Specimen Discovery through Community Science Efforts at the Botanical Research Institute of Texas

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The Botanical Research Institute of Texas Philecology Herbarium is home to almost 1.5 million botanical specimens from four distinct collections: Botanical Research Institute of Texas (Herbarium Code: BRIT), Southern Methodist University (SMU), Vanderbilt University (VDB), and the R. Dale Thomas Collection from the University of Louisiana at Monroe (NLU). These specimens are in various stages of the digitization workflow (image → label transcription → locality georeferencing), with label transcription being the greatest bottleneck preventing specimen discovery by the research community. Previous imaging efforts resulted in an excess of 81,000 images of North American specimens from the VDB collection uploaded to the TORCH Symbiota portal with only barcode identifiers accompanying specimen images. The award of a U.S. National Science Foundation Thematic Collections Network grant to digitize all Texas and Oklahoma specimens (TORCH TCN; torcherbaria.org) required the development of an efficient method to locate project specimens amongst these 81,000 images. Through the Crowdsourcing function within Symbiota, staff launched a virtual community science program to quickly add minimal data to these images, allowing easier discovery for specimens related to the TORCH TCN, for potential future grants, and researchers. Volunteers stayed engaged in the program through repeated training sessions, realistic timelines, and progress updates. A Google form allowed participants to easily submit questions and problems as they were discovered. The combined efforts of twenty volunteers and staff working asynchronously through the Dr. Kral's Treasure Chest crowdsourcing project resulted in all ca. 81,000 images searchable with scientific name, country, state, and county. The project was completed in nine months, and celebrated with a capstone event and gift recognizing the contributions of volunteers. The impact of this project was immediately noticed with requests from researchers via email regarding specimens involved in the project. The Herbarium now can prioritize the complete digitization of these specimen records as directed by research requests and funded projects, and apply this method to future community science transcription efforts.