

The Orchid Conservation Alliance
564 Arden Drive
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Nov 16, 2011

Today was the final day of the meeting. It started out with a talk on phalaenopsis breeding that I went to because it was the only talk of the morning. It was actually more interesting than I thought it would be, because the speaker, Wen Huei Chen of the National Cheng King University in Taiwan, has done quite a lot of work using molecular biology to understand phal breeding. Since I don't keep up with this field, I don't know how new it is, but his Orchid Research Center is making transgenic plants that show resistance to virus and bacterial pathogens. The molecular biology and pathogen testing can be done on very young plants, and the survivors can then be grown to maturity for breeding of resistant strains.

I'll fill you in on the two talks that were of most interest to me from the standpoint of conservation. Taiwan is an island, like many others, that has too many people, and the orchids are disappearing where the population is growing, reducing forest to agriculture and development, and where some orchids are used for medicine. Nothing new there. However, Rebecca Shu, an ecologist at the Taiwan Forest Research Institute, has begun to use geographic information software to model the distribution patterns for the rare orchids and strategize about protection. Twenty four rare species, including 11 endemic species, were selected for modeling. Using species locality information and 26 environmental variables, the potential distribution of each species was mapped after correlating the known locations with the environmental variables. These 24 maps were then combined to create a species richness map for the entire island. The resulting map shows that many richness hotspots fall outside protected areas. Now it will be necessary to go to the hotspots, see what is actually there and see what can be done to protect the orchids if they still exist. In the western part of Taiwan, the geography is flat and largely used for agriculture. Thus it is doubtful that many of the projected hotspots in the western part of the island have much left. The eastern part of the island is very rugged mountains, and it is more likely that the potential hotspots will be found to have orchids. This project was particularly interesting to me, because Joe Meisel of the Ceiba Foundation for Tropical Conservation is working on a very similar approach to mapping potential orchid hotspots in Ecuador with financial support from the OCA – which means you members.

The other talk of particular interest was an update from Phil Seaton of Kew Gardens in the UK on the Orchid Seed Store for Sustainable use, OSSSU (www.ossu.org). In 2006 he and Hugh Pritchard received a grant from the Darwin Initiative to establish a series of orchid seedbanks. The plan is not just to store seed but to store it, at least, under a standard set of conditions and monitor the viability of the seed from storage on. 26 sites around the globe are now storing seed of about 500 species and generating lots of viability data. The plan is that seed will be available for plant regeneration in the future when reintroduction is attempted. I can come up with all sorts of caveats about the actual utility of seed banking orchids, but there is no doubt that Phil and his colleagues have done a wonderful job of teaching people how to store seed and how to grow plants from the stored seed. Once trained they will doubtless come up with some novel uses for the seed.

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The last talk of the day was by Phillip Cribb. Cribb retired as Curator of the Orchid Herbarium at Kew Gardens, UK, in 2006 after 32 years on the job. He has published many orchid books and over 370 research papers on orchids. He is also very interested in the art of orchid and botanical illustration, and that was the topic of his talk. Cribb is the model intelligent, urbane, well-educated, British gentleman. I have known him from various orchid functions over quite a few years. If you ever get a chance to hear him talk, take it. I was going to say that he has forgotten more about orchids than I am likely ever to know, but in actuality I don't think he has ever forgotten anything about orchids. As you might guess, Kew Gardens has an excellent collection of botanical illustrations, and Cribb has studied it at length. In fact, Kew has an excellent collection of everything. For example, they have Captain Bligh's botanical notes and his herbarium sheets – you can go there and see them. And it was through Kew that rubber seeds were smuggled out of Peru and sent to southeast Asia to break the Peruvian rubber monopoly. I have no doubt that they have some of the original seed rolling around in a desk drawer somewhere. Anyway, Phillip Cribb covered botanical illustration from the Codex Vindabonensis published in 512 AD to relatively modern times and showed how it enables plant identification, solves mysteries of plant taxonomy, enables knowledge of plant habitat and ecology, informs horticulture, provides a history of botany from ancient times to the present, and is just fun to look at. It was a wonderful talk. With any luck it will be published somewhere so that you don't have to take my word for it.

After that, lots of closing speeches, thanking people, honoring people with various awards, reporting on the formalities of committees and official bodies, and as the final sentence of the official business of the World Orchid Conference, expressing the hope that people would meet in 2017 in Guayaquil, Ecuador. But, I already told you of that announcement and showed the happy Portillas.

As for myself, there will still be some more writing and reporting, but on Thursday, Nov 18th, I am off to Hong Kong for a few days, and the output will suffer. For now I will just show some orchid pictures and some of the food in the food court at the Marina Bay Convention Center. You will just have to guess what the food is, because I have no idea. It's been great to be in Singapore.



Cheers, PT

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