THE YELLOW FEVER EPIDEMIC OF 1793 IN PHILADELPHIA*

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MADISON, WIS.

LATE in the sixteenth century the small island of St. Kitts, whose hospitable shores had welcomed Columbus in 1493, sheltered a thriving colony of French and English. Their prosperity excited the envy of the Spanish who unceremoniously evicted them. Thereupon these refugees occupied Tortuga and later the western portion of Haiti to which they gave the name of Saint Dominique in 1630. This part of Haiti was ceded to the French by the treaty of Ryswick in 1697. Slavery was introduced and the colony thrived. Its population became overwhelmingly black, and the whites and mulattoes constituted a dominant minority. However, all was well until the National Convention in 1791 acceded to the demands of the free colored and mulattoes, and granted them the full privileges of French citizenship. This action was violently opposed by the white Colonists and by reason of their protests the decree was revoked by the home government. The seed had been sown and it bore fruit in an insurrection of the slaves supported by the mulattoes. General Galbo was directly charged with inciting certain irresponsible whites to set upon the French commissioners who had brought the authority for his suspension from Paris. To their defence the commissioners called the blacks whose interests they were naturally supposed to represent. In the resulting warfare the cruelty of the involved parties exceeded description. The French commission abolished slavery in 1793, but by that time disease and excesses of all types had made Santo Domingo a most unhealthy community. Upward of fifteen hundred of the white population who had escaped, after harrowing experiences at the hands of the blacks, sought refuge on the mainland of North America, since the violence of the French Revolution precluded possible return to the homeland.

Among the cities of the New World none was more liberal in its offer of shelter and financial aid to the unfortunate French emigré than was Philadelphia. In July 1793 over twelve thousand dollars were raised for the relief of these suffering refugees from Cape François. It was entirely fitting that the metropolis and the temporary seat of government of the new republic should thus manifest her sympathy for the unfortunate subjects of her recent ally. Indeed feeling ran high in those days and our national politics were strongly tinted by the supposed reaction of leaders toward political movements in France and England. Material wealth had advanced Philadelphia to a position of preeminence among the cities of the United States. The Delaware was crowded with shipping from all countries. Some five miles down the river East India men were greeted by the boom of a cannon reserved for such arrivals. Great fortunes were in the making and among these none was more romantic than that of Stephen Girard, a sea captain who had sailed his ship up the Delaware, in May 1776, to escape a British fleet. Here Girard found his bride and a fortune in the West Indian shipping. The enviable position of Philadelphia depended more upon her institutions than upon her wealth. Her hospitality had become even at this early period a byword among travelers. It was to this generous community that the French refugees from Santo Domingo came in July and August of 1793.

The season was quite warm. Indeed the year 1793 was long recalled for its unseason-

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ableness. January had been very moderate. The usual raw February of southeastern Pennsylvania succeeded. The fruit trees had blossomed in Philadelphia on April first. The migratory birds had made their appearance two weeks early. May had been a moderate month. June had had its quota of warm days and July had been uniformly warm. The first three weeks of August were moderate and pleasant. On August 25th there was a heavy rain storm and thereafter except for very light showers on September ninth and October twelfth no rain fell until October fifteenth. Springs and wells failed. The dust in the roads reached a depth of two feet. The pastures burned out and apples and pears shrivelled on the trees. Sir John Pringle had noted that "when the heats come on soon, and continue throughout autumn, not moderated by winds, or rains, the season proves sickly, distempers appear early, and are dangerous."

The historical relation is lost if the student commits the anachronistic error of hindsight. So one must follow Noah Webster through the maze of natural phenomena which were thought to influence atmospheric conditions and as a derivative whereof epidemics arose. Certain it was that David Rittenhouse had in January and February, 1793 noted a comet in the constellation of Cepheus and on September twelfth a meteor had fallen between Third Street and the Hospital:

> In the years 1793 and 4, the oysters on the coast of Connecticut and Rhode Island, were all sickly, watery, and tasteless; wholly unfit for food, and in some instances brought on nausea or sickness in those who ate of them.

Together with other observers Webster remarked the uncommon prevalence of mosquitoes in Philadelphia during the summer and fall of 1793. A basis for Webster's failure to properly evaluate the relationship of this circumstance may be found in his statement:

> Infection is a subordinate cause of the propagating of malignant distempers; but is itself an effect of some more general cause, whose force is a hundred fold more powerful and formidable than that of infection.

He further effected an elaborate classification of epidemic diseases on the basis of their "natural" causes:

In healthy periods	
Common intermittents	solely from marsh effluvia, and ordinary causes.
Remittents	
In pestilential periods, under the operation of elemental causes.	
Intermittents. remittents.	of a worse type, from marsh effluvia, aided by a general cause.
Bilious plague of the country, near lakes and rivers.	solely from marsh exhalations with the general cause.
Bilious plague of American cities	from the joint operation of vegetable and animal effluvia, with the elemental cause.
Inguinal plague of the east	principally from animal exhalations, with the elemental cause.

Be that as it may, several events on the water front demand our attention. In the middle of July 1793 the sloop Amelia, William Williams, master, from Borgne, Santo Domingo docked with a cargo of coffee. Several hundred-weight of this perishable material had spoiled and were carelessly dumped on the wharf. It was reported that the captain and five hands were sick at the time of landing. On May twenty-ninth the xebeque Sans Culottes, twelve guns and one hundred men, made the Flora of Glasgow, outward bound for Jamaica with a cargo of dry-goods, her prize. They stopped at Chester and discharged her sick master, Hamilton Sage. On the authority of Dr. William Martin, the master of the Sans Culottes died of yellow fever at the home of William Kerlins. As the privateer and her prize passed the fort on Mud Island on the evening of July twenty-second, loud greetings were exchanged between the crews of the two ships and the garrison. Between July twenty-fifth and August first a number of sick were said to have been sent ashore from the vessels above-mentioned. From

the statement of a super-cargo on a boat bound for Philadelphia six or seven men were ill of the fever on leaving Cape François. Thus unwittingly was the pestilence taken to the heart of the capital of the new republic.

Fig. 1. Stephen Girard.

Benjamin Rush, the most eminent figure in Philadelphia medicine of that period, has best recorded the awful pestilence that spread like wildfire through the unprotected city betrayed by its ignorance and generosity. Although in the light of modern knowledge, Rush held many untenable beliefs regarding the cause and the treatment of yellow fever, his stalwart devotion to duty and his remarkable fidelity in clinical observation place him on a pinnacle as yet unexcelled in American medicine. Rush records that on August fifth he was called to see Dr. Hodge's child "ill with a fever of the bilious kind, which terminated [with a yellow skin] in death." Inthe succeeding two weeks, five similar cases were attended without a suspicion of their true nature. On August nineteenth Mrs. Peter Le Maigre was seen in consultation with Doctors Foulke and Hodge in Water Street between Arch and Race:

> I found her in the last stage of a highly bilious fever. She vomited constantly, and complained of great heat and burning in her stomach. The most powerful cordials and tonics were prescribed, but to no purpose. She died on the evening of the next day. Upon coming out of Mrs. Le Maigre's room, I remarked to Dr. Foulke and Dr. Hodge, that I had seen an unusual number of bilious fevers, accompanied with symptoms of unusual malignity, and that I suspected all was not right in our city. Dr. Hodge immediately replied, that a fever of a most malignant kind had carried off four or five persons within sight of Mr. Le Maigre's door, and that one of them had died in twelve hours after the attack of the disorder. This information satisfied me that my apprehensions were well founded. The origin of this fever was discovered by me at the same time, from the account which Dr. Foulke gave me of a quantity of damaged coffee which had been thrown upon Mr. Ball's wharf, and in the adjoining dock, on the 24th of July, nearly in a line with Mr. Le Maigre's house, and which had putrified there to the great annoyance of the whole neighborhood.

One unauthenticated record noted the death of a Mrs. Parkinson after four days' illness on August seventh at Richard Denny's lodging house in Water Street. All sources agree in the location of the earliest cases in the congested district along the waterfront, although James Hutchinson for a time felt that the pestilence might first have appeared in Kensington, then a remote neighborhood well up the Delaware.

Of the beginning of the epidemic of 1793 the above statements are a fair analysis. Obviously there was a wide divergence of opinion as to the origin of the yellow fever, and it is not surprising that some of the more conservative practitioners were loathe even to admit its presence in the city. In the *National Gazette* of September twentieth

Dr. William Currie attempted to put at rest the fears of the laity in these words:

I have made the strictest enquiry respecting the number at present confined by the genuine yellow fever, and am convinced that it does not exceed 40 or 50 in the whole city. There is, however, another formidable disease prevalent, by which, I have reason to believe, there are above a thousand ill at this time. The disease, I mean, is the common remittent or fall fever. This fever, however, is not infectious . . . The disease which Dr. Rush calls the yellow fever, and of which Dr. P. says he has cured such numbers by the New Method, is only the fall fever, operating on persons who have been previously affected by influenza. It is time the veil should be withdrawn from your eyes, my fellow citizens.

Supporters of the local origin of the fever rallied to the banner of Benjamin Rush, while the foreign origin found its chief proponents in the College of Physicians. Possibly no great harm would have resulted from this professional difference had the public press not published from day to day and indeed frequently in the same issue the divergent views of the leaders in medicine. Rush with characteristic vigor maintained the local origin of the epidemic through the public press. A significant remark is found in his communication to the *American Daily Advertiser* of August twenty-ninth: "The noxious quality of the effluvia from millponds is derived wholly from a mixture of the putrified leaves and bark of trees, with water."

On September second through the same medium Medicus replied,

> Let others at invention aim,
> I seek no falsities for fame.

Mr. Dunlap, a correspondent in yesterday's paper, under the signature of R, has called the attention of your readers to the cause of the malignant fever, which now prevails in the city of Philadelphia. As he appears to be an advocate for the "damaged coffee," being the source of the complaint, and as this coffee has made as much noise, and with equal cause, as the scratchings of the Cock Lane Ghost did in the city of London, it may not be amiss to enquire how far the opinion is founded on truth . . . As your correspondent has been the first to throw the gauntlet, it is expected he will once more enter the lists, or it will be taken for granted, he has experienced a shameful defeat.

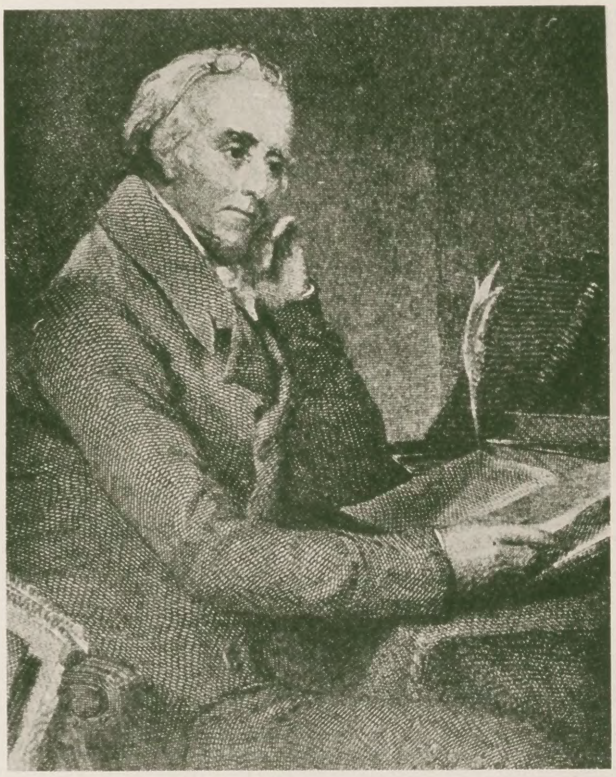

FIG. 2. BENJAMIN RUSH.

And then to clinch his argument Medicus added:

Since writing the above I have been informed that a number of poor people, who live down Passyunk road, gathered a quantity of damaged coffee, carried it home, and are now in perfect health. A strong presumptive proof against any noxious exhalation from that substance.

Prominent among the supporters of Rush in the public lists was Charles Caldwell, one of his students, writing under the nom de plume of Araeteus, Jr. In later communications Rush called upon the College to defend the "character of their departed brother, Doctor Hutchinson, for capacity and vigilance in his office, as inspector of sickly vessels." He caustically remarked:

Public report had derived it from several different islands; had chased it from ship to ship, and

from shore to shore; and finally conveyed it at different times into the city, alternately by dead and living bodies; and from these tales, all of which when investigated were proved to be without foundation, the College of Physicians composed their letter. It would seem from this conduct of the College as if medical superstition had changed its name, and that in accounting for the origin of pestilential fevers, celestial, planetary, and demoniacal influence, had only yielded to the term, importation. Why should it surprise us to see a yellow fever generated amongst us? It is only a higher grade of a fever which prevails every year in our city, from vegetable putrefaction. Loathsome and dangerous diseases have been considered by all nations as of foreign extraction. The venereal disease and the leprosy have no native country, if we believe all the authors who have written upon their origin.

There can be little wonder that this ill-timed and futile discussion led to indecision and confusion on the part of the populace. To add to the horror of the situation the pestilential visitation which appeared along the river front, spread steadily to Kensington, the Northern Liberties and outlying districts. As the disease reached the center of the city a new impetus was lent to its advance. Three hundred deaths from yellow fever were reported in August and in September the toll reached fourteen hundred. From fifty to ninety victims were claimed daily toward the end of September. The first half of October saw a death rate equivalent to that of the entire month of September. The peak was reached on October eleventh when one hundred and nineteen succumbed to the fever. The busy market places and streets were stilled and deserted. Human contact was assiduously avoided. The city famed for its hospitality now viewed with suspicion any display of attention. At the time of the outbreak of the fever President Washington was spending his vacation at Mount Vernon, where he remained until the epidemic had abated. Congress was not in session, but the governmental offices were removed to Germantown. With few exceptions all possessing means of flight left the less fortunate to their fate. The roads leading from the city of death were crowded with vehicles of every description. Over a third of the population estimated at fifty thousand sought refuge in the surrounding country. The hegira was in full swing by September twenty-fifth. Over half of the homes were closed; and yet with the obvious lack of protection only two robberies were reported during the epidemic. An unbelievable desolation supplanted peaceful prosperity. The deserted state of the erstwhile busy waterfront reflected the despair of the people and the ostracism of the port by foreign shipping. Funerals were for a time dignified by proper equipages and attendants, but shortly the demand and the associated terror led to the too familiar picture of a black leading a single horse drawing a coffin on a pair of chair wheels with a few relatives following at a distance. Finally even this formality was dispensed with from necessity and the cart with its common drivers patrolled the streets with their call of "Bring out your dead." It was a picture to instill fear in the hearts of the most sturdy. And yet Benjamin Rush was prompted by his experiences in that awful period to say, "I saw little to blame, but much to admire and praise in persons of different professions, both sexes, and of all colours." Matthew Carey wrote, "I rejoice, that it has fallen to my lot to be a witness and recorder of a magnanimity, which would alone be sufficient to rescue the character of mortals from obloquy and reproach."

The College of Physicians issued a bulletin on August twenty-sixth in which the avoidance of contact with the infected was urged. Placarding of the houses in which yellow fever occurred, was recommended. Advice in the care of patients, fomites and excreta was given. It was suggested that a large airy hospital be established in the vicinity of the city. Bells should not be tolled. Burials should be as private as possible. A city-wide cleansing

of streets and wharves was deemed essential. The practice of lighting bonfires served no good purpose in their judgment. Gun powder was thought to be more efficacious. In the matter of personal hygiene, excesses of physical exertion, eating and drinking were to be eschewed. Exposure to "currents of air, or in the evening air" was believed to be harmful. Vinegar and camphor "cannot be used too frequently upon handkerchiefs or in smelling bottles by persons whose duty calls them to visit or attend the sick." Dunlap's *American Daily Advertiser* for August twenty-eighth contains the following directions for the use of the widely recommended "Vinaigre des Quatre Voleures:"

> As a contagious Disorder has appeared in this City, it is thought proper to request the printer to publish what is said to be the Receipt communicated by Four Thieves, for preventing infectious Distempers, viz.
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> Take of rue, sage, mint, rosemary, wormwood and lavender, a handful of each; infuse them together in a gallon of white wine-vinegar; put the whole in a stone pot closely covered up, upon warm wood ashes for four days; after which, draw off (or strain through fine flannel) the liquid, and put into bottles well corked; and into every quart bottle put a quarter of an ounce of camphor. With this preparation, wash your mouth, and rub your loins and temples every day; snuff a little up your nostrils when you go into the air, and carry about you a bit of sponge dipped in the same, in order to smell to upon all occasions, especially when you are near any place or person that is infected.

By these precautions the notorious "four thieves" were said to have escaped infection in spite of intimate exposure. To tar, vinegar and camphor Benjamin Rush attributed no prophylactic virtue, but he was inclined to think that garlic might be useful in this direction, for he had "met with several persons who chewed it constantly, and who were much exposed to the contagion without being infected." Dr. Goos advised a preventive decoction made from twelve turnips, one endive and eight carrots in one gallon of water which was boiled to three quarts. This quantity was to be consumed in two or three days. Clysters of the same decoction were recommended.

Rush made a number of interesting observations on the relation of occupation and other circumstances to an apparent immunity to infection. Individuals confined to hospitals or prisons conspicuously escaped the disease. "Shut-ins" in general who had no outside contacts, likewise experienced an apparent immunity. Rush believed that the escape of sailors who refused shore-leave, was dependant upon the absence of effluvia in the air on shipboard; and contradicting his earlier observations of the inefficacy of tar in the prophylaxis of yellow fever he stated that the odor of tar might help in this direction. The freedom of certain confirmed drunkards from the fever was explained by the Brunonian theory in that the "stimulus of ardent spirits, probably predominated over the stimulus of the contagion, and thus excited an artificial fever which defended the system from that which was epidemic." Singularly there was little propagation of the infection into the country, even though infected individuals at times were moved to the rural districts or refugees from the city were stricken there. Butchers, painters, garbage collectors, and grave diggers were among the trades least affected. With regard to the last named Rush stated that "there seems to be something in the fresh earth which attracts or destroys by mixture, contagion of every kind." Prior to this epidemic negroes were supposed to enjoy a relative immunity to yellow fever. Rush early issued the following statement:

> It has been remarked that the black people have in no instance been infected with the malignant fever which now prevails in our city. The late Dr. Lining, of South Carolina, long ago made the same remark. "There is something very singular (says the Doctor) in the constitution of the negroes which renders them not liable to this fever; for though many of them were as much exposed as the nurses to the infec-

tion, yet I never knew of one instance of this fever among them, though they are equally subject with the white people to the bilious fever."

To the purport of this observation further attention will be later directed. In the present relation it need only be added that the mortality from yellow fever was relatively higher in the negro than in the white population during the epidemic of 1793. Currie in a footnote to his monograph of 1794 explained the apparent freedom of the French emigrés from yellow fever by their isolation rather than by immunity. While clothes were believed to be media of transmission, paper was not thought to be capable of so acting. Rush was noncommittal in the matter of the danger of graveyards. He stated:

> There were for several weeks two sources of infection, viz. exhalation and contagion. The exhalation infected at the distance of three and four hundred yards; while the contagion infected only across the streets. The more narrow the street, the more certainly the contagion infected. Few escaped it in alleys.

Carey records that there were thirty-two fever victims in thirty houses in Pewter Platter Alley.

A most remarkable contribution to the prophylaxis of yellow fever appeared in the *American Daily Advertiser* of August twenty-ninth but apparently attracted little attention:

> As the late rains will produce a great increase of mosquitoes in the city, distressing to the sick, and troublesome to those who are well, I imagine it will be agreeable to the citizens to know that the increase of those poisonous insects may be much diminished by a very simple and cheap mode, which accident discovered. Whoever will take the trouble to examine their rain-water tubs, will find millions of the mosquitoes fishing (?) about the water with great agility, in a state not quite prepared to emerge and fly off: Take up a wine glass full of the water, and it will exhibit them very distinctly. Into this glass pour half a teaspoon full, or less, of any common oil, which will quickly diffuse over the surface, and by excluding the air, will destroy the whole brood. Some will survive two or three days but most of them sink to the bottom, or adhere to the oil on the surface within twenty-four hours. A gill of oil poured into a common rain-water cask, will be sufficient: large cisterns may require more; and where the water is drawn out by a pump or by a cock, the oil will remain undisturbed, and last for a considerable time. Hickory ashes have been tried without effect.

The initials affixed to this item, A. B., do not identify the author; but it is safe to say that neglect to follow the advice given, on a wholesale scale, cost Philadelphia untold misery and wealth. Whereas the principle involved in this suggestion was unwittingly tantamount to the prophylaxis of yellow fever, the efforts of the people of Philadelphia, in 1793, were directed toward the care of the afflicted and the limitation of the spread of an infection they could only objectively comprehend.

The following excellent advice from a layman in the *American Daily Advertiser* for August twenty-fourth, 1793 likewise passed unheeded:

> Mr. Dunlap,
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> A Mortal Disease has begun to rage in this city. It is probably infectious, and it is to be feared that it may become epidemic, unless measures are seasonably taken to prevent its progress. What can be done, or whether anything ought to be done, by the police of the city, I leave others to consider and decide. But allow me, through the medium of your paper, to suggest to the faculty of physicians, whether it might not be proper for them to attempt something, in concert for the cure and prevention of this dangerous malady. In difficult cases a consultation is usually called. The idea is that a comparison of sentiments and a communication of information, among men of skill and observation, may effect that, to which the unassisted abilities of any individual might not be competent. Would it not then be desirable that a general consultation should voluntarily take place, relative to the general treatment of a dangerous disease, which threatens the lives of hundreds? Might not a method of cure probably

be suggested and agreed upon, that would not otherwise be readily or generally known? Might not much useful information, at any rate, be communicated which individual practitioners would not otherwise possess? These ideas have had so much weight with my mind that I have thought it my duty to throw them before the eye of the public. I am not myself a physician. It would therefore not be proper for me even to suggest the mode in which the proposed communication should be made. The known benevolence of the professors of the medical art in Philadelphia, and their numerous exertions in the cause of humanity leave me no room to doubt that if they judge that any thing useful would result from the measures hinted at they will easily find the means of carrying them into effect. I shall only further remark that if any method can be devised to preserve those from taking the infection who are exposed to its influence, it would be a most important discovery and ought to be made as public as possible.

Philanthropos.

Philadelphia, August 22, 1793.

The peace-maker reckoned without his host.

The practice of Benjamin Rush is outlined in his account of his second attack of yellow fever:

On the ninth of October, I visited a considerable number of patients, and as the day was warm I lessened the quantity of my clothing. Toward evening I was seized with a pain in the back which obliged me to go to bed at eight o'clock. About twelve I awoke with a chilly fit. A violent fever with acute pains in different parts of my body, followed it. At one o'clock I called for Mr. Fisher who slept in the next room. He came instantly, with my affectionate black man to my relief. I saw my danger painted in Mr. Fisher's countenance. He bled me plentifully and gave me a dose of the mercurial medicine. This was immediately rejected. He gave me a second dose, which likewise acted as an emetic, and discharged a large quantity of bile from my stomach. The remaining part of the night was passed under an apprehension that my labours were near an end. I could hardly expect to survive so violent an attack of the fever, broken down as I was, by labour, sickness and grief. My wife and seven children, whom the great distressing events that were passing in our city, had jostled out of my mind for six or seven weeks now resumed their former place in my affections. My wife had stipulated in consenting to remain in the country, to come to my assistance in case of my sickness; but I took measures which without alarming her, proved effectual in preventing it. My house was a Lazaretto, and the probability of my death, made her life doubly necessary to my family. In the morning, the medicine operated kindly, and my fever abated. In the afternoon it returned, attended with a great inclination to sleep. Mr. Fisher bled me again which removed the sleepiness. The next day the fever left me, but in so weak a state that I awoke two successive nights with a faintness which threatened the extinction of my life. It was removed each time by taking a little aliment. My convalescence was extremely slow. I returned in a very gradual manner to my former habit of diet.

The "mercurial medicine" referred to by Rush was the famous "ten and ten," the evolution of which is quite interesting. As a student under John Redman in the epidemic of 1762 the value of gentle purges had been remarked. John Mitchell of Virginia had advised Glauber's salt in this relation in the yellow fever of 1741. By reason of the failure of this medication Rush reasoned that emetics were indicated to meet the great indirect debility. Bark in all forms proved ineffectual as did also blisters applied to the neck, head and extremities. The warm packs of vinegar advised by Hume had no beneficial action in his experience. Rush consulted Doctor Stevens, late of St. Croix, West Indies, whose ideas in therapy had a considerable vogue, but trial convinced Rush of their inefficacy. The literature on the management of this malady was very contradictory. In one of the Continental hospitals during the Revolutionary War, Doctor Thomas Young, a senior surgeon, had used a formula of ten grains of calomel and ten grains of jalap, which was known as "ten and ten." Believing that his earlier failures might have resulted from the inadequate purgation, Rush substituted the formula of Young. "The jalap appeared

to be a necessary addition to it, in order to quicken its passage through the bowels; for calomel is slow in its operation, more especially when it is given in large doses." If this dosage were not sufficient, the jalap was increased to fifteen grains and commonly the latter combination was repeated twice at six hour intervals or until four or five large evacuations resulted. In addition venesection constituted an important adjunct to his management; but since he was certain that ill effects might result, blood was let especially when a crisis did not occur in three days. Further indications for blood letting lay in a tense pulse, moist white tongue on the first day of the disease ["a certain sign of an inflammatory fever"], hemorrhage and congestion of the brain. The amount of blood let was determined by the season, the pulse and other equally unrelated factors. As much as one hundred ounces were let in ten days. Doubt has been cast upon the period of time covered by the venesections of Doctor James Mease which totalled one hundred and sixty-two ounces according to Rush. But then the elder Shippen writing from his retirement at Oxford Furnace, New Jersey to Rush on October thirteenth, 1793 said, "Desperate diseases require desperate remedies. You should bleed your patients almost to death, at least to fainting." In substantiation of this position he quoted the physician-buccaneer, Thomas Dover. One of Benjamin Rush's staunch supporters, Doctor Griffitts, on leaving Philadelphia to recuperate from his third attack of yellow fever wrote:

I cannot leave town without a parting adieu to my kind friend, and sincere prayers for his preservation. I am sorry to find that the use of the lancet is still so much dreaded by too many of our physicians; and while lamenting the death of a valuable friend this morning, I was told that he was bled but once during his disorder. Now if my poor frame, reduced by previous sickness, great anxiety, and fatigue, and a very low diet, could bear seven bleedings in five days, besides purging, and no diet but toast and water, what shall we say of physicians who bleed but once.

Cool air, cold drinks, a low diet and cold sponges were also advised.

Rush's enthusiasm over the results of his treatment knew no bounds. He outlined his plan to the College of Physicians on September third. Casual meetings on the street afforded another medium of transmission of his discovery to professional brethren. He wrote:

Never before did I experience such sublime joy as I now felt in contemplating the success of my remedies. It repaid me for all the toils and studies of my life. The conquest of this formidable disease, was not the effect of accident, nor of the application of a single remedy; but it was the triumph of a principle in medicine. The reader will not wonder at this joyous state of my mind, when I add a short extract from my note book, dated the 10th of September. "Thank God! Out of one hundred patients, whom I have visited, or prescribed for, this day, I have lost none."

Rush's plan of treatment was the outgrowth of his theory of the origin of fever in a convulsion of the arterial system, and his manner of practice had the unequivocal support of a considerable group of influential practitioners, notably Griffitts, Say, Pennington and his former students, Leib, Porter, Annan, Woodhouse and Mease. But it is not to be supposed that these radical measures were generally accepted by the medical profession.

Dr. Kuhn called it a murderous dose. Dr. Hodge called it a dose for a horse. And Barton called it a devil of a dose. Dr. Hutchinson who is nearly as large as Goliath of Gath, and quite as vauntful and malignant, even threatened to give me a flogging. Dr. Hutchinson flog me. Why, gentlemen, if a horse kicks me, I will not kick him back again. But here is my man Ben whose trade it is to beat horses. He is willing to meet Dr. Hutchinson in my place, and play brute with him as soon as he pleases. I have that to do which belongs to a man.

To add fuel to the flame, Adam Kuhn whose contact with the epidemic dated from August twenty-third to September third and whose experience in the treat-

ment of yellow fever in 1793 was, according to Rush, limited to seven cases, addressed a letter to the *General Advertiser* on September eleventh, in which he condemned the use of emetics and purgatives. The bark was advocated. Hydrotherapy of the following order was advised after the method of "De Haehn of Breslau;" "The patient is to be placed in a large empty tub, and two buckets of water of the temperature of about 75 to 80 degrees of Fahrenheit's thermometer, according to the state of the atmosphere, are to be thrown over him." This procedure was to be employed twice daily. In support of his plan Kuhn quoted Stevens of the West Indies. On the succeeding day Rush replied:

The yellow fever now prevailing in our city, differs very materially from that which prevails in the West Indies, and in several particulars from that of the year 1762. This will easily be believed by all those who attend to the influence of climate and seasons upon diseases. Prescribing for the name of a disease, without a due regard to the above circumstance, has slain more than the sword. My only design in withdrawing myself for a moment from the solemn duties to my fellow citizens, in which I am now engaged is to bear testimony against a method of treating the present disorder, which if persisted in would probably have aided it in desolating three-fourths of our city. I have had so many unequivocal proofs of the success of the short and simple mode which I have adopted, of treating this disorder that I am now satisfied, that under more favorable circumstances of attendance upon the sick the disease would yield to the power of medicine with as much certainty as a common intermitting fever.

And so the battle between the West Indian plan of stimulation, tonics, bark, opiates and cold baths without laxatives and the Rush plan of bleeding and purging sundered the profession in a time, when public confidence could ill afford the shock of an open division of opinion.

The Ridgway Library collection of Rush's correspondence contains the following interesting example of the strained professional relations of those times:

Dear Sir,

I regret that you and I differ so much in our opinions and practice in the prevailing Epidemic, that it is impossible for us to consult together in any case whatever, hereafter, with Safety to a patient.

From Dear Sir, your
friend.

Benj'n Rush.

October 3rd, 1793
To Dr. Hodge.

In his account of the yellow fever Rush thus explained his position:

One thing in my conduct toward these gentlemen may require justification; and that is, my refusing to consult with them. A Mahometan and a Jew might as well attempt to worship the Supreme Being in the same temple, and through the medium of the same ceremonies, as two physicians of opposite principles and practice, attempt to confer about the life of the same patient. Humanity was therefore on the side of leaving them to themselves.

Through his modified Brunonian conception of disease Rush thought that by purgation an artificial weak part was created in the bowels; thus "I diverted the force of the fever to them, and thereby saved the liver and brains from fatal or dangerous congestions." As the results of his heroic therapy he believed that the slow pulse was elevated and the elevated, reduced; the patient was strengthened and revived; fever was reduced; sweats were induced; vomiting was checked; obstruction in the lymphatic system was removed and jaundice prevented.

Two factors probably led to Rush's next step of popularizing this method of treatment, namely his sincere conviction in its efficacy and the total inadequacy of medical personnel to cope with the situation. The medical profession paid a heavy toll of morbidity and mortality to the fever; and at one time from this cause and from defection from the call of duty it was said that only three physicians were available in the city to treat not less than six thousand cases of yellow fever. Under the circum-

stances it is not strange that the indefatigable Rush resented the intrusions of "medical gentlemen, who beheld the disease at a distance." It is nevertheless interesting to trace the steps of his departure from the narrow path of strictly ethical practice. The apothecaries were instructed in the preparation of and directions for the use of "ten and ten." The technique of venesection was taught not only to medical students but also to nursing attendants of all orders and races. No opportunity was lost to advise people on the streets of any impropriety that might lead to infection. Charles Caldwell related a characteristic episode: When the familiar conveyance of the famous doctor was seen to pass into one of the remote sections of the city, Kensington, a considerable group of citizens solicitous for the welfare of relatives gathered at a bridge over which he would have to pass on his return to the city to enlist his aid. In answer to their inquiries as to the proper method of treatment of the fever he said, "I treat my patients successfully by blood letting, and copious purging with calomel and jalap in doses of ten grains of each for adults, and six or eight for children and I advise you, my good friends to use the same remedies."

"What," said a voice from the crowd, "bleed and purge every one?"

"Yes," said the doctor, "bleed and purge all Kensington. Drive on, Ben."

In the judgment of Rush, "the danger of delay in using one, or both those remedies, should be inculcated in the strongest terms, for the disease, like Time, has a lock on its forehead, but is bald behind." Finally he came to the conviction that "it is time to take the cure of pestilential fever out of the hands of physicians, and to place it in the hands of the people." The result of such a teaching he clearly foresaw in that "the pride and formalities of medicine, as far as they relate to this disease, are now as completely discarded in our city, as the deceptions of witchcraft were, above a century ago."

The civic authorities early recognized the emergency and the necessity for the segregation of the sick. The Spruce Street Almshouse closed its doors to the fever patients by order of the Guardians of the Poor. Pennsylvania Hospital encountered difficulties in excluding yellow fever patients. The Minutes of the Managers note:

> A special meeting held at the house of Samuel Coates, 8 mo, 28, 1793 for the purpose of looking into a violation of the rules of the Hospital on account of patients having been admitted, said to be suffering from "yellow fever" . . . Two men had lately been admitted who were infected with a putrid malignant fever, which now prevails in the city; one of whom [a negro] died the morning after he came in; and the other supposed to be in the last stage of Yellow Fever, for which there is great reason to fear the spreading thereof, to the danger of the other patients in the House.

Doctor Foulke who was responsible for the admission of these cases, was requested to investigate the matter and all members of the staff were asked to exercise unusual caution in the examination of patients prior to their admission to the wards of the Hospital. To provide temporary quarters for these patients, the circus of Mr. Ricketts at the Commons was commandeered by the Guardians on August twenty-sixth; but no provision was made for the care of the sick. So that of the seven patients committed there, two died and a third crawled away. The body of one of these two victims was unclaimed and left to decompose for two days, when with the help of a servant girl, a carter took it away. Threats of citizens in the neighborhood of the Commons to fire the circus led the Guardians to seek quarters for housing these patients remote from the heart of the city. On August thirty-first Bush Hill, the deserted mansion of William Hamilton, was taken over by eight of the Guardians with the sanction of Governor Mifflin. At first a staunch supporter of the Continental cause, raising a regiment in its behalf, William Hamilton had deserted his position and late in 1778 found himself one

of sixteen on trial for treason before Chief Justice McKean. A letter from Isaac Ogden of New York to Joseph Galloway, London, dated November twenty-second, 1778 explains the situation:

Billy Hamilton had a narrow escape; his Tryal for treason, against the States lasted twelve hours. I have seen a Gentle'n who attended his Tryal. He informed me that his Acquittal was owing to a Defect of Proof of a Paper from Lord Cornwallis, the Direction being torn off.

Two of his co-defendants at this time were hung. John Adams had occupied Bush Hill for two or three years of his term as vice president and Mrs. Adams wrote to her daughter as follows:

Although there remains neither bush nor shrub upon it, nor very few trees except the pine grove behind it, yet Bush Hill is a very beautiful place; but the grand and sublime I left at Richmond Hill. The cultivation in sight and the prospect are superior, but the Schuylkill is no more like the Hudson than I to Hercules.

The Adams had left Bush Hill prior to the epidemic, but the tenant Thomas Boyles vigorously opposed its occupancy. However, he was permitted to remain in the house adjoining the mansion and on the evening of August thirty-first the four patients remaining at the circus were removed to Bush Hill, which thereby took its unusual position in the history of the yellow fever of 1793. Its high and airy site offered an ideal situation for a hospital. Nevertheless its early mismanagement led it to ill-repute. To begin with the facilities were inadequate and the building greatly overcrowded. Drunken and irresponsible help alone seemed obtainable; and so great was the terror instilled in the minds of Philadelphians that transfer to this temporary hospital was generally resisted. A rather overdrawn picture of conditions in Bush Hill at that particular time is found in Charles Brookden Brown's "Arthur Mervyn":

The atmosphere was loaded with mortal stenches. A vapour, suffocating and malignant, scarcely allowed me to breathe. No suitable receptacle was provided for the evacuations produced by medicine or disease. My nearest neighbor was struggling with death, and my bed, casually extended, was moist with the detestable matter which had flowed from his stomach.

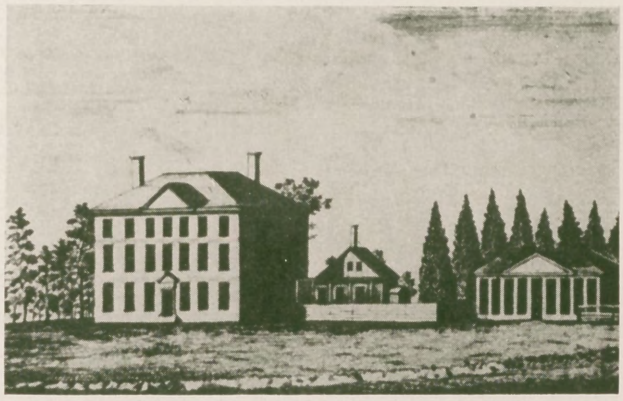

FIG. 3. BUSH HILL. (COURTESY, PENNSYLVANIA HISTORICAL SOCIETY.)

You will scarcely believe that, in this scene of horrors, the sound of laughter should be overheard. While the upper rooms of this building are filled with the sick and the dying, the lower apartments are the scene of carousals and mirth. The wretches who are hired at enormous wages, to tend the sick and convey away the dead, neglect their duty, and consume the cordials which are provided for the patients, in debauchery and riot.

A female visage, bloated with malignity and drunkenness, occasionally looked in. Dying eyes were cast upon her, invoking the boon, perhaps, of a drop of cold water, or her assistance to change a position which compelled him to behold the ghastly writhings or deathful smile of his neighbor.

The visitant had left the banquet for a moment, only to see who was dead. If she entered the room, blinking eyes and reeling steps showed her to be totally unqualified for ministering the aid that was needed. Presently she disappeared, and others ascended the staircase, a coffin was deposited at the door, the wretch, whose heart still quivered, was seized by rude hands, and dragged along the floor into the passage.

On September fourteenth two of the physicians to Bush Hill, Drs. Physick and Cathrall, reported a state of complete disorganization and confusion to the Committee of Health. They outlined the needs

of the institution. The Committee voted to petition the Bank of North America for a loan of 1500 dollars to meet these requirements. The next day two men of spirit and decision volunteered their services to oversee the hospital at Bush Hill; and from that time until the end of the epidemic the millionaire shipper and merchant Stephen Girard and the noble Moravian Peter Helm worked shoulder to shoulder with total disregard for personal danger or reward. They spent from six to eight hours daily at Bush Hill, frequently engaged in most lowly tasks. Girard directly supervised the internal administration of the hospital, while Helm oversaw the grounds and outlying buildings. Order was brought from chaos. The qualifications of nurses and attendants were investigated. Incompetency in all aspects of the hospital was summarily met. There still appeared to be confusion in the division of medical services. Doctors Leib, Cathrall, Physick and Annan had been in charge. On September sixteenth Doctor Deveze, lately arrived from Cape François, offered his services to the hospital. Whereupon the Committee:

> Resolved, that the Doctor be referred to the managers of the Hospital, and that in the meantime enquiry be made into his abilities and character, and if they should prove to be such as to justify his being employed, that when the Committee shall go into the appointment of Physicians, he have a part allotted to him.

Stephen Girard apparently acted as Deveze's sponsor in obtaining the appointment. On September eighteenth Deveze was given the unusual staff position of medical attendant on such cases as requested his services. This arrangement led to overlapping and dissatisfaction on the part of the other attending physicians. Various plans for the division of services were suggested; but in the end all members of the original medical staff resigned, leaving Deveze in charge. Doctor Benjamin Duffield offered his services to Bush Hill, and thereafter apparently the French physician and Duffield worked in close harmony.

The physical plant at Bush Hill and the organization under Girard and Helm deserve our attention. The mansion proper contained fourteen rooms together with three large entries which were utilized as chambers. To the matron, Ann Beakly, and her very capable assistant, Mary Savill, one of these passage rooms was assigned. The remainder of the rooms and entries were occupied by cots for the sick, a total of one hundred and forty beds being available. Particular care was directed toward the segregation of the desperately ill cases. A new frame house adjoining the mansion with three rooms on the ground floor accommodated seventeen patients, whereas its loft, sixty by eighteen feet, held cots for forty convalescents. Even the barn was utilized for the care of patients, room for forty convalescent men and fifty-seven convalescent women being provided therein. Here also resided the physician, apothecary and such men as were required to remain on the premises, except the cooks, steward, clerk and laborers who lived in other outbuildings. In all twenty nurses and attendants, equally divided between the two sexes, constituted an efficient nursing staff under Doctors Deveze and Duffield. One of the physicians supervised the diets of the sick. Two waiters were engaged to shave the patients. Each bed was supplied with sheets, pillow, two or three blankets, chamber, porringer, plate, spoon and clean linen. Bush Hill sheltered eight hundred and seven sufferers from the yellow fever in 1793, of whom four hundred and forty-eight died. Obviously perfect order prevailed. Rush wrote:

> [Bush Hill] was provided with all the necessaries and comforts for sick people that humanity could invent, or liberality supply. The attendants were devoted to their duty; and cleanliness and order pervaded every room in the house. The reputation of the hospital, and of the French physician, drew patients to it in the early stage of the disorder.

Instances of personal self-sacrifice and devotion in Philadelphia's awful trial were

innumerable. It was to be expected that physicians would head the list. Ten doctors died of yellow fever and their names, Hutchinson, Morris, Lynn, Pennington, Dodds, Johnson, Glentworth, Phile, Graham and Green were engraved deeply in the grateful hearts of their fellow citizens. Of this group James Hutchinson was the most outstanding. As physician of the port he had met with severe criticism at the hands of a certain group supporting the foreign origin of the fever. Notwithstanding his implied responsibility for the health of the port on the one hand and for the failure to detain the ships bearing the pestilential fever on the other Hutchinson fearlessly maintained its foreign origin and devoted every effort to the care of its victims when the majority of medical men of his mind had deserted their posts of duty. As unselfish and self-effacing as their medical brethren were the clergy, of whom a like number laid down their lives in the service of their fellowmen. Only three Guardians of the Poor remained in the city and two of these, James Wilson and Jacob Tomkins, were martyrs to their duty. Mayor Clarkson was an able executive in those trying days. His Committee of Health constituted twenty-six members, of whom twenty-two answered the call of duty and four [Andrew Adgate, Jonathan Dickinson Sergeant, Daniel Offley and Joseph Innskeep] died. They met daily and their proceedings constitute a model of orderly efficiency and civic calm in the face of terrible distractions.

In more humble relations the negroes of Philadelphia played an important rôle in the epidemic. Benjamin Rush, as has been previously stated, had pointed out in the press the relative immunity of the negro race to yellow fever. He continued:

> The only design of this remark is to suggest to our citizens the safety and propriety of employing black people to nurse and attend persons infected by this fever; also, to hint to the black people, that a noble opportunity is now put into their hands, of manifesting their gratitude to the inhabitants of that city, which first planned their emancipation from slavery, and who have since afforded them so much protection and support as to place them, in a point of civil and religious privileges upon a footing with themselves.

The negroes promptly responded to Doctor Rush's suggestion and Mayor Clarkson wrote the following communication to Claypoole:

> Sir,
>
> It is with peculiar satisfaction that I communicate to the public, through your paper, that the African Society, touched with the distresses which arise from the present dangerous disorder, have voluntarily undertaken to furnish nurses to attend the afflicted; and that by applying to Absalom Jones and William Gray, both members of that society, they may be supplied.
>
> Matth. Clarkson,
> Mayor.
>
> September 6th
> 1793

The negroes thereafter rendered invaluable service in the care of the sick and the disposal of the dead. Doctor Rush taught them the approved method of blood letting. In the earlier editions of his "Account of the Malignant Fever," Matthew Carey was inconsiderate enough to lay the charge of profiteering at the hands of these negroes and to generalize on the class of individuals giving nursing attention. Absalom Jones and Richard Allen were quick to resent these charges and insinuations in a brochure appearing in 1794. One thrust was particularly pointed:

> Mr. Carey, although chose a member of that band of worthies who have so eminently distinguished themselves by their labours, for the relief of the sick and the helpless yet, quickly after his election, left them to struggle with their arduous and hazardous task, by leaving the city. 'Tis true, Mr. Carey was no hireling, and had a right to flee, and upon his return, to plead the cause of those who fled; yet, we think, he was wrong in giving so partial and injurious an account of the black nurses; if they have taken advantage of the public distress, is it any more than he hath done of its desire for information?

We believe he has made more money by the sale of his "scraps" than a dozen of the greatest extortioners among the black nurses.

In justice to the character of the nurses at Bush Hill, Carey should have stated that on the reorganization of that institution all attendants except two negresses were dismissed. In answer to the charge of appropriating household goods to themselves these negroes gave a strict accounting of such materials to Mayor Clarkson, who exonerated them from all blame. According to the common practice beds from infected houses had been buried to disinfect them, but all charges of misappropriation were definitely refuted.

Philadelphia was early cut off from communication with neighboring and remote towns. Postmasters held Philadelphia mail by tongs and dipped it into vinegar. Quarantine on travelers and baggage from the afflicted city was enforced in New York, Trenton, Baltimore, Reading, Bethlehem, Chestertown, Lamberton, Hagerstown, Havre de Grace, Newburyport, Newbern and Charleston. According to the *National Gazette* of September twentieth, "on the 14th instant a detachment of militia were marched out of Baltimore, to take possession of a pass on the Philadelphia road, in order to stop all persons going hence to that town." Shipping from Philadelphia was especially watched in Atlantic seaports. In contrast to this strict quarantine against Philadelphia stood the kindly asylum offered refugees in Woodbury and Springfield, New Jersey. Elizabethtown and Wilmington also opened their doors to those who fled Philadelphia. Chestertown and Elkton, Maryland and Chester, Pennsylvania provided shelter for the accommodation of those excluded by quarantine from the towns. And yet with this ostracism supplies and funds from the generous countryside flooded the stricken city.

As has been discussed, the peak of the epidemic was reached in the second week of October. On October fifteenth Rush wrote, "The clouds at last dropped health in showers of rain, which continued during the whole day, and which were succeeded for several nights afterwards by cold and frost." Carey was not inclined to believe that the rain of October fifteenth had anything to do with the subsidence of the epidemic, which in his judgment "died away with hardly any rain, and a very moderate degree of cold." By November ninth the daily death rate had fallen to six. As early as September twelfth the *Federal Gazette* contained this item, "Dr. R. does not believe it will be prudent for those persons who are in the country to return to town, until after frost or heavy rains have taken place, both of which alike weaken or destroy the contagion of the yellow fever." On October twenty-sixth Mayor Clarkson announced the abatement of the fever but recommended that the citizens should not return "for a week or ten days, or until we have some considerable rains; as the change of air would prove dangerous, and might probably be fatal to many."

Now was the appointed time. At first the refugees returned slowly to the city; and their ruddy complexions were in sharp contrast to the sallow cast of those who had remained in the city. Various methods were employed for destroying the contagion, for example, burying articles, baking in ovens, burning, whitewashing and fumigating with various aromatic vapors. Rush did not deem these measures in any sense necessary. He urged that the windows be thrown open and floors and walls washed. On the fourteenth of November Governor Thomas Mifflin proclaimed December twelfth as a day of thanksgiving for the city's deliverance from the pestilence.

Four thousand and forty-four lives had been lost in the epidemic and the commercial prestige of Philadelphia had suffered an irreparable injury. The future welfare of the city therefore held the public attention. Against further invasions of the yellow fever the precept of Rush apparently prevailed: "Without the matrix of putrid vegetable matters, there can no more be a

bilious or yellow fever generated amongst us, than there can be vegetation without earth, water or air." He urged the drainage of swampy land and the planting of trees thereon. A comprehensive plan of wharf and street cleaning seemed to him to be indispensable for the protection of the health of the community. Noah Webster declared,

> I say nothing of Philadelphia for its position and the alterations in the original plan of the city have doomed it to calamity. The citizens will not believe the evil to arise among themselves and therefore must be left to their fate. If remitting fever every year, and yellow fever often, will not convince them that something is wrong in their city, it is in vain to reason with them. I believe that if all the cross streets and the back houses in Philadelphia could be levelled with the earth, and the ground converted into flower gardens and grass plats, the citizens would in twenty years celebrate the anniversary of their destruction, with as much fervor as the republicans in France celebrate the demolition of the Bastile.

Charles Caldwell, in 1801, pointed out that in 1762 Thomas Bond in a lecture at Pennsylvania Hospital had issued a warning that the filth of the city was capable of producing yellow fever. Caldwell further commented on the advantages of cultivation of the "Neck," a strip of low land between the Delaware and the Schuylkill Rivers, on which League Island Navy Yard and the Sesquicentennial Exposition have since been built. Laws relative to health protection and disease control were, enacted in Pennsylvania as a direct result of this epidemic. Furthermore, the port of Philadelphia was more adequately protected and a Lazaretto established.

Of the clinical studies of the fever no description compares with that of Benjamin Rush. He depicted the disease with the touch of a Sydenham. It is almost inconceivable that a man with his exacting and enormous practice, twice the victim of the disease himself, should have found time to make clinical notes, to engage in polemics and to maintain a wide correspondence in the hectic period of the epidemic. And yet among the classics in medicine stands his text, "An account of the Bilious remitting Yellow Fever, as it appeared in the City of Philadelphia in the Year 1793." Times have changed, and the Brunonian theory of disease has passed into the limbus of vain fancies and with it passed Benjamin Rush's conception of the unity of disease. From our remote position the soundness of his practice may be questioned, but this advantage may not be allowed in criticism. In justice to his honesty it must be granted that he personally submitted to his own plan of treatment. He came early to a conviction that yellow fever is not contagious. Caldwell assumed credit for Rush's position in this relation, by reason of the former's experience in mingling and sleeping with the patients at Bush Hill. Rush stated that in giving up the wearing of a cloth saturated in vinegar over the mouth, "Often I saw and felt the signs of the universal presence of the contagion in my system, I laid aside this, and all other precautions. I rested myself on the bedside of my patients, and I drank milk, or eat fruit in their sick rooms." The knowledge of the pathology of yellow fever was furthered by necropsies made at Bush Hill by Physick, Annan and Cathrall and later by Deveze. Notwithstanding the lessons drawn from this devastating epidemic of 1793, Philadelphia was doomed to repeated visitations of the yellow fever.

Immediately following the epidemic the College of Physicians reconvened and on November twenty-sixth submitted the following report in answer to Governor Mifflin's request for information relative to the source and the control of the fever:

> Sir,
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> It has not been from a want of respect to yourself, nor from inattention to the subject, that your letter of the 30th ult. was not sooner answered; but the importance of the questions proposed, has made it necessary for us to devote a considerable portion of time and attention

to the subject, in order to arrive at a safe and just conclusion.

No instance has ever occurred of the disease yellow fever having been generated in this city, or in any other parts of the United States, as far as we know; but there have been frequent instances of its having been imported, not only into this, but into other parts of North America, and prevailing there for a certain period of time; and from the rise, progress, and nature of the malignant fever, which began to prevail here about the beginning of last August, and extended itself gradually over a great part of the city, we are of opinion that this disease was imported to Philadelphia, by some of the vessels which arrived in the port after the middle of July. This opinion we are further confirmed in by various accounts we have received from unquestionable authorities.

Signed by order of the College of Physicians
John Redman, President

November 26th
1793

To the Governor of Pennsylvania.

Redman signed this document under protest and two other members of the College, Foulke and Leib dissented from the majority report. The controversy had been so heated that on November fifth Benjamin Rush resigned from the College, but in so acting testified to his magnanimity by presenting the library of the College with a copy of Wallis' edition of the works of Sydenham. Governor Mifflin appreciating the open breech between Rush and the College, on November sixth sought the counsel of the former. A separate report bearing particularly on the local origin of the yellow fever was thereupon submitted by Rush, supported by Caldwell, Deveze, Coxe, Physick, Reynolds, Sayre, Otto, Boys, Cooper, Stuart, Pascalis and Strong.

While October saw the storm of the pestilence pass, yet the burden of the homeless and orphaned children proved a growing problem. On September nineteenth Mary Parvin, matron, reported thirteen children under her care in the Fifth Street house, provided by the city authorities as an orphanage. The increase in their number to twenty-seven by October thirteenth led to the establishment of adequate facilities in the Loganian Library with three men and seven women to assist the matron. Dr. Duffield supervised the temporary institution from a medical standpoint. On October twenty-third Mary Parvin reported that a total of one hundred and fifty-nine children had been under her care. Of this number seventy-seven remained in residence at that time; forty-three were with nurses outside of the home; thirty-one had found homes with kinsmen and eight had died. A loss of one tenth of her population indelibly impressed the horrors of the yellow fever epidemic of 1793 upon the people of Philadelphia. This memory was further extended to another generation by the legacy of orphanhood. American literature carries its awful picture to posterity in Charles Brockden Brown's "Arthur Mervyn" and S. Weir Mitchell's "The Red City."