



WELLESLEY COLLEGE

Global Flora: How to Curate a Collection

This summer, the steel skeleton of the Global Flora conservatory seemed to magically arise, being transformed from two-dimensional, paper construction documents into an elegant three-dimensional building like no other in New England. It was fascinating to watch each of the 295 pieces of steel swirl into place at the end of a crane's cable and we found ourselves watching on our days off via the webcam [web.wellesley.edu/video/greenhouse.html]. Being a newcomer to the staff, I was not a huge part of the ten-year process that brought this gleaming structure into place and I can't imagine the satisfaction of those who brought us to this point, particularly Botanic Gardens Director Kristina Jones.

With the foundations poured and steel affixed atop them we can begin to get a feel for the space, the three dimensional reality rather than paper blueprints with human silhouettes. It feels taller than I imagined, with a greater volume. It feels like the narrow, tall-ceiling churches of my Catholic upbringing, but with a sloped, arching roof rather than the rectilinear, pew-filled space.

The Global Flora conservatory is a cathedral of sorts, a temple of biodiversity that will display an amazing set of plants culled from the 400,000 or so known species. But now we are faced with a crucial question. Since we can't grow them all, which ones do we grow?



The steel frame of the new greenhouse, 202 beams, 62 columns and 31 bracings, is now complete!

It really becomes a process of curation, applying a set of filters not unlike what a curator at an art museum would do. Size certainly is one filter. Just as few museums display monumental art inside (the wonderful MASS MoCA in North Adams, MA is

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an exception) few conservatories can manage to grow forest giants longterm.

Climatic considerations also come into play as we will be growing plants able to flourish in a certain range of temperatures determined by the set points on our computer-controlled Argus system. Light and water, two essentials for plant growth, are more easily and cheaply managed. The south-facing conservatory should be resplendent with light. The summer glare will be cut by a mechanical, interior shade system, also computer controlled. Water will be recycled rain water delivered to two massive underground cisterns then drawn up, filtered and applied where needed.

No two botanic gardens have identical collections. In the case of Global Flora the focus has an emphasis on plant form—those plants whose visual appearance tells a story of evolution, adaptation and uniqueness. Dr. Jones explains that this flows from the mission statement and in our case, the academic objectives for integrating plant science into the rest of the liberal arts at Wellesley. This emphasis builds a strong filter as it eliminates “the little brown birds” of the plant world and drives curatorial decisions.

We are beginning to amass a fairly strong set of filters to eliminate certain species: form, size, growth needs. Availability also comes into play. Some plants are just not in cultivation, despite how much you would long to have them in your collection.

What other filters would you bring to bear? What filters do you use in your own garden to make decisions about what to plant? A scientific teaching collection has to tell stories and be a teaching aid to faculty at Wellesley College across many disciplines.

Other filters I use, in addition to form, help drive choices about what plants to acquire. These include:

Utility: Is the plant economically important somewhere on the planet for food, spice, medicine or some other purpose?

Rarity: Is the plant listed in one of the categories of assessed endangered status on the International Union for Conservation of Nature Red List or federal lists of rare and endangered plants?

Documentation: Does the plant come from a documented institutional collection with accompanying data?

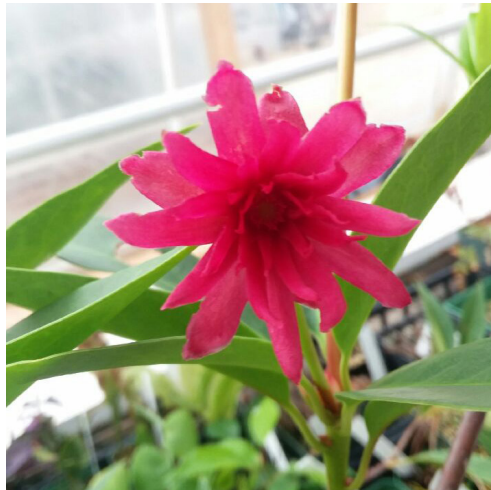
Teaching potential: Does the plant illustrate some important lesson for our students in the fields of botany, ecology or horticulture?

Research potential: Is the plant a current research subject or have that potential in the future?

Diversity: Does the plant represent a new family or genus in the collections?

Provenance: Is there information that ties the plant to a particular collector and locale in the world? This is important to researchers who often prefer this level of documented validity to their research.

Outreach: Is there something novel or beautiful about the plant so that it enhances the visitor experience? As a plant lover, I think every plant has beauty, but the general public often seizes on the biggest and brightest of leaves and flowers.



The striking Mexican anise tree is an old favorite of Collections Manager Rob Nicholson.

One new plant story at a time, we are slowly adding new plant material to the existing collections from the old conservatories. This week I had the pleasure of opening a box of plants ordered from the wonderful Camellia Forest Nursery in North Carolina. The first plant removed, *Camellia sinensis*, the tea plant, gives us a product worth \$100 billion to world economies. A second plant was an old friend, the Mexican anise tree, *Illicium mexicanum*, a plant I helped introduce to cultivation out of Mexico almost thirty years ago. It has red starburst flowers and the crushed leaves have the anise scent familiar to chefs who know five-spice powder. It is a basal angiosperm so is one of the more primitive flowering plants. I guess it added a final filter, sentiment, as it makes me think of younger days

collecting the beauties of nature in far off corners. Hopefully it inspires Wellesley students to delve into the amazing world of plants.

by Rob Nicholson
Botanical Collections Manager

Editor's Note: Rob Nicholson arrived on campus last spring after a long career at the the Arnold Arboretum and the Smith College conservatory to help develop the Global Flora collection.