

## **Developing modern aquatic plant displays at the United States Botanic Garden**

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In 2023, the United States Botanic Garden embarked on an ambitious project: the development of aquatic plant displays with the goal of increasing the awareness of vulnerable aquatic environments through modern aquarium techniques and conservation messaging that personally connects a diverse national and international audience to a topic that traditionally goes unseen to the public. The ability to access natural aquatic environments is far more limited than natural terrestrial environments due to physical and ecological limitations: cost, skill required for access, and the number of accessible aquatic environments. Even access to artificial aquatic environments is limited as modern aquatic plant displays are uncommon within public institutions. To tackle this goal, we are building infrastructure at our greenhouse facility for future support of modern aquatic plant displays that will eventually be highlighted in our free, open year-round, public conservatory. The infrastructure includes three 8'x4'x16" fiberglass trough tanks, that will be used to begin growing aquatic plants and as a training tool to educate staff on the care and maintenance of these plants and systems. Additionally, we are setting up a 157-gallon display aquarium, planted with rheophytes, to be the new entrance experience to our greenhouse facility, as well as proof of concept for the future displays in our conservatory. The future displays will include a paludarium, which is a type of vivarium that incorporates both terrestrial and aquatic elements, highlighting threatened rheophytes, and a mangrove display, highlighting the ecological importance of mangrove forests. Additional conservation messaging will include an introduction to vulnerable aquatic environments, the role and importance of aquatic plants on habitat and water quality in the environment, and the use of tissue culture plants, for both botanic gardens and hobbyists, as a way of combating over-collection from the wild.