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ON
THE SANATORY CONDITION
OF
OXFORD.

BY
W. P. ORMEROD,
FELLOW OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND,
AND
SURGEON TO THE RADCLIFFE INFIRMARY.

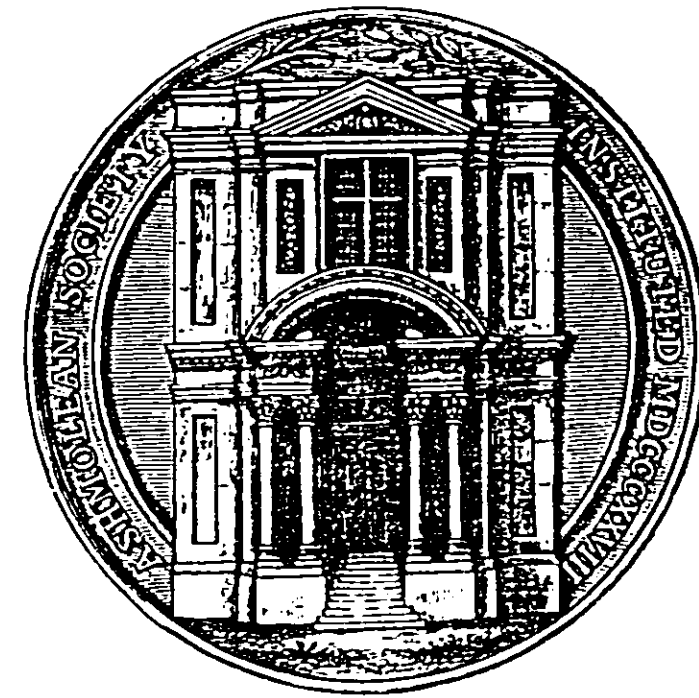


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THE present time has been chosen for collecting information on the Sanatory Condition of Oxford, not only to aid in the general investigation of the subject going on throughout the kingdom, but also to save time in case such information should be required by an inquiry being made into the ordinary condition of health, or the unusual prevalence of disease at any particular period in Oxford. At the same time it has been attempted to arrange the materials in such a way, that the parts on which disease presses most heavily may at any time be ascertained at once, and receive the chief attention.

The materials on which the Paper is based are the official reports to the Registrar-General; the plan followed is arranged according to the conclusions of the Metropolitan Sanatory Commission; the standards of comparison are taken from the Annual Reports of the Registrar-General, and the parts have been chiefly examined according to the questions addressed by the Poor Law Commission in 1839 to the Medical Officers of Unions in England and Wales. In this way it has been attempted to ensure accuracy, and to follow the road which seemed from the experience of others most likely to lead to useful and practical information.

The district chosen for examination does not cor-

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respond exactly with that chosen by the Registrar-General for the Annual Reports, nor with the division adopted in the Population Abstract of 1841, inasmuch as the divisions adopted in these Reports are made with especial relation to local arrangements and jurisdictions. In the following pages "Oxford" is understood to include these divisions:—The University during Term, the eleven United Parishes (including Grand Pont, but excluding the part of Littlemoor connected with St. Mary the Virgin parish), and the three parishes of St. Clement, St. John the Baptist, and St. Giles with Summertown; including in short that more or less continuous mass of building lying between Summertown, the toll-gates on the Witney and Abingdon roads, and the lower part of Headington Hill.

The information has been collected by personal observation, and by an accurate examination of the Returns of the Registrars of the Oxford District for the eleven United Parishes, and of those of the Registrar of the Headington District for the three parishes of Oxford situated in the Headington District, for the Workhouse of the eleven United Parishes in St. Giles', and for the persons dying in the Headington Workhouse belonging to St. Clement's, St. Giles', and St. John the Baptist parishes.

The years chosen as the basis of the calculations are 1844, 1845 and 1846, and for the following reasons:—Three years seemed to be a sufficiently long period for forming a fair opinion; and these three years were the last, were complete, and had differed considerably from each other: 1844 was a season of health, when the four quarterly reports of the Registrar-General successively announced a mortality below the average; 1845 was

marked by a winter of intense severity prolonged far into the spring, and by a wet sunless summer; whilst winter seemed to be almost wanting in 1846, but a summer of unusual heat, and accompanied with a general prevalence of epidemic diseases throughout the kingdom, raised the mortality to an alarming degree, and made the year 1846 an example of the extent to which the population of England may suffer from the ordinary diseases of this country. To make the lists of deaths occurring during the period included more accurate, a small number of deaths registered in the Radcliffe Infirmary have been deducted from the Returns. These deaths occurred amongst patients brought from the district round Oxford relieved by that Institution, and which may be considered as containing all places within the distance of twenty-five miles from Oxford, except in the East and South East directions, in which parts the poor are nearer to the Infirmary at Aylesbury and the Hospital at Reading.

The points to which attention has been chiefly directed are three:—

I. The mortality of Oxford from all causes compared with that of England generally.

II. The particular causes of mortality in different years.

III. An examination of the localities in which fever and diseases of an epidemic or contagious nature chiefly prevail.

The population of the parts included in this Report amounted in 1841 to 25,624; to this sum an addition has been made of 1,093 for the increase of population up to the year 1845, the middle year taken. The population of Oxford, in comparing it with other lo-

calities, will therefore be considered as amounting to 26,717 souls.

The standards chosen for comparison are, the tables contained in the seventh annual report of the Registrar-General; thus the general mortality of Oxford for three years is compared with the general mortality of England for seven years between 1838 and 1844, and the deaths from particular causes in Oxford for the same period are compared with the deaths from particular causes throughout England for five years between 1838 and 1842. It is necessary to bear in mind that the year 1846, included in the three years relating to Oxford, was one of extraordinary mortality throughout England, and makes the mortality of Oxford perhaps rather higher than it really is, as it is compared with England not including this year; but it shews at the same time that Oxford did not escape the general high mortality of that year.

I. The diseases of Oxford arranged in classes during the years 1844, 45, 46, are as follows:—

	1844.	1845.	1846.
1. Zymotic { Epidemic Endemic Contagious }	86	70	319
2. Cancer, and diseases of uncertain seat	67	72	95
3. Diseases of brain, &c.	52	67	75
4. lungs, &c.	188	184	175
5. heart, &c.	9	14	22
6. stomach, &c.	36	40	51
7. kidneys, &c.	2	3	11
8. child-birth, &c.	1	2	6
9. joints, &c.	2	2	1
10. skin, &c.	2	2	1
11. Old age	51	36	28
12. Violence, privation, intemperance ..	11	9	13
Causes not specified	10	14	8
Total	517	515	805

When compared with the population, this mortality will be in the following proportions,—

In Oxford 1 death to	{	51 living persons during 1844, 5.
		33 " " 1846.
		43 " " 1844, 45, 46 taken collectively.

The mortality in England generally for 7 years, from 1838 to 1844 was one in 46; in Oxfordshire, was 1 in 48.

The mortality in Oxford for the three years collectively was thus greater than the average in England and in Oxfordshire during the previous period of seven years.

The lowest mortality in Oxford was 1 in 51, and the highest 1 in 33. Let us compare these two extreme points with the extremes of the scale formed for England during the seven years' period.

Of forty-four districts in England the mortality was one in fifty-one in seven, and even less than this in ten districts; so that the most favourable years in Oxford were surpassed or equalled by seventeen districts of England.

The highest mortality was one in thirty-three; and how severe such a mortality is may be shewn by the following facts. For the seven years' period the mortality was not greater than one in thirty-seven, and this only in Lancashire; and during the two last quarters of 1846, the mortality in Oxford was proportionately greater in its increase on 1845, than the increase for the same periods in London, Liverpool, and Manchester.

II. In the following table the various classes of disease are described more minutely, each class being

divided into the various heads, to shew the particular causes of death.

A mere glance at the table will shew marked differences in the three years. In 1844 smallpox and influenza carried off a large number of persons, whilst in 1845 a much smaller number died of smallpox, which did not produce a single death in 1846. In 1846, measles, scarlatina, diarrhoea, and fever increased to such a degree, as to add more than two hundred to the deaths from these causes alone.

The number dying of consumption differed but little in each year, being in fact more even than any other great cause of death except debility.

	1844	1845	1846
CLASS I. { Smallpox.....	43	11	0
Measles.....	2	0	52
Scarlatina.....	3	3	125
Hooping cough.....	3	17	25
Croup.....	1	9	4
Thrush.....	4	2	1
Diarrhoea.....	5	6	49
Dysentery.....	0	1	1
Cholera.....	0	0	0
Influenza.....	10	3	4
Ague.....	0	0	0
Remittent fever.....	0	0	0
Typhus.....	14	18	58
Erysipelas.....	1	0	0
Syphilis.....	0	0	0
Hydrophobia.....	0	0	0
CLASS II. { Inflammation.....	1	1	0
Hæmorrhage.....	2	5	3
Dropsy.....	17	18	5
Abscess.....	4	5	2
Noma.....	0	0	1
Mortification.....	3	0	2
Purpura.....	0	0	1
Scrofula.....	0	1	6
Tumour.....	1	0	0
Cancer.....	4	6	11
Gout.....	0	0	0
Atrophy.....	6	4	27
Debility.....	28	29	30
Malformation.....	1	3	1
Sudden death.....	0	0	6

	1844	1845	1846
CLASS III. { Cephalitis.....	2	0	1
Hydroceph.....	9	15	26
Apoplexy.....	11	15	15
Paralysis.....	8	10	9
Convulsions.....	16	13	14
Tetanus.....	0	0	0
Chorea.....	0	0	1
Epilepsy.....	2	1	0
Insanity.....	1	2	0
Delirium tremens.....	1	7	3
Disease of brain.....	2	4	6
CLASS IV. { Laryngitis.....	0	2	0
Quinsey.....	1	0	1
Bronchitis.....	5	11	17
Pleurisy.....	2	0	1
Pneumonia.....	46	47	26
Hydrothorax.....	3	4	6
Asthma.....	13	6	3
Phthisis.....	118	107	105
Disease of lungs.....	0	7	16
CLASS V. { Pericarditis.....	0	0	4
Aneurism.....	0	0	0
Disease of heart.....	9	14	18
CLASS VI. { Teething.....	13	3	3
Gastritis.....	9	11	13
Enteritis.....	1	2	0
Peritonitis.....	3	11	20
Tabes Mes.....	0	0	0
Worms.....	0	0	0
Ascites.....	1	3	4
Ulc. Intest.....	0	0	2
Hernia.....	0	2	2
Colic. Ileus.....	0	0	0
Intussuscep.....	0	0	0
Stricture.....	0	0	0
Hæmatemesis.....	2	1	3
Disease of stomach.....	0	0	0
Disease of pancreas.....	4	0	0
Hepatitis.....	1	2	2
Jaundice.....	2	5	2
Disease of liver.....	0	0	0
Disease of spleen.....	1	1	1
CLASS VII. { Nephritis.....	0	0	3
Ischuria.....	0	0	0
Diabetes.....	1	2	3
Cystitis.....	0	0	0
Stone.....	0	0	0
Stricture.....	0	0	4
Disease of kidneys.....	0	0	

		1844	1845	1846
CLASS VIII.	Childbirth	1	1	3
	Paramenia	0	0	0
	Ovar. dropsy	0	1	2
	Disease of uterus	0	0	1
CLASS IX.	Arthritis	0	0	0
	Rheumatism	2	2	1
CLASS X.	Carbuncle	0	0	0
	Phlegmon	0	0	0
	Ulcer	1	0	0
	Fistula	1	0	0
	Disease of skin	0	2	1
CLASS XI.	Age	51	36	28
CLASS XII.	Intemperance	0	0	0
	Privation	0	0	0
	Violent death	11	9	13
	Not specified	10	14	8
Total		517	515	805

From an examination of the preceding table it is easy to know how far Oxford is liable to diseases of any particular class.

If we compare the mortality of three years in Oxford, in reference to its population, with the mortality in England generally during the years 1838—1842, as shewn in the seventh report of the Registrar-General, it appears that the proportion of deaths in Oxford in certain important classes of diseases varies considerably as compared with England generally.

Thus, in proportion to the population, the deaths in Oxford appear to be above the average in the

- 1st class, Zymotic diseases
- 4th „ diseases of respiratory organs.
- 5th „ „ circulatory „
- 6th „ „ digestive „
- 7th „ „ urinary „
- 10th „ „ tegumentary „

and below the average in the

- 2nd class, diseases of uncertain seat.
- 3rd „ „ nervous system.
- 8th „ „ uterine system.
- 9th „ „ locomotive system.
- 11th „ old age.
- 12th „ accident.

The excess in class V., diseases of the circulatory organs, and the deficiency in class II., diseases of uncertain seat, are probably dependent on the mode in which the death has been registered. The number of deaths from dropsy is remarkably small, but as this is one of the heads of diseases of uncertain seat, and the most common termination of disease of the heart, (under which particular head most of the diseases of the organs of circulation are mentioned,) it is probable that the excess and deficiency depend on the death being inserted indifferently under its primary or secondary cause.

The excess of diseases of the tegumentary system is unimportant, as such indefinite terms as ulcer and fistula, from which two deaths occurred, may have caused deaths from the most varied causes to have fallen under this head, and in a small mortality to have thus made an apparent but unimportant difference.

The excess in class VII., diseases of the urinary organs, is important, and considerable in proportion to the population. It is remarkable however that under the heads diabetes and stone no deaths are recorded, although both diseases are so common in and round Oxford, that, on the average, three cases of the former and four of the latter have been admitted annually into the Infirmary during the last eleven years. As regards the omission of diabetes, it is not improbable that pa-

tients so affected may have died of phthisis or from some of the diseases frequently accompanying this affection, whilst two persons dying of stone are omitted, as they were brought from a distance to obtain medical relief, and could not be justly entered among the inhabitants of Oxford.

The excess in class IV., diseases of the respiratory organs, amounts to rather more than seven per cent.; this difference is not however exclusively dependent on deaths from consumption, the mortality from which particularly is less in excess than that from the class, taken as a whole.

The excess of class I., zymotic diseases, is considerable, and deserves the most careful consideration, inasmuch as that class contains those diseases which are especially diminished by sanitary measures. The excess amounts to about one third, and depends principally on the deaths from scarlet fever, diarrhoea, and smallpox, and in a slight degree from measles. The deaths from typhus fever are only about two per cent. above the average.

Diseases of the nervous system are considerably below the average; the same is also the case with deaths from accidental causes, and from old age. The small number of deaths from accidental causes depends probably on the non-existence of any large manufactories of any kind in Oxford, whilst the smaller number of deaths from old age is no evidence of the average duration of life being short, and is not of much importance; this class may be also much diminished by death being entered under the head of the disease, which has by its occurrence anticipated by only a short period the effects of age.

There are certain individual diseases of which no death is recorded; no death from ague, tetanus, ascites, diabetes, stone, or intemperance is recorded, probably for the following reasons. Ague is exceedingly rare in Oxford, although the parts round are often flooded. The small number of deaths from accidental causes is in agreement with and explains the absence of tetanus. The cases of ascites are included under the head "dropsy." The absence of diabetes and stone has been already alluded to, and the head "delirium tremens" includes deaths from intemperance.

The numbers just stated shew by comparison with the numbers taken from the general mortality of England, not only how far the term *healthy* or the contrary may be applied to Oxford, but also in what particular classes of disease any excessive mortality exists.

In the different classes of disease succeeding the first, the mortality is determined chiefly by the organic and ordinary diseases of the human frame, influenced to a certain degree by the climate and situation of the locality; but the first class, consisting of zymotic diseases, deserves especial consideration, inasmuch as it contains those affections which are influenced by the mode in which the locality is adapted to the habitation of human beings, and thus includes those diseases which are most affected by arrangements, to which, from their general beneficial operation on health, the term *sanatory* has been applied.

In the study of the health of any town, fever, epidemic and contagious diseases will always, for these reasons, attract the greatest attention; inasmuch as their presence affords the clearest indication of those

conditions to which any remedial means can be applied, and of these conditions, presented more or less by nearly all the diseases of the zymotic class, typhus fever affords the most decided indications.

The laborious records of the Registrar-General, of the Sanatory Commissions, and especially of the Metropolitan Sanatory Commission, have not only placed this fact in the clearest light, but they have done more; their reports shew that fever with the ordinary epidemics of this country, as well as the cholera of the East, are influenced by the same physical conditions, attack the same classes of persons, visit the same places, and are relieved by the same arrangements. (Metr. San. Com. 1st Rep. p. 47.)

It is impossible to place too great a value upon these important conclusions; for it gives to sanatory measures the widest application, making the operations performed on an emergency a means of conferring permanent benefit, and constituting all gradual improvements the greatest safeguard against any sudden occurrence of rare epidemic disease.

III. In reference to these points, the various localities of fever in Oxford have been visited, and any circumstances apparently connected with the occurrence of disease in such parts have been noted.

Let it not be supposed however, that wherever fever has existed, something has been curiously searched for, as absolutely necessary, and the whole stress placed upon it; such has not been the case. The plain and evident conditions of the localities have been mainly looked at, and indications capable of treatment have been placed in the first rank, more especially where they seemed subject to the easy application of simple

and ordinarily used means. But whilst it has been attempted not to overvalue single cases of disease, every case has been considered important; for the search being based, not on cases of mere illness, but on cases of positive death, it was more probable that unhealthy localities should remain unvisited, than that any part should be considered unhealthy beyond its real degree.

In the following tables the number of deaths from the principal epidemic and contagious diseases in the several parishes during the three years is stated; and in the succeeding tables the localities of the various cases are mentioned in the several parishes, with a description of the parts chiefly visited by disease.

	Spor.	Meas.	Scarl.	Hp. Cgl.	Croup.	Thrush.	Diarr.	Dysnt.	Influ.	Fever.
St. Giles'	6	6	29	5	4	3	4		1	16
St. John's . .			2						1	
St. Clement's	1	4	13	8	1	1	5		1	7
St. Ebbe's . .	12	16	19	3	3	1	17		2	17
St. Thomas'	19	10	30	10	1		14	1	2	15
St. M. Magd.	6	5	12	5			2	1	2	6
St. Aldate's . .		4	13	2	3	2	7		4	7
St. Pet. Bailey	5	4	6	2	1		2		1	7
Holywell	1	2		3			3			1
St. Pet. East	1		3	2			1		2	7
St. Mary Virg.							1			
All Saints' . .		1		3			1			1
St. Michael's	1	1	2	2	1		2		1	5
St. Martin's . .	2	1	2				1			1

St. Giles'.

St. Giles', with Summertown.

	Sm. pox.	Measles.	Scarlatina.		H. Cough.			Croup.		Thrh.	Diarr.	Infl.	Typhus.		
	44	46	45	46	44	45	46	45	46	44	46	46	44	45	46
Summertown	I	I		2						I		I			3
Adams' Yard	2			2											I
Walton Terrace . .	I			3											
— Road	I								I						
St. John's Road . .		2		5	I	I									I
St. Giles'		2		I							I				I
Plantation Road . .		I									2				I
Observatory Street			I	I			I	I							
Windmill Yard . .				2					I	I					
St. John's Street															I
Cock's Row				I							I				I
Little Clarend. St.				I											
St. Giles' Road . .				I											
Walton Place				2											
Bridgewater's Yd.				I											
North Parade St.							I								
Heyfield Street . .										I					
Pauling's Yard . .														I	
Radcliffe Infirmary														I	I
Oxford Workhouse	I			4					I					I	4
Adelaide Street . .				I			I								
Caroline Row				I											

Typhus fever is recorded in seven places, (besides the Infirmary and Workhouse;) in all which situations other epidemic diseases had occurred with one exception, namely, Pauling's Yard. In Summertown the additional epidemic diseases were five, in Observatory Street four, in St. Giles' three, in Adams' Yard and Little Clarendon Street two, and in Cock's Row one.

There are circumstances worthy of attention in several of these localities:

1. Adam's Yard is a close court with a narrow entrance, paved but dirty, with an open pit full of wet, putrefying vegetable remains. Windmill Yard, close by, though not marked by fatal fever cases, deserves attention also from its uncleanness.

2. Cock's Row is a long, open court, chiefly unpaved

and with an earthen floor, and is said to contain two large cesspools in front of the houses. On visit, (Jan. 17,) the side of the court was flooded with black filthy water, communicating with a boarded hole, full of the same fluid, from which bubbles of gas were escaping. There was a heap of vegetable rubbish in one corner. The south side of this court has open gardens, in which are pigsties.

3. Pauling's Yard is a narrow but not uncleanly court, except at one angle, where there is a dirt heap, and a large puddle, this spot being used as a common urinal; at this part of the court the smell of the drains is said to be very bad at times. One fatal fever case occurred in this court, and that was in the house at this dirty corner.

4. Summertown appears to be very subject to epidemic diseases; fever, scarlatina, and smallpox having prevailed there extensively during the period between 1844 and 1846. Two of the fatal cases of fever occurred in two courts to the right of the Woodstock Road. These two courts present a remarkable contrast: one was formerly unhealthy and offensive, but on passing to a new proprietor was drained. A working man living in it stated that the healthiness and comfort of the court were much improved by this being done, little disease prevailing there now, and that he was willing to pay a little increase in rent on account of the improved healthiness and comfort of the place. The other court consists of a few small cottages, inhabited by very poor people, and is unprovided with the least means of getting rid of any refuse, which is thrown into the garden at the back of the house. One of the gardens visited resembled a dirt heap more than

a garden, and must render the whole row of houses dangerous to life. During the prevalence of fever in 1846, fever prevailed most extensively and for a very long time in this court.

St. Clement's.

	Sm. Pox.	Measles.	Scarlatina.	H. Cgh.	Croup	Thrh.	Diarr.	Intl.	Typh.		
	44	44	46	45	46	45	44	46	44	45	46
George Street and Yard	1	1	4	1	2	1					1
London Place		1									
High Street		1	3		3			2			
Caroline Street			1		2		1	2	1		1
Cherwell Street			1								1
New Street			1								
Magdalen Prospect			2								2
In Plain			1								1
Bath Street							1				
York Place										1	

In St. Clement's the streets on the left of the main road, and the main road itself for a short distance beyond the toll-gate, are built on a slope, so that the gutters are nearly free from fluid refuse; this advantage does not however extend to New Street, In the Plain, and the alley between George Street and Cherwell Street: thus New Street is wet, when the other streets are nearly dry, except In the Plain, which is very commonly rendered more or less disagreeable by its gutters being full of drain water.

In the annexed table is shewn how severely St. Clement's suffered from scarlatina; typhus fever also occurred in five localities, two of these being streets in which five or six other epidemic diseases prevailed. In George Street one person died in a house where every person, with one exception, was ill of fever; the house presented no peculiarities.

In Caroline Street the fatal case of fever occurred in

a side court of tolerably clean character. Nearly opposite this court is Chapel Yard, an untidy court, the garden adjoining to which is rendered very disagreeable to the inhabitants by the contents of a necessary soaking through the wall over the open ground.

Fever destroyed two children in a house in In the Plain. This house is rendered unwholesome in three ways: by the overflowings of the sink running into the house, (this is to be altered,) by pigsties in the garden, and by a dark, low court with the foetid soakings from a urinal in it; this court passes up to some cottages at the back.

Bath Street is clean, and no reason for the fever could be detected in it.

York Place is a narrow court, with untidy heaps of refuse, a bad surface drain, and an opening into the drain, which is foetid in warm weather: the lower end of the court is said to back on a row of privies.

Cherwell Street is perhaps the most untidy street in St. Clement's. No clear reason for the fatal case of fever could be found; but the inhabitant of the house complained of the occasional smell in the house, which was common in the cellar, and occasionally pervaded the whole house. Under the cellar was a drain, the smell from which might easily pass through the imperfections of the floor, and an opening made for convenience in a large stone only stopped by a cork.

Between George Street and Cherwell Street is an open space of ground deserving attention, as any nuisance in it may implicate two streets; it is untidy, and contains some dirty pigsties.

St. John's the Baptist Parish.

Fever is not noted as occurring fatally here.

St. Ebbe's.

	Sm. pox.		Measles.	Scarlatina.	H. Cgl.	Croup.			Thrh.	Diarr.		Infl.		Typhus.			
	44	45				44	45	46		45	45	46	44	45	44	45	46
Friar Street	I			3					I							I	
St. Ebbe Street . .	3		2	3									I				2
Church Street . . .	I		2				I			I	I				I	I	
Gas Street	I			2													I
Bull Street		I			I						2				I	I	
Bridport Street . .	2		2								3						2
Blackfriars' Road .	3		2	6			I	I		I	I	I				2	3
Paradise Square . .			4		I												
Penson's Gardens . .			I								3						
Abbey Place			I														
Godfrey's Row . . .			I														
Water Lane			I														
Pembroke Street . .					I												
Littlegate				2													
Hunt's Buildings . .				2													
Paradise Street . . .					I												
Castle Street											2						
Speedwell Street . .											2						
Bridge Street																	I
Waterloo B.																	I

The lower part of the parish of St. Ebbe's lying close to the river, and including Friar Street, Blackfriars' Road, Bull Street, Gas Street, and Bridport Street, suffered severely from scarlet fever, diarrhoea and fever. The whole of this district lies low; the gutters in Friar Street and Blackfriars' Road are frequently full during the entire day of drain water; and some of the courts, and especially the houses in the upper part of Blackfriars on the left hand side, are exceedingly dirty; there are also large plots of garden ground between the two streets which are nearly concealed from sight and deserve attention. Fever occurred in a house in Bull Street during two consecutive years; this house is situated down a closed passage, which is kept very neat, but contains a

slaughter-house, with cow-shed and pigsties. Gas Street is very dirty, and contains two very dirty courts.

Fever as well as dysentery occurred in Church Street. There are four courts on the west side of this street: one, Grubb's Yard, has been recently repaired, newly paved, and improved most extensively, to the great comfort of the inhabitants; whilst the other three, States' Yard, Godfrey's Row, and Coach and Horse Yard, are courts of the very worst kind, and present in common a degree of neglect and filth rarely witnessed. In States' Yard the very room in which the person formerly died of fever is now tenanted (Feb. 1.) by a man and his wife and two children; and the mother and eldest child were found sitting before the fire with their heads shaved, having only just recovered from typhus fever.

Of the two cases of fever in St. Ebbe's Street, no history could be traced of one, and the other appeared to have been quite unconnected with anything in the locality.

The mortality from fever in and about the Friars seems to convey but a slight idea of the extent of the disease; in no part of Oxford did the disease seem more common or even a matter of such ordinary occurrence.

St. Thomas'.

	Small-pox.		Measles.	Scarlatina.		Hooping Cough.			Croup.	Diarrhœa.			Dys.	Influenza.		Typhus Fever.		
	44	45		46	45	46	44	45		46	44	45		46	45	44	45	44
Church Street....	5					I	I											
Hamel.....	3																	I
Fisher Row.....	2							2		I	2			I				
King Street.....	I		2															
Broadwater's Yard	I																	
St. Thomas' Street	2				6												I	I
Near Brewery....	I							I										
Paradise Street ..	I		I															
Billings' Yard ..	I					I												
Holly-bush Row..		I	I		3	I				I							I	I
Allen's Yard		I																
Bossom's Row ..			I															
Hythe Bridge....			I					2										I
Jericho Gardens..			2								I							
Nergrove Row ..					I													
Falkner's Row ..					I													
Lamb Flag Yard..					I													
Church Lane					I												2	
Hughes' Yard ..			2															
Cardigan Street ..					4						I						I	I
Union Street					I					I								
Wellington Street					I													I
Walton Place					2					I	I							
Portland Place ..					3						I							
Ward's Fields....					I						I							I
Clarendon Street					2						2							I
Park End Street..									I			I	I					
Clarendon Place..											I						I	
Worcester Place..																		I
County Gaol								2										

The portion of the parish of St. Thomas lying north of Worcester College presents a completely different appearance from that part which lies on each side of the Gloucester road. The long line of houses forming Worcester and Walton Places, although lying low, and backing on the low ground near the canal and river, are placed by the side of a good broad road, and not encroached upon in any way; they are however placed

at no great distance from the lower part of that exceedingly foul drain which commences in Jericho and runs down through the grounds below Worcester College.

Beyond the University Press is a block of new streets chiefly inhabited by the poorer class, and formed by Jericho Lane and Gardens, Cardigan Street with Portland Place, Clarendon Street, Clarendon Place, Wellington Street, Ward's Fields, and Union Street. Here scarlatina and diarrhœa were very general and fatal; and in five localities fever terminated fatally. The locality is low, and borders on parts which are occasionally flooded, at the same time that the gutters at the lower ends of the streets are often full of stagnant drain water. One especial nuisance of the worst character however exists here; a drain of the filthiest kind runs down Jericho, quite open, then crosses the lower ends of Cardigan Street, Clarendon Street, and Wellington Street, only partially covered, and then runs quite open along Ward's Fields to the end of Nelson Street, after having received a more fluid but most unhealthy open drain, which runs down at the back of Wellington Street. By these two drains this block of streets is almost completely surrounded on three sides.

One of the houses in Ward's Fields which suffered from diarrhœa, and the house in Wellington Street which suffered from fever, are near this drain. At the house in Clarendon Street where one of the cases of diarrhœa terminated fatally, there is a small open drain, which afterwards passes in a pipe under the house; this drain is at times so offensive that the back room is unbearable, and food kept in the cupboard over the drain is rapidly injured by the smell.

The remaining part of St. Thomas' parish contains some of the worst habitations and the poorest inhabitants in Oxford. The courts in many parts are of a bad kind; the drains are often large and open; the river, with its levels varying at different periods of the year, runs through the parish; and there is a large tract of meadow land, close to the lower part of the parish, which is covered by water in floods. It is a matter of no surprise, that under these circumstances smallpox, scarlatina, diarrhoea and fever should have here prevailed extensively.

Passing over the bridge a short way from the bottom of George Lane, the line of cottages forming Fisher Row, in which five epidemics prevailed, lies immediately facing and close to the water; whilst on the island to the right is the house where fever proved fatal. In the row of houses lying on the left, forming part of Hythe Bridge, one cannot be surprised at the accounts of serious illness, for they are directly opposite some pigsties and a large depository of sweepings and nightsoil amounting to several tons. Through the remainder of Hythe Bridge and Hollybush Row runs a large open unclean drain; in this latter part measles, scarlatina and fever all terminated fatally.

Hughes' Yard is a narrow court in Hythe Bridge, with rubbish heaps and only a small surface drain; this drain being quite insufficient, and clogged up by a wooden pillar, which supports the building over the entrance of the court. The privy is for the whole court, and is said not to have been cleaned out for two years.

Church Lane is chiefly unpaved, but contains good neat houses. A court passes out of this lane, and its end opens on a stagnant ditch, filled with the filthiest

black animal and vegetable remains. Fever terminated fatally in this court, and an inhabitant stated that illness, generally fever, had occurred in nearly every house. At the end of this lane runs the open ditch, which crosses the end of the Hamel and of the courts on the south side of Church Street; after running immediately under the windows of the houses in Hamel Lane, it enters the side of the meadow near St. Thomas' Church.

The main street leading to St. Thomas' Church is unclean, and exceedingly ill attended to; but the courts right and left are deserving especial attention, inasmuch as disease has prevailed here extensively, and their present condition is, with hardly more than one exception, inconsistent with the health of the inhabitants, irrespective of epidemic disease. These courts are, on the right, Vaughan's, Orpwood's, Billing's, and Falkner's; on the left, Shoulder of Mutton, Nergrove's, Brazier's, and Allen's Courts, with the Old Hamel.

1. Vaughan's Court is unpaved, but moderately open to the river at the end, which receives the contents of the privy. There are heaps of filth, and bad smells. One inhabitant complained much of the nuisance from a dog-kennel in the court. One lodging-house in the court.

2. Orpwood's Court; paved, and might be readily kept very clean from its inclination to the river at the end. Here are dirt heaps, and one lodging-house. These two courts have not suffered from deaths from epidemic diseases.

3. Billing's Yard has suffered much from illness. The people seemed quite anxious to do their best in keeping the place clean, but the upper part of this

court is in the filthiest state from a large stagnant pool and an open earthen cesspool of the worst kind.

4. Falkner's Yard unpaved, with rubbish heaps, and also with the privy uncleared, suffers much from illness.

5. Shoulder of Mutton Yard; here a large dunghill in the court is a great nuisance.

6. Nergrove Court; close and confined from a high wall opposite the houses, it is destitute of any drain of a useful kind, and exceedingly filthy. There are pigsties in front, and a most offensive bone-house is close to one end. There are ten houses and one privy, whilst a hole has been knocked through the floor of the court into an open ditch below. In the midst of all this filth, one inhabitant lives who is exceedingly fond of flowers, and to gratify his taste he has suspended a fender, kettles, and iron pots along the wall, full of earth to form the beds for his plants.

7. Brazier's Yard is perhaps the worst court in St. Thomas'; it is unpaved, with a small open drain, with heaps of ashes and filth, and one corner of the yard rendered still more unclean by a donkey kept in it. There is one lodging-house here.

8. The large open court of the Hamel is very dirty, and contains three lodging-houses, one as remarkably clean as another is dirty. The house where fever occurred is one of the smallest on the west side, and belongs to some poor people.

9. Allen's Yard is a large open square court with gardens, and probably suffers more from its neighbourhood than from its own condition.

St. Mary Magdalene.

	Sm. Pox.	Measles.	Scarlatina.	Hoop. Cough.	Diarr.	Dys.	Influ.	Typhus.		
	44	46	46	45	46	46	44	44	45	46
George Street . . .	4		1	2		1			2	1
Red Lion Square	1		1						1	
Friars' Entry . . .	1	3	7	1						
Gloucester Green		2	1				1	1		
St. Giles' Street . .			1	1			1			
St. John's Street . .			1							
Worcester Street					1		1			
Victoria Court . .				1						1

The healthiness of St. Mary Magdalene parish appears on a general view to be greater than that of St. Peter-le-Bailey parish, and certainly much greater than the lower districts near the river. In Friar's Entry no fatal case of fever is recorded: in George Lane three are recorded—one occurred in a healthy house free from all nuisances; the second occurred in a court of the main street, but no cause could be found for its occurrence; fever in the third case was apparently caught from a man travelling about the country.

The locality of the case in Red Lion Square could not be ascertained, but the place is not well cleaned in any way.

The case in Gloucester Green was in a court; the surface drain of this court was full of drain water, and a lane with a dirty surface drain and full of heaps of rubbish opens into it.

St. Aldate's.

	Measles.	Scarlat.	Hoop. Cgth.	Croup	Thrush	Diarr.	Influ.	Typh.
	46	44 46	46	45	44 45	46	44 45	44 46
Clarke's Row	I							
Wyatt's Yard	I							
Sheppard's Row ..	2			I				I
Floyd's Row		I 4				3		
St. Aldate's Street		2 2	I	I				2
English's Yard ..		2	I	I				
Bridewell Street ..		I						
Water Lane		I				2		
Near Weirs.....					I I			
Spark's Yard						I I		I
Water Lane Square						I		2
Folly Bridge							I	
Almshouses							I	
Grand Pont.....							I	
Hall's Yard.....								I

The courts leading out of St. Aldate's Street, below the point at which the Trill Stream passes under the street, are deserving of attention, some of them being close, unclean, and exceedingly unhealthy, in addition to their being exposed to the danger arising from a stream or large open drain, passing at the end of a large number of them on the north side of the street.

Sheppard's Row is said to be very disagreeable in warm weather. There are dirt heaps, and no good drain exists, the only drain being a small surface drain of a very insufficient kind; and whilst two houses have the use of one privy, the other thirteen houses are limited to the use of a second one.

Water Lane Square, a large open court, is unclean, with a bad drain out of repair, and the open drain runs almost under the floor of the house in which two persons died of fever.

Spark's Yard is a narrow court, with dirty pools of water filling holes in the broken pavement. Even in February the stench in this court is quite excessive.

Hall's Yard is a narrow court near the lower end of St. Aldate's, dirty and close.

	Small-pox.	Measles.	Scarlatina.	Hoop. Cough.	Croup	Diarrhœa.	Erysipel.	Influ.	Typhus.
	44 45	46	45 46	45 46	45	44 45 46	44	44 46	44 45 46
<i>St. Pet.-le-Bailey.</i>									
Queen Street	I	I							I
Falkner's Row ..	I								
New-Inn-Hall St.	I								
Castle Street	I	I		2		I		I	I
Broadwater's Yd.		I							
Paradise Street ..		2							I
Broken Hayes ..									2
Tanner's Yard ..			I						
Frederic Place ..			I		I				I
Alder's Yard			I						
Jew's Row			I						
Grubb's Row									I
Brewer's Alley ..			I						
<i>Holywell.</i>									
Holywell Street ..	I	I		2		I	I	I	
Bennet's Yard ..						I			
Bath Place		I							I
Park Place				I					
<i>St. Pet. in East.</i>									
High Street	I							I I	I I
Long-wall Street..			I						
Angel Yard.....			I						I
Fidler's Yard ..			I						I
Brown's Yard....									I
Tanner's Yard ..				I					I
Merton Street....				I					
Merton Fields....						I			
St. Helen's									I
<i>St. Mary Virgin.</i>									
Grove Street						I			
<i>All Saints.</i>									
Bear Lane		I							
High Street.....						I			
Carter's Yard....				I 2					
Amsterdam									I
<i>St. Michael's.</i>									
New-Inn-Hall St.	I			I			I		I
Corn-Market							I		I
Bell Yard									I
Ship Street		I							
Broad Street			I		I				
George Street			I					I	I
Market Street....				I					
<i>St. Martin's.</i>									
Queen Street	I	I	I			I			I
Corn-Market St.	I								
St. Aldate's.....				I					

St. Peter-le-Bailey Parish.

Many of the courts of St. Peter-le-Bailey are very narrow, confined, and dirty. In Broken Hayes the two deaths from fever occurred in the same house; the inhabitants did not complain of the drainage, but of the great annoyance from the cowsheds and manure of a large establishment directly opposite, the smell of which is at times so great that they are obliged to shut their windows. The courts leading out of Broken Hayes are very dirty, and contain pigsties.

Grubb's Row has been newly paved and a drain made by the new proprietor of part of the court at a considerable expense. The court is however unclean, the drain is stopped up, and the inhabitants complain of their inability to procure help in cleaning it. Fever has terminated fatally in this court, and in the house at the corner of it and Castle Street.

Broadwater's Yard is clean at the farther end, but near the street is close and unclean; there is a dung-heap with a drain out of repair and stopped up.

Fever terminated fatally in a house in Paradise Street, in which much illness had also occurred since; the house is clean, except that the cellar is turned into a dog-kennel. There is a large lodging-house in this street.

Frederick Place is a large open court, with dung heap and imperfect drain near the entrance, and exceedingly neglected at the further extremity.

Holywell Parish.

The case of fever in Bath Place was in a corner house situated partly over the great Holywell Ditch; the openings in the drain deserve attention, as the water from the drain is said to have sometimes flowed

back from the drain into the court during very heavy rain.

St. Peter's in the East Parish.

The courts of St. Peter in the East Parish are much superior to those in the western part of Oxford, yet many of them are exceedingly close and narrow.

Fever terminated fatally in the High Street, Long Wall Street, Angel Yard, Brown's Yard, Tanner's Yard, and St. Helen's.

No clear history or cause of the cases in the High Street or in Long Wall could be made out, but in the other localities there are circumstances deserving of notice.

In Angel Yard the gutters are found quite insufficient in summer; the court is close but clean.

In Brown's Yard there is an exceedingly bad drain, which runs under the board near the entrance of the court.

Tanner's Yard is badly paved and dirty, there are hardly surface drains, there being only small drains just round two sinks. One of these sinks is directly in front of a house where fever terminated fatally. This sink is so badly constructed that the court is flooded at times in front of the house, and the smell from it is described as being occasionally as bad as that of the privy.

St. Helen's is said to have been much improved within the last few years, but the part near New College Lane is still very bad. There are several very unwholesome dirt heaps, an exceedingly bad surface drain, and a deep pit partly filled with solid matters and covered by a wooden trap door is situated close to a house, the inhabitant of which complained much of the smell arising from it.

Single fatal cases of fever occurred in New Inn Hall Street and Corn Market Street, as well as two in the upper part of George Lane, all in the larger houses. The case in Queen Street could not be traced, and the evidence of the case in Bell Yard being fever was not clear.

Amongst the febrile diseases of the first class, it appears that during the year 1846 measles, scarlatina, diarrhoea, and typhus fever prevailed extensively in Oxford. The two diseases, measles and scarlatina, resemble each other in so many circumstances, that it is a matter of considerable interest to compare them together in the period at which they occurred, and the localities especially affected. Fatal cases of measles did not begin to be numerous till August, whilst many had died of scarlet fever in May, June and July. Neither did the two diseases begin in the same parts, appear simultaneously in all parts at once, or affect parts in the same order. Thus measles chiefly began to terminate fatally in St. Ebbe's in August; in St. Aldate's, St. Thomas', and St. Mary Magdalene, in October; and in St. Giles' in November; whilst the first fatal cases in St. Clement's were as late as December. On the other hand, the greater number of deaths from scarlet fever began to occur in St. Giles', St. Thomas' and St. Clement's in May; in St. Ebbe's and St. Mary Magdalene in July, and in St. Aldate's in September. The difference in the exact locality of measles and scarlatina is shewn by the circumstance that the same streets and courts were not generally visited fatally by the two diseases. Thus in the parishes above mentioned, deaths occurred from scarlet fever in fifty-three localities, and from measles in twenty-nine; but of the twenty-nine places visited by measles, only twelve were the localities of fatal scarlet fever. It is worthy how-

ever of note, that of the seventeen remaining places only nine were free from some epidemic disease; fever, diarrhoea, smallpox, or hooping cough, having terminated fatally in all the others.

Measles and scarlatina are such common diseases, that few large towns are quite free from them for any long period; such is not however the case with smallpox, for its ravages are materially influenced by other circumstances, especially vaccination; though this latter cause may not at the present day be always sufficiently practised to exert all its power.

The mortality from smallpox was great in 1844, much less in 1845, and did not exist in 1846. In 1844 smallpox terminated fatally in St. Giles', St. Mary Magdalene, and St. Ebbe's, from May till August and September; affecting Holywell and St. Clement's about July, St. Michael's in September, and St. Martin's in November. St. Peter-le-Bailey suffered from August to October, and fatal smallpox commencing in St. Thomas' in May, still lingered there in December. In 1845, except three cases occurring in St. Michael's, St. Peter's in the East and St. Martin's, in the earlier months of the year, (two of these apparently continuous with the late cases of the previous year,) all the fatal cases of smallpox occurred in two localities. It is a point of great interest to note these two localities, for there only remained two regular fever localities wanting an additional smallpox mortality, namely, a large part of the lower part of St. Ebbe's, and the mass of buildings near Jericho. The result was this: the smallpox, lingering in December in Church Street and its courts, St. Thomas', destroyed in the early part of the following year a small number more of persons in the lower part of the same locality, attacked Blackfriars, Bull Street, and Bridport Street in the lower

part of St. Ebbe's, and spared in its fatal form the block of houses near Jericho.

The last death from smallpox in 1845 was in April; and up to the end of 1846 no fresh fatal case had occurred. The deaths had been 54 in number, and the number of cases which had occurred may be reckoned as about 216.

Of these fifty-four cases, only seven are known to have been vaccinated; forty-four were unvaccinated; and in three the point was unknown. It is painful to think that such a large number had not availed themselves or been submitted to such an almost certain means of protection from, or diminution of, the severity of smallpox; but it quite accords with the feeling often found to exist against vaccination.

This large number of unvaccinated persons well deserves attention, in relation to the following remark made in Mr. Marshall's* letter on Vaccination to Viscount Morpeth: "The vaccination returns for the year ending September 29, 1845, shew that in Dorset, Durham, and Oxfordshire, the registered births were respectively 4320, 4738, and 4220, whilst the vaccination cases were 953, 7228 and 488; and further, if those cases of vaccination only be considered that were performed within the first year after birth, their proportion to the total births registered is seen to vary in different counties from ten to fifty per cent., and in the case of Durham to a hundred per cent."

Smallpox ceased completely, and for a long time. This is often the case; a long period often elapses between its epidemic visitations, in which a population grows up unprotected from vaccination being neglected, and also unprotected by not having suffered

* Vaccination considered in Relation to the Public Health. By John Marshall, Surgeon, 1847.

from the disease itself. Forty-four unvaccinated persons died, of whom in all probability vaccination would have saved a large number; but after smallpox there is also some loss of life from secondary diseases, and not unfrequently blindness.

In examining the localities chiefly affected by measles, scarlatina, and smallpox, the large districts lying on the outside of the centre of the town appeared to suffer most and for the longest period; and some indications might be drawn from the parts in which these diseases prevailed, pointing to the localities chiefly requiring attention. In the presence of typhus fever there is however so decided an indication of the nature of the locality, that the Metropolitan Sanatory Commission have stated in their recent report, "*The evidence that the track of typhus is everywhere marked by the extent of this domain of filth, has been so often adduced that it is needless to repeat it.*"

In the three years, 1844, 45, 46, ninety persons died of typhus fever in Oxford; but of this ninety, in the long line of streets including St. Giles', Beaumont Street, Corn Market, St. Aldate's to the Trill Stream, High Street, Broad Street, and Holywell, there were but six deaths, the remaining eighty-four being in the streets and courts of the remaining part of the town. Again, of the sixty deaths occurring from diarrhoea in the same period, the same chief streets only suffered seven deaths.

The parts chiefly affected by fever were nine in number:—1. Courts in Summertown. 2. The narrower courts of St. Giles', with Little Clarendon Street. 3. The mass of streets lying between the ditches in Jericho. 4. Courts leading out of Gloucester Green. 5. The courts of St. Ebbe's, and St. Peter-le-Bailey near St. Ebbe's church. 6. Church Street and its courts,

St. Thomas'. 7. The Friars, and its neighbourhood. 8. St. Aldate's, beyond Trill Stream. 9. St. Clement's.

In the tables annexed a description is given of most of the localities in which fever existed. In some no evident cause was ascertained, but in by far the greater number something of a more or less unhealthy character existed, which, if not the cause, appeared to be capable at least of influencing the health of the locality; and it often happened that parts which had been visited many weeks previously as the worst drained parts of Oxford, were again visited in searching for the houses of those who had died of typhus fever.

Measles, scarlatina, smallpox, and typhus fever assume at times the most malignant type, and destroy life by their essential characters as disease; such however does not appear to have been the case in Oxford, from the limited localities in which these diseases chiefly prevailed. The districts in which measles, scarlatina, and smallpox prevailed fatally were to a certain degree the same, although the absolute locality of the individual cases often differed; when we examine, however, the localities of typhus fever, so valuable a symptom of the nature of a district that its existence is almost an indication of treatment, the plain, broad fact comes out with a degree of clearness not to be passed over, that the great localities of fever are also the great seats of epidemic and contagious disease.

If we compare the localities of fatal typhus fever with the localities of the four principal epidemic and contagious diseases, measles, scarlatina, smallpox, and diarrhoea in their fatal form, the result is, that of sixty-one localities of fever, only sixteen were free from some one of these other diseases; one of which occurred in twenty, two in thirteen, three in ten, and all four in two localities. Those whose duties lead them to these

districts will not be surprised to hear that the two districts on which disease seemed to fix its firmest hold were Blackfriars' and Holly Bush Row, nor that nine of the ten which suffered from three diseases, in addition to fever, were Caroline and George Street, St. Clement's; Church Street, Bridport Street, and the Friars, St. Ebbe's; George Lane and its neighbourhood, St. Mary Magdalene; with Castle Street, and Queen Street, St. Peter-le-Bailey. The tenth locality is Summertown, which, occupying a large space and passing as one street, is probably placed with a higher mortality than it fairly deserves.

Thus far we have alluded to the ordinary diseases of this country; but the preparations going on throughout the kingdom to meet the disease which seventeen years since first reached this country, and which is now again advancing towards us on its old track, and with similar characters, render an examination of its occurrence here in 1832 a matter of especial interest. The use of the materials for an examination of this point has been kindly granted by the Board of the Radcliffe Infirmary, in whose possession are the records of the visitation of cholera in 1832, arranged, and in many parts written by the Chairman of the Board of Health, the Rev. Vaughan Thomas. In these, as well as in the Memorials of the Malignant Cholera, 1832, presented to the members of the Board of Health by the Chairman, a most complete account of the cholera in Oxford exists; and in them is contained that information which so soon again, in all probability, is to be practically employed*.

The cholera appeared in England on Oct. 26, 1831,

* The remarks on the cholera in England are derived from Dr. W. Merriman's elaborate paper on the progress of the cholera over the globe. *Med-Chirurg. Transact.* vol. 27.

and reached Oxford in about eight months, on June 24, 1832. The last case of cholera occurred in Oxford Nov. 28, 1832, and the last case in England on December, 31 of the same year. The disease prevailed here chiefly during the months of July, August, and September, the same period in which England suffered most. The number of cases in Oxford and St. Clement's, without St. Giles', amounted to one hundred and seventy-four, of which eighty-six died, and eighty-eight recovered; the number of cases in Oxford as compared with other towns of England, being, that of one hundred and twenty-six places, consisting of large towns or parts especially visited by cholera, about one hundred suffered more than Oxford, and only about twenty-five less. The number of cases in places near Oxford, was in reference to the population, per cent., in Blackthorne about twenty, in Bicester seven, in Merton village, Oxon, six and a half, and in Oxford thirteen sixteenths. The places in England which suffered less in proportion to the population than Oxford are however not such as one would suppose less liable to epidemic disease, amongst them being Norwich, Bradford, Portsmouth, Wigan, Stockport, Bolton, Chester, Preston, Birmingham, and Halifax.

The cholera appears to have affected the greater part of Oxford more or less, St. Michael's, St. Mary the Virgin, and St. John's being the only parishes in which it did not occur. The stress of the disease fell however on St. Clement's, St. Ebbe's, and St. Thomas', for although twenty-seven cases occurred in St. Mary Magdalene, St. Aldate's, St. Peter-le-Bailey, St. Peter in the East, All Saints', Holywell, and St. Martin's, they were in twenty-two different localities, and nearly one half of them in St. Aldate's and its courts. These twenty-seven cases occurred, with two exceptions,

during the early period of the epidemic, none occurring later than the last week in August.

The locality of three cases is not mentioned, but whilst twenty-seven cases were scattered over seven parishes, one hundred and forty-four cases occurred in three parishes alone: namely, thirty-one in St. Ebbe's, forty in St. Thomas', and seventy-three or more than the number in these two parishes together in St. Clement's alone.

It has just been mentioned that the twenty-seven cases in the parishes lightly visited occurred chiefly about one time, but in the three parishes which suffered most the disease made a regular progress.

The disease commenced in the last week in June*, 1832, in the County Jail, then containing one hundred and thirty-five male prisoners; it destroyed three persons during that and the following week, all in one division of the prison, whilst every prisoner in the same division was affected with the bowel complaint; but in no other division of the prison did the affection occur. In the three following weeks several cases occurred in Wood Street, Bridge Street, Church Street, Littlegate, and especially in Godfrey's Row, all in St. Ebbe's, and then cholera ceased to appear in these localities with one exception; it then fixed itself for two weeks in Bull Street in the same neighbourhood. Thus by the 28th of July twenty-six cases of cholera had occurred in St. Ebbe's, and ten in the County Jail and St. Thomas' together, but not a single case in St. Clement's.

At the end of July the cholera almost ceased to occur in St. Ebbe's; but appearing in the New Hamel of St. Thomas', there attacked twenty-one persons in the three following weeks, then completely left this

* The disease is understood here and in the annexed table to commence at the time of seizure, and not on its being reported.

In considering the localities of typhus fever, the frequency of epidemic and contagious diseases in the same places was especially dwelt on; as by attention to such parts a large mass of disease is relieved. It was also shewn that twelve districts of Oxford suffered especially from fever and epidemic diseases during the period under consideration—the years 1844, 45, 46.

It remains now to be considered how far cholera attacked the same parts; and it appears that of these twelve districts cholera visited seven, and was in the streets adjacent to and surrounding four. Of the twelfth I have no record, namely, Summertown in St. Giles'.

Sixteen years have gone by since the cholera was here, yet the same districts which were then attacked are still more or less completely the great centres of disease; but the importance of the subject justifies a consideration of any thing which might seem to throw light on its probable locality, if it again occurred.

During the summer months of 1846 a great increase of fever and diarrhoea occurred here, and it is most important to note in what parts these two diseases especially increased; the one so similar to cholera in its choice of locality, that it seemed at times in 1832 to take its place, the other so like cholera in its characters, that some persons have pronounced them to be one and the same thing. It was in four districts that this increase took place: 1. The block of streets lying between the University Printing Office and the Canal, extending also to Observatory Street, Walton Place, and Little Clarendon Street. 2. Between Fisher Row and the Hamel. 3. Between St. Ebbe's Church and Bridport Street, extending to Speedwell

Street. 4. In the streets of St. Clement's between the Headington road and the Cherwell.

It is hardly necessary to repeat the four great points on which the cholera fixed itself—Godfrey's Row, Bull Street, the New Hamel, and St. Clement's. These four spots are however in the four districts just described; for the New Hamel is the present Jericho Gardens, close to and part of the buildings beyond the University Printing Office; Godfrey's Row is amongst the courts near St. Ebbe's Church; Bull Street between that Church and the Friars; and St. Clement's, the remaining district, though much healthier, still retains a prominent position amongst the localities of fever.

Thus, whether we take the cholera of 1832, the mass of epidemic disease during 1844, 45, 46, or the sudden increase of fever and diarrhoea during a particularly unhealthy season, 1846, the attention is drawn to nearly the same districts, and to which the means employed for relieving either ordinary disease or the occasional attacks of a severe epidemic would seem especially applicable.

These localities have been visited, and the condition of them is noted under the different parishes. It may however be of interest to know the general features of the parts.

In visiting the various parts of the town the inhabitants have often complained of serious inconvenience, but they have also spoke with gratitude of the exertions of the commissioners and private owners in their behalf. It has often appeared so plain that great good might be done by simply doing well what is supposed to be done so, and by performing generally what is only done here and there, that suggestions of what might be done with great benefit and very little expense, have been added in some cases.

The large open drains of Oxford consist of two classes, those not communicating with any great source of water, and those forming branches of the river. To the former class belong the open drains of Jericho and Church Street St. Thomas': drains full of decomposing matters, with sluggish streams of the foulest kind, and running through parts which suffer severely from disease. To the second class belong the open streams of St. Thomas', St. Ebbe's, and St. Aldate's, which at times are full of water, whilst at other times they hardly flow at all; into these streams a great number of small drains open, and the exposure of the water amongst the houses to the open air appears to be connected with the high mortality from contagious diseases in their neighbourhood, especially in St. Aldate's.

A large number of courts are situated close to these open drains, and in some cases the houses extend partly over them, an entire court or a single house being thus exposed to the most unwholesome nuisance, and in several instances the locality being also marked by the occurrence of fatal disease. It is worthy of note, in connection with the open branches of the river, to mark the great excess of mortality in the parishes lying below the high part of Oxford, namely, St. Clement's, St. Aldate's, St. Thomas', and St. Ebbe's, those parts which at the present moment (March 6) border so closely on the flooded lands, and which on the subsidence of the water are exposed to the vapour produced by the drying of a large tract of meadow-land.

The street gutters in the lower part of St. Ebbe's have little incline, and are often full of drain water: whereas those of the chief part of St. Clement's, from the natural slope, carry off the fluid matters more rapidly.

Cesspools are exceedingly common, and independ-

ently of their unhealthiness under all circumstances in the immediate neighbourhood of houses, there are serious inconveniences from their not being attended to. Thus in one instance the drain-water at times floods the court, and not unfrequently the odours pass up into the confined courts from the imperfection of the drain. In one place there is a kind of small cesspool in the course of a drain, immediately in front of a house-door, only covered by a wooden door: and in another, there is a cesspool forming an open pond at the end of a court.

There appears to be great irregularity in the period at which cesspools are cleaned out, the whole thing being sometimes left almost to chance. The sweeping and cleansing of many courts are also very irregular. In a large number of courts the drain is insufficiently guarded to prevent smells passing up, or so choked up at times as to prevent things passing down. In one case, the house where fatal fever existed was just opposite a drain of this kind; and of all the things likely to render a court unhealthy, none appears to be more calculated or more common in its occurrence. The court, and even the house, appears to be flooded in some cases with foul water from this cause. At times also a drain passes under a cottage floor or a house cellar, and renders parts of the house almost unbearable.

Too great stress cannot be laid on the necessity of setting the paving and drainage of the courts in good order. Many of the courts are narrow, confined, and hardly admit fresh air; and in others the floor, from being earthen, or full of holes, is soaked with drain water; in such cases the inhabitants cannot get rid of the refuse, are exposed to the most unwholesome

smells, and almost destitute of fresh air. In one most ruinous court, the surface drain is stopped up by a post, placed to support part of a falling house. There is great want in most courts of some place to put ashes and solid refuse in: these matters scattered about the court decompose and putrefy, as well as stop up the drain; if collected, they should be frequently and regularly removed.

It is hardly necessary to add to the evidence already existing relative to the anxiety of the poor themselves in many cases for some improvement in the cleanliness and drainage of the courts. Their houses, though often as neglected as their persons, not unfrequently in the dirtiest courts present a clean and tidy appearance, whilst they themselves almost apologize for living in such places, or for not removing when their children die of fever, alledging their want of means to move or take any dwelling bearing a higher price.

There are some nuisances which the poor complain of heavily, which are kept by some of their own class; lodging-houses for travellers, dog-kennels, and bone-houses.

The lodging-houses seem to receive any body, and the persons so admitted often violate all rules of decency in not availing themselves of the ordinary means of convenience adopted by the inhabitants of the courts; but as the poor people say, "They are here to-day and gone to-morrow, and what hold can be had on them?" Independently of this inconvenience, houses like these should be narrowly watched, not only from the unhealthy crowding of persons in them, but from the probability of contagious diseases commencing in them in consequence of the arrival of travellers in a state of disease.

Dog-kennels were complained of in two places. In

one court there was a large heap of refuse, and the other court was dirty.

There are yards in which depositories of bones are kept, bones being of considerable, and, during the last few years, of rapidly increasing value; and there is one establishment of this kind on a large scale in St. Thomas'. Such a place must be very unwholesome, and the smell of it was complained of by the neighbours. In addition to bones kept for agricultural purposes, cinder heaps covered and guarded with the greatest care, and small refuse heaps, have been met with in different parts, all kept for farmers. This point is important, as shewing the trouble which persons are willing to take to collect even small quantities of refuse, and is strongly in favour of the more extended use, which might be calculated on for the general mass of refuse collected throughout the town.

There are four things, which require being placed under proper regulations in all towns; pigsties, cowsheds, slaughterhouses, and manure repositories. Pigsties of an exceedingly dirty kind are found in some of the back courts and streets. There is a large cowshed in one part where fever existed, and here the annoyance is at times so great, that the persons opposite are obliged to close the windows. In another part there is a court with a house, cowshed, and slaughterhouse behind: these are all very clean, but fever prevailed here for two years consecutively.

In one locality there is a large manure-depot, consisting of heaps of refuse of great size and of the foulest kind: this is especially deserving attention, as it is immediately opposite houses, and is one of the most unhealthy localities of Oxford.

One remark may still be added in conclusion—

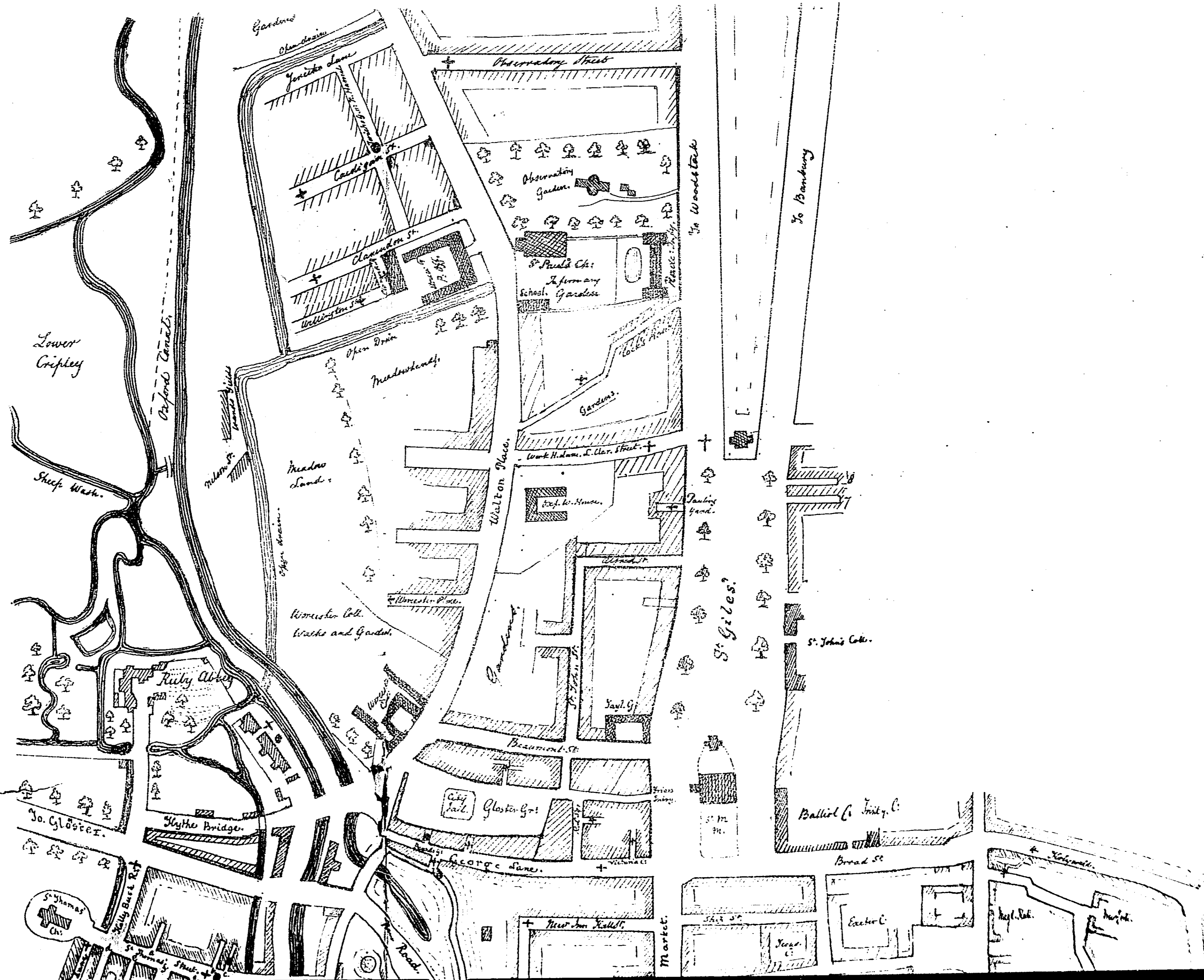
* Experience has shewn that great improvement has often been effected in unhealthy courts and streets by mere cleanliness and ventilation; but it has also shewn that the cleansing of drains with the emptying of cess-pools during the occurrence of contagious disease is at times rather an evil than a good, by exposing a large mass of decomposing matter to the open air. The time therefore for adopting such measures is limited, and may be considered as terminating at the period when epidemic diseases particularly exist.

During the three years 1844, 45, 46 fever and diarrhoea were fatal in the different quarters of the year to the following number of persons in Oxford:

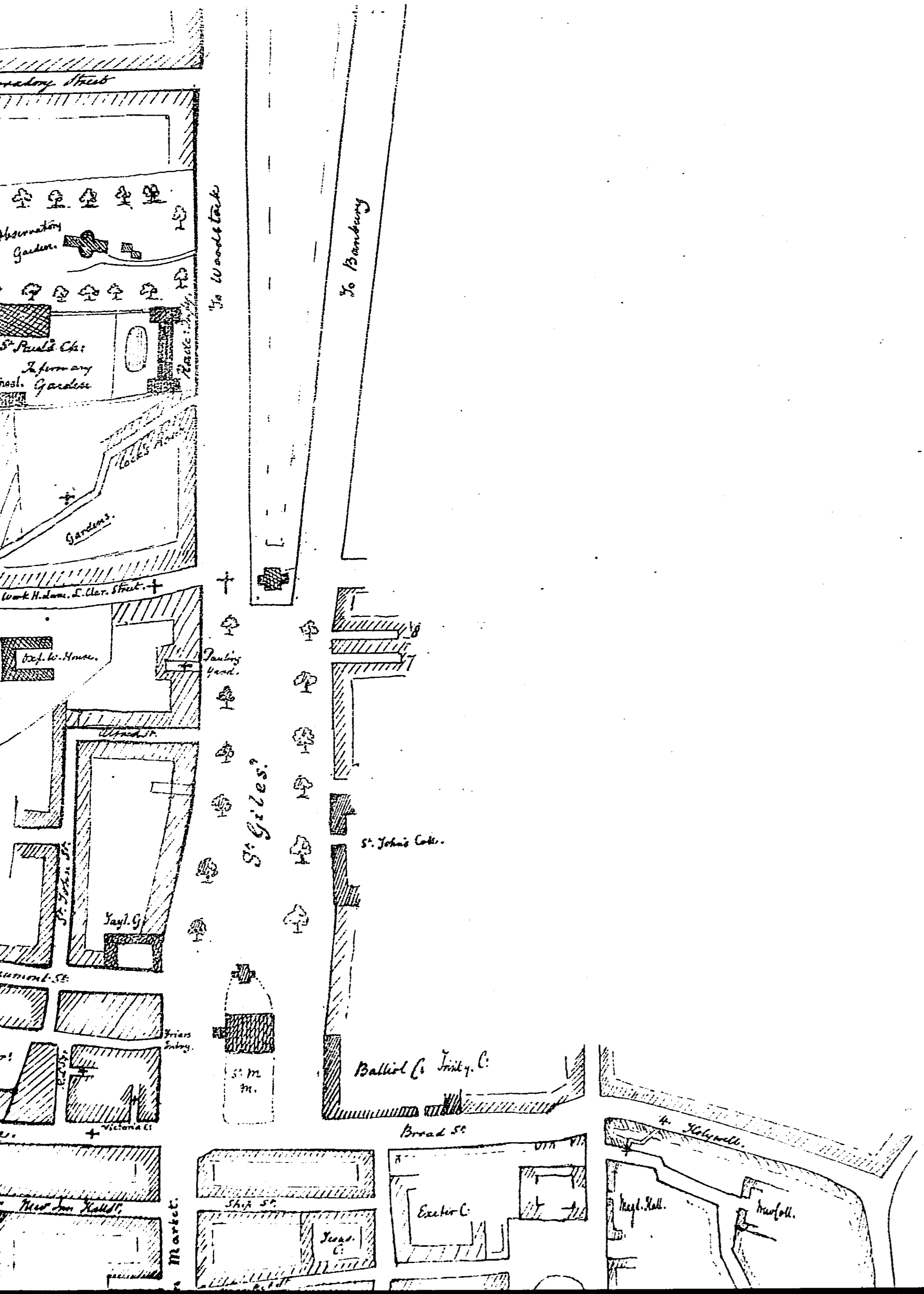
	Fatal Cases of Fever.	Fatal Cases of Diarrhoea.
1st quarter, January to March ...	14	2
2nd April to June	14	5
3rd July to September ...	31	41
4th October to December	31	12

The mortality from fever began to increase in June, and had become severe in August, in which latter month the deaths from diarrhoea, after having increased considerably in July, rose to 38 per cent. of the sum for the entire year. The period in which any measures attended with the exposure of a large mass of foul or putrid matters are best conducted may therefore be considered as terminating most properly in the month of June.

* First Report of the Metr. San. Commiss. p. 22. This and the second Report have been constantly referred to throughout the Paper without especial reference being made. They contain in a complete and condensed form the best information on the condition of the towns of England, with the proper remedies in relation to health generally, as well as to cholera.



great improvement has
by courts and streets by
; but it has also shewn
the emptying of cess-
of contagious disease is



Plan of Oxford showing the parts visited by Cholera and Fever.

- | | |
|-------------------------|------------------|
| a. Fothergill's Y. | 1. Angel Yard |
| b. Bellinger's Y. | 2. Gange Yard |
| c. Orford's Y. | 3. Gange Place |
| d. Allin's | 4. Bellin's |
| e. Brazier's | 5. Bell's |
| f. Haemel's | 6. Amstons |
| g. Pennington's | 7. Adams Yard |
| h. St. of Mutton's | 8. Windmill Yard |
| i. Brokers Place | |
| k. Foulton's Place | |
| l. Goulton's Yard | |
| m. do do | |
| n. States Yard | |
| o. Coach and Horse Yard | |
| p. Godfrey Row | |
| q. Broadwater Yards | |
| r. Wood St. | |
| s. Shanks Y. | |
| t. Sheppard Y. | |
| u. Jones Y. | |
| v. Carter Y. | |
| w. Hall's Papermaker Y. | |
| x. Fuller's Paper | |
| y. Bann's Yard | |
| z. Farmer's Yard | |

The localities of fever are marked with +
 The localities of cholera are marked with ⊙
 The parts chiefly visited by disease generally, are slightly shaded.

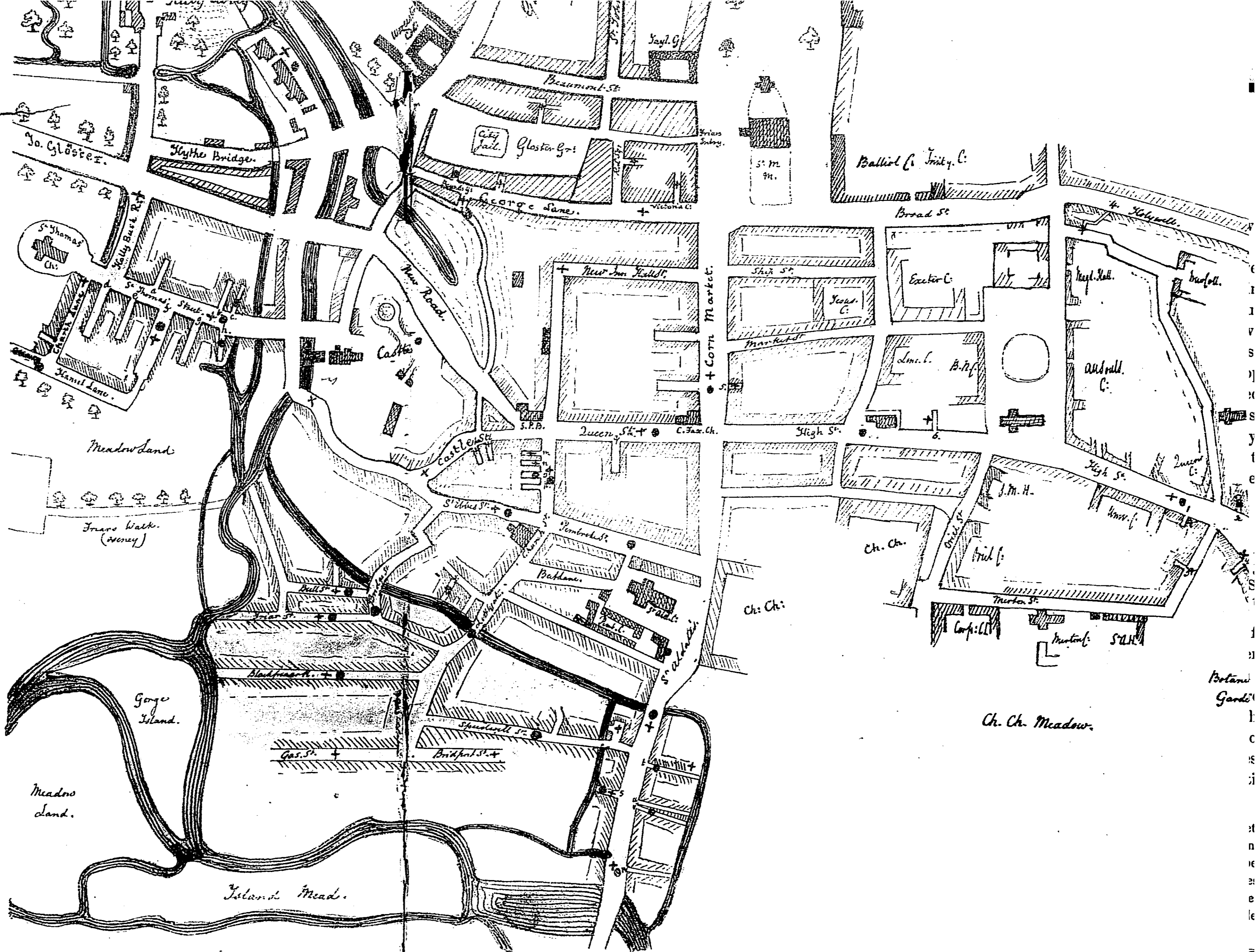
... that great improvement has been made in the ventilation of the unhealthy courts and streets by the introduction of fresh air; but it has also shewn that the introduction of fresh air is not a panacea, as the prevalence of contagious disease is not lessened than a good, by exposing a matter to the open air. The introduction of such measures is limited, and is not to be regarded as terminating at the period when the disease particularly exist.

... years 1844, 45, 46 fever and diarrhoea prevailed in the different quarters of the year, and the number of persons in Oxford:

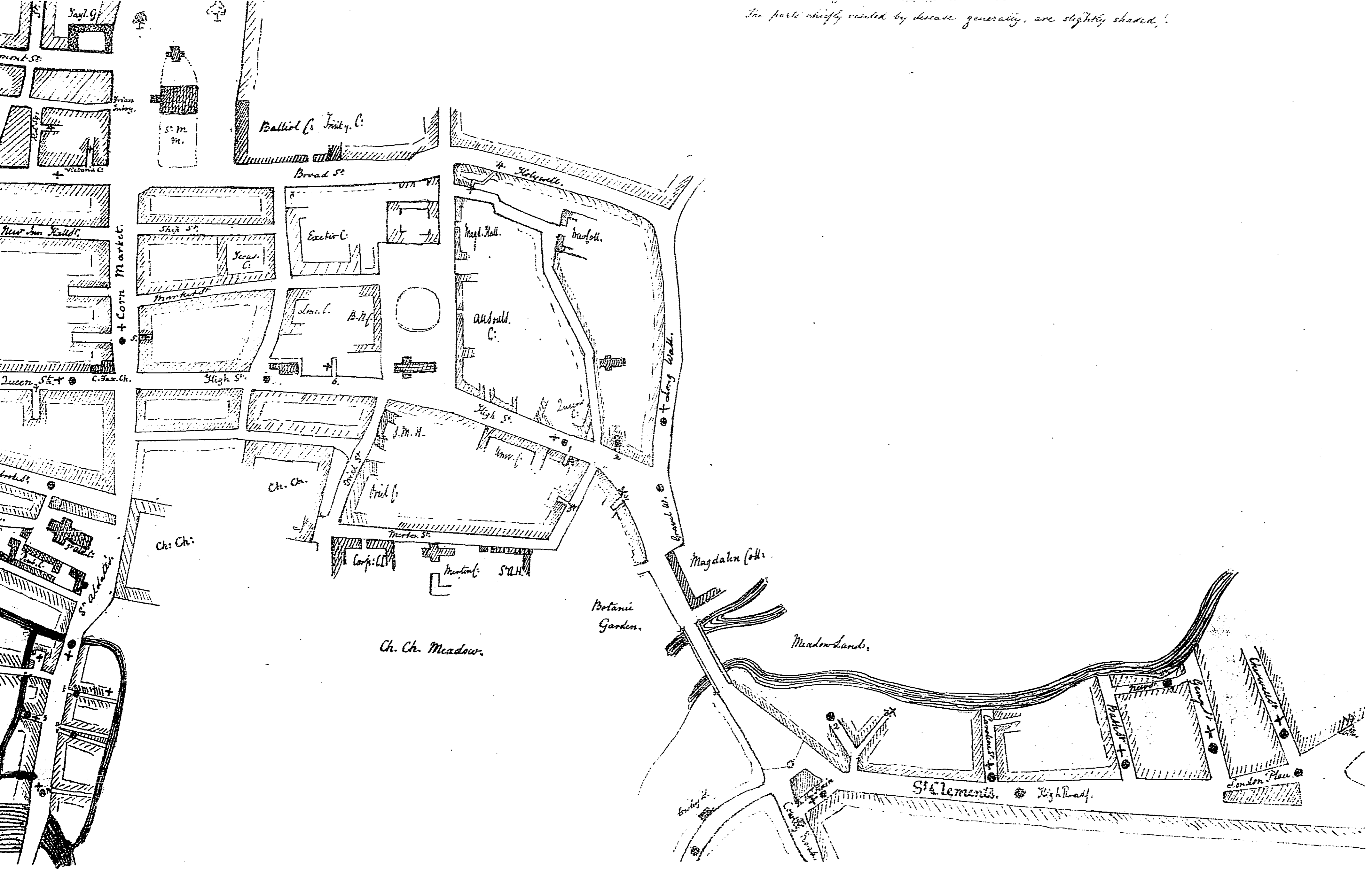
	Fatal Cases of Fever.	Fatal Cases of Diarrhoea.
... to March ...	14	2
... June	14	5
... September ...	31	41
... to December	31	12

... fever began to increase in June, and continued to increase in August, in which latter month the prevalence of diarrhoea, after having increased to 38 per cent. of the sum of the cases, was the period in which any measures of a large mass of foul or stagnant water, or the exposure of a large mass of foul or stagnant water, may therefore be conducted most properly in the month of August.

... r. San. Commiss. p. 22. This and the other maps are constantly referred to throughout the Paper, and are being made. They contain in a complete and concise manner the most important information on the condition of the city, and the proper remedies in relation to health.



The parts chiefly visited by disease generally, are slightly shaded.



W.P. Woodward
March 1848

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