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Floristic inventory and distribution characteristics of the Makiling Botanic Gardens, Mount Makiling Forest Reserve ASEAN Heritage Park, Philippines

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The Makiling Botanic Gardens (MBG) is the show window of the Mount Makiling Forest Reserve ASEAN Heritage Park (MMFR AHP). But unlike other botanic gardens, MBG covers about 300 hectares which include natural and regrowth forests, arboreta, and tree plantations. It serves as a training laboratory for education, research and extension as well as providing recreational, and tourism needs of the general public. The study presents the latest inventory of MBG's flora and its distribution characteristics within the area. It generally aims to assess the current species composition including spatial distribution and characterization for *in situ* and *ex situ* conservation programs. Following the GIS-Based Assessment, Monitoring, and Evaluation (GAME) Model gridding system, a survey was conducted from August 2019 to September 2020. Trees with a minimum diameter at breast height (DBH) of 5.0 cm were measured and mapped. Vines and orchids were counted and noted. Results of the initial inventory showed that current vascular plants of MBG included a total of 77 families, 263 genera, and 425 species. The area surveyed comprised 6.9 hectares accounting for only 2.3% of the 300 hectares of MBG but comprises about 21% of the 2,038 plant species of the whole MMFR. Of the 425 species, 381 are native, 25 are cultivated not naturalized, and 19 are naturalized. About one third (114) of native species are endemic. Based on the floristic inventory, MBG has a very high diversity index of 4.77 and houses 110 threatened species. The top species based on Importance Value are *Swietenia macrophylla* King (56.68), *Parashorea malaanonan* (Blanco) Merr. (25.69), and *Shorea contorta* Vidal (19.11). *S. macrophylla* is an exotic, introduced species used for plantations. The inventory shows that MBG is an important biodiversity conservation area having a significant number of rare and endemic and threatened species.