

PLEASE CIRCULATE THIS PAMPHLET.

*Borough of Newcastle-upon-Tyne.*

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NOTICE

ON THE

PREVENTION OF INFECTIOUS DISEASES

AND

RECOMMENDATIONS

IN FAVOUR OF

VACCINATION & RE-VACCINATION.

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PRINTED BY THE AUTHORITY OF THE SANITARY COMMITTEE OF THE  
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1881.

BOROUGH OF NEWCASTLE-UPON-TYNE.

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PREVENTION OF INFECTIOUS DISEASES.

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NOTICE.

ALL persons in whose households there is Infectious Disease, such as SMALL-POX, SCARLET FEVER, "FEVER," MEASLES, &c., are CAUTIONED against the REMOVAL of CLOTHING or OTHER ARTICLES FROM THEIR HOUSES, except by the Officers of the Corporation, for the purpose of being purified in the Disinfecting Apparatus.

SUCH ARTICLES MUST NOT ON ANY ACCOUNT BE TAKEN TO ANY OF THE PUBLIC WASHHOUSES.

The Public are also cautioned against permitting any person whilst recovering from any such disease to leave his house until he has been certified by his medical attendant as being quite free from fear of conveying Infection to others; and until his Clothing, Bedding, and the infected Premises have been thoroughly disinfected to the satisfaction of the Medical Attendant or the Medical Officer of Health.

Wilful exposure of any infected person or infected article of any kind, so as to endanger the public health, renders the offender liable to a heavy penalty.

Proceedings will be taken against any person offending against the Law.

Printed instructions for the protection of the healthy from the infected sick in households, and the precautions recommended, may be had at my Office in the Town Hall. I shall be happy to give any further advice or assistance in my power respecting the cause of outbreaks of Infectious Disease or the means of preventing their spread.

#### RE-VACCINATION.

As is well known, Small-pox has for a considerable time been epidemic in London. A few months ago the disease broke out in Newcastle. Fortunately the cases in this town have not been numerous, and it is hoped that under proper precautionary and protective measures the outbreak may soon be extinguished. But the disease has shown itself in several parts of the town, and has caused about thirty attacks, of which three have terminated fatally.

This is a warning that none should disregard. It behoves us, while we may, by every available means to protect ourselves and those around us against the foe of whose malignancy we had, but ten years ago, a terrible experience.

Against no infectious or "catching" disease other than Small-pox has man in his own person the means of guarding himself. Isolation and disinfection of the patient and his surroundings are the only processes by which other plagues can be stayed; and these measures are so difficult of proper application, so irksome, so little believed in, that they can seldom be said to obtain a fair trial, and not unfrequently fail in their effects; but against Small-pox

a man may shield himself and his children through life, so that they may live, eat, and sleep amid the disease without fear, *because they have been made insusceptible to its effects!*

This shield is vaccination.

Heads of families are earnestly recommended to have every member of their households who have reached seven years of age re-vaccinated without delay. The comparatively few individuals who through negligence or ignorance have not been vaccinated at all, or their guardians, are urged, as they value their health or that of those dear to them, to seek, while there is yet time, that protection which is open to them, not only free of charge, but of which, for their own and the public good, they are by law required to avail themselves. To those whom prejudice, founded on "a little knowledge," has tempted to break that law, let the unquestionable rhetoric of the facts, which my own opportunities for observation enable me to present in these pages, appeal. What object can I, or medical men in general, have in distorting such facts? And yet the almost universal consensus of professional opinion in favour of vaccination, based though it be on personal experience and the stubborn statistics of large institutions such as the various Small-pox hospitals in the metropolis, is discarded by some, in favour of the rash, biassed, and often (it is to be feared) unprincipled, assertions of individuals, who have had neither the opportunity for observation, nor the medical training necessary to turn such opportunity to account\*.

\* As an example of a section of the class from which the opposition comes, it may be stated that an anti-vaccination agitator in this town has been both vaccinated and re-vaccinated, without, so far as I know, the slightest cause for dissatisfaction.

and some of whom attempt to lay at the door of vaccination the diseases of themselves and their offspring due to their own misconduct.

Some vaccinations are more efficient than others. The protective influence of primary vaccination, *i.e.* the vaccination of a person for the first time, is in exact relation to the quality, and (within a certain limit) the quantity of the permanent scars left by the operation. Thus, a distinct vaccination-mark is better than a faint one; two marks are better than one, and three than two, and so on. By the term "better" is to be understood *more powerful*, and probably also *more lasting in protective agency*.

None but successful vaccinations, *i.e.* those leaving permanent scars, can be counted.

Owing to changes in the system, the effect of vaccination in infancy is liable to wear out. This is sometimes the case even with Small-pox itself, of which disease I have treated eight persons for second attacks. It is therefore advisable to have the operation repeated at a later age. Under ordinary circumstances it is sufficient if it be done for the second time at the age of fourteen or fifteen years; but in times of danger, all persons of seven years and upwards should be re-vaccinated. This re-vaccination, if successfully performed, may be regarded as almost absolutely protective for life.

Abundant proof of the accuracy of the foregoing statements may be found in Government Reports and other reliable publications. Having had under my own care at the Newcastle Fever Hospital upwards of 900 cases of Small-pox in the epidemic of 1871-72, it may be useful to give my experience of this epidemic:—

The mortality of the vaccinated was ... 9.5 per cent.  
That of the unvaccinated was ... 42.4 „

The subjoined statistics are taken from my Report for the 68th year of the Hospital (May, 1871, to April, 1872), which included the heaviest portion of the epidemic:—

49 vaccinated cases died.  
112 unvaccinated „

In 48 of the fatal vaccinated cases noted—

25	had only 1 cicatrix, or scar, of former vaccination.		
10	had 2 cicatrices	„	„
7	„ 3 „	„	„
3	„ 4 „	„	„
3	„ more than 4	„	„

As evidence in favour of re-vaccination, the following is quoted from the same Report:—

The best proof of the protection afforded by re-vaccination is shown by the nurses and servants in the Hospital. Each was re-vaccinated by myself before taking duty; and though, from repeated changes, we had many nurses and domestic servants, not one caught Small-pox. On the other hand, shortly after the return of fever, which had been totally absent for several months, three nurses were struck down with typhus, and a fourth fell a victim to the same disease about a month later.

Further, although cases were received from nearly every public institution of the town, including the Infirmary, Child's Hospital, Blind Asylum, Lying-in Hospital, the Home at Brandling Place, Penitentiary, Gaol, Vagrant Ward, Police Stations, hotels, factories, schools, ships, and even from the Byker Small-pox Convalescent Home, not one single official or servant connected with the Fever and Small-pox Hospitals has contracted Small-pox whilst doing duty during this epidemic.

The experience of the past is being confirmed by the outbreak now going on. The following is a copy of a

reply to an inquiry for information as to the cases of Small-pox that had up to the date of the letter occurred in Newcastle:—

[COPY.]

HEALTH DEPARTMENT, TOWN HALL,  
9th May, 1881.

DEAR SIR,

In reply to yours of the 5th inst., I beg to send you the subjoined particulars of the cases of Small-pox recently under my care at the Newcastle Fever Hospital:—

Ten cases have been admitted. Of these two were unvaccinated, of which one (a child) died. This case was confluent and very severe. The other unvaccinated case is one of the semi-confluent form of the disease.

Of the eight vaccinated cases one died, viz., that of a woman aged 58 years. The vaccination cicatrix of this patient, if such it really was, was so small and indistinct as scarcely to be perceptible, and had not the usual appearances of such a scar. The woman said that she had been vaccinated in infancy, but there was not the usual evidence that this had been properly done.

With regard to the remaining cases, the mildest have been those in which the vaccination marks were most distinct. (Your servant was one of these.)

The known vaccinated cases (even the confluent) have all been milder in character, and have had smaller and more superficial pustules, and have run a shorter course, than the known unvaccinated.

None of the vaccinated cases are likely to be followed by permanent pitting or scars of any kind, but this is not the case with the unvaccinated patient now likely to recover.

I have been unable to gain information about cases in private practice.

In a report of mine issued during the epidemic of 1871-2, I mentioned the fact that Small-pox was a disease which, so to speak, *picked out* the unvaccinated from the vaccinated members of the community. This has been exemplified in the recent outbreak in the case of one of your own family (unvaccinated), who was, to the best of my knowledge, the first to suffer after the disease broke out in a household in Byker, into which it had been introduced by a sailor from Antwerp. In the Byker household, in which three other cases occurred, of which two were fatal, all were removed to Hospital, and are included in the preceding statistics. The incidence of the disease in this family was exactly in the inverse ratio of protection from vaccination. Thus, the fatal unvaccinated case was that of a strong, previously healthy child of three years of age; the fatal alleged vaccinated case was that of a woman of advanced age, in whom all protection (if vaccination had ever been properly done, which is not likely) had become exhausted through lapse of time. The third case (very mild) was that of a man of about 35 years of age having two cicatrices of vaccination in infancy. The fourth and last member of the household (vaccinated) escaped the disease.

With regard to the protective influence of vaccination, I stated to you, on a former occasion, that throughout the epidemic of 1871-2 not one of my nurses or servants at the Fever Hospital (all of whom were vaccinated before entering on duty) took Small-pox; whereas, in my experience of the Hospital of nearly twenty years, very few nurses exposed to the contagium of typhus (which is usually considered a less infectious disease than Small-pox) have escaped. This has been confirmed by recent experience, not one of the staff having suffered from Small-pox.

I am, Dear Sir,

Yours faithfully,

HENRY E. ARMSTRONG,

MEDICAL OFFICER OF HEALTH.

To.....

A still later illustration of the propensity of Small-pox to single out the unvaccinated has come under my notice. In a family of six persons, of whom two are unvaccinated, one of the latter is now convalescent after, and the other is undergoing, a severe form of the disease. After their removal to Hospital a third member of the family (vaccinated) became unwell, and in a few days developed five or six papules of modified Small-pox. This case was very slight, and might almost have been overlooked but for the preceding cases in the house. The other members of the family have hitherto escaped infection.

The fact that in some epidemics more vaccinated than unvaccinated persons actually contract Small-pox is, if considered alone, apt to mislead, since it might, at the first glance, be regarded as evidence against the efficacy of vaccination. But when considered in connection with the other fact that about 95 per cent. of the population are vaccinated, it will at once be seen that the proportion of vaccinated cases of Small-pox to vaccinated persons in the community is vastly below the proportion of unvac-

inated cases of the disease to unvaccinated persons. Thus if, for example, in a population of 10,000 persons, of which 95 per cent. are vaccinated, an epidemic causes 300 cases of small-pox, viz., 200 in vaccinated and 100 in unvaccinated people,—although the actual number of the former cases is double that of the latter, the relative proportion is:—

Vaccinated cases to vaccinated persons ... ..	2·1 per cent.
Unvaccinated cases to unvaccinated persons ... ..	20·0 „

181, or about 3·1 per cent. of the children born in Newcastle in the year 1879 remained, according to a recent return, unvaccinated at the end of the year.

Vaccination or Re-vaccination is performed free of charge at the following Public Vaccinating Stations:—

*Eastern District.*—By Mr. H. W. NEWTON, Surgeon, on TUESDAYS, at 2 p.m., at the “Grace Darling” British Workman, Gibson Street.

*Central District.*—By Mr. JOHN HAWTHORN, Surgeon, on WEDNESDAYS, at 3 p.m., at Nun Street.

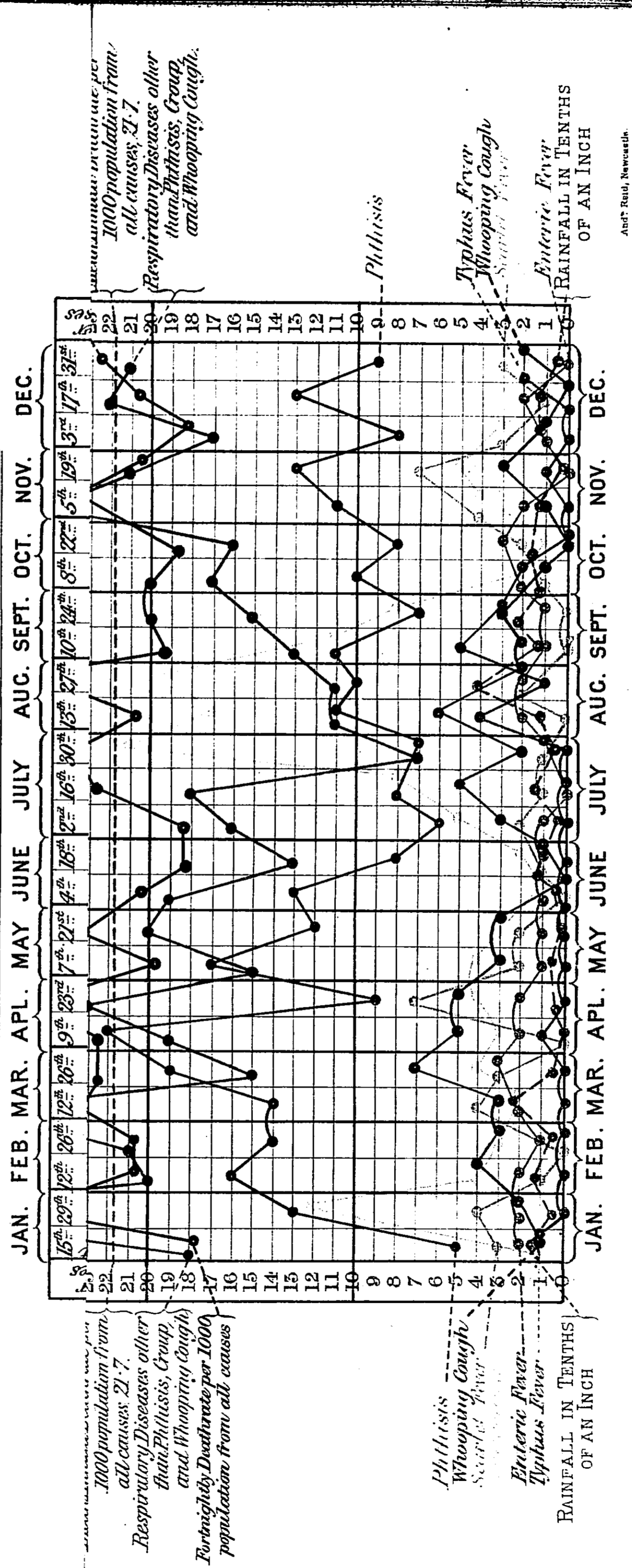
*Western District.*—By Mr. ANGUS, Surgeon, and Mr. DAGLIESH, Surgeon, on MONDAYS, at 3 p.m., at the Christian Meeting House, Gloucester Street.

HENRY E. ARMSTRONG,  
MEDICAL OFFICER OF HEALTH.

*Health Department,  
Town Hall, Newcastle-upon-Tyne,  
14th June, 1881.*

# BOROUGH OF NEWCASTLE UPON TYNE, 1881.

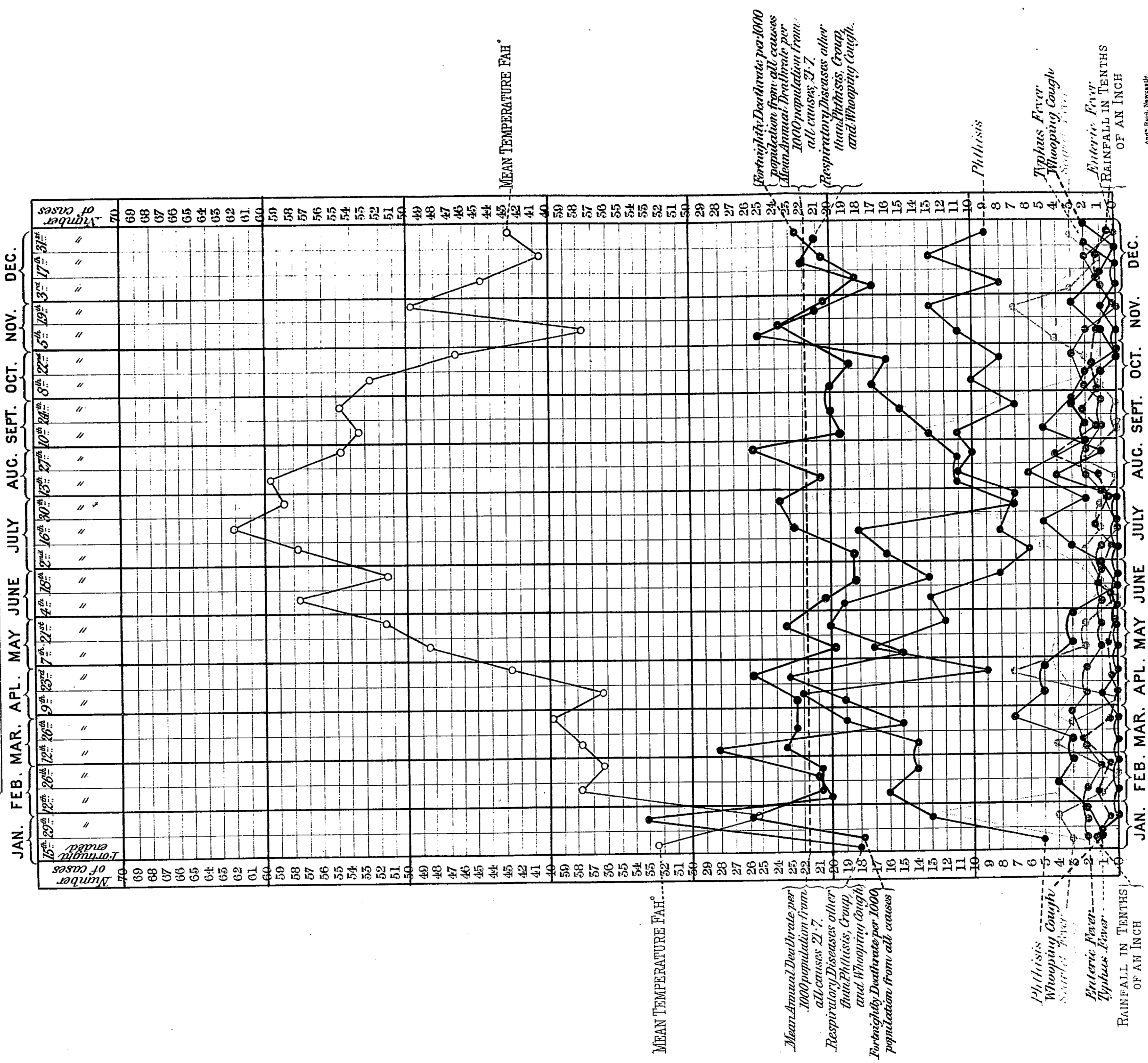
Fortnightly Diagram of Deaths from principal Zymotic Diseases and Diseases of the Respiratory Organs with Temperature and Rainfall.



And: Reid, Newcastle.

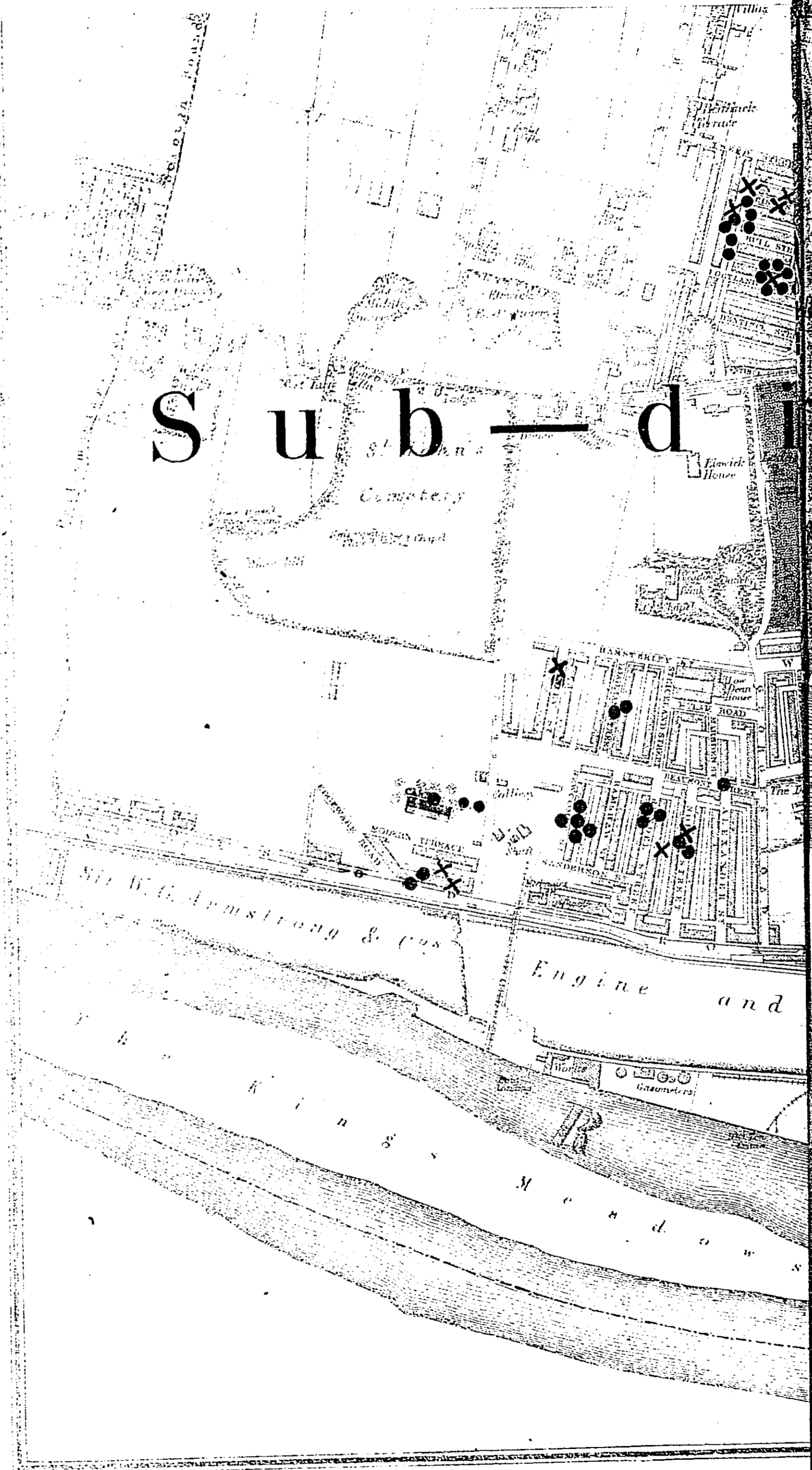
# BOROUGH OF NEWCASTLE UPON TYNE, 1881.

Fortnightly Diagram of Deaths from principal Zymotic Diseases and Diseases of the Respiratory Organs with Temperature and Rainfall.

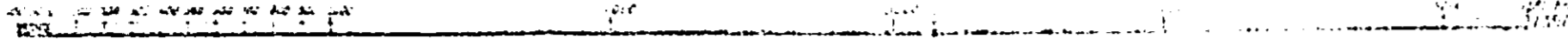




# S u b — d i



Scale 8 inches to 1 Mile



G O S F O R T H P A R I S H

DUKES MOOR

ST. ANDREW'S

CASTLE

RECREATION GROUND

Area 15 Acres

Bull Park

MOND

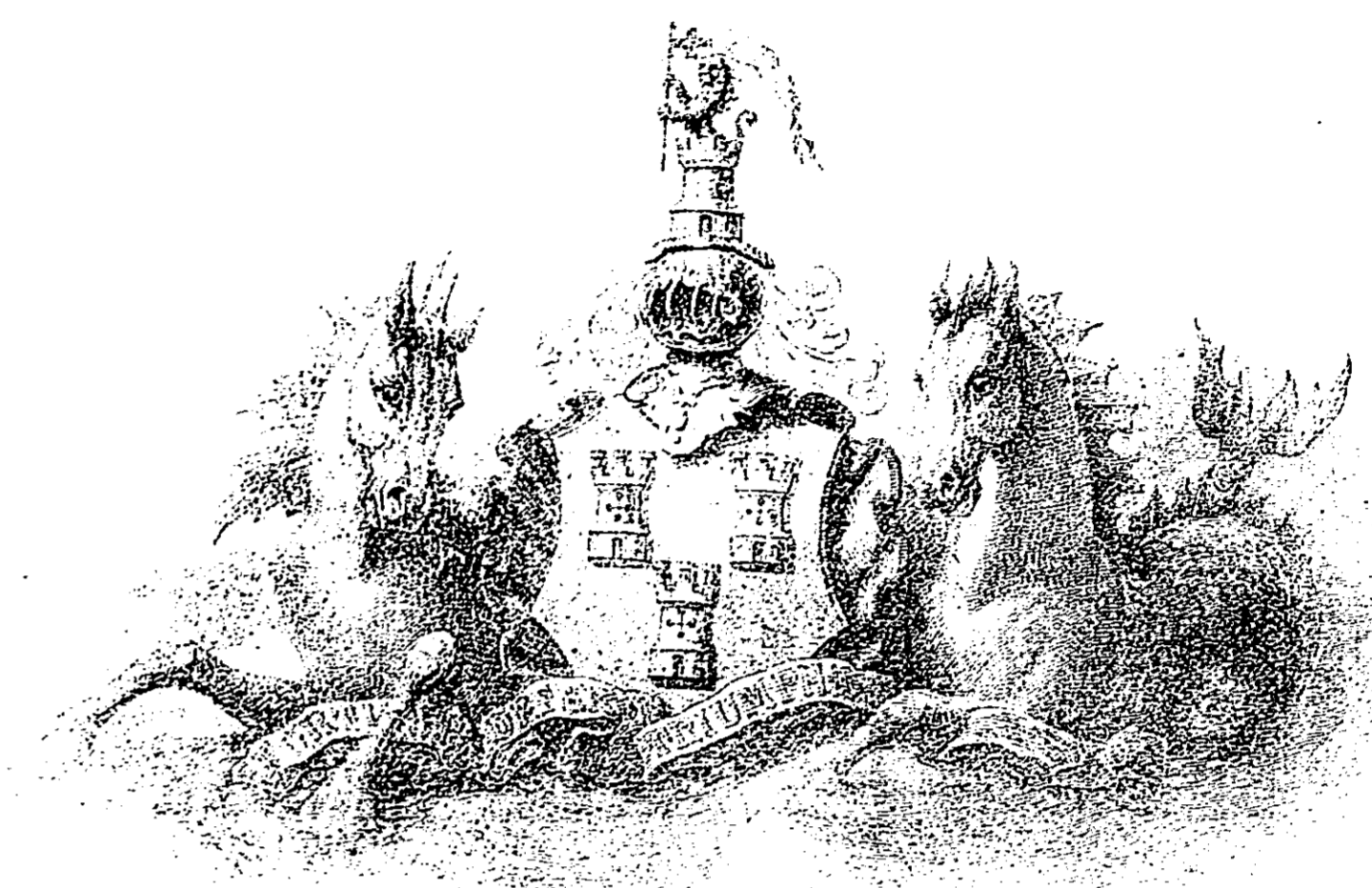
All-Saints Cemetery

St. Andrew's Cemetery

Parliamentary & Municipal Boundaries

Parliamentary & Municipal Boundaries

Parliamentary & Municipal Boundaries



PLAN  
 OF THE BOROUGH OF  
 NEWCASTLE UPON TYNE.

Reduced from the Actual Survey of the  
 BOROUGH ENGINEER.

Scale 8 Inches to 1 Mile

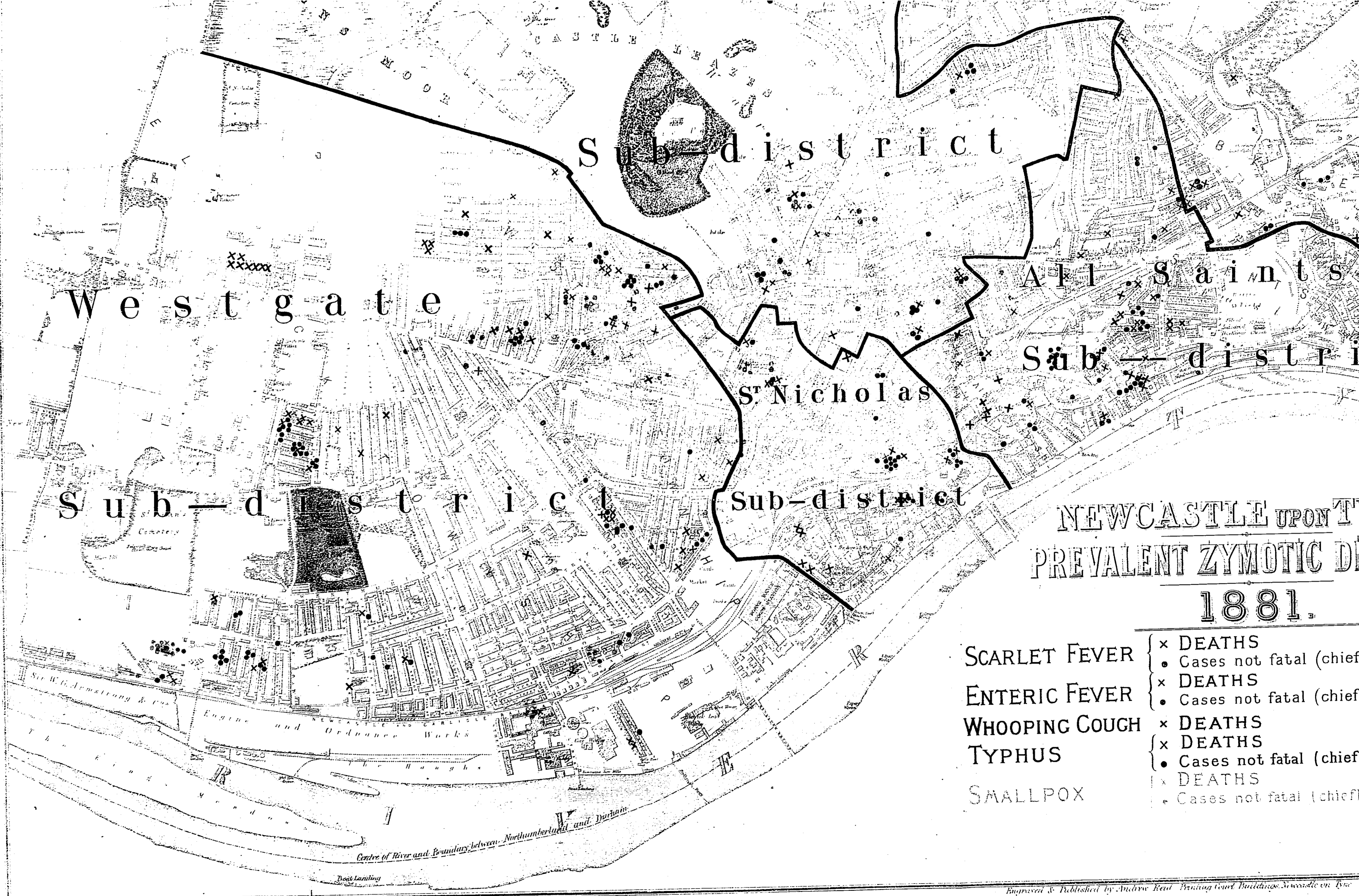
1882.

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 NEWCASTLE UPON TYNE.

EXPLANATION.

Borough Boundary

Parish and Township Boundary



NEWCASTLE UPON T<sup>E</sup>  
 PREVALENT ZYMOTIC DI  
 1881.

- |                |   |                             |
|----------------|---|-----------------------------|
| SCARLET FEVER  | { | x DEATHS                    |
|                |   | • Cases not fatal (chiefly) |
| ENTERIC FEVER  | { | x DEATHS                    |
|                |   | • Cases not fatal (chiefly) |
| WHOOPING COUGH | { | x DEATHS                    |
| TYPHUS         |   | • Cases not fatal (chiefly) |
| SMALLPOX       | { | x DEATHS                    |
|                |   | • Cases not fatal (chiefly) |

EXPLANATION.

Borough Boundary

Parish and Township Boundary

County Boundary

Existing Tramways

Proposed Tramways



All Saints Sub-district

Sub-district

NEWCASTLE UPON TYNE,  
PREVALENT ZYMOTIC DISEASES,  
1881.

- SCARLET FEVER { x DEATHS  
• Cases not fatal (chiefly in Dispensary practice)
- TYPHOID FEVER { x DEATHS  
• Cases not fatal (chiefly in Dispensary practice)
- WHOOPING COUGH { x DEATHS  
• Cases not fatal (chiefly in Dispensary practice)
- TYPHUS { x DEATHS  
• Cases not fatal (chiefly in Dispensary practice)
- SMALLPOX { x DEATHS  
• Cases not fatal (chiefly in Dispensary practice)

N.B The Areas Tinted Green are the Public Parks  
and Open recreation Grounds of the Borough

Henry G. Armstrong  
Medical Officer of Health

CITY AND COUNTY OF NEWCASTLE-UPON-TYNE.

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REPORT

OF THE

MEDICAL OFFICER OF HEALTH

WITH

TABLES AND DIAGRAMS,

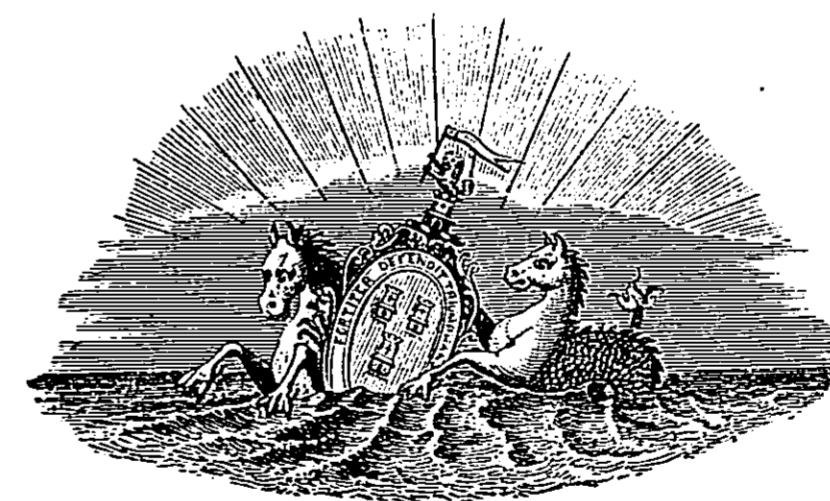
OF THE

SICKNESS AND MORTALITY,

SANITARY RETURNS, PLANS, FORMS, &c.,

FOR

THE YEAR 1882.



Newcastle-upon-Tyne:  
ANDREW REID, PRINTING COURT BUILDINGS, AKENSIDE HILL.

1883.

