

30(2)  
X

U.S. STRATEGIC BOMBING SURVEY  
NAGASAKI, KYUSHU, JAPAN

21 November 1945

Place of Interview: Omura Naval Hospital.

Person Interviewed: Cmdr. Shields Warren (MC), USNR.

Cmdr. Warren consented to give us a complete outline of all groups who have been working on Atomic Bombing Investigations. This outline is complete as far as he knows.

1st Group: MANHATTAN PROJECT

This group is headed by Gen. Farrell and Col. Stafford L. Warren. It reached Nagasaki about 18 September 1945 and left about 4 October 1945.

2nd Group: NAVTECHJAP TEAM #11

This group is headed by Cmdr. Shields Warren and there is a subgroup under Lt. Cmdr. Pace based at Nagasaki, which is called Navtechjap Team #11-100. Lt. Cmdr. Pace's group specializes in making radioactivity measurements. Cmdr. Shields Warren's group commenced work about 24 September 1945, and Cmdr. Warren will leave 24 November 1945 for Tokyo and will be in the Meiji Building until 10 December 1945.

NOTE: Radioactivity measurements are being taken at Nagasaki and Hiroshima. Dr. Kinoshita, Director of the Imperial Institute of Science of Tokyo, is also engaged in this work. Dr. Kinoshita is a very able physicist and "deduced more concerning the bomb in the first three days after it was dropped, than most other physicists knew over a week later." He has studied in California.

3rd Group: ARMY GROUP

This group is headed by Col. Oughterson, Prof. of Surgery at Yale. Cmdr. Warren is a professor at Harvard Medical School. It came in after the Navy group was already established. He established with Prof. Tsuzuki a joint GHQ Imperial Jap. Gov't Commission which split into two groups. One of these was under Col. Mason at Hiroshima, the other under Col. DeCoursey at Nagasaki. The Army Group arrived about the 1st week in October 1945. Cmdr. Warren emphasized that the Army and Navy groups have been working together very well and have coordinated all of their material

The Japanese are drawn from 3 sources:

1. Imperial University of Kyushu.
2. Imperial University of Tokyo.
3. Prefectural Medical College at Nagasaki. (25% of faculty and students survived, physical plant was totally destroyed.)

C-2

There are about 80 Japs altogether and they are working under the direction of the Army and Navy groups, which outlines the work which must be done. E.g. Determine percentage of abnormal births due to the Atomic Bomb. Japanese doctors do such investigations.

NOTE: About 18 August 1945, either the Imperial Government or the University of Tokyo set up a commission which made few autopsies, etc. This commission has probably merged with Prof. Tsuzuki's group.

DISSEMINATION OF REPORTS

Individual teams will make brief (40 or 50 page) reports, Army to Surgeon General, Navy to Bureau of Med. and Surgery. Neither will be for publication. Then, Cmdr. Warren (and the Army group concurs in this) would like a joint conference with all groups which have investigated and studied the Atomic Bomb. This would include U.S.S.B.S., the Manhattan Project, and a representative of the British group. (Col. Solandt of the British Group is ~~Prof. of~~ *Lectures in* Physiology at the University of Toronto.) The purpose and objective of this conference would be to produce a joint authoritative, single monograph which would present a complete story of the Atomic Bombing from all aspects, medical, physical damage, social aspects, etc.

NOTES:

1. Cmdr. Warren stated that Col. Stafford Warren of the Manhattan Project has in his possession in Washington movies taken of the Nagasaki Atomic Bombing Area by Lt. S. Ikura of the Nagasaki Harbor Police.

2. Accessory detonating devices dropped by B-29 on 9 August 1945. Cmdr. Warren was asked about the accessory detonating devices dropped. Cmdr. Warren, through the G-2 section of the 5th Marine Division at Ainoura (outside of Sasebo), recovered one of these devices. It was discovered in what had been an aeronautical laboratory in Ainoura. This laboratory at that time resembled a large empty warehouse. The two other devices dropped have not been recovered. The Japs may be keeping them for research purposes. The one recovered looked like an empty aluminum shell case with a heavy galvanized iron ring on one end and 2 such rings on the side. It is approximately 1 meter long and 20cm in diameter. The mechanism was still inside. The devices were dropped by parachute.

3. The Japs knew within 3 days that it was an Atomic Bomb at Hiroshima.

C-2

Kinoshita deduced that it was an Atomic Bomb when he discovered a substance which he identified as Uranium 235 which was washed down by the rain at Hiroshima following the bombing.

4. The original Municipal Crematory was destroyed by the bomb at Nagasaki. The one which was set up to take its place did not keep very reliable records but its casualty figures are more to be trusted than are those from the Prefectural Government.

5. Dr. Tsuzuki. He is Dean of the Medical School of the Imperial University of Tokyo. He was an admiral in the Jap Navy during the war. He is probably the most able medical man in Japan and "a very slick customer."

6. Cmdr. Warren stated that the groups (Army and Navy) will have a complete sampling of the types of injuries sustained in the Atomic Bombings. The sampling has been made on the basis of type of injury in relation to the area and the type of building the victims were in. The sampling will cover about 7000 cases at Hiroshima and 4000 at Nagasaki.

7. Cmdr. Warren was asked to give his estimate of casualties from "A" Bombings. He estimated 30,000 dead at Nagasaki; and 100,000 dead at Hiroshima out of a total of 175,000 casualties at Hiroshima. W/C Bronowski, of the British Group has a theory that the estimates on wounded and killed here must be incorrect because they are nearly equal. Cmdr. Warren says that the mistake lies in the Japanese way of considering a person "wounded". Most Japanese, if injured, try to get home or to a relative's home instead of to a hospital. And as a result, many "wounded" are not even reported. Cmdr. Warren stated that casualties, immediately after the bombing, were "piled" on trains and taken out of Nagasaki for treatment. Those most seriously hurt were removed from the trains first and so mortality rates in hospitals in places near Nagasaki ran as high as 80%. In more distant places, the mortality rate as low as 10%. There were undoubtedly uncounted bodies left in the ruins of Nagasaki. Cmdr. Warren stated that city birth and death figures were worthless since registration of births or deaths is not compulsory and only a small percentage of the population do so. He cited the Nagasaki and Inasa Police Station Districts which were totally destroyed. They had a total population of 40,495 plus 13,704 employees. (Population figures from Nagasaki Prefecture.)



Figures on deaths in hospitals outside of Nagasaki City: C-2

Omura Naval Hospital: 758 admitted up to September 1st.  
155 deaths up to September 1st.

Isahaya Naval Hospital: 873 admitted up to September 1st.  
239 deaths up to September 1st.

8 8. Nagasaki Medical School was of wood and brick construction. The hospital was of concrete construction. On 1 August 1945 6 bombs had been dropped on the hospital and as a result many patients had been moved out.

16 faculty were present on 9 August 1945.  
12 were killed.

800 students were present on 9 August 1945.  
600 were killed.

150 in-patients in the hospital.  
150 out-patients in the hospital.  
200 out of 300 killed.

9. Nagasaki Medical Society's figures are not to be trusted. Cmdr. Warren expressed disgust at the manner in which their doctors seemed to be interested only in the fees they received from the Prefecture for treating Atomic Bomb victims. Dr. Takao is head of the Nagasaki Medical Society. Cmdr. Warren gave me an article by Father Siemes entitled "ATOMIC BOMB ON HIROSHIMA", eyewitness account of P. Siemes. Cmdr. Warren termed it a "classic account." This document is to be returned to him and is not to be used or released without prior clearance from him personally.

10. Cmdr. Warren requested the following from U.S.S.B.S.:
- (a) Population figures on Nagasaki City, broken down into districts. 1 November 1945 census.
  - (b) Newspaper accounts of the Atomic Bombing.
  - (c) Photographs taken by P.D.D. Team #2. Major Dragnett told Cmdr. Warren that these would be available for his use in Washington.
  - (d) Map of Nagasaki with names and locations of schools.
- (a), (b) and (d) are available, but are not yet fully translated. (c) will be available in Washington.

C-2 Annex

Date-20 Nov. 1945

Place-Nagasaki City

Division of Origin----G-2, Nagasaki

Subject----Groups studying the medical effects of the atomic bombing.

Personnel interrogated----Lt.Cmdr. Nello Pace, H(S), USNR

Where interviewed-----NavTechJap Room of the Nagasaki Prefectural Office

Summary:

Lt.Cmdr. Pace's group is attached to NavTechJap for research on Atomic Bombing. The work is being done for the Naval Bureau of Medicine and Surgery.

Cmdr. Shields Warren, (MC), USNR is OinC of the NavTechJap ~~Group~~ Medical Group. He is at OMURA Naval Hospital where Atomic Bomb patients are now being treated.

The group at Nagasaki consists of Lt. Smith, H(S), USNR, plus 3 translators and 6 hospital corpsmen.

The group arrived at Nagasaki 22 September 1945 and expects to leave about 1 December 1945 for Bethesda, Md.

Present address: LT CMDR NELLO PACE, USNR  
c/o NAVTECHJAP  
NAVY # 3912  
FPO SAN FRANCISCO, CALIF.

After 1 Dec. NAVAL MEDICAL RESEARCH INSTITUTE  
BETHESDA, 14 MD.

The group's mission is "to investigate the physiological effects of Atomic Bombing". They are not part of the Manhattan Project which left Nagasaki about 5 October. Their efforts have been pooled with a similar Army medical group. Lt.Cmdr.Pace stated that some index and correlation between the various groups working on the Atomic Bombing is needed. He further stated that he has heard talk of a conference between those various groups.

\*\*\*\*\*

Personnel Interviewed: Major Manuel Berg

Summary:

This group, the Army medical group, arrived in Nagasaki 30 September 1945 and expect to leave about 1 December 1945.

The group is composed of Major Manuel Berg, Major Herman Tarnower, 2 laboratory technicians and 2 clerk typists (all EM).

Groups studying  
medical effects  
of atomic bomb.

(2)

C-2 annex

The Army group's mission is to study the medical effects of Atomic Bombing.

Japanese doctors working with the Nagasaki group are:

Dr. OHASHI  
Dr. HAKAMADA  
Dr. NIKAIDO  
Dr. UEDA  
Dr. URABE

These men are from TOKYO Imperial Medical College.

Statistics that are being gathered here will go to Washington through regular Army and Navy channels and be released by them.

Note on first interview listed above:

Lt. Cmdr Pace requested photo or map coverage of the following area:

AREA EAST OF NISHIYAMA RESERVOIR TO YAGAMI VILLAGE, ON ROAD BETWEEN NAGASAKI AND ISAHAYA, NORTH AND SOUTH 1 MILE FROM RESERVOIR.

This request was passed on to Lt. Moser, PI at Nagasaki who furnished what was available to Lt. Cmdr. Pace. The above area is the scene of some radioactivity.

The only information that he (Pace) has on Japanese Atomic Bomb Investigations is as follows:

Tokyo Imperial University is the center of investigations made by Japanese groups. A Dr. TSUZUKI of that university was at Nagasaki. Also here were geologists from the same university working on physical damage.



1 December 1945

Subject : Atomic Bomb Investigations by Japanese Groups.  
Source : Comdr. Shields Warren (MC) USNR Nav.Tech.Jap.  
Place : Meiji Bldg. Tokyo, Japan.

Comdr. Warren went on a field trip and met the men listed below who are engaged in various aspects of Atomic Bomb Studies.

KYOTO IMPERIAL UNIV:

- Prof. FUNAOKA, Seigo  
Chief of the Anatomic Institute  
(Prof. of Anatomy)  
"Smartest man in the University".  
He is working on the "A" Bomb.  
Age about 50. Speaks and under-  
stands English.
- Prof. OKAMOTO,  
Acting Prof. of Pathology.  
Holder of Chair was killed in typhoon  
at Hiroshima 8 Oct. All records  
destroyed.
- Prof. UCHIKURO,  
Speaks English very well. Useful  
as an interpreter.
- Prof. KIMURA,  
Dean of Medical School. An "educational  
politician".

KYOTO PREFECTURAL MEDICAL SCHOOL:

A 3rd. or 4th. rate institution.

- Prof. ARAKE,  
Not a top man. He has some X-Ray plates on  
Atomic Bomb victims but Comdr. Warren does  
not regard them as authentic.

OSAKA IMPERIAL UNIVERSITY,

Cyclotron destroyed.

Prof. Ueno,  
Sick, and Comdr. Warren did not meet him.

Prof. KOBAYASHI,  
Ueno's assistant. Bright.

Prof. KAICHUCHI,  
Bright. Man who had cyclotron.

Prof. ASADA, T.  
Comdr. Warren dealt with him. Asada has measured  
radio activity at Hiroshima where he found  
residual radioactivity, but so low that absolutely  
harmless to humans.

OSAKA IMPERIAL UNIVERSITY:

Comdr. Warren interviewed

Prof. ASADA, T

Prof. KOBAYASHI, S

Prof. ITO, S

Asada, a physicist, made measurements of the surface soil on Aug. 10 at Hiroshima taking 1 kilogram samples. The normal count of his Geiger Counter is 27. The highest count that he obtained was 120 which was near the TOGOKOKU Shrine (almost at the center). He found another high point of approximately 90 at the KOI Bridge. He found radioactivity at several stations along the area of approximately 3 miles radius all of which were elevated to varying degrees. (1 kilogram Geiger Counter measures radioactivity). They also analyzed the earth to see what the active fraction was at the KOI Bridge and they found it was Uranium x-1 in equilibrium with Uranium x-2. They said that there was a possibility that it might be an ISOTOPE of selenium. They had done some work of "half - lives" (radioactivity)

$P^{29} = 3.4''$      $Li^8 = 0.91''$      $Al^{26} = 6.87''$      $Ag^{110} = 23.7''$



7 December 1945

Source: Comdr. Shields Warren, Navy Medical Group.

NAGAOKA, Pref.

A physicist at Imperial University of Tokyo. In an interview with Comdr. Warren NAGAOKA stated that there was no overall coordination of research. As a result there was much overlapping with men in one area not knowing what men in other areas were doing. Up to the time of the War there was no governmental research for nuclear physics, the only support for such research coming from individual grants.

C-2

U.S. STRATEGIC BOMBING SURVEY  
NAGASAKI, KYUSHU, JAPAN

21 November 1945

Place of Interview: Omura Naval Hospital.

Person Interviewed: Cmdr. Shields Warren (MC), USNR.

Cmdr. Warren consented to give us a complete outline of all groups who have been working on Atomic Bombing Investigations. This outline is complete as far as he knows.

1st Group: MANHATTAN PROJECT

This group is headed by Gen. Farrell and Col. Stafford L. Warren. It reached Nagasaki about 18 September 1945 and left about 4 October 1945.

2nd Group: NAVTECHJAP TEAM #11

This group is headed by Cmdr. Shields Warren and there is a subgroup under Lt. Cmdr. Pace based at Nagasaki, which is called Navtechjap Team #11-100. Lt. Cmdr. Pace's group specializes in making radioactivity measurements. Cmdr. Shields Warren's group commenced work about 24 September 1945, and Cmdr. Warren will leave 24 November 1945 for Tokyo and will be in the Meiji Building until 10 December 1945.

NOTE: Radioactivity measurements are being taken at Nagasaki and Hiroshima. Dr. Kinoshita, Director of the Imperial Institute of Science of Tokyo, is also engaged in this work. Dr. Kinoshita is a very able physicist and "deduced more concerning the bomb in the first three days after it was dropped, than most other physicists knew over a week later." He has studied in California.

3rd Group: ARMY GROUP

This group is headed by Col. Oughterson, Prof. of Surgery at Yale. Cmdr. Warren is a professor at Harvard Medical School. It came in after the Navy group was already established. He established with Prof. Tsuzuki a joint GHQ Imperial Jap. Gov't Commission which split into two groups. One of these was under Col. Mason at Hiroshima, the other under Col. DeCoursey at Nagasaki. The Army Group arrived about the 1st week in October 1945. Cmdr. Warren emphasized that the Army and Navy groups have been working together very well and have coordinated all of their material.

The Japanese are drawn from 3 sources:

1. Imperial University of Kyushu.
2. Imperial University of Tokyo.
3. Prefectural Medical College at Nagasaki. (25% of faculty and students survived, physical plant was totally destroyed.)

There are about 80 Japs altogether and they are working under the direction of the Army and Navy groups, which outlines the work which must be done. E.g. Determine percentage of abnormal births due to the Atomic Bomb. Japanese doctors do such investigations.

NOTE: About 18 August 1945, either the Imperial Government or the University of Tokyo set up a commission which made few autopsies, etc. This commission has probably merged with Prof. Tsuzuki's group.

#### DISSEMINATION OF REPORTS

Individual teams will make brief (40 or 50 page) reports, Army to Surgeon General, Navy to Bureau of Med. and Surgery. Neither will be for publication. Then, Cmdr. Warren (and the Army group concurs in this) would like a joint conference with all groups which have investigated and studied the Atomic Bomb. This would include U.S.S.B.S., the Manhattan Project, and a representative of the British group. (Col. Solandt of the British Group is Prof. of Physiology at the University of Toronto.) The purpose and objective of this conference would be to produce a joint authoritative, single monograph which would present a complete story of the Atomic Bombing from all aspects, medical, physical damage, social aspects, etc.

#### NOTES:

1. Cmdr. Warren stated that Col. Stafford Warren of the Manhattan Project has in his possession in Washington movies taken of the Nagasaki Atomic Bombing Area by Lt. S. Ikura of the Nagasaki Harbor Police.
2. Accessory detonating devices dropped by B-29 on 9 August 1945. Cmdr. Warren was asked about the accessory detonating devices dropped. Cmdr. Warren, through the G-2 section of the 5th Marine Division at Ainoura (outside of Sasebo), recovered one of these devices. It was discovered in what had been an aeronautical laboratory in Ainoura. This laboratory at that time resembled a large empty warehouse. The two other devices dropped have not been recovered. The Japs may be keeping them for research purposes. The one recovered looked like an empty aluminum shell case with a heavy galvanized iron ring on one end and 2 such rings on the side. It is approximately 1 meter long and 20cm in diameter. The mechanism was still inside. The devices were dropped by parachute.
3. The Japs knew within 3 days that it was an Atomic Bomb at Hiroshima



Kinoshita deduced that it was an Atomic Bomb when he discovered a substance which he identified as Uranium 235 which was washed down by the rain at Hiroshima following the bombing.

4. The original Municipal Crematory was destroyed by the bomb at Nagasaki. The one which was set up to take its place did not keep very reliable records but its casualty figures are more to be trusted than are those from the Prefectural Government.

5. Dr. Tsuzuki. He is Dean of the Medical School of the Imperial University of Tokyo. He was an admiral in the Jap Navy during the war. He is probably the most able medical man in Japan and "a very slick customer."

6. Cmdr. Warren stated that the groups (Army and Navy) will have a complete sampling of the types of injuries sustained in the Atomic Bombings. The sampling has been made on the basis of type of injury in relation to the area and the type of building the victims were in. The sampling will cover about 7000 cases at Hiroshima and 4000 at Nagasaki.

7. Cmdr. Warren was asked to give his estimate of casualties from "A" Bombings. He estimated 30,000 dead at Nagasaki; and 100,000 dead at Hiroshima out of a total of 175,000 casualties at Hiroshima. W/C Bronowski, of the British Group has a theory that the estimates on wounded and killed here must be incorrect because they are nearly equal. Cmdr. Warren says that the mistake lies in the Japanese way of considering a person "wounded". Most Japanese, if injured, try to get home or to a relative's home instead of to a hospital. And as a result, many "wounded" are not even reported. Cmdr. Warren stated that casualties, immediately after the bombing, were "piled" on trains and taken out of Nagasaki for treatment. Those most seriously hurt were removed from the trains first and so mortality rates in hospitals in places near Nagasaki ran as high as 80%. In more distant places, the mortality rate as low as 10%. There were undoubtedly uncounted bodies left in the ruins of Nagasaki. Cmdr. Warren stated that city birth and death figures were worthless since registration of births or deaths is not compulsory and only a small percentage of the population do so. He cited the Nagasaki and Inasa Police Station Districts which were totally destroyed. They had a total population of 40,495 plus 13,704 employees. (Population figures from Nagasaki Prefecture.)

Figures on deaths in hospitals outside of Nagasaki City:

Omura Naval Hospital: 758 admitted up to September 1st.  
155 deaths up to September 1st.

Isahaya Naval Hospital: 873 admitted up to September 1st.  
239 deaths up to September 1st.

8. Nagasaki Medical School was of wood and brick construction. The hospital was of concrete construction. On 1 August 1945 6 bombs had been dropped on the hospital and as a result many patients had been moved out.

16 faculty were present on 9 August 1945.  
12 were killed.

800 students were present on 9 August 1945.  
600 were killed.

150 in-patients in the hospital.  
150 out-patients in the hospital.  
200 out of 300 killed.

9. Nagasaki Medical Society's figures are not to be trusted. Cmdr. Warren expressed disgust at the manner in which their doctors seemed to be interested only in the fees they received from the Prefecture for treating Atomic Bomb victims. Dr. Takao is head of the Nagasaki Medical Society. Cmdr. Warren gave me an article by Father Siemes entitled "ATOMIC BOMB ON HIROSHIMA", eyewitness account of P. Siemes. Cmdr. Warren termed it a "classic account." This document is to be returned to him and is not to be used or released without prior clearance from him personally.

10. Cmdr. Warren requested the following from U.S.S.B.S.:
- (a) Population figures on Nagasaki City, broken down into districts. 1 November 1945 census.
  - (b) Newspaper accounts of the Atomic Bombing.
  - (c) Photographs taken by P.D.D. Team #2. Major Dragnett told Cmdr. Warren that these would be available for his use in Washington.
  - (d) Map of Nagasaki with names and locations of schools.

(a), (b) and (d) are available, but are not yet fully translated. (c) will be available in Washington.