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### METROPOLIS LOCAL MANAGEMENT,

18 & 19 Vic., cap. 120.

## VESTRY

OF THE

## PARISH OF BERMONDSEY,

# Reports

BY

## JOHN CHALLICE, M.D.

MEDICAL OFFICER OF HEALTH,

"VERITAS NIL TIMET."

#### LONDON:

PRINTED BY E. BILLING, & SON, 152, BERMONDSEY STREET.

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PARISH OF BERMONDSEY.

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## JOHN CHARLIOE, M.D.

MEDICAL OFFICER OF BEALTH,

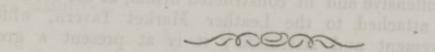
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## MEDICAL OFFICER'S REPORT.



#### TO THE VESTRY OF BERMONDSEY.

November 5th, 1860.

Mr. Chairman and Gentlemen,—In consequence of a complaint of Mr. Walter Smith, of the Grange, I visited and inspected the premises of Messrs. Husband, in the Grange, on the 27th ult., accompanied by your Inspector of Nuisances. There is doubtless a very offensive odour emanating from the factory, which appears to arise principally if not entirely from "Pures;" this is not only perceptible, but a nuisance in the neighbourhood and adjoining thoroughfares. There does not appear to be any very great precaution used in mitigating or preventing this peculiarly offensive odour from becoming obnoxious. I pointed out some alterations which might be easily carried out, with but little expense. I purpose again visiting this factory, and trust that the remedy which I suggested will be adopted.

The deaths for the week ending Oct. 13th, show an increase, being 31, the corrected average being 36. We had 9 deaths from Zymotic disease; 1, I regret to say, from small pox, 2 from measles, 2 from scarlatina, 3 from whooping cough, 1 from typhus and 1 from diarrhea. For the week ending Oct. 20th, the mortality shews a material diminution,—the deaths were but 16, the corrected average being 25. Death from Zymotic diseases fell to 1 only, and that was from whooping cough, a most remarkable and encouraging fact; formerly, if small pox, scarlatina, and typhus prevailed in one week, adding

very materially to the mortality of the district, on the following it might have been anticipated with almost unerring certainty, that either a rapid or a slow and fatal increase would take place.

Now it seems that the rank soil in which these human pests formerly flourished no longer exists, and consequently these diseases fail to take root, and no longer remain with us as a permanent cause of disease and of death.

In the week ending Oct. 27th, the deaths were again but 16, although we lost 3 from whooping cough; the corrected average would have been within a fraction of 30.

There is an offensive and ill constructed urinal, at the corner of Market Street, attached to the Leather Market Tavern, which requires improvement and alteration; it is at present a great nuisance.

I am, Gentlemen,

Your very faithful Servant,

JOHN CHALLICE, M.D. Medical Officer of Health.

## TO THE VESTRY OF BERMONDSEY.

of Mr. Waiter Smith, of the Grange, I visited and inspected the premiers of Mesus, Husband, in the Usange, on the 27th oft, ac-

Dec. 17th, 1860.

Mr. Chairman and Gentlemen,—Although I have been unable personally to attend the meeting of the Vestry, in consequence of severe illness, yet I have watched with considerable interest the returns of the Registrar General of the mortality of our district, and also the weekly returns of the Medical Officers of the sickness prevailing during my forced absence.

In the week ending Nov. 31st, the deaths were 16, the corrected average being a trifle beyond 22. The Registrar General remarks, that the returns of this week bear testimony to a very favorable state of public health, and that those districts of the highest sanitary condition reduce the mortality of London. Bermondsey must have been present in his mind, inasmuch as our deaths stood lower, as compared with the average of former years, than they did in 29 of the other districts.

For the week ending Nov. 10th, the deaths were 24, the corrected average being 25 and a fraction. Our mortality was increased by 4 cases of whooping cough, 2 of scarlatina, 1 of diptheria, 1 of typhus and 1 of diarrhœa.

In the following week ending November 17th, the mortality was 22, the corrected average being within a fraction of 28. There were 3 deaths from whooping cough, 2 from diarrhœa, 1 from scarlatina and 1 from small pox.

For the week ending Nov. 24th, the deaths were 20, the corrected average being within a fraction of 30. Whooping cough was again fatal in 3 cases, scarlatina in 1, and typhus in 1. The month of of November, sometimes a very severe and trying month, to the weak and aged especially, has passed with us in a peculiarly favorable manner.

I am, Gentlemen,

Your obedient and faithful Servant,

JOHN CHALLICE, M.D.

Medical Officer of Health.

#### TO THE VESTRY OF BERMONDSEY.

Jan. 7th, 1861.

Mr. Chairman and Gentlemen,—The month of December just passed, has proved very trying to the whole of the metropolis, and our population has suffered in common with others.

The great vicisitudes of the temperature has borne with severity on the human constitution and its influence has been generally felt. The character of a large portion of the population of Bermondsey would especially expose its inhabitants to the diseases which have lately increased mortality. Inclemency of the weather, with us, brings not only the usual trials with which the working classes have to struggle, but also by stopping work adds most materially to their hardships. Under these circumstances it might have been expected that we should have suffered in a much greater degree than we have

hitherto done. It is to me most consolatory, that I find no death registered in our district as occasioned by either of the following causes.—By exposure to cold, by neglect, or from insufficient food. This is a proof, if any were required, of the watchful energy practised throughout our Parish, in not merely administering relief to those who ask it, but in seeking out those who are in want, and those who need assistance. Practical benevolence has done much in alleviating hardships, which in crowded and poor populations invariably add to sickness and swell the tables of mortality.

During the month 13 aged persons died, of these the oldest, an inmate of the workhouse, was 86 years of age; 6 of these 13 died in the last week of December, affording an illustration of the influence of cold upon the aged.

Our deaths were 31 for the week ending December 1st, the corrected average being 28. Measles were fatal in 3 instances, and scarlatina in 1. The births in the week were 41.

In the week terminating December 8th, our mortality was but 25, compared with a corrected average of 31.—Whooping cough was fatal in 2 cases, diptheria in 1, scarlatina in 1, and small pox in 1. The births were 44.

The week following, that ending December 15th, our mortality rose to 53, the corrected average being 24. Scarlatina was fatal in 4 cases, whooping cough also in 4, and typhus in 1. The births were 54.

In the week ending December 22, the deaths rose to a somewhat serious extent, registering 38, the corrected average being 25. No less than 7 fatal cases of whooping cough have occurred, also 2 deaths from measles, 1 from diarrhoea, 1 from typhus, and 1 from small pox. The births were 45.

The week ending the 29th of December, the deaths were 31, being a fractional increase only on the average. Four deaths occurred from whooping cough, 1 from diarrhoea, 1 from scarlatina, and 1 from small pox, in a child two years old, unvaccinated. The births this week were but 28.

am, Gentlemen,

Your faithful Servant,

JOHN CHALLICE, M.D.

Medical Officer of Health.

Jan. 21st, 1861.

Mr. Chairman and Gentlemen,—In the week ending Jan. 5th, the deaths in Bermondsey were 26, the corrected average being within a fraction of 31.—Whooping cough was fatal in 3 cases, diarrhoea in 1, and typhus in one. There was 1 death at 81, and 2 considerably over that fage. Also a widow died at the age of 89. The weather the week above named, will be marked as one of the severest on record, and its effects were evident upon our population in the week ending Jan. 12th, when our deaths were 37, the corrected average being 26. There were 5 fatal cases of whooping cough in St. James's District, and 1 case of small pox. The aged and the very young, as usual in inclement seasons, suffered most. No less than 26 died from affections of the lungs.

It is my painful duty to record that the want and privation experienced now by our working classes will of necessity predispose them to diseases of a Zymotic character, and more especially to fever.

The deprivation of animal food cannot be borne without a most serious risk, when combined with exposure to cold and other hardships. The fever which almost invariably follows, although in the first place the victims are those where want has prevailed, soon spreads its wings and infection finds its way into the mausions of the rich, where luxury and abundance prevail. It thus becomes a question of importance to all, one indeed of self-preservation, to strive earnestly and by personal co-operation, to relieve the great prevalent distress.

Complaint has again been made to me of the Fish Manure Factory of Mr. Powell. It is reported as being most offensive. I have already on several occasions expressed my opinion on the magnitude of the nuisance, and as to its being not only offensive but injurious to health.

I am, Gentlemen,

Your obedient Servant,

JOHN CHALLICE, M.D.

Medical Officer of Health.

Feb. 14th, 1861.

Mr. Chairman and Gentlemen,—The severe weather which we have lately experienced is now telling, as I feared it would upon the health of our population, and is increasing the mortality of the district. For the week ending Jan. 19th, the deaths were 30, the corrected average being 26—There were 6 fatal cases of whooping cough, I of measles, and I of diarrhæa.

In the week ending Jan. 26th, the deaths were at the high figure of 39, the corrected average being 26. Whooping cough still adds very materially to mortality; there were 5 deaths from this disease, 1 from typhus fever, 1 from scarlatina, and 1 from diarrhœa.

I have visited the manufactory at the rear of Jamaica Row.—
There were evidences of a large amount of fish refuse having undergone the process of exposure to the action of concentrated sulphuric acid, during which an offensive effluvia is emitted, which is injurious to health. At least 200 tons of manufactured manure was on the premises. There is a large accumulation of animal matter which is a nuisance and injurious to health, in a yard in the occupation of Mr. Goodwin, at the rear of houses in Little Paulin Street.

I am, Gentlemen,

Your obedient Servant,

JOHN CHALLICE, M.D. Medical Officer of Health.

#### TO THE VESTRY OF BERMONDSEY.

Feb. 18th, 1861.

Mr. Chairman and Gentlemen,—The diminished inclemency of the weather is exercising a favorable influence upon the health of our population, and the mortality I am happy to report is very considerably decreased.

The deaths for the week ending Feb. 2nd, were 26, the corrected average being 31. We had no fatal case of any Zymotic disease, with the exception of two cases of whooping cough.

For the week ending Feb. 9th, the deaths were but 18, the corrected average being 27. We were entirely free from Zymotic disease, save one case of diarrhœa. The births in the two weeks were 90.

It is my conviction that this very satisfactory condition of the health of our population after the late inclement weather, and the trying ordeal undergone by the working classes is, under Providence, in a vast measure owing to the excellent arrangements made for administering timely relief to those really needing it.

I am, Gentlemen,

Your very faithful Servant,

JOHN CHALLICE, M.D.

Medical Officer of Health.

#### TO THE VESTRY OF BERMONDSEY.

March 4th, 1861.

Mr. Chairman and Gentleman,—I have been naturally anxious on the subject of the removal of human remains from an old burial ground in the Borough, to the Friends burial ground, in Long Lane, which has now for some years been discontinued as a place of interment. I have had a communication from Mr. Grainger, the Government Inspector of Burial Grounds, of which the following is a copy:—

"February 19th.

" My dear Sir,

"In reference to the removal of the remains from Red Cross Street, to Burial Ground in Long Lane, you are aware that no interment had taken place for about Seventy years; and that, unless under perculiar circumstances, nothing could be found except old dry bones. I took the precaution, however, to have a grave opened, and I found, as I anticipated, that the only remains consisted of perfectly decayed bones. But it was arranged that if unexpectedly

any organic remains of the soft parts should be discovered, they were to be enclosed in a proper coffin. The remains were interred in middle earth in the Long Lane Burial Ground, and thus all precautions necessary were taken for the removal of these remains which was rendered absolutely necessary, by an Act of Parliament, in connexion with the formation of a new Street, from the High Street, Southwark.

"I remain, my dear Sir,

"Yours, faithfully,

"To Dr. Challice."

"K. D. GRAINGER."

The above explanation has removed from my mind all shadow of fear as to any possible injury that could arise.

The bills of mortality indicate a not unfavorable condition of public health in our district. The deaths for the week ending 16th Feb. were 23, the corrected average being 27.—The births were 37.

For the week ending 23rd ult. the deaths were 22, the corrected average being 26.—The births for the week were 43.

I desire to draw the attention of the Vestry to a public nuisance:

—A tidal ditch, at the rear of the Holly Tree public house, Blue Anchor Road. This nuisance which, unless remedied, will infallibly in the ensuing season be productive of sickness; it is aggravated by an accumulation of the contents of many privies and much decomposed vegetable matter.

I am, Gentlemen,

Your obedient Servant,

JOHN CHALLICE, M.D.

Medical Officer of Health.

#### TO THE VESTRY OF BERMONDSEY.

April 1st, 1861.

Mr. Chairman and Gentlemen,—The mortality of children from whooping cough in our district is still large, and requires especial notice.

In the week ending March 2nd, we had 5 deaths from this disease; all children of and under 2 years of age.

On one of these infants an Inquest was held; the other was uncertified by any Medical man. I again deliberately record my opinion, not caring about offending popular prejudice, that a large proportion of the deaths of these helpless infants might be prevented, by the Parents having recource to proper Medical advice which is too frequently neglected.

A death from preventible disease requires comment. A man 41 years of age has died from delirium tremens.—He was a publican. This disease so well known, is caused not so much by occasional excess in intoxicating drinks, as by continued tippling. It is now to the credit of the community more rare than formerly.

The entire deaths for this week were 22, the corrected average being 27.—The births were 45.

For the week ending March 9th, the deaths were 29, the corrected average being within a fraction of that number. There were 3 deaths from whooping cough, none from any other Zymotic disease.—The births for the week were 59.

In the week ending March 16th, the deaths exceeded the average; they registered 25, the average being 23. Whooping cough was again fatal in 3 cases, 1 was uncertified; thus proving that medical attendance had been ignored.—The births for the week were 57.

In the week ending March 23, the deaths were below the average, they were 20, the average being within a fraction of 25. I am glad to report that whooping cough did not contribute to the mortality.

—The births were 47.

The effects produced by diseased meat upon the human system, are in some cases so marked as to remove any shadow of doubt as to its pernicious and poisonous properties. In other cases, health is sapped by a more gradual process.—Of the two, the latter is the more dangerous. The former which is most usually marked by vomiting and diarrhæa, is of a passing character only. I regret to state, that in several instances I have lately had to complain that meat exposed for sale was, to say the least, of a doubtful character—I warned the vendors in a friendly manner. I may state, that I have the whole of the butchers shops in the Parish under my surveillance; those who invariably keep good and sound meat for sale, receive my visits with frankness and apparent satisfaction, the reverse is the case in other instances.

I regret to report, that on Saturday afternoon I had cause for ordering three carcases of calves to be seized in the shop of Mr. Thos. Tate, 79, Bermondsey New Road. They were taken by your Inspector to the police station, and condemned by the sitting Magistrate, as unfit for human food.

From the general appearance of the carcases, more particularly from the consistence of the muscular fibre and cellular tissue, there could be no doubt as to the entire absence of all the qualities of wholesome meat. As, however. Mr. Tate said that he had purchased these carcases in Newgate Market, and when he further stated that they had been passed by the Inspector, I suggested that the Magistrate's decision might be adjourned until this evidence was forthcoming, as the fact would be alarming and of serious import to the public at large. Mr. Tate declined this proposition, and the meat was subsequently destroyed in presence of your Inspector.

I am, Gentlemen,

Your faithful Servant,

JOHN CHALLICE, M.D.

Medical Officer of Health.

#### TO THE VESTRY OF BERMONDSEY.

April 14th, 1861.

Mr. Chairman and Gentlemen,—In the week terminating the 30th March, our deaths were but 18, of these no less than 6, or one third were from whooping cough. The corrected average mortality was within a fraction of 29. Only 3 deaths occurred in St. Mary Magdalen district, all children under two years of age, and all from whooping cough. For the first week in April, our mortality was 29, the corrected average being a fraction above 27. Only two deaths took place from whooping cough, and there were six deaths of people of 70 and 80 years of age. The births in the fortnight were 96, the deaths 47.

I have during the past week, (accompanied by your Inspector) visited the slaughter houses of the district, and I have to report, that most of them are in a fair condition, and that some are faultless.

There are two instances requiring especial notice, the first is the case of Mr. Hope, of 6, Bermondsey new road; here that which was a licensed slaughter house has been converted into a stable, and there is a temporary shed erected for slaughtering purposes, for which it is most unfitted—Pigs were also kept in the yard, and there was an accumulation of dung. At Mr. Worleys' 11, Star corner, on the morning of Saturday, the 6th instant, I visited his slaughtering place, and found it in a filthy condition, uncleansed of the blood, offal and muck of the previous day's killing. In addition to this most objectionable condition, there was a still graver cause of complaint, in the presence of a quarter of mutton and of the carcase of a sheep, both diseased and unfit for human food. Mr. Worley consented at first to their seizure and destruction,—subsequently however he refused, and the Magistrate at the Southwark Police Court condemned them. The carcase weighed 25½ lbs. and the quarter 4½ lbs.

On inspecting the slaughter house of Mr. Phipps, Long lane, it wass found to be moderately clean and in a fair condition, but requiring whitewashing, and some portion of the pavement to be relaid. I perceived however a faint odour of a peculiar character, which I mentioned to Mr. Phipps. This, on further inspection, was found to proceed from a large tub containing a quantity of pork,—legs, sides and heads. This was being soaked in water, which was tinged with blood; when a portion of this meat was removed its real character was discovered. I know of no phrase adequately to describe it,—anything so bad or rotten intended for human food, I never before met with. To report thus pains me—but on a former occasion I cautioned Mr. Phipps, and then earnestly remonstrated with him on the gross impropriety of exposing unsound and diseased meat for sale, for human consumption.

Gratifying however is it to be able to turn away from what is so loathsome, to that which is beneficial and creditable. Throughout the length and breadth of a large and populous Parish, the great majority of the Butchers sell sound, wholesome, and most excellent meat, suited to the character and wants of our population. And we are not without proof, that in Bermondsey meat of the highest class can be procured, challenging comparison with any in the metropolis.

I am, Gentlemen,

Your obedient faithful Servant,

JOHN CHALLICE, M.D. Medical Officer of Health.

May 5th, 1861.

The deaths in Bermondsey, for the week ending April 13th, were 27, the corrected average being within a fraction of that amount.

There was no death from any epidemic disease, with the exception of whooping cough, which proved fatal in 6 cases; 4 of these were in the Leather Market district, all of children under 2 years of age; one was the daughter of a wharf labourer, in White Lion Court, and this death is marked as uncertified, thus proving the entire absence of medical treatment.

In the week ending April 20th, the mortality was favorable, indicating a satisfactory condition of the health of the district, the deaths being only 20, and the corrected average 25. Whooping cough however still swells the list, 4 children having died from this epidemic. There were no deaths from any other epidemic disease.

For the week terminating April 27th, the deaths were 24, the corrected average 26. Whooping cough was fatal in 1 case only. There was 1 death from fever.

The creation of a most intolerable and dangerous nuisance in the Blue Anchor road was reported to me.—Some persons, from the neighbourhood of Whitechapel, having purchased a cargo of shipwrecked rags, and hired some vacant ground in this neighbourhood to dry them. As the stench given off was abominable, I requested your Inspector to apply to the Magistrate for an order for their instant removal, and at the same time used every exertion to prevent a further deposit; I also directed deodorizing powder to be used, which was done effectually, under the superintendence of your Inspector.

I have certified that pigs are kept, so as to be a nuisance and injurious to health, at John street, Kent road, and also at Austen's Rope ground, Staple street.

I am, Gentlemen,

Your obedient Servant,

JOHN CHALLICE, M.D.

Medical Officer of Health.

May 20th, 1861.

Mr. Chairman and Gentlemen,—In the week ending 4th of May, there was a sudden and severe attack of epidemic whooping cough in the Leather Market district; no less than 9 children there fell victims to this disease, whilst in St. Mary Magdalen district, 1 only died from it, and in St. James' district also but 1. The average mortality was increased by this sudden outburst of disease amongst children, as in other respects the reports are favorable. The deaths for the Parish were 31, the corrected average being 25.

For the week ending May 11th, the deaths were 22, the corrected average being the same number. Whooping cough was fatal in 3 instances in the Leather Market district, none in the other districts.

I may here with propriety refer to the population of our Parish, as proved by the recent census. In 1851, the population of Bermondsey was 48,128,—it is now 58,250.—Thus in round numbers showing an increase of 10,000, or at the rate of 20 per cent. Now as the deaths are calculated on the presumed increase of the population at 10 per cent. only, and as ours has been double, this is an additional cause of congratulation on the proved sanitary condition of this important district.

With reference to the nuisance complained of by inhabitants, caused by the removal of skutch in a putrid condition from the several glue and size factories of Messrs. Gee & Sewel, Messrs. Procter & Bevington, and Messrs. Cripps. I have to report, that there is at present on each of the premises above alluded to an accumulation of skutch which is offensive, and which for the health of the district requires removal. Of this fact there can be no question; still some means might be adopted to render its removal less objectionable to the public. On a former occasion I urged the propriety of covered carts, with closely fitting covers being employed .- This precaution I advise the Vestry to enforce. If this be adopted, with the addition of a tarpauling and a layer of deodorizing powder, I believe that the present accumulations can be removed without any damage to the public. It would be better done at night, and so arranged that the barge or lighter should start with its cargo without delay. Out of regard to those who travel by water, the skutch should be scrupously protected from the atmosphere. During hot weather, this material or refuse of trade should be promptly removed,

and so no nuisance would be created, as it is only after two or three days exposure that putrefaction takes place, and the peculiarly offensive odour is given off. If carted away within twenty-four hours removal from the hides, there would be little or no unpleasant smell, —a most desirable result.

There is a nuisance of a somewhat similar description, the product of an adjoining Parish.—It is that of offensive bones, removed from Green street, St. George's, which are shipped at Cherry Garden stairs, passing through the length of our Parish, leaving an offensive trail, rivalling certainly, even not surpassing that for which skutch is distinguished. Similar precautions recommended for the prevention of nuisance in one case, I advise to be enforced in the other.

I have certified an accumulation of manufactured manure, at premises or lofts over the houses 130 & 131, Bermondsey Street. The inhabitants are all suffering in health from the effluvia which is sickening and offensive. It is a most improper place as a warehouse or store place for manure.

There has been a fresh deposit of rags in a rope ground, at the rear of South place, Upper Grange road, and I have certified them a nuisance, and alarmingly dangerous to health. There is so much recklessness and disregard of all public decency and propriety in every circumstance connected with this nuisance, that I must strongly urge upon the Vestry the need of at once taking every measure which the law will permit, not only to remove the nuisance, but to punish the offender.

I am, Gentlemen,

Your obedient Servant,

JOHN CHALLICE, M.D.

Medical Officer of Health.

### TO THE VESTRY OF BERMONDSEY.

June 3rd, 1861.

Mr. Chairman and Gentlemen,—In the week ending May 28th, the deaths were 24, of these 5 were from whooping cough, and 1 from small pox; the corrected average would be 22; the births were

52. For the following week the deaths were also slightly in excess of the average; again caused by the mortality from whooping cough, 5 children having died from this disease and 2 from typhus. The total mortality was 25, the corrected average being 22, and the births 56.

I purpose, with the sanction of the Board, to inspect the premises of the various Dealers in Marine Stores within the Parish in the ensuing week. This it will be in the recollection of the Vestry was done last year, and I believe with a practical and very beneficial result.

I am, Gentlemen,

Your faithful Servant,

JOHN CHALLICE, M.D. Medical Officer of Health.

#### TO THE VESTRY OF BERMONDSEY.

June 10th, 1861.

Mr. Chairman and Gentlemen,—In consequence of a complaint made to me about half-past eight o'clock p.m., on Tuesday, the 5th instant, I visited Mr. Whitworth's premises used as a fish manure factory, in the rear of Jamaica row; there was a perceptible fish odour pervading the neighbourhood. In the premises there were two heaps of fish heads in a stinking condition; one more so thau the other. The man in charge stated that the heap which was most offensive had been there longer than the other. In quantity there was about a ton of fish:—the effluvia may be better imagined than described.

On the following day I again visited these premises, the process of mixing was then going on. The fish was stinking,—when sulphuric acid was poured on, fumes of a very offensive character were given off. These were dense and suffocating, and in my opinion highly injurious to health. I have no hesitation in stating it to be a nuisance and dangerous to the health of the district.

I am, Gentlemen,

Your obedient Servant,

JOHN CHALLICE, M.D. Medical Officer of Health.

June 17th, 1861.

Mr. Chairmau and Gentlemen,—I have pursuant to the order of the Board, inspected the premises of Mr. Mathews, in the Spa road. I regretted to find that the complaints of offensive and sickening smells arising from this yard, appeared to me to be well founded—There was an absence of cleanliness and care about the place, also an accumulation of refuse close by the public thoroughfare. The pits (technically called grainers) are also within a few yards of the road, and so placed that the odour from them cannot pass off freely within the yard, but is necessarily carried towards the street. I am compelled to state, that all necessary precautions are not at present taken to carry on the trade so as to prevent nuisance.

The mortality in our Parish in the week ending June 1st, was 28, the corrected average being 23. Whooping cough was fatal in 6 cases. There were 2 deaths of infants uncertified, the cause in each case reported as debility; this is unsatisfactory.

In the week ending June 8th, the deaths were but 16, the corrected average being 34. Whooping cough was fatal in only 1 case.

I am, Gentlemen,

Your faithful Servant,

JOHN CHALLICE, M.D.

Medical Officer of Health.

#### TO THE VESTRY OF BERMONDSEY.

July 15th, 1861.

Mr. Chairman and Gentlemen,—In the four weeks elapsed since my last report, it is satisfactory for me to observe that the health of our Parish, notwithstanding some adverse influences has remained good. The Mortality Tables show the following results:—For the week ending June 15th, the deaths were 23, the corrected average being within a fraction of 24. There was 1 fatal cause of scarlatina, and there were 2 of whooping cough.

There were but 19 deaths in the week ending June 22, the corrected average would have been 25. Two deaths again occurred from whooping cough, and 1 from scarlatina.

In the week ending June 29th, the deaths were but 17, the corrected average being within a fraction of 25. There were 2 deaths from diarrhæa, 2 from typhus, and 1 from whooping cough.

The first week in July the mortality of the Parish was 18, the corrected average was 22. There was 1 death from fever, and 1 registered as from diarrhea, but uncertified.

The offensive effluvia now prevalent, and which arise from the calamitous conflagration that has lately occurred in Southwark, are calculated, as I have before observed, to affect the health of the district injuriously.

My attention has been directed to the premises of Mr. Harridine, in Bermondsey Street, which I have visited on several occasions during the past week. There were large quantities of fatty matters, more or less mixed with sewage. The bulk was singularly offensive, and peculiarly sickening. I consider the health of the inhabitants of the neighbourhood endangered by the stench which has proceeded from these premises.

My attention has been also directed to the arches in Upper Grange road, facing West place. I found that a considerable quantity of what appeared to be the refuse of sugar or molasses had there been deposited. This was giving off a vapour, which I knew from experience to be most injurious to health. This deposit ought at once to be removed, or completely saturated and neutralized by disinfectants, and then thoroughly burried beneath earth or brick rubbish.

There have lately been complaints of nuisances arising from manufacturing premises, occupied respectively by Mr. Olney, fellmonger, Mr. Ecroyd, leather dresser, and Mr. Wiseman, hair factory. These premises occupy that portion of ground, bounded on the North by Tyers gateway, on the South by Manning street, and on the East by Bermondsey street about 1½ acres of ground.

I have visited each of these occupants. They mutually complain of each other. The combination is undoubtedly most offensive, and a disgrace to the district, but it is to a great extent remediable; being not only a nuisance, but also damaging to health, an alteration and improvement is imperatively called for.

I have to report, that I attended the Sessions of the Old Bailey on

the 8th and 9th instant, on the prosecution of Mr. Whitfield for a nuisance, and on my evidence, a true bill was found by the Grand Jury against that gentleman, for the commission of a nuisance.

I am, Gentlemen,

Your obedient Servant,

JOHN CHALLICE, M.D.

Medical Officer of Health.

#### TO THE VESTRY OF BERMONDSEY.

August 5th, 1861.

In the week ending July 13th, the deaths in Bermondsey were 27; the corrected average would have been within a fraction of this number. We had I death from diarrhæa, 2 from typhus, 1 from scarlatina, and 2 from whooping cough.

The atmosphere of this and the neighbouring Parishes has been impregnated with various offensive effluvia, arising principally from the main sewers, and caused by decomposing matters and putrid remains from the late calamitous fire. In my opinion (and from experience) the health of the district has materially suffered from this cause. Numerous cases have come under my notice of constant nausea, and in some instances of vomiting, internal pains, and violent diarrhoea, which were undoubtedly brought on by this stench.

I cannot refrain from strongly urging upon this Board, as a measure of most necessary precaution, the effectual cleansing and purifying of the sewers, more especially of the main sewers, by the same means adopted by the Metropolitan Board some years since.

The plan then employed, that of pumping a solution of lime into the sewers daily, was productive of the greatest public benefit. Although the main object was the disinfection of the Thames, the scarcely secondary one, that of fixing the sewer gases, was accomplished, by which poisonous emanations into dwellings, as well as into the public thoroughfares were effectually prevented.

The deaths registered in the week ending July 20th, were 31, the corrected average being 25.—The numbers ought however to be 30, as there is a death registered twice.

There is one case requiring especial notice.—It is a fatal case of cholera. A man aged 44, a fellmonger, being previously in good health, died after thirty-four hours illness. He lived in Stephenson's court. On inquiry I find that his wife had been working and handling for some days the sewer fat, and as in most of these instances she had, as a consequence, indulged very freely in spirituous liquors. She first fell ill; she recovered; the husband died. The court is moderately clean, but complaints are made that the dust and refuse are allowed to accumulate and to become offensive. The receptacle was full when I was there.

I certify, the house at 15, Bermondsey square, as being without any privy accommodation, and I consider that immediate proceedings should be taken to remedy this most gross neglect on the part of the owner.

I also certify to an accumulation of dung in a yard at Little Paulin street, as being dangerous to health and a serious nuisance,—repeated complaints have been made of these premises.

There are pigs kept so as to be a nuisance and injurious to health, in Staple street, and also in Little Paulin street.

Diarrhæa, during the last fortnight, has become general throughout the Metropolis, as yet it is of a mild form, with some few exceptions. Children as usual, suffer the most.

In the week ending the 27th ult., we had five deaths from this disease, but all were in children under 12 years of age; we had also one death from small pox, and one from diptheria.

I am, Gentlemen,

Your obedient faithful Servant,

JOHN CHALLICE, M.D.

Medical Officer of Health.

#### TO THE VESTRY OF BERMONDSEY.

August 19th, 1861.

Mr. Chairman and Gentlemen,—As is usual at this period of the year, diarrhœa is generally prevalent in the Metropolis, and this

district is suffering like all the rest. To children however, or rather infants of tender age, this disease is at present most formidable or fatal.

In the week ending August 3rd, the deaths were 29, a fractional increase upon the average. There were 3 deaths from diarræa, the same number from whooping cough, and one from Typhus.

For the week terminating August 10th, the mortality was 35, the corrected average being 33½.

Diarrhœa was fatal in 6 cases, typhus in 2, whooping cough in 1, and scarlatina in 3.

This is not a satisfactory condition, it is one requiring vigilance, although not alarming.

I have to call the attention of the Vestry to the entire absence of water supply to the Skin Market; there is in consequence a want of that cleanliness so necessary not only for health, but for comfort and decency about the place. The necessity which exists for repeated cleansing of a market such as this is, requires no argument, and for this purpose, an adequate supply of water is absolutely required. A free use of lime wash to the walls and columns of the building would be desirable, and indeed is requisite.

I am, Gentlemen,

Your obedient faithful Servant,

JOHN CHALLICE, M.D.

Medical Officer of Health.

#### TO THE VESTRY OF BERMONDSEY.

September 16th, 1861,

Mr. Chairman and Gentlemen, — The mortality of Bermondsey during the month which has elapsed since my last report, has considerably varied. In the week ending August 17th, the deaths were 17, the corrected average being 34, there were 5 deaths registered from diarrhœa. The births in the week were 50.

For the week ending August 24th, the deaths rose suddenly to 41,

there were 9 deaths from diarrhoea, 2 from Typhus, 1 from scarlatina and 1 from whooping cough, the corrected average was 31. The births were 39.

In the week succeeding that which terminated on August 31st, the deaths were 24, the corrected average being 33. Diarrhœa was fatal in 7 instances, whooping cough and scarlatina each in 1 case. The births were 31. In the first week of the present month, the deaths numbered 27; the corrected average being 33; diarrhœa was fatal in 6 cases, scarlatina and typhus each in 4. The births were 47. I have inspected the several slaughter houses within the Parish, and beg to hand in for the consideration of the Vestry my reports upon them. I may here state that, year by year, I observe a marked improvement, as well as an evident and wholesome anxiety on the part of the owners to merit a favorable notice.

I have had considerable trouble and anxiety in reference to the salvage from the late fire at Cotton's wharf; a very large quantity of various "bread stuffs" having been deposited in Wyld's rents. It appeared to me, that the damaged flour, rice, sago, &c. &c. could not be sold as human food, without great risk to health and to life. I remonstrated accordingly, and lodged with Messrs. Toplis and Harding a formal notice, which I personally delivered. These premises are now also a serious and very offensive nuisance, independent of any that may arise from the various vegetable products rescued from the fire in a partially consumed condition. The pits are filled with various liquors, in a putrescent condition, giving off sulphurretted hydrogen to a great extent, and are exercising a most pernicious effect upon the health of the surrounding neighbourhood. This is being remedied, but I regret to state in a very sluggish and inefficient manner, as there are six or seven pits only which have been filled, and there are about a hundred which are as bad as so many open cesspools.

I am, Gentlemen,

and envel he were redience such had to vicepan and

Your obedient Servant,

JOHN CHALLICE, M.D.
Officer of Health.

October 7th, 1861.

Mr. Chairman and Gentlemen,—During the three weeks ending respectively September 14th, 21st and 28th, the deaths in our Parish have been in each case below the corrected average.

For the week ending September 14th, the deaths were 24, the corrected average being 33. Diarrhœa was fatal in 4 cases, typhus in 2, scarlatina in 4, and measles in 1.

The deaths in the week following declined to 17, the corrected average being 33. Typhus was fatal in 1 case, diarrhœa in 1, scarlitina in 3, diptheria in 1, and whooping cough also in one.

For the week ending September 28th, the deaths registered were 29, the corrected average being a fraction over 34. Typhus was fatal in 2 cases, diarrhœa in 3, and measles in 2.

Although these statistics on the whole show a favorable condition of the public health, there is an amount of zymotic disease sufficient to cause some anxiety; doubtless the unusual mildness of the weather has tended to the development of fever, especially typhus and scarlatina, there is consequently a necessity for strictness in sanitary measures.

An instructive and painful case is one of a child aged 6 years, who died on the 19th instant, in Williams' rope ground, from maglinant scarlet fever. On inspection, I found that the mother, a widow, receiving parochial relief, occupied a small hovel, for which she paid a rent of 1s. 6d. per week. The room in which she and her five children slept, (the eldest a youth of 16, a girl of 14, another of 12, the deceased and a younger one) was less than 7 ft. square, with no ventilation. How any of them have escaped is indeed a marvel, as the amount of air was not sufficient for more than one person; in addition to this fact, the state of the exterior atmosphere in this place, was offensive and injurious to health, in consequence of a number of pigs and an accumulation of dung. I have repeatedly certified these premises as a nuisance, and from time to time the Magistrate has ordered the removal of the pigs, which in mockery is complied with, but only to be replaced by others. I urge upon the Vestry the necessity for some more stringent and effective measure. On inquiry, I find that another case of fever has occurred in one of the other houses in this yard; there is a large

tub sunk in the ground, partly filled with black putrid stinking water, the remains of two cats, and other indiscribable filth.

The condition of the Hide and Skin market, I regret to say, is in no degree improved, not the slightest measure having been adopted for rendering it creditable as it might be, instead of a disgrace to Bermondsey. It is filthy to the sight, and most offensive to the smell; I certify it as a nuisance.

There are some pits in an unoccupied tan yard in Baalzephon street, which require to be filled up; at times they are offensive; a notice to the owner, would I believe be effectual.

I am, Gentlemen,

Your obedient Servant,

JOHN CHALLICE, M.D. Medical Officer of Health.

#### TO THE VESTRY OF BERMONDSEY.

October 21st, 186I.

Mr. Chairman and Gentlemen,—In consequence of complaints made to me, I have inspected the premises of Mr. Hayland, in the Grange. They are but little used, the pits are filled mostly with stale bark liquor, and have become fetid and offensive; pures are occasionally used, and as the tubs in which the process is carried on, are close to the public thoroughfare, and the windows are nearly all broken, the emanation is not only most disagreable, but is also injurious to the health of passers by.

The condition of the Dock of St. Saviour's, has been complained of by Messrs. Vogan. I have inspected the place, and cannot report otherwise than I did to this Board, on the 4th of August, 1856. The report was as follows:—"St. Saviour's Dock, is at low water; there is a large mass of corrupting filth, emitting a most offensive and sickening stench, which is a very serious and dangerous nuisance, not only to the crews of the vessels and labourers in the dock, but also to the adjacent neighbourhood."

During the last two weeks, the health of our district has not been unsatisfactory, although we have in some degree suffered from the unusual mildness of the season. In the week ending October 5th, the mortality was 25, the average being about 24½ in the week ending October 12th, the deaths were 23. the corrected average being 27. Scarlatina of rather a severe form prevails to some extent, and whooping cough still continues to add to our mortality.

I am, Gentlemen,

Your obedient Servant,

JOHN CHALLICE, M.D.

Medical Officer of Health.

#### TO THE VESTRY OF BERMONDSEY.

November 4th, 1861.

Mr. Chairman and Gentlemen,—The week ending the 19th ult., was remarkable for the low rate of mortality in our district, the deaths were but 14, the corrected average being within a fraction of 26—we had 1 death from scarlatina, and 1 from typhus, but were exempt from any fatal case of other zymotic disease. The births in the week were 43.

In the week terminating the 26th inst., the mortality was considerably augmented, and zymotic diseases, typhus, scarlatina and diarrhœa, each contributed to the increase, the deaths were 28, the corrected average being within a fraction of that number.

I have certified the existance of an aggravated nuisance in Messrs. Baker's tan-yard, in the Grange; proper measures are not taken in the way of precaution or mitigation of this nuisance, which is one of the worst I have met with it arises from old "soaks," and "pures," mixed together, and when the pits are emptied the whole neighbourhood is impregnated with fetid gases.

I am, Gentlemen,

Your obedient Servant,

JOHN CHALLICE, M.D. Medical Officer of Health.

November 18th, 1861.

Mr. Chairman and Gentlemen,—In the week ending November 2nd, the deaths were 27, the corrected average is 24. Scarlatina was fatal in 3 cases, typhus in 2, and diptheria in 1 instance.

For the week ending November 9th, the deaths were 26, being slightly below the average. Measles proved fatal in 3 instances, whooping cough in 3, and scarlatina in 1.

There were three deaths in St. Mary Magdalen district, without medical certificates—1 at 36, Grange walk, 1 at 53, Little George Street, and 1 at 33, Russell street.

I regret to report, that there is no improvement in the premises of Messrs. Baker. The portion of the yard by the pure pits is almost unendurable, from the stench arising from them; there was a heap of skins which had been in soak, giving off a most intolerable odour. The road in the yard is unpaved.

It is gratifying to pass from these premises, to those of Messrs. Husband, opposite, which are now most materially improved. The same may be justly said of the Leather Market; the improvement here is most marked, but not quite completed. I consider the frequent washing and cleansing of a large surface of pavement, which is constantly saturated with blood, to be essential to the health of the district.

I urge upon the Vestry, this important point, inasmuch as there is still no provision made for cleanliness, no water supply yet provided.

There is a continuance or recurrence of a nuisance in Austen's rope grounds, from pigs being kept; this is in defiance of the Magistrate's order.

Complaint has been made to me of a very offensive vapour, arising from Whitworth's, in the Market Garden Ground, Jamaica Row; as this is said to be produced only at intervals, and as I have not been able to witness the process complained of, I am not at present prepared to report more definitely.

I am, Gentlemen,
Your obedient Servant,
JOHN CHALLICE, M.D.
Medical Officer of Health.

December 2nd, 1861.

Mr. Chairman and Gentlemen,—The deaths in the week ending November 16th, were 28, the corrected average being within a fraction of 29. Whooping cough was fatal in 2 cases; diarrhœa, diptheria, scarlatina and measles each in 1 case.

The mean temperature of the atmosphere during the week following, was unprecedently low, being nearly 4 degrees below the average for the last 43 years. On Saturday, the 16th, the thermoneter stood at 7 degrees below freezing point. The effects of this undue severity, and the sudden change, became painfully evident upon the health and lives of our population in the succeeding week, when the deaths rose to 41, the corrected average being within a fraction of 30. Those with affections of the lungs, especially suffered, and there were no less than 10 deaths from bronchitis: as is almost invariably the case, the young and the aged especially suffered, 7 were children and infants, of 2 years, and under. A master tailor died aged 86; a clerk aged 77; and the widow of a shoemaker, (in the Workhouse,) aged 78. Whooping cough was fatal in 3 cases, typhus in 2, scarlatina in 4, and measles in 3.

I am happy to report a material change for the better, on the premises in the Grange; the offensive pits are no longer in use, the pures are discontinued, the yard is in better condition, and Mr. Baker assures me that he will set about the paving, forthwith.

I have certified 4 cottages in Austin's Rope Ground, as filthy, and unfit for human habitation.

DHIN CHARLICE M. II.

I am, Gentlemen,

Your faithful Servant,

JOHN CHALLICE, M.D.

Medical Officer of Health.

December 16th, 1861.

Mr. Chairman and Gentlemen,—I have on more than one occasion reported to you, and commented upon, the unsatisfactory condition of the Skin Market.

I visited the place this morning, and regret to say, that it was dirty and offensive. This condition betokens a carelessness, if not a wilful disregard on the part of those to whom its proper keeping is entrusted, as to the health of those living in the immediate district.

The entire absense of water renders the place a nuisance injurious to health, and as such I have certified it.

I have also certified to the existence of a nuisance, arising from a very considerable accumulation of horns, which are in a stinking condition, at premises in the Leather Market, occupied by Messrs. Boutcher and Mortimore.

The state of Queen street, Bermondsey New road, is altogether bad, the footway and roadway are filthy.

Alice Street, adjoining, is if possible in a still worse state, surface water, lying in dirty pools, and mud and muck in the road are ankle deep. There are three houses in Green walk, Bermondsey New road, totally unfitted for human habitation, the walls are saturated with damp, and a most unwholesome and fetid odour pervades them. There is an open, and offensive privy, and the corner of the yard where it is situated, is covered with unmentionable filth; as a matter of course, fever has lately prevailed here.—The roadway is filthy.

The deaths in the week ending November 30th, were slightly below the average, they were 29, as compared with a corrected average of 31. Scarlatina was fatal in 3 cases, measles in 2, diptheria and whooping cough in 1. In the week ending December 7th, the deaths were 28, the corrected average being within a fraction of 31. Scarlatina was fatal in 2 cases; the births in the fortnight were 37.

I am, Gentlemen,

Your obedient Servant,

JOHN CHALLICE, M.D.

Medical Officer of Health.

TABLE shewing BIRTHS and DEATHS, in the three Districts of BERMONDSEY, from January, 7th, to December 28th, 1861.

TERRET	St. J	ames's.	Leather	Market.	St. Mary Magdalen		
.1881 AMI Am	Births.	Deaths.	Births.	Deaths.	Births.	Deaths.	
January 5	21	13	15	4	21	9	
12	24	14	22	8	19	15	
19	23	6	14	10	14	14	
26	22	12	8	11	13	16	
February 2	16	12	19	7	14	7	
9	12	7	12	6	17	5	
16	22	4	3	10	13	9	
23	22	6	10	10	11	6	
March 2	17	4	15	8	13	10	
9	24	14	17	6	18	9	
16	27	12	14	. 8	15	9	
23	22	6	13	5	12	9	
30	16	9	20	3	15	6	
April 6	25	11	4	6	16	12	
13	22	11	12	0	22	9	
20	18	7	18	5	13	8	
27	26	6	10	7	8	9	
May 4	13	8	15	13	17	10	
11	19	7	11	7	6	8	
18	25	9	12	6	15	9	
25	29	9	12	9	15	7	
June 1	17	16	13	9	18	3	
8	13	3	12	8	11	5	
15	18	5	9	11	25	7	
22	16	8	19	5	16	6	
29	24	bu 7 bu	13	000 5	10	5	
	23	Q	11	6	10	4	
July 6	24	7	11	7	12	13	
		74	15	8	13	9	
20	27	11	17	9	23	10	
2,	28	11	11	12	10	10	
August 3	22	W 7001	18	9	16	19	
10	13	6	11	6	14	5	
17	25	13	11	14	8	14	
24	20		12	4	8	7	
31	11	13	12	8	0	018	
Sept. 7	27	71	12	6	14	11	
14	13	7	11	4	10	7	
21	15	6	12	7	8	0	
28	22	13	13	0	ET 77 - 23233 - 1	5	
October 5	21	11	15	8	25 21	8	
12	22	1	15	4	8	6	
19	20	4	15	6	0.50	13	
26	22	9	14	13	12 18	6	
Nov. 2	21	8	22	6	9	8	
9	17	12	13	9		10	
16	24	9	15	15	12	10	
23	23	16	15	8	11		
30	21	6	3	7	16	15	
Dec. 7	24	13	12	1	11	8	
14	15	7	17	11	14	13	
21	17	9	13	11 8	16	12 11	
	13.3			75	117		
28	21	8	9		12	11	

Table of DEATHS, compared \* with corrected Average.

		Deaths.	Corrected Average.	3 22 2 - 2 3	Deaths.	Corrected Average.
January	21	26	31	Brought forward	644	670
-		37	26	July 15	18	22
February	4	30	26	August 5	27	27
		39	26		31	25
	18	26	31	19	29	29
		11	27	// *****	35	33
March	14	23	27	September 16	17	34
	<i>"</i>	22	26	11	41	31
April	1	22	27		24	33
30	<i>u</i>	29	29	# *****	27	36
	<i>"</i>	29	23	October 7	24	33
		20	25		17	33
	14	18	29	#	29	34
	p	29	27	21	25	- 24
May	5	27	27	#	23	27
1 4 8		20	25	November 4	14	26
	#	24	26		28	28
	20	31	25	18	27	24
		22	22		26	27
June	3	24	22	December 2	28	29
		25	22	<i>u</i>	41	30
	17	28	23	16	29	31
		16	24	"	28	31
July	15	23	24	Jan. 6, Three weeks	83	84
2 3	H	19	25	0 0 1		
	<i>u</i>	17	25	Total	1315	1401
Carrie	d forward	644	670	19 10000		

<sup>\*</sup>The corrected average of deaths, is calculated on the assumption, that the increase of the population has been 10 per cent in the last ten years, now as the increase in the population of Bermondsey, has been in that period, about 20 per cent, it follows, that our proportionate diminution of deaths, is still greater than is shewn by the above table.

I have been favored with the following interesting Report, from Mr. Tough, the Superintendent of the Bermondsey Baths and Washhouses, an Institution exercising a most salutary Influence upon our Population.

	Opened June 24th, 1854					Washers		
				N 24 CH - 27 CH OT OT OT OT OT	Men.	Women.	Total.	
40 Weeks ending 24th March, 1855				60,237	4931	65,168	11,492	
52	"	22nd	"	1856	77,097	6685	83,782	22,376
53	"	28th	"	1857	86,686	6916	93,602	26,117
52	"	20th	,,	1858	89,776	6886	96,662	23,891
53	,,	26th	,,	1859	81,849	6675	88,524	26,063
52	,,	24th	,,	1860	82,901	6341	89,242	27,150
52	"	23rd	,,	1861	63,709	4764	68,473	29,740
Verse	10.1	1	Tota	1	542,255	43,198	585,453	166,829

WM. TOUGH, Superintendent.

TABLE,

Shewing the BIRTHS and DEATHS in Bermondsey, from January 5th, to December 28th, 1861, with the Mortality from Zymotic Diseases, and the Deaths at various Ages.

Week en	ding	Births.	Deaths.	Measles.	Scarla- tina.	Hooping Cough.	Small Pox.	Typhus.	Diarr- hœa.	Under 2 years.	From 2 under 20	From 20 under 40	From 40 under 50	From 50 under 70	From 70 and upwards.
January	5,	57	26			3		1	1	10	4	4		2	74, 75, 80, 72, 71, 89
AT	12,	65	37	1	1	5	1		1	12	6	5	1	9	77, 84, 71, 77
	19,	51	30	1		7			1	8	5	4	i	7	84, 76, 91, 86, 83
11	26,	43	39		1	7		2	1	15	7	5		8	70, 79, 70, 76
February		49	26			2				12	1	3	1	4	79, 75, 82, 70, 89
-11	9,	41	18							8	1	4	2	0	
H	16,	38	53			3		1		7	4	6	1	5	
	23,	43	22		2			1.1	1.5	6	4	4	2	3	77, 76, 75
March	2,	45	22	1		5			1	6	6	2	2	3	71, 76, 72
H	9,	59	29			3			**	12	3	3	2	5	79, 71, 76, 80
	16,	56	29			3		1:		15	2	6	1	2	88, 79, 86
B	23,	51	20	**		**		1	**	5	6	3	2	2	74, 71
A wail	6,		18		**	6		**		9	5	2		1	72
April	13,	56	29		1	2	**			14		3	3	3	72, 75, 74, 77, 85, 79
"	20,	49	27 20			6				14	4	1	2	3	90, 79, 87
	27,	49	22			4				5	5	3	2	4	78
May	4,	45	31	3		1 10	**	1 0		8	4	4	1	3	89, 72
n ay	11,	36	22			10		2	**	16	7	2	1	2	74, 75, 79
"	18,	52	24			5	1	**		8	5	1	5	3	
	25,	56	25	**		5		2 2	**	8	7	1	1	4	77, 73, 70
une	1,	48	28		i	6				9	7	6		2	72
li .	8	36	16	**	î	2				14	4 5	3	2	3	76, 86
	15,	52	23		1	2	**			9	5 6	2 5	1		88
	22,	51	19	**	î	2			**	12	1	1	1 2	1	82
#	29,	47	17		-	ĩ		i	1	7	4	2	3 2	1	70 84
July	6,	44	11					î	î	7	6	1		3	72
	13,	47	27			2		2	î	7	9	5	**	3	71, 79, 75
H	20,	55	31	1	1	2			4	15	6	6		2	79, 82
	27,	68	30						5	18	4	4	**	3	76
August	3,	43	29			3		1	5	13	5	2	1	3	74, 71, 84, 80, 75
H	10	47	35		3	1		1	7	14	11	3	2		75, 79
11	17,	50	17						5	2	2		3	2	71
	24,	39	41		1	1		2	10	20	6	4	2	4	81, 76, 78, 71, 70
	31,	31	24		1	1			7	13	5		. 1	2	85, 89, 80
Septembe		47	27	**	2				6	12	8	2		4	81
N	14,	31	24	1	4			2	4	10	6	2	3	2	70
N	21,	36	17		3	1		1	1	9	- 5		1	1	70
Not a hou	28,	43	29	**	2	**		2	2	11	4	6	4	4	
October	5,	61	25		1	3			1	9	8	4	2		78, 84
H	12,	58 43	23		3	1			2	9	9	1		1	75, 72, 81
	19,	48	14		1 2	**		**		6	3		2	2	77
Novembe	26,	61	28	1	3	1		3	2	9	8	6	1	4	
	9,	39	27		3	2		T		11	10	1		4	72
	16,	51	26 28	3	1	3 2				15	5	3		2	78
"	23,	49	41	3	4	3			1	13	6	1	1	4	74, 74, 73
. H	30,	40	29	2	3	1				14	12	2	3	7	86, 77, 78
ecember		47	28		2		1			7	6	4	2	4	77, 74, 71, 83, 72, 84
W COCIII OCI	14,	46	24	2	3		1			7	5	3	7	1	71, 70, 81, 72, 84
	21,	46	32		3	5		2	2	12	3	4	1	2	74, 85
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