University museum and multimedia

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http://www.museum.kyoto-u.ac.jp/index_e.htm
Today’s topics

1. What is university museum?

2. Our university’s data base system

3. University museum’s multi-media
# Chronology of our museum

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1897</td>
<td>Foundation of Kyoto Imperial University</td>
</tr>
<tr>
<td>1914</td>
<td>The prototype of the university museum</td>
</tr>
<tr>
<td>1959</td>
<td>Museum attached to the Faculty of Literature</td>
</tr>
<tr>
<td>1989</td>
<td>A basic plan for Natural History Museum</td>
</tr>
<tr>
<td>1997</td>
<td>Recommendation for establishing university museums by the Science Council to the Ministry of Education.</td>
</tr>
<tr>
<td>1997</td>
<td>Foundation of the Kyoto University Museum</td>
</tr>
<tr>
<td>2000</td>
<td>New building for natural science completed</td>
</tr>
<tr>
<td>2001</td>
<td>Exhibition rooms opened for citizens</td>
</tr>
</tbody>
</table>
The three missions of the university museum:

1. preserving and maintaining valuable collections,
   (we have 2.5 million specimens)

2. promoting the utilization of collections for research and education,

3. popularizing the scientific and educational activities of museum and university,
Type specimen as voucher of the election of new species

Meaning of Specimens

Type species of Nauman’s elephant, inhabited Japan between a few hundred to a few ten thousand years ago.
Specimens as witness of nature surrounding us.

Meaning of Specimens

Large catfish and carp from Biwa lake collected more than 25 years ago.
Specimens as cultural heritage

Meaning of Specimens

Map of Kyoto City, 1831
Specimens can help understanding

Meaning of Specimens

Model of sea urchin from the beginning of the 20th Century
Collection is not dead stock!
The three missions of the university museum:

1. preserving and maintaining valuable collections,

2. promoting the utilization of collections for research and education,

3. popularizing the scientific and educational activities of museum and university,
Air conditioned storage rooms

Natural and cultural heritages are stored for our descendants.
Research and collecting activities

Study of the tropical rain forest ecology, originally lead by late Professor T. Inoue
Collected samples are processed, studied and stored.
Database system for easy access to the collection.
The three missions of the university museum:

1. preserving and maintaining valuable collections,

2. promoting the utilization of collections for research and education,

3. popularizing the scientific and educational activities of museum and university,
Exhibition rooms introducing university’s scientific activities to citizens

Guided tour

Evolution and fossils, a part of natural history exhibition
Museum's network system

Exhibition hall
- large size monitor
- small size monitors

MUSE LABO

International Network
- transmitting scientific activities of the university
- expedition
- satellite mission
- tele-lectures
- internet contents
- database
- receiving current scientific happenings of the world

Research rooms
- terminals
- tele-conference system

Storage rooms
- mobile terminals

University's Network

Server
Muse Lab. A small theater in the museum's exhibition hall, the center for popularizing scientific activities of the university

transmitting LECTURES
on scientific tradition of the university
on new discoveries by the university
on new hypothesis by the university

receiving LIVE IMAGES
on university's expeditions
on current scientific missions of the university and other institutions
I enjoy telling you about my experience.
You enjoy learning what is new to you.
Computer program for testing the intelligence of chimpanzee is also installed in the exhibition room. You can compete with chimpanzee.
Real time seismological data are displayed at the entrance of our museum.
Today’s topics

1. What is university museum?

2. Our university’s data base system

3. University’s multi-media
Database

Chaotic is the characteristic of our collection
The Kyoto University Museum's Collection Database (KUMC)

**NOMENCLATURE TABLE**

- **Species ID**
  - Latin name
  - Author
  - Japanese name
  - Etc.

- Related information table
  - **present** status of the species within the hierarchial system of nomenclature

- Liable to change with the development of nomenclatural sciences

**SPECIMEN TABLE**

- **Species ID**
- **[Species ID2]**
  - Information table
    - Date of registration
    - Registrating person
    - Revising person
    - Identifying person
    - Confidential category
    - Designation of holotype
    - Etc.

- Entrance for the user

**DETAILED INFORMATION TABLE**

- **Specimen ID**
  - Histeresis table
    - Source, collector, storage location, etc.
  - Images table
    - Photo ID, etc.
  - Literature table
    - Bibliographic information of the related reference

- Specimen specific table
  - Original specimen ID!
  - Geological formation name
  - Excavation site no., etc.

- Existant information with different format
Database content is accessible in the exhibition rooms and through internet.
Today's topics

1. What is university museum?
2. Our university's database system
3. University museum's multimedia
Museum and elementary education

Chaotic situation dominating in the elementary, secondary as well as in high Schools

Current issues
1. Too simplified curriculum
2. Free Saturday for self-learning
3. Introducing a new subject: “time of integrated learning”
4. Hypothesis-verifying style learning

Negative consequences
1. Less engagement with learning
2. Playing games instead of self-learning
3. Synthesis without basic knowledge
4. Just like giving pupils with jet-plane driver license

Pupils are potential customer of university!

University museum’s initiative for improving the situation
Guided tours
Lectures
Moving museum
Science schools
and
Providing with attractive contents for learning through internet
Web content by Kawakami

http://chigaku.ed.gifu-u.ac.jp/chigakuuhp/

To provide pupils and teachers with:

1. understandable explanations of the subject to be learned,
2. provide with photos and diagrams to make the learning easy and enjoyable

To cover the material for learning:

1. for natural science, with special emphasis on earth science
2. from elementary to high school

To be open for anyone interested in the subject
<table>
<thead>
<tr>
<th>項目</th>
<th>内容</th>
</tr>
</thead>
<tbody>
<tr>
<td>天文分野</td>
<td>宇宙から見た地球の画像を公開（写真：NASA）</td>
</tr>
<tr>
<td>新月の画像</td>
<td>月の満ち欠けを月面にあわせた新月の画像</td>
</tr>
<tr>
<td>新月の金星画像</td>
<td>星上の天体写真で撮影の新月と金星の写真</td>
</tr>
<tr>
<td>火星画像</td>
<td>火星を屋上天体望遠鏡の野外観測から撮影しました</td>
</tr>
<tr>
<td>東昇画像</td>
<td>木星と衛星画像、ガリレオ衛星の東昇写真と木星の衛星写真を公開</td>
</tr>
<tr>
<td>土星日の日の画像</td>
<td>2002年3月20日の土星日の日を屋上のラッペルから撮影した写真</td>
</tr>
<tr>
<td>その他の天体</td>
<td>その他天体の写真を公開しました</td>
</tr>
<tr>
<td>太陽系の惑星について</td>
<td>太陽系と惑星のデータを公開しました</td>
</tr>
</tbody>
</table>
金星の変化の記録

地学科では金星の大きさや形の変化の様子を、1月から3月までの3ヶ月間に渡り屋上の天体望遠鏡を用いて撮影してきました。ここではその変化の様子を紹介します。

画像はこれまでに取得したデータを用いている。
日付は東方最大離角からの日数をもとに換算した。


A B A A A C
University museum can provide hard and soft infrastructures for experiencing joy of learning
University’s engagement with elementary and secondary education in near future

<table>
<thead>
<tr>
<th>University’s engagement with elementary and secondary education in near future</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Positive feedback</strong></td>
</tr>
<tr>
<td><strong>Caeuf planning</strong></td>
</tr>
<tr>
<td><strong>Good resonance</strong></td>
</tr>
</tbody>
</table>

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**京都大学生涯学習ベンチャー・ラボ**

<table>
<thead>
<tr>
<th>設置目的</th>
<th>京都大学がもつ知的・人的資源を活用して、以下の業務を行う 1)初等・中等教育の現場における児童・生徒の学習意欲向上 2)現場教員のリカレント教育プログラムの提供</th>
</tr>
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**組織**

<table>
<thead>
<tr>
<th>総合博物館等教官</th>
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**業務**

<table>
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<tr>
<th>協力教官の発掘</th>
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<tr>
<td>カリキュラム・シラバス策定</td>
</tr>
<tr>
<td>教材の開発・制作</td>
</tr>
<tr>
<td>実施日程管理</td>
</tr>
<tr>
<td>広報・参加者の募集</td>
</tr>
<tr>
<td>実施事業の事後評価</td>
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**從来より開催中の大学解放関連事業の効率的実施の支援**

<table>
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<tbody>
<tr>
<td>開催日程重複の調整</td>
</tr>
<tr>
<td>参加者に便利な開催場所の確保</td>
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<tr>
<td>効率的広報の実施</td>
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</tbody>
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（魅力ある統一パンフレット、ビラ、大学ホームぺージでの労力情報の提供）

京都大学記者クラブへの広報依頼

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**京都府教育委員会**

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