

The business and mission of conservation: convincing people that species and habitats are worth saving

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Introduction

I am fascinated by biodiversity, like many of you I read every new book, I watch every documentary and above all I relish interacting with biodiversity in wild habitats, museums, gardens, zoos, and even the kitchen. Yet it was a shock to me to realize that most people are not deeply fascinated by biodiversity. While E.O. Wilson proposed that our species has a deep affinity with biodiversity, “biophilia”, I fear that for the majority of the people biodiversity is both an abstract and baffling entity. As ecologists and conservationists we are spending our lives studying and attempting to conserve a resource that many people neither understand nor value.

Yet this is an exciting time for ecologists and conservationists. Fundamentally we are the generation of conservation professionals who will be measured by what we can save during this time of massive environmental degradation and social change.

We face incredible challenges. You could argue that as a species we are undertaking ecological experimentation on a vast scale and it is an experiment that poses extraordinary risks to our societies and to the biodiversity and ecological processes that underpin the existence of those societies. We will be effective conservationists by developing new scientific tools and fundamentally through retaining habitat but for that to happen we need to securely establish our institutions and our work within people’s lives. This means that national parks, research institutions, zoos, museums and botanic gardens need to start working with their communities.

The Biodiversity Challenge

We are witnessing changes to biodiversity that we could not have predicted a generation ago. These phenomenons include the global climate change, the rapid global decline in amphibians, the massive clearance of ancient forests in both the temperate and tropical areas, the impact of exotic and invasive species on forests, over-harvesting of medicinal plants, the collapse of bee populations in Europe and North America, and now accelerating extinction events for corals, sharks, primates, river turtles and gymnosperms. On top of this we are on the edge of extraordinary social and economic change-the era of cheap fuel and cheap food is now over. Assumptions on growth and prosperity will start to change. Not only do we have to campaign for our local species but we are also having to consider how impact the planet as a whole. Our institutions and the communities we work with have a global and local impact.

In the last twenty years we have seen the need for conservation incorporated into national and international legislation. The Convention on Biological Diversity ratified in 1992 changed everything. Importantly our collective tool kit for conservation has grown beyond recognition over the last thirty years and, perhaps most importantly, restoration of endangered species and degraded habitats is a working tool for conservation. Few countries in the world have demonstrated the ability to restore natural resources as well as Korea-your heroic rebuilding of your forest resources is an extraordinary example of rebuilding natural capital. Similarly we are

learning the gems of great beauty and value do survive-for instance the survival of the DMZ wilderness is an opportunity to create national awareness of Korea's biodiversity and to promote its restoration on a large scale.

Conservation at a certain level is no longer seen as optional, as merely an ethical or sentimental activity driven by our affection for a particular small furry animal or spring flower. The recent publication of the Millenium Ecosystem Assessment (2005) clearly stated the need for conservation. Human induced change in land cover at the global scale is changing species abundance-we are losing the rare specialists and encouraging the generalist species who like our disturbed nutrient rich new landscapes. These changes will impact on ecosystem process; and the consequences on humanity will be profound and particularly hard on the poor, who are most vulnerable to the loss or disruption of ecosystem services. For the first time as conservationists we are able to say that biodiversity is part of the economy and part of the national economic and cultural metabolism.

Yet this is still abstract and not of immediate concern to most people. The science is clear but the public understanding is still murky. We need to effectively communicate the links between our work and the ability of people to farm fertile land, to harvest fruit from pollinated crops, or for rural communities to harvest wild mushrooms or to survive spring floods. All of these ecosystem services depend upon biodiversity yet the communities we work for, whose funding often support our work, remain at best ambivalent about biodiversity.

Around the world biodiversity institutions (protected areas, botanic gardens, museums, universities and zoos) are demonstrating their role in conserving and documenting biological diversity and showing that they can develop vital partnerships within their communities. As the extinction spasm accelerates, and the species and habitats we value erode, our combined professional skills in threatened species management will be increasingly vital. The accumulated collections that we nurture in our

museums, zoos and botanic gardens will record what we are losing, and offer resources for what we choose to restore. Of immense scientific and cultural value, the viability of these biological collections represents a great financial and political challenge. So many great biological collections have been lost with time and with each loss we are denied both historical perspectives and scientific opportunities.

We are becoming more sophisticated business entities as we recognize that we are increasingly dependent upon the support and financial patronage of our communities and this community can include government agencies, urban populations or project partners in remote mountain communities. This is a profound change from the days when visitors were seen as an awkward impediment that stood between a botanic garden curator and absolute horticultural perfection. As a student studying in botanic gardens I would hear the phrase "this would be a great garden if it were not for the public" now we recognize that this "will only be a great garden if we get the public involved!"

As ecologists and conservationists we now recognize that our institutions are translators of environmental science to millions of people of all ages and all communities and we need to balance our mission with our business. This is perhaps one of the most important recent changes for biodiversity institutions. We have a noble and important mission, translating the value of biodiversity and the imperative of conserving species and habitats, and we have a business, raising funds and resources to pay our staff and keep our programs advancing, a vital part of that business plan is demonstrating our relevance to our "pay masters", whether government or private, and to our constituents, the public and the communities we serve.

Many biodiversity institutions are doing extraordinary work-documenting the inventory of life, yet this work, is often effectively invisible since it takes place in the herbarium, field or laboratory. Our politicians are lobbied to fund our work, whether here in Korea, or the UK and

US, and they wonder why our organizations exist and what we really do with their hard earned tax funds. We need to market our work and our mission.

Accordingly and with all humility I offer some ideas on how we can advance the cause of conservation. These are based on my work at Fairchild and Al Ain and with national parks, botanic gardens, zoos and museums, big and small, and I hope you will find some of them relevant and useful.

1. Breakdown the barriers between people and biodiversity.

By exposing more people to more biodiversity, my guess is that people will become champions for biodiversity. We need to provide venues where people can meet other species and meet them in an intimate and personal manner. This may be in a garden, on a butterfly or bird watching trip, or a nature hike. To bridge the gap between people and biodiversity our institutions need to provide biological translation services—where we can introduce biodiversity to an increasingly urban and bio-illiterate society. A key part of this approach is bringing biodiversity into people's lives. At Fairchild Tropical Botanic Garden we work with local partners (including schools, churches, hospitals and urban parks) to create butterfly and bird gardens and in contrast we brought the wild to Fairchild with a series of events designed to bring our regional wilderness, the Everglades National Park, to our botanic garden visitors. Another approach is to use festivals as a means of introducing people to biodiversity. Many institutions use festivals as a way of linking people and biodiversity—butterfly, blossom, harvest or migration festivals can engender great personal enthusiasms and useful institutional publicity.

2. Link our conservation concerns with daily life.

I soon learnt that a concern for the rainforests of Madagascar or Haiti seems like an exotic whimsy for the

average residents of Miami or London. However by linking our concerns for conservation with the concerns of a population you can generate interest and concern. At Fairchild we used an interest in food to develop an interest in tropical conservation—we mercilessly used chocolate and coffee to discuss rainforest issues. We linked schools in Miami to our field conservation projects in the South Pacific and developed work sessions based on shared concerns—for instance the impact of climate change on coastal communities. The One Planet Living Index developed by the World Wild Fund for Nature (WWF) is a very valuable way for a biodiversity institution to assess the sustainability of its own operations and a way to communicate with its constituency. At Al Ain we use this system as a guide for developing our sustainability master plan and directing or public outreach. A biodiversity institution needs to incorporate sustainability into the core of its mission and programs—we are expected to lead on this topic and it is an invaluable opportunity to demonstrate our relevance.

A huge issue here is our role in slowing the production of greenhouse gases and the rate of deforestation. Deforestation accounts for roughly 20 percent of global carbon emissions — and more than 30 percent of emissions from developing countries. Halting deforestation over the next 50 years would protect important habitat while also providing around 15 percent of the carbon-emissions reductions needed to stabilize global temperatures. Our ecological footprint extends into the carbon sink forests of the tropics and our institutions should demonstrate the highest levels of sustainability with regard to timber and fuel economy.

3. Ignore traditional boundaries and expected roles.

Look at your community and see what they like. We tested our boundaries at Fairchild and explored ideas that would increase the public's interest in our work and biodiversity in general. We tried open air cinema (very

popular with our guests but not with our neighbours), art festivals, bird watching trails and tours, set up a butterfly garden, ran chocolate and mango festivals. Design these new initiatives around your mission and your community and you will develop a good business. Your institution needs to be alive and attractive. For instance a botanic garden can develop habitats for butterflies and dragonflies as potent tools for education, use tigers as a symbol for both the loss and the restoration of wilderness, and use cinema to lure families.

4. Effectively communicate your success and use the web and other media for outreach.

Traditionally we are a modest crowd and the hardest lesson we may have to learn is the value of the “dark” art of publicity. We have a media say public and we need to work with that. The web site is now part of or public institution. We have to make sure our traditional academic values do not keep our achievements invisible. A key lesson learnt here is make sure you have access to somebody under the age of 25 and find out how they communicate and how they learn! Put your work on show- the new conservation biology laboratory at Fairchild allows the guest to walk along a corridor and view the work of the conservation labs.

5. Use your institutions for delight.

For an institution to thrive it needs to be loved, not only by our staff but by our community. We should use spectacular and beautiful exhibits as a means of building a community support. People make a choice to visit and support our institutions and habitats, we need them to come back and we need them to applaud our work. It is clear to me that delight and enjoyment is a critical first step in establishing an understanding and concern for biodiversity. A view of a magnificent flowering magnolia or watching migrating raptors can establish that sense of wonder. Do not under estimate the value of flowers,

butterflies and birds to charm, delight and inspire.

6. Bridge art and science.

Some of the most exciting initiatives in botanic gardens are occurring at the interplay of art and science. Illustrating a strong collaboration between scientists and artists and a locally focused mission is the Ethnobotanical Garden of Oaxaca, Mexico, where pre Hispanic motifs and dramatic design showcases the ethnobotanical heritage of Oaxaca State. This approach opens the institution to new communities and new opportunities for promotion and advertizing. At Fairchild we established a garden sculpture program that doubled our attendance over a year-it brought an entirely new audience to the institution and allowed many people to experience a tropical garden for the first time.

7. Develop a sense of cultural identity.

As a balance to increasing globalization there is an increasing interest in local identity, we saw this in the US with a spectacular surge of interest in regional cuisine, local food production and the “sense of place”. The global growth of the “Slow Food Movement” shows how a food based movement is now playing a role in the conservation of regional genetic resources and the sustainability of small farmers. Partnering with these groups allow s you to work with the most palatable component of biodiversity- food! An exhibition of mangos-with 250 varieties on a table, allows a myriad different stories to be told about biodiversity in the tropics.

8. Use business as a conservation tool.

There are many opportunities to use business to actively promote a conservation agenda. At one scale your institution can become a platform for supporting sustainable and biodiversity friendly business – for instance local honey producers or organic farmers can sell their products

at events or in your shop. At Fairchild we linked with farmers in Florida and with producers in Venezuela, Haiti, Zimbabwe and Kenya using fair trade principles. We also worked with developers in Florida and the Middle East and Asia to ensure that new housing and tourist developments were “green” and not “green-wash”.

9. Think Big.

Bold ideas can spark public enthusiasm. The success of cross border conservation areas throughout southern Africa has been one of conservation's great success stories. Similarly the use of big carnivores to promote continental scale conservation projects, for instance the “Path of the Panther” in Central America or from “Yellowstone to Yukon”, shows that great projects can be achieved. Perhaps the time is right for a national initiative in Korea to create a national network of wilderness with the DMZ as a hub, a series of wild landscapes, both retained and restored, that can once again echo to the roar of the tiger?

The American circus impresario, Phineas T. Barnum said “every crowd has a silver lining”. We need to make

our institutions enjoyable and inspiring places, once we have caught the imagination of our guests we can work with them on the big issues of biodiversity, sustainable development, food security and climate change. First and foremost we have to establish that emotional link between our institutions, biodiversity and people.

The challenge for us in the conservation community is to build on that emotional and aesthetic response in order to generate changes in both public behaviour and political will. We are seeing institutions all through the world moving beyond the traditional roles to encompass both local and global challenges. Korea has a remarkable portfolio of species and habitats and sits as a fulcrum in Asia—a nation with considerable influence as a political leader and consumer. Your leadership will have global benefits.

I thank you for this opportunity to share some thoughts on conservation—we are a privileged profession and we have immense opportunities to do good. Our professional legacy will be measured not only in papers published, specimens collected, and budgets balanced, but in lives changed, species conserved and habitats retained.