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SEATTLE, WA 98104
4CULTURE.ORG

Collections Care Projects

Sample Application

Project Summary

Applicant

The Pacific Bonsai Museum

Project Title

Preserving Living Culture through Integrated Pest Management

Short Description

Support for soil testing and staff training in plant “preventative medicine” to boost our living collection’s resiliency in the event of future environmental stress.

Narrative

Project Description

Pacific Bonsai Museum is an outdoor, non-profit museum set in a forested area in Federal Way, WA presenting exhibitions of living bonsai to the public. Our collection of 150 trees represents the finest examples of the art of bonsai and is the most geographically and botanically diverse collection of bonsai assembled anywhere in the world. Bonsai in our collection represent living cultural artifacts, from the oldest living bonsai in America (the ‘Domoto’ maple, a bonsai since c.1850), to a bonsai started from seed by a Japanese American while he was held against his will in a WWII-era, barbed-wire detention camp (the ‘Furuzawa’ pine, a bonsai since 1945). Descendents of the artists who made the most significant contributions to bonsai in America chose to pass on their family’s legacy to us and entrusted us to care for and keep their artworks alive for as long as hundreds of years into the future.

Maintaining a living, museum-worthy collection comes with a unique set of challenges and opportunities, particularly as weather patterns become more erratic as a result of anthropogenic climate change. Recent periods of extreme heat and cold have put increased stress on our trees,

leading to a higher prevalence of pest-related issues and diseases. Responding to these problems with pesticide interventions only amplifies the problem in the long run, as beneficial organisms are also harmed and therefore aren't there to support the tree in recovery, plus the pests become resistant to the chemicals, and the cycle repeats. Furthermore, toxic chemicals present a significant hazard to our staff who would have to apply them and can run off into the surrounding landscape.

In search of a better, more holistic, and healthful response, we turned to testing as practiced in Integrated Pest Management (IPM). In IPM, soils and plant tissues are tested regularly in order to identify nutritional imbalances that can signal the presence or effects of pest species and/or the early stages of disease. (Example test results for two trees in our collection are shown in the supplemental materials, attached.) We can use test results to guide us as we apply plant-derived amendments to the bonsai container that provide specific nutrients that were shown in tests to be out of balance. This "preventative medicine" approach supports the plant's health, improves its ability to photosynthesize, and boosts its resiliency in the event of future environmental stress.

We started IPM practices and testing in the spring of 2022 and so far our bonsai have shown a remarkably positive response to this kind of care. In the 34 years since our collection was assembled, this is the healthiest our collection has ever looked as a whole. (An example of the difference in plant vigor and health before and after nutritional testing and balancing is shown in the attached supplemental photos of our Japanese Beech, a bonsai since 1958.) This tells us we are on the right track. We see that more, regular testing of the various species in our collection, combined with more staff training in results analysis and how to determine the best subsequent actions, could "future-proof" our precious collection to be more resilient as we head into a climate that could be increasingly less predictable and more extreme. Support from 4Culture at this time would help us continue this critical work.

Project Impact

Our collection is a unique repository of cultural artifacts. Living objects represent both a slice of the time and context in which they were first made, as well as the evolution and legacy of a cultural community as they are viewed and interpreted today. Through our exhibitions, the public has been introduced to a set of cultural practices around an art form they may have never encountered before.

Pacific Bonsai Museum is located in the City of Federal Way in South King County, which is part of the 2010 Census tract area designated a Community of Opportunity where the population does not have access to many other local museums. We are committed to equitable access-for-all, offering free admission-by-donation, six days a week, year-round. The collection and public events, school field trips, docent-led tours, and classes attract diverse students and families from across King County and from around the world. Last year we welcomed a record-breaking 53,000 visitors to the Museum and this year we had an all-time highest weekend attendance recorded at 5,000 visitors. Pacific Bonsai Museum connects people of all ages, circumstances, and abilities to nature through the living art of bonsai.

The future long-term care of our collection is fundamental to our organization's existence. We ensure the future care of the collection with the work of our dedicated, talented, professional staff funded by a diverse revenue stream. Revenue streams include gifts from public and private

institutions, individual gifts, admission donations, earned income through classes and sales, corporate sponsorships, grants, and endowment income.

Relevant Expertise / Experience / Accomplishments

Pacific Bonsai Museum Staff

Aarin Packard, Curator

Aarin Packard is in charge of both the botanic and artistic direction of our collection. He has been creating groundbreaking exhibitions that have brought cultural communities together around bonsai every year since he joined our staff in 2014. Aarin holds a Masters's Degree in Museum Studies from George Washington University and keeps himself informed of current museology practices. He has more than a decade of experience caring for bonsai at two of the finest bonsai institutions in the world: The National Bonsai & Penjing Museum at the U.S. National Arboretum and Pacific Bonsai Museum. Aarin's peers are a small group; there are very few bonsai scholars and even fewer curators of bonsai museums, making him one of the only people capable of caring for a collection such as ours.

Scarlet Gore, Assistant Curator

Scarlet Gore has had day-to-day, hands-on interaction with trees in our collection for nearly 30 years. She knows and cares for the trees like her own children. Scarlet has studied horticulture at Clover Park Technical College and over the past fifteen years has taken periodic IPM classes through the University of Washington Professional & Continuing Education.

Courtney Branam, Bonsai Gardener

Courtney Branam joined our team in 2020 coming from over twenty years working in the arts. In addition to being an accomplished artist, glassblower, and glass art instructor, Courtney is also a bonsai artist and has been a member of the Puget Sound Bonsai Association since 2015. Courtney helps care for the collection several days a week and has developed an attentive eye for detail in bonsai.

Outside Consultant

Ryan Neil, Bonsai Mirai

Bonsai artist Ryan Neil founded his business, Bonsai Mirai, in 2010 to explore the dialogue between humans and the living tree after becoming the first Western person to complete a grueling, six-year apprenticeship under bonsai master, Masahiko Kimura, in Japan's Saitama prefecture. As a horticultural incubator and creative facility, Mirai's mission is to explore the boundaries and identity of bonsai in the Western world through the context of the tree—where compositions reflect the vast array of native landscapes and cultures that are formed in their midst.

As a leader in the practice, Neil is committed to sharing knowledge through science-based bonsai education. With a vast collection of botanically diverse trees in various stages of development and a commitment to science-based horticultural practices, Bonsai Mirai has a perfect set of trees on which to trial various alternative practices. Neil has pioneered cutting-edge, applied research on IPM practices and over the past two years, has paved the way towards codifying a new, sustainable bonsai practice that can be replicated as the norm rather than the exception. Thus, Neil is uniquely capable of advising Pacific Bonsai Museum staff on what he has learned, through trial and error and rigorous testing, and guiding us as we decipher our own test results.

Project Implementation

Workplan

Phase 1

August 2023, collect samples and send them to Apical Agriculture for testing. Since we need mature, fall foliage for analysis, work must begin in August as leaves are falling, so that samples can be tested before they deteriorate. We realize this will be outside the period for reimbursement for this grant.

Sept 28, 2023, Ryan Neil visits to consult on interpreting August test results and guide staff in subsequent care through Fall.

Phase 2

Up to 35 trees will be tested during this phase from the end of February through April 2024. This is the period when we can take soil samples as it coincides with Spring bonsai repotting season. The specific date of repotting is determined by the tree and the weather. Between April and May 2024, we will collect leaf tissue samples. This tissue collection period will coincide with spring pruning work which happens after trees have started putting on good growth. This timing is also determined by the individual tree in response to its environment. We will send tissue samples to Apical Agriculture for analysis during this period.

In mid-to-late-May, we will invite Ryan Neil for a second visit to analyze our test results and guide our staff on the best course of spring care and nutritional support.

Phase 3

Additional mature leaf samples will be taken and sent for testing with Apical Agriculture (from up to another 35 trees) in August 2024. Results from the Spring nutrition application will hopefully be apparent in the improved health of the collection and decreased presence of pests.

Planning: Curator Aarin Packard plans the order and priority for determining which trees are tested, and at what time of year, and will oversee the sample-collecting processes.

Execution: Scarlet Gore and Courtney Branam will assist with test sample collections; Administrative Assistant Sarah Quick will ship test samples for analysis. PDF versions of each soil/tissue sample test will be saved in our tree collection files.

Fundraising: Fundraising for this project has started and will continue through our annual operating fund which is funded through a mix of initiatives including annual fundraising campaigns using a variety of channels, individual giving campaigns, on-site admission donations, corporate sponsorships, and grant applications from public and private institutions. Major milestones for the fundraising initiatives start prior to the year while creating the annual fundraising plan. Once the fundraising plan is adopted by the Board of Directors, the staff carries out the plan which typically includes the above-listed fundraising vehicles. This project is critical for the care of the collection and will happen regardless, but the timing and number of the tests, and extent of consultations to guide our care practices may vary based on cash flow.

Publicity: We will continue the discussion with our community on our sustainability plan and continue leading the discussion about IPM as it is practiced in bonsai. We will share our methods and results in order to stimulate a robust exchange of experiences among the community and steer the practice towards more sustainable approaches.

Advancing Equity

The history of bonsai in America is deeply imbricated with structural racism. America's first bonsai masters were first-generation Japanese immigrants. Racial discrimination limited their work and educational opportunities, so many worked as gardeners and farm laborers, doing bonsai as a hobby. Those who established nursery businesses suffered significant losses with the signing of Executive Order 9066, which excluded anyone of Japanese descent from living in the Western States. In the barbed-wire detention camps, Japanese American incarcerated successfully grew bonsai in arid desert environments with limited resources, improvised tools, and makeshift containers. After the War, the pain and betrayal of incarceration led some bonsai artists to limit outsiders' access to their formal bonsai groups, while others saw a growing interest in bonsai as an opportunity for healing and began teaching anyone who wanted to learn. So began the practice and proliferation of bonsai in America.

Significant contributions to bonsai history in America were made by King County bonsai artists. In Seattle, Hiromu "Kelly" Nishitani's father, Denjiro, established a garden business on Ravenna Way and later passed on the business to his son, Kelly. He went on to become a key bonsai teacher in the Puget Sound region. The Oriental Garden Center nursery was co-founded in Federal Way by brothers-in-law Joe Asahara and Ken Hikogawa, who famously taught Japanese joinery to George Nakashima at Minidoka. The iconic bonsai that stood outside the Garden Center for 57 years--the 'Asahara' hemlock--was donated by family members to Pacific Bonsai Museum in when the Garden Center closed in 2017.

Takeyuki "Taki" Nagasawa was born in Seattle in 1915 to a truck farmer in Woodinville who grew fruit for regional markets. Nagasawa helped run the family farm until 1942 when the entire family was incarcerated, first at the Puyallup Assembly Center, and then at the Minidoka camp in Idaho. Like so many young men of his generation, Nagasawa answered the call of his country to fight; yet unlike most men, he enlisted while he was incarcerated and served in the 442nd RCT. In 1960, Nagasawa opened the Green River Nursery in Kent, WA, specializing in bonsai, and in 1973, he became a charter member of the Puget Sound Bonsai Association. In 1988, Nagasawa joined the acquisition team responsible for selecting the bonsai that formed the original collection of the Pacific Rim Bonsai Collection (now Pacific Bonsai Museum).

We have maintained relationships with the family members of Japanese American artists whose works are now in our collection. Their descendants still feel deeply connected to their relatives' trees but lack the horticultural knowledge of how to care for them. While they can't fully participate in the decisions regarding tree care, we do keep them involved and invite engagement in museum developments, events, openings, happenings, and host periodic gatherings.

Project Budget

Project Expenses

- People – \$7,458
- Supplies – \$7,000
- TranspShipping – \$300
- **TOTAL – \$14,758**

Project Income

- Applicant – \$1,600
- Foundations – \$2,500
- IndivDonors – \$3,279
- 4Culture request – \$7,379
- **TOTAL – \$14,758**

Project Budget Notes

Budget includes:

- 70 Soil tests with consults on results from Apical testing;
- Packaging and shipping hard costs for soil tests;
- Two, in-person visits from expert Ryan Neil from Bonsai Mirai to help interpret and use testing results;
- 32 hours of training for lead staff member (Curator), specifically related to understanding, interpreting, and utilizing information; and
- 32 hours of training for two bonsai specialist staff members to implement updated practices based on soil testing.

File Uploads

Sample Description

- Draft mock-up of card

Documents

- Before Integrated Pest Management
- After Integrated Pest Management