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NYBG Scientist and Colleague Name New Lichen Species from the Southeastern United States in Honor of a Famous Native of the Region—Oprah Winfrey

Hypotrachyna oprah Is the First Plant Species Named for One of the World's Most Prominent Media and Entertainment Figures



Hypotrachyna oprah growing on the bark of a tree

Bronx, NY—A New York Botanical Garden scientist and his colleague have named a new species of lichen that can be identified in part because of its bright glow under ultraviolet light in honor of a media and entertainment figure who has been in the spotlight for four decades—Oprah Winfrey, who was born in the region where the lichen is found. It is the first plant species named for Ms. Winfrey.

The new species, *Hypotrachyna oprah*, was discovered in the southeastern United States by James C. Lendemer, Ph.D., an Assistant Curator in the Botanical Garden's Institute of Systematic Botany, and Jessica L. Allen, Ph.D., an Assistant Professor of Biology at Eastern Washington University. The region is a biodiversity hotspot, with a high concentration of unique species and ecosystems found nowhere else on Earth. The new species is considered rare and was possibly confused with another lichen species in the past.

Drs. Lendemer and Allen describe *Hypotrachyna oprah*, which they have given the common name "Oprah's sunshine lichen," in a paper for *Castanea*, the journal of the Southern Appalachian Botanical Society. The paper is available to subscribers online and will be published in the journal's May issue.

Lichens, which are composite organisms formed by algae and fungi working in partnership, are important but often overlooked members of the natural world. They are critical in many ecological processes, provide food and habitats for animals and insects, and, because they are sensitive to pollution, are considered positive indicators of an ecosystem's health.

The authors write that specimens of the new species have been collected since at least the 1970s in the southeastern United States, where it grows on the bark of hardwood trees in humid habitats such as ravines and pocosins, wetlands with sandy peat soils. Although similar to another lichen in the genus *Hypotrachyna* that is found throughout the region, the specimens' features and chemistry were distinct from any other known lichens. However, the available samples were too limited to establish it as a new species.

As part of Dr. Lendemer's National Science Foundation-supported project to document lichen diversity in the eastern and southern U.S., he and Dr. Allen discovered populations of the mysterious species in Alabama, Florida, and North Carolina, which allowed them to collect a sufficiently large sample for study. In addition to its features and chemistry, they found that the species fluoresces with a yellow glow in ultraviolet (UV) light, which is commonly used in studying lichens.



Hypotrachyna oprah, also known as Oprah's sunshine lichen, as seen under ultraviolet light

In biology, naming a new species for a person is considered a prestigious and important honor. The two scientists, who have collaborated since Dr. Allen was a graduate student at the Garden's Commodore Matthew Perry Graduate Studies Program, named a lichen species most commonly found in the southern Appalachian Mountains for country-music singer-songwriter and philanthropist Dolly Parton in 2015. In considering a name for the new species, they were surprised by how few plant or animal species have been named for women.

"This led to the question of whether anyone had ever honored Oprah Winfrey, one of the most famous and well-known figures in modern American culture and a world-renowned philanthropist," said Dr. Lendemer, who consulted species lists with Dr. Allen to research the question. "The answer was no. We realized we had a new species from the southeastern U.S. that had a bright UV fluorescence and was easily recognized in the field. It seemed like a perfect fit."

Ms. Winfrey, whose daytime talk show *The Oprah Winfrey Show* debuted nationally in 1986, was born in Kosciusko, Mississippi, about 180 miles from the Talladega National Forest in central Alabama, which is the source of the type specimen that was used as the basis for the

scientific description of *Hypotrachyna oprah*. That preserved specimen and the others collected by the two scientists are now among the more than 7.8 million specimens in the William and Lynda Steere Herbarium at The New York Botanical Garden.

Drs. Lendemer and Allen's paper about Oprah's sunshine lichen is available to the media as a PDF upon request to pubrel@nybg.org

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The New York Botanical Garden is a museum of plants, an educational institution, and a scientific research organization. Founded in 1891, the Botanical Garden is one of the world's preeminent centers for studying plants at all levels, from the whole organism down to its DNA. Garden scientists conduct fundamental research on plants and fungi globally, as well as on the many relationships between plants and people. A National Historic Landmark, the Garden's 250-acre site is one of the greatest botanical gardens in the world and the largest in any city in the United States, distinguished by the beauty of its diverse landscape and extensive collections and gardens, as well as by the scope and excellence of its programs in horticulture, education, and plant research and conservation. Learn more: nybg.org

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

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