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Notes on native Thai orchid studies

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Thailand is home to a diverse range of orchid species, many of which are highly threatened due to their demand as ornamental plants. Urgent studies on orchid conservation are needed, and therefore, we have reviewed and summarised the results from biological studies and conservation efforts targeting the native orchids of Thailand. The most complete taxonomic report on Thai orchids, authored by Gunnar Seidenfaden, documented a total of 1,242 species belonging to 160 genera. The genera *Bulbophyllum* (192 species) and *Dendrobium* (176 species) account for approximately 30% of the total species in Thailand. The most popular species for the horticultural trade are *Rhynchostylis gigantea*, *Vanda coerulea*, *Paphiopedilum* spp., and *Dendrobium friedericksianum*. However, species names are frequently changed due to emerging evidence from molecular phylogenetic studies, population variation and nomenclatural revisions. In terms of biological conservation, there is still a lack of fundamental work on genetic diversity, autecology and reproductive biology. Significant research interest centers on the aymbiotic propagation of native orchids, particularly the more attractive species. Although symbiotic propagation is crucial process for orchid conservation, there have only been a few successful attempts. There are about 130 genera and 600 species in the living collections, and 370 native orchid species in short term storage in the tissue culture laboratories of the Queen Sirikit Botanic Garden and Suranaree University of Technology. *In situ* conservation might be the most suitable method for the conservation of threatened species, but it should be carried out under academic supervision, with careful monitoring to ensure success. However, *in situ* re-introduction efforts should prioritise species that are threatened by over-collection and meet the necessary criteria. Additionally, conservation efforts involving community participation may be more sustainable. Case studies on *Paphiopedilum exul*, *Vanda coerulea*, and *Dendrobium friedericksianum* reveal the pros and cons for future conservation management.

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