

By

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1. Introduction

Williams-Hunt aerial photograph collection is the collection of aerial photographs that Peter Williams-Hunt gathered from the reconnaissance missions of Royal Air Force during and after the World War II and also the collection of aerial photographs took by Peter Williams-Hunt himself. Peter Williams-Hunt had interested in the application of utilizing aerial photograph for archaeology studies. He had wrote an article on the discovery of Roman site from aerial survey in 1946 (Williams-Hunt & Bradford, 1946) He made the collection on these aerial photographs on Southeast Asia while he had been working as aerial photograph interpreter for the Royal Air Force during and after the World War II. He died in Malaysia in 1953. Before he died, he had passed the aerial photographs collection to John Bradford in 1951. After that, the collection was kept in Pitt Rivers Museum. There are some archaeologists, for example, William Watson and Quartich Wales, who tried to utilize this collection for their research in the 1960's but without much success since the collection was not organized and there was no explanation of the photos.

In 1982, Dr. Elizabeth Moore from the School of Oriental and African Studies (SOAS), University of London, England became interested in the Williams-Hunt photographs in connection with her doctoral research on circular moated sites in Northeast Thailand. Thanks to a suggestion by Mr. Pisit Chareonwongsa in 1981, she contacted the Pitt Rivers Museum in Oxford. After his untimely death in Malaysia in the early 1950's, Williams-Hunt's pictures were sent to his colleague John Bradford and housed at the Pitt Rivers. The Pitt Rivers agreed for the photos to be transferred to the University of London, where thanks to grants from the South East Asia Committee of the British Academy, the collection was digitized to produce a set of full-size negatives. In this process, Elizabeth Moore organized the aerial photographs according to the locations and produced simple database for the collection as illustrated in table 1 below.

BOXNO	NAME	SORTIE	SERIAL	LOCATION
ND47-12	THAILAND (C)	SIAM15	6	BANGKOK: URBAN: MAIN RAILROAD STATION
ND47-12	THAILAND (C)	SIAM15	6	BANGKOK: URBAN: MAIN RAILROAD STATION: DUPLICATE
ND47-12	THAILAND (C)	SIAM15	30	BANGKOK: URBAN: RAILROAD: ROADS
ND47-12	THAILAND (C)	SIAM15	72	BANGKOK: URBAN: MILITARY HEADQUARTERS?
ND47-12	THAILAND (C)	SIAM15	87	BANGKOK: URBAN: PARK: STATUE
ND47-12	THAILAND (C)	SIAM15	92	BANGKOK: URBAN: KLONG: RIVER
ND47-12	THAILAND (C)	SIAM15	93	BANGKOK: URBAN: KLONG
ND47-12	THAILAND (C)	SIAM15	95	BANGKOK: URBAN: STADIUM
ND47-12	THAILAND (C)	SIAM15	100	BANGKOK: URBAN: STATUE (TAKSIN ?)
ND47-12	THAILAND (C)	SIAM15	105	BANGKOK: URBAN: PALACE/CHEDIS
ND47-12	THAILAND (C)	SIAM15	109	BANGKOK: URBAN: PALACE/CHEDIS
ND47-12	THAILAND (C)	SIAM15	111	BANGKOK: URBAN: RIVER: WATS: CHEDI ON HILL
ND47-12	THAILAND (C)	SIAM15	121	BANGKOK: URBAN: RIVER: PLAYING FIELD
ND47-12	THAILAND (C)	SIAM15	121	BANGKOK: URBAN: RIVER: PLAYING FIELD: DUPLICATE
ND47-12	THAILAND (C)	SIAM15	129	BANGKOK: URBAN: WAT: KLONG
ND47-12	THAILAND (C)	SIAM15	137	BANGKOK: URBAN: RIVER: UNFINISHED BRIDGE
ND47-12	THAILAND (C)	SIAM15	138	BANGKOK: URBAN: RIVER: UNFINISHED BRIDGE
ND47-12	THAILAND (C)	SIAM15	141	BANGKOK: URBAN: WAT: RESIDENTIAL
ND47-12	THAILAND (C)	SIAM15	142	BANGKOK: RESIDENTIAL: MILITARY HEADQUARTERS?
ND47-12	THAILAND (C)	SIAM15	144	BANGKOK: RESIDENTIAL: MILITARY HEADQUARTERS?
ND47-12	THAILAND (C)	SIAM15	145	BANGKOK: RESIDENTIAL: MILITARY HEADQUARTERS?
ND47-12	THAILAND (C)	SIAM15	147	BANGKOK: RESIDENTIAL: MILITARY HEADQUARTERS?

Table 1 Sample from Williams-Hunt Collection Aerial Photograph Database produced by Dr. Elizabeth Moore

After that the Williams-Hunt aerial photographs collection were kept at The School of Oriental and African Studies (SOAS), University of London, England. As one of the aims of making the digitized negatives was provision to the wider academic community, copies of the Williams-Hunt photographs were made available at cost to the Center for Southeast Asia Studies (CSEAS), University of Kyoto, Japan, the Nation Achieve, Fine Arts Department, Thailand and the National Archives of Malaysia. In addition, a set of the Angkor portion of the collection was acquired by the Royal Angkor Foundation (Budapest), and copies of 200+ pictures loaned to the National Archives, Ministry of Finance and Planning, Yangon, Union of Myanmar. .

2. Detail

Williams-Hunt Aerial Photograph Collection has the coverage as follow:

Angkor	128 photos
Myanmar	821 photos
Malaysia	2632 photos
Thailand	1671 photos
Singapore	240 photos
Other	312 photos

This collection has both vertical and oblique looks. For the oblique look photos, some Peter Williams-Hunt took by himself, such as the photos of temples, archaeological sites. However, many of the others were taken by the Allied Photographic Interpretation Service (A.P.I.S.). An example of this is shown below in Figure 1, where the Sortie number is Siam 78.A.P.I.S., taken on March 15, 1946 using a 5 inch lens at variable height. All the sortie information such as this is embedded in the database of the Williams-Hunt Collection.

At CSEAS, the whole collection was already scanned to convert the photos into digital format with the best quality scanning process from Fuji Film Company, Osaka, Japan with the 1200 DPI resolution for vertical photos, and 600 DPI for oblique photos. Currently, the author is conducting a research on this Williams-Hunt Collection at Center for Southeast Asia Study (CSEAS), University of Kyoto to geo-referencing the collection with the Ortho-rectified Landsat ETM satellite images, ASTER satellite images, IKONOS and Quickbird satellite images where available, and developing the digital archive system through internet with the searching capabilities of map search and keyword search. Also, developing meta-data from the database that originally developed by Dr. Elizabeth Moore. In the future, the collection will be able to link with other digital archive around the world. Currently, after geo-referencing these aerial photographs, they can be used in GIS analysis for archaeological studies through out the countries in the Southeast Asia.

In addition, some of vertical images in the collection that were able to form a cluster together after geo-referenced were mosaic together, as illustrated sample in figure 1 and 2 below.



Figure 1 Ayutthaya Mosaic image from WHC (not true scale)

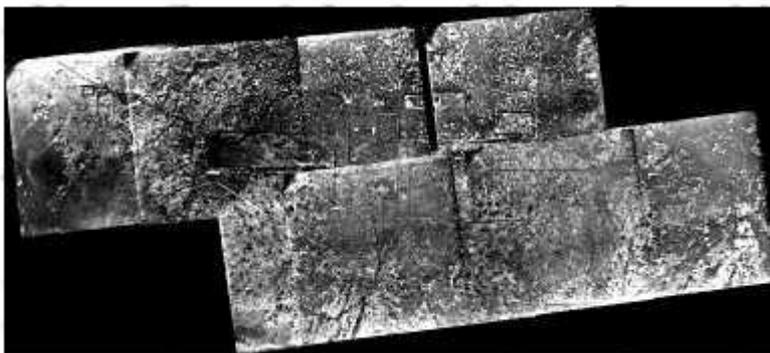


Figure 2 Angkor Mosaic image from WHC (not true scale)

3. Sample Aerial Photographs from the Collection

The following images are samples from Williams-Hunt Collection of important historical locations, and the land had been totally changed from the way they were shown in the photos.



Figure 3 Wat Prasrisunpeth, Ayutthaya



Figure 4 Wat Ratchaburana, Ayutthaya

Remake: the figures shown were reduced in resolution since the original resolution is too large to be illustrated in this document



Figure 5 Wat Prasimahathat, Pithsanulok

In addition, there is rare photos coverage that very few people had ever seen.

Thonburi Battleship after Koa Chang's battle. The ship was recovered and waiting for the repairing, but the repairing had never happened.





Figure 6-7: Thonburi Battleship after Koa Chang's battle, the water marks stilled can be noticed and the control room can be noticed of damaged

Royal Thai navy Submarine Force





Figure 8-9: Rare photos of the Royal Thai Navy submarines, the Royal Thai Navy's flag can be noticed at the back of the ship from original photos.



Figure 10 Oblique view of Angkor Vat



Figure 11 Vertical view of west baray, Angkor

4. Preliminary Conclusion

From the sample photos, we can notice that Williams-Hunt Aerial Photos collection has significant value for the research study in the term of the original landscape, original structures, and original styles of archaeological sites in these photos. The value of this collection is not stopped only on the topics just mentioned. They are also very important to understand the way of life during the period that the photos were taken. The history that is now forgot by the people of the land they are belonged to.

In the technical point of view, the current technologies make it possible to improve the quality of these photos to bring back almost same quality as the original photo token more than 60 years ago. For example, the figure below from Wat Param, Ayutthaya, we can zoom up into very high detail of the decoration of the pagoda (prang) to learn about the art of Ayutthaya that is now gone forever.

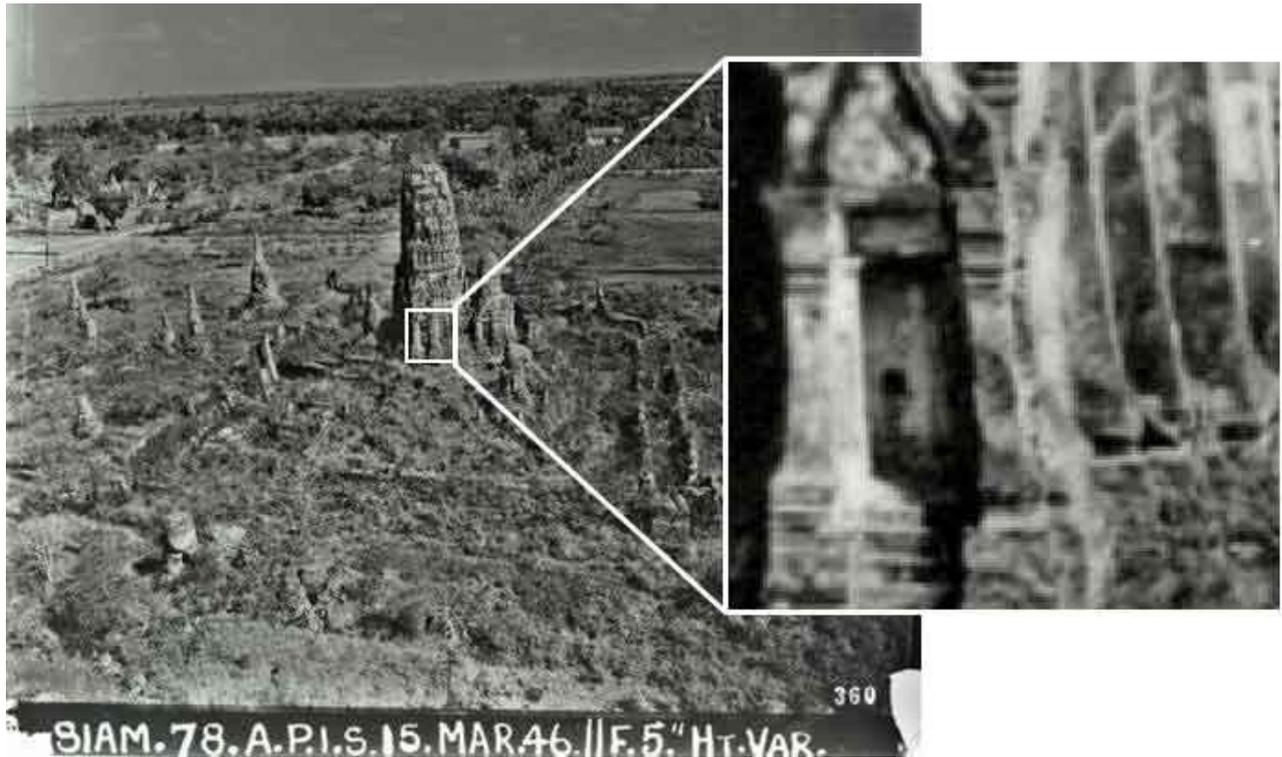


Figure 12 Wat Praram, Ayutthaya

As the development continue for the Williams-Hunt Collection, very soon the scholar around the world will have the chance to use one of the most valuable information for their studies like never before. The author would like to thank:

Dr. Elizabeth Moore, SOAS for her kind support on the detailed information and database and generous support to distribute the data for scholarly usages.

Prof. Mamoru Shibayama, CSEAS

Dr. Yasuyuki Kono, CSEAS

For support on the implementation of digital achieve in the term of inviting me as visiting scholar at CSEAS, funding for this research to develop digital achieve.

Also, to UNINET, Thailand for funding support for implementation of digital achieve.

For the usage and reference of the Williams-Hunt Collection figures in this document, please quote as

Williams-Hunt Aerial Photos Collection

Original from the School of Oriental and African Studies (SOAS), University of London

Digital Archive from Center for Southeast Asia Studies (CSEAS), University of Kyoto

5. Reference

Elizabeth Moore, Inventory of Williams-Hunt Collection, Detailed of Williams-Hunt Collection Database