

EPIDEMIC DISEASES, SOLDIERS AND PRISONERS OF WAR IN SOUTHAMPTON, 1550-1800

By MARY L SOUTH

ABSTRACT

Communities frequently suffered vicissitudes of fortune with regard to the health of their inhabitants. Some of these were directly attributable to national famine, extremes of weather or epidemics. Many outbreaks of disease, however, were confined to one community or area. Scrutiny of Southampton's local epidemics indicates that nearly one in three appear to be directly related to a military presence in the town. Such occurrences usually resulted from the embarkation or disembarkation of troops employed in overseas enterprises. This article is devoted to the outbreaks of disease in relation to this military presence and the lodgement of prisoners of war.

INTRODUCTION AND PARISH SOURCES

Within the town there were five parish churches, two on the west side, St Michael's and St John's and three on the east side, St. Lawrence, All Saints and Holy Rood (Fig 1).

When a group of Walloon refugees repaired to Southampton c 1567, Elizabeth I gave them leave to use the small chapel of St Julian's at God's House, for worship in their own manner and tongue. This was commonly known as the French Church and although not a separate parish, the congregation did keep its own records.

Thus, there are potentially six sets of registers to draw upon. St Michael's, beginning in 1552, being the most complete. However, there are breaks in the records, noticeably when the townsfolk were suffering some calamity, usually an outbreak of disease, for example, the influenza pandemic of 1556-1559 and the 1665 plague. After this last outbreak the registers are more complete. The lacunae in St Michael's early registers are, however, offset by the French Church's records for some years. This congregation was greatly concer-

ned for the wellbeing of the townspeople and the registers give some details of conditions within the town during times of affliction.

Of the other registers, Holy Rood's do not begin until 1653, but are complete apart from one break during the plague of 1665. All Saints ostensibly start in 1653 also, but were badly damaged when the church was bombed during the Second World War. Only the years 1653-1663 survive from the seventeenth century, but the records are complete from 1723. There are no extant registers for the separate parishes of St Lawrence and St John, only those for the combined parish commencing in 1768.

Thus, it can be seen that the first one hundred years of this survey was reliant upon the registers of St Michael's and the French Church, but that from the mid seventeenth century greater detail could be obtained due to the increasing number of registers available for statistical analysis.

THE DISEASES

Seasonal patterns of mortality may sometimes help us to identify the nature of the fatal diseases. In this survey the quinquennial moving average technique was used. Those five year periods which showed a sudden decline in population had each individual year examined more closely, statistically, for seasonal sickness patterns. Sudden high summer burial rates could be taken as indicative of a plague outbreak and was usually noted in the registers. Similarly, outbreaks of smallpox in the sixteenth century can be tentatively identified by spring and summer mortalities. However, such patterns can also be linked to 'fevers', amongst which must be

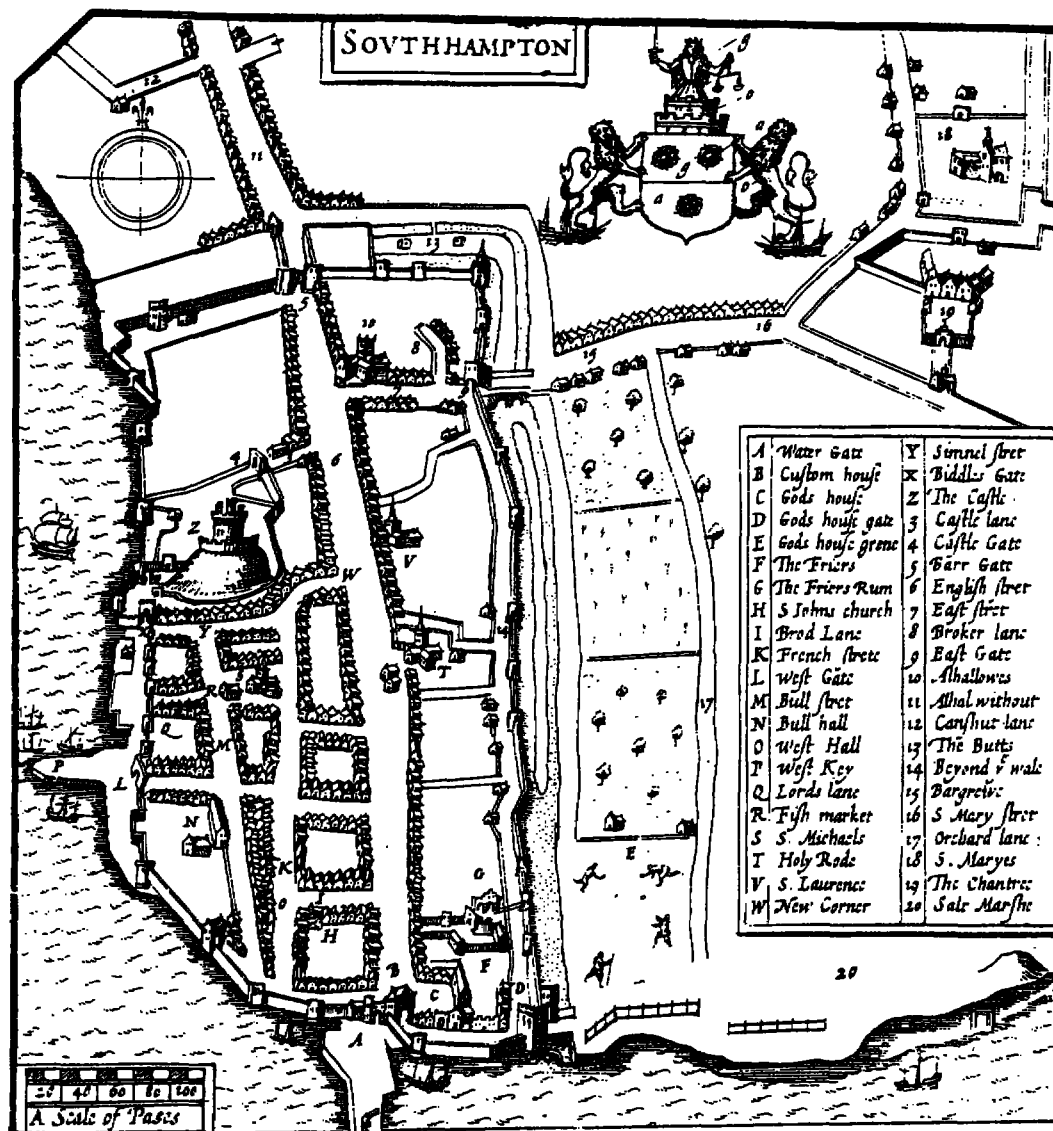


Fig 1. John Speed's map of Southampton 1611.

noted those attributable to the presence of endemic malaria in the town (James 1929, 1-18), during this period. The seasonal pattern of smallpox deaths is specifically noted in parish registers in the eighteenth century. Previously, smallpox had not been regarded as a great danger (Creighton 1965, i, 460) but with the retreat of the plague as a 'dealer of

death', smallpox became greatly feared (Buchan 1783, 231-2) hence the recording of its presence in the town by the parish clerks.

High burial numbers in spring, autumn and winter were considered to be possibly caused by the debilitating effects of influenza on the population, in a similar manner to a modern outbreak.

Table 1. Possible Relationships Between Local 'Sick' Years and Military Movements in Southampton.

Disease	Total number of 'sick' years	Number of 'sick' years with a military influence	% Years with military influence
Influenza/fevers	9	—	—
Typhus/Famine fever	19	11	58%
Plague	3	1	33%
Smallpox	15	3	20%
Total	46	15	32.6%

Based on South 1982, Table 11, 59.

Other diseases were less seasonally related, but more closely linked with environmental considerations. In unhygienic, overcrowded conditions typhus would be prevalent, due to its transmission by the human body louse (Cheng 1964, 580). Frequently the state of the soldiers was deplorable; unpaid, poorly clothed, debilitated and sick. The influx of large numbers of such individuals led to overcrowding and often to food shortages in the town. Moreover, prisoners of war were also held within the walls and since prisons were no more available than barracks they, like the soldiers, were often billeted in private houses or inns. All too often the state of both prisoners and military was very similar and the conditions produced by them in the town comparable to one another. Typically, typhus, also known as famine fever, (Howe 1972, 10-11) flourished in this environment. Table 1 compares the total number of years showing various diseases and the number of those same sick years when a military presence was manifest, in the town. Significantly nearly 60% of typhus outbreaks can be seen to be related to a military presence.

Sexually transmitted disease brought to the town by billeted troops, had long been a cause for concern to the townspeople. The 'unrestrained conduct of ... troops at Hampton, their villany, rapacity and horrible licentiousness' (Davies 1883, 468) added considerably to the pressures on the local population, already caused by their presence.

Another serious health hazard for the town was the increased amounts of human waste for

disposal. In the sixteenth and seventeenth centuries, contrary to local legislation, many householders kept livestock within the town walls (Hearnshaw 1908, 117, 332, 369, 458, 510, 563). Thus, the increased amounts of human faecal matter in the town must frequently have contaminated the animal's foodstuffs. Such contamination in suitable circumstances, would have caused the distribution of beef and pork tapeworm, throughout the population, via the slaughtered animals' flesh. In times of food shortages the townspeople were encouraged to be on the watch for butchers selling 'measelled pork' (Connor 1978, 67; James 1979, 16) so presumably this hazard was well appreciated. The problem of feeding large numbers of troops led to just such food shortages within the town. Consequently, the townspeople and their guests, would be obliged to eat poor quality food which would produce gastric disorders in the population. It would seem highly likely that in such conditions *Salmonella* flourished in the town, especially in warm weather.

Pressures produced by food shortages and the troops' behaviour were probably less important factors in the decline of the town's health, than the impact of the external parasites which the troops carried. Each group of parasites was responsible for its own typical disease; ticks carried relapsing fever, lice transferred typhus, whilst the association between the human flea and bubonic plague is now well understood (Buchsbbaum 1966, ii, 293 and fig 82; McNeill 1976, 143).

THE OUTBREAKS

Plague in 1563: French and Spanish Wars

It seems that England's overseas enterprises, in the sixteenth century, led to an outbreak of the feared plague in Southampton during 1563.

In that year, an English garrison holding Le Havre was besieged. In June and July it succumbed to the plague and due to the men's weakened condition, the town fell. On 27 July 1563 they were given four days in which to leave (*CSPV* 1563, 363–65). Some evacuated via Jersey (Creighton 1965, i, 308) where the plague was identified on 6 August. Two days later the burials recorded in St Michael's register at Southampton showed a significant increase and the first plague victims were moved into the newly finished almshouses early in September (*SC* 5/3/1 fo 111). The traditionally strong links between the Channel Islands and Southampton suggest that the disease arrived by this seaborne route.

On 18 September 'the painter's wife in East Street' was paid for making crosses on the doors of those that were infected and John Lorde was paid for providing white rods (the traditional plague wands) for the identification of individuals from infected houses. On 1 October six men and women were appointed 'to kepe the syke people and to bare them to churche'. Obviously cures were not expected. Payments to the keepers and bearers continued weekly, at the rate of one shilling each. The painter's wife was again called into action in October, whilst a December payment was 'geven to the syke people that cryed owte for famin at tymes'. Bearing and keeping appears to have been very regular employment until 21 January, although by 14 January the number of bearers had fallen to four (*SC* 5/3/1 ff14–15). Here the record ends, the peak had been passed but increased numbers of burials continued to be recorded until May 1564, giving an estimated 20% mortality within the town walls, which would be commensurate with a fairly typical bubonic plague outbreak (McNiell 1976, 159).

The town suffered further outbreaks of sickness. In 1591, payments were made to poor, sick and vagrant soldiers, mostly returning from France and Spain. This was to aid them on their way and prevent them lingering in Southampton (*SC* 5/3/1 ff 232–35).

Scarcity and Subsistence: 1623–1628

Sixty years after the 1563 plague, troops within the town were again directly involved in an epidemic. During a period of national scarcity and crisis, in 1623, increasing numbers of people were already coming into Southampton. The situation was further exacerbated by the billeting of soldiers on the townspeople (Hearnshaw 1910, 439; *SC* 2/1/6, 4 July 1617). The Venetian ambassador, Girolamo Lando, reporting in 1622 described Southampton acidly as, 'a place of moderate size. I may call it not a relict but a trace of the former trade of the Italians and subjects of your Serenity, now so miserably reduced and in the hands of the English alone, who seem to guard and fortify it like so many teeth' (*CSPV* 1622, 430).

The pressures exerted by the newcomers and troops helped to inflate the price of corn from September 1622 and throughout 1623 (*SC* 2/1/6, 20 December 1622). These increased prices caused the town carrier to complain about making a loss, since so few people were making use of his services (*SC* 2/1/6, 6 February 1623). Billetting continued and in January 1626, the Mayor wrote to the Secretary of State enquiring what should be done with the 'desperately poor' soldiers (*CSPD* 1626, 234). By June, the Mayor was at his wits' end and was seriously considering running away, due to the unrest caused by the soldiers and an impending mutiny (*CSPD* 28 August 1627).

In April 1628, the Mayor was pleading to be excused from accepting two more companies of soldiers on 'account of the utter decay of our trade' and since two unpaid companies were already billeted there, whilst Christchurch, Ringwood, Lymington, Portsmouth, Alresford and Alton had no soldiers at all (*CSPD* 1628,

92). Pressures were so great that the better off townsfolk were again considering desertion.

There is no direct evidence of any outbreak of epidemic proportions during this period, although Creighton (1965 i, 524) does make a reference to the closure of one house, in Southampton, due to the plague in 1625. The available burial registers indicate increased numbers of deaths throughout the period 1623-1628 and it may well be that the combination of crop failure and overcrowding produced a mild typhus outbreak. However, the registers may only be indicative of the greater numbers obliged to live in the town.

Civil War and Dutch Prisoners: 1642-1655

During the Civil War a further outbreak of disease was brought about by military activities. In 1642 a Parliamentary garrison was sent to the town under Colonel Norton (Hall & Barker 1985). With the supply road from the New Forest to the town broken at Redbridge, the presence of Hopton's Royalist troops at Romsey and Winchester meant that Southampton was virtually under siege. This state of affairs lasted until Hopton's forces suffered defeat at Cheriton in March 1644 but the garrison remained until 1651 (Davies 1883, 488-91; Hearnshaw & Clarke 1910, 89-99; Godwin 1973 under 'Southampton'; *CSPV* 1643, 25; 1644, 60, 88). By the September following Hopton's defeat there were 2,000 men quartered in the town. When this figure is compared with a population estimate of 3,000 based on the 1641 Protestation Return, then the strain placed on the community's resources by an increase of 66% becomes apparent. On 19 October 1644 the Earl of Essex wrote from Petersfield, that Southampton was in a sad condition and weakly manned (*CSPD* 19 October 1644; *CSPV* 1644, 140). At the time of his writing, the town was suffering from an outbreak of disease again, the most likely cause being typhus, due to the overcrowded conditions and increasing scarcity of provisions. A contemporary estimate suggested that 100 inhabitants died in the 1644 epidemic (*CSPD* 3 March 1653) but it would

seem reasonable to suggest that this is an underestimate, since only figures from St Michael's parish are available and these show sixty deaths in that parish alone.

After the siege had been lifted in 1644, there followed a series of poor harvests until 1651 (Howe 1972, 135). This scarcity resulted in the wheat prices being increased from 32s per quarter in January 1646 to 50s in the following August. By December 1646, the price of wheat was set at 56s and remained at this level throughout 1647 (SC 2/1/8 ff17-30). Presumably this dearth helped to maintain the increased burial rate in St. Michael's parish, which had begun with the 1644 typhus epidemic. A comparison between the mortality rates per thousand of population can be made from the burial registers and an estimated parish population of 879, based on the 1641 Protestation Return (see Table 2). Although the parish population figure would not have remained constant, as shown in Table 2, the trend in the parish mortality can be seen and it may well reflect the pattern within the walled town, during this period.

Table 2. Comparison of Mortality Rates per 1000 in St Michael's Parish 1630-1646.

Year	Mortality per 1000
1630-39	
(Average)	16.2
1644	68.3
1645	42.1
1646	26.2

The garrison left the town in 1651, but there still remained sick and wounded soldiers to be maintained and in December 1652 a weekly rate was levied on the parishes to this end (SC 2/1/8 fo 91). At the same time, the town carrier was again complaining about the high cost of hay; oats and provisions, thus giving indirect evidence of a food shortage in Southampton. This is verified by the pleas of both the military governor and the Mayor in March 1653. Both were horrified to hear that a further 1,200 Dutch prisoners were to be placed within the town walls. Such a number, together with those already present, could only be a danger

to the health of the whole population (*CSPD* 3 March 1653). The Mayor wrote to the Secretary of State, on 30th November, enquiring about money for the Dutch prisoners present in the town for the last six months (*CSPD* 30 November 1653). In March 1654, Richard Belchamber reported to the Admiralty Committee that he had taken care of 200 sick and wounded in Southampton, which were endangering the health of others (*CSPD* 31 March 1654). His solicitude proved too late to avert the outbreak which started the following month in All Saints and Holy Rood parishes. The burial rate remained high in May, but decreased during the summer, only to increase sharply again in November, through until February 1655. Such a pattern is suggestive of an influenza outbreak, which was apparently centred on the Dutch prisoners. Their doctor's bill came to £106 3 shillings 6 pence, but none would check it because no one would venture near the doctor, after his wife and two assistants died from the illness (Davies 1883, 490).

Militia, Rebels and Prisoners: 1673–1706

The army's return in 1673 again coincided with a period of food shortage which produced another increase in recorded burials. During the years 1670–75, the number of burials tended to rise in the early spring, decrease throughout the summer and show another upward trend in the autumn and winter. This seems to indicate a further series of influenza/fever outbreaks, exacerbated by the additional stresses caused by the army's presence. In March 1674 the sixty soldiers remaining were disbanded, dismissed from the town and their arms collected by the Mayor (*SC* 2/1/8 fo 294).

Respite from the army was shortlived. In March 1679, after the Hampshire militia had been placed in a state of readiness to repair to Southampton, a company of Monmouth's men was marched there. A month after their arrival, some of their officers caused a riot in the town by attacking customs men (*CSPD* 14 December 1678; 12 January 1679; 6 March 1679; 17 April 1679). On this occasion the numbers of soldiers involved was probably not

sufficient to be directly responsible for the deterioration in the town's health. However, their presence could have aggravated the situation in this year of national sickness (Wrigley & Schofield 1981, 334).

Although there is debate as to whether 1689 was a nationally unhealthy year (Creighton 1965, ii, 44; Wrigley & Schofield 1981, 334) yet sickness does seem to have manifested itself in Southampton that year. The young Isaac Watts described himself as suffering from a 'great and terrible sickness' at his home in French Street (Fountain 1982, 22). At the same time the mortality rate in Holy Rood parish had risen from 46 per 1000 to 72 per 1000, the outbreak being centred on the Military Hospital at God's House in Holy Rood. Several sick seamen were also recorded as dying whilst being nursed at the Half Moon Inn, in Butcher's Row (West Street) (*PR* 2/1/1 fo 222). From the nature of the establishments mentioned it would seem reasonable to suggest that this outbreak may well have been typhus again, albeit mainly confined to Holy Rood parish.

The same parish was again to suffer early in the next century, due to the freedom enjoyed by the French and Spanish prisoners held in the town. Since prisons were no more available than barracks, they, like the soldiers, were often billeted in private houses or inns. In 1702, with the assistance of one officer and eighteen men, the town was responsible for 600 such prisoners. It became the usual practice for these prisoners to sleep in houses adjacent to the gaol, but a riot resulted one night when someone had the temerity to lock them in the gaol itself (*CSPD* 28 September 1702; 1 October 1702; 1 November 1702). That year the mortality rate in Holy Rood parish rose to 79 per 1000 and remained at that level until the end of 1706. By January 1703 the number of prisoners had risen to 823 and at the beginning of February, the Commissioners of Sick and Wounded recommended their removal to Lyndhurst, since the sickness among the prisoners was keeping people from the town's markets (*CSPD* 30 January 1703; 9 February 1703).

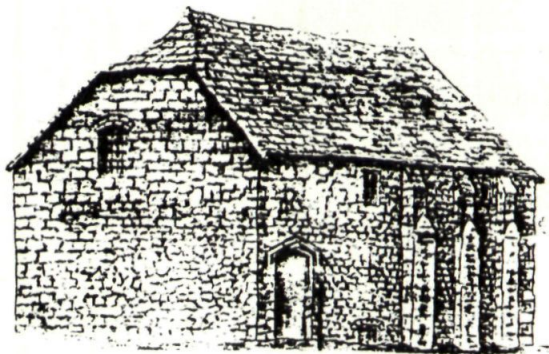


Fig 2. The Woolhouse 1807 (SCRO).

Troops and Prisoners: 1740-1760

During the 1740s Southampton was made a place of reception for sick and wounded marines sent from Portsmouth. Some were boarded out in private lodging houses while others were kept in the civilian hospitals. Eventually all available accommodation was filled and the sick were billeted in private houses, despite the townsfolk's concern about the disease that some carried (Temple Patterson 1966, i, 90). Understandably, such conditions coupled with a bad harvest in 1740, produced an increase in deaths the following year and magnified the effects of the smallpox recorded in 1742 (PR 2/1/1 fo 259).

Two years later, in May 1744, John Ayres, the lessee of the old woolhouse (Fig 2), then being used as a prison for French prisoners of war, was given leave to provide a compound for them around the building. This was essential, since some 800 men were crammed into the makeshift prison having been transferred from Porchester Castle where 'gaol' fever was rife (SC 2/1/10 5 May 1744). By August the disease, presumably typhus, had spread to the townspeople. Deaths remained at a high level throughout 1745 and an entry in St Michael's burial register noted that the hospital for Colonel Agnew's marines was in the parish. It also referred to a separate list of the men who died therein during 1745. It is feasible that this 'hospital' was the old St Michael's prison in St Michael's square (SC 2/1/9, 687).

John Ayres never made the enclosure for the

prisoners and after his death, a new order was made to the new lessee, of the old Woolhouse, John Monckton, in May 1747. He carried out the order, much to the dismay of the townspeople and Corporation, when the prisoners went on public view. In January 1748 the Corporation made the following new order:

'Whereas the said Mr. John Monckton has enclosed a part of Bull Street and of the street leading from the Watergate to the West Gate of this Towne and the same being in the Opinion of the Common Council a publick nuisance and being complained of by several of the Principal Gentlemen and Inhabitants of this Towne not only on Account of the Prejudice to the said Streets but of the Sickness of the French Prisoners who are confined in the adjacent Prison. It is ordered that the said Mr Monckton do remove the said nuisance and lay open the said Streets within eight Days And in Default thereof the Corporation will immediately take proper Measures for the doing thereof.'

Five days later a petition was sent to the Lords of the Admiralty for the removal of the French prisoners since several of them had an infectious distemper, which was injuring Southampton's reputation for salutary medicinal waters, which causes people of all ranks to resort thither'. The town was being promoted as a fashionable spa resort and, was therefore, more aware of its own shortcomings in health matters (SC 2/1/10, 162; 17 January 1748, 171; Temple Patterson 1966, 39 n 1). The comment regarding the prisoners' state of health was not unfounded. Mortality in the town, as shown by the burial registers, increased yet again 1747-48, suggesting that typhus and/or dysentery present amongst the prisoners had reached the inhabitants.

John Speed MD (1703-81) was practising medicine in the town at this time and writing its history. Despite the apparent increasing concern regarding health matters, he saw little of note in the disease outbreaks in the town. However, he did show some concern about the



Fig 3. The Sugar House, shortly before it was demolished following destruction in the bombing of 1940 (SCRO P146).

habits of the visitors. In particular he was very scathing about the dresses of the ladies, especially their headresses. These were frequently so complicated that they were 'untouch'd for months together' and were full of vermin (Davies 1883, xi). Almost certainly such 'vermin' would have been lice and would have made a suitable disease reservoir, if infected with typhus.

More troops were quartered in the town in 1756, when the innkeepers and victuallers petitioned the House of Commons for relief from the expense and distress being suffered due to the billeting of Hessian soldiers. Their General, Sir John Mordaunt, disapproved of the accommodation offered and insisted on placing them in already over-crowded public houses (Temple Patterson 1966, i, 91). The poor harvests of 1756 and 1757 produced food shortages, once more coinciding with pressures caused by troops in the town. These conditions caused the Corporation to make a special subscription for the poor of 50 guineas, during the 'Season of Scarcity of Corn and all other sorts of Provisions' (SC 2/1/10, 328).

The pressures produced by growing numbers of people in the town, from troops and fashionable 'spa' visitors, combined with the food shortages, would seem to favour the possibility of another outbreak of disease. Nonetheless the successive waves of smallpox recorded in the registers of St Michael's and St Mary's did not cause havoc (SC 5/1/1 ff 57-9). Instead there is no apparent increase in the burials within the town walls, which may be indirect evidence for the population's growing immunity to the virus, at this time.

The Age of Revolution: 1770-98

During the next twenty five years, Southampton was subjected to almost continual military activity associated with the French Wars and the American War of Independence (for a detailed summary of these movements see Temple Patterson 1966, i, 90-103). It seems unlikely that there were sufficient numbers resident in the town long enough to spread disease of epidemic proportions during this period.

In August 1783, troops returning from Gibraltar were quartered in the town (SC 2/1/12, 1). By September the recorded burials almost doubled. This increase was maintained throughout the winter, suggesting that typhus had once more been brought into the town as a direct result of the troops' long sea voyage in cramped conditions. Further complications were produced by the bad weather that winter, so that in March 1784, the Corporation made a 'Benefaction of 50 guineas paid to the poor due to their extreme distress during the late inclement weather' (SC 2/1/12 March 1784, 19).

Nine years later, in 1793, the horrors of the French Revolution had an indirect influence on Southampton's health. The *Hampshire Chronicle* of 17 June 1793 notes that the town's publicans were pressing the Government for an order to purchase or erect barracks to ease the billeting of soldiers in their houses, which caused considerable suffering to their families. Later in the year, eight regiments of men were placed under Earl Moira's command with the

intention of saving the French royalists from defeat. These men had been at sea for many weeks, due to the dithering of the politicians, before Moira took them to Brittany, on their abortive mission. In January 1794 they returned from France in order to 'refresh themselves' at the Isle of Wight and Southampton (Fortescue 1906, iv, 154). The transports arrived in the river on 24 January, whilst barracks in various warehouses were being prepared for them with all speed, the workmen working around the clock to achieve results (HC 27 January 1794). Having been at sea for so long the soldiers were already sick and dying from typhus and when 3,000 eventually landed to be housed in the storehouses on 17 March (HC 17 March 1794) the sickness was soon giving cause for alarm. Amongst the buildings allocated was the old sugar refinery on Gloucester Square (Fig 3), in Holy Rood parish (Englefield 1805, 47). The deaths suffered there are recorded in the registers. During February and March a total of 138 burials were recorded in Holy Rood, including 79 soldiers. The deaths noted in the entire town remained high especially in Holy Rood parish, throughout the summer. In September and October the greatest numbers of townspeople's deaths were recorded, with a total of 368 local inhabitants dying in the typhus outbreak that year.

After the army's departure for Holland in August (HC 4 and 8 August 1794) their sheets and blankets were stored in the warehouses they had used. There the bedding remained until the winter, which proved to be bitterly cold. January 1795 had an average temperature below freezing throughout the entire month (Manley 1974, 395). The Corporation made a payment to the poor, of £50, 'at this inclement season' and further payments were made in the spring to keep the price of bread down, 'for the good of the poor' (SC 2/1/12, 313 and 316). In such freezing conditions the temptation of the stored blankets proved too great. The warehouses were broken into, the bedding stolen and sold to the townspeople, together with the typhus it still carried (PR 7/1/4 fo. 116). Consequently the sickness

continued in the town until June 1795. That year a further 219 inhabitants died, bringing the total number of recorded deaths during the epidemic to 587. Taking a population estimate 'within walls' of 3,300 (based on the 1791 Poor Rate Assessment) prior to the outbreak, approximately 18% of the inhabitants perished.

John Monckton, the same doctor who had been responsible for making the enclosure around the Woolhouse in 1747, had long been concerned about the health of the townsfolk. He now made an effort to isolate sick seamen and give them better care. The doctor had been responsible for maintaining these men since 1793, but now, in 1795, he converted a storehouse into a seamen's hospital at a cost of £28 7s 0d. Here the men were treated by the ageing practitioner until 1798. How efficacious the hospital was can only be guessed at, especially when in 1798 only two sick individuals chose to go into the establishment. The rest elected to be treated at home by Monckton (PRO ADM 102/794). During the period 1796-98 the recorded diseases treated at the hospital show that 'fever' was the most common diagnosis (see Table 3). Such a broad term as 'fever' makes any conclusion about the cause impossible, since there are no ships' records available to indicate the type of sickness which might have broken out on board. Lack of numbers entering the hospital suffering from fever may simply indicate a high mortality at sea, with only a few survivors returning to be treated.

Table 3. *Comparison of Diagnosed Diseases Treated in the Seaman's Hospital 1796-1798.*

Diagnosis	No. cases	Percentages
Consumption	4	7%
Fevers	28	51%
Fits	5	9%
Itch	3	5.5%
Rheumatism	6	11%
Scurvy	3	5.5%
Injuries	6	11%
Total	55	100%



Fig 4. A 19th century engraving showing troops marching towards the Bargate (SCRO P106/13).

Table 4. Comparison of Southampton's Death Rate With National Trends.

Date	NDR(1) per 1000	CDR(2) per 1000
1563	29	218*
1644	26	68*
1654	28	69*
1689	33	57
1702	30	73*
1741	29	68*
1742	39	65
1744	27	62*
1745	27	60*
1747	28	64*
1748	28	63*
1756	27	46
1757	27	40
1758	27	43
1783	27	52
1794	27	111*
1795	27	67*

(1) NDR National Death Rate based on Wrigley & Schofield 1981, 314, Fig 8.5

(2) CDR Crude Death Rate calculated from the available parish registers and population estimates made from tax assessments, muster rolls etc (See Appendix)

*Years in which town's death rate was at least double the national rate

CONCLUSIONS

Whilst the outbreaks of contagion associated with the troops may not all immediately appear to be unduly severe, a comparison of the town's crude death rate per thousand with the national death rate's trend indicates the possible impact on the lives (or deaths) of the townspeople. These effects are highlighted in Table 4. It should be noted that new evidence seems to suggest that the population estimates in the Appendix, used to calculate the crude death rates in Table 4, may be too high (Stapleton 1985, 27-35). Nonetheless, since the burials remain constant, the effect would be to increase the impact of the outbreaks on

the population. Thus, it is important to stress that these figures should not be regarded as absolute, due to the variability in the standards of the parish registers and the necessity to make broad estimates of population levels for some years. They may be regarded, however, as indicative of the general pattern produced by the billeting of troops within the town walls.

Immediate social effects of epidemic disease resulted in the disruption of the economic and social organisation, with markets suspended, food shortages and flight from the town. Such pressures produced a virtual breakdown of local government resulting in violence and rioting.

Although the detrimental effects of the military has been stressed it should also be noted that they were not always badly regarded by the inhabitants (see Fig 4). In the 1740s one regiment of marines was billeted in the town for ten years and came to be almost adopted by the locals (Temple Patterson 1966, i, 90). Also, during the mid-eighteenth century, the officers may have added greatly to the social life of the spa visitors, especially when the romantic notions of young ladies during the 'season' could be fanned by the vicarious thrill of an occasional duel (Douch 1961, 20-22; Davies 1883, 506).

The years 1756, 1757, 1758 and 1783 are noteworthy in view of the lowered death rate, despite the military presence. It may well be that the influx of spa visitors (which also sparked off a series of inoculation campaigns (SC 2/4/1)) had the indirect benefit of improv-

ing the local inhabitants' awareness of the value of hygiene. The greater prosperity brought into the town by the visitors may have served to improve the living standards and hence the health, of the townspeople.

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APPENDIX

Population Estimates and Sources Used to Calculate Walled Town's Crude Death Rate for Table 4.

Date	Estimate	Source
1563	1298	1556 Muster Roll (SC 13/2/2)
1644	2997	1641 Protestation Return
1654	2923.5	Average from 1649 & 1655 Tax Assessments (SC14/2/18 & SC14/2/26)
1689	2573.5	Average from Compton Census & 1696 Tax Assessment (SC14/2/66-74)
1702	2389.5	Average from SC 14/2/66 & 1725 Bishop's Visitation (HRO B/2/A)
1741-1758	2366	All taken as average of 1736 & 1766 Tax Assessments (SC 14/2/124-341)
1783	3394	Poor Rate 1783 (SC/AG 7/3)
1794 & 1795	3304	Poor Rate 1791 (SC/AG 7/5)

REFERENCES

Abbreviations

CSPD. *Calendar of State Papers, Domestic series*
 CSPV. *Calendar of State Papers, Foreign series (Venetian)*
 HC. Hampshire Chronicle
 HRO. Hampshire Record Office
 PRO. Public Record Office, London (Kew)

Manuscript Sources

Hampshire Record Office
 Hampshire Pamphlets Box 5. Compton Census photocopy (original in William Salt Library Stafford. Salt MS 33)
 B/2/A Bishop's Visitations 1725 and 1788

Southampton City Record Office

- PR 1/1 All Saints Registers
 PR 2/1 Holy Rood Registers
 PR 4/1 St Lawrence and St John's Registers
 PR 5/1 St Mary's Registers
 PR 7/1 St Michael's registers
 SC 2/1 Corporation Journals and Assembly Books
 SC 2/4/1 Innoculation Committee Minutes
 SC 5/3 Mayor's Casualty Book
 SC 13/2 Muster Rolls
 SC 14/2 Tax Assessments
 SC AG/7 Poor Rate Books

Public Record Office

- ADM 102/794 Hospital Muster Book

Southampton Local History Library

- HSj Copy of 1641 Protestation Return
 (original in House of Lords' Record Office)
 Hampshire Chronicle 1793-94

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Author: Mary L South, 2 Ideal Park Homes, Bishopstoke Road, Brambridge, Eastleigh SO5 7HX

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