

A museum's contribution to sustaining local nature and culture relationships; what we learned from making an exhibition about biodiversity and utilization of reed marshes around Lake Biwa.

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Introduction

The Lake Biwa Museum is located on the lakeshore of Lake Biwa, the largest lake in Japan. Our museum opened in 1996, and we are now undergoing a renovation until 2020. Our largest permanent gallery, which deals with nature and human relationships of the lake and its catchment area with a freshwater aquarium, re-opened in 2016, as the first part of the renovation. The reed marsh exhibition was entirely renewed and named “Into the Reed Marshes”.

Before the renovation, there was a small exhibit named “Function of Reed Beds” which focused on filtration of emergent plants, containing several graphic panels. This exhibit was connected to a larger “World of Aquatic Plants” exhibition and didn't attract visitors so much because of its limited methods and information. After a decade of our museum's research and activities with some new research scientists joining, we gained much more knowledge about reed marshes and decided to make a whole new exhibition featuring relationships between living organisms and reed marshes around Lake Biwa.

Composition of “Into the Reed Marshes” exhibition

This new exhibition is composed of a prologue and four sections. The prologue is a tunnel of reeds to show how tall reeds are in the field and visitors are able to observe harvest mice (*Micromys minutus*) alive in an enclosure. The first section “Life in Reed Marshes” (Fig.1-a) and the second section “Interactions and Relationships between Reed Marshes and Humans” contain life-size dioramas showing the nature of reed marshes, emphasizing biodiversity with changing seasons.

The second section also shows how reeds are harvested and marshes are maintained and works as a connection to the third section, “Utilization of Reeds and Reed Marshes in the Past, Present and Future” (Fig. 1-b). In this section, we tried not to refer reed utilization as old habit, but living tradition which leads us to the future. To visualize this, we displayed new products made of reeds, such as wallpaper, cookies, chopsticks and leaf mold, next to the traditional products. We also introduced some activities of companies and NPOs to conserve and maintain reed marshes as encouraging movement for the future

of reed utilization. The fourth section “Lakeshore Wetlands and Satellite Lakes” is a database of satellite lakes around Lake Biwa which are important habitats of reed.



Fig.1. Main exhibits of “Into the Reed Marshes” exhibition. (a) Dioramas in “Life in Reed Marshes” (left); (b) Display of traditional reed products (right).

Process of preparing exhibits about harvesting and utilizing reeds

In Japan, reeds (*Phragmites australis*) are traditionally used for making screens, furniture, roofs, and ritual tools. As there were vast reed marshes around Lake Biwa, the Lake Biwa reeds used to have large markets, mainly around Osaka and Kyoto, the ancient capital. However, our lifestyles changed and these products became outdated, and some markets were taken over by Chinese reeds.

In our process of making the exhibition, we collected data about how reeds are recently harvested and utilized. In winter season, we visited the sites of harvesting reeds and burning of left stems and other grasses after harvesting to take photographs and samples for dioramas (Fig.2).

We tried to collect traditional reed products newly made by craftsmen and masters, so we were able to know and record how these products were actually made. For example, there still are many traditional fire festivals held in the city of Ohmi-Hachiman, the historical area near the largest satellite lake called Nishinoko (Fig.3-a). The torches used in these festivals are made from reeds and other plant materials.

Our museum’s folklorist Dr. Keiichi Watanabe visited torch making masters and asked to make torches for our exhibition and we could collect a beautiful real-size torches and some miniature as well as precise records of making them models through mediation of Masse Co. Ltd. the local company promoting reed utilization. We also interviewed some of these craftsmen and masters, and we learned they were really willing to have opportunities to present their works and, pass their knowledge and techniques to the next

generations. Through these procedures, we set our goals of renovation to make our museum and exhibition be the places to let visitors know the tradition of reed utilization around Lake Biwa and to have communication among visitors, people working with reeds and us.

We also collected new products made from/of reeds and found these products very attractive and useful as well as traditional ones, so we displayed those to show the future of Lake Biwa reeds hoping our exhibition could facilitate these designers, companies, and organizations to develop more products.



Fig.2. Harvesting and maintaining of reeds. (a) Harvesting reeds with a pushcart-type harvester (left). (b) Burning reed fields to kill insects and fertilize the ground with ash (right).



Fig.3. Obtaining torches. (a) Fire festival in Asagoi Village (left). (b) Torch making Master Tsunemasa Inoue from Asagoi Village (right). (Photographs by Dr. Keiichi Watanabe)

How the Lake Biwa Museum can contribute through reed exhibition.

After “Into the Reed Marshes” exhibition opened in 2016 as a result of our renovation, we are still trying to actualize what we set as goals of our exhibition. One of our efforts is cooperating with the Reed Lamp Exhibition held for two days by a local committee in

Azuchi every September on the lakeshore of Nishinoko. We held the Reed Lamp Workshop in our museum to participate this exhibition and some of our participants had won awards in this Exhibition. We also display lamps in our temporary gallery during winter, so many people can see and enjoy the beauty of reeds (Fig.4).

What we have posted here are only a small portion of our activities to contribute to local nature and culture relationships about the Lake Biwa reeds. Some of our research scientists have started new research projects dealing reeds and reed marshes. We are looking forward to expanding our museum's cooperation with visitors, reed craftsmen, schools and companies to meet our goals we set through our renovation.



Fig.4. Cooperation with the Reed Lamp Exhibition, Azuchi. (a) Flyer of the Exhibition (top-left). (b) Making reed lamps at the workshop in our museum (top-right). (c) Display of lamps in our temporary gallery (bottom-left). (d) A reed lamp which won an award (bottom-right).