Woody Landscape Plant Crop Germplasm Committee

Annual Meeting (Zoom)

Minutes

2022.11.17

*Attendance*Gary Kinard, Jake Shreckhise, Jeff Carstens, Lauri Reinhold, Madhugiri Nageswara-Rao, Margaret Pooler, Michael Dosmann, Pam Allenstein, Peter Bretting, Russell Galanti, Todd Rounsaville, Andy Sherwood, Fred Gouker, Bryan Peterson, Kim Shearer (Chair)

Virtual Zoom meeting hosted by The Morton Arboretum

Annual WLPCGC meeting was called to order. First order of business, previous meeting notes were reviewed and approved.

# Roster Update

CGC members reviewed the roster for retirements and inactive members, and updated the roster accordingly. Upon completion of review and revision, the CGC discussed new member recruitment from the prior year and for the upcoming year. From the prior year, Kim Hummer contacted Colin Khoury, Senior Director of Science and Conservation at San Diego Botanic Garden. He declined due to constraints on capacity to participate, but would reconsider in 2022 or 2023.

CGC members also suggested that recruiting a commercial propagator from the subtropic/tropic region would be a beneficial addition in representation of stakeholders and expertise. Madhugiri Nageswara-Rao offered to research potential candidates in Florida.

# CVS to Manuscript

A draft of the CVS manuscript intended for publication with ISHS was reviewed by the CGC. Margaret Pooler noted that the manuscript was essentially ready to be published with some relatively minor revisions and additions. Some distillation of areas was suggested as it related to descriptions of the USDA departments that play roles in the management and acquisition of woody landscape plants. Additionally, it was noted that addition of figures to illustrate trends in the nursery industry of particular woody crops as it relates to introduction of invasive insect pests and diseases.

Madhugiri raised the question of whether the CGC considers palms as a WLP. The CGC consensus was/is yes.

# Plant Evaluation Proposal Review

Proposals reviewed by the CGC during FY2022 were discussed. Proposals included evaluations of Gymnocladus, Cercis, and Acca. The proposal for Gymnocladus was supported by the CGC for submission to the Office of National Programs, Crop Production and Protection via Loren Coleman for the March 3, 2023 deadline, providing funding for FY2023. Regarding Cercis, the CGC was concerned that the material represented by the collection in the proposal was not yet deposited with the USDA-NPGS and that there would be a considerable amount of propagation work necessary to get it represented in the NPGS. Regarding Acca, the CGC questioned whether this should be considered a new crop. Gary suggested that the conversation could be initiated with the new crop CGC to determine which CGC was the most appropriate for reviewing. Authors were notified regarding these comments and NC-CGC Chair contact information was also provided to initiate communication.

# NGRL Report

Gary Kinard provided the NGRL Report. A staff update in the NGRL Plant Exchange Office was highlighted–Anne Francis taking over for Karen Williams. Francis is the new contact for submitting plant exploration and exchange proposals supported by the CGC. An international exploration targeting Salix was conducted in the country Georgia. A domestic exploration project targeting Aronia species in Illinois was completed by Jeff Carstens and Andy Sherwood. The NGRL initiated a collaboration with NatureServe, USBG, and other partners in conservation of *Vitis* species native to North America. GRIN Taxonomy for plants update included completion of initial work on 386 major/minor crops from 174 genera, and CWR from 4,295 taxa was mapped to these crops with others under progress. Germplasm exchange continues to be active.

# NPGS Briefing

Peter Bretting provided presentation slides that outlined the NPGS briefing. This included updated metrics for accession numbers (increasing), germplasm demand (increasing after dip during pandemic), and budget (appear to be increasing, but when factoring inflation it has decreased significantly). Some increases in budget for plant genetic resources included small grains (Aberdeen, ID), Vaccinium (Corvallis, OR), hemp (Geneva, NY), and pecan (College Station, TX).

# Crop Curator Reports

CCRs were provided by NC7 (Carstens) and USNA (Rounsaville).

NC7 reported metrics on accession numbers. Total accessions 2022 were 3,990 compared to 20 years prior at 1,765 accessions. New acquisitions include species of Fraxinus, Morus, Salix, Quercus, Chilopsis, Crataegus, and Acer. Future prospects include additional Fraxinus (Midwest, Southwest), Ulmus thomasii, Quercus prinoides, Chionanthus virginicus, and Morus rubra. Germplasm requests included Fraxinus, Cornus, Viburnums, Morus, Aronia, Pinus, Salix, and Ptelea. A summary of NC7 Regional Trials taxa was provided. This included future trials: Magnolia acuminata, Betula uber, Abies bornmuelleriana (2023); Sassafras albidum, Thuja occidentalis, Quercus velutina (2024); Metasequoia glyptostroboides, Ilex vertillata, Acer triflorum, Ulmus, Quercus prinoides (2025). Duration of Salix seed viability at RT was evaluated for S. candida, S. discolor, and S. humilis. Results indicate seed viability declines significantly in a short time with optimal viability within 10 days of harvest for all three species, and 20 days of viability for S. candida and S. discolor. This demonstrated the necessity of maintaining living collections of Salix species. Dirca decipiens was also evaluated for seed germination with and without cold stratification comparing sowing methods of excised, in fruit, or seed. Optimal germination is cold stratification of seed extracted from fruit.

In FY2022 the USNA distributed live plants, vegetative propagules, and seed with seed being approximately 75% of material distributed. The most common key word associated with WLPGR GRIN-Global requests was research (85%) followed by breeding (26%). The remainder of key words used included public, education, native, conservation, collections, archaeological, genetic, arboretum, demonstration, taxonomic, cultivars, and teaching. Stakeholder composition of requestors was diverse with academia and public gardens making up ~50%. The remaining 50% included industry, state/federal gov’t, private individuals, and plant nurseries/growers. Exploration expeditions targeted species in the Southeast–Hamamelis ovalis and Magnolia ashei. Active plant evaluations include heat tolerance of Tsuga chinensis, comparct/variegated clones of Lindera benzoin, compact/fastigiate selections of Tilia, and cold-hardiness of Malus from Vietnam. A new cultivar of Viburnum was introduced–V. nudum ‘Little Cherub’. Active research projects focus on ploidy/genome size survey of Lindera, evaluation of genetic diversity of Hamamelis ovalis, seed ecophysiology in Magnolia ashei and Sideroxylon lanuginosum, and expedited germination in taxa with complex and combinational dormancy (Fothergilla, Hamamelis, Stewartia, and Viburnum).

# Plant Collections Network-American Public Gardens Association

An update from the PCN was provided by Pam Allenstein. The APGA-USDA collaboration has been ongoing for 27 years (since 1995). Current NACA runs through FY2027. Todd Rounsaville is the USDA rep on the PCN committee. The Sassafras conservation project continues. New nationally accredited plant collections include Hamamelis at Madison Square Park and Quercus/Magnolia at USNA. There are 84 participating APGA institutions, 152 Nationally Accredited Plant Collections™ and 4 metacollections (Acer, Magnolia, Quercus, and Cycad). Training and networking provided by PCN included a webinar hosted by the PCN committee, “ Preparing & Utilizing Collection Development Plans”; workshop hosted by Tim Hohn author of Curatorial Practices for Botanic Gardens, “Building Collections”; and a PCN Forum where safeguarding collections and curatorial care continuity were discussed. The Tree Gene Conservation Partnership was developed to focus on at-risk kspecies which cannot be conserved through seedbanking. Matching grants are provided for seed collecting across distribution and distribution of propagules. Funded 2022 projects included Quercus havardii, Q. sadleriana, Magnolia tripetala, Pinus torreyana, and Q. boyntonii.

# 2023 Annual Meeting

The next annual meeting was planned to be held virtually.

# Action Items

Action items were primarily focused on CGC recruitment, new crops discussion, and ongoing development of the WLP-CGC manuscript.