

'Green biased' yellow fever swept through Irish immigrants in 19th century US

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New research by University of Warwick historian Dr Tim Lockley has found why yellow fever had a green bias in 19th century fever outbreaks in the southern states of the US. Almost half of the 650 people killed by yellow fever in Savannah Georgia in 1854 were Irish immigrants.

Dr Tim Lockley's study is based on four sources: the burial records of Laurel Grove cemetery; the records of the city's Catholic cemetery; the minutes of Savannah's Board of Health; and published lists of the dead in the Savannah Morning News. These sources yielded the names of 650 people who died of yellow fever between early August and the end of November 1854, of which 293 were [Irish immigrants](#) (and 10 others were of unknown nationality).

Savannah was not the only southern US city to witness this Irish susceptibility to yellow fever. In nineteenth-century New Orleans annual yellow fever outbreaks killed many Irish and German immigrants. This encouraged a view of yellow fever as less serious than other illnesses such as typhoid, and for some locals it was a welcome guarantee against being overrun by "foreigners".

Others were simply dismissive about the appearance of yellow fever as long as it was only affecting the Irish. Savannah doctor Phineas Kollock said at the time :

'..the extremely [hot weather](#) . . . has at length developed yellow fever among our Irish population. The disease is mostly confined to the Eastern part of the city. I do not feel apprehensive of its extending its ravages very much, although it is probable that we shall have cases occurring until frost."

However a week later his view had changed. The fever had become particularly "malignant" and he then wrote that "I have determined therefore to send my family to Habersham [County] immediately."

Yellow fever is a [tropical disease](#), endemic in West Africa, the Caribbean and parts of Latin America. It is a virus that cannot be transmitted via normal human-to-[human interaction](#) but requires a vector, in this instance a mosquito. In the Americas the culprit is the female *Aedes aegypti* mosquito. Once there are no more susceptible humans or no mosquitoes, then the disease cycle is broken and the epidemic ends. In Savannah the mosquitoes would have been killed by the first frosts that were reported on 13 November 1854, but even before then mortality had been declining for more than a month due to the reduced number of new victims, or 'non-immunes' that were available.

It seems likely, based on contemporary estimates, that more than 80 per

cent of those infected with yellow fever during the 1854 epidemic recovered, and all of those people would have gained immunity from further infection as a result. If so many recovered why then did so many Irish immigrants die?

The mortality records from Savannah examined by Dr Lockley demonstrate that yellow fever affected certain segments of the population far more severely than others. It was, for instance, very evident at the time that black mortality was a mere fraction of white mortality. Slaves and free black people constituted just under half of Savannah's population yet only fourteen black people died of yellow fever, prompting one doctor 'to remark that the blacks formed the "privileged class" among the inhabitants of the city'.

Black people were not immune from infection but, perhaps due to some genetic advantage, they seemed much less likely to die; Savannah Doctor Richard Arnold noted at the end of September 1854 that: 'There has been a great deal of sickness amongst the negroes within the last three or four weeks, fortunately not nearly so fatal as amongst the whites.'

Among caucasians it is immediately evident from the records that mortality from yellow fever among children was far lower than among adults. According to the 1850 census those under ten years old constituted 23 per cent of the white population, but in 1854 they accounted for fewer than 7 per cent of yellow fever deaths. As with many other diseases (for example, chickenpox, mumps and rubella), childhood infections of yellow fever were more likely to be 'mild or asymptomatic' than for adults.

Immigrants who had no prior exposure to yellow fever caught the disease as adults and as a result suffered high mortality. In nineteenth-century New Orleans annual yellow fever took a heavy toll among Irish and German immigrants but often by-passed those who had grown up in the

city.

The newest immigrant arrivals to the city, particularly the Irish, were the most at risk and new ship loads of non immune Irish immigrants provided fuel for the continuation of the epidemic. Parts of the city which had had very few new cases on 5, 6 and 7 October suddenly reported 12 new cases on 10 October and a further 20 cases on 13 October.

Yellow fever claimed a further 80 victims in Savannah in October and November, all but three of whom were recent immigrants; 23-year-old Irishman Bartholomew Stephens had only been in the city for two weeks when he died of yellow fever on 17 October, while his compatriot, 25-year-old Michael Bennet, lasted just ten days before he died on 23 October.

Another key factor was that the *Aedes aegypti* mosquito is more active in the day than many other mosquitoes, and is drawn to exposed sweaty flesh. Many Irish immigrants became labourers and men working outside during the day, and if engaged in manual labour in the heat of a Georgia summer were probably stripped to the waist. An early fatality precisely fits this description. James Gallagher was a 21-year-old carpenter who 'had been working on the roof of a house which was just finishing' and furthermore he had 'walked nearly a mile two or three times daily to and from his work, which was in the north-eastern portion of the city, through the broiling sun'.

Dr Lockley said:

"[Yellow fever](#) certainly was a 'strangers' disease' but not because strangers were not acclimatized to living in Savannah. Rather, it was a 'strangers' disease' because strangers were also disproportionately male, in their twenties, working outside, and resided in neighbourhoods close

to low swampy ground where mosquitoes thrived and in Savannah's case a very large number of the 'strangers' in this position were newly arrived Irish."

Provided by University of Warwick

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