

Putting plants online: Four leading botanical gardens to create first online catalog of all plants

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The New York Botanical Garden (NYBG); the Missouri Botanical Garden (MBG); The Royal Botanic Gardens, Kew (RBG Kew); and the Royal Botanic Garden Edinburgh (RBGE) have announced plans to develop the World Flora—the first modern, online catalog of the world's plants—by the year 2020. This massive undertaking will include the compilation of information on up to 400,000 plant species worldwide. It will also achieve a primary target of the Global Strategy for Plant Conservation, an ambitious effort first adopted by the United Nations' Convention on Biological Diversity in 2002, to halt the continuing loss of plant biodiversity around the globe. Representatives of the four botanical gardens recently met to organize a framework to guide their efforts and respond to this need for a baseline survey of the plants of the world that has been called for by the international community. A Memorandum of Understanding (MOU) detailing plans to create the World Flora was recently signed into effect by the four institutions.

"The world's great botanical gardens are proud to lead this effort," said Gregory Long, Chief Executive Officer and The William C. Steere Sr. President of The New York Botanical Garden. "Thanks to advances in our botanical knowledge and in digital technology, an online World Flora is within our grasp. It is imperative that we create this resource, which will help us assess the value of all [plant species](#) to humankind and be effective stewards to ensure their survival." Professor Stephen Hopper, Director, Royal Botanic Gardens, Kew said, "Using the wealth of

resources available at our institutions, we will help to provide the baseline data needed to develop plant-based solutions for a rapidly changing world. Botanical institutions worldwide have much expertise to contribute to this effort to capture the information necessary to better conserve and sustainably use the planet's plant diversity."

"Botanic gardens have led the way in spearheading international conservation strategies and programs, and are a natural partnership for mobilizing much needed information on plant biodiversity," said Professor Stephen Blackmore, Regius Keeper of the Royal Botanic Garden Edinburgh. "This is a large task, but with many contributors we can deliver what is needed."

"There are few institutions in the world that have the capacity to foster this project, and no one of us could do this alone," added Dr. Peter Wyse Jackson, President, [Missouri Botanical Garden](#). "We all want to see this come to fruition, and the entire international community will benefit from it. With the botanical resources and knowledge we each possess, it was implicit that our institutions would step forward to collaborate on this project."

Plants are one of Earth's greatest resources. They are sources of food, medicines and materials with vast economic and cultural importance. They stabilize ecosystems and form the habitats that sustain the planet's animal life. They are also threatened by climate change, environmental factors and human interaction. There are an estimated 400,000 species of vascular plants on Earth, with some 10 percent more yet to be discovered. These plants, both known and unknown, may hold answers to some of the world's health, social and economic problems. A full inventory of plant life is vital if their full potential is to be realized before many of these species, and the possibilities they offer, become extinct.

The critical situation for plants, where at least 100,000 plant species are threatened by extinction worldwide, has been recognized by the U.N. Convention on Biological Diversity (CBD). In 2002, a Global Strategy for Plant Conservation (GSPC) was developed and adopted by the Convention.

In 2004, a Global Partnership for Plant Conservation (GPPC) was formed, involving leading environmental, conservation and botanical organizations, which came together to support the achievement of the GSPC. The four botanical gardens involved in this new project are all members of the GPPC.

"An online Flora of all known plants" is the first of the GSPC's targets for the period 2011-2020. Earlier work by the [Royal Botanic Gardens, Kew](#) and the Missouri [Botanical Garden](#) addressed one of the GSPC's earlier targets for 2010 with the launch of The Plant List, an online portal containing the accepted names and synonyms of all known plant species. The forthcoming Flora will use The Plant List as a building block for something much more detailed, containing not just names but also descriptions, images and distribution information about every plant.

The team tackling the World Flora will build a collaborative partnership for this work worldwide and create a structure and program able to incorporate data from institutions and individuals all over the world. In some cases, existing electronic data sets will be combined and augmented with the results of botanical research published over more than a century around the world. Much historic information will require a thorough review and update, along with a conversion to an electronic medium. As new [plants](#) are subsequently collected, named and described, they too will be added to the World Flora.

"We look forward to working with institutions worldwide to produce a sustainable resource to aid conservation globally, regionally and

nationally," said Hopper.

Provided by The New York Botanical Garden

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