S.	2.	3
			" 23.	66	69	67	6.72	7.00	7.30	29.03	28.98	28.96	28.99	100	100	100	N. & S. E.	2.	1
			" 24.	63	68	63	6.45	6.77	6.45	28.98	29.02	29.07	29.03	100	95	100	N. W.	2.	3
64	Sept 1.	Sept 3.	" 30.	56	72	61	4.89	4.68	5.72	29.27	29.23	29.15	29.22	40	100	90	W. & S. E.	2.	1
			" 31.	66	71	66	6.35	7.48	6.72	28.97	28.92	28.98	28.95	100	100	100	E. & W.	2-4	3
			Sept. 1..	53	54	52	4.11	4.86	3.58	29.08	29.05	29.05	29.06	100	100	10	N. W.	2.	4
65	3.	3.	" 1..	53	54	52	4.11	4.86	3.58	29.08	29.05	29.05	29.06	100	100	10	N. W.	2.	4
			" 2..	53	63	51	3.74	4.18	3.61	29.00	28.96	29.04	29.00	95	90	40	N. W.	2.	3
			" 3..	51	71	57	3.74	5.18	3.88	29.08	29.02	29.04	29.04	95	80	20	S. W.	4-12-2	3
66	3.	3.	" 1..	53	54	52	4.11	4.86	3.58	29.08	29.05	29.05	29.06	100	100	10	N. W.	2.	4
			" 2..	53	63	51	3.74	4.18	3.61	29.00	28.96	29.04	29.00	95	90	40	N. W.	2.	3
			" 3..	51	71	57	3.74	5.18	3.88	29.08	29.02	29.04	29.04	95	80	20	S. W.	4-12-2	3
67	3.	4.	" 1..	53	54	52	4.11	4.86	3.58	29.08	29.05	29.05	29.06	100	100	10	N. W.	2.	4
			" 2..	53	63	51	3.74	4.18	3.61	29.00	28.96	29.04	29.00	95	90	40	N. W.	2.	3
			" 3..	51	71	57	3.74	5.18	3.88	29.08	29.02	29.04	29.04	95	80	20	S. W.	4-12-2	3
68	2.	4.	Aug. 31.	66	71	66	6.35	7.48	6.72	28.97	28.92	28.98	28.95	100	100	100	E. & W.	2-4	3
			Sept. 1..	53	54	52	4.11	4.86	3.58	29.08	29.05	29.05	29.06	100	100	10	N. W.	2.	4
			" 2..	53	63	51	3.74	4.18	3.61	29.00	28.96	29.04	29.00	95	90	40	N. W.	2.	3
69	1.	4.	Aug. 30.	56	72	61	4.89	4.68	5.72	29.27	29.23	29.15	29.22	40	100	90	W. & S. E.	2.	1
			" 31.	66	71	66	6.35	7.48	6.72	28.97	28.92	28.98	28.95	100	100	100	E. & W.	2-4	3
			Sept. 1..	53	54	52	4.11	4.86	3.58	29.08	29.05	29.05	29.06	100	100	10	N. W.	2.	4
70	1.	4.	Aug. 30.	56	72	61	4.89	4.68	5.72	29.27	29.23	29.15	29.22	40	100	90	W. & S. E.	2.	1
			" 31.	66	71	66	6.35	7.48	6.72	28.97	28.92	28.98	28.95	100	100	100	E. & W.	2-4	3
			Sept. 1..	53	54	52	4.11	4.86	3.58	29.08	29.05	29.05	29.06	100	100	10	N. W.	2.	4
71	1.	5.	Aug. 30.	56	72	61	4.89	4.68	5.72	29.27	29.23	29.15	29.22	40	100	90	W. & S. E.	2.	1
			" 31.	66	71	66	6.35	7.48	6.72	28.97	28.92	28.98	28.95	100	100	100	E. & W.	2-4	3
			Sept. 1..	53	54	52	4.11	4.86	3.58	29.08	29.05	29.05	29.06	100	100	10	N. W.	2	4

* Explained in foot-note on page 198.

Fever, and Coincident Conditions.

Ozone, Day, 7 A. M. to 2 P. M.	Rainfall, Inches.	Character of Surrounding Country, and Nature of Soil.	Sanitary Surroundings of Habitation.	Age, in Years.	Sex and Social Condition.*	Recent Exposures, Excesses, and Deprivations.	Type of Disorder.
4 4 4	.22 ..... .05	Same as case 53	Same as case 53	12	Fe.	Had been over worked. Exposed to air of dwelling.	Tertian, then Quotidian.
4 4 4	.22 ..... .05	Same as case 53	Same as case 53	4	Fe.	That pertaining to house	Tertian.
4 4 4	..... .05	Same as case 53	Same as case 53	34	Fe. M.	Been subjected to hard work. Nursing babe. Exposed to damp air of house.	Quotidian.
4 2 3	.83	Same as case 53	Same as case 53	7	Ma.	Exposed to damp air of house.	Tertian.
4 4 4	..... .05	Same as case 51	Same as case 51	21	Fe. M.	Accustomed to house work. Had been out in the field all day picking berries on 21st.	Quotidian.
3 4 4	..... .22	Rolling farm'g land. Soil sandy.	House low and built of rough boards. Water fair. Country new. Coal pits near for the manufacture of charcoal.	20	Ma.	Been working unusually hard in woods.	Quotidian.
4 4 2	..... .83	New farm'g lands. Land rolling. Soil sandy.	House new. Sanitary surroundings fair. Water good.	9	Fe.	No known exposure	Quotidian.
2 3 4	....	Same as case 51	Same as case 51	3	Ma.	No known exposure. Been ailing for week previous.	Remittent.
3 4 4	....	Same as case 1	House good and on border of lake. Water good.	21	Ma.	Been ailing for week	Tertian.
4 2 3	.83	Hilly farming land. Soil sandy.	Sanitary surroundings fair	20	Ma.	Overworked in field on day of attack.	Tertian.
2 4 3	..... .77	Same as case 48	Same as case 48	9	Fe.	Been ailing for some time	Quotidian.
3 3 4	....	Same as case 48	Same as case 48	1	Ma.	Nothing unusual	Tertian.
3 3 4	....	Same as case 1	Sanitary surroundings good	33	Ma. M.	Is generally an invalid. Worked unusually hard in store on day and night of the 1st inst.	Tertian.
3 3 4	....	Low farming land. Soil clay loam.	House comfortable. Well water not generally good, low at time of attack.	31	Ma.	Clearing land and working hard in night air.	Tertian.
4 3 3	.77	Rolling farm'g land. Soil sandy.	House low on ground. Well 35 ft. deep. Water good.	32	Fe. M.	Worked in a damp room one week before attack and had been ailing until day of attack.	Tertian.
2 4 3	..... .77	Same as case 59	Same as case 59	44	Ma. M.	Been working in a swamp for some time previous to attack.	Quotidian.
2 4 3	..... .77	Same as case 59	Same as case 59	16	Fe.	Been ailing all summer	Remittent.
2 4 3	..... .77	Same as case 59	Same as case 59	19	Fe.	No known unusual exposure	Tertian.

* Ma.—Male. Fe.—Female. M.—Married.

TABLE—CONTINUED—*Cases of Intermittent*

CASE.	Date of Attack.	Date of first Visit.	Date of Meteorological Observation.	TEMP. 7 A. M.	TEMP. 2 P. M.	TEMP. 9 P. M.	GRAINS OF VAPOR IN A CUBIC FOOT OF AIR. 7 A. M.	GRAINS OF VAPOR IN A CUBIC FOOT OF AIR. 2 P. M.	GRAINS OF VAPOR IN A CUBIC FOOT OF AIR. 9 P. M.	BAROMETRIC PRESSURE. REDUCED TO 32° F. 7 A. M.	BAROMETRIC PRESSURE. REDUCED TO 32° F. 2 P. M.	BAROMETRIC PRESSURE. REDUCED TO 32° F. 9 P. M.	BAROMETRIC PRESSURE. REDUCED TO 32° F. Mean.	PER CENT OF CLOUDINESS. 7 A. M.	PER CENT OF CLOUDINESS. 2 P. M.	PER CENT OF CLOUDINESS. 9 P. M.	PREVAILING DIRECTION AND VELOCITY OF WIND. Direction.	PREVAILING DIRECTION AND VELOCITY OF WIND. Miles per. Hour. *	Ozone, Night, 9 P. M. to 7 A. M.
	Sept	Sept	Sept. 3..	51	71	57	3.74	5.18	3.88	29.08	29.02	29.04	29.04	95	80	40	S. W.	4-12-2	3
72	5.	6.	" 4..	55	76	60	4.46	5.06	5.24	29.06	29.02	29.08	29.05	00	80	10	S. W.	2-4-2	3
			" 5..	57	66	58	4.76	5.42	4.92	29.16	29.23	29.30	29.23	95	100	80	N. E.	2.	2
			" 4..	55	76	60	4.46	5.06	5.24	29.06	29.02	29.08	29.05	00	80	10	S. W.	2-4-2	3
73	6.	7.	" 5..	57	66	58	4.76	5.42	4.92	29.16	29.23	29.30	29.23	95	100	80	N. E.	2.	2
			" 6..	56	66	50	4.61	4.37	3.73	29.36	29.35	29.40	29.37	75	100	00	N. & E.	2.	3
			Aug. 31.	66	71	66	6.35	7.48	6.72	28.97	28.92	28.98	28.95	100	100	100	E. & W.	2-4	3
74	2.	8.	Sept. 1..	53	54	52	4.11	4.86	3.58	29.08	29.05	29.05	29.06	100	100	10	N. W.	2.	4
			" 2..	53	63	51	3.74	4.18	3.61	29.00	28.96	29.04	29.00	95	90	40	N. W.	2.	3
			" 5..	57	66	58	4.76	5.42	4.92	29.16	29.23	29.30	29.23	95	100	80	N. E.	2.	2
75	7.	10.	" 6..	56	66	50	4.61	4.37	3.73	29.36	29.35	29.40	29.37	75	100	00	N. & E.	2.	3
			" 7..	51	69	56	4.12	4.09	4.89	29.26	29.31	29.30	29.29	5	90	10	N. E.	2.	1
			" 6..	56	66	50	4.61	4.37	3.73	29.36	29.35	29.40	29.37	75	100	00	N. & E.	2.	3
76	8.	11.	" 7..	51	69	56	4.12	4.09	4.89	29.26	29.31	29.30	29.29	5	90	10	N. E.	2.	1
			" 8..	58	75	54	5.21	4.66	4.54	29.33	29.25	29.26	29.28	5	10	00	N. E. & S. W.	2.	1
			" 6..	56	66	50	4.61	4.37	3.73	29.36	29.35	29.40	29.37	75	100	00	N. & E.	2.	3
77	8.	12.	" 7..	51	69	56	4.12	4.09	4.89	29.26	29.31	29.30	29.29	5	90	10	N. E.	2.	1
			" 8..	58	75	54	5.21	4.66	4.54	29.33	29.25	29.26	29.28	5	10	00	N. E. & S. W.	2.	1
			" 8..	58	75	54	5.21	4.66	4.54	29.33	29.25	29.26	29.28	5	10	00	N. E. & S. W.	2.	1
78	10	12.	" 9..	57	72	61	5.05	5.18	5.40	29.20	29.12	29.09	29.14	30	100	10	S. E.	2.	1
			" 10..	58	62	64	5.51	6.25	6.65	29.03	28.95	28.96	28.97	100	100	100	N. E.	2.	3
			" 8..	58	75	54	5.21	4.66	4.54	29.33	29.25	29.26	29.28	5	10	00	N. E. & S. W.	2.	1
79	10	12.	" 9..	57	72	61	5.05	5.18	5.40	29.20	29.12	29.09	29.14	30	100	10	S. E.	2.	1
			" 10..	58	62	64	5.51	6.25	6.65	29.03	28.95	28.96	28.97	100	100	100	N. E.	2.	3
			" 10..	58	62	64	5.51	6.25	6.65	29.03	28.95	28.96	28.97	100	100	100	N. E.	2.	3
80	12	13.	" 11..	64	73	63	6.65	7.21	6.10	29.01	29.00	29.05	29.02	100	100	5	W. & S. E.	2.	1
			" 12..	64	76	62	6.29	6.83	6.50	29 16	29.11	29.19	29.15	100	100	10	S. E.	2.	3
			" 11..	64	73	63	6.65	7.21	6.10	29.01	29.00	29.05	29.02	100	100	5	W. & S. E.	2.	1
81	13	14.	" 12..	64	76	62	6.29	6.83	6.50	29.16	29.11	29.19	29.15	100	100	10	S. E.	2.	3
			" 13..	60	83	65	5.87	6.95	6.51	29.24	29.21	29.22	29.22	25	95	5	S. E. & S. W.	2.	0
			" 12..	64	76	62	6.29	6.83	6.50	29.16	29.11	29.19	29.15	100	100	10	S. E.	2.	3
82	14	15.	" 13..	60	83	65	5.87	6.95	6.51	29.24	29.21	29.22	29.22	25	95	5	S. E. & S. W.	2.	0
			" 14..	61	82	68	6.06	6.10	6.43	29.24	29.12	29.05	29.14	00	40	00	S. E.	2.	0
			" 14..	61	82	68	6.06	6.10	6.43	29.24	29.12	29.05	29.14	00	40	00	S. E.	2.	0
83	16	18.	" 15..	68	82	65	6.43	6.41	6.87	28 99	28.87	28.98	28.95	10	100	90	S. E.	2-4-2	2
			" 16..	62	80	66	6.25	4.45	5.72	29.08	29.04	29.09	29.07	100	00	20	S. W. & N. W.	2-4	2
			" 13..	60	83	65	5.87	6.95	6.51	29.24	29.21	29.22	29.22	25	95	5	S. E. & S. W.	2.	0
84	15	18.	" 14..	61	82	68	6.06	6.10	6.43	29.24	29.12	29.05	29.14	00	40	00	S. E.	2.	0
			" 15..	68	82	65	6.43	6.41	6.87	28.99	28.87	28.98	28.95	10	100	90	S. E.	2-4 2	2
			" 16..	62	80	66	6.25	4.45	5.72	29.08	29.04	29.09	29.07	100	00	20	S. W. & N. W.	2-4	2
85	18	19.	" 17..	55	65	43	4.74	6.17	3.16	29.11	29.05	29.16	29.11	100	15	5	N. W.	4-12-2	3
			" 18..	43	64	44	3.16	2.96	3.52	29.20	29.16	29.17	29.18	00	5	00	W.	2-12-2	1
			" 15..	68	82	65	6.43	6.41	6.87	28.99	28.87	28.98	28.95	10	100	90	S. E.	2-4-2	2
86	17	20.	" 16..	62	80	66	6.25	4.45	5.72	29.08	29.04	29.09	29.07	100	00	20	S. W. & N. W.	2-4	2
			" 17..	55	65	43	4.74	6.17	3.16	29.11	29.05	29.16	29.11	100	15	5	N. W.	4-12-2	3
			" 12..	64	76	62	6.29	6.83	6.50	29.16	29.11	29.19	29.15	100	100	10	S. E.	2.	3
87	14	20.	" 13..	60	83	65	5.87	6.95	6.51	29.24	29.21	29.22	29.22	25	95	5	S. E. & S. W.	2.	0
			" 14..	61	82	68	6.06	6.10	6.43	29.24	29.12	29.05	29.14	00	40	00	S. E.	2.	0
			" 8..	58	75	54	5.21	4.66	4.54	29.33	29.25	29.26	29 28	5	10	00	N. E. & S. W.	2.	1
88	10	20.	" 9..	57	72	61	5.05	5.18	5.40	29.20	29.12	29.09	29.14	30	100	10	S. E.	2.	1
			" 10..	58	62	64	5.51	6.25	6.65	29.03	28.95	28.96	28.97	100	100	100	N. E.	2.	3
			" 16..	62	80	66	6.25	4.45	5.72	29.08	29.04	29.09	29.07	100	00	20	S. W. & N. W.	2-4	2
89	18	20.	" 17..	55	65	43	4.74	6.17	3.16	29.11	29.05	29.16	29.11	100	15	5	N. W.	4-12-2	3
			" 18..	43	64	44	3.16	2.96	3.52	29.20	29.16	29.17	29.18	00	5	00	W.	2-12-2	1

* Explained in foot-note on page 198.

Fever, and Coincident Conditions.

Ozone, Day, 7 A. M. to 2 P. M.	Rainfall, Inches.	Character of Surrounding Country, and Nature of Soil.	Sanitary Surroundings of Habitation.	Age, in Years.	Sex and Social Condition.*	Recent Exposures, Excesses, and Deprivations.	Type of Disorder.
4 4 3	------ ------ ------	Same as case 51	Same as case 51	6	Ma.	No known unusual exposure.	Remittent.
4 3 4	------ ------ ------	Same as case 68	Same as case 68	6	Ma.	No known unusual exposure.	Tertian.
4 3 3	.77 ------ ------	Same as case 51	Same as case 51	21	Fe.	After working unusually hard on the 2d inst. was attacked, diarrhea, chill and fever.	Remittent.
3 4 4	------ ------ ------	Level farming land. Soil sandy loam.	House poor and near to woods. Cellar wet. Water good.	1	Ma.	No known exposure	Tertian.
4 4 3	------ ------ ------	Same as case 51	Same as case 51	45	Fe. M.	Worked hard in taking care of sick.	Tertian.
4 4 3	------ ------ ------	Land surrounded by swamps. Soil sandy.	House low on ground. Water good.	61	Fe.	Been ailing for 2 or 3 months. Has valvular disease of heart.	Tertian.
3 4 3	------ ------ .87	Same as case 1	Sanitary surroundings fair	19	Ma.	Went hunting on the 10th and had a chill on return.	Tertian.
3 4 3	------ ------ .87	Same as case 78	Same as case 78	10	Ma.	Been ailing for some time. First chill on the 10th inst.	Tertian.
3 2 3	.87 ------ ------	Good farming land. Soil sandy loam	House good. Well-water not good.	6	Fe.	Not been well for 3 weeks. First chill on 12th inst.	Tertian.
2 3 2	------ ------ ------	Same as case 1	House low. Sanitary surroundings not good. Water fair.	12	Fe.	No known exposure	Tertian.
3 2 3	------ ------ ------	Same as case 81	Same as case 81	5	Fe.	No known exposure	Tertian.
3 3 3	------ .46 ------	Farm on high land between two swamps. Soil sandy.	Low log house in a dilapidated condition—damp. Well-water good.	⅙	Fe.	No known exposure	Tertian. Tertian.
2 3 3	------ ------ .46	Rolling farming land. Soil sandy.	House and surroundings in fair sanitary condition. Water good.	23	Ma.	Recently came from Ohio in a debilitated condition from dissipation.	Quotidian, then Typo-malarial.
3 4 4	------ .11 ------	Same as case 83	Same as case 83	45	Ma.	No unusual exposures	Tertian.
3 3 4	.46 ------ .11	High farming land. Soil sandy.	Low board house. Spring-water used.	36	Fe. M.	Enciente	Tertian.
3 2 3	------ ------ ------	Same as case 83	Same as case 83	22	Ma.	No unusual exposure	Tertian.
3 4 3	------ ------ .87	Rolling farming land. Soil sandy.	House low. Water good	9	Ma.	Unusually exposed to damp weather.	Remittent.
3 4 4	------ .11 ------	Same as case 88	Same as case 88	11	Fe.	No unusual exposure	Quotidian.

* Ma.—Male. Fe.—Female. M.—Married.

TABLE.—CONTINUED.—*Cases of Intermittent*

CASE.	Date of Attack.	Date of first Visit.	Date of Meteorological Observation.	TEMP. 7 A. M.	TEMP. 2 P. M.	TEMP. 9 P. M.	GRAINS OF VAPOR IN A CUBIC FOOT OF AIR. 7 A. M.	GRAINS OF VAPOR IN A CUBIC FOOT OF AIR. 2 P. M.	GRAINS OF VAPOR IN A CUBIC FOOT OF AIR. 9 P. M.	BAROMETRIC PRESSURE. REDUCED TO 32° F. 7 A. M.	BAROMETRIC PRESSURE. REDUCED TO 32° F. 2 P. M.	BAROMETRIC PRESSURE. REDUCED TO 32° F. 9 P. M.	BAROMETRIC PRESSURE. REDUCED TO 32° F. Mean.	PER CENT OF CLOUDINESS. 7 A. M.	PER CENT OF CLOUDINESS. 2 P. M.	PER CENT OF CLOUDINESS. 9 P. M.	PREVAILING DIRECTION AND VELOCITY OF WIND. Direction.	PREVAILING DIRECTION AND VELOCITY OF WIND. Miles per Hour. *	Ozone, Night, 9 P. M. to 7 A. M.
	Sept	Sept	Sept. 19.	48	69	48	3.06	3.66	3.47	29.18	29.07	29.11	29.12	5	100	00	S. W.	2.	2
90	21	22	" 20.	46	55	50	3.70	4.74	3.99	29.13	29.06	29.18	29.13	90	100	90	S. E. & N. E.	2.	1
			" 21.	42	69	48	3.30	4.09	4.01	29.29	29.31	29.32	29.31	00	10	00	N. E. & S. E.	2.	1
			" 16.	62	80	66	6.25	4.45	5.72	29.08	29.04	29.09	29.07	100	00	20	S. W. & N. W.	2-4.	2
91	18	21	" 17.	55	65	43	4.74	6.17	3.16	29.11	29.05	29.16	29.11	100	15	5	N. W.	4-12-2	3
			" 18.	43	64	44	3.16	2.96	3.52	29.20	29.16	29.17	29.18	00	5	00	W.	2-12-2	1
			" 20.	46	55	50	3.70	4.74	3.99	29.13	29.06	29.18	29.13	90	100	90	S. E. & N. E.	2.	1
92	22	23	" 21.	42	69	48	3.30	4.09	4.01	29.29	29.31	29.32	29.31	00	10	00	N. E. & S. E.	2.	1
			" 22.	46	71	54	3.50	7.13	3.70	29.36	29.28	29.26	29.30	00	5	00	S. E.	2.	0
			" 17.	55	65	43	4.74	6.17	3.16	29.11	29.05	29.16	29.11	100	15	5	N. W.	4-12-2	3
93	19	24	" 18.	43	64	44	3.16	2.96	3.52	29.20	29.16	29.17	29.18	00	5	00	W.	2-12-2	1
			" 19.	48	69	48	3.06	3.66	3.47	29.18	29.07	29.11	29.12	5	100	00	S. W.	2.	2
			" 21.	42	69	48	3.30	4.09	4.01	29.29	29.31	29.32	29.31	00	10	00	N. E. & S. E.	2.	1
94	23	25	" 22.	46	71	54	3.50	7.13	3.70	29.36	29.28	29.26	29.30	00	5	00	S. E.	2.	0
			" 23.	53	78	63	4.11	5.12	5.15	29.27	29.20	29.22	29.23	00	20	10	S. E. & S. W.	2-4-2	1
			" 22.	46	71	54	3.50	7.13	3.70	29.36	29.28	29.26	29.30	00	5	00	S. E.	2.	0
95	24	28	" 23.	53	78	63	4.11	5.12	5.15	29.27	29.20	29.22	29.23	00	20	10	S. E. & S. W.	2-4-2	1
			" 24.	62	84	67	5.27	6.18	6.23	29.23	29.17	29.17	29.19	10	30	00	S. W.	2-4.	3
			" 26.	62	71	69	5.96	7.13	6.63	29.21	29.18	29.20	29.20	20	50	50	S. W. & N. E.	2-4.	1
96	28	28	" 27.	62	74	67	5.91	7.08	6.55	29.17	29.16	29.12	29.15	50	20	50	E.	4-2.	3
			" 28.	62	69	55	6.25	5.97	4.74	29.24	29.26	29.28	29.26	75	90	00	S. E. & N. E.	2.	1
			" 20.	46	55	50	3.70	4.74	3.99	29.13	29.06	29.18	29.13	90	100	90	S. E. & N. E.	2.	1
97	22	28	" 21.	42	69	48	3.30	4.09	4.01	29.29	29.31	29.32	29.31	00	10	00	N. E. & S. E.	2.	1
			" 22.	46	71	54	3.50	7.13	3.70	29.36	29.28	29.26	29.30	00	5	00	S. E.	2.	0
			" 25.	65	80	65	6.17	6.03	6.17	29.22	29.15	29.14	29.17	50	90	00	S. W.	2-4-2	2
98	27	29	" 26.	62	71	69	5.91	7.13	6.63	29.21	29.18	29.20	29.20	20	50	50	S. W. & N. E.	2-4	1
			" 27.	62	74	67	5.91	7.08	6.55	29.17	29.16	29.12	29.15	50	20	50	E.	4-2	3
		Oct.	" 24.	62	84	67	5.27	6.18	6.23	29.23	29.17	29.17	29.19	10	30	00	S. W.	2-4	3
99	28	1	" 25.	65	80	65	6.17	6.03	6.17	29.22	29.15	29.14	29.17	50	90	00	S. W.	2-4-2	2
			" 26.	62	71	69	5.91	7.13	6.63	29.21	29.18	29.20	29.20	20	50	50	S. W. & N. E.	2-4	1
			" 26.	62	71	69	5.91	7.13	6.63	29.21	29.18	29.20	29.20	20	50	50	S. W. & N. E.	2-4	1
100	28	1	" 27.	62	74	67	5.91	7.08	6.55	29.17	29.16	29.12	29.15	50	20	50	E.	4-2	3
			" 28.	62	69	55	6.25	5.97	4.74	29.24	29.26	29.28	29.26	75	90	00	S. E. & N. E.	2.	1
			" 27.	62	74	67	5.91	7.08	6.55	29.17	29.16	29.12	29.15	50	20	50	E.	4-2	3
101	29	2	" 28.	62	69	55	6.25	5.97	4.74	29.24	29.26	29.28	29.26	75	90	00	S. E. & N. E.	2.	1
			" 29	55	80	66	4.74	6.99	6.35	29.24	29.24	29.10	29.19	15	10	00	E. & S.	2-4-2	2
			" 26.	62	71	69	5.91	7.13	6.63	29.21	29.18	29.20	29.20	20	50	50	S. W. & N. W.	2-4	1
102	28	5	" 27.	62	74	67	5.91	7.08	6.55	29.17	29.16	29.12	29.15	50	20	50	E.	4-2	3
			" 28.	62	69	55	6.25	5.97	4.74	29.24	29.26	29.28	29.26	75	90	00	S. E. & N. E.	2.	1
	Oct.	Oct.	2..	59	66	58	5.69	6.04	5.51	29.15	29.08	29.08	29.10	100	100	100	N. E.	2.	3
103	4	7	" 3..	62	80	68	6.25	5.18	5.30	29.07	28.97	28.74	28.93	100	10	25	S. E.	2-4-2	1
			" 4..	50	54	41	3.48	3.06	2.74	28.80	28.90	29.11	28.94	75	75	00	N. W.	4.	1
			" 4..	50	54	41	3.48	3.06	2.74	28.80	28.90	29.11	28.94	75	75	00	N. W.	4.	1
104	6	8	" 5..	37	47	35	2.56	2.90	2.40	29.20	29.04	29.26	29.17	00	90	00	N. W.	2-12-2	4
			" 6..	33	59	38	2.22	3.01	2.65	29.41	29.39	29.45	29.42	00	10	00	W.	2-4-2	1
			" 4..	50	54	41	3.48	3.06	2.74	28.80	28.90	29.11	28.94	75	75	00	N. W.	4.	1
105	6	14	" 5..	37	47	35	2.56	2.90	2.40	29.20	29.04	29.26	29.17	00	90	00	N. W.	2-12-2	4
			" 6..	33	59	38	2.22	3.01	2.65	29.41	29.39	29.45	29.42	00	10	00	W.	2-4-2	1
			" 9..	47	64	52	3.88	3.98	4.56	29.17	29.16	29.12	29.15	25	90	100	W. & E.	2.	4
106	11	16	" 10.	48	58	41	3.85	1.91	3.19	29.02	28.82	28.96	28.93	100	90	100	S. E. & W.	4.	4
			" 11.	38	45	41	2.89	3.14	3.19	29.10	29.20	29.28	29.19	100	90	100	N. W.	4-2	3
			" 17.	49	60	56	3.85	4.41	5.18	29.25	29.13	29.08	29.15	90	75	100	S. E.	2.	3
107	19	20	" 18.	57	59	52	5.05	5.08	4.26	29.07	29.07	29.12	29.08	100	100	100	N.	2.	3
			" 19.	50	51	47	4.28	4.12	3.62	29.09	29.12	29.14	29.12	100	100	100	N.	2-4-2	

* Explained in foot-note on page 198.

Fever, and Coincident Conditions.

Ozone, Day, 7. A. M. to 2 P. M.	Rainfall, Inches.	Character of Surrounding Country, and Nature of Soil.	Sanitary Surroundings of Habitation.	Age in Years.	Sex and Social Condition.*	Recent Exposures, Excesses, and Deprivations.	Type of Disorder.
4 2 3	.16	Same as case 1	House low. Well-water very poor.	4	Fe.	Over-exerted herself by a long walk in night air on Wednesday night, and was ailing until 21st inst., when chill and fever came on.	Quotidian.
3 4 4	.11	Same as case 1	House low on ground. Barn close to house. Unsanitary surroundings. Procured water at different wells.	8	Ma.	Been complaining for 2 weeks previous to attack.	Remittent.
2 3 3	.16	Same as case 1	House low on ground. Damp excavation beneath house for cellar. Well-water poor.	1 & ⅕	Fe.	No unusual exposures	Tertian.
4 4 4	.11	Same as case 51	Same as case 51	.8	Ma.	Attacked while away from home visiting.	Tertian.
3 3 3		Same as case 1	House of rough boards. Low on ground. Well-water good.	54	Ma.	Worked unusually hard, and after excitement wore off began to feel ill.	Quotidian.
3 3 3		Same as case 1	Sanitary surroundings of house fair, although house had been uninhabited for two weeks.	4	Fe.	Been subjected to excitement in moving and settling. Father a minister.	Tertian.
2 2 3	.99	Same as case 95	Same as case 95	2	Ma.	Same as case 95	Tertian.
2 3 3	.16	Same as case 1	House low on ground. Water not good.	8	Fe.	No unusual exposure	Quotidian.
3 2 2	.99	Same as case 95	Same as case 95	35	Fe. M.	Same as case 95	Tertian.
3 3 2	.99	Level farm land. Soil sandy.	House low on ground and sanitary surroundings poor. Well-water good.	10	Fe.	Been ailing for two weeks. others in same house not well.	Tertian.
2 2 3	.99	Low swampy farm lands. Soil clay loam.	House low on ground and poorly constructed. Well-water poor.	18	Fe.	Been ailing for week before attack by chill.	Tertian.
2 3 4		New farm. Land rolling. Soil mixed.	House damp. Water in cellar. Water tastes bad.	4	Fe.	Drank a good deal of water before attack.	Tertian.
2 3 2	.99	High farming country. Soil sandy.	Log house. Damp, unventilated cellar. Water tastes of organic matter.	5	Fe.	Nothing unusual	Tertian.
3 4 4	.12	In pine woods. Soil sandy.	Board house. Spring water—very poor.	37	Fe. M.	Suffered from diarrhea for one week before attacked by chill.	Tertian.
4 4 4	.12	Open farming country. Soil sandy.	Board house poorly constructed. Cellar dry. Water good.	30	Fe.	No unusual exposures	Quotidian.
4 4 4	.12	Rolling farming country. Soil sandy.	Sanitary surroundings fair. Water good.	22	Ma.	Was out hunting in woods all night preceding day of attack.	Tertian.
3 4 4	.64	Rolling farm land. Soil sandy.	House poor. Water good	22	Ma.	Caught cold four days before attack.	Quotidian.
2 3 4	.12 1.21	Same as case 83	Same as case 83	22	Ma.	Was sick with ague on Sept. 14th and 20th. See case 87.	Tertian.

* Ma.—Male. Fe.—Female. M.—Married. † Not enough to measure.

TABLE.—CONTINUED.—*Cases of Intermittent*

CASE.	Date of Attack.	Date of first Visit.	Date of Meteorological Observation.	TEMP. 7 A. M.	TEMP. 2 P. M.	TEMP. 9 P. M.	GRAINS OF VAPOR IN A CUBIC FOOT OF AIR. 7 A. M.	GRAINS OF VAPOR IN A CUBIC FOOT OF AIR. 2 P. M.	GRAINS OF VAPOR IN A CUBIC FOOT OF AIR. 9 P. M.	BAROMETRIC PRESSURE. REDUCED TO 32° F. 7 A. M.	BAROMETRIC PRESSURE. REDUCED TO 32° F. 2 P. M.	BAROMETRIC PRESSURE. REDUCED TO 32° F. 9 P. M.	BAROMETRIC PRESSURE. REDUCED TO 32° F. Mean.	PER CENT OF CLOUDINESS. 7 A. M.	PER CENT OF CLOUDINESS. 2 P. M.	PER CENT OF CLOUDINESS. 9 P. M.	PREVAILING DIRECTION AND VELOCITY OF WIND. Direction.	PREVAILING DIRECTION AND VELOCITY OF WIND. Miles per Hour. *	Ozone, Night, 9 P. M. to 7 A. M.
108	Oct. 20	Oct. 21	Oct. 18.	57	59	52	5.05	5.08	4.26	29.07	29.07	29.12	29.08	100	100	100	N.	2.	3
			" 19.	50	51	47	4.28	4.12	3.62	29.09	29.12	29.14	29.12	100	100	100	N.	2-4-2	4
			" 20.	42	44	40	3.06	2.80	2.65	29.24	29.17	29.15	29.18	100	100	90	N.	2-4-2	4
109	20	29	" 18.	57	59	52	5.05	5.08	4.26	29.07	29.07	29.12	29.08	100	100	100	N.	2.	3
			" 19.	50	51	47	4.28	4.12	3.62	29.09	29.12	29.14	29.12	100	100	100	N.	2-4-2	4
			" 20.	42	44	40	3.06	2.80	2.65	29.24	29.17	29.15	29.18	100	100	90	N.	2-4-2	4
110	29	31	" 27.	41	50	50	2.96	3.73	4.28	29.05	29.00	29.01	29.02	100	100	100	S. E.	4.	4
			" 28.	48	65	63	4.01	4.98	4.33	29.20	28.96	28.86	29.00	100	40	10	S. E.	2-4-12	2
			" 29.	47	52	41	3.12	2.81	2.54	29.11	29.18	29.25	29.18	50	20	00	N. W.	12-4-2	4
111	Nov 20	Nov 20	Nov. 18.	29	37	22	2.14	1.79	1.69	29.48	29.56	29.55	29.53	15	25	5	N. W.	2-4-2	4
			" 19.	26	32	26	1.93	2.17	1.93	29.57	29.56	29.55	29.56	50	100	30	N.W. & N.E.	2.	4
			" 20.	24	44	35	1.81	2.80	2.00	29.55	29.49	29.46	29.50	20	25	5	E.	2-4.	8
112	17	21	" 15.	51	51	47	4.42	4.42	3.88	28.99	28.97	29.09	29.02	10	100	100	S. W.	2-4.	3
			" 16.	37	52	41	2.80	3.02	2.74	29.18	29.17	29.14	29.16	25	50	50	S. W.	2-4-2	5
			" 17.	41	48	36	3.19	3.47	1.89	29.01	28.94	29.17	29.14	10	100	75	S. & W.	2-4-12	4
113	26	26	" 24.	44	49	47	3.52	4.00	3.88	29.03	28.90	28.99	28.97	100	100	100	E.	2.	7
			" 25.	48	50	48	4.01	4.28	4.01	28.93	28.66	28.78	28.77	100	100	100	S. E.	2.	7
			" 26.	46	51	42	3.76	4.05	3.06	28.59	28.37	28.49	28.48	100	100	90	E.	4-2.	4
114	26	30	" 24.	44	49	47	3.52	4.00	3.88	29.03	28.90	28.99	28.97	100	100	100	E.	2.	7
			" 25.	48	50	48	4.01	4.28	4.01	28.93	28.66	28.78	28.77	100	100	100	S. E.	2.	7
			" 26.	46	51	42	3.76	4.05	3.06	28.59	28.37	28.49	28.48	100	100	90	E.	4-2.	4
115	23	Dec. 6	" 21.	35	46	42	2.00	2.61	3.30	29.27	29.22	29.09	29.19	90	90	100	S. E.	4-2-12	5
			" 22.	43	41	38	3.41	2.60	2.65	29.17	29.27	29.35	29.26	100	90	100	W. & N. E.	4-2	4
			" 23.	40	45	44	2.86	3.39	3.52	29.32	29.21	29.16	29.23	100	100	100	N. E.	2-4-2	8
116	Dec. 5	Dec. 6	Dec. 3..	24	38	29	1.81	2.00	1.82	29.24	29.20	29.23	29.22	10	00	00	S.	4-2	5
			" 4..	36	40	43	1.95	3.09	3.41	28.93	28.87	28.84	28.88	100	100	100	S. E.	4-12	4
			" 5..	35	34	33	2.19	2.11	2.22	28.71	28.66	28.71	28.69	90	100	100	S. W.	12.	4
117	18	20	" 16.	28	51	37	2.07	2.92	2.56	29.23	29.24	29.32	29.26	100	00	40	W. & S.	2.	4
			" 17.	32	50	34	2.37	2.82	2.33	29.23	29.29	29.48	29.34	100	25	75	S. & N. E.	2-4	4
			" 18.	29	36	40	1.55	2.48	3.09	29.48	29.33	29.26	29.36	80	100	100	E.	12-2	4
118	21	22	" 19.	52	58	51	4.56	4.64	4.42	29.28	29.20	29.31	29.26	90	75	100	W.	4-12-4	3
			" 20.	45	48	46	3.64	2.79	3.76	29.44	29.44	29.49	29.46	100	100	100	S. E.	4-12	4
			" 21.	44	61	44	3.52	4.83	3.52	29.54	29.50	29.52	29.52	100	5	25	S. E.	2.	0

* Explained in foot-note on page 198.

As recorded in the table, of the one hundred and eighteen cases, seventy-two persons were either reduced by previous sickness, or subjected to unusual exposures just previously to the attack. In forty-six cases no such relation of causation could be traced. That exposures and previous sickness increase the liability to attack the record seems to prove.

SEX.—Fifty-eight of the cases were males and sixty were females. Of those who were attacked after unusual exposures, thirteen were males and twelve females. Of those who were ill previously to attack, twenty were males and twenty-seven females. This difference was no doubt due partly to the greater liability of the female to disease or physical depression from many conditions characteristic of the female.

AGE.—Thirty-one of those cases attacked were under five years of age; 33 between the ages of 5 years and 20 years; 47 between the ages of 20 years and 50 years; while of those over 50 years of age only seven were attacked. Estimating the susceptibility to attack according to the age, the record declares the period of infancy to be the time when attacks are most liable to occur.

Fever and Coincident Conditions.

Ozone, Day, 7 A. M. to 2 P. M.	Rainfall, Inches.	Character of Surrounding Country, and Nature of Soil.	Sanitary Surroundings of Habitation.	Age, in Years.	Sex and Social Condition.*	Recent Exposures, Excesses, and Deprivations.	Type of Disorder.
3 4 4	------ 1.21 ------	Same as case 1	Farm in border of village. Low lands near. Water good.	30	Ma.	No unusual exposures	Tertian.
3 4 4	------ 1.21 ------	Swamps and ponds near. Sandy soil.	House poor. Well-water fair.	1 & ½	Ma.	Had a cold for some time	Quotidian.
3 2 4	.18 ------ ------	Same as case 61	Same as case 61	23	Fe.	Been ailing for a week before attacked by chill.	Quotidian.
4 4 8	------ ------ ------	Pine woods. Soil sandy	House poor. Water not good	25	Ma.	No known exposures	Tertian.
3 4 4	.27 ------ ------	Same as case 109	Same as case 109	2	Ma.	No known exposure	Quotidian.
7 3 4	------ .44 Mist.	Low farm lands. Soil mixed.	House of logs. Water good	74	Ma. M.	No known exposure	Tertian.
7 3 4	------ .44 Mist.	Same as case 95	Same as case 95	4	Fe.	Was sick the last of September. See case 95.	Tertian.
4 4 4	.20 ------ ------	Same as case 59	Same as case 59	28	Ma.	No unusual exposure	Tertian.
4 3 4	------ .09 .23	Same as case 59	Same as case 59	2	Ma.	No unusual exposure	Tertian.
3 4 4	------ ------ .70	Same as case 59	Same as case 59	16	Ma.	No unusual exposure	Quotidian.
3 3 3	.13 .19 ------	Same as case 1	Same as case 90	4	Fe.	Been ailing for some time. See case 90.	Quotidian.

* Ma.—Male. Fe.—Female. M.—Married.

This may be accounted for when we consider the physical tenderness of this age and the many exposures to which such cases are subjected by the thoughtlessness of parents and guardians.

TYPE OF DISEASE.—Of the 118 cases 25 were quotidian, 80 tertian, and 9 remittent. One case was first tertian, then quotidian, then typho-malarial. One case was first tertian, then quotidian, then double quotidian. There was also one case of congestive chill among the number.

WATER.—In 37 of the cases the water used for drinking and culinary purposes was unfit for use, being mostly surface water.

SANITARY SURROUNDINGS.—A large proportion of cases were related to bad sanitary surroundings. The houses in many instances were low on the ground and poorly constructed. In some instances there was standing water beneath the floor.

SWAMPS.—Twenty-seven cases were attacked while living near to marshes, although 91 cases occurred at a distance from any such influence.

SOIL.—The greatest number of cases occurred where the soil was sandy.

The porous condition of such soil giving a large surface for the evaporation of moisture, where rains are frequent, may partly account for the large number of cases occurring where they were subjected to such possible influences. It is certain that fewer cases of intermittent fever appear in this vicinity where there is a clay soil.

Temperature and Moisture.—The greatest number of cases occurred when the temperature was higher than the average for the month, and there was a correspondingly greater humidity. Sudden decrease in temperature with excess of moisture, exerting a chilling influence, would sometimes be followed by increase in the number of cases.

Atmospheric Pressure exceeded the average for the month, as a general rule, when there was an increase in the number of cases, and most generally with any of the cases. The exceptions were mostly after a rainfall when there was an increase in temperature and excess of moisture.

Clouds.—A marked relation seems to exist between the average per cent of clouds and the prevalence of intermittent fever. The least per cent of clouds occurred in the month of September, when there was by far the greatest number of cases recorded. The per cent of clouds influencing the radiation of heat may bear no small relation to the appearance of disease.

Direction and Velocity of Winds.—The prevailing direction of winds during the prevalence of this disease was west and south, and particularly during the month of September. The velocity of the wind was least in those months when there was the greatest prevalence of fevers, as in the months of August and September.

Ozone.—There was much less than the average of ozone at night, as indicated by Schönbein's test, when the greatest number of cases occurred. The same conditions obtain in regard to the amount of ozone by day. During the months of October, November, and December, when fevers were least prevalent, there was much more than the average of ozone. If we may believe that other meteorological conditions affect the presence or scarcity of the type of disease under consideration, understanding as we do the important relation oxygen bears to animal life, can we assume that an increase or decrease in the quantity of such an important element of the atmosphere as oxygen in a state of activity can itself exert no modifying influence upon this disease?

Rainfall.—Seventy-one of the cases recorded in the table occurred immediately after rains. Four-fifths of these cases occurred after rainfalls exceeding .20 of an inch. In the month of June 4 cases occurred immediately after a rainfall of .56 of an inch. Of seven cases about the first of September *all* were immediately after a fall of .77 of an inch. Later in the month five cases were after a fall of .99 of an inch, and five others after a fall of .11 of an inch. Four other cases in this month occurred immediately after a rainfall of .87 of an inch. Under no other conditions were the meteorological data repeated so often. With these cases there usually occurred an increase of temperature and a much greater absolute humidity than the average.

In summing up the meteorological and other conditions with which fevers may be associated, as exhibited in this record, is it not possible to discover sufficient causes for a disturbance of the system to produce the phenomena of disordered functions of digestion, and fevers with periodicity, without ascribing them to some particular, poisonous entity? If there is a particular cause, it is evident that many disturbing elements, rendering the system susceptible to attack, may be removed by attention to matters of sanitation and personal comfort.