

Medical Events In the History of Key West

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I. THE MARINE HOSPITAL

CLOSURE of the United States Marine Hospital, Key West Florida, on February 15, 1943, marked the termination of hospital facilities rendered by the U. S. Public Health Service¹ for approximately 98 years to seamen and to citizens of Key West. Its history was associated with trials and tribulations modified by political bureaucracy, wars, epidemics of contagion, climatic conditions and geographic location. In spite of various unsatisfactory conditions, it was an oracle for the art of healing in the community. Now that a new order is to be established, it has been regarded worthwhile to give an insight into the medical situation of this locality by recording some of the more important past events concerning the institution.

Historical facts and legends go back beyond the eighteenth century when the Indians inhabited the Florida Keys. According to tradition, tribes from the isles trespassed on hunting grounds of those living on the continent. Subsequently the latter drove the former to Key West and slaughtered most of them. Skeletal remains found, thereon, ironically accounted for the original name, "Cayo Hueso," meaning, Bone Island. Several decades later the title was altered to Thompson's Island and finally to Key West, which is the corrupted English pronunciation of the Spanish title.

The first white people to set foot on Key West were pirates and shipwrecked victims, who probably came in the latter part of the sixteenth century, from Cuba. Permanent settlers did not arrive until near the end of the eighteenth century. On August 26, 1815, Don Juan de Estrada,

Reprinted from *Bulletin of the History of Medicine*, Vol. XV, No. 5, 1944

¹ Prior to 1898, the Marine Hospital Service was a part of the U. S. Treasury Department.

then Spanish Governor of Florida, presented the territory of Key West to Teniente Juan Pablo Salas of Havana, Cuba, for services rendered in the Royal Artillery Corps. Salas had no particular use for the property. Thus he welcomed the prospective buyers. John Simonton and John B. Strong, Simonton eventually purchased the 2000-acre tract for \$2,000.00 on January 19, 1822. Through business relations in Mobile, Alabama and the State of New Jersey, and political connections in Washington, D. C., he became cognizant of the strategic value of the island for commercial and military purposes. In addition, he believed climatic conditions ideal to construct a salt processing plant.

Prior to Simonton's transactions, Salas had made a conditional sale to Strong, who transferred his claim to John Geddes. The latter effected a landing in conjunction with Doctor Montgomery and took possession of Key West in April 1822, by countenance of Captain Hammersley of the United States Naval Schooner "Revenge" which was then at anchor in the harbor.

Within the next two months, Salas made a compromise between the two by settling the claim in favor of Simonton and forfeiting 500 acres of land on the Florida coast to Strong.

One month before Geddes' foray, the island had been officially occupied and taken possession of, by Lieutenant M. C. Perry, Commander of the U. S. Schooner "Shark" in the name of the United States, under the title of Thompson's Island.

By the year's end, Commodore David D. Porter had established headquarters in Key West from where he was to command a task force ordered to rid the Caribbean Sea of pirates known as the "Brethren of the Coast." In the course of events, hospital quarters were erected for his men. These were the first housing facilities ever provided here by the U. S. Government for the care of sick seamen. Doctor Thomas Williamson from the "Seagull" was appointed hospital surgeon on April 8, 1823. He served in that capacity until October 21, 1823. During Porter's stay (1822-24) of duty, he was continually appealing for more medical aid. However, help was seldom obtained. From July to September of both years, yellow fever was prevalent. In a report to the Secretary of the Navy in 1825, we find sickness appeared to a "distressing extent," but was "less severe than heretofore."

According to the Annual Register of the Navy Department for 1826, Surgeon's Mate Samuel Biddle was stationed at Thompson's Island from July 1825 to February 14, 1826, when he died.

The era 1822 to 1830 revealed a young village in its infancy struggling to organize a local government. The inhabitants' principal occupation included: salvaging wrecked ships, which had been incapacitated either by storms or by running aground in the shallow straits nearby; and fishing for the Havana market.

By 1828, the Town was incorporated. February 1829 it was surveyed. The next year the census was recorded as 517 (368 white; 149 negroes, 66 of whom were slaves). Almost every nationality was represented. In May 1831 Key West had its first burial of one of the oldest settlers. The same year a company of infantry was established on the island. Several months afterward, Doctor Benjamin B. Strobel was mentioned as the Surgeon of the Army Post. By this time, the increase of commercial and military activity had made Key West the largest city in Florida. It was to retain that prominence until 1860. Very early the need for a hospital, where sick seamen could be treated, was manifest.

The allowance for ports south of the Potomac at that time were: "for suitable boarding, lodging and nursing three dollars per week; for necessary medicines, the usual apothecary rates; for medical services, twenty-five cents for each day, when the aggregate time for which rendered shall average less than twenty-five days to each patient. When the average time to each patient does not exceed ten, six dollars and twenty-five cents for each patient, and when there is a greater number than ten, three dollars and twelve and a half cents for each patient; and for funeral charges six dollars."

This was so inadequate that Monroe County demanded redress. In 1835 William Whitehead called attention to the need for a Marine Hospital at this port.

An object long had in view by the citizens of Key West is the establishment here of a Marine Hospital, or accommodations for the sick of a more general character than exist at present.

Situated as Key West is, it is calculated at all times to become a receptacle for the sick of vessels leaving the ports of West Florida, Alabama and Louisiana, and also of those bound to the northward from the Coast of Mexico, as there is no port offering equal advantages as a stopping place, and none between Charleston and Pensacola possessing the superior attraction of a hospital. Such being the case, seamen are brought here sick to be left to the care of strangers, dependent upon private charity (there being no municipal regulations for their support), and the hospital fund of the United States for their

nursing and subsistence. We would therefore recommend an application to Congress, through our delegate, for the establishment here of some public accommodations for the sick seaman, whereby his comfort may be in some measure secured while incapacitated by disease—to which they are liable—from pursuing his usual vocations.

In February 1836, the territorial delegate from Florida, Colonel Joseph M. White, introduced in Congress a resolution inquiring into provisions for greater care of disabled and sick seamen in Key West than those provided for by the disbursement of the Marine Hospital Funds. This was a step forward but the motion failed to carry. In short order a memorial was prepared and sent to Congress setting forth the many reasons why a hospital was especially needed. After repeated efforts by citizens of Key West, the building of a hospital was sanctioned by the U. S. Treasury Department. The site selected was a piece of land, "which was covered by a mortgage to John Bancroft as Trustee from John Simonton," who in turn, because of business interests, was largely responsible in starting the move to obtain a hospital at this port.

On July 8, 1844, A. Gordon, who also had a small interest in the hospital site and who was Collector of Key West, set forth the opinion that the proper location for the hospital was on the waterfront of the harbor adjoining the town lots (now the corner of Emma and Front Streets) just outside the "corporate limits of the town." Here, "it is near enough to allow the physician to render medical services to the citizens as well as to the patients in the hospital. The sick may be landed at the spot from boats or vessels without being carried through the town." He went on to say that he believed one thousand dollars per acre, the price demanded by Colonel Simonton, too much for the grounds. His comments on how to build the structure were adopted with little modification. "Permanency," he said, "requires that the principal material should either be brick or the stone of the Islands—if of the latter, which would be cheaper and equally good, it should be covered on the outside by a coat of cement mortar, which would effectively prevent the absorption of moisture."

The building was erected under the guidance of Colonel Simonton in 1844. It was two stories high, measured 100 x 45 feet and was equipped with 60 beds. A wharf was constructed on the west side to enable small boats to come alongside and anchor. Few alterations were made in the structure for many years except to repair damages wrought by storms.

During the Civil War the grounds, etc., were not maintained properly, largely because there were not sufficient appropriations. A report by Doctor William F. Cornick, Surgeon of the Marine Hospital, to the Commissioner of Customs, in December 1869 disclosed: "The Hospital building is very much out of repair. The fences are old and broken down. With reference to the records², there is but one book and that a 'Register of the Sick.' . . . There is one steward, one matron, one cook, three attendants and one washerwoman." In 1870, he wrote several letters asking about the regulations regarding the washing of the clothing of the Chief Surgeon and the matron of the hospital.

In 1871 an apothecary was requested for the hospital. However, it was many months before that office was filled. Previously, medical supplies had been purchased by contract from a local pharmacist. December 31, 1873, a horse was requisitioned to transport patients to and from the clinic.

Eventually a third story was added to the building. Here dwelled the Surgeon in charge with his family. Other personnel lived in an adjacent house, except the nurses who had quarters in the city. Not till 1917 was a home built for occupancy by the Chief Physician. When he moved from the third floor, this permitted doubling the capacity for patients to 125 beds.

About 1907 and 1917, respectively, the north portion of the hospital grounds and the waterfront were transferred to the U. S. Navy. The beach area west of the institution was filled in for a distance of several rods beyond the water's edge. Thereon, wharves and buildings were erected..

From 1835 to 1919, inclusive, the island was hit by several severe hurricanes and the population affected repeatedly by either smallpox or yellow fever. Hurricanes came in the fall of 1835, '46, '73, '94, 1909, '10, and '19. During these storms buildings were frequently damaged and sometimes some of the inhabitants injured or killed. With the tempest of 1846, many of the dead were disinterred from their graves. Thereafter, burials were no longer made in the graveyard to the northeast of the hospital, approximately where the Marine Barracks now stands. Instead, the bodies have been laid to rest in an area on the higher, central portion of the island. As late as 1855, interments were completed in Saint Paul Episcopal Churchyard.

² A letter from The National Archives, Washington, D. C., on February 5, 1943, revealed that most of the records of the Marine Hospital made before 1869 were either lost or destroyed.

A hurricane of violent character occurred October 6, 1873, destroying window blinds, breaking glass panes, tearing plaster from the ceiling and ripping doors from their hinges in the hospital.

Other minor storms through the seventies stimulated the acting head of the Marine Hospital to request of the Surgeon General of the U. S. Marine Hospital Service, in the year 1880, that a seawall be erected along the adjacent waterfront to protect the building from the southwest breakers. Two plans were presented for the construction: first, by piling; second, by using cement and rubblestone. Since the cost of the two was estimated to be approximately the same, the concrete was recommended for its greater durability. However, since the appropriations were limited, only the 150 feet in front of the hospital was finished. In later years, it was extended.

The worst hurricane struck October 11, 1909, causing total damage to the extent of between two and three million dollars in Key West. Water stood four feet deep on the hospital grounds. The lower floor of the building was flooded, the kitchen put out of commission temporarily and the yard covered with debris. The seawall and wharf were partially demolished and a great deal of the sandy beach was washed away. Repair and replacement, respectively, were made during the next few months. The following year another windstorm visited the city. It was a "recurring hurricane." Apparently having finished with the vicinity, it returned with renewed violence. Again the seawall was destroyed in part. Subsequently it was rebuilt and extended the entire length of the waterfront (about 600 feet).

Besides the destructive storms, the natives experienced several epidemics of yellow fever and smallpox. The transient nature of the population and the ingress of travelers increased the possibility of outbreaks of disease for several decades. During these periods the citizens often became panicky. Sometimes the sick were abandoned and left to die. In other parts of the state, the migrants saw lights burning and food cooking on the stoves in houses of the neighbors who jettisoned all property to be the first to flee. The terror-stricken in other sections were turned back at county borders at the point of a gun. Laws were formed at one time to prevent people having the contagions to disembark at this port. In the early years (fifties) where there was a "hint of the appearance of yellow fever in the city, trunks were hurriedly packed and the first steamer leaving Key West took the family away," not to return until the "Northers" blew away "the poison of disease" in the late fall. In the early days the malady was known as "Stranger's fever" because newcomers other than

children were usually the only individuals susceptible. The majority of native adults had had the fever. The illnesses amongst the older people generally ended fatally while the children experienced mild attacks. Observation, even in those days, proved that having the disease gave a permanent immunity.

The first severe epidemic of yellow fever came in 1835. No other authentic reports of disease appear until, "In June 1852, the steamer 'Philadelphia' of the Panama R. R. Line, lay near Sand Key, seven miles off with cholera on board. No cases were brought on shore. In July of the same year the 'Eldorado' of the same line anchored three miles off with about 300 passengers, 75 of whom were sick with cholera, yellow fever and chagres fever. The disease broke out on passage from Colon, proving very fatal. The vessels lay here for about one week; the dead were thrown overboard, some bodies drifting to the shore and were picked up and buried. A few passengers from the 'Eldorado' landed, but no cases of cholera or yellow fever occurred among them." Elsewhere it is related that the "Star of the West"³ was cut loose from her moorings as soon as the local authorities learned that disease existed on board the vessel. The floating dead, which had been dumped overboard, were gathered by boat hooks and towed out of the harbor by small boats into the tide channel, from which they went to sea, "probably to be eaten by sharks." It seems certain that cholera did not spread amongst the natives of Key West, for in 1874, the Marine Hospital authorities in a letter to the U. S. Treasury Department said that "cholera had never existed here."

During 1857, '58, the years of Civil War, '67, '69, '70, '73, '74, '75, '76, '78 and '84, yellow fever prevailed as an epidemic each summer. The usual mortality was 50 to 33 per cent. During the first two years mentioned, Doctor George Troupe Maxwell, was surgeon in charge of the Marine Hospital. Sometime within that interval, he and his nephew performed a postmortem examination on a sailor who had died of yellow fever at the hospital. "The nephew and his wife, and Mrs. Maxwell and some of the negro servants contracted fever. The two ladies died, as did also some of the servants." It was reported that the nephew "took" the fever "from the postmortem, the uncle escaped because he had had it before coming to Key West."

December 4, 1861, the Marine Hospital was designated to accept patients of the U. S. Navy. In a letter dated March 24, 1862, Flag Officer,

³ Although it was not possible to confirm absolutely the identity, it is probable that the "Eldorado" and "Star of the West" were the same ship.

William W. McKean, at Key West wrote, "I sent by the 'Carolina' 22 sick men from the Marine Hospital at this place, the surgeon having recommended their return to the north. I would bring to the notice of the Department that no surgeon has yet been ordered to this hospital. It has been attended for some months by an Army Surgeon, but a few days since, General Brannon informed me that he should be compelled to withdraw this officer, and applied to me to detail a naval surgeon to take charge of the hospital. This I was unable to do. . . ."

The next summer Doctor David T. Lewis was appointed Surgeon of the Marine Hospital. He died a few weeks later (September 3rd) of yellow fever after an eleven-day illness. While he was ill and for about three weeks afterwards, Doctor Horner, Surgeon of the Fleet, visited the hospital daily, and administered medical aid. On September third and tenth, Charles Howe of Key West, Collector, submitted a request to the Secretary of the Treasury for, "furniture, beds and bedding" to provide for the increasing number of patients and to replace much of the furniture "unavoidably destroyed during the epidemic." Between July first and September tenth, 49 deaths had occurred, "and nearly all by yellow fever—black vomit—more than one half this number were naval seamen."

In this same year and during the following one, as many as 30 cases of yellow fever were hospitalized at one time. Many soldiers stationed in Key West died of the disease within this interval. The local Catholic priest, Father S. Hunincq, made note of having fortified one group of ten soldiers with the Sacraments. These men apparently died suddenly within the same interval.

Treatment of the illness often touched ridiculousness and as Doctor Porter, Senior, in later years said, "It demonstrated First, the amount of ignorant medication the human system can stand and throw off. . . ." An exemplary case drawn from *The Journal of Practice* signed by surgeon's steward, J. W. Plummer of the U. S. S. Honduras, reads as follows: "Samuel D. Holt, acting third engineer, age 27, . . . was ushered in, August 8, 1863. Fever started with a chill and colic. A week previous given dosages of compound spirits of ether and whiskey. Ensuing day, fever strong and marked intense pains in the head. Gave calomel and rhubarb—15 grains each. Cold to head. Treatment afterwards consisted of acid drinks, liquid potasse citrate, and occasionally one ounce of castor oil. Thirty drops of laudanum and six drops of oil of turpentine to check bilious discharge. . . ."

Since the rules of the Marine Hospital excluded contagious diseases,

vessels infected had to proceed north in 1862 and 1864 when yellow fever prevailed in Key West.

It was not until 1872 that a dreadful epidemic of smallpox appeared. Shortly thereafter, Doctor Robert Murray, whose life history deserves some comment, was appointed Surgeon to the hospital. This man was to be associated intermittently with this institution for 31 years. He eventually attained a national reputation as an authority on how to restrain the march of yellow fever from points without the United States to adjacent territory of this country. During a 31 year interval he gave aid in 17 of 24 epidemics. Another version claimed he encountered the disease 25 times in 31 summers in 50 towns, 11 states, besides on board ship. Death came accidentally while he was en route to investigate an outbreak of the disease at Laredo, Texas, in 1903. His earlier life had been spent in Ohio. During the Civil War, he ran away from home at the age of 15 years and joined the Union Army. He was wounded five times and finally imprisoned by the Confederacy at Richmond for one year. One of the injuries involved the right eye leaving a permanent defect. As a result, lachrymation was chronic. It is said he was quite sensitive about the disfigurement, and in an effort to hide the blemish, he would turn his head off to the side when carrying on a conversation. There is also the story that one kidney had been removed in earlier life. Several years later while serving at a northern post, the Chief of the Marine Hospital Service received a telegram saying, "Stop sweating, going to Key West." It was ascertained that the impulsive move had been made because he reasoned that the remaining kidney was being overworked concomitant with the onset of colder weather and lessened activity of the sweat glands.

Doctor Murray had studied medicine by apprenticeship as well as graduating from two medical schools: Cleveland, Ohio, and Jefferson in Philadelphia. An internship was spent at "Blockley" Hospital, otherwise known as the "Philadelphia City Hospital." Then, after a year in the regular Navy from 1871 to 1872, he entered the U. S. Marine Hospital Service. It appears that during his career, he brought more improvements to medical standards in Key West than any other man outside of Doctor Porter, Senior. Soon after assuming duty at this station, he prepared a report to the Acting Secretary of the U. S. Treasury, W. A. Richardson, emphasizing the inadequate facilities to meet the catastrophe of 1872.

In reply, I will premise by stating that Key West is an isolated

province town with a population of over 8000 which is rapidly increasing. The island is comparatively barren, almost all supplies having to be brought by water and in consequence the prices of articles are very high in comparison with Cuba and New York. Even fruits of this and neighboring islands are dearer than in New York.

When the smallpox broke out last autumn a degree of fear and terror affected all classes surprising to one so familiar with the disease as myself. The laws of Florida make no provision for public hospital or care of the poor and no epidemic of smallpox ever having occurred here, there was no provision at all for the care of the unfortunate poor nor isolation of the more favored. Application was made by the city authorities to allow the smallpox patients to be admitted to the Marine Hospital which was referred by the Collector to the Department. The answer by telegraph was that the request could not be granted and also that affected seamen could not be admitted. The military authorities also refused the use; isolated four unoccupied buildings. The city authorities built a couple of plain houses which were put under the charge of the Health Officer, Doctor Joseph Otto.⁴ The poor were admitted and treated free, the Sisters of Charity giving their services; those able to pay were required to give \$2.00 per day for the use of the buildings alone. Subsistence and medical attendance not considered. In consequence of the telegram the Collector sent all the affected seamen who applied to him for relief, to the city hospital. It should be stated that on the outbreak of the disease, Doctor Baron, the Surgeon of the hospital, began to arrange a ward for their reception of seamen supposing of course he would have the care of them; but for the reason alone given none were sent at all nor was the doctor informed of those who were sent to the city hospital.

The terrible conditions under which patients were nursed is revealed in a report concerning William Turner, who died after the epidemic had subsided and after the hospital had been closed for extra accommodations.

The doctor charge (\$35.00 for seven days) is reasonable as he had to go a mile and a half twice a day to see the man. The nurse was (\$18.00 per week) cheap at any price as it was almost impossible to procure anyone to attend such cases. Several deaths occurred for want

⁴ Doctor Otto, as a young man, fled from Prussia during the student's revolution. He escaped the country in a load of hay, found passage to New York City and subsequently became attached to the U. S. Army as a physician during the Seminole War. Afterwards, he remained as contract surgeon for the Army at Key West.

of attentions. Doctor Otto was often compelled to attend personally to the care of the patients, to lay out the dead and in two instances to assist in burial, reading the services by lantern light and filling up the grave. The difficulties which beset the care of the patients during a period of three months are inconceivable to those who live where the disease is more common.

Political jealousy and misunderstanding soon developed between the civilian and Marine Hospital authorities. Up to the time of closure of the institution, differences and distrustfulness continued more or less. Such circumstances were to develop during Doctor Murray's term of duty, partially because he was a very righteous person who believed that it was a physician's duty to adhere strictly to the Hippocratic oath and aid all the sick regardless of their station in life. This opinion indirectly was opposed by the Collector of the Port and the Mayor when he offered treatment to merchantmen ill with yellow fever. Antagonism grew largely out of ignorance on the part of the officials. They had the idea that disease would be introduced to the hospital and spread amongst the population therefrom. Although it was not known at that time, their ideas contained some truth. Nevertheless, an example of the situation is demonstrated in the handling of the U. S. S. *Ticonderoga*, which had arrived from Brazil in August, 1873. The captain's clerk, Nathaniel White, had died of a fever on August 12th, after a 90 hour illness. Immediately Admiral Mallany, of the Fleet, inquired of the local authorities, that in case any other men became sick could they be sent to the Marine Hospital. The Health Officer of the City replied that no objections would be tendered provided the cases were transported to the hospital by water rather than through the city. The same day the Board of Health sanctioned the action. The ship was quarantined the usual seven days. On the eighth day the forehole of the vessel was broken out. Three days later four men were ill with fever. Doctor Penrose, the naval surgeon, in conjunction with Doctor Perry (USN) and the Health Officer confirmed the diagnosis of yellow fever. Permission to bring the patients to the Marine Hospital were not completed till late that afternoon. Since the ship had received imperative orders to put to sea at once, it was necessary to move the patients ashore promptly. They were loaded into a boat by Doctor Penrose and brought abreast of the hospital about sundown. As a landing was about to be effected, a messenger from the Collector's Office appeared and forbade the hospital steward to admit the patients. At the same time the Health Officer came alongside in a boat

and delivered an order from the Mayor that they were not to land anywhere on the island. The naval surgeon returned to the ship with the sick men, but reappeared about one hour later accompanied by a group of marines, commanded by Lieutenant Fisher, who had been ordered by the Admiral to put the four men in the hospital, by force if necessary. Doctor Murray and his staff were taken by surprise in the halls of the hospital and arrested while the men with yellow fever were placed in bed. After Doctor Penrose had apologized to the staff for the turn of events, the ship's crew withdrew and left word from the Admiral that, "Any complaints could be made to him."

Although Doctor Murray was in sympathy with the Navy, he felt it his duty to report the incident immediately to the Collector. This he did by personal interview about one hour later. The Collector swore vengeance on the Admiral. He overruled the Board of Health and in conjunction with the Mayor placed everyone in the hospital under quarantine. Doctor Murray and the Health Officer felt the order "nonsensical" and that it "arose from fear and jealousy." The hospital staff was prohibited in procuring ice, food, coffins, etc. The yellow quarantine flag was run up by the city officials in front of the hospital. Two hours later it was purposely torn down by Doctor Murray. This move compelled the Mayor to keep a policeman at the gate through whom the hospital staff was able to maintain contact with the outside world for the next several days while the local authorities "cooled off." Doctor Murray went on to say,

There have never been any restrictions nor contentions about the admission of yellow fever patients to this hospital prior to this (This is not entirely true; for in 1862 and 1864 such cases coming from ships were not permitted to land). In fact the hospital was built chiefly to accommodate them and pernicious remittent fever from the lower Gulf Coast, there being no available relief short of 400 or 500 miles. Almost every year yellow fever has been treated here. In 1862 and 1863 there were as many as 30 cases here at one time. Also in 1854, '5, '8 and '9 cases were admitted without question. In August 1872 this same health officer brought a man here with diagnosis of yellow fever. Smallpox was always admitted and during the epidemic of 1872 the surgeon, Doctor C. S. Baron expressed his willingness to provide for cases. The few cases occurring then, among the seamen had previously been sent to a shanty hastily erected by the city, where they were allowed to remain at an enormous cost to the service. . . . This building is large enough to accommodate any

number likely to come and if cases of smallpox come a tent can be placed in the lot, completely isolated from the hospital and the town.

He later said he felt that as a physician he should have the right to decide who was ill and with whom he was to associate. The objections of the local authorities of Key West "arose from spiteful jealousy . . . The Collector charged him with a desire to run the hospital and to get a cheap notoriety among naval officers."

The next few years were essentially uneventful until February 22, 1887, when the Honorable I. G. Harris, Chairman of the Committee of Epidemic Diseases in the U. S. Senate, presented a bill for an appropriation of \$50,000.00 to make one of the Dry Tortugas Keys a quarantine station for ships going north from southern waters. Six months later a severe epidemic of yellow fever appeared in Key West. It was believed to have been conveyed by a man named Bolio, whose family was in the hotel business with establishments in Havana and Key West. Ostensibly while on business in this city, he became ill with the disease. According to the annual hospital report, the first case became known May 21, 1887.

Seven days later there were five cases and three deaths and on the first of June the existence of the disease was reported in four different localities in the city. The War Department authorized the President of the Board of Health to use the hospital attached to the military barracks for the treatment of yellow fever patients, and upon the request of the state and local authorities, bedsteads, bedding, subsistence and medical supplies were furnished from the Marine Hospital stores. The Secretary of the Treasury also authorized the employment of nurses and guards to assist the local Board of Health at the Barracks hospital and in guarding infected premises. June 10, 1887, 22 cases and eight deaths reported to date.

Upon the request of the President of Board of Health of Tampa, Florida, and the recommendation of the Bureau, extra help was employed by the Post Office Department to disinfect all mails coming from Key West and Havana before landing at Tampa. The requirements of local quarantine at Tampa, as reported by the Board of Health, were 15 day detentions of passengers and disinfection of baggage. But the period of detention was finally cut to 10 days at my request.

The incidence of disease continued to increase. Two hundred and eighty-two cases and 62 deaths from yellow fever were reported in Key West up to September 14, 1887. A majority of the latter were native

children. After that date the epidemic gradually subsided.

This epidemic gave weight to the measures recommended by the Committee of Epidemic Disease. Ships arriving at Key West were either treated by isolation or sent to the government refuge stations at Sapelo Sound, Dry Tortugas, or Chandeleur Island. The Board was fearless in its action as shown in 1895 when the Spanish cruiser, "Infanta Isabella," directly from Havana, sought to enter the port of Key West. It was forbidden the right to do so without complying with the governmental regulations. The ship's captain was given the option to proceed to sea. This was accepted. However, instead of remaining thereon, she went directly to Tampa Bay, and passed without stopping at the station at Mullet Key. Early the next morning, the State Quarantine Launch "Germ," sighted, captured and boarded the vessel. The ship was forced to return to the Quarantine Station and undergo the required treatment.

Yellow fever was responsible for quarantine of this port for two months in 1892. In 1897 and 1899, respectively, severe epidemics occurred. During the outbreak of 1897, attempts were made to gather epidemiological data in Key West by the U. S. Marine Hospital Service. This was met with suspicion and insurmountable difficulties. Doctor Eugene Wasdin, passed assistant surgeon, wrote the Surgeon General of the U. S. Marine Hospital Service in September of the same year, saying,

In explaining the difficulty of obtaining autopsies and bacteriologic studies, . . . strange as it may seem, it is next to impossible to get this material. This is due to two causes: one to the evident antagonism of local physicians and the outspoken hostility of the mass of the populace. The former, at this place, still refuse to diagnose cases of yellow fever, the latter are loud in their denunciation of "experts," in which class are numbered all quarantine officials. The proposition of taking blood from a foot vein by hypodermic puncture has been resisted and finger tip puncture can alone be done. Even this procedure has aroused unfavorable comment. Again and again it has been refused. A number of deaths have occurred and strenuous efforts made to get autopsies have failed.

Within the same interval all of the Sisters⁵ of the Convent of Mary Immaculate had yellow fever. None died. Quarantine was maintained

⁵ Sister Louis Gabriel was among those who contracted yellow fever. She came to the Convent in 1896, served as a nurse during the period when the U. S. Army took over the institution for a hospital during the Spanish-American War, and has remained on as a very active member of the school these 47 years.

for several weeks. This regulation necessitated the keeping of a messenger who maintained contact with civilian activities, brought in medicines and food and other provisions by procuring information, etc. respectively, by shuttling to and from a fire station nearby.

The epidemic of 1899 was the worst in the history of the island. Many cases were in the hospital. A total of 1320 persons had the disease, 68 died. Assistant Surgeon, W. R. Adams, of the Marine Hospital was in active charge of the patients. He contracted the fever and died after a six-day illness. The state health officer of Florida estimated that approximately 6000 persons, who were susceptible, had arrived or had been born in the city since the outbreak of 1887. Of this number about 13 per cent had the disease.

Two other contagions were to spring forth in Key West in the nineties. The first was smallpox which appeared among the civilians in 1896 following an incorrect diagnosis of chickenpox in the case of an adult negress. Since it showed evidence of becoming widespread, medical aid was soon obtained from the State Board of Health. In spite of the existing danger, a report reveals that the citizens were still uncooperative. Doctor J. H. White, surgeon of the Marine Hospital, "was contacted by Doctor Joseph Y. Porter⁶ on July 14th." Up to that time 28 cases with seven deaths were recorded. A detention camp (Camp Harrison) "on the South Beach of the Island, some three miles from the center of the city, a hospital was built by Dr. Porter." The structure was 186 x 30 feet. "East of this some 1000 yards or more, Doctor Porter had placed the 25 tents provided by the service." A request was then sent to the mayor to have those people infected isolated in the new quarters. Compliance with the plan was refused. The State Board of Health issued immediately an order to the mayor to have all the patients moved in 12 hours or else medical assistance would be withdrawn and the city placed under strict quarantine. Through telegraphic communication, cooperation was obtained from the U. S. Navy Department and the U. S. Marine Hospital Service to enforce the edict. Captain Sigbee of the U. S. Battleship "Maine" was asked, "that no vessel or person thereon should be permitted to leave the harbor of Key West without written permit from the State Board of Health stating that the passengers and crew had been satisfactorily vac-

⁶ Doctor Porter was one of the committee members to establish a public health service in Florida. He served as the first State Health Officer from 1889 to 1917. During his term of office he contributed much to the elevation of medical standards in the state, particularly in the fields of sanitation and disease control.

cinated." The main channel was guarded by a motor boat from the "Maine" while the upper harbor was controlled by the launch of the Board of Health. Events moved peacefully until one day a rumor was circulated that a vessel from Galveston, Texas had run aground several miles outside the main channel. Immediately everyone with a boat scurried forth from shore toward the wreck. The motor boat was kept busy sending small boats back to port. However, the captain of a tug boasted that he would not be stopped even though he did not possess the required certificate. On the way out of the harbor his vessel outdistanced the motor boat. In the meantime, the deck officer of the "Maine" had been watching the progress of events, and as a warning, fired a blank shot in the direction of the fleeing tug. Since the ship continued to advance, a shot was dropped just ahead of its course. The effect was instantaneous. A "hard about" was executed and members of the guilty crew proceeded hurriedly to the State Health Officer for vaccination. This incident had a lasting effect, for during subsequent quarantines the people retained the idea that the U. S. Government stood behind regulations protecting the life and health of its citizens.

Early in the course of trying to enforce the order to isolate infected patients, the populace threatened violence. In some instances the parties to be moved declared their intention to fight to the death before they would go. Nevertheless, it was only a short time before one family agreed to be detained. Thereafter objections ceased and all were placed in the hospital.

A major obstacle in the care of the patients was shortage of water. Rainwater collected in cisterns constituted the only source for drinking water on the isle. No rain had fallen all summer so that most of the wells were dry. Water to bathe and remove the pus laden scabs from the individuals with variola had to be bought and hauled from the Masonic Temple cisterns at 50 cents per barrel. It was worth 62 cents a barrel in Key West for civilian use.

During this epidemic only one person with smallpox died. Doctor Porter completed the tremendous task of a house to house inspection and saw that approximately 13,000 of the 16,500 inhabitants had good vaccination.

The war of 1898 also brought problems. Many injured and sick seamen were housed in the Marine Hospital. The majority of Army personnel went to the Army hospital located on the Convent of Mary Immaculate, which had been offered, gratis, to the War Department by the Mother

Superior for the duration of the conflict. Actually it was used from April to August of that year for a total of four months. Many cases of typhoid fever were treated there. Only one soldier had yellow fever; he died. Toward the end of the summer, the members of the State Board of Health and the U. S. Public Health Service were involved in a major dispute with the naval authorities at this station when an undefinable fever of short duration suddenly broke out among a contingent of Marines who were encamped in an unoccupied cigar factory. A short while before the sickness began, a young, enthusiastic assistant surgeon, recently out of school, arrived from New Orleans to act as the naval surgeon. At the onset of the disease, he promptly made the diagnosis of yellow fever: so convincing was he, that some of the local practitioners became of the same opinion. This diagnosis was quite disturbing because thousands of susceptible people including hundreds of service men were in port. Immediately the U. S. Public Health Service sent Doctor A. H. Glennan, a former surgeon at the Marine Hospital, here during the epidemic of yellow fever in 1887, to Key West to make an investigation. First of all, when he arrived, he was surprised to find that he must put on a rubber hat and coat over his clothing in order to be permitted to examine the patients. This being the hotter part of the summer, it was quite an ordeal to see a hundred men. On the basis of clinical history and physical findings, he agreed with the State Board of Health that this was not yellow fever but probably dengue. Three days later the characteristic skin rash appeared confirming his opinion. Between five and six thousand persons had the disease before the epidemic ended. No deaths resulted. In spite of the obviousness of their mistake, the naval authorities refused to relinquish their original diagnosis. They were so cocksure that they succeeded in having the entire Fleet, which was anchored in these waters, ordered to northern ports. During the cruise northward, several more of the seamen evacuated also developed dengue and had to be left in Miami and Jacksonville, where 300 and 1,000 cases, respectively, occurred.

Merchants in Key West had purchased large stores of food and other provisions to meet the military demands. Sudden transfer of the Navy personnel left the business men with much perishable stores on hand. This was a total loss. As a result of the entire affair, many of the local officials among the U. S. Public Health and State Health Services and citizens were left embittered toward the Navy.

Fear of other epidemics led Doctor Porter to certify in 1901, that machinery to disinfect baggage be purchased from the State Board of

Health. Two years later, he informed the Surgeon General of the U. S. Public Health Service that there was no further need to fumigate baggage of passengers coming into Key West, as those ships with infections on board were sent to Tampa Bay or Mullet Bay. Also it was about this time that Finlay's work on the role of mosquito in carrying yellow fever had been reported. Thus previous methods of restraining the spread of the disease were being regarded with skepticism.

After the war, the out-patient clinic of the Marine Hospital became a source of political graft. A letter from the chief surgeon in June 1905, disclosed the fact that the dispensary service had degenerated into a gigantic system of outdoor relief for the negroes of Key West. This skuff-duggery was accompanied by "owners" and "agents" ("Not bona-fide by captains") issuing certificates.

From the medical log of the Marine Hospital, a summary given for the previous year on June 30, 1906, reads:

Hospital and Out-patient Service: During the past fiscal year there were 104 hospital cases treated, being a decrease of 74 from the previous year. The out-patient relief was 526, a falling off of 674 cases from the previous year . . . The decrease in cases treated is due to the collapse of the sponging industry of Key West its old and only maritime enterprise except fishing and wrecking . . . Diving for sponges has been introduced by Greeks who have driven the old style method of "hooking" out of business and Congress has been appealed to in the matter to regulate the new rivalry. It is apparent that this trade is lost to Key West and thus a large source of alleged "seamen" cut off from the hospital relief.

For the fiscal year 1916, 31 naval personnel were transferred to the Marine Hospital for treatment. Then, the average complement of the U. S. Naval Station was 131.

Between 1906 and 1922 the town continued to grow rapidly because of the tobacco industry. Within this period Surgeons S. E. Banks, E. K. Sprague, John T. Burkhalter, H. M. Manning and G. M. Guiteras successively occupied the headship of the hospital. In 1911 and 1917 respectively, Drs. John B. Maloney and W. R. Warren, who were local practitioners, were appointed consultants to the institution.

Like all other Marine Hospitals, this one was filled to capacity during the epidemic of influenza in 1918. The disease apparently began September 12th. The clinical course among the early cases was mild but later it became more severe with deaths following in a few hours. The con-

tagion spread so rapidly that physicians were unable to cope with the situation. In response to a request from Doctor Guiteras, officials in Washington, D. C. sent a physician and two nurses to Key West on October 15th at the height of the epidemic. A telegram from Surgeon G. M. Guiteras to the Public Health Service in Washington, on October 25th, states:

Influenza report October 15-25. Naval training camp admitted 23, discharged 37, remaining 7. U. S. Marine Hospital admitted 10, discharged 14, died one, remaining 14. Naval Hospital admitted 12, discharged 98, deaths 4, remaining 152. Army Barracks admitted 13, discharged 7, remaining 6. Civilian population estimated total cases to date 4000 with 23 deaths. Total deaths of influenza in Key West from October 1 to date from all sources 54. Epidemic declining.

From March to November, 1918, Doctor Guiteras had charge of a large force concerned with the sanitation as a war measure to protect the unusual large personnel of the Navy and Army in Key West. Under his guidance a commendable degree of cleanliness was maintained. As soon as the conflict was over, this organization was eliminated and the naval sanitary corps cut to zero. During the first half of 1919, repeated requests were made to the City to keep the premises clean, but a report to the Secretary of the Navy for that year reveals the sanitary conditions "left much to be desired."

Activity of the clinic receded after the war. It gradually became a haven for the more destitute by 1932. In 1928 care for the veterans of the Spanish-American and World War I was authorized officially. The next year, Joe La Scala, a patient in the Marine Hospital, and Francis C. Brady, a veteran of the Spanish-American War, brought charges of vice, graft, and other abuses against the hospital staff. A federal investigation proved the matter a hoax. In fact, one of the complainants was found insane while the other had been a victim of bribery.

In 1930 the Marine Hospital was one of 24 institutions accredited by the American College of Surgeons for internships. Key West was then the thirteenth largest city within the state and one of 16 centers having a certified hospital. The same year the *Miami Daily News* on September 27th quoted the following figures from the annual report of the Marine Hospital: "312 major operations" with "no deaths" had been performed. There had been "30,440 hospital days."

The financial collapse in 1929 was accompanied by a progressive diminution of financial enterprises at the port. Approximately 85 per cent

of the civilians eventually had to seek relief. Military operations practically ceased. The naval dispensary closed in 1932 so that out-patients of the Navy had again to go to the Marine Hospital. This had not been necessary since 1908, but continued as such until 1939 when the Naval Dispensary was reopened. The city was caught with no facilities to give proper medical aid to the poor. Even so, it was apparent that local physicians were largely responsible in blocking several attempts by the Federal Government, the Commonwealth Fund and the Rockefeller Foundation to endow a municipal hospital. They and the citizens could not agree as to the management of such an institution, because the local practitioners were without the qualifications to staff such a hospital. The result ended with Public Health Service taking the brunt of the responsibility for all emergency medical care requiring hospitalization. Those who could afford it frequently went to Miami, Havana or other large city for consultations. After the depression had gained momentum, the hospital frequently ran into the "red" financially. Compared with the standard rate of \$3.75 per patient-day charged by the U. S. Treasury, this institution would often have to ask a fee of five to seven dollars a day to break even. This remained true to the day the clinic closed its doors. Desperate circumstances in Monroe County led to an agreement whereby a special rate of \$2.00 per case was made for cases from the Community Clinic. This arrangement was never discontinued after the depression. Although the Good Samaritan deeds were supreme in importance to the vicinity, most of the civilians remained unwilling to try and help defray expenses incurred by them.

Evidence of another World Conflict in the future caused the Navy to enlarge the Naval Station promptly from 1940 onward. The city grew rapidly from a population of 12,927 to an estimated 35,000 in 1943, due largely to military men and defense workers coming with their families. The Hospital became the base for administering medical aid to the severely injured survivors of the ships torpedoed by the Axis in the upper Caribbean during 1942. Naval and Army personnel requiring hospitalization were admitted here until November 1942 and the summer of 1942, respectively, when the Naval and Army hospitals were completed.

Since there were no official regulations providing for hospitalization of naval and marine dependents, facilities had to be obtained elsewhere outside the jurisdiction of the Navy. The Marine Hospital offered the only feasible place. With the consent and aid of Captain Robert B. Team, USN, who was then Senior Medical Officer of the Naval Station in Key

West, Lieutenant R. L. Pearse, USNR, in charge of the Family Clinic, made arrangements with Doctor Anthony P. Rubino, Chief of the Marine Hospital, to permit admission of naval patients to that institution at the daily rate of \$3.75. This courtesy was retained from 1941 till February 15, 1943.

The latter part of June 1942, Doctor Andrews, the last physician to serve an internship here, left for duty in the Panama Canal Zone. Shortly before Doctor Rubino had been replaced by Dr. T. H. Rose. He and Doctor P. D. Holloway constituted the permanent medical staff for the next few months.

With the progress of events, it became necessary to enlarge the Naval Base. This required condemning some of the city property and the site of the hospital. The grounds of the latter were transferred officially to the U. S. Navy Department on November 21, 1942, with the understanding that the Public Health Service would continue to admit patients until December 21, 1942, and close January 1, 1943. Before and after the transaction, the townsmen of Key West petitioned responsible authorities in Washington, D. C., to keep the service going under the control of U. S. Public Health Service or guarantee that adequate hospitalization be provided elsewhere for the citizens. Even the Maritime Union opposed the closure on the basis that their members would have no other hospital available for a distance of several hundred miles radius.

Indirectly the Naval Officials became concerned because according to Navy Regulation 1186, the medical attendants of the Service in addition to their regular duties may be required to attend families of officers and enlisted men in cases of emergency and where other medical aid is unobtainable.

At the time of this episode, several naval dependents were due to soon need hospitalization for obstetrical care. All those expecting delivery after December 14th were advised to seek medical care elsewhere promptly. Excerpts from a memorandum submitted to the Commanding Officer of the Naval Station, on the medical facilities available in Key West emphasizes the situation:

There are at present six civilian doctors in Key West licensed to practice in Florida. Two are Cuban and one is very old. One is not in good repute with the local medical society. The bulk of the medical practice is performed by three doctors who have been in Key West many years. All three of them are about 60 years old and suffer from various disabilities. One of them does only office consultations

and refuses to see patients after 6 P.M. The other two have cottage hospitals to do some obstetrics and minor surgery but will almost never answer any calls after 6 P.M. None of the physicians are members of the F. A. C. S., or qualified by any of the boards of specialties. They almost never have county meetings and cordial relations do not exist among them. They have made nocooperative effort to benefit the inhabitants of Key West. However, when a young doctor attempted to establish practice in Key West a few years ago, the older and established doctors were somewhat inimical. He soon left the island.

There are three civilian hospitals in Key West, none of which are approved by the F. A. C. S., nor have they trained nurses in attendance, satisfactory laboratories, trained attendants to give anesthesia, means for giving transfusions rapidly or adequate means for feeding patients.

Because of the absence of qualified practitioners and suitable hospital facilities, the Marine Hospital, in the interest of humanity, has been forced to admit all patients suffering from major medical and surgical ailments. This has apparently been going on for generations. Although the local population is not entitled to the service, they have come to regard it as their right. The Marine Hospital is approved by the F. A. C. S., staffed by Public Health Service doctors and equipped to handle safely all situations usually managed in a hospital. The patients can be fed, laboratory studies made and trained attendants are available for care and anesthesia.

Local civilians are admitted through the Community Clinic and pay two dollars daily to the Treasury Department for all services. Only emergency cases are entitled to this service. Mrs. Robert Spottswood is the effective member of this clinic and administers its affairs very unselfishly and honestly. She is the daughter of a former Key West doctor (Dr. Maloney). Her knowledge of the local situation has been very helpful.

During the past year the daily census of the Marine Hospital has revealed a daily average of about three community clinic patients . . . Most of the patients have been suffering from automobile accidents, acute appendicitis or chronic conditions that have become acute from neglect . . . The Public Health doctors have quietly and efficiently given the civilian population of Key West a service for years. In conclusion the opinion was given that, "The local population is both

incapable and unwilling to arrange for their own medical care. Some agency is necessary ultimately to care for the seriously ill in Key West.”

The afternoon of January 1, 1943, several hours after the Marine Hospital was supposed to have ceased operations, service was extended another seven weeks by orders from Washington, D. C. Alteration in plans produced disagreeable circumstances for Doctors T. H. Rose and P. D. Holloway. Most of their staff of nurses, orderlies and other help had procured other jobs or made arrangements to accept transfer to other stations. In addition part of their equipment and the majority of supplies had been moved out of Key West. It was necessary to struggle along with an inadequate quantity of everything. However, duties were nobly performed up to February 15, 1943, when the doors were closed to the admission of patients. Mr. Neale, steward of the Hospital, took inventory of all the property and disposed of it through official channels; completing the task April 1, 1943. About this time the Navy released \$70,000.00 to remodel the interior of the building in preparation for the housing of WAVES.

It can be said without reservation that this institution probably netted the city of Key West more humanness than any other establishment within its limits. The type of work performed will represent a goal for others to exceed. It appears that benevolence was often demanded and given to the population at considerable expense to the U. S. Government; that the citizens were often unwilling to cooperate and help provide their own medical facilities when extended the opportunity to enlist philanthropic aid; and that the Federal Government will have to continue to be responsible for this hospitalization. Time will tell!*

STATEMENT OF BIBLIOGRAPHY

A large part of the data consulted in preparation of this manuscript was housed in the attic of the Marine Hospital. When it ceased functioning as a hospital, the periodicals, books and other documents were taken up by the U. S. Public Health Service. Other documental sources are given in the references while some material was kindly supplied by these individuals: Sister Louis Gabriel, Convent of Mary Immaculate, Key West, Florida; Father Terrence King, Catholic Rectory, Key West,

* The opinions or assertions contained within this article are not to be construed as official or reflecting the views of the U. S. Navy Department or the Naval Service at large. Released for publication by Bureau of Medicine and Surgery, U. S. Navy, October 4, 1943.

Florida; Captain H. A. Baldrige, USN (Retired), Curator, U. S. Naval Academy, Annapolis, Maryland; Captain Dudley Knox, USN (Retired), Officer-in-Charge, Naval Records and Library, Navy Department, Washington, D. C.; Lieut. Comdr. R. L. Pearse, USNR, Durham, N. C.; P. M. Hamer, Director of Reference Service, the National Archives, Washington, D. C.; Doctor T. H. Rose and P. D. Holloway of U. S. Public Health Service; Miss Marie L. Cappick, Miss Marguerite Lacedonia and Mrs. Robert F. Spottswood, all of Key West, Florida.

1. BROWN, J. B.: *Key West, The Old and New*. The Record Co., Printers and Publishers, Saint Augustine, Florida, 1912.
2. *An estimate of appropriations for the Marine Hospital at Key West, Florida*. Document No. 1210 from House of Representatives, 61st Congress, 3rd Session.
3. *Report United States Marine Hospital Service for fiscal year 1887*. Government Printing Office, Washington, D. C.
4. *Operations of United States Public Health and Marine Hospital Service*. Government Printing Office, pp. 297, 1903.
5. *Miami Daily News*, October 31, 1929.
6. *Ibid.*—December 21, 1930.
7. PORTER, J. Y.: Looking backward over fifty years of health work in Florida, *J. Florida Med. Assoc.*, serially July 25, 1925 to Jan. 26, 1926.
8. *Yellow Fever Epidemic of 1873*, House Document No. 85, 43rd Congress, first session.
9. RERICK, R. H.: *Memoirs of Florida*, The Southern Historical Association, Vol. I and II, 1902.
10. CHAPIN, G. A.: *Florida*. S. J. Clarke Publishing Co., Chicago, Ill. 1914.
11. *Report of the Secretary of Navy Department for the fiscal year 1916*. Washington, Government Printing Office, pp. 685, 1917.
12. *Ibid.*, for the year 1920, pp. 849, 892, 1921.