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Antarctic Ocean Whaling Photo Album : Cataloguing And Preservation Of A Japanese Album

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Antarctic Ocean Whaling Photo Album:
Cataloguing and Preservation of a Japanese Album

by

Hui-Yun (Ki-in) Tsai,
Honors BA, University of Toronto, 2004

A Thesis

presented to Ryerson University
and
George Eastman House International Museum of Photography & Film

in partial fulfillment of the
requirements for the degree of

Master of Arts

in the Program of

Photographic Preservation and Collections Management

Toronto, Ontario, Canada, 2008

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Hui-Yun (Ki-in) Tsai
Master of Arts, 2008
Photographic Preservation & Collections Management
Ryerson University / George Eastman House

Abstract

Antarctic Ocean Whaling Photo Album is an album published during the 1940's by a Japanese marine product company. The album contains 52 gelatin-silver prints of a whaling expedition to the Antarctic Ocean and is a fascinating visual record of the Japanese whaling industry. Using this album as a case study, this thesis project is a study of the cataloguing process and preservation of a photographic album. The goal of this project is to make the album more accessible to researchers through translation, cataloguing and digitization, as well as to provide a preservation strategy through condition assessments. This paper summarizes the research conducted on the album, outlines the cataloguing process, the condition assessment of the album and provides a treatment proposal and a handling guideline for the album. The paper also includes a Romanization chart and a translation table of the album texts as aids for further research.

Acknowledgements

I would like to express my gratitude to all the individuals who helped me through in completing this thesis project.

First of all, I would like to thank my First Reader, Mr. David Soures Wooters at George Eastman House for his guidance and support. I could not have completed this project without his suggestions, encouragements and patience in editing my drafts.

All the staff at George Eastman House who have supported me on this project: Mr. Grant Romer for his advice and guidance on the preservation of the album, Mr. Joe Struble for his support at the study center, Mrs. Laurie Soures Wooters and Ms. Jamie Allen for their help on working with TMS, Ms. Barbara Galasso for photographing the album, and Dr. Alison Nordström for suggesting the idea for this project and for serving as my Second Reader.

I would like to also acknowledge the Public Relations Department at Company N for providing information, Miss. Tsen-Jung Ku from Tainan National University of Arts in Taiwan for her insights on paper conservation and Mr. Ian Clary for editing and providing suggestions for improvement.

Special thanks to my classmates, Sarah, Nadia, Ali and especially Fran, I would have panicked and the project would not have been completed without your help.

My dear families and church friends in Toronto, Taiwan and Rochester, thank you very much for your prayer, love and support. I felt your prayer during my hard times.

I praise and give thanks to the Lord who has given me strength and wisdom.

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Antarctic Ocean Whaling Photo Album: Cataloguing and Preservation of a Japanese Album

Introduction

This paper accompanies my thesis project of a case study in album preservation, which involves the cataloguing and preservation assessment of an album found in the collection of George Eastman House. This paper describes the process and methodology used in cataloguing and assessing the condition of the album, as well as summarizes and analyzes the information discovered through my research. My goals for the project are to learn various approaches to album preservation and to make this album more accessible to researchers.

The album is a common form for assembling and organizing photographs. A wide range of albums can be found in any collection; some are valued as works of art and some are valued as sources of visual information. Even though the term “album” is often used as a generic term referring to any bound form of photographs, Gustavo Lozano has pointed out that there are distinctions between a *photographically illustrated book* (*photobook*), which is a published book with photographic prints tipped in as illustrations, and a *photograph album*, which is “a unique compilation of photographs assembled into a blank book by an individual or a group of persons.”¹ The main distinctions are “acquired vs. produced, public vs. private and multiple vs. unique.”² The object used in my research is a *photographically illustrated book* according to Lozano’s definition. However, I am using the term “album” to describe it, because the title includes the term “album,” it is classified as an album in George Eastman House’s collections management system, and it is preserved as a unique object in the photographic collection, rather than as a published book in the library collection.

¹ Gustavo Lozano, “History and Conservation of Albums and Photographically Illustrated Books” (Research project, The Advanced Residency Program in Photograph Conservation, George Eastman House, 2007), 2.

² Ibid., 3.

Chapter 1: The Album – Its Content, Use and History

An Overview of the Album

The album used for this case study is a Japanese album published around 1941 by a Japanese marine product company that is still in business today. The company, which has asked to not be identified in this paper, is referred to here as “Company N”.–The album is titled *Antarctic Ocean Whaling Photo Album* ³ (accession number 2003:1185:0001-00052) and contains 52 gelatin silver prints that depict whaling activities and whaling vessels. It appears that the album was produced for the purpose of introducing the company’s whaling business to related companies and stockholders, as well as the company’s employees.

The 52 photographs in this album, which are roughly in chronological order, follow the journey of whalers in great detail. The sequence of photographs can be divided into five sections:

1. From departure to finding whales (2003:1185:0002 – 0011)
2. Killing of whales (2003:1185:0012 – 0028)
3. Dismemberment of whales (2003:1185:0032 – 0041)
4. Whaling vessels (2003:1185:0029 – 0031 and 2003:1185:0042 – 0047)
5. Antarctic seascapes (2003:1185:0048 – 0052)

The frontispiece (2003:1185:0001), which depicts a ship at sea, does not fit into the sequence.

One sentence printed captions accompany each photograph, except for the frontispiece. These captions not only act as a narration to the photographs, transforming the album’s otherwise grim subject into an exciting storybook, but also provide valuable information and useful clues for research.

Although the focus of *Antarctic Ocean Whaling Photo Album* is whaling, it also places emphasis on the whaling vessels. Almost one third of the 52 photographs in the album focus on whaling ships and there are seven vessels identified by name in captions, showing the importance of the vessels in whaling and making the album a valuable record of these vessels.

³ Translated from the original Japanese title, “南氷洋捕鯨寫真帖” (read as: Nanpyôyô hōgei syasin tyô).

Historical Research: Establishing the Date

Based on my historical research I believe *Antarctic Ocean Whaling Photo Album* was published circa 1941. The company name and the slogan of “Syokuryô hôkoku”⁴ written in calligraphy after the album’s title page provide two clues to the publication date. Company N is a company that engages in fishery, aquaculture, sales and distribution of its marine products, including fresh and frozen fish, as well as frozen prepared foods. Since its foundation in 1911, The company has changed its name several times during its history and different names from the particular name used in this album were used prior to March 15, 1937 and during the time between March 31, 1943 and November 30, 1945, which places the publication date of the album to either between March 15, 1937 and March 31, 1943, or after December 1, 1945.⁵

The slogan of “Syokuryô hôkoku,” meaning “By food serving the country,” was established as Company N’s company motto as of January 1, 1941.⁶ The inclusion of this slogan suggests a publishing date of 1941-1943 rather than after December 1, 1945. The company newsletter of Company N published on July 1, 1941 also mentions the expected completion date of the album⁷ later that month,⁸ lending further evidence to a publication date of *ca.* 1941.

The date for the photographs was determined as *ca.* 1940-1941 based on the whaling vessels identified in the photographs and e-mail correspondence with Company N. Among the seven identified vessels, the last one to join the Japanese whaling fleet in the Antarctic Ocean was a vessel purchased from England, which was first used in Antarctic whaling in 1939,⁹ making that year the earliest possible date for these

⁴ “食糧報國” in Japanese Kanji characters.

⁵ Fumio Nagasawa, “Natukasii Nippon no kisen” (Nostalgic Japanese Steamships), <http://homepage3.nifty.com/jpnships/> (accessed June 4, 2008).

⁶ Tensyo, “Senpyôsen Nanpyôyô wo yuku: hinomaru hogeï sendan no tataikai, dai iti syo: Syokuryô sensi no na no sitani” (War vessels in the Antarctic Ocean: the battle of Hinomaru whaling fleet, Chapter 1: under the name of food soldier), Tensyo Kantai (Tensyo Fleet), http://www.d1.dion.ne.jp/~j_kihira/library/nanpyoyo/nanpyoyo1.html (accessed June 5, 2008). Information confirmed through e-mail correspondence with Company N on July 7, 2008.

⁷ It is unknown how many copies of this album were made and how many still exist. Copies of this album occasionally appear in auctions of antique books in Japan.

⁸ Company N Public Relations Office, e-mail correspondence, July 7, 2008.

⁹ Yuhzou Tanaka, “Senjika ni usinawareta Nippon no Syôsen” (Japanese merchant vessels lost during the war), Musuem of Japanese Merchant Ship, <http://homepage2.nifty.com/i-museum/19430409kousei/kousei.htm> (accessed June 4, 2008).

photographs. The more specific date of 1940-1941 was later provided by Company N in e-mail correspondence¹⁰.

The 1940/1941 expedition was the last whaling expedition before Japan fully engaged itself in the Second World War with the attack of Pearl Harbor.¹¹ Japan's mother ship style whaling in the Antarctic Ocean was suspended from 1941 to the season of 1946 due to the war. All vessels, both mother ships and whaling ships, depicted in this album were used as tankers and battle ships during the war and destroyed in battles between 1943 and 1944.

The Slogan of “Syokuryô Hôkoku” and The Production of Whale Meat

The album begins with the company motto, “Syokuryô hôkoku” (By food serve the country), written in calligraphy. This slogan was also used by the Japanese government during the Second Sino-Japanese War¹² for dealing with the shortage of food. With this slogan, the Japanese government began to urge people to conserve rice in 1939 and support its rationing system for food and daily items instituted by 1940.¹³ It was also during this time that the Japanese government began to encourage the production of meat through the whaling industry,¹⁴ hoping to ease the food shortage.

In spite of the inclusion of the “Syokuryô hôkoku” slogan in the album, the images in *Antarctic Ocean Whaling Photo Album* do not emphasize the process of meat production, but rather offer a general view of whaling. Only nine out of the 52 photographs fall into the “dismemberment of whales” section (2003:1185:032 – 0041), which is relevant to the production of meat and oil. In this section, there are references to oil production, such as the throat groove, sebum, born, the Hartmann boiler¹⁵ and sperm

¹⁰ f Company N Public Relations Office, e-mail correspondence, March 10, 2008.

¹¹ Japan was already at war with China (The Second Sino-Japanese War). Western governments including the United States and the Britain tried to force Japan to withdraw from China by denying trade with Japan, which Japan took as an act of aggression and led to its declaration of war against the western countries.

¹² The Second Sino-Japanese War was fought between China and Japan before and during the Second World War. It began on July 7, 1937 with the Marco Polo Bridge Incident and ended after Japan's surrender on September 9, 1945.

¹³ Oita Broadcasting System, “Kokka sôdôin hô: minna ga taeta donzoko seikatu” (National Mobilization Law: Enduring the life of poverty), Oita Broadcasting System, Inc., <http://www.e-obs.com/heo/heodata/n256.htm> (accessed June 5, 2008).

¹⁴ Morikuni Itabashi, *Nanpyôyô hogeishi* (Tokyo: Chûô Kôronsha, 1987), 97.

¹⁵ The Hartmann boiler is used for oil production. The skin, fat and intestines of the whale are cut into pieces and thrown into the boiler. Bones were processed in different boilers.

whales,¹⁶ but there is no clear reference to whale meat. The idea of “Syokuryô hôkoku” is only referenced through one photograph of a ship (2003:1185:0045), accompanied by a caption mentioning the ship “strives to provide food for the service of country.” This ship was a freezer ship used for the transportation of whale meat, but this is not mentioned in the album.

The lack of emphasis on meat production in *Antarctic Ocean Whaling Photo Album* becomes more apparent when compared to other publications of the same subject. *Nanpyôyô no Hogeï (Whaling in Antarctic Ocean)* published in 1950 by Iwanami Shoten is another book with photographic illustrations that describe a whaling expedition to Antarctica. This small booklet of 64 pages presents the whaling expedition in a manner similar to *Antarctic Ocean Whaling Photo Album*, including similar images of departure from the port, preparation works, shipboard entertainments and hunting activities. However, it shows more imagery related to meat production, including many close-up views of the butchered meat, the process of transporting the meat to the freezer and the final product of packaged whale meat. The book concludes with a photograph of a feast on the ship celebrating the new record the expedition achieved in meat production.

When compared to this booklet, *Antarctic Ocean Whaling Photo Album*’s use of the “Syokuryô hôkoku” slogan seems more like propaganda or public relations than fact. The slogan seems to have been included to show the general attitude of Company N but does not reflect their whaling concerns.

There is a general impression that Japanese whaling has always focused on meat production with oil production a secondary concern. However, the ratio of meat to oil production in Japanese whaling changes according to the needs of the society.¹⁷ Although the Japanese have eaten whale meat throughout their history, it did not become a basic food item widely consumed by the population until after the Second World War.¹⁸ Freezer ships for the transportation of whale meat were introduced in the 1939/1940 expedition, but the production of meat was still small in comparison to oil. From 1934 to

¹⁶ Sperm whales were hunted mostly for their oil, which produces the *spermaceti* oil, one of the most important whale oils. The meat of the sperm whales has a strong smell and is not suitable as food.

¹⁷ Hiroyuki Watanabe, *A Historical Sociology of the Whaling Issue: Relationships between Whales and Human Beings in Modern Japan* (Tokyo: Toshindo Publishing Co., Ltd., 2006), 56.

¹⁸ Prior to the war, whale meat was consumed only locally in areas with access to fresh whale meat due to the lack of technology to preserve and transport the meat.

1941, including the 1940/1941 expedition depicted in *Antarctic Ocean Whaling Photo Album*, the primary goal of Japanese whaling industry was still whale oil production¹⁹ and it was not until 1946 that the production of meat became dominant.²⁰ This also helps to explain why *Antarctic Ocean Whaling Photo Album*, published ca. 1941, pays little attention to meat production in comparison to *Nanpyôyô no Hogeï*, which was published in 1950.

The Use and Meaning of the Album

Antarctic Ocean Whaling Photo Album was used to introduce whaling to related businesses and employees of Company N, who probably had some knowledge of whaling already. The audience would be familiar with the company's vessels, the company motto and know that the main business of the company is food production. The inclusion of the "Syokuryô hôkoku" slogan at the beginning of the album reinforces this idea of the company's mission. Whether or not the photographs actually depict food production was probably not a concern in the production of this album.

The album is also a celebration of the heroic act of whaling in the Antarctic Ocean. In the devastating war period, the whaling industry was seen as a hope for the country, and whalers were honored as "industrial soldiers" who fought against the cold air and raging waves of the Antarctic Ocean. Many of the words and phrases used in the album captions not only convey a sense of heroism, but also have a military overtone to them.²¹ For example, the word "sinpatu" used with the last photograph "Akatuki no sinpatu"²² (Embarkment at dawn. 2003:1185:0052) is a word used specially to describe

¹⁹ Katsuaki Morita, *Kujira to hogeï no bunkashi* (Nagoya: Nagoya Daigaku Shuppankai, 1994), 353.

²⁰ The food shortage in Japan grew more severe after the Second World War and the lack of protein sources was especially a problem. The General Headquarters (GHQ), under the leadership of General Douglas MacArthur, gave Japan permission to re-launch whaling in the Antarctic Ocean in 1946 in order to resolve the crisis. Several marine product companies embarked for the Antarctic Ocean using surviving tankers from the war refurbished as whaling vessels. The meat brought back from the expedition relieved the food crisis in Japan, and prompted the Japanese whaling industry to grow rapidly.

²¹ Whaling in Japan has always had military connections. It has been connected with the Marines because whaling ships were often constructed with the most advanced technology and later converted into military vessels. Whale oil was a raw material for explosives, and the money obtained from exporting the oil often became military funds.

²² "暁の進發" in Japanese Kanji characters.

the retreat of military troops.²³ While promoting the company's business and the whaling industry with their nationalistic slogan, this album can be viewed as a response to the Second Sino-Japanese War, showing support for the country and cheering for the "soldiers" who labor in the service of their country.

²³ From online dictionary, goo Jisyo (<http://dictionary.goo.ne.jp/>), definition provided by *Daijirin* (2nd edition), a dictionary published by Sanseido Books in 1995 (accessed March 13, 2008).

Chapter 2: Cataloguing of the Album

Cataloguing is an important part of collections management, making a collection more accessible and contributing to its preservation. Cataloguing this album made its contents searchable by several criteria and through the collections management system, organized related information into a useful format. Preservation of the album is enhanced because the catalogue record reduces handling of the actual object, providing a visual reproduction and relevant information including author, date and dimensions. The album is also made accessible to the public by uploading the records to George Eastman House's online collection through the eMuseum system. There were four stages involved in the cataloguing of *Antarctic Ocean Whaling Photo Album*:

1. Creating item records;
2. Adding images;
3. Cataloguing records;
4. Making the records available online.

Stage 1: Creating Item Records

The Museum System (TMS) is the collections management system used at George Eastman House. The system provides access to the collections database through modules such as objects, constituents, media, exhibitions and bibliography. The first stage of the cataloguing process was to split the original lot record for the album into separate item records for each page. This allowed each photograph to be identified as a single entity. The lot record for the album is a single record using the classification of "album" that represents all 52 photographs. Splitting this into 53 records (52 item records with the classification of "photo" + 1 lot record with the classification of "album") allows researchers to view the contents of the album and search individual photographs through TMS.

Before sending the request for item records to the Registrar's office, the original lot record was reviewed in order to determine what fields required changes and what information would be kept. This also revealed what information was missing and needed further research. Changes were made to *Classification*, *Constituent(s)* and *Title* fields,

whereas fields such as *Medium*, *Credit Line* and *Location*, were kept and duplicated into item records to save the trouble of re-entering the information fifty-two more times. Other fields, such as *Dimensions* and *Inscription(s)* were left empty for new information specific to each photograph to be added. Once the item records were created, the next step was to add the corresponding image to each record.

Stage 2: Adding Images

Adding a digital image of the photograph to the corresponding catalogue record is an important key to better preservation. It provides a visual reference for the researcher, making it possible to view the album's contents without handling the actual album. Without images in the records, researchers still need to handle the album in order to see the photographs. In the case of a bound album, it is impossible to look at one photograph without affecting the condition of other photographs in the album. As it will be discussed later, some album page connections are weak for certain pages in this album and any unnecessary handling should be avoided. Thus, it is especially important to have digital images attached to the catalogue records.

The album was photographed by Photographic Services at George Eastman House in high resolution TIFF format for the purpose of reproduction. These files were compressed into smaller JPEG format using Photoshop in order to be used in TMS.

Stage 3: Cataloguing of Records

The third stage is the cataloguing of the individual photographs. One of the main reasons this album was not given much attention in the collection is that all information in the album is written in Japanese, a language not many people in the institution can read. It was necessary to translate the text in order to make the album more available to a broader English-speaking audience. Thus, the translation of Japanese captions into English titles became a major task of cataloguing. Each caption was translated and entered into the *Title on object* field. Even though it is possible to see the Japanese caption in the digital image, some of these are not clear and are difficult to read. For this reason, Japanese captions are recorded in the *Inscription(s)* field using the Japanese

Romanization system;²⁴ so researchers familiar with Japanese may read the captions more easily. The Kunrei-siki system (ISO 3602) was chosen from the many systems of Romanization for use on this project,²⁵ as it is the international standard.

Some information in the lot record remains different from the item records. Though research established a date of *ca.* 1940-1941 for the photographs, a slightly later date of *ca.* 1941 is used for the publication date. The photographer is also credited differently between the lot record and the item record. The album credits four photographers, Tosio Kaneya, Akira Yosizawa, Syunpei Enza and Masayasu Kuhara,²⁶ for the photographs in this album. It is, however, unclear as to which photographer made which photographs.²⁷ Rather than attributing each photograph to all four photographers, item records use *Unidentified, Japanese* as the original photographer. The four known photographers are entered as *Constituent(s)* with the role of *Original Photographer* only in the lot record. This directs a researcher looking for the work of any one of these photographers to this album without the cumbersome attribution of every photograph in the album to four photographers. Additional information relating the subject of each photograph, such as information on the vessels, is entered into the *Notes* section of the item record.²⁸

Stage 4: Making the Records Available Online

The last stage of the cataloguing process is to make the information available to the public by adding the album to George Eastman House's existing online collection (<http://www.emuseum.eastmanhouse.org/code/eMuseum.asp?page=collections>). This

²⁴ The Romanization of Japanese (*rōmaji* or *rōmazi*) is the phonetic transcription of Japanese language using Latin alphabets. The three main Romanization systems are Hepburn Romanization, Nihon-siki and Kunrei-siki, which is standardized by the Japanese Government and the International Organization for Standardization as ISO 3602. See Appendix A for a summary of the Kunrei-siki Romanization rules.

²⁵ Kunrei-siki is followed only on translations done by myself. It may not apply to terms relating to specific entities, such as company name, author names and published book titles, in which recognized versions of Romanization already exist. In these cases, the existing version is used.

²⁶ In Japanese Kanji characters: 金谷稔雄 (Kaneya, Tosio); 吉澤晃 (Yosizawa, Akira); 圓座俊平 (Enza, Syunpei); and 久原正安 (Kuhara, Masayasu). The proper reading of these names has not been confirmed. The Romanization is done based on the conventional way of reading them and it is possible that there are different ways of reading these names.

²⁷ The only information found on these four photographers is that Enza worked as the filming assistant in the movie, "Sanren hana," in 1935. Further research is required for the biographic information of these photographers.

²⁸ See Appendix F *TMS Catalogue Records*.

online collection allows researchers to view low-resolution images of the museum's collections as well as search the database. An object package with a short description that included all 53 record of the album was created in TMS, which is linked to the online collection, making the low resolution image and basic information in the record, such as the title, date, medium and dimension of the photograph available to the public.

In Japan, the copyright for photographs made prior to December 31, 1956 has expired.²⁹ Though there should be no problem in showing the photographs from *Antarctic Ocean Whaling Photo Album* online, out of respect to Company N, the original publisher, we will wait for their approval before using the images online.

²⁹ Kouji Takeda, "Syasin no tyosakuken ni tuite" (On the copyright of photographs), Hakodate Siden Hakodate no romen densya (Hakodate street cars), <http://wakouji.at.infoseek.co.jp/chosaku.htm> (accessed June 16, 2008).

Chapter 3: Preservation Issues

The Physical Structure

The *Antarctic Whaling Photo Album* contains 52 fiber-based gelatin silver prints, all approximately 11cm x 16cm. The album itself measures 22.7cm x 29.2cm x 3cm. The front and back of the album are boards covered with blue cloth. On the front cover of the album printed in yellow is a Japanese Kanji character meaning “whale.” On the back cover of the album embossed into the cloth is the symbol of Company N.

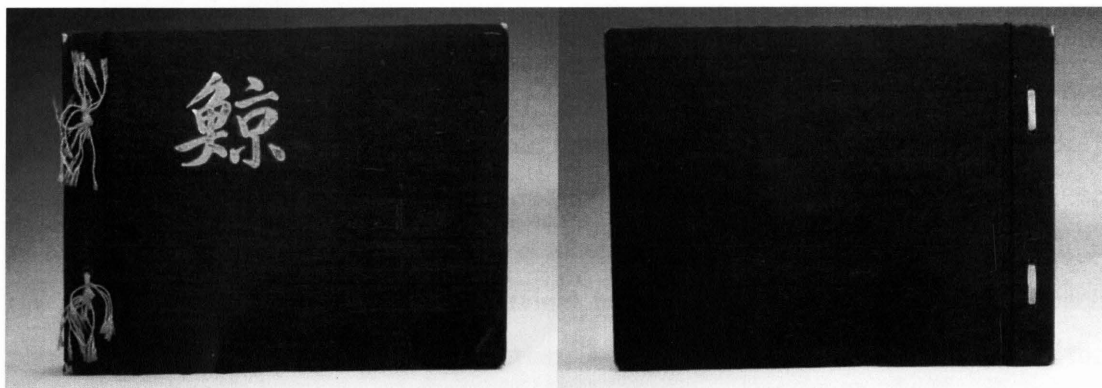


Fig. 1 – Front & Back of the Album

The album begins with a title page, followed by a page with calligraphy on Japanese paper. The frontispiece photograph is followed by 51 photographs adhered on both sides of 26 pages.

The format of the album is called a *laced scrapbook* in western bookbinding terminology, which was the most commonly used structure for photo albums from 1920 to 1960. In Japanese bookbinding, the style is known as *Yamato-toji*, a “flat-cord-bound pouch book.”³⁰ The western term of *laced scrapbook* can refer to any book with leaves bound together on one side using cords, but the Japanese *Yamato-toji* has a more strict definition. A *Yamato-toji* has four holes opened on the text block at one side, usually on the right hand side, where the spine will be, and tied with two decorative cords into two knots. It often uses corner pieces to reinforce the top and bottom of the spine. The front

³⁰ Graeme, “Appendix 3: Glossary,” Graeme’s Place, <http://www.graemedawes.co.uk/> (accessed June 16, 2008).

and back covers are often made out of wood panel or thick paper covered with cloth. In *Antarctic Whaling Photo Album*, compensation stubs have been placed along the spine between every two pages to compensate for the added thickness of the photographs.

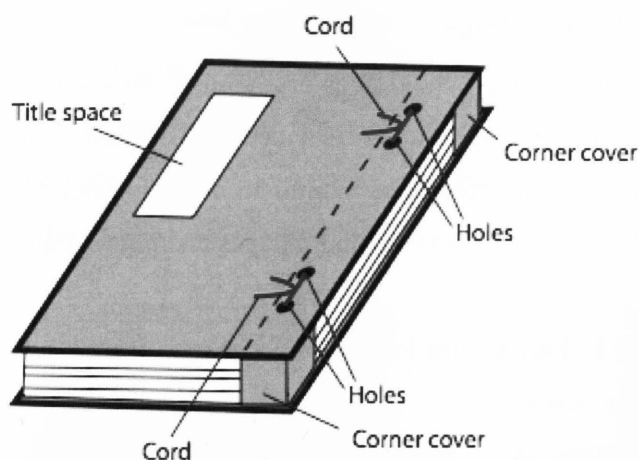


Fig.2 – Yamato-toji structure

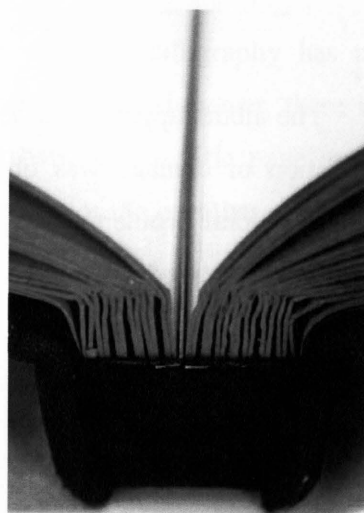


Fig. 3 – Compensation stub between pages

Antarctic Whaling Photo Album is bound at the left hand side and opens from right to left like western books. At first, this may seem strange, as most Japanese books are bound at the right hand side and open from left to right. However, it is a misconception that all Japanese books open from left to right. The binding of a book is usually decided by the layout of its content. As a general rule, if the text is written vertically, the book is bound at the right and opens from the left, so the flow of the text moves from right to left, which is how the language is read. However, if the text is written horizontally, as often happens in science books that include equations, numbers and alphabets, the book will be bound at the left and open from the right to keep the flow of the text in the logical order of left to right.³¹ Although *Antarctic Whaling Photo Album* does not contain anything like equations, there are more photographs of horizontal format (32 prints) than vertical format (20 prints). The captions on these horizontal prints, as well as the title and the calligraphy at the opening of the album are all written horizontally. Therefore, it is logical that the publisher chose the left-binding format to

³¹ Aiwa print, “Migitoji ka hidaritoji ka” (Binding at right or left), Aiwa print, <http://aiwaprint.jp/> (accessed July 13, 2008).

Chapter 3: Preservation Issues

The Physical Structure

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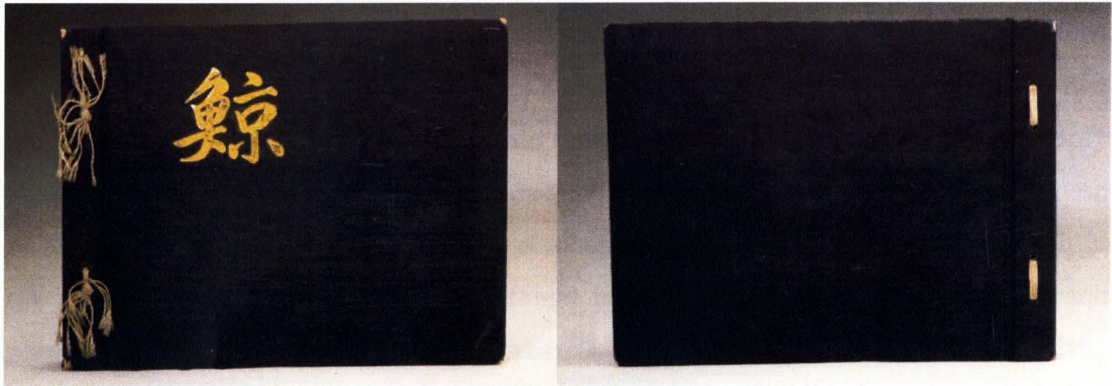


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The album begins with a title page, followed by a page with calligraphy on Japanese paper. The frontispiece photograph is followed by 51 photographs adhered on both sides of 26 pages.

The format of the album is called a *laced scrapbook* in western bookbinding terminology, which was the most commonly used structure for photo albums from 1920 to 1960. In Japanese bookbinding, the style is known as *Yamato-toji*, a “flat-cord-bound pouch book.”³⁰ The western term of *laced scrapbook* can refer to any book with leaves bound together on one side using cords, but the Japanese *Yamato-toji* has a more strict definition. A *Yamato-toji* has four holes opened on the text block at one side, usually on the right hand side, where the spine will be, and tied with two decorative cords into two knots. It often uses corner pieces to reinforce the top and bottom of the spine. The front

³⁰ Graeme, “Appendix 3: Glossary,” Graeme’s Place, <http://www.graemedawes.co.uk/> (accessed June 16, 2008).

and back covers are often made out of wood panel or thick paper covered with cloth. In *Antarctic Whaling Photo Album*, compensation stubs have been placed along the spine between every two pages to compensate for the added thickness of the photographs.

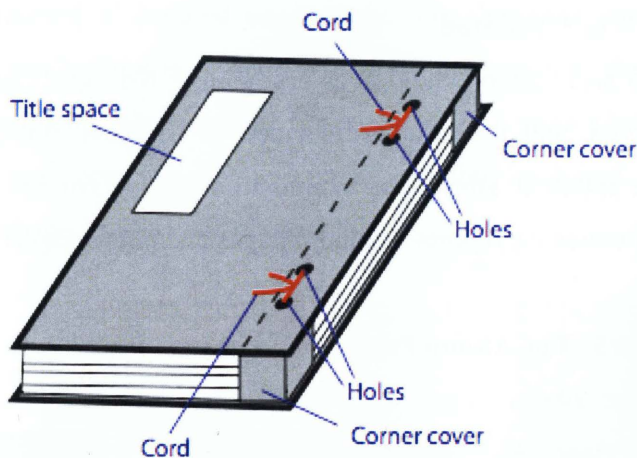


Fig.2 – Yamato-toji structure

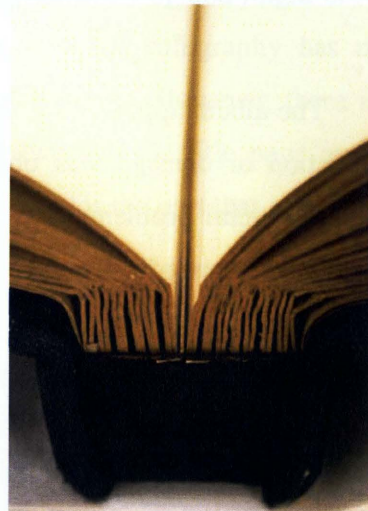


Fig. 3 – Compensation stub between pages

Antarctic Whaling Photo Album is bound at the left hand side and opens from right to left like western books. At first, this may seem strange, as most Japanese books are bound at the right hand side and open from left to right. However, it is a misconception that all Japanese books open from left to right. The binding of a book is usually decided by the layout of its content. As a general rule, if the text is written vertically, the book is bound at the right and opens from the left, so the flow of the text moves from right to left, which is how the language is read. However, if the text is written horizontally, as often happens in science books that include equations, numbers and alphabets, the book will be bound at the left and open from the right to keep the flow of the text in the logical order of left to right.³¹ Although *Antarctic Whaling Photo Album* does not contain anything like equations, there are more photographs of horizontal format (32 prints) than vertical format (20 prints). The captions on these horizontal prints, as well as the title and the calligraphy at the opening of the album are all written horizontally. Therefore, it is logical that the publisher chose the left-binding format to

³¹ Aiwa print, “Migitoji ka hidaritoji ka” (Binding at right or left), Aiwa print, <http://aiwaprint.jp/> (accessed July 13, 2008).

maintain the flow of the text. It is still unusual, however, to see a left-bound book produced in the traditional Japanese binding style, which adds to the unique character of this album.

The Condition

The album appeared to be in fairly good condition at first glance. No significant deterioration or damage was observed, and the structure seemed to be fairly stable. However, several problems became apparent after close examination during condition reporting. See Appendix B and C for condition reports on album pages and photographs.

Problem 1: The Album Pages

The first problem is with the album page, and the high acidity of the paper. A simple pH test on the album pages revealed an acidity level of 4.3 - 4.5, which is extremely acidic compared to the recommended pH value of 7.2 to 9.5 for storage materials for black-and-white photographs. Acidification of paper can be caused by atmospheric pollution, the paper manufacturing process and the acidic substances contained in the paper, such as lignin. The use of non-archival adhesives can also contribute to the acidification of the paper while heat and moisture catalyze the process of deterioration.³² In the case of this album, the poor quality of the paper is probably the main cause of deterioration.

There are three types of papers used in this album: a thinner paper used as the endpaper; the page of Japanese paper with calligraphy; and the heavier album pages, from which the pH reading was taken. All three types of paper have their own problems. The endpapers are yellowed with brown stains over the entire surface from the adhesives applied to their back. The album pages have turned yellow, become brittle, and lost their

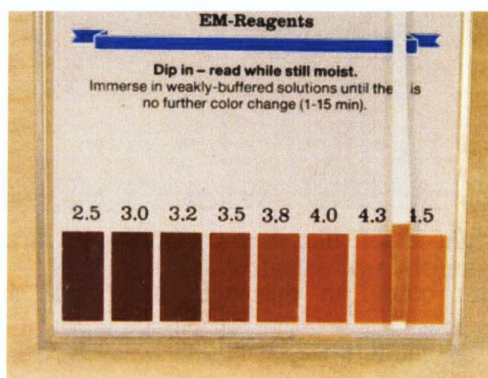


Fig. 4 – Acidity test

³² Wendy Bennet, *A Paper Conservator's Evaluation of the Bookkeeper Deacidification Process*, in the Conservation Online Document Library, <http://palimpsest.stanford.edu/byorg/lc/massdeac/bennett.html> (accessed June 16, 2008).

flexibility. Some cockling is observed at the top part of the pages with some traces of mold, indicating that the album had some water damage. The edges of the pages, especially at the bottom corner, are creased and torn from repeated handling. The page connections have been weakened from the stress of repeated handling and might become detached if handled excessively. The Japanese paper with the calligraphy has more flexibility and is in better condition compared to the other pages. However, there is an interesting phenomenon observed on this page placed between the title page and the frontispiece. The Japanese paper is slightly yellowed, except for the part that is in contact with the frontispiece photograph.

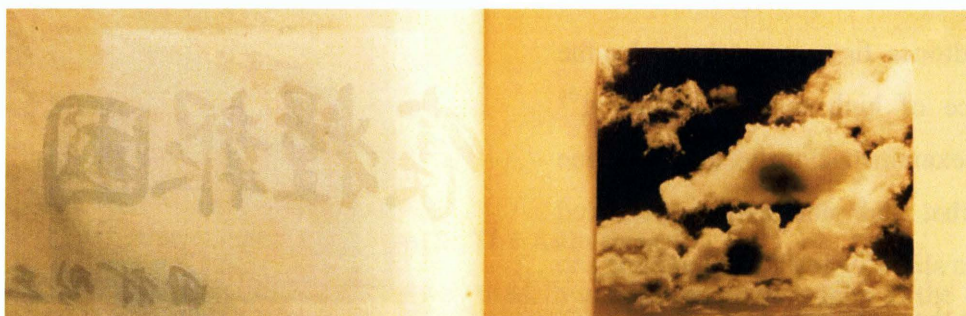


Fig. 5 – Transfer of the image on the Japanese paper (detail from 2003:1185:0001)

There is also a slight transfer of the image from the photograph. According to paper conservator, Tsen-Jung Ku, this is because the photograph protects the Japanese paper from the acidity of the album page. The photograph blocks the acid in the album page from migrating to the Japanese paper and where there is more silver density in the photograph, there is more protection provided to the Japanese paper. The acid migration through the photograph onto the Japanese paper imprints a faint and yellow reversed image of the photograph onto the Japanese paper. This phenomenon not only demonstrates how severely acidic the album page is, but also suggests the possibility of photographic deterioration caused by the acidic paper.³³

³³ Even though not as prominent as it is in the Japanese paper page, a similar phenomenon is also observed on some of the album pages where a vertical photograph and a horizontal photograph face each other. The part of the page that is in contact with the adjacent photograph is less yellowed compared to other parts of the page, creating an outline of the adjacent photograph on the page.

Problem 2: The Photographs

Chemical deterioration, including discoloration, image fading and silver mirroring is the most prominent problem. All of the prints except one have yellowed from inadequate washing during processing. The residual fixer in the prints decomposes over time and reacts with the image silver to form a yellowish to brownish silver sulfide stain. This deterioration, which affects the midtones first, is catalyzed by the presence of high relative humidity.³⁴ When examined closely, even the one print that did not appear yellowed shows a slight yellow stain beginning to form in the midtones.

A shiny mirror-like appearance, known as silver mirroring, is seen in the dark areas of many of the photographs when examined under raking light. This is caused by the chemical reaction between the silver and acidic pollutants. The image silver is oxidized by pollutants, such as hydrogen sulfide, into silver ions, which migrate to the surface of gelatin, where they are transformed into metallic silver and silver sulfide. Moisture is acting as a catalyst in this process, as well.

The major preservation problems for these photographs, as discussed above, are residual chemicals, atmospheric acidic pollutants and moisture. The residual chemicals are an internal problem, while pollutants and moisture are external factors. As the album is now stored in a climate controlled vault, which minimizes the effect of humidity and

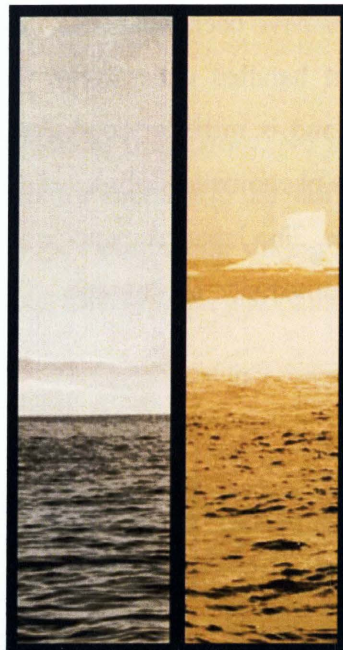


Fig. 6 – Colour difference between a yellowed photograph and the black-and-white photograph (details from 2003:1185:0043 and 0052)

³⁴ As mentioned previously, cockling is observed at the top part of the pages with some traces of mold, indicating that the album had some water damage, creating at least a temporary environment with high relative humidity.

air pollutants, the unaddressed problem to be concerned with in preservation of the album is the internal problem, the residual chemicals.



**Fig.7 – Silver mirroring on the photograph
(detail from 2003:1185:0001)**

Problem 3: The Adhesives

An unknown type of adhesive was used to adhere the photographs to the album pages. This adhesive has lost its strength over time, and the photographs are now coming loose from the album pages. Although most are still attached to the album pages, they may become detached with repeated handling. Weakened adhesive and the resulting loose prints threaten our understanding of the album. Much meaning would be lost if the photographs were preserved without preserving their original context within the album.

Chapter 4: Preservation of the Album

Understanding the significance of albums and how to preserve them is an important aspect of managing photographic collections. Although album conservation has been studied since the 1980's, there is no systematic guideline of how to classify or to treat different albums. Just as each album is unique, each case of album preservation is unique and the problem must be dealt with a case-by-case manner. As seen from the previous section, there are two types of problems that need to be considered for the preservation of the album: the external problems, such as the storage conditions and handling; and the internal problems, such as the acidic pages and the residual chemicals in the photographs. The external problems can be controlled through proper storage and handling, whereas the internal problems may require conservation treatment.

Storage of the Album

The album is now well protected, housed in a one-piece phase box type wrapper with an inner mat board liner³⁵ and stored in a climate-controlled vault.³⁶

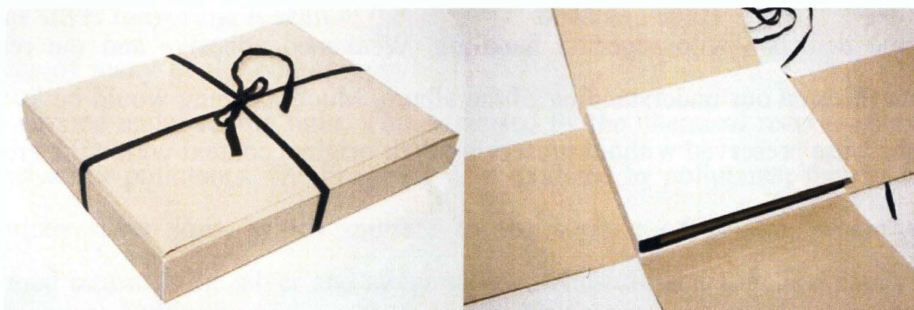


Fig. 8 – Enclosures of the album

³⁵ Only archival materials that have passed the Photographic Activity Test (PAT) should be used in the construction of the enclosure. PAT is a worldwide standard (ISO 14523) for archival quality in photographic enclosures developed by Image Permanence Institute in Rochester, New York. The test predicts possible interaction between photographic materials and enclosure materials. Samples of the enclosure material are placed with an image interaction detector and a stain detector in a climate-controlled chamber of 70 °C and 86 % relative humidity for 15 days. The degree of fading and staining on the detector is measured to determine the suitability of the tested sample as an archival material.

³⁶ The recommended storage condition of black-and-white photographs is at a temperature below 18°C with the relative humidity of 30% to 50%. With black-and-white prints generally the colder the temperature the better.

This is adequate for the album in its present condition. If the structure of the album becomes weakened in the future, a new phase box or a clamshell box design will be needed.

If the photographs become completely detached from the album pages, they should be housed individually using archival paper sleeves³⁷ and stored in the same case with the album. The page from where the photograph was originally placed in the album and the text on the page should be transcribed on the enclosure using a pencil.

Adding polyester interleaving would help protect the photographs from the acidic pages. However, interleaving would increase the thickness of the album and add extra stress to the album spine. Interleaving does not seem necessary for the album at this time.

Handling of the Album

Repeated handling and unnecessary use of this album will lead to further damage. Care should be taken when handling the album with careful attention to the handling guidelines of the study center. An additional guideline pertaining to album handling should also accompany the album.³⁸ This guideline addresses issues such as weak page connections and partially detached photographs that may be damaged by careless handling.

There are three key points to keep in mind when handling this album. First, pages should be turned gently by holding the page not at the bottom corner but along the side. The missing corner of page 24 and the crescent creases at the bottom corner of many pages are the result of improper handling. Some of the creases are beginning to tear and as the paper is brittle, continued handling at the same spot will result in loss of the corner.

Second, the pages should not be forced to lie flat. The spine of the album is rather stiff and the pages do not always lie flat. Forcing this will damage the spine and page connection. A book cradle should be used to provide extra support and minimize the stress to the album. The album page can also be lightly supported using one hand while viewing the album.

³⁷ Paper envelopes made of PAT tested material is a good absorbent of acidic pollutants.

³⁸ See *Appendix D: Handling Guidelines for Antarctic Ocean Whaling Photo Album*.

Third, partially detached photographs should not be handled. When turning the album page, extra attention should be given to these loose photographs, so they are not bent or creased.

Conservation of the Album

There are several options for conservation treatments that can improve the condition of this album. The simpler treatments are the surface cleaning and re-adhering of the photographs. Surface cleaning can be done using cotton swabs and chemicals such as Kodak Film Cleaner. This process removes surface dirt and greasy residues from the surface of the photograph without removing the photograph from its page. The re-adhering of the photographs may be done through reactivation of the residual adhesives that remain on the back of the photographs, or by reapplying archival adhesives to the loose photographs.

A more elaborate treatment is a thorough cleaning of the album that involves unbinding the album and washing the pages and photographs separately. This is possible because the binding style of the album allows it to be disbound and reassembled. With this treatment, each problem can be treated separately without affecting other parts of the album. Photographs, once removed from the album pages can be washed thoroughly to remove residual chemicals, while the album pages can also be washed and treated separately to neutralize the acidic substances contained in the paper. Damages to the pages, as well as the album cover can be repaired, photographs can be re-adhered and the album can be reassembled to its original form after treatment.³⁹ These conservation treatments should be carried out by conservation technicians, or under their supervision.

Conservation treatment requires time, money and special training. Treatment priority is given to objects in poor condition that require urgent action. Factors such as the value of the object also play a role in determining conservation priorities. Even though damaged, this album is still in relatively stable condition. As long as it is kept

³⁹ It is important to keep in mind that an album is not simply a group of photographs, but also an object with unique meanings. To take apart its content is to spoil the integrity of the object. Therefore, it is recommended not to disassemble the album or to remove the photograph from the album page if there is no need to do so. Disassembling is suggested here because it is possible to reassemble this album into its original form.

under a climate-controlled environment with minimum handling, there is no urgent need for further treatment.

Treatment Proposal

The following is a treatment proposal for the conservation of this album. A three-level treatment approach is recommended for this album depending on available resources.

- **Level 1: Preventive Conservation**

Keep the album in its current condition without any treatments. The focus here is on preventive conservation, which may involve the creation of preservation tools such as digital surrogates and handling guidelines. The condition of the album is monitored and new enclosures may be made as needed.

- **Level 2: Simple Treatments on Photographs**

Simple treatments such as surface cleaning and activation of the adhesives to re-adhere the photographs.

- **Level 3: Complete Cleaning of the Album**

Involves unbinding the album, thorough washing and treatment of photographs and album pages, and the restoration and reinforcement of the album cover and pages. Interleaving can be integrated into binding when reassembling the album to protect the treated photographs.

Conclusion

Antarctic Ocean Whaling Photo Album is neither a masterpiece of photography nor a one-of-a-kind object of great monetary value. Rather, it is a historical record of a fascinating subject illustrated with photographs, with a distinct charm that captivates its viewer. Until now not much attention has been paid to this album. Little was known about the subject of whaling within the museum and the fact that the text was in Japanese hindered further research. This project has eliminated the language barrier by providing translations to the text and uncovered interesting facts about the album and its history. Cataloguing has made the album more accessible to both museum staff and the public by making the album content available in TMS and eMuseum. Cataloguing and digitization of the album has also helped with the preservation of the album by reducing unnecessary handling. The assessment of the album condition and its preservation issues will hopefully become a guideline for monitoring and caring for this album in the future.

There are still unanswered questions to *Antarctic Ocean Whaling Photo Album*, such as who are the four photographers, how many copies of the album were made and how many still exist today. This can be the focus of further research. I hope that the research, cataloguing and preservation assessment done for this project will lay the groundwork for further preservation and research relating to this album.

APPENDICES

APPENDIX A – Kunrei-siki (ISO 3602) Romanization Chart

あア <i>a</i>	いイ <i>i</i>	うウ <i>u</i>	えエ <i>e</i>	おオ <i>o</i>
かカ <i>ka</i>	きキ <i>ki</i>	くク <i>ku</i>	けケ <i>ke</i>	こコ <i>ko</i>
さサ <i>sa</i>	しシ <i>si</i>	すス <i>su</i>	せセ <i>se</i>	そソ <i>so</i>
たタ <i>ta</i>	ちチ <i>ti</i>	つツ <i>tu</i>	てテ <i>te</i>	とト <i>to</i>
なナ <i>na</i>	にニ <i>ni</i>	ぬヌ <i>nu</i>	ねネ <i>ne</i>	のノ <i>no</i>
はハ <i>ha (wa)</i>	ひヒ <i>hi</i>	ふフ <i>hu</i>	へヘ <i>he (e)</i>	ほホ <i>ho</i>
まマ <i>ma</i>	みミ <i>mi</i>	むム <i>mu</i>	めメ <i>me</i>	もモ <i>mo</i>
やヤ <i>ya</i>		ゆユ <i>yu</i>		よヨ <i>yo</i>
らラ <i>ra</i>	りリ <i>ri</i>	るル <i>ru</i>	れレ <i>re</i>	ろロ <i>ro</i>
わワ <i>wa</i>	ゐヰ <i>i</i>		ゑヱ <i>e</i>	をヲ <i>o (wo)</i>
んン <i>n</i>				
がガ <i>ga</i>	ぎギ <i>gi</i>	ぐグ <i>gu</i>	げゲ <i>ge</i>	ごゴ <i>go</i>
ざザ <i>za</i>	じジ <i>zi</i>	ずズ <i>zu</i>	ぜゼ <i>ze</i>	ぞゾ <i>zo</i>
だダ <i>da</i>	ぢヂ <i>zi (di)</i>	づヅ <i>zu (du)</i>	でデ <i>de</i>	どド <i>do</i>
ばバ <i>ba</i>	びビ <i>bi</i>	ぶブ <i>bu</i>	べベ <i>be</i>	ぼボ <i>bo</i>
ぱパ <i>pa</i>	ぴピ <i>pi</i>	ぷプ <i>pu</i>	ぺペ <i>pe</i>	ぽポ <i>po</i>
きゃキャ <i>kya</i>	きゅキュ <i>kyu</i>	きょキョ <i>kyo</i>		
しゃシャ <i>sya</i>	しゅシュ <i>syu</i>	しよシヨ <i>syo</i>		
ちゃチャ <i>tya</i>	ちゅチュ <i>tyu</i>	ちよチヨ <i>tyo</i>		
にゃニャ <i>nya</i>	にゅニュ <i>nyu</i>	にょニョ <i>nyo</i>		
ひゃヒャ <i>hya</i>	ひゅヒュ <i>hyu</i>	ひよヒョ <i>hyo</i>		
みゃミャ <i>mya</i>	みゅミュ <i>myu</i>	みよミョ <i>myo</i>		
りゃリャ <i>rya</i>	りゅリュ <i>ryu</i>	りよリョ <i>ryo</i>		
ぎゃギャ <i>gya</i>	ぎゅギュ <i>gyu</i>	ぎょギョ <i>gyo</i>		
じゃジャ <i>zya</i>	じゅジュ <i>zyu</i>	じょジョ <i>zyo</i>		
ぢゃヂャ <i>zya (dya)</i>	ぢゅヂュ <i>zyu (dyu)</i>	ぢょヂョ <i>zyo (dyo)</i>		
びゃビャ <i>bya</i>	びゅビュ <i>byu</i>	びょビョ <i>byo</i>		
ぴゃピャ <i>pya</i>	ぴゅピュ <i>pyu</i>	ぴょピョ <i>pyo</i>		

Notes:

- When *he* (へ) is used as a particle it is written as *e* not *he*.
- When *ha* (は) is used as a particle it is written as *wa* not *ha*.
- In literal translation, を is written as *wo* not *o*.
- In literal translation, ぢ, づ, ぢゃ, ぢゅ and ぢょ are written as *di*, *du*, *dya*, *dyu* and *dyo*, not *zi*, *zu*, *zya*, *zyu* and *zyo*.
- Long vowels are indicated written as *ā*, *ī*, *ē*, *ō*, *ū* and as *ā*, *ī*, *ē*, *ō*, *ū* in literal translation.
- Syllabic *n* (ん) is written as *n* before consonants but as *n'* before vowels and *y*.
- Geminate consonants are marked by doubling the consonant following the sokuon (っ).
- The first letter in a sentence and all proper nouns are capitalized.

APPENDIX B – ALBUM PAGE CONDITIONS (1/5)

- = Not applicable, O = No significant damages, Δ = Minor damages, X = Major damages

	Connection Stability	Brittleness	Tear / Crease	Cracking	Discoloration	Cockling	Mold	Notes
Front & back cover (outside)	Δ	-	X*	O	Δ**	O	O	*Cover cloth torn at four edges **Cover stained
Front & back cover (inside)	X	-	X	X*	X**	O	O	*Spine tape cracked **Stain from adhesive all over
Front page1 (blank)	Δ	O	Δ*	Δ	X	Δ	O	*Tear and crease at bottom right
Front page 2 (title)	O	O	O	O	X*	Δ**	O	*Stain at bottom left **Cockling towards the spin
Front page 3 (calligraphy)	O	O	O	O	X	O	O	
2003:1185:0001	Δ	Δ	Δ*	X**	X***	O	O	*Crescent crease at bottom right edge **Connection cracked ***Lighter discoloration at back on surface in contact with adjacent photo of p.2
2003:1185:0002-3	Δ	Δ	Δ*	Δ	X	Δ	O	*Crescent crease at bottom right edge (p.2)

ALBUM PAGE CONDITIONS (2/5)

- = Not applicable, O = No significant damages, Δ = Minor damages, X = Major damages

	Connection Stability	Brittleness	Tear / Crease	Cracking	Discoloration	Cockling	Mold / Dirt	Notes
2003:1185:0004-5	Δ	Δ	X*	X*	X	Δ**	X**	*Crease at bottom right edge, cracked (p.4) **Cockling and mold on page top
2003:1185:0006-7	Δ	Δ	O	Δ	X	Δ	O	
2003:1185:0008-9	Δ	Δ	O	Δ	X*	Δ	O	*Light color circles at upper left (p.8)
2003:1185:0010-11	Δ	Δ	O	Δ	X*	Δ	O	*Lighter discoloration on surface in contact with adjacent photo (p.10)
2003:1185:0012-13	Δ	Δ	O	Δ	X	Δ	Δ*	*Accretion at upper left (p.12)
2003:1185:0014-15	Δ	Δ	Δ*	Δ	X	Δ	Δ**	*Crease at edge **Dirt and light color circles at upper part (p.15)
2003:1185:0016-17	O	Δ	Δ	O	X	Δ	Δ*	*Mold at top right, dirt at upper left (p.16)
2003:1185:0018-19	O	Δ	O	O	X*	Δ	O	*Light color circles at upper left (p.18), lighter discoloration on surface in contact with adjacent photo (p.19)

ALBUM PAGE CONDITIONS (3/5)

- = Not applicable, O = No significant damages, Δ = Minor damages, X = Major damages

	Connection Stability	Brittleness	Tear / Crease	Cracking	Discoloration	Cockling	Mold	Notes
2003:1185:0020-21	O	Δ	O	O	X*	Δ	O	*Light color circles at upper left, lighter discoloration on surface in contact with adjacent photo (p.21)
2003:1185:0022-23	O	Δ	Δ*	O	X**	X***	Δ****	*Tear at top, crease at bottom left (p.22) **Light color circles at upper left (p.22) **Cockling creating large opening on top part of text block ***Mold at top
2003:1185:0024-25	O	Δ	X*	O	X**	Δ	X***	*Tear at edge **Light color circles ***Mold at top (p.24)
2003:1185:0026-27	O	Δ	O	O	X*	O	O	*Light color circles at bottom (p.26) and bottom right (p.27)
2003:1185:0028-29	O	Δ	O	O	X*	O	Δ**	*Light color circles **Mold at top
2003:1185:0030-31	O	Δ	O	O	X*	O	O	*Light color circles
2003:1185:0032-33	O	Δ	O	O	X	O	O	

ALBUM PAGE CONDITIONS (4/5)

- = Not applicable, O = No significant damages, Δ = Minor damages, X = Major damages

	Connection Stability	Brittleness	Tear / Crease	Cracking	Discoloration	Cockling	Mold	Notes
2003:1185:0034-35	Δ	Δ	O	Δ*	X	O	O	*Connection cracked at bottom (p.34)
2003:1185:0036-37	Δ	Δ	O	Δ*	X	O	O	*Connection cracked at top (p.36) & bottom (p.37)
2003:1185:0038-39	Δ	Δ	O	Δ	X*	O	O	*Light color circles
2003:1185:0040-41	Δ	Δ	Δ*	X*	X**	O	O	*Crease at bottom left, cracked (p.40) **Light color circles (p.41)
2003:1185:0042-43	Δ	Δ	Δ*	X*	X**	O	O	*Crease at bottom left, cracked (p.42) **Stain at top (p.42), light color circles at top right (p.43)
2003:1185:0044-45	Δ	Δ	Δ*	X**	X	O	O	*Crease at bottom left and top right (p.44) **Bottom left crease cracked (p.44)
2003:1185:0046-47	Δ	Δ	Δ*	X*	X	O	O	*Crease at bottom left, cracked (p.46)
2003:1185:0048-49	Δ	Δ	Δ*	X*	X	O	O	*Crease at bottom left, cracked (p.48)
2003:1185:0050-51	Δ	Δ	Δ*	X	X	X	O	*Crease at bottom left (p.50)

ALBUM PAGE CONDITIONS (5/5)

- = Not applicable, O = No significant damages, Δ = Minor damages, X = Major damages

	Connection Stability	Brittleness	Tear / Crease	Cracking	Discoloration	Cockling	Mold	Notes
2003:1185:0052	Δ	Δ	Δ*	X	X**	O	O	*Crease at bottom left **Light color circles
Back page 1 (credit)	O	O	Δ*	O	X	O	O	*Crease at left
Back page 2 (blank)	Δ	Δ	Δ*	X	X**	O	O	*Crease at left **Stains from end paper adhesives at back

APPENDIX C – PHOTOGRAPH CONDITIONS (1/4)

O = No significant damages, Δ = Minor damages, X = Major damages

	PHYSICAL DAMAGES		CHEMICAL DAMAGES			OTHER DAMAGES			Notes
	Abrasion / Tear / Crease	Imprint	Discoloration	Fading	Silver Mirroring	Image Transfer	Accretion	Adhesive Failure	
2003:1185:0001	O	X	X	Δ	Δ	X*	Δ**	Δ**	*Image transferred to previous page (Japanese paper) **Photo loose at bottom left, adhesive mark at top right
2003:1185:0002	O	O	X	Δ	Δ	O	Δ	Δ	
2003:1185:0003	O	X	X	Δ	Δ	O	X	Δ	
2003:1185:0004	O	Δ	X	Δ	Δ	O	Δ*	O	*Bottom right
2003:1185:0005	O	X*	X	Δ	Δ	O	X	Δ	*Marks of adjacent photo
2003:1185:0006	O	Δ*	X	Δ		O	Δ	X**	*Marks of adjacent photo **Photo loose at bottom
2003:1185:0007	O	Δ*	X	X	Δ	O	Δ	Δ	*Marks of adjacent photo
2003:1185:0008	O	X*	X	Δ	Δ	O	Δ**	X***	*Marks of adjacent photo **Adhesive mark at top right ***Photo loose at bottom
2003:1185:0009	O	Δ	X	O	X	O	Δ	Δ	
2003:1185:0010	Δ*	Δ**	X	X	Δ	O	X***	Δ	*Abrasion at top left **Marks of adjacent photo, also on album page ***Dark spots on surface
2003:1185:0011	O	Δ	X	X	O	O	Δ	X*	*Photo loose at bottom
2003:1185:0012	O		X	Δ	Δ	O	Δ	Δ	

PHOTOGRAPH CONDITIONS (2/4)

O = No significant damages, Δ = Minor damages, X = Major damages

	PHYSICAL DAMAGES		CHEMICAL DAMAGES			OTHER DAMAGES			Notes
	Abrasion / Tear / Crease	Imprint	Discoloration	Fading	Silver Mirroring	Transfer	Accretion	Adhesive Failure	
2003:1185:0013	O	O	X	Δ	Δ	O	Δ	O	
2003:1185:0014	O	O	X	Δ	Δ	O	Δ*	O	*Fingerprints at right edge
2003:1185:0015	O	Δ	X	X	Δ	O	Δ*	O	*Dirt on top left
2003:1185:0016	O	Δ	X	Δ	Δ	O	Δ*	Δ	*Dirt on top left
2003:1185:0017	O	Δ	X	X	Δ	O	Δ	Δ	
2003:1185:0018	O	Δ	X	X	Δ	O	Δ	Δ	
2003:1185:0019	Δ*	Δ**	X***	Δ	X	O	Δ	X****	*Crease at top left **Marks of adjacent photo, also on album page ***Stain at top right ****Photo loose at bottom right
2003:1185:0020	O	Δ	X*	X	Δ	O	Δ	Δ**	*Stain at top right **Photo loose at bottom
2003:1185:0021	O	Δ*	X	X	Δ	O	Δ**	X***	*Marks of adjacent photo, also on album page **White material at top right ***Photo loose at bottom right
2003:1185:0022	O	Δ	X	X	Δ	O	Δ	Δ	

PHOTOGRAPH CONDITIONS (3/4)

O = No significant damages, Δ = Minor damages, X = Major damages

	PHYSICAL DAMAGES		CHEMICAL DAMAGES			OTHER DAMAGES			Notes
	Abrasion / Tear / Crease	Imprint	Discoloration	Fading	Silver Mirroring	Transfer	Accretion	Adhesive Failure	
2003:1185:0023	Δ*	Δ	X	Δ	X	O	Δ	X**	*Abraded spots at top **Photo loose at bottom, adhesive mark at top right
2003:1185:0024	O	Δ	X	Δ	Δ	O	Δ	X*	*Photo loose
2003:1185:0025	O	O	X	Δ	Δ	O	Δ	O	
2003:1185:0026	O	O	X	X	Δ	O	Δ*	Δ**	*Fingerprints at left **Photo loose at bottom left
2003:1185:0027	O	O	X	X	Δ	O	Δ	Δ*	*Photo loose at right
2003:1185:0028	O	O	X	Δ	Δ	O	Δ	Δ	
2003:1185:0029	O	Δ	X	X	Δ	O	Δ	Δ*	*Photo loose at bottom center
2003:1185:0030	O	Δ*	X	X	Δ	O	Δ	Δ**	*Marks of adjacent photo at top **Photo loose at left and bottom center
2003:1185:0031	O	Δ	X	X	Δ	O	Δ	Δ	
2003:1185:0032	O	Δ	X	Δ	X	O	Δ	X*	*Photo loose at bottom left
2003:1185:0033	O	Δ	X	X	Δ	O	Δ	Δ*	*Photo loose at top left
2003:1185:0034	O	Δ	X	Δ	Δ	O	Δ	X*	*Photo loose at bottom right
2003:1185:0035	Δ*	Δ	X	Δ	X	O	Δ	X**	*Abrasion on surface **Photo loose at bottom right

PHOTOGRAPH CONDITIONS (4/4)

O = No significant damages, Δ = Minor damages, X = Major damages

	PHYSICAL DAMAGES		CHEMICAL DAMAGES			OTHER DAMAGES			Notes
	Abrasion / Tear / Crease	Imprint	Discoloration	Fading	Silver Mirroring	Transfer	Accretion	Adhesive Failure	
2003:1185:0036	O	Δ	X	X	Δ	O	Δ	Δ*	*Photo loose at bottom left
2003:1185:0037	O	Δ	X	Δ	Δ	O	Δ	O	
2003:1185:0038	O	Δ	X	Δ	Δ	O	Δ	Δ*	*Photo loose at bottom center
2003:1185:0039	O	Δ	X	Δ	Δ	O	Δ	O	
2003:1185:0040	O	Δ	X	X	Δ	O	Δ	Δ	
2003:1185:0041	O	O	X	X	X	O	Δ	Δ*	*Photo loose at bottom left
2003:1185:0042	O	O	X	Δ	Δ	O	Δ	Δ*	*Photo loose at bottom
2003:1185:0043	O	Δ	O	O	Δ	O	Δ	Δ*	*Photo loose at bottom left
2003:1185:0044	O	Δ	X	X	Δ	O	Δ	X*	*Photo loose at bottom
2003:1185:0045	O	Δ	X	X	Δ	O	Δ	O	
2003:1185:0046	O	Δ	X	Δ	Δ	O	Δ	O	
2003:1185:0047	O	Δ	X	Δ	Δ	O	Δ	O	
2003:1185:0048	O	Δ	X	Δ	Δ	O	Δ	Δ*	*Photo loose at top left
2003:1185:0049	O	Δ	X	Δ	Δ	O	Δ	O	
2003:1185:0050	O	Δ	X	Δ	Δ	O	Δ*	O	*White material at center, fingerprints
2003:1185:0051	O	Δ	X	Δ*	X	O	Δ	O	
2003:1185:0052	O	Δ	X	Δ	Δ	O	Δ	Δ*	*Photo loose at bottom

APPENDIX D –

Handling Guidelines for *Antarctic Ocean Whaling Photo Album*

Welcome to the Gannet Foundation Photographic Study Center at George Eastman House. Please keep in mind that the album you are going to see is fragile and requires extra care in handling. To help preserve the album, please read the following guidelines before you start working and notify staff members if you have any questions and concerns.

- Please wash your hands before handling the album
- Do not wear any jewelry such as rings, bracelets, and watches while handling the album. Anything dangling from the neck should also be put away
- Please have enough work space and keep the table clean and neat
- Please wear gloves when handling the album
- **Please use the book cradle to support the album during the viewing**
- Please handle the album with care, using both hands
- **Please turn the pages gently by holding the page along the side and NOT at the bottom corner**
- Support the page lightly using one hand while viewing the album
- **Do not force the pages to lie flat**
- **Do not handle the photographs that are partially detached from the pages**
- Please pay attention while turning the page, so the partially detached photographs are not damaged
- Please notify the staff immediately if something breaks or if photographs become detached from the page
- Please do not put the album away on your own, but notify the staff when finished

**** IF YOU FEEL UNCOMFORTABLE HANDLING THE OBJECT AT ANY TIME,
PLEASE CALL THE STAFF TO ASSIST YOU****

Accession Number	Japanese Captions & Romanized Japanese	English Translation / [Descriptive Title]
2003:1185:0018	命中! Meityû!	A hit!
2003:1185:0019	第二弾の装填 Dainidan no sôten	Loading the second harpoon
2003:1185:0020	二番鰯命中 Niban mori meityû	The second harpoon makes a hit
2003:1185:0021	もんどりうつ巨鯨 Mondori utu kyogei	Tumbling giant whale
2003:1185:0022	引き寄せられたる大鯨ー頭部に見えるは鼻孔 Hikiyose raretaru taigei ~ tôbu ni mieru ha bikô	Large whale being pulled to the ship ~ holes seen on its head are nostrils
2003:1185:0023	沈まぬやう腹中に空気を送入する Sizumanu yau hukutyû ni kûki wo sônyû suru	Pumping air into the stomach so the body will not sink
2003:1185:0024	標識旗を立てて放流し次の捕獲に向かふ Hyôsikiki wo tatete hôryû si tugi no hokaku ni mukahu	Placing a marker on the body, discharging it and heading for the next catch
2003:1185:0025	不要な尾羽の截り捨て Huyô na obane no kirisute	Cutting and discarding unneeded flukes
2003:1185:0026	巨鯨を舷側に Kyogei wo gensoku ni	Giant whale tied to the side of the ship
2003:1185:0027	獲物を曳航して母船へ Emono wo eikô site bosen he	Towing the catch to the mother ship
2003:1185:0028	待機 Taiki	Standing by
2003:1185:0029	第二圖南丸 Daini Tonanmaru	Tonan Maru no.2

APPENDIX E – Japanese-English Translations of Texts

* Accent of “^” (â, î, ê, ô, û) are used instead of the accent of “-” (ā, ī, ē, ō, ū) in the TMS record.

Accession Number	Japanese Captions & Romanized Japanese	English Translation / [Descriptive Title]
2003:1185:0001-0052recto	鯨 Kujira	Whale
2003:1185:0001-0052b	南氷洋捕鯨寫真帖 Nanpyôyô hogeï syasin tyô	Antarctic Ocean Whaling Photo Album
2003:1185:0002-0052c	食料報國 / 田村 [かつ] 三 Syokuryô hôkoku / Tamura [Katu]zô	By food serve the country / Katuzô Tamura
2003:1185:0002-0052d	撮影者 / 金谷稔雄 / 吉澤晃 / 圓座俊平 / 久原正安 Satueïsy / Kaneya Tosio / Yosizawa Akira / Enza, Syunpei / Kuhara, Masayasu 不許複製 / 非賣品 Hukyo hukusei / Hibaihin 制作 / 東京市京橋區築地 1-18 / ジーチャーサン商会 Seisaku / Tokyosi Kyobasiku Tukiji 1-18 / Jîtisan syôkai	Photographers / Tosio Kanera / Akira Yosizawa / Syunpei Enza / Masayasu Kuhara All rights of reproduction reserved / Not for sale Production / Tokyo Kyobasi-ku Tukiji 1-18 / G.T. Sun Company
2003:1185:0001	N/A	[Whaling ship in Antarctic Ocean]
2003:1185:0002	誓いは固し職域奉公 Tikai ha katasi syokuiki hôkô	Strong oath to serve the job
2003:1185:0003	故国を後に勇躍壮途へ Kokoku wo ato ni yûyaku sôto he	Leaving the homeland, embarking on the ambitious enterprise in high spirits
2003:1185:0004	南氷洋指して隊伍堂々 Nanpyôyô sasite taigo dôdô	Grand procession towards Antarctic Ocean
2003:1185:0005	航海中の準備作業ー捕鯨網の整理とリングワイヤーの製作 Kôkaityû no junbi sagyô ~ hogeimô no seiri to ringu waiyâ no seisaku	Preparation works on voyage ~ organizing whaling nets and making wire rings

Accession Number	Japanese Captions & Romanized Japanese	English Translation / [Descriptive Title]
2003:1185:0006	赤道祭の余興 Sekidôσαι no yokyô	Entertainment at Neptune's revel
2003:1185:0007	暴風圏を衝く Bôhûken wo tuku	Going through storm zone
2003:1185:0008	怒濤に挑むキャッチャーボート Dotô ni idomu kyattyâ bôto	Catcher boat challenging angry waves
2003:1185:0009	バックアイス（浮氷）に漂ふ漁場 Bakku aisu (huhyô) ni tadayohu gyozyô	Fishing ground between the drifting pack ice
2003:1185:0010	洋々たる南氷洋 Yôyô taru Nanpyôyô	Vast Ocean of Antarctica
2003:1185:0011	獲物を求めて Emono wo motomete	Searching for a catch
2003:1185:0012	鯨群発見 Kujiragun hakken	Group of whales found
2003:1185:0013	フルスピードで迫るキャッチャーボート Hûru supîdo de semaru kyattyâ bôto	Catcher boat approaching at full speed
2003:1185:0014	・・・ 寸前に潮吹きあがる Sunzen ni siohuki agaru	Whale spout right in front of the boat
2003:1185:0015	緊張の一瞬 Kintyô no issyun	A moment of tension
2003:1185:0016	轟然一発 Gôzen ippatu	A thunderous shot
2003:1185:0017	鉾は飛ぶ Mori ha tobu	The harpoon flies

Accession Number	Japanese Captions & Romanized Japanese	English Translation / [Descriptive Title]
2003:1185:0018	命中！ Meityû!	A hit!
2003:1185:0019	第二弾の装填 Dainidan no sôten	Loading the second harpoon
2003:1185:0020	二番鉾命中 Niban mori meityû	The second harpoon makes a hit
2003:1185:0021	もんどりうつ巨鯨 Mondori utu kyogei	Tumbling giant whale
2003:1185:0022	引き寄せられたる大鯨～頭部に見えるは鼻孔 Hikiyose raretaru taigei ~ tôbu ni mieru ha bikô	Large whale being pulled to the ship ~ holes seen on its head are nostrils
2003:1185:0023	沈まぬやう腹中に空気を送入する Sizumanu yau hukutyû ni kûki wo sônyû suru	Pumping air into the stomach so the body will not sink
2003:1185:0024	標識旗を立てて放流し次の捕獲に向かふ Hyôsikiki wo tatete hôryû si tugi no hokaku ni mukahu	Placing a marker on the body, discharging it and heading for the next catch
2003:1185:0025	不要な尾羽の截り捨て Huyô na obane no kirisute	Cutting and discarding unneeded flukes
2003:1185:0026	巨鯨を舷側に Kyogei wo gensoku ni	Giant whale tied to the side of the ship
2003:1185:0027	獲物を曳航して母船へ Emono wo eikô site bosen he	Towing the catch to the mother ship
2003:1185:0028	待機 Taiki	Standing by
2003:1185:0029	第二圖南丸 Daini Tonanmaru	Tonan Maru no.2

Accession Number	Japanese Captions & Romanized Japanese	English Translation / [Descriptive Title]
2003:1185:0030	圖南丸 Tonanmaru	Tonan Maru
2003:1185:0031	第三圖南丸 Daisan Tonanmaru	Tonan Maru no. 3
2003:1185:0032	南極の資源 Nankyoku no sigen	Resources of South Pole
2003:1185:0033	スリップウェイより甲板へ Surippuwei yori kanpan he	From the slipway to the deck
2003:1185:0034	曳き上げられる白長須鯨（25米） Hikiage rareru sironagasu kujira (25 mêtoru)	A blue whale (25 meters) being pulled up
2003:1185:0035	大長刀をかざして（粗解剖） Ônaginata wo kazasite (ara kaibô)	Holding the long knife aloft (rough dissection)
2003:1185:0036	畝、皮脂をハートマンボイラーへ Une, hisi wo Hâtoman boilā he	Sending throat grooves and sebum into Hartmann boiler
2003:1185:0037	白長須鯨の巨口（下腭骨と上腭の鯨鬚） Sironagasu kujira no kyokô (kagakukotu to zyôgaku no kujira hige)	Huge mouth of blue whale (baleens on lower and upper jawbones)
2003:1185:0038	工藝品となる鯨鬚 Kôgeihin to naru kujira hige	Baleens that will become craft objects
2003:1185:0039	物凄い抹香鯨の歯 Mono sugoi makkô kujira no ha	Gruesome teeth of the sperm whale
2003:1185:0040	抹香鯨の解剖 Makkô kujira no kaibô	Dissection of sperm whale
2003:1185:0041	寒気と吹雪に闘う産業戦士 Kanki to hubuki ni tatakau sangyô sensi	Industrial soldiers fighting against cold air and blizzard

Accession Number	Japanese Captions & Romanized Japanese	English Translation / [Descriptive Title]
2003:1185:0042	結氷せるキャッチャーボート Keppyô seru kyattyâ bôto	Frozen catcher boat
2003:1185:0043	探鯨船箕面丸 Tangeisen Minoomaru	Minoo Maru, the whale-scouting vessel
2003:1185:0044	捕鯨に協力する駿河丸 Hogei ni kôryoku suru Surugamaru	Suruga Maru joins forces in whaling
2003:1185:0045	食糧報國に邁進する厚生丸 Syokuryô hôkoku ni maisin suru Kôseimaru	Kosei Maru strives to provide food for the service of country
2003:1185:0046	母船に横着けせる油槽船嚴嶋丸 Bosen ni yokozuke seru yusôsen Itukusimamaru	Itsukushima Maru, the tanker, comes alongside the mother ship
2003:1185:0047	捕鯨の洋上基地 Hogei no yôzyô kiti	Whaling base on ocean
2003:1185:0048	南極の道化師アデレーペンギン Nankyoku no dôkesi aderē penguin	Adelie penguins, jesters of South Pole
2003:1185:0049	南極の平和郷 氷上に午寝するアザラシと鯨鳥 Nankyoku no heiwayô hyôzyô ni hirune suru azarasi to kujiratori	Peaceful paradise of South Pole; seals and whale birds napping on ice
2003:1185:0050	氷山の間に働く Hyôzan no aida ni hataraku	Laboring between icebergs
2003:1185:0051	白夜を航く Byakuya wo yuku	Sailing under the midnight sun
2003:1185:0052	暁の進發 Akatuki no sinpatu	Embarkment at dawn

APPENDIX F – TMS Catalogue Records

Object Package Description

Antarctic Ocean Whaling Photo Album was published around 1941 by a marine product company in Japan. The album contains 52 gelatin silver prints that depict whaling activities and whaling vessels made during the whaling season of 1940-1941. Photographs are arranged in a chronological narrative, showing the departure of the whaling ship from the port, the pursuit of whales and cutting up of the carcass. The album also includes photographs of Japanese whaling vessels. Each photograph is accompanied by a one-sentence descriptive caption. The album was produced for the purpose of introducing the company's whaling business to related companies as well as the company's employees. It is covered in a blue cloth with the title "Whale" in Japanese calligraphy printed in yellow and includes a page with the slogan "Syokuryô hôkoku" (By food serve the country), also in calligraphy. Although the photographs are yellowed with silver mirroring, the album is in fairly stable condition.

2003:1185:0001-0052

Title on Object: Antarctic Ocean Whaling Photo Album

Classification: Album

Original photographer: Tosio Kaneya

Original photographer: Syunpei Enza

Original photographer: Masayasu Kuhara

Original photographer: Akira Yosizawa

Dates: ca. 1941

Dimensions: Overall: 29.2 x 22.9 x 3 cm

Inscription:

first page (ink): Barbara Pitoni gift from "Nunu" / "godfather"

last page (ink): FRom "NuNu"

2003:1185:0001

Descriptive Title: Whaling ship in Antarctic Ocean

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 16.3 x 13.4 cm

Inscription:

[no inscription]

2003:1185:0002

Title on Object: Strong oath to serve the job

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 16.2 x 11.2 cm

Inscription:

mount recto (printed in Japanese): tikai ha katasi syokuiki hôkô
[strong oath to serve the job]

2003:1185:0003

Title on Object: Leaving the homeland, embarking on the ambitious enterprise in high spirits

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 11.2 x 16.1 cm

Inscription:

mount recto (printed in Japanese): kokoku wo atoni yûyaku sôto he
[leaving the homeland, embarking on the ambitious enterprise in high spirits]

2003:1185:0004

Title on Object: Grand procession towards Antarctic Ocean

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 11.2 x 16.1 cm

Inscription:

mount recto (printed in Japanese): Nanpyôyô sasite taigo dôdô
[grand procession towards Antarctic Ocean]

2003:1185:0005

Title on Object: Preparation works on voyage ~ organizing whaling nets and making wire rings

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 16.1 x 11.2 cm

Inscription:

mount recto (printed in Japanese): kôkai chû no junbi sagyô ~hogeimô no seiri to ringu waiyâ no seisaku [preparation works on voyage ~ organizing whaling nets and making wire rings]

Notes: The preparation work includes organizing the whaling nets, cutting ropes into appropriate length and making the wire rings. This work was done immediately after the whalers finish unloading the luggage.

2003:1185:0006

Title on Object: Entertainment at Neptune's revel

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 11.4 x 11.2 cm

Inscription:

mount recto (printed in Japanese): Sekidôsai no yokyô
[entertainment at Neptune's revel]

Notes: Neptune's revel is a sailors' celebration of crossing the equator. In an age when ships relied on the wind for their maneuvers, Neptune's revel was a ceremony that celebrated the safe crossing of the windless region around the equator with prayers for safety for the rest of the voyage.

2003:1185:0007

Title on Object: Going through storm zone

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 16.2 x 11.3 cm

Inscription:

mount recto (printed in Japanese): bôfûken wo suku

[going through storm zone]

Notes: The region of latitude 40 to 60 degree south is a storm zone known as the "roaring forties, furious fifties, and screaming sixties" feared by sailors. Cyclones are formed as the colder air from the south meets the warmer air from the north, causing the strong west wind and high waves. This is the first trial of nature that Japanese whalers must endure in order to enter the Antarctic Ocean.

2003:1185:0008

Title on Object: Catcher boat challenging angry waves

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 11 x 16.4 cm

Inscription:

mount recto (printed in Japanese): dotô ni idomu kyattyâ bôto

[catcher boat challenging angry waves]

Notes: The catcher boat is a boat that hunts the whale. It is equipped with the harpoon gun and a tall mast for spotting the whale.

2003:1185:0009

Title on Object: Fishing ground between the drifting pack ice

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 16.1 x 11.1 cm

Inscription:

mount recto (printed in Japanese): bakku aisu (huhyô) ni tadayohu
gyôzyô [fishing ground between the drifting pack ice]

2003:1185:0010

Title on Object: Vast Ocean of Antarctica

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 11.1 x 16.1 cm

Inscription:

mount recto (printed in Japanese): yôyô taru Nanpyôyô
[vast Ocean of Antarctica]

2003:1185:0011

Title on Object: Searching for a catch

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 11 x 16.2 cm

Inscription:

mount recto (printed in Japanese): emono wo motomete
[searching for a catch]

2003:1185:0012

Title on Object: Group of whales found

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 11.2 x 16.1 cm

Inscription:

mount recto (printed in Japanese): kujiragun hakken
[group of whales found]

2003:1185:0013

Title on Object: Catcher boat approaching at full speed

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 16.3 x 11.2 cm

Inscription:

mount recto (printed in Japanese): hûru supîdo de semaru kyattyâ bôto
[catcher boat approaching in full speed]

2003:1185:0014

Title on Object: Whale spout right in front of the boat

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 16.1 x 11.2 cm

Inscription:

mount recto (printed in Japanese): sunzen ni siohuki agaru
[whale spout in front of the boat]

2003:1185:0015

Title on Object: A moment of tension

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 16.1 x 11.2 cm

Inscription:

mount recto (printed in Japanese): kintyô no issyun [a moment of tension]

2003:1185:0016

Title on Object: A thunderous shot

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 16.2 x 11 cm

Inscription:

mount recto (printed in Japanese): gôzen ippatu [a thunderous shot]

2003:1185:0017

Title on Object: The harpoon flies

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 11.1 x 16.2 cm

Inscription:

mount recto (printed in Japanese): mori ha tobu [the harpoon flies]

2003:1185:0018

Title on Object: A hit!

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 16.1 x 11.2 cm

Inscription:

mount recto (printed in Japanese): meityû! [a hit!]

2003:1185:0019

Title on Object: Loading the second harpoon

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 11.3 x 16.3 cm

Inscription:

mount recto (printed in Japanese): dainidan no sôten

[loading the second harpoon]

Notes: Even though it is possible to kill the whale with the first harpoon, a second harpoon is recommended in case the rope attached to the first harpoon breaks. If the whale does not die with the second harpoon, a third and fourth harpoon will be shot.

2003:1185:0020

Title on Object: The second harpoon makes a hit

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 16.3 x 11 cm

Inscription:

mount recto (printed in Japanese): niban mori meityû

[the second harpoon makes a hit]

2003:1185:0021

Title on Object: Tumbling giant whale

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 11.2 x 16.4 cm

Inscription:

mount recto (printed in Japanese): mondori utu kyogei
[tumbling giant whale]

S2003:1185:0022

Title on Object: Large whale being pulled to the ship ~ holes seen on its head are nostrils

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 16.2 x 11.1 cm

Inscription:

mount recto (printed in Japanese): hikiyose raretaru taigei ~ tôbu ni mieru
ha bikô [large whale being pulled to the ship ~ holes seen on head are nostrils]

2003:1185:0023

Title on Object: Pumping air into the stomach so the body will not sink

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 16 x 11 cm

Inscription:

mount recto (printed in Japanese): sizumanu yau hukutyû ni kûki wo
sônyû suru [pumping air into the stomach so the body will not sink]

Notes: The bodies of whales such as right whales and sperm whales float after they have been killed, but whales such as fin whales have less fat in their bodies and sink when they die. It is impossible to retrieve the sunken body. In order to keep the dead whale afloat, air is pumped into its body. The whale can then be collected at the end of the hunt.

2003:1185:0024

Title on Object: Placing a marker on the body, discharging it and heading for the next catch

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 16.2 x 11 cm

Inscription:

mount recto (printed in Japanese): hyôsikiki wo tatete hyôryû si tugi no hokaku ni mukau [place a marker on the body, discharge it and head for the next catch]

Notes: In pre-war whaling, a marker was placed on the whale and the whale was left floating in the water to be collected later in order to save the time of repeatedly bringing catches to the mother ship. However, the thick skin of the whale traps heat inside the body, accelerating the rate of decomposition and affecting the quality of the meat. In post-war whaling, with its emphasis on meat rather than oil, each catch was brought to the mother ship for processing in order to keep the meat fresh.

2003:1185:0025

Title on Object: Cutting and discarding unneeded flukes

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 16.2 x 11.1 cm

Inscription:

mount recto (printed in Japanese): huyô na obane no kirisute [cutting and discarding unneeded flukes]

2003:1185:0026

Title on Object: Giant whale tied to the side of the ship

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 16.2 x 11.1 cm

Inscription:

mount recto (printed in Japanese): kyogei wo gensoku ni [giant whale tied to the side of the ship]

Notes: The carcass of the whale is tied to the side of the ship where waste can be cut away. When pumped with air, the carcass also serves as a sort of bumper for the ship.

2003:1185:0027

Title on Object: Towing the catch to the mother ship

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 11.1 x 16.1 cm

Inscription:

mount recto (printed in Japanese): emono wo eikô site bosen he
[towing the catch to mother ship]

2003:1185:0028

Title on Object: Standing by

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 11.3 x 16.3 cm

Inscription:

mount recto (printed in Japanese): taiki [standing by]

2003:1185:0029

Title on Object: Tonan Maru no.2

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 11 x 16.2 cm

Inscription:

mount recto (printed in Japanese): daini Tonanmaru [Tonan Maru no.2]

Notes: Tonan Maru no. 2 was built by Osaka Iron Works (now Hitachi Zosen Corporation) and was the largest tanker in Japan. Its first operation was in 1937. It was used as a cargo ship during World War II, transporting mainly fuel. It was lost in the South China Sea on August 20, 1944.

2003:1185:0030

Title on Object: Tonan Maru

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 11 x 16.2 cm

Inscription:

mount recto (printed in Japanese): Tonanmaru [Tonan Maru]

Notes: Tonan Maru was originally built by Wm. Denny & Bros. In England in 1906 as a freezer ship named Opawa. It was then refurbished as a whaling mother ship in Norway with the name Antarctic and finally purchased and brought to Japan in 1934. The name of Tonan Maru was given after its test operation in the Antarctic Ocean. It became the base model for many whaling ships built in Japan. It was lost on November 28, 1943 near Vietnam.

2003:1185:0031

Title on Object: Tonan Maru no.3

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 11.2 x 16.2 cm

Inscription:

mount recto (printed in Japanese): daisan Tonanmaru [Tonan Maru no.3]

Notes: Tonan Maru no. 3 was built by Osaka Iron Works in 1938 and was one of the largest merchant vessels of its day. It was used as a cargo ship during the war, and was sunk at Truk Islands on February 20, 1944 while awaiting repairs. In 1951, with permission of General Headquarters (under Gen. Douglas MacArthur) the vessel was salvaged, repaired and used until 1971 under the new name of "Tonan Maru."

2003:1185:0032

Title on Object: Resources of South Pole

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 11.2 x 16.2 cm

Inscription:

mount recto (printed in Japanese): Nankyoku no sigen
[resources of South Pole]

2003:1185:0033

Title on Object: From the slipway to the deck

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 16.2 x 11.1 cm

Inscription:

mount recto (printed in Japanese): surippuwei yori kanpan he
[from the slipway to the deck]

Notes: The slipway is an opening at the stern of the mother ship where whales are pulled up to the deck using a steel claw.

2003:1185:0034

Title on Object: A blue whale (25 meters) being pulled up

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 11.1 x 16.3 cm

Inscription:

mount recto (printed in Japanese): hikiage rareru sironagasu kujira
(25 mêtoru) [a blue whale (25 meters) being pulled up]

2003:1185:0035

Title on Object: Holding the long knife aloft (rough dissection)

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 16.1 x 11.2 cm

Inscription:

mount recto (printed in Japanese): ônaginata wo kazasite (ara kaibô)
[holding the long knife aloft (rough dissection)]

2003:1185:0036

Title on Object: Sending throat grooves and sebum into Hartmann boiler

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 16.1 x 10.8 cm

Inscription:

mount recto (printed in Japanese): une, hisi wo Hâtoman boirâ he
[sending throat grooves and sebum into Hartmann boiler]

Notes: The Hartmann boiler processes skin, grooves and sebum but not bones. These parts are thrown into the boiler and melted into liquid form. The liquid is then centrifuged to separate the oil from the impurities.

2003:1185:0037

Title on Object: Huge mouth of blue whale (baleens on lower and upper jawbones)

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 11.1 x 16.4 cm

Inscription:

mount recto (printed in Japanese): sironagasu kujira no kyokô
(kagakukotu to zyôgaku no kujira hige)

[huge mouth of blue whale (baleen on lower and upper jawbones)]

2003:1185:0038

Title on Object: Baleens that will become craft objects

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 11.2 x 16.3 cm

Inscription:

mount recto (printed in Japanese): kôgeihin to naru kujira hige
[baleens that will become craft objects]

Notes: Baleens are comb-like structures on the upper jaw of baleen whales, which filter the whale's food. Baleens are composed of keratin, the same substance found in human hair and nails. Baleens are flexible and durable and were widely used in corsets, umbrellas, fishing rods, and Japanese fans.

2003:1185:0039

Title on Object: Gruesome teeth of sperm whale

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 11.2 x 16.2 cm

Inscription:

mount recto (printed in Japanese): mono sugoi makkô kujira no ha
[gruesome teeth of sperm whale]

2003:1185:0040

Title on Object: Dissection of sperm whale

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 11.1 x 16.4 cm

Inscription:

mount recto (printed in Japanese): makkô kujira no kaibô
[dissection of sperm whale]

Notes: Sperm whales were hunted mostly for their oil and spermaceti, a substance used in cosmetics and medicine. The meat of sperm whales has a strong smell and is not suitable as food.

2003:1185:0041

Title on Object: Industrial soldiers fighting against cold air and blizzard

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 11.2 x 16.2 cm

Inscription:

mount recto (printed in Japanese): kanki to hubuki ni tatakau sangyô
sensi [industrial soldiers fighting against cold air and blizzard]

2003:1185:0042

Title on Object: Frozen catcher boat

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 11.1 x 16.3 cm

Inscription:

mount recto (printed in Japanese): keppyô seru kyattyâ bôto
[frozen catcher boat]

2003:1185:0043

Title on Object: Minoo Maru, the whale-scouting vessel

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 11.3 x 16.4 cm

Inscription:

mount recto (printed in Japanese): Tangeisen Minoomaru
[Minoo Maru, the whale-scouting vessel]

Notes: Minoo Maru was a 400 ton trawler built by Hitachi Zosen Corporation's Sakurajima factory in 1933. It was lost during the war on January 27, 1944 at Micronesia.

2003:1185:0044

Title on Object: Suruga Maru joins forces in whaling

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 11.1 x 16.1 cm

Inscription:

mount recto (printed in Japanese): hogei ni kyôryoku suru Surugamaru
[Suruga Maru joins forces in whaling]

Notes: Suruga Maru was a 1000 ton freezer ship built by Hikosima Zosen in 1938. It was lost during the war on February 15, 1943 at Truk Islands.

2003:1185:0045

Title on Object: Kosei Maru strives to provide food for the service of country

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 11.1 x 16.2 cm

Inscription:

mount recto (printed in Japanese): syokuryô hôkoku ni maisin suru
Surugamaru [Kosei Maru strives to provide food for the service of
country]

Notes: Originally named Narenta, Kosei Maru was a freezer ship
purchased from England in 1939. It was capable of freezing 80 tons of
meat per day and storing up to 10,000 tons of meat. In World War II Kosei
Maru was used as a cargo ship to transport firearms, food and mail. It was
sunk on April 7, 1943 while on its way to the Truk Islands.

2003:1185:0046

Title on Object: Itsukushima Maru, the tanker, comes alongside the mother
ship

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 11.1 x 16.3 cm

Inscription:

mount recto (printed in Japanese): bosen ni yokozuke seru yusôsen
Itukusimamaru [Itsukushima Maru, the tanker, comes alongside the
mother ship]

Notes: Built in 1937 by Kawasaki Shipbuilding Corporation in Kobe,
Itsukushima Maru was a tanker designed for the storage and
transportation of food and supplies, as well as for fuel and whale oil on
whaling expeditions. After joining the whaling expedition for three
seasons, Itsukushima Maru was used for the transportation of petroleum.
It was lost on October 31, 1944 near the Philippines.

2003:1185:0047

Title on Object: Whaling base on ocean

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 11.2 x 16.4 cm

Inscription:

mount recto (printed in Japanese): hōgei no yōzyō kiti
[whaling base on ocean]

Notes: The whaling mother ship is the lead vessel of the whaling fleet and where the whales are processed. It is characterized by the slipway and claws and is equipped with advanced communication and whale searching systems. It carries supplies for the 6-month voyage, including fuel, fresh water, and processed whale oil. The middle deck is a factory that processes whale parts sent from the upper deck, where the whale is cut apart. The mother ship is the base of operations on the whaling expedition.

2003:1185:0048

Title on Object: Adelie penguins, jesters of South Pole

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 11.2 x 16.1 cm

Inscription:

mount recto (printed in Japanese): Nankyoku no dōkesi aderê penguin
[adelie penguins, jesters of South Pole]

2003:1185:0049

Title on Object: Peaceful paradise of South Pole; seals and whale birds napping on ice

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 11.2 x 16.2 cm

Inscription:

mount recto (printed in Japanese): Nankyoku no heiwayō hyōzyō ni hirune suru azarasi to kujiratori [peaceful paradise of South Pole; seals and whale birds napping on ice]

2003:1185:0050

Title on Object: Laboring between icebergs

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 11.2 x 16.1 cm

Inscription:

mount recto (printed in Japanese): hyôzan no aida ni hataraku
[laboring between icebergs]

2003:1185:0051

Title on Object: Sailing under the midnight sun

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 11.2 x 16.2 cm

Inscription:

mount recto (printed in Japanese): byakuya wo yuku
[sailing under the midnight sun]

2003:1185:0052

Title on Object: Embarkment at dawn

Classification: Photo

Original photographer: Unidentified

Dates: ca. 1940-1941

Dimensions: Image: 11.2 x 16.2 cm

Inscription:

mount recto (printed in Japanese): akatuki no sinpatu
[embarkment at dawn]

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