

Two sides of the same coin – finding common ground among plant conservation professionals and commercial propagators[©]

J.R. Clark^a

Director of Plant Conservation, Institute for Conservation Research, San Diego Zoo Global; President and Executive Director, Center for Plant Conservation, 15600 San Pasqual Valley Rd., Escondido, California 92027, USA.

INTRODUCTION

If ever asked, “Why should we appreciate plants and nature?” I can quickly and without hesitation reply, “All life depends on plants. Without the world’s flora, life as we know it would not exist.” But I have known many others, my friends and colleagues in commercial nurseries and other related professions, who know plants primarily as the source of their livelihood. In growing plants for sale, these people contribute significantly to the global economy and provide well for their families and others.

Are these in fact competing value systems or are they two sides of the same coin, where plant diversity – both wild and cultivated – contributes to our quality of life? I believe that in exploring this question, we can come to a greater understanding of why plants matter and better learn how we can work together for a better tomorrow.

For me, I think, I’ve believed in the value and importance of plants and nature for nearly all of my life, or at least it seems that way. Perhaps this understanding was a serendipitous result of being born in the 1970s, raised in a middle-class family in rural Ohio, steeped in educational television shows like *Wild Kingdom* and *Nature*, and influenced by a number of well-meaning teachers along the way, including my mother, an avid gardener. And if this were not enough, I grew up in a time when environmental concerns were increasingly in the public eye.

Two years after I was born, Peter Raven had this to say in the opening to his 1976 essay on plant conservation:

“The roughly 300,000 species of green plants and algae provide the means by which the energy of the sun that reaches the earth’s surface is locked up in chemical bonds. By carrying out this process, the plants and algae provide all of the food for from ten to thirty times as many heterotrophic organisms, including all the animals and man himself. ... the diversity of plants is the underlying factor controlling the diversity of other organisms and thus the stability of the world ecosystem. On these grounds alone, the conservation of the plant world is ultimately a matter of survival for the human race.”

In the 1970s, when Raven and other notable visionaries were espousing the virtues of conserving plants and nature, the world was in the midst of an environmental awakening of sorts. Spawned by a post-war realization that our planet was indeed a small place and getting smaller, globally-minded conservation organizations began to spring up including the International Union for the Conservation of Nature (1948), The Nature Conservancy (1951), and World Wildlife Fund (1961).

Many existing gardens, zoos, museums, and other centers of learning, including the Missouri Botanical Garden, The Royal Botanic Gardens Kew, the San Diego Zoo, and the National Museum of Natural History, among many others, were turning at least part of their attention and mission towards global environmental concerns. In the USA alone, the 1960s and 1970s witnessed a boom of new gardens and institutions including the National Tropical Botanical Garden, Chicago Botanic Garden, and the Marie Selby Botanical Gardens, all of which came onto the scene as conservation organizations.

As a result of this period of heightened ecological awareness, the children of the 1960s

^aE-mail: jclark@sandiegozoo.org

and onward have been steeped in conservation language, science, and culture. It would seem that if these trends continue, we would all soon become aware of the value of plants and agree to conserve them at all costs.

CHALLENGES TO THE CONSERVATION ETHIC

Despite indications that the world is ready to embrace conservation, tangible, large-scale results on the ground are often elusive. Remaining tracts of land continue to be cleared, species declines appear to be accelerating, and global climate change threatens the survival of even the most protected places and habitats on Earth. Putting it bluntly, Peter Kareiva, former Chief Scientist and Vice President of The Nature Conservancy, along with his coauthors state, “By its own measure, conservation is failing.” (Kareiva et al., 2012).

If conversion to a conservation ethic were simply a result of one’s cultural environment and a concerted conservation campaign, it would be an easy matter for those in industry and the general public alike to adopt a conservation mindset. To the contrary, very real challenges in economics, short term gain vs. long term investments, and the simple but confounding issues that we as a species are creatures of habit, all compete with conservation in both philosophy and practice.

Exacerbating these very real challenges for conservation, fewer people today identify themselves as environmentalists than in the previous decade. Between 1989 and 2008, the percentage of the USA public that self-identified as environmentalists decreased from 76% to 41% (Marvier, 2013). As I and others have stated countless times, many are perhaps disenchanting with the onslaught of “doom and gloom.” Still others might simply be unaware of the importance of plants and the environment despite intensive education campaigns by the Nature Conservancy, the Center for Plant Conservation, and many other conservation organizations large and small. In a world with so many challenges, as well as so many new and emerging opportunities, protection of nature seems distant and irrelevant to the daily lives of many.

THE OTHER PERSPECTIVES

Some of you might share my upbringing and worldview while many of you see things differently. Considering the wealth of experiences out there, it is no wonder. Take for example the following: a person who has only known the inner city her or his whole life. It must be really hard for someone to know and care for nature if they grew up away from the fields, woods, and wildlife that I took for granted as a child. Or still more challenging, I wonder what it would be like growing up effectively “in nature” but being so poor that I was preoccupied with where my next meal would come from.

On the opposite end of things, I often think about what it is like to be “any kid” in the USA today, a kid who has only known a connected world, on line, always looking at a screen, virtually free – but technically bound. In this case, I particularly worry about my son who by the age of 2 could already navigate an iPhone. I worry about how I will teach him to love the world outside when the world inside is so bright and captivating.

But there is cause for optimism because so many of us do appreciate plants, if only for different reasons. For me, I could have taken a path into the commercial plant industry, working in horticulture and plant propagation which I have done at various stages through my life. But instead, I jumped on the conservation bandwagon, driven by science, and found myself receptive to Raven’s call to conservation long before I knew who he was. But I am fully aware this is only one of many ways to look at plants. The real trick, and the truly difficult part of what I believe needs to be done, is finding creative ways to appreciate and save nature regardless of our differences and perspectives. Preserving our quality of life and maintaining our livelihoods at the same time is essential. To do this, we have to go back to what it means to do conservation, and begin listening again to others to learn what it is we should be doing.

FOR THE FUTURE OF OUR PLANET, WE MUST BE OPEN TO NEW IDEAS

The oft repeated quote, “We have two ears and one mouth so that we can listen twice

as much as we speak” comes to mind. Attributed to Epictitus and referenced everywhere from church sermons to Forbes Magazine, this message speaks to the value of learning from others so that one can grow within. For conservation's sake, I would take it a step further and say that we also have two eyes — we need to both listen and watch what others are doing so that we might create a focus — a mission — that stands the greatest chance of success.

We cannot do this alone and we certainly can't do it by forcing our conservation message upon others. We have to make conservation speak to them in whatever way works best. A number of prominent conservationists seem to agree with this notion including Peter Kareiva mentioned before, Emma Marris, environmentalist and author of *Rambunctious Garden*, and Greg Aplet, Senior Science Director at The Wilderness Society. These and many other scientists and environmentalist writers are advocating for a more introspective approach to conservation, one where we are open to new ideas and to experimentation.

In a recent editorial in the scientific journal *Nature*, Tallis and Lubchenco (2014) proposed “a unified and diverse conservation ethic; one that recognizes and accepts all values of nature, from intrinsic to instrumental, and welcomes all philosophies justifying nature protection and restoration, from ethical to economic, and from aesthetic to utilitarian.” In this way, the authors argue, we will be able to fully embrace the role nature plays in society and, in turn, engender support and concern for the natural world among us all.

To accomplish this, we need not only listen to others, but experiment with new approaches and watch what happens ... and see how others react. Marris and Aplet write in a 2014 New York Times editorial, “in the face of great uncertainty, we should hedge our bets and allocate large swaths of land to ... restoration, innovation and hands-off observation.” These new experiments go well beyond the borders of parks, preserves and remote wilderness. Proponents argue that we should be taking advantage of fallow farm lands, increasing numbers of vacant lots in cities, and abandoned industrial sites throughout the USA and the world. It is here that more people will see the results of conservation work and will provide opportunities for feedback and engagement including citizen science.

Through increased exposure and participation, we also stand a chance of engendering support; those who once did not care for plants and nature might begin to do so. And plant propagators have a role to play in this. It has been shown that when people are engaged in conservation that they increasingly become advocates for the mission and practice of conservation (Johnson, 2014). And what better way to engage people than to bring nature to where they live? New approaches might best include maintaining endangered species not just in preserves but also in cities and private collections at times. And in creating ways that a diversity of plants are available, not just those commonly used in landscaping and horticulture, we will create more opportunity for us both commercially and environmentally.

I recently spoke with Emma Marris and she joked with me that she would love to see golden lion tamarins (an endangered New World monkey) swinging through the cities of the Southeast USA in place of squirrels. While this might be a bit farfetched, the potential to introduce endangered trees and shrubs into city landscapes might be closer to reality. In doing so, we might further engage the public in plant conservation, a practice that was previously relegated to “the experts” for decades. And although this prospect has not been attempted on any meaningful scale to date, Peter Raven (1976) has suggested that lay enthusiasts might serve conservation by maintaining endangered plants in private collections, managed as part of distributed populations and in conjunction with botanic gardens and other enthusiasts.

PLANT DIVERSITY IS THE FUTURE — LET'S PRESERVE IT

I am comforted in knowing that I am not alone in my concern and love for plants; organizations like the Center for Plant Conservation are made up of some of the most devoted and passionate plant lovers there are. And when I see industry professionals actively engaged in discussion on how to be more sustainable and diverse in their businesses, like I heard so many discussing at the IPPS meeting in Cincinnati, I am again encouraged about the future.

In the end, just imagine how wonderful the world could be if the entirety of its people cared deeply about our only flora. The diversity of plants in nature has led to the infinite varieties and cultivars we know and love in our managed landscapes as well as in the food that graces our tables. To maintain and to continue to advance this diversity for everyone's good requires the ability to respect and embrace a diversity of ideas on how the world ought to be. As plant growers and plant lovers, whether garden enthusiasts, plant conservationists, or commercial plant propagators, it is our responsibility to manage and preserve this diversity. Let's embrace this notion and engender support for an environmentally and economically greener tomorrow. So long as we all care for plants and nature in some meaningful way, we all benefit in the end.

Literature cited

Johnson, M. (2014). Citizen science increases environmental awareness, advocacy. ScienceDaily. <http://sciencedaily.com/>

Kareiva, P, Marvier, M., and Lalasz, R. (2012). The Breakthrough Institute. <http://thebreakthrough.org/>

Marris, E., and Apletoc, G. (2014). How to mend the conservation divide. The New York Times October 31, 2014

Marvier, M. (2013). New conservation is true conservation. *Conserv. Biol.* 28 (1), 1-3 <http://dx.doi.org/10.1111/cobi.12206>. PubMed

Raven, P.H. (1976). Ethics and attitudes. In *Conservation of Threatened Plants* (Springer), p.155-179.

Tallis, H., and Lubchenco, J. (2014). Working together: A call for inclusive conservation. *Nature* 515 (7525), 27-28 <http://dx.doi.org/10.1038/515027a>. PubMed