

EDITORIAL

THE MARIE SELBY BOTANICAL GARDENS SPIRIT COLLECTION: A VALUABLE BOTANICAL RESOURCE

BRUCE K. HOLST

Marie Selby Botanical Gardens, 811 South Palm Ave., Sarasota, FL 34236-7726, USA.
E-mail: bholst@selby.org

The Marie Selby Botanical Gardens (MSBG) announces completion of a project funded by the National Science Foundation to curate a Spirit Collection of vascular plants housed at the Selby Gardens Stark Botanical Research Center. The MSBG Spirit Collection is the largest of its kind in the Western Hemisphere and the second largest in the world (after the Royal Botanic Gardens, Kew). The collection is comprised of more than 26,000 vials of flowers or entire small plants of Orchidaceae (24,000) and Bromeliaceae (300), and includes a recently acquired collection of ca. 2000 Gesneriaceae.



FIGURE 1. Spirit collection of *Dendrobium vagans* (Orchidaceae) at the Marie Selby Botanical Gardens. (Photograph by Bruce Holst)

The preservative spirits used are a combination of 70 parts denatured alcohol, 27 parts water, and 3 parts glycerin. The Spirit Collection is composed of separate collections donated by Carlyle Luer, Calaway Dodson, G.C.K. Dunster-ville, Alexander Hirtz, and Hans Wiehler.

The NSF grant allowed for the purchase of plastic storage containers and for replacement of metal caps and liners. Bar codes were applied to the bottles for inventory and tracking purposes. More than 450 orchid type specimens were identified, a list of which is available online at: <http://www.selby.org/research/herb/types.htm>. Though the focus of the curation work to date has been on the Orchidaceae, plans are underway to similarly curate the Gesneriaceae and Bromeliaceae specimens. The spirit collections of these latter two families may well include type material of dozens of species.

Preserving plant specimens in spirit fluids maintains the flowers in a form as close-to-nature as possible, which is critical to understanding the nuances of orchid taxonomy and pollination. It obviates the need to rehydrate flowers from herbarium specimens, especially type specimens that may have only one or few flowers. Thus a spirit collection better protects herbarium specimens for future analysis techniques. Spirit preservation also provides a method to preserve voucher specimens resulting from scientific studies, and it provides a resource to more fully understand the morphological range and geographical distribution of a species.

Selby Gardens encourages the use of its Spirit Collection and provides low-cost visitor quarters to botanists wishing to consult the specimens. Limited, short-term specimen loans are available. Complementing the Spirit Collection at Selby Gardens are 9000 greenhouse accessions (living), 3300 display and grounds accessions (living), 88,000+ herbarium specimens (dry mounted specimens that include 27,000 orchids, 8000 bromeliads, and 1700 type specimens. The



FIGURE 2. Spirit collection vials stored in sealed plastic containers on metal shelving. (Photograph by Wesley Higgins)

Selby Gardens Research Library has 6500 volumes (including a 543-volume rare book collection), 300+ active periodicals, and a microfiche collection of many early botanical references.

For more information, contact Bruce Holst, Research and Conservation Department, Marie Selby Botanical Gardens, 811 South Palm Avenue, Sarasota, FL 34236-7726. Tel: 941-955-7553 x312. E-mail: bholst@selby.org. Web site: www.selby.org.

Wes Higgins, Wes Rouse, Andrea Bishop, Lorena Endara, Athene Grant, and numerous

other volunteers at Selby Gardens spent many hours on the curation and management of the Spirit Collection. The Gesneriaceae collection was accumulated in large part under the direction of the late Hans Wiehler at the Gesneriad Research Foundation (GRF) in Sarasota, FL. The American Gloxinia and Gesneriad Society kindly assisted in the transfer of spirit collection and other materials from the GRF to Selby Gardens in 2002. The National Science Foundation provided funds for a 1-year project (NSF DBI-0138615) to curate the collection.