Practice of living aquatic plant conservation technology

J. Pan*, Y.L. Liu, B. Lu, and S. Gan

Wuhan Botanical Garden, Chinese Academy of Sciences, Wuhan, China

Keywords: Maintenance management system, plant introduction, preservation system, specialized garden

China is rich in aquatic vascular flora and is one of the regions with the highest diversity of aquatic plants worldwide. However, with the rapid development of China's social economy and global changes, the water environment has undergone dramatic alteration, which has caused inevitable interference with aquatic plants, such as species diversity, resource quantity, and distribution range. Hence, it is urgent to accelerate the collection and conservation of aquatic plants in China before they go extinct. Firstly, we analyzed the main threats faced by aquatic plants, the high ecological value of aquatic plants, and the types of aquatic plants conserved in the germplasm bank, and proposed the goals of our aquatic plant conservation. Secondly, we acquired aquatic plants through various channels such as plant introduction, plant exchange, the Germplasm Bank of Wild Species, and plant enthusiasts in China. Finally, we preserved aquatic plant resources by establishing a preservation system of living resource banks, specialized plant areas, and community preservation areas. Establishing a living preservation system does not mean the end of conservation tasks, and only high-quality and high-level management can gradually achieve the expected results. We took the Lotus plant as an example to explore scientific maintenance management. As our work continues, it has been extended to Nymphaea, submerged plants, and other living resource banks of aquatic plants. We believe that the conservation of aquatic plants needs to be ensured through scientific management and technological innovation to ensure the healthy growth and successful reproduction of aquatic plants. This study serves as a potential model for conserving and protecting aquatic plants.

^{*}Corresponding author email: panjunfeng@wbgcas.cn