AEBI 427 - Barbados Interdisciplinary Project; One page summary

Creation of An Orchid Wonderland at Flower Forest Botanical Garden

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Flower Forest Botanical Gardens (FFBG) is a 53-acres horticultural park and tourist attraction located in Saint Joseph, Barbados (Flower Forest Botanical Gardens, 2024). The Orchid Wonderland Project is designed to introduce a variety of orchids into FFBG's forest to enhance both visitor experience and local biodiversity. Botanical gardens serve as vital hubs for biodiversity, scientific research, and ecological restoration, offering much more than just aesthetic value to our orchid project (Primack & Miller-Rushing, 2009). This initiative seeks to assess and understand the environmental conditions at FFBG, including wind, temperature, light, and water availability, to determine which orchid species will thrive in which setting. The project also aims to create visually appealing orchid displays that will enhance the visitor experience and improve their overall visit at the botanical garden. The environment at FFBG is a natural tropical rainforest with uncontrolled weather conditions, high biodiversity, and complex interactions between orchids and the local ecosystem (Flower Forest Botanical Gardens, 2024). Key environmental factors such as wind, temperature, light, and water availability are crucial for successful orchid growth and integration into the environment (M. Marshall, personal communication, July 14, 2024). Additionally, educational brochures will be developed to increase public understanding of the orchids and raise awareness, among current/future staff and visitors about species conservation while showing how to monitor and address any health issue or pest with the transplanted orchids. The orchid varieties chosen for this project include Dendrobiums, Oncidiums, Epidendrums, Phalaenopsis, Cymbidiums, and Vandas, each selected for their adaptability and visual appeal. They come in a variety of different colours which we placed strategically focusing on aesthetics. The methodology for planting involves preparing coconut husks, attaching washers and screws to the husks for stability, placing the orchids on the tree, positioning the husks on the desired area, and securing them to ensure the orchids remain in place (M. Marshall, personal communication, July 14, 2024).

To further enhance the aesthetic appeal of the Flower Forest Botanical Gardens, a structure featuring three totem poles named "Faith," "Love," and "Hope" has been designed, with "Love" standing as the tallest. These names hold deep personal significance for Mr. David, the owner of the Flower Forest. The structure is supported by a raft foundation, chosen for its stability and incorporating local construction practices. After construction, the poles will be adorned with artistic crafts, adding a unique and vibrant visual element. Engineered to withstand both vertical and lateral forces, this design ensures the structure's durability and presence in the garden, even under the most challenging conditions.

Through the course of this project, we learned the importance of teamwork, as collaboration is essential for the successful implementation and continuous management of the orchid displays. We wanted to thank David Spieler, our mentor, and the whole staff of FFBG as well as Michael I. Marshall our orchid expert.

REFERENCES

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