

# An Introduction to the St. Louis Declaration and the Codes of Conduct

By Peter White

Campus Box 3375

North Carolina Botanical Garden and  
Department of Biology

University of North Carolina

Chapel Hill, North Carolina

27599-3375

Peter.White@unc.edu

## Introduction

Botanical gardens, the horticultural industry, and gardeners have been responsible for some of the unwanted invaders in our natural areas and landscapes. It is estimated, for example, that 85 percent of woody plant invaders in North America were purposefully introduced for ornamental use (Reichard and Campbell 1996). Although horticulturists have become increasingly aware over the last several decades of a variety of environmental and conservation issues (e.g., integrated pest management, xeriscaping, the importance of native plants), awareness and consensus on the issue of invasive pest plants has been slower to develop. In this article I will present a brief review of this issue within botanical gardens (in part from my personal experience at the North Carolina Botanical Garden) as a way of introducing the results of the landmark meeting “Linking Ecology and Horticulture to Prevent Plant Invasions” that was held at the Missouri Botanical Garden in St. Louis in December 2001. Sarah Reichard (University of Washington), John Randall (the Nature Conservancy, Davis, California), Pat Duncan Raven (Missouri Botanical Garden), and I were the organizers and conveners of this meeting. Peter Raven and his staff at the Missouri Botanical Garden generously helped raise the support and provide the facilities

for the meeting itself. The sponsors, products, proceedings, and participants of the meeting are available at [www.mobot.org/iss](http://www.mobot.org/iss).

## The North Carolina Botanical Garden Experience

The North Carolina Botanical Garden has always prided itself in being a pioneer among botanical gardens for adopting a conservation creed almost from its inception (the first public facilities were opened in 1966). In the early 1970s, the staff was widely active in promoting native plants and Conservation through Propagation—an ethic that called for propagation to avoid impacts to wild populations. In 1988, when the first formal mission statement was approved, conservation was presented as one of five mission elements. Today, visitors to the Garden or to its web site ([www.unc.edu/depts/ncbg](http://www.unc.edu/depts/ncbg)) will see the prominent display of the subtitle “A Conservation Garden”. The staff continues to define what it means to be a conservation garden—the support of biological diversity and environmental quality generally (White 1995).

Despite this tradition, we, like other gardens, had no formal policy on the invasive species issue in 1990. Although we specialized in native plants, we had no formal definition of “native” and we were occasionally involved in plant introduction or in receiving plants newly introduced by other gardens. Further, we, as part of the time honored tradition among gardens, participated in the exchange of seed lists that made our own North Carolina plants available anywhere else in the world. Our activities in these areas were lower key than other gardens, but they were there nonetheless.

In the early 1990s, we began to

discuss this issue as a staff. Based on these discussions, we formulated what may have been the first explicit botanical garden policy in this area (1996):

*To possess plant collections that do not harm natural areas and the native plant diversity of North Carolina and the Southeast and to protect and restore the Garden's highest quality natural areas by eradicating invasive exotic species.*

We followed this in 1998 with a revision of our seed distribution policy in which we restricted our own distribution of plants to a twelve state region that lies east of the Mississippi River and south of the Ohio River, Pennsylvania, and New Jersey. This geographic region is arbitrary and subject to revision but is based on the premise that the farther a plant or gene is moved, the more likely it is to be detrimental. I believe, also, that this is the first time a garden ever restricted its own distribution of plants.

Working with Sarah Reichard, I have been involved in bringing this issue to the attention of other botanical gardens through the annual meeting of the American Association of Botanical Gardens and Arboreta (AABGA) (e.g., White 1997). An invitation from Sarah to participate in a session on conservation ethics in gardens at the 1999 annual meeting in Vancouver was the opportunity to issue a challenge to all botanical gardens through the Chapel Hill Thesis (nailed to a Paulownia tree at the Garden and now displayed on a Paulownia post cut from that tree). The Thesis was published as a challenge to botanical gardens in national and international newsletters, including the newsletter of the SEEPC (White 1999a, 1999b, 1999c).

Sarah Reichard's 2000 session on conservation ethics for botanical gardens at the AABGA annual meet-

ing in Asheville, North Carolina (also the World Botanic Garden Congress) was a direct progenitor of the 2001 St. Louis meeting.

### **The evolution of the issue in the 1990s**

As the discussion took place among botanical gardens, horticulturists, and the gardening public, it was initially polarized. On the one hand, some conservationists, at least to many horticulturists, seemed to be saying that all introduced plants were suspect and that risk of harm could only be eliminated by a natives-only policy. Since many plants are clearly non-invasive (even dependent on cultivation), a natives-only policy can not attain widespread acceptance. On the other hand, some horticulturists, at least to many conservationists, seemed to be saying that all plants should be permitted in horticulture and that invasiveness was a non-issue. It was clear, however, that many invasive ornamental plants had become unwanted pest species that impacted not only natural areas, but recreational boating and swimming, forestry and agriculture. A "no limits to horticulture" policy was as unlikely as a "natives-only" policy to gain acceptance. This polarization sometimes focused on the word "exotic" itself—conservationists often used this as a shorthand for "invasive" and horticulturists thus perceived a direct attack on all introduced plants. By the end of the decade, words like "pest" and "invasive" were helping to diminish the polarization occasioned by shorthand use of "exotic".

Distinguishing between "exotic" and "invasive" implies an ability to carry out risk assessment (for new introductions or newly spreading species) or measures of impact (for established species). The 1990s provided some hopeful signs in the sense that several risk assessment schemes have been shown to be able to separate invaders from non-invaders (Reichard and Hamilton 1993; but see White and Schwarz 1998 for a discussion of the uncertainties), that only a portion of introduced plants had proved to be troublesome, that an alternative to free reign horticulture could be made to work (Harty 1993), and that horti-

culturists and conservationists could work together (e.g., the experience in Florida, Regulbrugge et al. 2002). These hopeful results have allowed agreement between horticulturists and conservationists that a problem exists. The next line of discussion will take place over which species are on the "invasive" or "non-invasive" lists. It is likely that such lists will be developed through the consensus of expert opinion from all involved parties, rather than complete scientific knowledge. They will have to be reassessed on an ongoing basis. Indeed, there is a precedence for this in the formulation of endangered species lists beginning in the 1960s.

This overview of the history of the issue within the horticultural world is biased both to botanical gardens and my personal history of the issue. Other initiatives of the 1990s also were critical as backdrops to the St. Louis Meeting, including President Clinton's Executive Order 13112 in February 1999. This order established the National Invasive Species Council and called for the preparation of a National Management Plan. These efforts also have involved both horticulturists and conservationists.

### **The St. Louis Meeting (2001): Linking Ecology and Horticulture to Prevent Plant Invasions**

Given this historical development, the organizers of the St. Louis meeting wanted to bring together all players in the invasive plant problem with the goal of issuing a joint statement on the problem and formulating draft codes of conduct that would be presented to all interested parties for voluntary adoption. Convened by the Missouri Botanical Garden and Kew Gardens and sponsored by 12 other foundations and organizations, the meeting brought together some 65 individuals representing five groups: botanical gardens, nursery professionals, landscape architects, government, and the gardening public. The Statement of Purpose was: To agree on a statement of the problem, to draft voluntary codes of conduct for each group, to discuss application of the codes, and to discuss next steps.

The products of the meeting included the St. Louis Declaration and draft codes

of conduct for each of the five groups represented at the meeting.

The five voluntary codes of conduct all address, in one way or another, eight key areas: prevention and risk assessment on a regional basis; eliminating continued distribution of invasives; removal of established invasives; development of non-invasive alternatives for various uses; raising public awareness and diminishing demand for invasives; the need to include the invasive issue in professional training; the importance of partnerships, databases, and communication; and importation and exportation rules.

One of the goals of the meeting was to disseminate the draft codes of conduct and to encourage the adoption of these codes by other parties. All of those who were involved with the St. Louis meeting are pleased by the adoption by the Southeast Exotic Pest Plant Council. In the future, the web site will include a mechanism to register and list such adoptions. For more information, link to [www.mobot.org/iss](http://www.mobot.org/iss).

### **Literature cited**

- Harty, F. M. 1993. How Illinois kicked the exotic habit. Pages 195-209 in B. N. McKnight (ed.), *Biological pollution: the control and impact of invasive exotic species*. Indiana Academy of Science: Indianapolis.
- Reichard, S. H., and C. W. Hamilton. 1997. Predicting invasions of woody plants introduced into North America. *Conservation Biology* 11:193-203.
- Regulbrugge, C., P. Lewis, and H. Gramling. 2002. Updates on nursery industry efforts to address invasive plant species concerns. Pages 15-19 in Fay (ed.), *Linking ecology and horticulture to prevent plant invasions, proceedings of the workshop*. Missouri Botanical Garden, St. Louis.
- White, Peter S. 1996. In search of the conservation garden. *The Public Garden* 11(2): 11-13, 40.
- White, Peter S. 1997. A bill falls due: botanical gardens and the exotic species problem. *The Public Garden* April 1997:22-25.
- White, Peter S. 1998. Biodiversity and the exotic species threat. Pages 1-7 in: *Exotic pests of eastern forests* (Britton, K., ed.). Atlanta: Tennessee Exotic Plant Council and USDA Forest Service.
- White, Peter S. 1999a. The Chapel Hill Challenge for Halting Invasives. American Association of Botanical Gardens and Arboreta, Newsletter, November, 1999.
- White, Peter S., 1999b. The Chapel Hill Thesis. *Botanical Gardens Conservation NEWS* Vol. 3, No. 3, p. 13.
- White, Peter S. 1999c. The North Carolina Botanical Garden issues the Chapel Hill Thesis. *Southeast-EPPC News* 6(4):1-6.
- White, P. S., and A. Schwarz 1998. Where do we go from here? The challenges of risk assessment for invasive plants. *Weed Technology* 12:744-751.