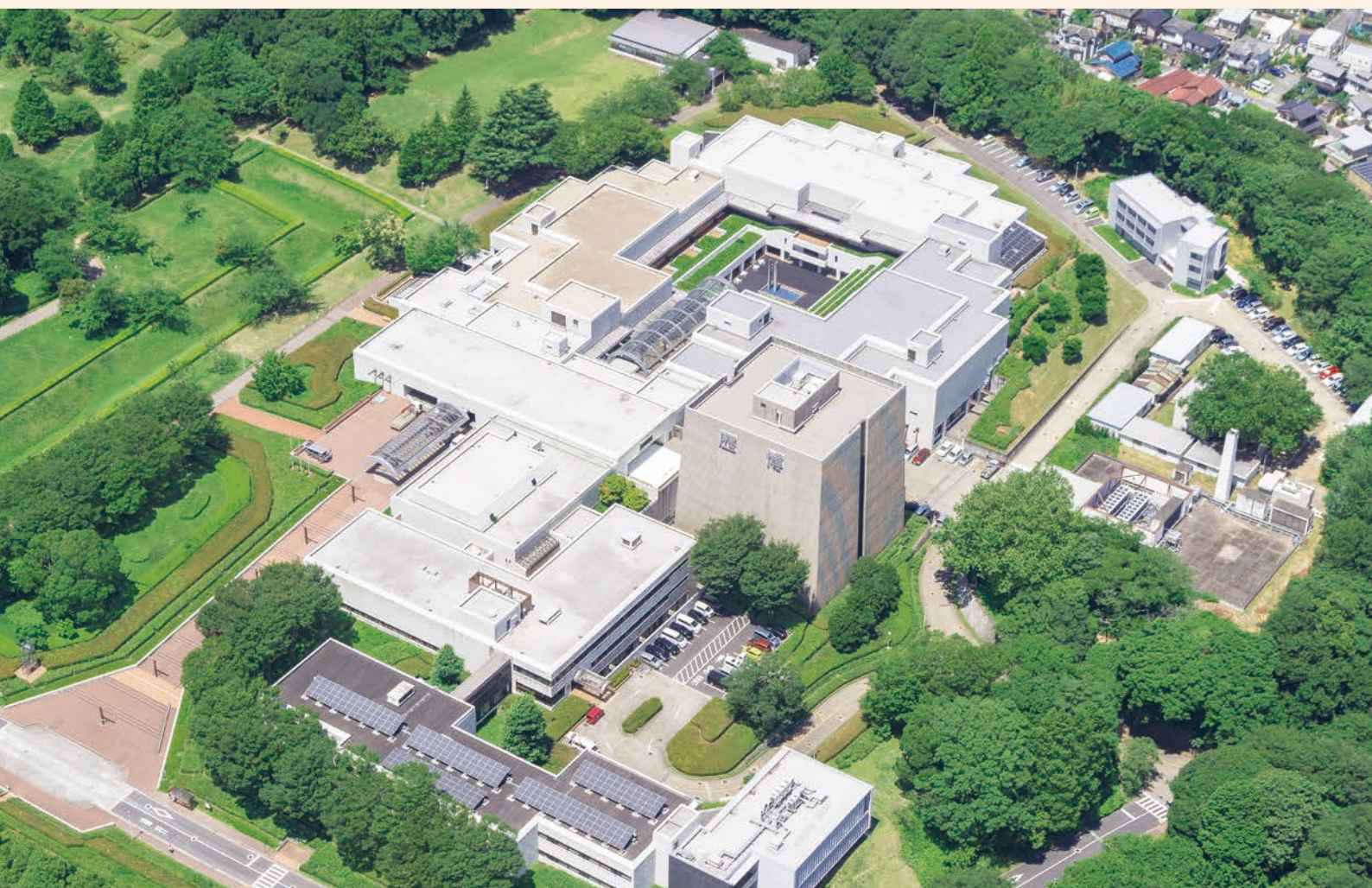


NEWS LETTER

Advances the state of historical
studies in Japan

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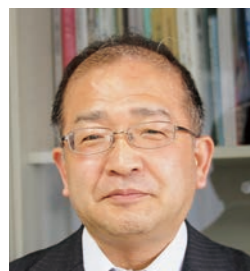


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Advances the State of Historical Studies in Japan

Greetings



Director-General, National Museum of Japanese History

Hiroshi Kurushima

A Path to Integrated Studies of Cultural and Research Resources (ISCRR)

I would like to say a few words before we start to disseminate information through the Integrated Studies of Cultural and Research Resources Newsletter.

The National Museum of Japanese History (NMJH, called as “Rekihaku” in Japanese) is an inter-university research institute established in 1981 to promote research on the history and culture of Japan in an organized and sustainable manner. Its mission is to help develop a view of history and historical imagination that enables people in modern society, in which historical human activities are complexly intertwined, to gain an informed view of their future; and in addition, to contribute to mutual understanding between people with different views of history. With the different forms of economic

inequality in different parts of the world, there are frequent conflicts between countries, as well as ethnic and religious conflicts; all against the background of serious global environmental problems. We believe that we need to learn our history, on our own initiative, from exhibits, because today it is difficult to predict our future on a global scale and discuss it in a fruitful manner. We, as an inter-university research institute encompassing a history museum, are being asked what we can do to enhance this process.

As part of our mandate, we have collaborated with related disciplines, including history, archaeology, folklore, and natural science, and have conducted fundamental and advanced research on the history and culture of Japan, from a modern perspective and from the perspective of world history, in cooperation with researchers from domestic and foreign universities and institutes, and the broader academic community. To visualize the research process, we have made resources available as historical and cultural resources with richer academic information, by adding the results of analysis from the perspective of both the social and natural sciences, and presented, in the form of exhibits centered on historical narratives, the results of the resource analysis and collaborative research.

We believe we can take history research to a higher level by these means. We call the research philosophy and approach in which three key functions—resources, research, and exhibition—are organically integrated, “Museum-Based Research Integration,” and have shared this approach with the broader academic community.

Beginning this year, in the six-year, Phase 3 Medium-term Goal and Plan, we will refine this approach, and develop ISCRR as a new academic field that can serve as a model case of cross-field collaboration and integration. Last year, we established and launched the Center for ISCRR, and in April, initiated a project to create new and vibrant fields of study.

Various resources, including historical resources such as historical documents, as well as objects reflecting lifestyles and cultures such as archaeological artifacts and folk implements; and natural history resources such as plant specimens and animal skeletons; are in the collections of history and folk museums and general museums at universities (including university museums and libraries), and in local communities. Information, in the form of traditional folk tales and told stories, is also stored. A museum is like a department store of fundamental resources for history research. However, a large variety and amount of resources are in the collection of universities and museums, and thus not easily accessible by those who are not history researchers. This has restricted the capabilities of researchers in both the social and natural sciences. We believe, therefore, that to take history research to a new level, as well as to activate the greater potential of universities and museums, we must overcome this problem and make such resources available for research in a wide-range of fields (promotion of open science based on improvement in the potential of resource information used as shared data).

We believe that we should enter into agreements with as many

universities as possible, share a large amount of resource stored in universities, and make this available as a resource for resource and education (collaboration with universities). Many universities pursue research, and study or collect resources, in the local community where they are located; and in order to partially fulfill their responsibilities in the local community, they should collaborate with local museums. In addition, we believe that, taking advantage of our strength as an inter-university research institute with a history museum, we can integrate the resources in the universities with those in the museum, and thereby provide conditions to enhance the educational and research functions of the universities, with regard to history and the local community (enhancement of university capabilities), and at the same time assist them in conducting new research. Furthermore, as foreign universities and research institutes (including museums) have much unused resource concerning Japan, we will promote academic research exchange based on agreements with these entities, to globalize ISCRR.

We do not yet have a comprehensive conception of ISCRR; thus, we will work with as many people as possible to implement this research project and produce tangible results. The purpose of this newsletter is to disseminate information enabling this broader community to determine the direction of the project, and we would appreciate your active cooperation and participation in this initiative.

Establishment of the Center for ISCRR



Deputy Director-General/ Principal Investigator

Masaru Nishitani

Background

What prompted us to launch ISCRR as a field of study was the Great East Japan Earthquake on March 11, 2011. Universities and museums were faced with the issue of how they should address the historical relationship between natural disasters and humans, and how they should obtain information on resources lost in or surviving the disaster, and document these resources. They felt a strong need to make their resources accessible to researchers, as well as the public in general, and to share the resources with them.

For example, in the Great East Japan Earthquake, roughly 400,000

items at the Rikuzentakata City Museum in Iwate Prefecture, and roughly 10,000 items at the Ishinomaki Cultural Center in Miyagi Prefecture, were damaged by the tsunami. In the Amami rainstorm of 2010, roughly 10,000 items in the Harano Agriculture Museum were damaged. In the Yamaguchi-Shimane rainstorm of 2013, the exhibit room in the main building of the Susa History Museum in Yamaguchi Prefecture, and the Masuda Family Residence on the museum site, were flooded, leaving roughly 700 historical items damaged, and the list of resources under water. In the presentation by the Science Council of Japan, entitled “Ensure the Transmission of Cultural Properties to the Next Generation: Developing Measures for Protection from Disaster” (June 24, 2014, a sub-session on the protection and use of cultural properties, conducted by the History Committee of the Science Council of Japan), the need to develop a database of cultural properties was strongly expressed. Museums affiliated with the Japanese Liaison Council of History and Folk Museums expressed their interest in the preservation and use of museum resources (* see note below).

A more serious problem is that, in addition to the impact of natural disasters, historical and cultural resources in local communities are being lost every day due to social changes, such as change in

local communities (change in local economies and movement of people, due to globalization), increase in uninhabited areas (due to decreasing population, there will be no inhabitants in 60% of Japan by 2050 [predicted by the Ministry of Land, Infrastructure, Transport and Tourism]), and increased exports to foreign countries (cultural heritage resources are exported to foreign countries as a result of a change in position in the global economy).

Mission

Under these circumstances, it is a matter of great urgency to convert historical archives into digital archives, develop a network of universities and museums to provide a backup system for resources, and increase the usage of the resources. We believe that the National Museum of Japanese History, as an inter-university research institute, needs to serve as a contact point for universities, university museums, museums, and the like, to promote cooperation and create a method for exploiting the distinctive environments of each institute. However, providing backup alone does not ensure the protection of the resources; thus, a critical aim of ISCRR is to conduct research aimed at turning archived resources into “active” resources; that is, actively used resources.

The resources in the collections of universities and museums are assets belonging to the people of Japan, and research should be conducted to preserve and use them. It is necessary not merely to develop a backup system for resource data, and to use each other’s data, but also to integrate the process, from preserving resources and conducting research, to making the resources available for viewing and use, and conducting research focused on developing forms of resource usage that enhance the connections between museums and universities, and the public.

* In the 3.11 Great East Japan Earthquake, many museums and cultural properties were damaged, and restoration projects were implemented. History and folk museums across the country were engaged in rescue activities. One of the problems identified during these activities was that science museums, art museums, zoos, and aquariums have type-specific national organizations, but history and folk museums do not have such organizations. The rationale for establishment, type of establishing organization, region, time period, and field of interest often differ from one history or folk museum to another. Thus, the Japanese Liaison Council of History and Folk Museums aims to follow and practice the principle that history and culture is an essential form of infrastructure for local communities, by requesting the participation of museums across the country that share the objectives of preserving and using tangible and intangible cultural resources, exchanging information, and collaborating with each other. (The Japanese Liaison Council of History and Folk Museums was established on June 14, 2012, after a meeting of 651 museums that supported this principle. As of September 2016, 748 museums had declared their support.)

Overview of ISCRR

ISCRR is a field of study that aims to analyze and examine resources mainly in the collection of universities and history museums, in various ways. Classifying historical resources by time period, region, field, etc. and analyzing them with an interdisciplinary scope can lead to more advanced sharing infrastructure and collaborative research. Through the use of resources on the history of Japan, it aims to create a new conception of Japanese history as well as a new discipline beyond the humanities, natural science, and information science. Towards constructing ISCRR, Rekihaku has established the Center for ISCRR and has launched various initiatives.

History organizations in universities and museums typically possess a variety of resources, often not only archaeological artifacts but also plant and insect specimens (as natural science specimens), and resources from the history of technology. University museums also have intermediate products produced as part of studies conducted by researchers. Integrated Studies aims to view history research from a variety of perspectives, using these varied resources. The approach to a given resource item varies with the field of study, and one of the objectives of ISCRR is to reflect on this variety in resource approach, and make resources available for researchers in as many fields as possible.

We hold three workshops aimed at achieving the objectives of ISCRR.

In Workshop 1, we conduct research to generate a wide-range of information extracted from resources, as an information infrastructure. As such, we conduct research to provide an environment that allows for external access to the information extracted and accumulated from such resources, through this research. For example, a given historical documents will reveal a variety of aspects depending on how it is approached. From the perspective of history, a historical documents is characterized by its content, as well as the complex context of time, space, and society at the time, including who passed it on to whom, and in what context. When we focus on the historical documents itself, we may analyze how it was written or what writing style was used (language history). When we analyze the elements of the document into individual characters, we seek language-study knowledge, particularly in the field of character study.

As we extend the research into detail, we seek (in the case of Japan) information concerning sumi ink and paper. The perspective of the history of technology is essential to analyzing materials of the sumi ink and the paper. And if we investigate the use of plants as paper material, we obtain important information for enhancing our knowledge of the natural environment at that time. These enhanced investigations arise through collaboration with the natural science.

Co-Principal Investigator
Makoto Goto



Thus, properly approached, a historical documents reveals a wide variety of elements to be studied. We aim to develop an information infrastructure in which multidisciplinary research information is stored. The catalogs of resources vary slightly from one research institute to another; thus, we aim to present resources in the information infrastructure, for multidisciplinary and multi-institutional research, through collaboration between researchers in the field of information technology and those in other fields.

The Linked Data Platform and the IIF (International Image Interoperability Framework) approach are employed to present the information. On the Linked Data Platform, a wide range of catalog information is integrated to allow historical information of greater complexity to be presented, and the combined information forms a database that can be used to search for a variety of specific catalogs. The IIF offers an international standard for the global distribution of images, and allows visual information from a wide range of studies to be shared.

In Workshop 2, researchers in the humanities and sciences conduct research and discussions focusing on historical resources as objects. Detailed information is extracted from a given item of resource, and fed back to various fields of study. The workshop offers researchers in the social and natural sciences an opportunity to conduct research integrating the two branches of science, using the information infrastructure, and to generate a compilation of useful studies. More specifically, we specify a given issue, and investigate which types of research approaches from different fields are available for addressing this issue. The aim is to develop a research model, based on different fields of research, to explore historical and cultural characteristics, based on a single item of resource.

In FY2016, we began with an item of resource called the Reitokaku-shukocho (in the collection of the National Museum of Japanese History), a collection of historical information gathered by people in the Edo period, including documents, and information on metal products, wood products, maps, and scales and measures. It is a kind of encyclopedia of its time, and may be seen as a resource instance of ISCRR in the Edo period. We are analyzing the contained information from a variety of perspectives, and its relationship with other resources; and the information will also be used as IIF data on an experimental basis.

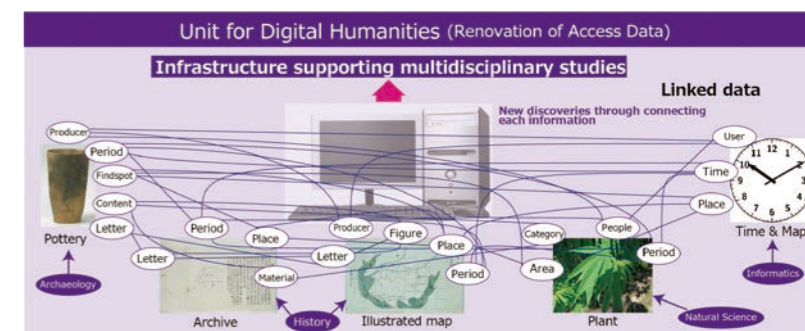
In Workshop 3, we work with universities and museums to develop a model to feed back the results of research based on ISCRR to universities and local communities. To this end, we present a conception of local history, through the universities and museums, based on the results of Workshops 1 and 2, as well as provide

research results, and perform outreach activities such as educational programs and exhibits.

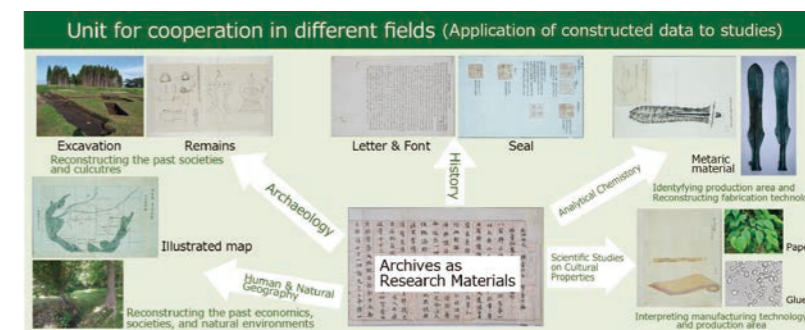
More specifically, we aim to promote fine-grained research on local history and culture, by collaborating with local universities and exploiting the information infrastructure and research approach of ISCRR. We believe that we can generate a new conception of local history by using resource information from the local museums and developing a research system involving both the humanities and sciences, through collaboration between universities and museums. In Workshop 3, we aim to provide an opportunity to elucidate local history in an explicit manner, and thus to contribute to local culture and the solution of local issues.

The three workshops may be summarized as follows. In Workshop 1, we, as an inter-university research institute, develop data, which serves as a gateway (or 'inlet') for research, and share this data with universities. In Workshop 2, we perform a data-based integrated research procedure involving both the humanities and sciences. In Workshop 3, which serves as an outlet for research results, we collaborate with society. The movement from Workshop 1 to Workshop 3 is not linear. We have established a cyclic structure in which requests resulting from collaboration are fed back to research, and research-based knowledge is reflected in the data. We define the opportunity of creating a new conception of history as 'ISCRR.'

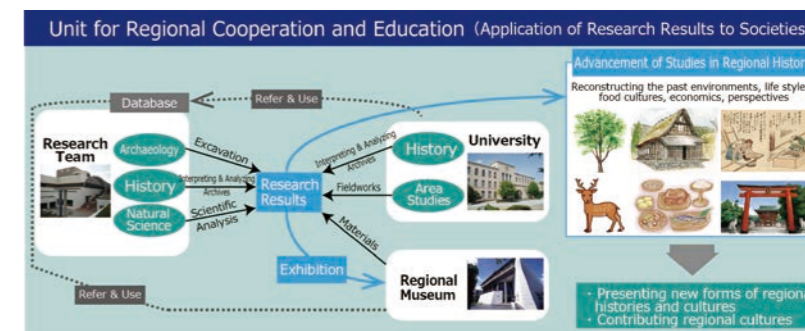
We at the Center for ISCRR are committed to conducting research in collaboration with universities, research institutes, and museums. We hope to contribute to advancing research on historical resources from various perspectives including the humanities, natural sciences, and information engineering. We invite institutions promoting integrated research on historical resources to consider future collaboration with us.



Workshop 1

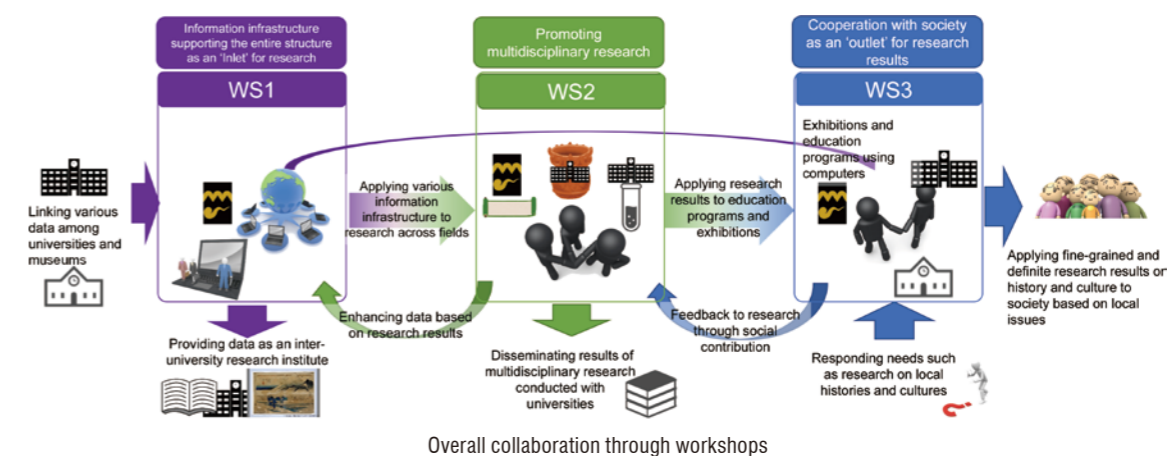


Workshop 2



Workshop 3

Note: Workshops 1, 2, and 3 were renamed to 3 units in April, 2017.



Research Activities

Workshop 1: 1st Session

Makoto Goto (Workshop 1 Leader)

Date 13:30 to 17:00, Sunday, May 22, 2016

Location National Museum of Japanese History

Workshop 1, conducted on May 22, 2016, was the first of the three ISCRS workshops to be held.

The aim of Workshop 1 is to develop a variety of information extracted from resources, as an information-based infrastructural environment. We analyze and compile know-how, to develop an environment enabling external access to resources extracted and compiled based on research. More specifically, several researchers develop catalog information on specific resources and describe the concept of information development.

For example, historical literature researchers look at a koban (an oval gold coin) from the perspective of coinage, and natural science researchers look at it as a resource, with the respective research catalogs differing from one research area to another, and with different researchers likely to create different catalogs. Thus, the catalogs of resources differ slightly from one research institute to another.

In light of this, we aim to present resources in the information infrastructure, for multidisciplinary and multi-institutional research, through collaboration between researchers in the field of information technology and those in other fields. The Linked Data Platform and the IIIF approach are employed to present the information.

In FY2016, we began developing a prototype. At present, we plan to launch an experiment on the integration of data stored in the universities and museums with whom we are in the process of establishing agreements. Next year, we will begin to provide access to the model, for the integration of their data.

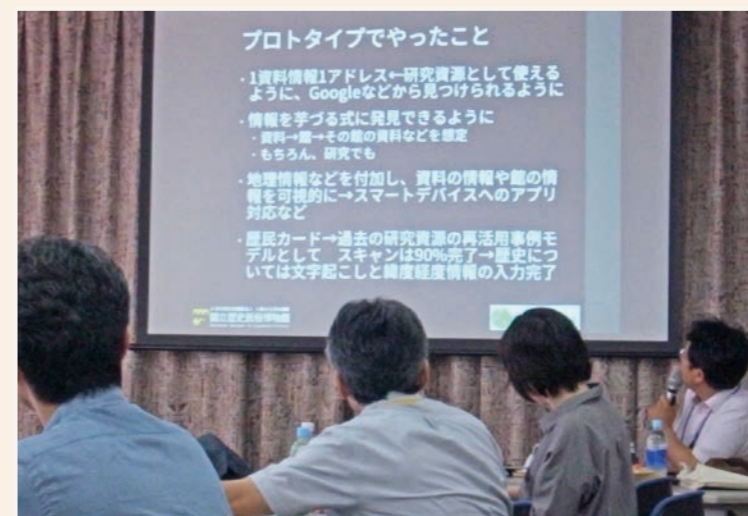
In this May 22 session, we discussed the catalogs of several different institutes, which are being created based on the Linked Data platform, and discussed general features of the data input to the catalogs and a method for determining a URI.

We also presented resources stored in museums that will be

Schedule	
13:30~13:45	Greetings
13:45~14:45	Presentations 1) Overall Framework for ISCRS, and Direction of Research in Workshop 1 Presenter: Makoto Goto (National Museum of Japanese History)
14:45~14:55	Break
14:55~16:50	Discussion 2) Intensive Discussion on Rekihaku's Linked Data System Prototype Presenter: Makoto Goto (National Museum of Japanese History)
16:50~17:00	Related information

made accessible as research resources, and briefly reviewed the progress in digital archiving for local research institutes and museums. As a whole, the discussion provided the basis for the integrated research information infrastructure, which will be developed for ISCRS.

In Workshop 1, we are discussing the development of an information infrastructure for Linked Data-based resources stored in universities and museums, with the aim of providing interdisciplinary research resource information in the most research-friendly form; closely linking this effort to the developments in digital humanities/humanistic informatics, and reviewing the related developments in technology.



Introduction of Workshop 1



Summary of integration with Workshops 2 and 3



Discussion of technical issues related to the development of the Linked Data system

“Integrated studies of cultural resources”

Workshop 2: 1st Session

Yoshitaka Mikami (Workshop 2 Leader)

Date 13:30 to 17:00, Sunday, June 5, 2016

Location National Museum of Japanese History

The Workshop 2 on ISCRR was held on June 5, 2016.

This Workshop 2 aims to develop and share an approach to conducting research on museum resources from the perspectives of different fields of study. In this first session, the workshop leader presented examples of previous historical resource studies, and reported on the vision and issues involved in incorporating these studies into ISCRR.

After the report, we thoroughly viewed the Reitokaku-shukocho, which is in the Rekihaku collection, and exchanged views. The Reitokaku-shukocho, a collection of illustrations and Kobutsu-ruiju compiled from the late Edo Period to the first year of the Meiji Period, enables us to conduct research from the perspectives of history, archaeology, art history, ethnology, cultural asset studies, and other fields of study. The distinctive research approach of ISCRR involves the extraction and organic integration of as many pieces of information as possible from one item of resource.

During the exchange of views after studying the Reitokaku-shukocho, we acknowledged the need for basic research on the resource itself and comparative research on similar resources, and the importance of developing a database that incorporates the research results. Through these research activities, we will develop ISCRR, beyond conventional museology.

Schedule

- 13:30~15:00** Conference Room 1
- 1) Introduction: Direction of ISCRR Workshop 2
Presenter : Yoshitaka Mikami
(National Museum of Japanese History)
 - 2) Report: "Potential of ISCRR"
Presenter : Shigeji Ogura
(National Museum of Japanese History)
- 15:00~15:15** Break
- 15:15~16:30** Survey Room 1
- 3) Viewing the Reitokaku-shukocho in the Rekihaku collection
- 16:30~16:40** Break
- 16:40~17:00** Conference Room 1
- 4) Exchange of views
- 17:00** End



Viewing the Reitokaku-shukocho



Discussion of document styles



Introduction of Workshop 2



Discussion of the content of the Reitokaku-shukocho

"Integrated cultural resources"

Visit to Taiwan and Surveys

Ayako Shibutani

Date	9:30 to 15:20, Thursday, May 26, 2016	Location	National Museum of Taiwan History
Schedule	<p>9:30~ 9:40 Greetings Wang Changhua (Director of the National Museum of Taiwan History)</p> <p>9:40~10:20 Scientific technology and museum: Surveys and Uses of Museum Resources Hsieh Shihyuan (National Museum of Taiwan History)</p> <p>10:20~11:00 Practical construction of "Research Circulation Access Model" to Translate Museum Collections into "Activated Resources" Masaru Nishitani (National Museum of Japanese History)</p> <p>11:10~11:50 Information Infrastructure of Prototype for ISCRR Makoto Goto (National Museum of Japanese History)</p> <p>11:50~12:50 Lunch break</p> <p>12:50~13:30 Development of Multidisciplinary Research Using Museum Resources Yoshitaka Mikami (National Museum of Japanese History)</p> <p>13:40~14:20 What information of museum artefacts is chosen? From the scope of archaeological science studies Ayako Shibutani (National Museum of Japanese History)</p> <p>14:30~15:20 General discussion (Moderator: Wang Changhua)</p>		

From May 25 to 29, 2016, four members of the Center for ISCRR (Nishitani, Mikami, Goto, and Shibutani), one member of the Administrative Office, and Riko Shimadate of the Natural History Museum and Institute, Chiba, visited Taiwan. The purpose of the visit was to present an approach to ISCRR, exchange views on how to implement future projects at the National Museum of Taiwan History in the City of Tainan, and learn about the state of humanities resources at the Institute of History and Philology and National Taiwan University.

At the National Museum of Taiwan History, a presentation and discussion on ISCRR was held, according to the above schedule.

First, research activities at each institute were reported on, and related topics presented. Then, views on how to implement future projects were exchanged.

Dr. Hsieh of the National Museum of Taiwan History briefly described the museum, explained the management and use of information on resources, and reported on the results of various research activities and exhibits at the museum. Nishitani, Director of the ISCRR, National Museum of Japanese History (or Rekihaku), briefly described the nature of the studies, and explained future research projects. Goto reported on the developmental status and future direction of the information system infrastructure prototype, which was being developed at the Center for ISCRR. Mikami briefly described the Reitokaku-shukocho, and research on the Gwangaeto Stele epigraph, as an example of multidisciplinary research. Shibutani, the author, presented examples of research on museum resources from the scope of archaeological science, and natural science.

There are various genres and types of museum resources. In the general discussion, the National Museum of Taiwan History and the Rekihaku shared the view that it is increasingly important, in establishing connections among museums, for the individual museums to understand each other's structure; and in establishing connections among countries, for the countries to understand each other's culture. We also discussed how to collect a variety of information on one research topic or item of resource, develop an information system, and conduct multidisciplinary collaboration, as in the case of resource analysis (including the restoration of archaeological artifacts); and how to incorporate research results into museum exhibits. This discussion will provide the basis for

international information dissemination and research collaboration, which will be promoted in ISCRR.

We also conducted an inspection tour of various cultural heritage sites in Tainan, with Dr. Hsieh of the National Museum of Taiwan History, and discussed the current state, preservation, and management of cultural heritage, and how these may be optimized.

We learned about the state of humanities and other resources on exhibit at the Institute of History and Philology and the National Taiwan University in Taipei.



Discussion at the National Museum of Taiwan History



Inspection tour of Tainan cultural heritage sites, with local researchers

Activities at Partner Institutions

Research Activities at the Historiographical Institute and the University of Tokyo, and in Integrated Studies of Cultural and Research Resources

Koki Yambe (Historiographical Institute (HI), the University of Tokyo)

HI of the University of Tokyo is a research institute focusing on Japanese historical resources that cover the period up to the Meiji Restoration in Pre-Modern Japan. The institute collects and researches historical resources, and compiles them for publication as collections of historical resources. Through these activities, it seeks to contribute to various types of research on Japan, including Japanese history.

Many of its projects are related to ISCRR. I would like to present some examples from the collection of resources on the history of Japan and other countries, and from research on historical resources.

I understand that the underlying intent of ISCRR is to collect information on a variety of resources in the collections of universities and museums. The institute focuses on a specific area, or specific resources, related to the history of Pre-Modern Japan. Since about 1877, it has collected duplicates of resources related to Japanese history, scattered throughout the country, and sought to collect historical resources related to Japan that are located in other countries. Its task of collecting historical resources is related to ISCRR, in that it gathers information on resources that have been passed down from generation to generation, and have existed in various places.

In recent years, we have been designated as a Base of Research Operations for Converting Japanese Historical Source Materials into Research Resources, which serves as a center for shared use and collaborative research; and have collected resources and conducted research on historical resources, in addition to solicited collaborative research projects. We have collected historical resources in cooperation with many researchers, and aim to develop broader collaborative relationships. We have sought to expand the horizon of research on historical resources, by integrating different perspectives, with the participation of Japanese history researchers and researchers in a variety of other fields. We conduct collaborative research with researchers in areas where historical resources have been passed down from generation to generation, and we seek to feed the research results back to the local community through symposiums and exhibitions.

Digital images of the collected historical resources are not accessible on the Web, in order to protect the rights of owners of the resources, but are publicly accessible through the Hi-CAT Plus database in the reading room at the institute. Information on historical resources obtained from research is added to the images as metadata.

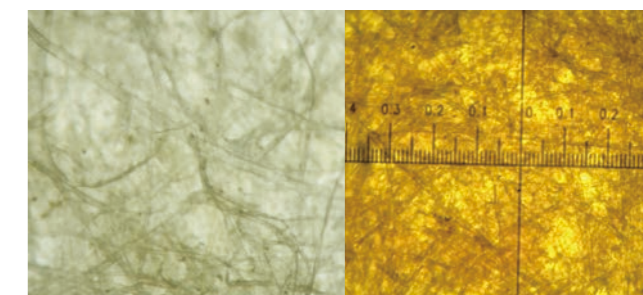
I would like to describe a specific field of study called "integrated historical resource study", as an example of research on historical resources. The purpose of this type of study is to conduct new research on historical resources by correlating (a) the results of historical resources research based on analysis of the content of

documents (which we have performed), or on information, such as formal qualities, that can be easily obtained, with (b) the results of research analyzing historical resources as objects, using a natural science approach. In the analysis of documentary resource as an object, for example, we collect data using various analytical instruments, and determine the paper qualities from microscopic images, based on the knowledge of paper-making science, in cooperation with the teaching and technical staff at the institute.

Such historical resources are rarely passed down from generation to generation in their original style, but instead are often converted into scrolls or other styles, making it difficult to analyze them as objects in many cases. If they can be taken apart and repaired, they will be temporarily restored to their original format, providing excellent opportunities to analyze them as objects. At HI, many original resources are stored during the collection process. We perform analysis using resources that are given the opportunity for repair. Up to last year, for example, we had analyzed as an object the diary, Nakanoin Ipponki, of the courtier, *Nakanoin Michifuyu*; taking it apart, repairing it, attempting to reproduce the paper, and studying the writing style. We also took apart and repaired the *Gomonjo* material, containing the Shimazu family's major, national treasure documents, which were passed down from generation to generation in the Shimazu family; and are currently analyzing it as an object. We plan to develop a database of data on the aforementioned resources, as objects, and make it broadly accessible.

We understand that the efforts of ISCRR will lead to analysis and research of resources from the perspectives of different fields of study, and produce novel results. Integrated historical resource study focuses on resources on the history of Japan, and therefore cannot be easily integrated into the broad compass of ISCRR. In terms of concept, it has certain affinities with ISCRR.

We at HI will strive to produce further research results on the history of Japan, in collaboration with ISCRR, and make these results broadly accessible.



Microscopic image of Japanese historical papers

Summary and Purpose of the Database of Plant Macrofossils from Archaeological Sites in Japan

Arata Momohara (Graduate School of Horticulture, Chiba University)
Itoe Ishida (National Museum of Ethnology)
Yuichiro Kudo (National Museum of Japanese History)

The Database of Plant Macrofossils from Archaeological Sites in Japan, accessible on the National Museum of Japanese History's website (https://www.rekihaku.ac.jp/up-cgi/login.pl?p=param/issi/db_param), is a searchable database incorporating roughly 63,000 excavation records, from archaeological survey reports throughout Japan, of plant remains (e.g., fruits, seeds, and leaves) large enough to be observed with the naked eye. Excavation records of plant macrofossils are important in studying the history of relationships between people and plants, such as plant growing, as well as local vegetation history. Since 1980s, as a result of large-scale development projects, archaeological excavations at lowland archaeological sites was actively conducted, and an enormous number of macroscopic plant remains excavation records were provided as part of excavation reports. However, since the published reports were only available for viewing at certain facilities, it was critical to develop a comprehensive database, in order to use the reports as vegetation history resources. From roughly 60,000 excavation reports in the library of the National Museum of Japanese History, we identified roughly 2,500 reports containing examples of plant macroremains analysis, and developed a database of these records. The database can be searched by category group (plant family, Japanese name, or scientific name), time period, prefecture, site name, and/or other keywords. Search results can be output in list form, and data distribution can be displayed on Google Maps. When you click on a search result, or a location in Google Maps, you can obtain detailed information, including publication information.

A digitization of excavation records makes it possible to determine the temporal and spatial distribution of many plants for which excavation records have been collected, such as beans, grains and fruits, as well as the relationship between such distributions and changes in human subsistence activities. The database makes it easier for researchers to share information, and is expected to facilitate standardization of identifying plant remains, which differ among researchers, and of plant morphology terms and identification methods. As a result of the database, during the excavation and analyzing process, researchers will be more aware of which types of plant remains can be found, from a given time period and in a given area, resulting in an increase in the number of plant remains records with accurate stratigraphic profiles.

This database is essential not only to archaeobotany and vegetation history research, but also to local green space management, nature restoration, and historical landscape design. Since the Jomon Period, vegetation in urban and woodland areas has changed significantly in response to changes of human subsistence activities. For example, in modern times, until recently, pine trees were typically planted; today, cedar trees are typically planted. Nature restoration projects have been actively implemented in urban areas and surrounding

areas. Existing, mostly native vegetation, which provides useful information for the restoration of the ecosystem in a particular region, is extremely limited. If vegetation is destroyed and restored, it cannot be determined whether the vegetation in the region is indigenous, and vegetation history materials are important for confirming this. In particular, macroscopic plant remains provide information on which plants existing in the region are important from a historical perspective and should be protected. In addition, they are useful for restoring vegetation that was indigenous to the region. When a green area is developed around a historical site, information on the relationship between the living environment, people, and plants can be provided to visitors to the site if the historical landscape in each time period is accurately restored based on vegetation history materials, and the plants best suited to the site can be planted there.

In the development of the database, in addition to the chapters of each excavation report containing specific analysis and reports on macroscopic plant remains, we copied the relevant forewords, abstracts, and absolute dating of pottery chronology and radiocarbon dating with stratigraphic profiles; and based on these, assigned time periods according to the archaeological strata in which the plant macroremains were found. However, most of scientific analyzing reports containing plant macrofossils were included in excavation reports in the same manner as delivered by the original contractors, and the strata classification may not be integrated in that manner in the main volume. Consequently, there are many pieces of data for which accurate classification of soil layers or the time period cannot be determined. For plant remains for which the time period cannot be determined from the excavation report, the time period of the overall archaeological site, as described in the abstracts, has been entered into the database. In addition, in some cases, remains of later periods in the upper soil layer are evidently contaminated. Thus, in the case of plant remains for which the accuracy of identification varies, and/or the identification is considered to be incorrect, the identification as shown in the excavation report has been entered into the database. The purpose of the database is to provide information to facilitate access to primary sources (original excavation reports). It should be noted that the data is characterized by uneven distribution in terms of location and time, and contains many incorrect records. Thus, the users of the database should check the order of stratigraphic profiles and pictures provided in the primary source, and, if possible, the stored specimens.

For details, please see the reference below. Please be sure to quote it when writing a paper or report using the database.

Itoe Ishida, Yuichiro Kudo, Arata Momohara: 2016 Database of Plant Macrofossils from Archaeological Sites in Japan "Japanese Journal of Historical Botany", 24-1: pp.18-24.

The World Conveyed through Photography: An Approach in ISCRR

Riko Shimadate (Natural History Museum and Institute, Chiba)

The same landscape looks different to different people.

Below is a picture of Kemigawa-machi, in Hanamigawa Ward in the City of Chiba, in 1955. The picture shows an expanse of tideland along the coast. There used to be an expansive tideland area in Tokyo Bay, but most of the area has been reclaimed and the landscape has changed significantly.

The picture is definitely an important document, simply because it depicts a vanished landscape; but it is also valuable in another sense. As with the 'same landscape' above, a picture provides different information, depending on the knowledge and experience of those who look at it.

I wonder if people see living things all over the beach. This is a marine alga named as *Ana-aosa* (in Japanese, *Ulva pertusa* Kjellman) called in the Chiba area. It has small holes on the surface, and is not suitable for eating because it is hard. *Ana-aosa* is not a form of the marine alga commonly sold as *Aosa nori*. It grows very densely in Tokyo Bay. It is washed ashore and causes a foul odor, or is deposited on the ocean floor and forms sludge. Thus, it causes environmental problems.

Why is *Ana-aosa* spread out, as shown in the picture? From the beginning, this *Kawana* (a freshwater alga) was known to decompose if left untreated, and cause damage to shellfish harvested in Tokyo Bay. It is troublesome, but is spread out with the purpose of using it, either as food or livestock feed (though it is hard), or as fertilizer because it contains nitrogen and phosphoric acid. Dried *Kawana* is shipped in straw bales. *Ana-aosa* was troublesome from the beginning, but was hand collected by people for beneficial use.

Some people may notice the depressions in front of the spread-out *Kawana*. There used to be a place called *Utari* (comprising parts of the MakuHari, Kemigawa, and Kurosuna regions of Chiba), a tidal depression where water remains at low tide. *Kawana* was moved by a southerly wind and left in *Utari*.

When the Great East Japan Earthquake of March 11, 2011 hit, the soil on the reclaimed land in the MakuHari and Kemigawa areas was generally liquefied, but with significantly different damage, depending on the precise location in the reclaimed land area. Whether true or not, the local people say that this microtopographic feature, which existed before reclamation, may have accounted for the difference in the extent of damage. In any case, a large amount of *Kawana* piled up

in this region because of the microtopography.

People in the Nakajima district near the Kaneda Interchange of the Tokyo Bay Aqua Line in Kisarazu, a city located on Tokyo Bay, said, "Kawana was washed ashore but was not troublesome because it was not decomposed. It was dried and sold to fertilizer brokers and wholesalers from the MakuHari area." In the Nakajima area, there were no microtopographic features, such as in *Utari*, where *Kawana* piled up. This is why they were not troubled by the decomposition of *Kawana*. What is interesting here is that, though *Kawana* was troublesome because of the microtopography, people in Kemigawa and MakuHari did not see it as troublesome, but instead saw it as a valuable product. Indeed, they traveled all the way to Kisarazu to buy it, and used it for business.

When you view more closely the scene in the picture, from different perspectives, you can see that a marine alga called *Ana-aosa* is involved both in the topography of Tokyo Bay and in the life of people in a complex manner. This is the result of sharing knowledge about the alga, topography, and human life.

The Natural History Museum and Institute, Chiba, is a general museum with a staff of about 60 researchers with different fields of expertise. Starting next year, taking advantage of the characteristics of the museum, we will undertake a focused research project in which researchers collaborate to study pictures, postcards, and other image resources in the collection of the museum. I am sure that this project will allow us to collect a varied wealth of information from one picture. This is one approach in ISCRR.



"Utase Boats on the Kemigawa River and Ground-Drying of Kawana"
Collection of the Natural History Museum and Institute, Chiba; photo taken by Tatsuo Hayashi

List of Project Members (Name/Organization/Role)

◎ Principal Investigator, ○ Co-Principal Investigator Members other than the leaders and coordinators are listed in alphabetical order.

Supervisor

Hiroshi Kurushima
(National Museum of Japanese History)

WS1

- **Makoto Goto** (National Museum of Japanese History) * WS1 Leader
- Norihiko Uda** (University of Tsukuba)
- Ikki Ohmukai** (National Institute of Informatics)
- Yoshihiro Okada** (Kyushu University)
- Haruyoshi Goto** (The Kyoto University Museum)
- Kazuhiro Shin** (Coastal Branch of Natural History Museum and Institute, Chiba)
- Tatsuki Sekino** (Research Institute for Humanity and Nature)

WS2

- Yoshitaka Mikami**
(National Museum of Japanese History) * WS2 Leader
- Ayako Shibutani** (National Museum of Japanese History)
- Naoko Iwasaki** (The Kyoto University Museum)
- Masato Ogawa** (Hokkaido Museum)
- Towao Sakaehara** (Osaka Museum of History)
- Koki Yambe** (Historiographical Institute, the University of Tokyo)

WS3

- ◎ **Masaru Nishitani**
(National Museum of Japanese History) * WS3 Leader
- Takayuki Ako** (Tokyo Tech Museum and Archives)
- Akihiro Ito** (Saga University)
- Hiroshi Okumura** (Kobe University)
- Naoki Sakiyama** (Chiba University)
- Toru Shinohara** (Lake Biwa Museum, Shiga)

- Yoshihiro Takata** (Kanazawa University)
- Norio Togiya** (Kansai University)
- Taizo Yamada** (Historiographical Institute, the University of Tokyo)
- Arata Momohara** (Graduate School, Chiba University)
- Shoji Arakawa** (National Museum of Japanese History)
- Junko Uchida** (National Museum of Japanese History)
- Jun'ichi Koike** (National Museum of Japanese History)

- Hiro'o Aoyama** (National Museum of Japanese History)
- Kazunori Araki** (National Museum of Japanese History)
- Shigeji Ogura** (National Museum of Japanese History)
- Kanta Takata** (National Museum of Japanese History)
- Kosuke Harayama** (National Museum of Japanese History)
- Kaori Hidaka** (National Museum of Japanese History)
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- Riko Shimadate** (Natural History Museum and Institute, Chiba)
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- Yutaka Yabuta** (Hyogo Prefectural Museum of History)
- Junichi Okubo** (National Museum of Japanese History)
- Tsutomu Saito** (National Museum of Japanese History)
- Takuzi Suzuki** (National Museum of Japanese History)
- Jiro Muraki** (National Museum of Japanese History)

Member Profile of the Center for ISCRR



Director of the Center for ISCRR

Masaru Nishitani

Professor, Archaeology Division, Research Department

Area of Expertise East Asian human history (history of daily life activities in East Asia, history of human-nature relationships)

This is a difficult time for humanities. Immediate results and monetary benefits are increasingly more valued. I believe that the ultimate purpose of the humanities and social sciences is to gain knowledge of humanity. And the search for this knowledge is of preeminent importance in our time.



Shigeji Ogura

Associate Professor, History Division, Research Department

Area of Expertise Ancient history of Japan, historical material studies (main research areas: history of shinto shrine system in ancient Japan, historical studies of the imperial court libraries in premodern Japan)

My involvement in the Center has offered me the chance to take a closer look at what ISCRR is. It has led me to think about ways to deepen and broaden research, going beyond my current scope, and to make it more widely available.



Yoshitaka Mikami

Associate Professor, Research Department

Area of Expertise Ancient history of Japan (main research areas: study on the history of exchange of ancient East Asia character culture; study of ancient monetary history; factual study of ancient and medieval local communities)

My recent motto is "From Kokaidou-hibun to graffiti." In my view, epigraphs praising a king, graffiti drawn by medieval people, Shoso-in Monjo and pottery with ink-writing are all equally important as textual materials.



Makoto Goto

Associate Professor, Research Department

Area of Expertise Digital humanities; digital history; ISCRR (digitization of historical information, digital archiving, constructing ISCRR, etc.)

Looking at history and the humanities with the aid of a computer is an attempt to look at something old with a new tool. I hope our ongoing efforts in disseminating the latest findings and knowledge of history and the humanities to the world will make our society a better place to live.



Ayako Shibutani

Research Assistant Professor, Research Department

Area of Expertise Archaeobotany, scientific study of cultural properties (main research areas: reconstruction of prehistoric plant food cultures and foodways, impact of plant foods to human health)

I examine starch grains from the surface of pottery and stone tools, soil in the archaeological record, and dental calculus with teeth, to explore the history and culture of food, in terms of how humans converted plants into food. In ISCRR, I analyze the elements of historical resources from the scope of archaeological science.

FY2016 Schedule

..... The following events will be held.

2016

5/22 (Sun) Workshop 1
(National Museum of Japanese History)

- Introduction “Overall Framework for ISCRR, and Direction of Research in Workshop 1”
- Report “Intensive Discussion on Rekihaku’s Linked Data System Prototype”

5/25 (Tue)~29 (Sun) Research in Taiwan
(at the National Museum of Taiwan History, Institute of History and Philology,
National Taiwan University)

- * Presentation and discussion of ISCRR at the National Museum of Taiwan History (5/26)

6/5 (Sun) Workshop 2
(National Museum of Japanese History)

- Introduction: “Direction of ISCRR Workshop 2”
- Report: “Potential of ISCRR”
- Viewing the Reitokaku-shukocho in the Rekihaku collection

6/30 (Thu) · 7/1 (Fri) Poster presentation
19th Meeting of Japanese Council of University Museums and 11th Meeting of
Japanese Association for Musescience (in Higashi Hiroshima)

7/8 (Fri) Workshop 3
(Kanazawa Chamber of Commerce and Industry)

- * 5th Annual Meeting of the Japanese Liaison Council of History and Folk Museums
 - Inspection tour (Kanazawa Castle Park)
 - Report session: Development of a Model for Exhibition and Educational Activities in the Museum, with Museum Resources and Research Data Based on Museum Resources
 - Topic 1: Overall Framework of ISCRR, and Role of Workshop 3
 - Topic 2: Regional Society Uses of the Museum Resources Database for ISCRR
 - Topic 3: Renovation of Regional Academic Culture and ISCRR

9/12(Mon) Workshop 1
(Fukutake Hall, Hongo Campus, the University of Tokyo)

- * An international symposium jointly held by the Japanese Association for Digital Humanities and Rekihaku
 - Lecture 1 “The Humanities, the Liberal Arts and the University in a Digital World”
 - Lecture 2 “Academic Assets and Digital Archives”
 - Lecture 3 “Making Database of City Life from Genre Paintings—Persons’ Database of 16th Century Rakuchu-rakugai-zu Byobu (Screens of Scenes In and Around Kyoto)”

9/14 (Wed) ~17 (Sat) Resource Provider Workshop at the 2016 EAJRS Conference in Bucharest

10/23 (Sun) Workshop 3 (National Museum of Japanese History)

11/13 (Sun) Workshop 2 (venue to be determined)

12/9 (Fri) Workshop 1 (venue to be determined)

2017

1/28 (Sat) or 29 (Sun) Workshop 3 (venue to be determined)

2/11 (Sat) or 12 (Sun) Workshop 2 (venue to be determined)

3/18 (Sat) & 19 (Sun) Plenary session (venue to be determined)

* The details of the workshops to be held after October 23, 2016 are yet to be finalized (as of September 30, 2016)

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