

Hazel Wirick Scholarship

An annual scholarship is underwritten by Kalamazoo Garden Council, Inc., in memory of founder and past president, Hazel Wirick, and awarded by Michigan Garden Clubs, Inc., to Western Michigan University to support a student selected by the university in the field of botany, biology, environmental studies or other related subjects. Michigan Garden Clubs awards scholarships at Michigan universities with programs in fields related to its mission. Donations to these scholarships may be sent to Scholarship Chair of Michigan Garden Clubs, Inc., Donations for the Hazel Wirick scholarship should be noted as such. Lynn Dinvald (Past MGC President) is the MGC Agent to Western Michigan University. Dr. Todd Barkman is head Chair of Biological Sciences at WMU and recommends candidates for the scholarship. The 2020 Hazel Wirick Scholarship recipient is Peter Quakenbush who is finishing his Ph.D. in Biological Sciences. Following is a letter from Peter Quakenbush included with his application for the Hazel Wirick Scholarship.

I have desired to know and explore the plant kingdom of life as long as I can remember. Under Dr. Todd Barkman, I am pursuing a phylogenetic study of *Medinilla* in the doctoral program at Western Michigan University. *Medinilla* is a plant group that Hazel Wirick could have appreciated. Much like the lilac for which she established as Kalamazoo's official flower, many *Medinilla* species are prized ornamentally. They have large, colorful panicles of flowers that are often pink or purple. Flowers are visited by numerous bee species. They develop into juicy berries, that are fed on by birds, monkeys, and even civet cats. The group exhibits a variety of growth forms. There are terrestrial shrubs, woody climbers, and epiphytes. Like other members of the melastome family (to which Michigan's *Rhexia* spp.—the meadow-beauties—belong), *Medinilla* has a diversity of elaborate anthers. *Medinilla* species are found naturally throughout the wet, Old World tropics, and are a favorite in conservatories of temperate botanical gardens.



Just how many *Medinilla* species there are, is unknown (perhaps 400), but it is clearly one of the largest and least studied genera of flowering plants. Many have yet to be described, while others are thought to already be extinct. My research will provide the first in-depth systematic, evolutionary, and historical biogeographic study from a phylogenetic perspective for *Medinilla*. Along with identifying major lineages—hopefully supported by interesting morphological traits—and establishing their relationships, I am interested in early dispersal events linking key areas of diversity such as Madagascar, India, Indochina, Borneo, the Philippines, and New Guinea. I am also interested in identifying possible scenarios as to why this species rich group is so species poor on the continents of Africa, Asia, and Australia. Additionally, the evolution of floral changes related to anther morphology and configuration and transitions in growth form will be investigated. All this will contribute to better understanding the historical processes responsible for the species distribution patterns seen today in many of the world's hottest biological hotspots, which are critical for global biodiversity conservation.

My long focus on plants is clear through my B.S. Biology at Calvin College, summer work in Rocky Mountain National Park, agricultural work in the Central African Republic, M.S. Botany at the University of the Philippines, and currently through my doctoral work at WMU. Here I am enjoying my teaching and research responsibilities. They have given me the opportunity to inspire and foster lifelong learners who are biologically (even botanically) informed, and make contributions to what we know about the world. I envision continuing to do this kind of work in academia, at a botanical garden, a museum, or other like-minded institution. The year 2020 will mark 50 years since the first Hazel Wirick Scholarship. It would be an absolute honor to use this resource to significantly increase the amount of data I can generate for my dissertation project.