## University of Richmond

# **UR Scholarship Repository**

**Honors Theses** Student Research

Spring 1926

# Dr. Walter Reed and yellow fever

Reade W. Corr University of Richmond

Follow this and additional works at: https://scholarship.richmond.edu/honors-theses



Part of the History Commons

#### **Recommended Citation**

Corr, Reade W., "Dr. Walter Reed and yellow fever" (1926). Honors Theses. 450. https://scholarship.richmond.edu/honors-theses/450

This Thesis is brought to you for free and open access by the Student Research at UR Scholarship Repository. It has been accepted for inclusion in Honors Theses by an authorized administrator of UR Scholarship Repository. For more information, please contact scholarshiprepository@richmond.edu.



HISTORY

7 n Jacob Belle Kopf Prize

## Dr. WALTER REED AND YELLOW FEVER

May 1926

By Reade W. Corr

A close-up view of the house in which Dr. Reed was born

## Bibliography

#### Authorities:

\*H. A. Kelly: Walter Reed and Yellow Fever.

\*W. D. McCaw: Walter Reed: A Memoir.

Libby: History of Medicine.

\*\*Ravenel: A Half Century of Public Health.

Cushing: Life of Sir William Osler.

\*Senate Documents vol. 61: Yellow Fever.

\*House Documents vol. 123, no. 757: Typhoid Fever in the United States Military camps, Report of the origin and spread of.

### Encyclopaedias:

Life of Walter Reed: Americana.

Life of Walter Reed: New International.

#### Magazine and Newspaper Articles:

Republic Forgetfulness: Outlook for August 11, 1906.

The Inside History of a Great Medical Discovery, by Aristides Agramonte: Schentific Monthly for Dec. 1915.

The Walter Reed Memorial Fund: Science for March 9, 1906.

Richmond Times Dispatch for April 11, 1926

\*Newport News Daily Press during April 1926.

Gloucester' Gazette for April 15, 22 & 29, 1926.

May be obtained from the Virginia State Library.

May be obtained from the Virginia State Board of Health.

The references not marked may be obtained from the University of Richmond Library, except the Gloucester Gazette, which is in the Gloucester Library.

#### Outline

#### I Introduction.

- A Reasons for chossing this topic.
  - 1 Have been hearing about him all my life.
  - 2 Felt is was my duty to inform my self.
  - 3 He was born in my Native county.
- B Methods of approach to the subject.
  - 1 The three divisions.
    - a Life and works combined.

    - b Estimation of the value of his works.
      c Discussion of the movement to perserve his birthplace.
  - 2 Considered in an informing way -- not from a medical point of view.
- C Sources used.
  - 1 See bibliography for books.
  - 2 Corresponded with James C. Reed of Blackstone, Va.
  - 3 Corresponded with the office of the Surgeon General of the United States Army.
  - 4 Talked with men who knew him personally.
  - 5 Visited his birthplace.
  - & Talked with Dr. Greer Baughman.
- D Discussion of the house.
  - 1 Size -- number of rooms, windows, and doors.
  - 2 The way it was built.
  - 3 A move to preserve the house.
- E Conclusion.
  - 1 Results of my investigation.
  - 2 Quotation from Roosevelt.

#### II Life and Works.

- A Gloucester county, Virginia -- his birthplace.
- B Birth and life to young manhood.
  - 1 Born -- Sept. 13, 1851.
  - 2 Parents.
    - a Father -- a Methodist minister, native of N.C.
    - b Mother -- daughter of a N.C. planter.
  - 3 Childhood.
    - a Frequent changes in the dwelling place.
    - b Fourteen months old when he left Gloucester.
    - c Child during Civil War.

d Education. (1) Foundations laid in the home. (2) Had a bright mind. (3) Good preliminary education. e M.D. from U. of Va. when only 17. C Northern life. 1 Belleve Hospital Medical College. Second degree. 2 Service in Hospitals. 3 Meets Miss Lawrence. 4 Enters Army Medical Service. a Assigned duties in Arizona. b Married Miss Lawrence. D The next eighteen years. 1 Hardships in the west -- people uncivilized. 2 Faithful work. a Paved way for future work. b McCaw's statement. c Results of work. B Demanded fifteen changes. 4 Promoted to Captain. 5 Birth of two children. E A fill-in period. 1 Duties in Baltimore. a Hopkins. b Prof. Welch. 2 1893. a Rank of Major. b Professor of bacteriology. 3 Work as head of typhoid fever commission. F Work of Yellow Fever. 1 First work done in 1899-1900, overthrew old idea. 2 Cuba June 1900. a President of a commission. (1) Object of commission. (2) Other members. b Yellow fever prevalent in Havana. (1) Sahitary efforts made to prevent it. (2) Dr. Reed's conclusions. (3) New theory. (4) Dr. Reed decided to make a demonstration. 3 The demonstration. a Methods used and how.

b Conclusion -- germ carried by a mosquito.

- c Cost of the experiment.
  - (1) In money.
  - (2) Insuffering.
- (3) In life -- death of Dr. Lazear. 4 Conclusions announced by the Army Board.
- G The end of a servicable life.
  - '1 Honorary degrées.
  - 2 Recommendation of the Sect. of War.
  - 3 Failing health.
  - 4 Death -- Nov. 22, 1902.
  - 5uBuried in Arlington.

#### ·III Value of Dr. Reed's Work.

- A Figures that have been collected.
  - 1 Based on Cuban War.
  - 2 Lives lost in New Orleans and Philadelphia.
  - 3 Cost of epidemic of 1878 -- \$15,335,000.
  - 4 Today yellow fever is rarely heard of.
- B Actual value.
  - 1 Can it be compared with the work of other men?
  - 2 Saves money and lives.
  - 3 Influence felt in other fields.
  - 4 Connection with Panama Canal.
    - a My ppinion.
    - b Dpinion of A. Agramonte.
- C Conclusion.
  - 1 Impossible to value work.
  - 2 Reed as compared with Napoleon.
  - 3 Dr. Walter Reed rid the world of YELLOW FEVER.

# IV Movement to perserve Reed's birthplace.

- A Attempts that have been made.
  - 1 The Walter Reed Medical Association.
  - 2 The National Medical Society.
- B National interest in the movement.
  - 1 Article from Texas -- April 6, 1926.
  - 2 Editoral from the Newport News Daily Press.
- C The Walter Reed Memorial Commission.
  - 1 Purpose.
  - 2 Members.
  - 3 A recent meeting.

D Present plans for preserving the house.

1 Make the house a memorial.

2 Establish a Walter Reed Research Fund at U. of Va.

3 Method.

a Through the public schools. b By popular subscription.

4 The house will be kept up by the Gloucester Chamber of Commerce.





#### DR. WALTER REED AND YELLOW FEVER

#### Introduction

All my life I have been hearing about Dr. Walter Reed. He has been known to me as the man who made possible the building of the Panama Canal. This I was told he did by eliminating yellow fever from Central America. Hew he succeeded in doing this or when it was done, I did not know. Indeed pepple in general seem to know nothing whatever concerning him. In order to inform myself of Dr. Reed's work I have decided to prepare this paper. I also feel that it is my duty to learn of Dr. Reed. He was born in my native county -- Gloucester, Va. This last fact is my outstanding reason for this topic. He has gained world-wide fame; being perhaps the only Gloucesterian to obtain such a high place in the last century.

I have passed and repassed the place of his birth; it seemed just as any other place. I feel now that it would be impossible to go in sight of this spot without receiving a thrill. Not a thrill of happiness nor of joy, but one of pride. Pride because I am where one of the greatest Americans was born and also because I am a native of the same county. I shall first give an account of his life and works combined. This will be followed with an estimation of the value of his accomplishments to civilization. I shall conclude the paper with a discussion of the movement to make Dr. Reed's birthplace a national shrine, that is, for the government to buy the house and see that it is kept in good condition. As I have explained, the topks will be

considered in an informing way; facts which I think would interest the average person being given. It will not be treated from a medical point of view. I shall not attempt any lengthy explanation of the facts which were discovered. The details of such experiments must be left to medical students, who are capable of explaining them.

Before concluding the introduction I want to say a word concerning the sources from which I have gathered my material. The books which I consulted are listed in the bibliography. addition th these I have corresponded with Dr. Reed's brother. James C. Reed of Blackstone. Va. Mr. James C. Reed is an elder in the Methodist church. He has given me some valuable information, facts which are not recorded in any of the books which I have consulted. I corresponded, also, with the office of the Surgeon-General of the United States Army in Washington, D.C. As another means of obtaining information I talked with Dr. Greer Baughman, a prominent physician of Richmond, Virginia, who is one of the five members of the Walter Reed Memorial Commission. have also talked with several fellow-countymen who knew Dr. Reed personally. One man, indeed, lived in the house in which Dr. Reed was born for twenty years. In addition to this I made a special trip to the house. The house is still standing. incorporating some pictures which I took in March in this paper.

The house in which Dr. Reed was born is twelve by twenty feet, having two doors and five windows. There are two

rooms and attic. The rear room had a ground floor, the front room is raised several feet from the ground. It is today standing on brick blocks; these are evidently the work of recent years. It was doubtless upon wooden blocks when Reed lived there. The right wing was added in the last thirty years. No one is living in the house today. It is rapidly showing the weathering of time. There is a move on, by the National Medical Society in Washington, to preserve the house. This, in itself, shows that Americans are just beginning to realize the value of Dr. Reed's contributions to civilization.

As a result of my investigation I have learned to appreciate Dr. Reed. To me he ranks among the greatest men of his age, indeed he equals the best of them. Theodore Roosevelt wrote the following sentence to the Senate and House of Representatives on December 5, 1906: "Major Reed's part in the experiments which resulted in teaching us how to cope with yellow fever was such as to render mankind his debtor, and this nation should in some proper fashion bear witness to this fact."

#### Life and Works

It is given to but few counties to be the birthplaces of outstanding contributors to humanity. Even in these counties it as rare; occuring, probably, once a century. Gloucester county, Virginia has an undisputed claim to be numbered among these honored counties. The greatest event in the history of Gloucester since Oct. 19, 1781; the date of that memoryable occurrence across the York in Yorktown, was the birth of Walter Reed on Sept. 13, 1851.

Walter Reed was born on the western side of the county. not many miles from the York river. The house in which he was born is still standing. It is just across the county highway from Belori postoffice. Rev. Lemuel Sutton Reed, father of Walter, was a leading Methodist divine. At the time of Walter's birth he was stationed on a charge in Gloucester, being pastor of what is now Bellamy's church. The house in which Rev. Reed was living was the parsonage for the field. It is said that the house then was in a somewhat delapted condition. A new parsonage was being erected, to which the family moved several months after the birth of the Rev. Reed was a native of North Carolina. His ancestors wre among the first to settle in that state; they were descendants of a notable family of England. Rev. Reed's wife, Pharaba White. was also from our neighboring state. Her father was a North Carolina planter. He, also, came of a good English family.

The customs of the Methodist church were then somewhat as they are now. The divines would change their charges every few

years; The change now is every fourth year, but as I have been told it was every second year in Rev. Reed's day. Of course, it often happened that a minister would serve two terms at the same place, especially the ones in the rural districts. Accordingly Rev. Reed in 1853 was sent to another part of the state. Thus Walter left Gloucester when only a young child. His brother, James C. Reed of Blackstone, says that Walter was fourteen months of age when he departed from the county of his birth. To follow the family here and there over the state would require more space then I am here allowed. I shall hence not attempt this, but merely give his boyhood in a general way.

years of his boyhood were spent in a much troubled section of the years of his boyhood were spent in a much troubled section of the wouth during the Civil War. Whatever inconviences the war caused were counteracted by the boy's bright and acquiring minds so far as his education was conerned. He received a good preliminary education. The foundations for this were evidently laid by his parents in their home. The finishing touches were put on in the public schools of the state. Walter was unusally bright and at the age when most boys are still in the schoolroom he began the study of medicine at the University of Virginia. In 1869, when only 17 years of age, he took his M.D. degree from the University. Dr. Reed did not go directly into praticing medicine, he realized the need of graduate study. The M.D. which he received, of course, does not compare with that given by Virginia today. It was more

like the present B.S. in Medicine, which requires four years of college work. The M.D. of today therefore repersents four three years more of work than it did in 1869. This, however, does not lessen the merits of the man.

His thrist for knowledge took him North. He entered the Belleve Medical College of New York. Here he took a second medical degree. We then find him doing service in several hospitals of New York and Brooklyn. His work was gratifing. He was appointed one of the five inspectors on the Brooklyn Board of Health. He soon gave up the idea of general pratice. During a visit South he met Miss Lawrence, whom he later married. asking Miss Lawrence to marry him, he determined to secure a position, - one which would give him a fair income. Consequently he decided to enter the army medical service. In order to do this he had to pass an examination. One can obtain an idea of the zeal and sincerity whith which Dr. Reed went about his work by reading Dr. H. A. Kelly's account of his preparation for the medical examination. Dr. Kelly shows this chiefly by giving extracts of Dr. Reed's letters to Miss Lawrence. Several years were spent in preparation. Dr. Reed said that it seemed impossible that he had forgotten so much in such a few years. The examination was not simply a medical one. It covered every phase of knowledge -- from mathematics to the acient languages. Dr. Reed passed the examination and entered the Medical Corps of the

United States Army. He was now twenty-four years old. He was appointed assistant surgeon with the rank of first lieutenant on June 25, 1875. He was assigned duties in Arizona. Before going west he and Miss Lawrence were married.

The west was then practically uncivilized. population was scattered and rough. Dr. Reed and his wife were forced to endure many hardships. They both had an unusal sense of humor; this kept their spirits up. Dr. Reed's service in the west is unsurpassed in faithfulness. He not only administered to the sodiers, he also served the inhabitants for miles around his headquarters. No weather was too bad to stop him. He would fearlessly attack any case which presented itself. His only helps were a few small instruments and some primative medicines; all of which he could easily put into his saddle bag. His first eighteen years of army service demanded fifteen changes. He served in Arizona, Nebraska, Dakota and in the Souhtern and Eastern states. The experiences of these years paved the way for what was to follow. Walter D. McCaw says: "Such experience schools well in self-reliance, and in the formation of quick and accurate observation". His hardships prevented easy discouragements. His Judgement was always sound and rapid. He learned to make the best of what he had. These years also witnessed gradual promotion. 1880 he was made captain assistant surgeon. During these years there was born to Dr. and Mrs. Reed two children, the elder a boy and the younger a girl.

In 1890 Reed was assigned duties in Baltimore. Here he had the great advantage of working in the laboratories of Johns Hopkins University. He formed a close friendship his distinguished teacher, Prof. William H. Welch. The next important event occurred in 1893. During this year Reed was promoted to surgeon with rank of major. The same year he was detailed in Washington as curator of the Army Medical Museum and professor of bacteriology at the newly organized Army Medical School. The work following these promotions was exceedingly creditable.

Numerous monographs were published, revealing information to the medical world. I, however, must hasten on to Reed's great work.

The deaths caused by typhoid fever during the Spanish-American War of 1898 demanded that this government take some action. Consequently a commission was appointed to investigate the origin and spread of this fever in the United States military camps.

Maj. Reed headed this commission, Dr. Victor C. Vaughan and Dr. E. O. Shakespeare being the other members. This investigation advanced our knowledge. It showed the importance of the common fly as a carrier of infection in the camps. It also showed that the fever was spread by immediate contact with one another. For some unknown reason the full report was never published. The result was that the English did a similar work in the Boer War and discovered the facts anew.

The first work by Maj. Reed bearing on the causation of yellow fever was in 1899-1900. During this time he overthrew the

old idea as to the cause of the disease. It was now necessary forchim to discover what was the cause and how it spread. began the special work which made him one of the benefactors of mankind in June, 1900. He went to Cuba as president of a commission to study the infectious diseases of Cuba, yellow fever especially. The other members of this commission were Acting Asst. Surgs. James Carroll, Jesse Lazear and A. Agramonte. disease at that time was prevalent in Havana and near the camp of the American troops. Every effort was made to enforce sanitary measures to prevent the spread of yellow fever with fout apparent results. Maj. Reed became convinced that proper sanitation was not all that was needed. He recognized that some agent other than unclean conditions was responsible for the spread of the disease. The theory that malaria and yellow fever were tansmitted by a certain species of mosquitoes had been advanced. It was unsupported by scientific demonstration and had therefore received only slaght attention. Dr. Reed's attention was attracted by the theory, and he decided to make a scientific demonstration. It was this demonstration which brought honor and respect to the names of Maj. Reed and his associates.

The experimenters exposed themselves to the disease in every possible way, Such as sleeping with sick persons, handling their articles, living in their soiled clothes with lack of sufficent air, and improper food. They also allowed themselves to be bitten by certain species of mosquitoes. After each exposure

sufficient time was allowed for the development of the disease, before another trial was made. Every effort to obtain the actual facts was made. After several months work it was proved that yellow fever was transmitted solely by mosquitoes. The cost of proving such was enormous. It not only cost in money; indeed money was the minor cost. It cost the suffering of the commission and the fearless soldiers. Yes, it cost one man his greatest worldly pesession -- his life. All who permitted themselves to be bitten contracted the disease, many suffered a severe attack. It was Dr. Lazear who paid the supreme sacrifice. He died a martyr of science, working in behalf of humanity.

were: That yellow fever is conveyed from the sick to the well solely by the bite of the female Stegomyia mosquito; that the insect can become infected only after sucking the blood of a patient within the first three days of sickness.; that the period of extrinsic incubation is from twelve to twenty days; that the period of intrinsic incubation is from three to six days; that yellow fever may be produced artificially by injecting a non-immuned with the blood of a patient in the early stage of the disease; and that the causal agent of yellow fever is a sub-microscopic parasite. These are the conclusions which Major Reed made possible. This is the crowning work of his lafe.

Dr. Reed returned to his country in 1990; as the outstanding man in the medical world. Havard and Michigan

Universities conferred honorary degrees upon him. The Secretary of War recommended to Congress his promotion by a special act to the rank of Colonel. This was never carried out. Dr. Reed's work had been done. His faithfulness proved hard on his health. He began to weaken in the summer of 1902. On November 22 of the same year the end came quietly, as a result of an operation for appendicitis. The medical world did not then know how to cope with such operation; this remained for a successor of Dr. Reed to discover. Dr. Reed died in Washington, we was buried in Arliagton among the heroic dead. His grave is marked with a monument, erected by his widow. It is a shaft five feet high, of dark quincy granite, bearing the following inscription:

Walter Reed, M&D. of the University of Virginia,

A.M. of Harvard University,

Ll.D. of the University of Michigan,
Professor of Bacteriology, Army Medical School,

and

Columbian University, Washington, D.C.

"He gave to man control over that dreadful scourge,

Yellow Fever".

## Value of Dr. Reed's Work

Many statistics have been gathered estimating the monetary value of Dr. Reed's discovery. The figures are startling. Like figures have been collected as to the lives saved. It is said that more lives are saved yearly, as a result of his work, than were lost during the Cuban War. The same is true regarding the money saved yearly and that spent in the Cuban War. Yellow Fever is now a thing of the past. A century ago it was a demon. In 1853 8,000 lives were lost in New Orleans because of it. The epidemic of 1793 wiped out 10 per cent of Philadelphia's population. Today it is unheard of in the United States. The epidemic of 1878xcost this country 15,335,000 dollars. The suffering, panic and tears of widows and orphans can never be estimated. To continue giving figures would be burdensome. These give an idea of the power yellow fever once had.

Is such a great work comparable with that of any other man? Would it not be an endless task to list all the things this one discovery has made possible. Besides saving lives and money, Dr. Reed's work has been felt in other ways. Prehaps the greatest is the building of the Panama Cahal. How? By driving yellow fever out of Central America and thus making it possible for men to live and work there. Yellow fever was the cause of the failure of the Spanish and French in their undertaking to build the canal. I now see why I have known Dr. Reed as the man who made

monthly for Dec. 1915 Aristides Agramonte makes the following statement. "The construction of the Panama Canal was made possible because it was shown that yellow fever, like malaria, could be spread only by the bites of infected money money."

The Gloucester man holds undisputed claim to public health honors; is the opinion of Dr. Clarence Jones, a lexading medical man of Newport News, Virginia. From a medical point of view Dr. Jones sums up Reed's work as follows. He discovered; first -- that Yellow fever was caused by the bite of a mosquito, second -- That Malarial fever also was caused by the bite of a mosquito, third -- that Bubonic plague was spread by fleas from rats, and fourth -- that flies are the greatest carriers of typhoid.

I want to conclude by saying it is impossible to give a fair summation of Dr. Reed's work. Can we compare him with Napoleon? My father has always said that in his opinion Dr. Reed did more for humanity than Napoleon. Is not this statement logical? Surely saving lives is more helpful to humanity than destorying them. Dr. Reed was therefore greater than Napoleon. Reed worked alomost alone, not to lessen the value of his brave helpers; Napoleon had armies to help him. If someone would ask me to clearly and concisely tell what Dr. Reed accomplished I would answer with this sentence. Dr. Reed rid the world of YELLOW FEVER.

### Movement to Perserve Reed's Birthplace.

Since shortly after the neath of Dr. Reed in 1902 there have been various attempts made to honor him nationally. Most of these attempts have failed; it seems as if the public has forgotten their servant. However, a few things have been accomplished and there are still a few loyal citizens who realize the debt the nation owes Reed and are trying to make his birthplace a national shrine.

There is a Walter Reed Memorial Hospital in Washington, D.C. One of the public schools in Newport News is named in his honor; the school nearest his birthplace in Gloucester county is also known as the Walter Reed school. There is a bronze tablet on the walls of the Gloucester Couthouse in his The Walter Reed Medical Association formed by remembrance. medical men of Norfolk, Newport News, Gloucester and the Peninsula was the first organization to be formed to attempt to perserve the house. This association was followed by the National Medical Society of Washington; several years ago they appointed a committee to consider the buying of the birthplace and restorsing it to its original condition. This proved to be only a committee. The Walter Reed Memorial Commission is the body that is functioning at present. It will be discussed in the next paragraph.

That the perserving of the birthplace is of national interest is evident from recent articles which have appeared in

various daily and weekly papers of eastern Virginia. Richmond Times Dispatch for April 11, 1926 contains an article on its editoral page in the form of a letter from an interested party in Texas. The article is headed, "Neglect a Reproach to America", the letter is written by Mr. Harry M. Carroll of Donna, Texas. Mr Carroll has seen a picture of the little house and was impressed by its delapted condition, he writes to arouse having interest in the government or some worthy organization buying the house and seeing that it is fixed as it was in Reed's day. He says that the house is now a reproach to America and Americans. A few days later the Newport News Daily Press editorally eddorsed the proposition that the birthplace of Major Walter Reed should not be promitted to go to decay and ruin. Col. W. S. Copeland, as editor of the Daily Press, stated that his paper was ready and willing to back any movement towards repairing The result was that on Sunday April 25, 1926 the Walter Reed Memorial Commission met in Richmond.

The Walter Reed Memorial Commission was appointed by the Medical Society of Virginia a few years ago. It attempted to purchase the house at Belroi, the association being without funds had to drop the matter teporarily. The members of the commission are Dr. E. C. S. Taliaferrp, Norfolk; Dr. Greer Baughman, Richmond; Dr. Clarence Porter Jones, Newport News; Dr. Halstead S. Hedges, Charlottesville; and Dr. Garnett Nelson of Richmond. At the recent meeting it was decided to prosecute

the project verously from now on.

The present plan is for the commission to buy the house and three-quarters of an acre of land surrounding it. is owned now by Mr. George D. Stubbs, merchant at Belroi. cost of the house and lot will be \$1,000. The commission, of course, expects to repair the house and restore it as nearly as possible as it was when Reed lived there. In addition to this they expect to establish the Walter Reed Medical Research Fund at the University of Virginia. The means by which the above is to by accomplished is by arousing interest in the project through the public schools of the state. Each school child will be given an opportunity to contribute to the fund; the campaign, according to the Gloucester Gazette of April 29, will be carried on during the next school term if the State Board of Education gives it aproval. The general public will also be informed of the campagin and have an opportunity to contribute if it wishes. It is the idea of the commission to make the campagin as general as possible. Any sum will be accepted, no matter how small; in this way every one may take part in given honor to whom honor is due.

After the House has been bought and repaired the Gloucester Chamber of Commerce has agreed to look after the building. In this way the house will be indefinitly perserved. Visitors may see it at any time in its original condition. The research fund to be established at the University of Virginia will met an age-old need and will contribute real and lasting

benefits to both science and education. Thus we see that at present there is much interest being aroused in Dr, Reed and a century his work. It has taken the nation nearly a quarter of to awaken to the fact that Dr. Reed should be honored; May it not take us that long to carry out the present plans! Regardless of what America or Virginia does, Walter Reed has done his him part and everyone is daily benifited becaused he lived. We have his life and accomplishments before was to inspire us on to greater things and nobler lives.

The attic

A nother view of the house The wing was added during the last thirty years