**SOME
STATISTICAL RECORDS
OF THE
PROGRESS OF THE
ASIATIC CHOLERA
OVER THE GLOBE.**

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HAVING been appointed to deliver the Thurston Oration last year at Gonville and Caius College, Cambridge, and the subject of "Cholera" having been selected for me, I examined minutely the history of this dreadful scourge, and soon became convinced that although much had been published relative to its progress over the globe, yet that a great mass of information remained still in obscurity; that although there had been ample opportunities of procuring correct accounts, yet that very few had been published. The various Government Reports and other publications of the Indian practitioners gave a very full statement of the ravages of the disease in India and of its advance towards

Europe until the year 1824, when it became dormant for six years, eventually commencing a fresh progress from Astrachan in 1830. My investigations have enabled me partly to give the history of the disease during this dormant period, and also that of much greater importance, viz. an account of its visit to our own Islands, and to other countries subsequent to February 1832, neither of which are included, or, if at all, are very slightly touched upon, in the published histories. Of the subsequent progress, however, I have found but few authentic documents, so that the account must necessarily remain rather meagre.

The account of the progress of the cholera between the years 1824 and 1830 is drawn principally from the Edinburgh Medical Journal, which contains in a Supplemental volume an analysis of several most important reports on the cholera by medical men, appointed by the Russian and other governments to study the disease in those spots where it prevailed: from these reports I learn that the disease remained in the parts of Persia and the Russian territories which border on the Caspian Sea, during the whole period in which it made no progress.

Before commencing my historical sketch I may, perhaps, be allowed to allude to a curious coincidence, viz. that the "Cholera" occupied fourteen years in its passage from India to England, and that the "*Black Death*," which desolated Europe and Asia in the middle of the fourteenth century, required fifteen years to spread from China, where

it first arose, to Europe.* This may be merely an accidental coincidence, but it appears to be worth recording.

It is a question of considerable doubt, whether the cholera was altogether a new disease in 1817, or at that period commenced the progress which I am about to relate.

Rising, in May 1817, in one of the towns near to Calcutta, it ravaged that city first, and then appeared at Jessore, according to the Bengal Government Report, and did not commence in the latter place, as is stated in our ordinary accounts. It spread up the Ganges towards the north, also towards the south and south-west, reaching Bombay in September 1818, and Madras in October of the same year; it continually travelled onwards, eventually reaching the Island of Ceylon, and was thence transported, as is usually believed, to the Mauritius. It spread eastwards through Arracan, Malacca, Sumatra, Penang, and Borneo, where it attacked Singapore in October 1819. In 1820, it advanced through Tonquin and Cochin China, reaching China in December of that year. Here it existed for several years, committing very great ravages.†

* See "Hecker's Epidemics of the Middle Ages," published by the Sydenham Society.

† In the April number of the Edinburgh Medical and Surgical Journal for 1844, are some researches upon the Cholera in China; it is stated "to have reached Ningpo in May 1820, where 2,000 died; it appeared again the two following years with redoubled violence, so that during the summers of 1820-21-22, 10,000 persons are supposed to have been carried off in the city and

It re-appeared in Java in 1822, and advanced to Ternat, Celebes, and Banda; in 1823 it reached Amboyna, and afterwards Timor; also the Philippine and Spice Islands; it desolated many cities of Mongolia and reached Siberia in 1827, where it was checked by a strong north wind in February: elsewhere I have found it reported that Siberia was attacked as early as 1823.

During this period it had also advanced to the west, appearing at Muscat on the Persian Gulf in July 1821. It ascended the Gulf to Bassorah, and Bunder Abassi or Gombroon, the Great Persian seaport, at the northern extremity of the Gulph. It crossed Persia, (leaving, however, Ispahan, which was closed rigorously against all visitors, and is a particularly healthy spot,) and thus gained the borders of the Caspian Sea, where it attacked Astrachan, but spread no further in that direction. It spread westwards to Erzeroom, near the Black Sea, and up the Tigris and Euphrates into Syria, where we last hear of it at Tiberias in 1824.

At this point there is a cessation of reports, the cholera apparently not extending rapidly, but confining itself to the Persian towns in the neighbourhood of the Caspian Sea, with which there is little intercourse; a close investigation, however, of the various reports have shown that during the

department of Ningpo." It broke out again in 1831, but not so violently, and in 1841 appeared afresh in the city of Chinhai.

The account states that it is not an uncommon disease in China, and that the Chinese are very much frightened at it.

years 1828-29, it prevailed at Reschd and the neighbouring country on the south-west coast, and at Teheran near the south coast ; that at Tabreez or Tauris on the ancient river Araxes to the west of the Caspian, it prevailed in 1823, and again in 1829 and 1830 ; and at Tiflis, the capital of Georgia, in August and September 1830.

In 1829, it suddenly appeared at Orenburg, a Russian town 400 miles north of the Caspian Sea, and it is remarked that the authorities were quite unable to trace either infection or contagion. The first case occurred August 26th, the second a week later, the third on September 8th ; it now became general, and by November 20th, 1,100 cases had occurred, of which 260 died. It lasted during the winter, ceasing finally on February 23rd, 1830.

The cholera appeared for the second time at Astrachan on July 31, 1830, with intense malignity, destroying in twenty-seven days, 4,043 persons in the town, and 21,268 in the province ; it now rapidly ascended the Volga, reaching Moscow on September 26th, where, however, it did not become prevalent till the 31st. The disease continued in Moscow till February 1831, and destroyed 4,690 persons out of 8,576 attacked. It did not reach Riga till the middle of May, nor St. Petersburg till June 26th, having been apparently retarded by the intense cold of a Russian winter.

From Astrachan it spread likewise to the northern coast of the Black Sea, where it prevailed in August 1830, and ran up the rivers into the central parts

of Russia. It reached the frontiers of Poland in December or in January 1831, and spread over that country in an unusual manner, as if it had followed the movements of the Russian army, at that very time engaged in subjugating the people: in April it appeared at Warsaw, and on May 29, at Dantzic, at the mouth of the Vistula. It was at Lemberg, in Austrian Poland, and in Cracow, in June; in Galicia it destroyed between 34 and 35,000 persons, and attacked Hungary, where it carried off about 95,000. Gaining thus the banks of the Danube, it appeared in Vienna in August or September; Berlin suffered in August, as did likewise Hamburg, whence it is believed that the disease was imported into England; of which more presently. But first let me mention its ravaging Constantinople and Smyrna, at which place it first appeared, September 25th, 1831. The account of this attack in the Medical Gazette, vol. ix. page 756, is remarkable, and well worthy of notice. In Cairo, the disease appeared August 15th, 1831, brought by a caravan from Mecca, 5,500 persons having died on the road; the disease disappeared on September 13th, having carried off, it is said, 10,400 Mahomedans, besides Jews and Christians, who were never numbered.

I proceed now to give an account of the disease in Great Britain, and regret much that I am able to do so little towards rendering the history complete, owing to the difficulty of obtaining authentic documents. The newspapers published indeed frequent reports of the ravages of cholera in our island, but

without regularity, so that their value is greatly diminished, in consequence of the numerous omissions ; by the kindness, however, of Sir William Pym, I have obtained from the Privy Council Office, a copy * of the summary of the daily returns sent to the Central Board of Health from 422 places in Great Britain, which I have analysed according to the divisions of the kingdom, and from which I have extracted those returns which appear most valuable, as showing in how many of the principal towns the disease prevailed, and to what extent : also in what localities it attacked the greatest numbers, or proved most fatal. I regret much that I have been unable hitherto to obtain a similar report from Ireland, for the disease prevailed there to a great extent ; I have only the aggregate numbers of persons attacked and deceased up to a certain period, but this I append hereafter in its proper place.

The opinion of the members of the Central Board, and also of many other practitioners, was, that the cholera was propagated by infection or contagion, and was not epidemic ; and so many instances have been mentioned where this manner of propagation is highly probable, that in our present state of observation, it can hardly be doubted that such was often, perhaps usually, the cause of its spreading from town to town ; nevertheless, it appears also incontrovertible, that the number of victims in each

* I believe that there are only three copies of this Report in existence, one at the Privy Council Office, one in the Library at Buckingham Palace, and that with which I have been favoured.

place depended very materially upon the local peculiarities of dirt and damp, want of ventilation, irregular and depraved habits of living, and, possibly, of the weather ; it is, therefore, much to be regretted, that the Board did not draw up a classified report of the various peculiarities in each town which may be supposed to have favoured or hindered the spread of the disease. It would have been a laborious task, but one eminently useful to succeeding generations, if they had ascertained the proportion which the cases occurring in the filthy, undrained quarters inhabited by the poor, bore to those in the open, freely-ventilated habitations of the higher classes. An inspection of the lists I append to this paper shows the great prevalence of the disease at sea-ports, and places on the borders of canals and rivers, where inland navigation is carried on : doubtless we have here all the requisites for the conveyance of contagion, but the dampness, the dirt and irregular living of the inhabitants must have assisted this contagion, if contagion there was, distinguished from a general aerial influence, and we have now no means of ascertaining the full value of each.

Numerous other places are in the mining and manufacturing districts. Here, again, want of ventilation, and irregular living, prevail, and must have exerted their influence.

There are, besides, many villages and small towns not affected (as would appear from a superficial investigation) by any of these peculiarities ; and, accordingly, we find but few cases in them. Still this

varies very much, and I am quite unable to suggest a reason for this difference; how very valuable, therefore, would a report, drawn up so as to show the injurious effects of some, and the beneficial effects of other circumstances (in each case affecting a larger or smaller extent of territory), be to future investigations into the study of the means of promoting the public health.

With reference to this subject, let me make a few observations upon some places in this list—and first of Lancaster. I have heard from medical men, intimately acquainted with this town, that not one case of true Asiatic cholera occurred here, although the report mentions thirty-five, yet all agree that the numbers set down as occurring at the “asylum” are correct. Now, the asylum is built in a hollow, at a considerably higher level than the town, in a spot which was formerly a marsh, frequented by snipes, and even now is often covered by fogs: such a locality appears very favourable to the spread of cholera. Again, at Whitehaven, $4\frac{5}{8}$ per cent. of the inhabitants were attacked: this large proportion is accounted for by the circumstance, that Whitehaven is usually unhealthy, as I am informed, epidemics of all kinds prevailing to a great extent in that town, under ordinary circumstances. I am not acquainted with the town, and cannot assign any particular cause for this unhealthiness. The cholera affected the following places, in the manufacturing districts, and very near to each other, so differently, that I am induced to call the attention

of the Society to the circumstance. At Bilston, in Staffordshire, there were 2,250 cases, being a percentage of $15\frac{1}{2}$ on the population; at Sedgeley, 1,463 cases, or $7\frac{1}{8}$ per cent.; at Tipton, 1,018, or $6\frac{3}{4}$; at Dudley, in Worcestershire, 1,228, or $5\frac{3}{8}$; at Oldbury, in a detached part of Shropshire, 198 cases, or $4\frac{3}{8}$; at Walsall, 378, or $2\frac{1}{2}$; at Wednesbury, 175, or $2\frac{1}{12}$; at Darlaston, 127, or $1\frac{1}{8}$; at West Bromwich, 279, or $1\frac{1}{8}$; at Birmingham, 31, or $\frac{1}{10}$; and at Hales Owen, 1 case only out of a population of 11,839. The two extremes are thus 2,250 cases out of 14,492 inhabitants, and 1 case only out of 11,839; a striking difference, and which can only be explained, I confidently expect, by the peculiarity of situation, or by there being a difference in the character of the inhabitants.

The increased mortality in Scotland may, I believe, be attributed to the great misery of the poorer classes in the large towns, a circumstance which would much increase the malignity of the disease.

The disease commenced and ended its ravages on the following dates :—

England—Sunderland, Oct. 26, 1831; and Knaresborough, Dec. 31, 1832.

Scotland—Haddington, Dec. 25, 1831; and Aberdeen, Dec. 31, 1832.

Wales—Flint, May 7, 1832; and Abergavenny, Dec. 16, 1832.

The longest duration of the disease at one place was in

England, at Newcastle-upon-Tyne, viz., of 351 days.

Scotland, at Leith, of 327 days.

Wales, at Merthyr Tydfil of 89 days.

The lists which are appended, show more clearly the exact duration at these and other places.

The following Table shows the commencement and termination of the disease in each of the four hundred and twenty-two places whence returns were received, arranged according to the months.

	BEGINNING.				ENDING.			
	England.	Scotland.	Wales.	Ile of Man.	England.	Scotland.	Wales.	Ile of Man.
1831.								
October	1							
November	1							
December	6	1						
1832.								
January	1	9						
February	5?	10				6		
March	4	20			5?	10		
April	9	12			5	5		
May	12	6	2		4	9		
June	38	6	3	1	11	5	2	
July	58	11	2		22	8	4	
August	64	17	3		27	6	1	
September	50	15	1		79	9	2	1
October	23	17	5		71	33	3	
November	4	3	1		39	23	3	
December	1				14	13	2	
	277	127	17	1	277	127	17	1

N.B. The ? in the above Table denotes a possible inaccuracy, as I do not know where to class the place named Salton Heard Manston, but assume it to be English. There are also two errors arising from the fault of the original transcriber, who makes the cholera begin at Hurlet, in Renfrew, on October 27th, 1832, and terminate on June 20th, 1832, and states that the disease disappeared from Stoke Man-

deville on August 26th, being forty-three days since the 15th of the same month.

The following are the aggregates which I make for the various divisions of the kingdom :—

	Cases.	Deaths.	Recoveries.	Population of places affected.
England	49,594	14,807	33,790	2,753,958
Scotland	20,202	10,650	10,549	937,146
Wales	1,436	498	938	101,603
Isle of Man	276	146	130	6,054
	71,508	26,101	45,407	3,798,761
London and } its vicinity }	11,020	5,275	5,745	1,424,896
	82,528	31,376	51,152	5,223,657
Ireland up to } March 1, 1833 }	54,552	21,171	33,381	
	137,080	52,547	84,533	

Being a mortality of $38\frac{1}{4}$ per cent. on the cases.

The proportion of cases in Great Britain, to the population, is } $1\frac{1}{3}\frac{1}{2}$ per cent.

The proportion of deaths in Great Britain, to the population, is } $\frac{1}{3}\frac{1}{2}$ per cent.

according to the copy of the returns ; but according to the calculations which I have instituted, I find the mortality to be—

England*	0·5377	or rather more than $\frac{1}{2}$ per cent.
Scotland	1·136	or rather more than 1 per cent., and double that of England.
Wales	0·49	not quite $\frac{1}{2}$ per cent.
Isle of Man	2·411	called $2\frac{1}{8}$ in returns.

* Exclusive of London.

And if compared with the number of cases, we have the mortality in

England*	29·856	per cent.
Scotland	52·717	
Wales	34·678	
Isle of Man	52·898	
Ireland	38·808	

I now proceed to give extracts from the returns, and here wish to state the rule which has guided me in my selection.

I have extracted *all* those places where the number of persons affected amounted to 5 or more per cent. upon the population, these localities being at once marked as favourable to the spread of the disease. I have afterwards merely extracted those places which, from their size and importance, or some other peculiarity, are worthy of notice, and serve to show how extensively the disease was propagated over the whole kingdom.

The arrangement is according to the numerical value of the per centage of cases.

* Exclusive of London.

ENGLAND.

N.B.—The * denotes that the place so marked was attacked more than once by Cholera, the extreme dates and aggregate duration only being expressed.

Name of Place affected.	Date of First Case.	Date of Last Case.	Days' Duration	Number of Cases.	Number of Deaths.	Number of Recoveries.	Proportion of Deaths to Cases per Cent.	Population.	Proportion of Cases to Population per Cent.	Proportion of Deaths to Population per Cent.
Bamburgh, Northumberland	Nov. 1, 1832	Dec. 20, 1832	50	121	23	98	19½	417	28½	5½
Goole, Yorkshire	April 5	June 2	59	96	36	60	38	450	21½	8½
Blackthorne, Oxfordshire	June 5	July 30	56	81	22	59	27	393	20½	5½
Bilston, Staffordshire	Aug. 4	Sept. 29	57	2,250	693	1,557	31	14,492	15½	4½
Paulton, Somerset	Sept. 28	Nov. 6	40	273	66	207	24	1,784	15½	3½
Hartlepool, Durham	Sept. 13	Sept. 21	9	182	54	128	30	1,330	14	4
Hetton and Houghton le Spring	Dec. 1, 1831	March 3	94	488	97	391	20	3,914	12½	2½
Barning, Kent	Aug. 31, 1832	Oct. 10	41	70	13	57	17½	565	12½	2½
Chorlton-on-Medlock, Lancashire	July 13	Oct. 11	61	76	32	44	43	624	12	5
Paul, Cornwall	July 27	Dec. 7	134	466	81	385	17½	4,191	11	2
Denver, Norfolk	July 1	July 23	24	88	27	61	28½	850	10½	3½
Stoke Mandeville, Bucks	Aug. 15 {	Aug. 26 {	43	40	10	30	25	461	9½	2½
Droitwich, Worcester	July 24	Sept. 10	49	228	63	165	27½	2,487	9	2½
Newcastle-upon-Tyne	Nov. 27, 1831	Nov. 12	351	3,487	801	2,686	38	42,760	8½	1½
Swanscombe, Greenhithe, & Dartford	May 24, 1832	June 5	16	116	30	86	27	1,414	8½	2½
Whittlesea, Cambridgeshire	May 29	Sept. 10	104	461	97	364	22	6,019	7½	1½
Blythe and Cowpen, York	Aug. 24	Nov. 1	70	142	42	100	30	1,805	7½	2½
*Jarrow and Hebburn, Durham	Feb. 16	Sept. 24	76	263	70	193	27	3,530	7½	2

Basford, Nottingham †	July 9	Oct. 19	103	28	8	20	39	379	7½	2
Dartmouth	Aug. 4	Nov. 12	100	322	49	273	15	4,485	7½	1½
Sedgeley, Staffordshire	Aug. 9	Oct. 16	69	1,463	231	1,232	15½	20,577	7½	1½
Farley, Wiltshire	Oct. 23	Oct. 28	6	12	5	7	41	174	7	3
Bicester, Oxon.	June 7	July 27	51	196	64	132	33	2,868	7	2½
Cawood, Yorkshire	June 5	July 9	35	77	15	62	20	1,173	6½	1½
Tipton, Staffordshire	June 24	Oct. 7	106	1,018	281	737	27½	14,951	6½	1½
St. Thomas, near Exeter	July 31	Nov. 8	101	276	39	237	27½	4,203	6½	½
Merton, Oxon.	July 1	Aug. 1	32	10	4	6	40	163	6½	2½
Cuxham, Oxon.	June 4	June 30	27	13	3	10	25	207	6½	1½
Padstow, Cornwall	Aug. 8	Sept. 13	37	114	23	91	20	1,822	6½	1½
Fenstanton, Hunts	July 4	Aug. 1	29	60	21	39	35	968	6	2½
Hampall, Yorkshire	June 17	Aug. 1	46	9	5	4	55	140	6	3½
Plympton Maurice, Devon	Aug. 25	Sept. 13	20	49	19	30	38	805	6	2½
Shilton and Anstey, Warwick	July 17	Aug. 7	32	23	9	14	40	396	6	2½
Plymouth	June 15	Sept. 24	102	1,805	702	1,103	39	31,080	5½	2½
The Grove, near Wantage	Oct. 1	Oct. 10	10	29	9	20	30	520	5½	1½
Hutton Rudby	Oct. 3	Oct. 30	28	47	22	25	42½	919	5½	2½
East Rudham, Norfolk	June 30	July 24	25	51	5	46	10	950	5½	½
Northwick, Cheshire	May 27	June 17	22	84	30	54	35	1,490	5½	2
Dudley, Worcestershire	March 31	Dec. 3	157	1,228	277	951	22½	23,043	5½	1½
Kingsbridge and Doddbrook	Aug. 16	Sept. 17	33	136	30	106	22½	2,624	5½	1½
Aylesbury, Bucks	June 17	July 30	44	259	60	199	28	4,907	5½	1½
Workington	July 15	Sept. 29	77	333	119	214	27½	6,439	5½	1½
Cawston, Norfolk	July 18	June 29	43	57	17	40	32	1,110	5½	1½
Piddington, Oxon.	May 25	Aug. 5	42	20	6	14	30	422	5	1½
Bulwell, Nottingham	Aug. 30	Sept. 18	20	106	26	80	25	2,105	5	1½
Whitehaven, Cumberland	July 1	Nov. 11	34	835	244	591	29	18,000	4½	½

† In Lewis's Topographical Dictionary, the population of this parish is set down as 6,235.

Name of Place affected.	Date of First Case.	Date of Last Case.	Days' Duration	Number of Cases.	Number of Deaths.	Number of Recoveries.	Proportion of Deaths to Cases per Cent.	Population.	Proportion of Cases to Population per Cent.	Proportion of Deaths to Population per Cent.
Rotherham, York	Aug. 13	Nov. 20	100	159	34	125	20½	3,548	4½	1½
Oldbury, Salop	Aug. 15	Oct. 8	55	198	37	161	17½	4,482	4½	1½
Exeter	July 19	Sept. 4	75	1,136	347	789	30½	28,201	4	1½
*Stockton-upon-Tees	Feb. 5	Sept. 22	79	304	126	178	41½	7,991	3½	1½
Newcastle-under-Lyne	Aug. 7	Oct. 23	78	284	60	224	21½	8,192	3½	½
Gainsborough	June 7	Aug. 5	60	223	41	182	18½	6,658	3½	½
Plympton St. Mary, Devon	July 28	Oct. 5	70	74	30	44	45	2,153	3½	1½
Sunderland	Oct. 26, 1831	April 20	177	554	215	339	38	17,060	3½	1½
Brixham, Devon	Sept. 4, 1832	Nov. 6	64	154	31	123	20	5,015	3½	½
Gloucester	July 11	Sept. 22	74	366	123	243	32	11,933	3½	1½
Coventry	Aug. 20	Nov. 18	91	41	18	23	46	27,070	3½	1½
Liverpool	May 17	Sept. 13	119	4,977	1,523	3,454	30½	165,175	3½	1½
East Stonehouse, by Plymouth	July 2	Sept. 20	71	285	133	152	47	9,571	3	1½
Tweedmouth, Durham	Oct. 10	Nov. 30	52	138	72	66	52	4,673	3	1½
Ashburton	Aug. 14	Sept. 29	46	118	44	74	48½	4,165	2½	1½
Hull	April 14	Nov. 2	193	820	300	520	36½	28,591	2½	1½
Gateshead	Dec. 26, 1831	March 5	71	407	148	259	36½	15,177	2½	1½
Warrington, Lancashire	June 24, 1832	Sept. 10	79	420	168	252	40	16,018	2½	1½
Walsall, Staffordshire	Aug. 17	Sept. 29	44	378	77	301	21	15,066	2½	½
*South Shields	Dec. 22, 1831	Oct. 8	148	493	147	346	30	19,756	2½	½
Ely, Cambridgeshire	March 17, 1832	May 8	53	149	61	88	40	6,189	2½	1
Bedworth, Warwick	Sept. 9	Nov. 27	80	92	26	66	30	3,980	2½	½
Carlisle	June 13	Nov. 21	162	448	265	183	57	20,006	2½	1½
Clifton	Aug. 15	Sept. 7	24	196	64	132	32	8,811	2½	½

Sheffield	July	10	Nov.	3	117	1,347	402	945	30	59,011	2½	††
• Lancaster, including } The Lunatic Asylum }	Dec. 17, 1831		Sept.	6	45	35	20	15	57½ }	12,613	2½	††
Penzance, Cornwall	Sept. 13, 1832		Oct.	16	34	246	94	152	40 }			
Widnesbury, Staffordshire	Sept. 17		Nov.	20	65	186	64	122	32½	8,621	2½	‡
North Shields, and Tynemouth	Aug.	9	Oct.	9	62	175	78	97	45	8,437	2½	††
Darlaston, Stafford	Dec. 10, 1831		March	21	103	339	98	241	29	16,926	2	††
Berwick-upon-Tweed	Aug. 18, 1832		Sept.	29	43	127	57	70	45	6,647	1½	††
Totnes	Sept. 11		Nov.	8	60	172	84	88	48	8,920	1½	††
West Bromwich, Staffordshire	Aug.	4	Sept.	24	52	64	17	47	27	3,442	1½	†
Salford, Lancashire	July 15		Sept.	21	69	279	59	220	18	15,327	1½	†
York	July 13		Nov.	7	118	701	216	485	31½	40,786	1½	†
King's Swinford	June 3		Oct.	8	128	450	185	265	40	25,359	1½	††
Nottingham	June 29		Sept.	25	89	266	83	183	31½	15,156	1½	††
Worcester	June 5		Nov.	7	136	796	296	500	37½	50,680	1½	††
Kendal	July 14		Oct.	26	105	293	79	214	27½	18,610	1½	††
Nuneaton, Warwick	Sept. 17		Nov.	14	136	168	68	100	40	11,265	1½	†
Leeds, Yorkshire	May 29		Nov.	23	65	123	56	67	45	7,799	1½	†
Wisbeach, Cambridge	July 19		Nov.	20	179	1,817	702	1,115	39	123,393	1½	†
Devonport	July 9		Sept.	17	61	103	41	62	40	7,250	1½	‡
Worsley, Lancashire	Sept. 9		Oct.	27	111	455	228	227	50	34,883	1½	††
Wakenfield, York	Sept. 9		Oct.	28	49	95	16	79	16½	7,191	1½	††
Bedford	June 24		Oct.	10	109	156	62	94	40	12,232	1½	†
Bristol	Sept. 9		Nov.	27	80	81	36	45	45	6,957	1½	†
Wantage, Berks	July 16		Nov.	23	141	1,612	626	986	39	103,886	1½	††
• Doncaster	Sept. 26		Oct.	10	15	30	18	12	60	2,507	1½	††
Shrewsbury	Jan. 10		Aug.	8	49	112	26	86	23	10,801	1½	†
Lynn, Norfolk	Aug. 4		Oct.	31	89	219	75	144	35	21,277	1½	†
Manchester	April 10		Aug.	27	140	134	49	85	37½	13,370	1	†
Bridport	June 29		Dec.	5	160	1,323	674	649	55	142,026	1½	††
	Aug. 16		Sept.	8	24	35	16	19	48	4,242	½	†

Name of Place affected.	Date of First Case.	Date of Last Case.	Days' Duration	Number of Cases.	Number of Deaths.	Number of Recoveries.	Proportion of Deaths to Cases per Cent.	Population.	Proportion of Cases to Population per Cent.	Proportion of Deaths to Population per Cent.
Kidderminster	Aug. 12	Sept. 12	32	137	67	60	52 $\frac{1}{2}$	14,981	$\frac{1}{2}$	$\frac{7}{8}$
Oxford	June 26	Nov. 28	156	173	81	92	47	20,434	$\frac{1}{2}$	$\frac{1}{2}$
Barking, Essex	Sept. 5	Sept. 24	20	46	18	28	38	8,036	$\frac{1}{2}$	$\frac{1}{2}$
Norwich	Aug. 21	Oct. 17	57	321	129	192	40	61,110	$\frac{1}{2}$	$\frac{1}{2}$
Bradford, York	Sept. 5	Oct. 26	52	114	30	84	23	23,233	$\frac{1}{2}$	$\frac{1}{2}$
Portsmouth	July 26	Sept. 22	150	192	86	106	45	46,282	$\frac{1}{2}$	$\frac{1}{2}$
Wigan	June 25	Aug. 2	39	85	30	55	35	20,774	$\frac{1}{2}$	$\frac{1}{2}$
Stoke-upon-Trent	Aug. 28	Dec. 20	125	165	46	119	26	37,220	$\frac{1}{2}$	$\frac{1}{2}$
Dewsbury, York	Sept. 24	Oct. 27	34	23	12	11	52	8,272	$\frac{1}{2}$	$\frac{1}{2}$
Maidstone	June 24	Oct. 10	99	36	16	20	45	15,387	$\frac{1}{2}$	$\frac{1}{2}$
Bath	July 28	Oct. 26	80	74	49	25	62	38,063	$\frac{1}{2}$	$\frac{1}{2}$
Edmonton	Sept. 29	Sept. 29	1	16	11	5	65	8,192	$\frac{1}{2}$	$\frac{1}{2}$
Derby	June 24	Dec. 3	86	32	16	16	50	23,607	$\frac{1}{2}$	$\frac{1}{2}$
Dover	June 23	July 12	20	15	10	5	66	11,924	$\frac{1}{2}$	$\frac{1}{2}$
Rochester, Kent	July 10	July 17	8	10	3	7	30	8,075	$\frac{1}{2}$	$\frac{1}{2}$
Taunton	Oct. 4	Oct. 26	23	13	3	10	24	11,139	$\frac{1}{2}$	$\frac{1}{2}$
Stockport, Cheshire	June 19	Oct. 13	117	66	29	37	45	66,610	$\frac{1}{2}$	$\frac{1}{2}$
Bolton, Great	Aug. 23	Sept. 29	38	26	12	14	47	28,299	$\frac{1}{2}$	$\frac{1}{2}$
Chester	July 12	Sept. 8	59	20	14	6	73	21,363	$\frac{1}{2}$	$\frac{1}{2}$
Gosport	Nov. 30	Dec. 7	8	5	5	0	100	6,184	$\frac{1}{2}$	$\frac{1}{2}$
Reading, Berks	Aug. 16	Oct. 9	8	12	8	4	66	15,595	$\frac{1}{2}$	$\frac{1}{2}$
Lincoln	July 19	July 19	1	6	3	2	60	11,892	$\frac{1}{2}$	$\frac{1}{2}$
St. James and St. Paul, Bristol	Aug. 15	Sept. 5	22	7	4	3	57	19,634	$\frac{1}{2}$	$\frac{1}{2}$
Preston	Aug. 18	Oct. 26	70	9	6	3	66	33,112	$\frac{1}{2}$	$\frac{1}{2}$

Birmingham	July 7	Nov. 6	123	31	21	10	70	146,986	$\frac{1}{14}$
Yarmouth, Norfolk	March 22	March 23	2	2	2	0	100	21,115	$\frac{1}{14}$
Hales Owen, Salop	Sept. 18	Sept. 18	1	1	1	0	100	11,839	
Halifax	Sept. 18	Sept. 18	1	1	1	0	100	15,382	
Collieries and other villages round Newcastle	Feb. 16	April 12	57	1,598	259	1,339	164		
London and its vicinity	Feb. 14	Dec. 18	230	11,020	5,275	5,745	474	1,424,896	44
Total . . . 230 . . . 11,020 . . . 5,275									

N.B.—The number of days' duration is made up as follows:—

In Nov. & Dec.

SCOTLAND.

Duddingstone, Edinburgh	March 30, 1832	Dec. 17, 1832	102	105	52	53	50	397	25	124
Kirally, Fife, being the Dunnikier and Sinclair Towns	Aug. 11	Nov. 24	106	137	56	81	40	1,240	104	44
Linwood, Renfrew	July 5	July 20	47	17	9	8	524	169	10	44
Tranent	Jan. 16	Feb. 28	44	282	78	204	274	3,620	74	24
Clackmannan	April 5	Nov. 13	223	323	75	248	23	4,266	74	14
Dumfries	Sept. 15	Dec. 11	88	835	418	417	50	11,606	74	34

† These numbers must be incorrect, as thus more persons died than were attacked. If for $\frac{1}{14}$ we read $\frac{1}{17}$, the proportion is nearly maintained.

Name of Place affected.	Date of First Case.	Date of Last Case.	Days' Duration	Number of Cases.	Number of Deaths.	Number of Recoveries.	Proportion of Deaths to Cases per Cent.	Population.	Proportion of Cases to Population per Cent.	Proportion of Deaths to Population per Cent.
Preston Pans	Jan. 25	May 10	107	144	28	116	20	2,322	6 $\frac{3}{4}$	1 $\frac{1}{4}$
Ditto, West	March 6	March 17	12	10	6	4	60			2 $\frac{1}{2}$
Ayr	July 20	Oct. 18	91	436	190	246	44	7,606	5 $\frac{3}{4}$	2 $\frac{1}{2}$
Musselburgh, Edinburgh	Jan. 18	March 28	63	447	202	245	45	7,836	5 $\frac{3}{4}$	2 $\frac{1}{2}$
Slaines Colleson, Aberdeen	Aug. 18	Oct. 15	28	54	9	45	16 $\frac{1}{2}$	1,134	5	3 $\frac{1}{2}$
Troqueer, Kirkcudbright	Sept. 21	Nov. 26	67	235	125	110	53	4,665	5	2 $\frac{1}{2}$
Inverness, Burgh	May 9	Nov. 4	97	556	177	379	31			
Ditto, Landsward Part	Oct. 3	Nov. 18	47	60	12	48	20	14,324	4 $\frac{1}{2}$	1 $\frac{1}{2}$
Wick, Caithness	Aug. 7	Nov. 3	89	411	69	342	17	9,850	4 $\frac{1}{2}$	4 $\frac{1}{2}$
Coldstream	Jan. 25	March 29	65	117	41	76	35	2,897	4	1 $\frac{1}{2}$
Govan, Renfrew	March 1	July 27	149	192	77	115	40	4,967	3 $\frac{3}{4}$	1 $\frac{1}{2}$
Port Glasgow, Renfrew	April 9	Oct. 20	143	192	69	123	37	5,192	3 $\frac{3}{4}$	1 $\frac{1}{2}$
Cupar, Burgh, Fife	Aug. 23	Dec. 14	114	130	63	67	47 $\frac{1}{2}$			
Ditto, District	Aug. 14	Dec. 30	139	92	45	47	50	6,743	3 $\frac{1}{2}$	1 $\frac{1}{2}$
Tain, Ross	Aug. 27	Oct. 25	60	107	55	52	52			
Greenock	Feb. 29	Oct. 30	244	850	436	414	50 $\frac{3}{4}$	3,078	3 $\frac{1}{2}$	1 $\frac{1}{2}$
Alloa, Clackmannan	April 25	Nov. 21	135	186	72	114	40	27,571	3 $\frac{1}{2}$	1 $\frac{1}{2}$
Haddington	Dec. 25, 1831	May 28	149	139	65	74	45	6,377	2 $\frac{1}{2}$	1 $\frac{1}{2}$
Kilmarnock, Ayr	June 9, 1832	Oct. 5	119	399	205	194	58	5,883	2 $\frac{1}{2}$	1 $\frac{1}{2}$
Monkland, Old, Lanark	April 12	May 4	23	209	125	84	65	18,093	2 $\frac{1}{2}$	1 $\frac{1}{2}$
Ruthvern, Banff	Sept. 3	Oct. 22	50	134	15	119	11 $\frac{1}{2}$	9,580	2 $\frac{1}{2}$	1 $\frac{1}{2}$
*Rutherglen, Lanark	April 1	Oct. 19	99	127	65	62	52	6,484	2 $\frac{1}{2}$	1 $\frac{1}{2}$
Kirraly, Fife	Aug. 11	Nov. 17	68	96	48	48	50	5,503	2 $\frac{1}{2}$	1 $\frac{1}{2}$
								5,034	1 $\frac{1}{2}$	1 $\frac{1}{2}$

*Rutherglen, Lanark

Leith	.	.	.	.	.	.	7	327	448	267	181	58	28,885	1 $\frac{1}{2}$	1 $\frac{3}{8}$
— Newhaven	.	.	.	.	.	.	16	173	77	35	42	47 $\frac{1}{2}$		1 $\frac{1}{2}$	
— Rastratrig, Rock Lodge, &c.	.	.	.	.	.	.			27	17	10				
Dundee	.	.	.	.	.	.	19	207	808	512	296	63	45,355	1 $\frac{3}{8}$	1 $\frac{3}{8}$
Dysart, Fife	.	.	.	.	.	.	18	157	98	39	59	40	6,259	1 $\frac{1}{8}$	1 $\frac{1}{8}$
Aberdeen	.	.	.	.	.	.	31	122	251	99	152	40	32,912	1 $\frac{1}{2}$	1 $\frac{1}{2}$
Dunbar, including Haddington and West Bainer }	.	.	.	.	.	.	23	37	67	38	29	55	5,272	1 $\frac{1}{2}$	1 $\frac{1}{2}$
Paisley	.	.	.	.	.	.	28	25	761	444	317	57 $\frac{1}{2}$	57,466	1 $\frac{1}{2}$	1 $\frac{1}{2}$
— Neilston	.	.	.	.	.	.	8	267	6	5	1	80	4,679	1 $\frac{1}{2}$	1 $\frac{1}{2}$
Thurso, Caithness	.	.	.	.	.	.	1								
Edinburgh	.	.	.	.	.	.	20	56	63	26	37	42 $\frac{1}{2}$			
— Water of Leith	.	.	.	.	.	.	26	340	1,886	1,065	821	56 $\frac{1}{2}$			
— Carron Mills	.	.	.	.	.	.	24	291	125	59	66	49	162,403	1 $\frac{3}{8}$	1 $\frac{3}{8}$
— Bonnington & Stockbridge	.	.	.	.	.	.	3	271	43	26	17	58			
Perth	.	.	.	.	.	.	4	117	114	66	48	57 $\frac{1}{2}$	20,016	1 $\frac{1}{2}$	1 $\frac{1}{2}$
Stirling	.	.	.	.	.	.	27	51	54	35	19	65	8,556	1 $\frac{1}{2}$	1 $\frac{1}{2}$
Falkirk, Stirling	.	.	.	.	.	.	15	86	69	31	38	45	12,743	1 $\frac{1}{2}$	1 $\frac{1}{2}$
Arbroath, Forfar	.	.	.	.	.	.	10	36	23	13	10	52	6,660	1 $\frac{1}{2}$	1 $\frac{1}{2}$
St. Andrews, Fife	.	.	.	.	.	.	22	3	7	5	2	70	4,899	1 $\frac{1}{2}$	1 $\frac{1}{2}$
Campbetown, Argyle	.	.	.	.	.	.	2	47	13	10	3	74	9,472	1 $\frac{1}{2}$	1 $\frac{1}{2}$
Glasgow	.	.	.	.	.	.	4	267	6,198	2,994	3,204	48 $\frac{1}{2}$			
— Bushby	.	.	.	.	.	.	21	33	16	8	8	50			
— Baillerton	.	.	.	.	.	.	6	5	12	4	8	33			
— Burhead	.	.	.	.	.	.	15	51	2	1	1	50	202,426	1 $\frac{1}{2}$	1 $\frac{1}{2}$
— Pollokshaun	.	.	.	.	.	.	8	136	292	143	149	49			
— Maryhill	.	.	.	.	.	.	28	44	61	24	37	40			

WALES.

Name of Place affected.	Date of First Case.	Date of Last Case.	Days' Duration	Number of Cases.	Number of Deaths.	Number of Recoveries.	Proportion of Deaths to Cases per Cent.	Population.	Proportion of Cases to Population per Cent.	Proportion of Deaths to Population per Cent.
Swansea	Aug. 9	Sept. 22	45	430	152	278	35	13,256	3 $\frac{1}{2}$	1 $\frac{1}{2}$
Merthyr Tydfil, Glamorgan	Aug. 31	Nov. 27	89	608	160	448	26	22,083	2 $\frac{3}{4}$	$\frac{1}{2}$
Denbigh	June 10	July 21	42	105	47	58	42	3,786	2 $\frac{3}{4}$	1 $\frac{1}{2}$
Flint	May 7	June 30	55	37	18	19	50	2,216	1 $\frac{1}{8}$	1 $\frac{1}{2}$
Haverfordwest	Oct. 5	Oct. 28	24	43	16	27	37 $\frac{1}{2}$	3,915	1 $\frac{1}{4}$	$\frac{1}{2}$
Carnarvon	Oct. 15	Nov. 29	46	78	30	48	37	7,642	1 $\frac{1}{4}$	$\frac{1}{2}$
ISLE OF MAN.										
Douglas	June 27	Sept. 20	106	276	146	130	53	6,054	4 $\frac{1}{2}$	2 $\frac{1}{2}$
IRELAND.										
Up to March 1, 1833				54,552	21,171	33,381	38 $\frac{1}{2}$			

A case of cholera, supposed to be brought from England, occurred at Calais on March 15, 1832, and on the 26th the disease was discovered in Paris: here it raged till September 30, when it finally disappeared, having carried off 18,402 persons.

The order of time now brings me to speak of the extension of this most awful disease across the Atlantic to the continent of America, a distance which it was reasonably hoped might bid defiance to the conveyance of infection; but, nevertheless, it is believed that an emigrant ship carried it over, and the mortality was much greater than in England.

The disease first appeared in our own territories at Quebec, whither the ship was bound, on June 8, 1832, and on the 10th at Montreal, higher up the River St. Lawrence; it spread furiously to Kingston, on the Lake Ontario, and all over the surrounding country.

In the United States it appeared at New York on June 24, and at Albany on July 3, both being on the River Hudson; at Newcastle, on the Delaware, about the end of July, ordinary cholera having been very prevalent since June 18th; Philadelphia was attacked July 11. The disease spread all over the continent, extending even to Yucatan, in South America, where Mr. Stephens, the assiduous searcher for the ruined cities abounding in that neighbourhood, found remembrances of it among the Indian population.

Of these latter attacks I have no further account; but there is so good a description of the two at-

tacks of cholera at Kingston, in Canada, given by Mr. Henry, Surgeon to the Forces, in his recently published "Events of a Military Life," that I am induced to transcribe a portion, condensing it, however, as much as possible. "The disease reached Kingston on June 17, 1832. Here the military authorities had taken care to form a camp on a healthy spot for the married men, who usually lived in the town, and also to perfectly isolate the barracks, to lighten the duties of the soldiers as much as possible, to regulate the canteen, and to cause all persons to be regularly examined by the medical officers; in consequence, the disease did not attack the army till July 4, when two grenadiers were seized, who were bled largely, and recovered; ten others were treated in the same way, and recovered, giving hopes that a cure was found; but, immediately after, three men and a woman were seized, who died in twelve hours, notwithstanding the bleeding; but (and this is a remarkable circumstance) they lived on Point Frederick, near the dock-yard, the air of which was vitiated by the rotting ships; the company was removed next morning to the camp, and had no more cholera." Mr. Henry here considers that two forms of disease were present, one of which had much the character of tetanus, or lock-jaw. This genus was marked by early, severe, and universal spasms, affecting every muscle, and causing great torture; this, he says, gave way at once to early and copious bleeding; but in the other more dangerous form, when the disease stole on quietly, the

patient sunk early into hopeless debility, and here medicine was of little avail.

“ Mr. Henry and Dr. Sampson, the principal practitioner in Kingston, tried saline transfusion in twenty hopeless cases, but without curing any: in one case, a poor emigrant from Yorkshire, life was prolonged for seven days by constant pumping; this man almost instantaneously recovered voice, strength, colour, and appetite, and they hoped that they had found the elixir of life.

“ There were 36 cases of cholera in the Sixty-sixth Regiment, of whom 17 died; no child suffered; four-fifths were attacked during the night. The disease ceased entirely in the middle of October.

“ The second invasion of the cholera, beginning July 26, 1834, was more fatal than the first; in 1832, 200 died out of a population in Kingston of 5,000; in 1834, not less than 300 were carried off. This latter epidemic had more of the asthenic character than the former; that is, it was more marked by symptoms of debility and prostration immediately after the first attack, and less by violent spasms and extreme distress.” Again, Mr. Henry noticed a ferruginous taste in the air, and this was observed in Paris and other places where cholera raged in 1832. (This bears a curious analogy with Dr. Prout’s experiments on the air, mentioned in his *Bridgewater Treatise*, p. 371, and “*On Stomach and Urinary Diseases*,” p. 21, 4th edition.) Again the same system of isolation, &c., was adopted, and steady non-

commissioned officers were appointed to observe the men at their meals, and to report if they perceived any loss of appetite in any individual, that the disease might be crushed in the bud. The men were kept to light and amusing employment, but all severe toil was avoided. "We," he says, "had only eight adult cases of cholera out of 769 individuals; however, we had a host of bowel complaints, many of which would, no doubt, have merged in the pestilence, but for early treatment. This was a ratio about twenty-fold less than amongst the civil population, and our total loss was fifty-fold less, or thereabouts, being only one man and two children. There was a material difference between the practice of 1832 and 1834; laudanum, brandy, and other stimulants, were administered much more sparingly than before, when, probably, they had been too frequently used. Bleeding, also, was not so common; for those violent tetanic spasms, which it had so frequently relieved in the former year, were not now so general. Calomel had been given then very largely, but was now used less indiscriminately. In 1834, acetate of lead was used in some hopeless cases with much benefit. My favourite remedy was castor oil, combined with a small quantity of laudanum, given in some grateful and demulcent fluid, as hot as possible; making the patient lie on his right side, for the assistance of gravitation towards the pylorus, and to prevent nausea. In some hundred cases on this and the former occasion I witnessed the most excellent effects from this remedy, and,

moreover, experienced them myself in the early stage of two attacks of cholera I had at Kingston." After some notice of the great liability of some spots and the non-liability of others, he adds :—" By the middle of September, the health of Kingston was restored ; but half the inhabitants were in mourning."

The cholera broke out at Havannah in February 1833, at Oporto very early in January, in Malaga and other parts of Spain about the same time, and raged dreadfully at Madrid at the commencement of 1834. It re-appeared in the South of France in 1835, and passing along the southern coast, attacked Genoa, Naples, Sicily, Malta, and Rome ; the two last named suffered most in August 1837. The number of deaths at Rome during the height of the epidemic amounted, in one day, to 300, and, for many days, more than 200 died daily.

The disease partially re-appeared in London in 1834 and 1837, as has been ably described in the Transactions of this Society by Dr. Budd.

It is stated also that Holland and Sweden, the only part of Europe hitherto unmentioned, suffered from cholera ; but I have been unable to find any historical account of the attack.