

Backgrounder: Current Science Research Projects in the Caribbean By New York Botanical Garden Scientists

In addition to displays of beautiful tropical flowers and plants, exhibitions of rare botanical art from several centuries of plant exploration in the Caribbean, and a rich offering of cultural programs, The New York Botanical Garden is also busy conducting biodiversity research in the Caribbean. The Botanical Garden is at the forefront of worldwide botanical research, and the breadth of its scientific facilities, programs, and staff is unparalleled. It's all focused on helping to meet the urgent need to discover, decipher, document, and defend Earth's vast biodiversity.

This scientific research takes many shapes and extends to all parts of the globe, but, since its founding, the Garden has been especially distinguished by its expertise in the New World, including the Caribbean. The Garden has amassed the world's most extensive holdings of Caribbean plant specimens and its first expedition outside the United States, in 1898, was to the Caribbean.

Below are short introductions to three exciting Garden research projects in the Caribbean.

Plants in Health: Dominican Community Healthcare Project

Even today, most people in the world rely largely on remedies made directly from plants to treat their ailments. These uses of medicinal plants form an important body of knowledge that is poorly understood and poorly documented.

A research project at the Garden is studying the knowledge and use of medicinal plants by immigrants from the Dominican Republic in both a host city, New York, and their home country. Research into their use of medicinal plants provides insight into health care issues and effectiveness.

Medicinal plants are very popular in the Dominican community in New York City and are most frequently used to treat flu and common cold, diabetes, blood pressure, kidney problems, and respiratory conditions such as asthma.

The goals of the Garden's project are to:

- investigate, document, and disseminate cultural knowledge of Dominican immigrants about medicinal plants.
- learn *how* and *to what extent* migration from the Dominican Republic to New York City has affected the knowledge and use of medicinal plants.
- seek validation for the Dominican traditional uses of medicinal plants by testing selected plants in the laboratory for anti-inflammatory activity.

Plants, Technology, and Art: *Flora Borinqueña*

As part of its Virtual Herbarium, the Garden has created the *Flora Borinqueña Digital Herbarium and Library*, an online guide to the plants of Puerto Rico. The Virtual Herbarium is the electronic gateway to the William and Lynda Steere Herbarium, the Garden's vast collection of more than 7.2 million preserved plant specimens.

Flora Borinqueña includes images of herbarium specimens and scientific descriptions as well as historical field notebooks and photographs from 16 expeditions to the island that the founders of the Garden, Nathaniel and Elizabeth Britton, carried out from 1903 to 1933.

It provides a wealth of botanical, cultural, and natural history information and features 423 unpublished watercolor images by well-known artist Frances Worth Horne (1873–1967). In collaboration with the University of Puerto Rico, the Garden is adding current information about the ways people use these plants.

This project blends science and art and the resurrection of historical information through cutting-edge technologies.

To learn more about the *Flora Borinqueña Digital Herbarium and Library*, please visit <http://sciweb.nybg.org/science2/hcol/pr/florbor.asp>

Sharing Plant Knowledge: Plants and Lichens of Saba

Saba, a five-square-mile island off the coast of St. Maarten in the Netherlands Antilles, is home to a wide diversity of plant life for such a small area. A new Web site that serves as an online inventory of the island's plants was launched on March 10, 2007.

The Garden is collaborating on the project with two conservation organizations that in 2006 embarked on a comprehensive survey of Saba's biodiversity. Garden scientists led the survey of the mosses, lichens, and vascular plants of the island as well as the creation of the online resource.

The site provides information such as photos, scientific and common names, and locations. The ultimate goal of the project is to provide comprehensive illustrated checklists of all plants and lichens, both native and introduced, which grow on Saba.

This resource is available—and invaluable—to scientists, conservationists, and policy makers as well as amateur botanists and nature enthusiasts. It is just one of many ways the Botanical Garden is helping to bridge the knowledge gap between the scientific community and the public.

To learn more about the Plants and Lichens of Saba, visit <http://sweetgum.nybg.org/saba/index.html>

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The New York Botanical Garden is located on property owned in full by the City of New York, and its operation is made possible in part by public funds provided through the New York City Department of Cultural Affairs. A portion of the Garden's general operating funds is provided by The New York City Council and The New York State Office of Parks, Recreation and Historic Preservation. The Bronx Borough President and Bronx elected representatives in the City Council and State Legislature provide leadership funding.

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