

# THE NEW YORK BOTANICAL GARDEN

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*Studying, exhibiting, and conserving plants for 120 years*

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## **Ave Atque Vale: Botany Bids ‘Hail and Farewell’ to Latin-only Descriptions of New Plant Species in 2012**

**New nomenclature rules approved at the International Botanical Congress also do away with requirement that new species be published in print, allowing faster and more accessible online publication**

In a major effort to speed up the process of officially recognizing new plant species, botanists will no longer be required to provide Latin descriptions of new species, and publication in online academic journals and books will be considered as valid as print publication.

The new rules, which were approved at a nomenclature conference held in conjunction with the International Botanical Congress in July, become effective January 1, 2012. They overturn longstanding historical requirements for identifying new species of plants, algae, and fungi.

“These are fundamental changes that are going to facilitate the ability to name and describe new species,” said James S. Miller, Ph.D., Dean and Vice President for Science at The New York Botanical Garden, who is the lead author of a summary of the new rules in the online journal *PhytoKeys*. “Eliminating the Latin requirement and moving to electronic publication will really expedite and simplify the process of describing the diversity that’s out there.”

The changes are far from academic. Botanists name about 2,000 new species of plants, algae, and fungi every year, an important initial step in assessing and ultimately conserving the biodiversity of a habitat. Scientists are concerned, however, because they believe that many more plants remain to be discovered and named—if environmental problems such as climate change and deforestation do not drive them to extinction first.

By doing away with the Latin and print requirements, botanists are removing two major obstacles that slow down the process of naming and describing new species. Writing scientifically accurate and grammatically correct Latin descriptions is cumbersome and time-consuming in an age when fewer scientists are comfortable with Latin, once the *lingua franca* of science. And publishing a new species in a print journal can entail months, if not years of waiting.

“In an age where almost certainly 20 percent of the world’s plant species, and undoubtedly much greater percentages of fungi and algae, remain to be discovered, described and named, this step will hopefully help taxonomists in their race to document biological diversity before it is lost to the deforestation and habitat degradation that threatens their extinction,” Dr. Miller and his colleagues wrote, referring to the new rule recognizing electronic publication.

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The binomial tradition of scientific nomenclature—such as *Homo sapiens* for humans—dates to the 1753 publication of *Species Plantarum* by Swedish botanist Carl Linnaeus (1707–78). As part of the process of establishing the scientific foundation for a new species, botanists must describe the species in exacting detail, focusing on the attributes that make a species unique. Since 1908 the international code for botanical nomenclature has required that description to be in Latin.

For example, when Dr. Miller gave a new species the binomial name *Cordia koemarae* in 2001, his lengthy Latin description began, “*Arbor ad 8 m alta, ramunculis sparse pilosis, trichomatis 2-2.5 mm longis.*” (Tree 8 meters tall, the twigs sparsely but evenly pilose [covered with fine hairs], the hairs 2-2.5 mm long.)

With the new nomenclature rules, the binomial scientific names for new species will still be latinized, but a Latin description of the plant will no longer be mandatory. Beginning in 2012, the description must be in either Latin or English.

Botanists hope that an additional benefit of electronic publication of new species will be that more researchers will have easy access to the information.

“As many universities and research institutions in the developing world cannot afford to subscribe to large numbers of journals, it is hoped that this will improve access for a greater number of the world’s taxonomists,” the authors wrote.

Some 200 delegates, most of them members of the International Association for Plant Taxonomy, attended the nomenclature conference, which met in conjunction with the International Botanical Congress in Melbourne, Australia, in July. The meetings are held once every six years.

Dr. Miller welcomed the changes as an important step in modernizing and accelerating one of the basic activities of the biological sciences—cataloging the world’s biodiversity.

“There’s an urgency in describing the plants of the world,” he said. “I don’t think we have any capacity to understand and take care of nature unless we can identify it.”

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**The New York Botanical Garden is a museum of plants located at Bronx River Parkway (Exit 7W) and Fordham Road. It is easy to reach by Metro-North Railroad or subway. The Garden is open year-round, Tuesday through Sunday and Monday federal holidays, from 10 a.m. to 6 p.m. The best way to enjoy the Garden is with the *All-Garden Pass*, which includes admission to the grounds as well as to seasonal gardens, exhibitions, and attractions such as the Enid A. Haupt Conservatory, Everett Children’s Adventure Garden, Rock Garden, and Tram Tour: \$20 for adults, \$18 for seniors and students with ID, \$8 for children ages 2–12, free for children under 2. A *Grounds-Only Pass* is also available: \$10 for adults, \$5 for seniors and students with ID, \$2 for children ages 2–12, free for children under 2. Grounds-only admission is free all day on Wednesdays and from 10 to 11 a.m. on Saturdays. For more information, please call 718.817.8700 or visit [www.nybg.org](http://www.nybg.org)**

**The New York Botanical Garden, 2900 Southern Boulevard, Bronx, New York 10458**

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For a copy of the paper or to arrange an interview with Dr. Miller, contact Stevenson Swanson at 718.817.8512/8616 or [sswanson@nybg.org](mailto:sswanson@nybg.org)