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Field Report No. 3 - Tabor Tree Project Summary Report 2021

Portland, Oregon

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TABOR TREE PROJECT SUMMARY

Mt. Tabor Park, Portland, Oregon

2021 Mazamas Conservation Grant Recipients



Moon Tree planted Fall 2021 at Mt. Tabor Park with its new Spring buds

Summary

“The Friends of Mt. Tabor Park (FMTP) was organized as a non-profit group* in 2000. Our purpose is to improve and help maintain Mt. Tabor Park for the benefit of individuals, organizations and the Park Bureau; to identify and help solve problems; and to participate in park planning projects.”(FMTP) During the winter of 2021 with covid closures of the Visitor Center, Tree Medicine hikes were offered almost daily and quickly added more than 400+ hiking participants learning about the trees, trails and ecology of the park. By April 2021, our collective of Citizen Scientists had already gathered data on more than 150 trees using the NASA Globe Observer App. Focusing this work into a year long proposal, we were awarded a \$1000 Mazama Conservation Grant to offer four focused training workshops and purchase a field iPad to maintain the data collection information of this continuing Tabor Tree Project. In the Fall of 2021, four very successful training workshops were held at the Visitor Center adding another 50 citizen scientists which continue to add information into the growing knowledge of Mt. Tabor Park. Three Field Reports have been published in 2021 with the collected data. In summary, at the end of April 2022, the participants have added more than 600 trees of great diversity into the NASA global database with additional data on temperature, moisture and soil health expanding into a full ecological study in the newly forming Mt. Tabor Nature Education Center. Thanks to the help of the Mazamas, we have also

planted a **Moon Tree** within the canopy of Mt. Tabor and it has begun to bud and grow amongst the great diverse old-growth forest.

Quoting the summary from Field Report No. 2 - Tabor Tree Report we began here:

“NASA’s citizen science projects are collaborations between scientists and interested members of the public. Through these collaborations, volunteers (known as citizen scientists) have helped make thousands of important scientific discoveries.” (NASA) In January 2021, using the GLOBE Observer app, the Mt. Tabor community joined this global network of scientists, students, teachers, hikers, and nature lovers in collecting Earth Science data and sharing in this international network spanning 120+ countries. Beginning in January 2021, what began as Tree Medicine Hikes led by Dr. Candace Gossen through the Portland Hiking Meetup Group, more than 400 hikers began observing, sharing and learning about the trees of Mt. Tabor Park. Forming small groups, they began measuring the old growth forest known as Mt. Tabor. Collecting tree height, circumference, and age on more than 150 trees between January and April, Dr. Gossen and the Friends of Mt. Tabor wrote a small conservation grant to the Mazamas to continue collecting data during the Fall and winter 2021. The Ronin Institute, supporting Independent Scholars was instrumental with supporting Dr. Gossen’s mission to train Citizen Scientists and expand the ecological knowledge of the park. Four dates were organized at the end of October and 48 eager community members showed up, ready with app in hand to learn more about the trees. Another 46 hikers attended the Tree Medicine hikes making it a collective of 94 new Citizen Scientists with a mission to observe, collect and add new information about the trees and forest ecology into the global community. In this Field Report, we summarize the Citizen Science Trainings which will continue on into 2022.

Today, at the end of April 2022 we offer that the Mt Tabor Tree survey project has been an excellent activity for developing citizen scientists and promoting the importance of woodland ecology in an urban setting. The program created a strong sense of usefulness for numerous park goers, it taught individuals how to access the size and abundance of different trees, and it demonstrated that teamwork could produce significant ecological information.

In addition, new acquaintances were made and the participants learned firsthand about the difficulty of gathering consistent raw data in the field. For example, many of the tree measurements were dependent on sightings of the treetops and this was complicated when trees were close together. As a result, many of our citizen scientists learned the importance of replication, the need for averaging, and the potential data bias. In the latter case, various survey groups realized that they biased tree selection on clear visibility of the top and base of a tree. Because of the density and height and accessibility of the Doug Fir trees at Mt Tabor, it was often difficult to clearly measure an individual tree. Thus estimates had to be made and it was instructive to the participants to see how to use the estimates in environmental research.

Another important aspect of the project was the connection of history to the tree data collection. Clearly, Doug Fir trees were relatively consistent in height and age throughout the park, with averages hovering around 150-175 feet high and 150-200

years old. This predates the development of Mt Tabor Park (1894 – 1911), suggesting that logging, which occurred extensively in the Portland area during that time, did not occur on Mt Tabor. Instead, it is possible that a forest fire in the early 1800's may have promoted a significant "regrowth" of Doug Fir trees and we are now enjoying the beauty of a 200 + year old woodland on Mt Tabor. Participants in the tree survey program were excited to learn of this possible relationship and how their data collection had made the inference possible.

For many of the citizen scientists involved in the projects, it was refreshing for them to learn how the "little" urban woodland on Mt Tabor, in fact, mattered even to the international scale of the NASA Earth Observatory program. During the orientation part of our survey program, which occurred over a month long period in September 2021 and involved over 50 participants, we presented the science and the rationale of the NASA program and we think most of the participants became convinced that their contribution would matter and that citizens from where ever, can contribute to an international-scale undertaking in an effective and meaningful way. This was aided tremendously by Dr. Candace Gossen's dynamic, informative, and enthusiastic presentations during the orientations.

The success of any program of this nature depends on it projecting well beyond the time frame of the grant. Indeed, a significant number of the citizen scientists have agreed to continue with the data collection in the park and forwarding the information to the NASA database. To handle this continual input of data, we have purchased an Apple ipad to keep at the Mt Tabor visitor center where all the backup data will be entered and stored. Much of the tree height and age information includes notations on cloud cover, rain, temperature, and environmental conditions and over time rough correlations can be drawn and provided to the NASA database. Pursuant to these longer-term studies, is collaboration with Dr. Taryn Oakley at Portland Community College. She teaches environmental sciences and requires each of the students to have a field project. We are fortunate to have her include the Mt Tabor tree survey activity as part of her field projects and we have had accordingly, several students independently collecting tree data.

Finally, the Friends of Mt Tabor Park, under which this grant was administered, is currently seeking support to develop a nature center at the park. Critical to this support is the existence of programs that informs and educates the public about the nature and ecology of the Park. The tree survey project has been a great help in this regard and Park officials are now acknowledging the need for more programs of this sort.

Dr. Candace Gossen, continues to expand the vision of research at Mt. Tabor and has submitted a Research Grant with the Mazamas called *Osculation*. During the ob-

servations and data collection with a larger relationship to understanding climate change and how this is affecting the forests of the Pacific Northwest, it was noticed that some of the two trees with greatest canopy abundance at Mt. Tabor Park, the Big-Leaf Maples and the Douglas Firs, have joined their trunks together. This merging of stem cells could be a local adaptation to change within the forest or a greater adaptation to climate change where differing species of trees are now collectively helping each other through these changes. I am certain that we will continue to find ecological connections within this small 200 acre old-growth forest which is why its protection is possible by a dedicated group of citizen scientists that grew its roots from the Tabor Tree Project.

With gratitude for the 2021 Conservation Grant, all of us, more than 500 participants in this project say *Thank you* for believing in our project and the great potential of healing and life capacity of the Mt. Tabor forest and all of us that love it so.

Previous reports may be found here:

<https://ronininstitute.org/citizen-science-tabor-tree-project-field-report-2/6547/>

<https://ronininstitute.org/citizen-science-tabor-tree-project-upcoming-field-training/5920/>

Tabor Tree Project Field Report No. 1 April 2021

https://www.academia.edu/61612119/Tabor_Tree_Project_Field_Report_No_1_April_2021?source=swp_share

Field Report No.2 - Tabor Tree Project

https://www.academia.edu/62189973/Field_Report_No_2_Tabor_Tree_Project

Charts for the Tabor Tree Project

https://www.academia.edu/47771883/Charts_for_the_Tabor_Tree_Project

Expenditures and Accountability of \$1000 Mazama Conservation Grant:

Moon Tree purchase& shipping	\$200
Ipad plus case	\$600
Training Workshops	\$200
Total Used	\$1000
Balance Remaining	0

References Cited

Cain, E. and Rosman, J. 2017 *Broken Treaties: An Oral History Tracing Oregon's Native Population*. OPB March 20, 2017 <https://www.opb.org/artsandlife/series/brokentreaties/oregon-tribes-oral-history-broken-treaties/>

Friends of Mt. Tabor <https://www.taborfriends.org/>

Moon Tree will be new Addition at Mt. Tabor <https://blackcoyotemedicine.org/2021/10/14/moon-tree-will-be-new-addition-to-mt-tabor/>

Portland explained: Why the city is taking Mount Tabor, Washington Park reservoirs offline. OregonLive. April 22, 2019 https://www.oregonlive.com/portland/2015/06/portland_explained_why_portlan.html

Taboh, Julia, April 22, 2021. Voice of America, *Citizen Scientists Worldwide Collect Environmental Data for NASA* <https://www.voanews.com/episode/citizen-scientists-worldwide-collect-environmentaldata-nasa-4663671> (Dr. Candace Gossen, Tabor Tree Project inclusive)

Tabor Tree Project – Part Two begins October 28, 2021 <https://blackcoyotemedicine.org/2021/10/14/tabor-tree-project-part-two-begins-october-28-2021/>

Tabor Tree List <https://blackcoyotemedicine.org/2021/04/29/tabor-tree-list/>

Tabor Tree Project Field Report No. 1 April 2021 https://www.academia.edu/61612119/Tabor_Tree_Project_Field_Report_No_1_April_2021?source=swp_share

Tabor Tree Project - Guidelines Newsletter 2B- improved images and additions

The campaign URL for this campaign is: <https://mailchi.mp/b573f61471b4/tabor-tree-project-guidelines-and-globe-observer-app-info-newsletter-9772217>

Wilson E. O. 2013 Letters to a Young Scientist. Liveright Publishing Corporation, W. W. Norton and Company, New York, 244 pp. ISBN 978-0-87140-377-3

Wilson, Edward O. (1995). On Human Nature. London: Penguin Books. ISBN 0-14-024535-9.

