The Campus Plant Digital Library Project

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for  
Systems Analysis for Information Management  
Focus on Creating Digital Libraries (LIS 647/ICS 691)  
with thanks to our teacher, Dr. Luz M. Quiroga  
and to our project mentors  
Roxanne Adams, Eileen Herring
Rock and Plants: The Vision of the Mānoa Campus as a Botanical Garden

Joseph F. Rock
(1884–1962)
“Pohaku”

1908: Botanical collector, Hawai‘i Territorial Division of Forestry
1911: Botanist at College of Hawai‘i, in charge of the herbarium
1919: Professor of systematic botany
1955–1957: Botanized in Hawai‘i
1962: Awarded honorary PhD, while professor of Oriental studies

Rock planting *H. giffardianus*, 1 September 1940
Photo: L. W. Bryan; HI Archives portrait no: 28
A Century’s Assemblage of Plants

King Prajadhipok of Siam planted Chaulmoogra (*Hydnocarpus anthelmintica*) in honor of Alice Ball for her work on Hansen’s Disease using this tree.

Botanists and horticulturalists added plants collected on their work in the Pacific and beyond; the golden variety of *Delonix regia* was originally collected at the Papeari Botanical Garden on Tahiti in 1975, by Horace Clay, whose name it now bears.

Early visiting scholars who came to give lectures at UH, like Carl Sandberg, often planted a tree while they were here.
The problem...

A botanical garden is more than a collection of plants — it is also a set of carefully kept records about the plants.

We have the plants, but not the records, so...

in 2011, Roxanne Adams, Director of UH Buildings and Grounds Management (BGM) initiated an inventory of the existing plants and a project to map and collect information
Campus map shows > 5000 plants
Allows multiple kinds of queries
Gives scientific and cultural info
Provides links to other databases

http://manoa.hawaii.edu/landscaping/plantmap.html
Inventory built on earlier work

The information problem

Originally assembled in one big database

As records grew both in number and depth, this became unwieldy

Much of the information was redundant, e.g. the same data for each member of a species

So, the first problem for our project is how to deal systematically with the data
Nested classes
e.g. biogeography

- Native
  - Endemic: e.g. Māmaki
  - Indigenous: e.g. Hala

-Introduced
  - Polynesian: e.g. Kalo
  - Cosmopolitan: e.g. Lilikoʻi
Classing attributes
Attributes understood as metadata

DarwinCore is a modified DublinCore schema used for biological collections
Metadata in a digital library

A working Greenstone Library prototype of the dedicated trees
Project problem 2

How does the project function to support the larger goal?
(treating the campus plant collection as a botanical garden)
Formal Position of the Campus Plants Project within BGM
Formal Position of the Campus Plants Project within BGM

Organization of Waimea Botanical Garden
Effective Position of the Campus Plants Project within BGM
Effective Position of the Campus Plants Project within BGM

Potential Organization of Plant Collections Curation at UH Mānoa
Refining the question

How best to manage the campus plants data?
Refining the question

How best to manage the campus plants data?

How best to structure the campus plants project?
Refining the question

How best to manage the campus plant collection as a botanical garden?

How best to manage the campus plants data?  
How best to structure the campus plants project?
Refining the question

How best to manage the campus plant collection as a botanical garden?

How best to manage the campus plants data?

• Structuring data classes
• Standardizing Metadata
• Evaluating Greenstone prototype

How best to structure the campus plants project?

• Understanding data flow
• Using interoperable metadata schema
• Formalizing organization
• Problem and Prototype Review
• Limitations of the Study
• Conclusion - Recommendations – Solutions
Special Thanks

• Roxanne Adams

• Eileen Herring

• Dr. Luz M. Quiroga
¿Q & A?
Hawai‘i State Librarians’ Association (HLSA)
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The night
Feedback
Instructors
Public Phone-in
Experienced Gained