

From houseplant exhibition to conservation platform: a replicable curatorial model using *Platycerium* at the Sejong National Arboretum

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Abstract

Companion plant culture – the keeping of plants as household companions – has expanded rapidly in the Republic of Korea, prompting botanic gardens and arboreta to reconsider how public enthusiasm for horticulture may be aligned with ex situ conservation. This article presents a case study of a *Platycerium* initiative at the Sejong National Arboretum (SNA) that developed between 2024 and 2025 from a thematic exhibition into a conservation platform. In 2024, the special exhibition *The Mysterious Flight of Bakjwi-ran (Staghorn Ferns)* displayed over 100 individuals representing 70 *Platycerium* taxa, including all 18 recognised species, which were subsequently incorporated into SNA's documented living collection. In 2025, SNA established a 90 m² core *Platycerium* conservation zone within the 2,800 m² Tropical Garden, complemented by installations across the conservatory to accommodate species-specific growth forms. Public programmes involving plant enthusiasts facilitated knowledge exchange, collaborative exhibition contributions and resource efficiencies. This transition demonstrates how exhibition-led initiatives can catalyse accession and collection development. The article proposes a four-stage curatorial model applicable to ornamental taxa where popularity intersects with ecological constraints.

Introduction

Companion plant culture and emerging conservation questions

In recent years, companion plant culture has expanded in the Republic of Korea. In Korea, the term 'companion plants' (Korean: 반려식물) refers to plants kept close to one's living environment to provide enjoyment and emotional stability through sustained care and interaction (Ko, 2017). This sense of 'companion plant' – plants

kept as companions to people, analogous to companion animals – corresponds broadly to the English 'house plant', and is distinct from 'companion planting' in the horticultural sense of 'growing mutually beneficial species together'. A nationwide survey conducted in 2024 found that 34% of the population – approximately 17.45 million people – report cultivating such plants. The total companion plant industry, including plant sales and associated horticultural materials, is estimated

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at KRW 2.42 trillion (c. USD 1.76 billion) (Rural Development Administration, 2025).

Globally, enthusiasm for ornamental plants has expanded alongside urbanisation and the advent of digitally mediated horticultural communities. The circulation of visually distinctive taxa through networks of enthusiasts has intensified interest in plant identity, provenance and cultivation. While strengthening public engagement with horticulture, it has also highlighted long-standing tensions between use and conservation in the ornamental trade (Heywood, 2003).

Recent scholarship suggests horticultural plant use may be an under-recognised pillar of ex situ conservation when cultivation networks are aligned with institutional curation (Ismail *et al.*, 2021). Large-scale production and collections maintained by enthusiasts already hold extensive plant diversity but often remain disconnected from formal conservation frameworks. When documented and accessioned, such networks may complement traditional botanic garden and arboretum collections.

Within this context, Korea's companion-plant boom reflects a wider pattern in which demand for ornamental plants, ecological awareness and conservation concerns increasingly intersect. Botanic gardens and arboreta play a central role in global ex situ conservation – collectively managing c. 30% of known plant species and holding 41% of threatened taxa – yet collections worldwide remain biased towards temperate flora, with tropical taxa being underrepresented (Mounce *et al.*, 2017). This imbalance underscores the strategic importance of strengthening tropical living collections within urban, public-facing botanic gardens.

Framed more broadly, the expansion of urban environments need not be viewed

only as a pressure on biodiversity. Cities are increasingly recognised as complex habitats that can shelter substantial plant diversity, including species of conservation concern, and through which plants can persist within the urban matrix (Gentili *et al.*, 2023). Urban forests and other plantings, ubiquitous across cities worldwide, can act as repositories of threatened plant diversity and, when treated as part of ex situ conservation alongside botanic gardens and arboreta, may extend conservation capacity beyond institutional collections (Love *et al.*, 2025). Where refuges for a wide range of taxa are established across a city – and, ultimately, across many cities – they may make a meaningful contribution to safeguarding plant diversity at a broader scale. As an urban arboretum at the centre of Sejong, the Sejong National Arboretum (SNA) is well placed to act within this context, connecting everyday plant culture with a wider urban conservation role.

*The genus *Platyserium* as a conservation-relevant ornamental taxon*

The genus *Platyserium* (Polypodiaceae), comprising approximately 18 recognised species (Zhao *et al.*, 2024), is widely known as staghorn ferns. The genus is divided into two major clades with centres of diversity in Afro-Madagascar and Australasia (Kreier & Schneider, 2006), and several species exhibit geographically restricted distributions.

Platyserium spp. are epiphytic ferns characterised by dimorphic fronds: basal (shield) fronds that protect the root zone and accumulate organic matter, and fertile fronds, often antler-like, that bear sporangia and conduct photosynthesis. Their distinctive form and their adaptability to vertical mounting have made them popular companion plants.

Some species are associated with specific types of forest or canopy niche and may be sensitive to habitat alteration. Reports of habitat degradation and pressure from ornamental collections in parts of Southeast Asia have raised regional conservation concerns for selected taxa, including *P. grande* in the Philippines (Cano-Mangaoang & Gumban, 2020). More broadly, over roughly the past two decades demand for ornamentals has been linked to the harvesting and largely undocumented cross-border trade of wild-collected epiphytes, including *Platycerium*, in continental Southeast Asia, at a scale far exceeding official statistics (Phelps & Webb, 2015). Although formal conservation assessments vary, the genus illustrates a broader category of horticulturally prominent yet ecologically specialised taxa in which demand for ornamentals intersects with restricted distribution patterns.

As epiphytes of exposed forest canopies, *Platycerium* species have an upright, vertically oriented growth habit (Wang *et al.*, 2025). This ecological trait not only differentiates the genus morphologically but also provides opportunities for distinctive display, unlike conventional horizontal bench-based systems.

Research aims

This study examines a *Platycerium*-focused initiative at SNA as an example of exhibition-led institutional integration. Beginning as a thematic exhibition and evolving into a structured conservation display, the initiative sought to integrate public engagement, ecological interpretation and formal accession.

The article addresses three questions:

- How can a companion-plant exhibition function as a catalyst for accession and long-term collection of wild-origin taxa?

- How can ecologically informed exhibition design and spatial infrastructure be translated into sustained ex situ conservation practice?
- How can networks of enthusiasts be integrated into institutional curation and accession systems while maintaining high standards of documentation and curatorial oversight?

By analysing the transition from exhibition to embedded conservation infrastructure, this study proposes a replicable curatorial model through which consumer-driven enthusiasm for plants may be directed towards institutional ex situ conservation.

Institutional context and strategic framework

SNA, operated by the Korea Arboreta and Gardens Institute (KoAGI), is a national arboretum located at the centre of Sejong, the administrative capital of the Republic of Korea. KoAGI is a public organisation established in May 2017 under the Korea Forest Service, in accordance with the Act on the Creation and Furtherance of Arboreta and Gardens. Its mandate includes the establishment and management of national arboreta by climate and vegetation zone and the promotion of garden culture and the gardening industry. KoAGI operates multiple national arboreta and associated institutions, including SNA, the Baekdudaegan National Arboretum, the National Botanic Garden of Korean Native Plants and the Korean National Garden Culture Center.

SNA covers approximately 65 hectares and comprises outdoor themed gardens and a Four Seasons Conservatory encompassing a Mediterranean Garden, a Tropical Garden and a Special Exhibition Garden (Fig. 1A). Since opening in late 2020, SNA has rapidly

expanded its visitor base: in 2025 it surpassed one million annual visitors for the first time, underscoring the institution's strong exhibition-oriented public reach as Korea's flagship urban arboretum.

Over the past six years, SNA has delivered 16 major special exhibitions integrating plant collections with humanities, art and public storytelling frameworks (Fig. 1B). These exhibitions have addressed themes such as biodiversity, climate change and carbon neutrality, positioning plant display as a medium for environmental communication. This programme has contributed to visitor engagement while reinforcing an institutional approach in which the exhibition is treated as a strategic instrument linking public interpretation with the development of living collections. In addition, SNA has run ten themed exhibitions focused specifically on companion plants. During the COVID-19 pandemic, when many people spent extended periods indoors and in relative isolation, these exhibitions highlighted the diversity of house plants and the comfort and other benefits they can offer, helping to promote plants, garden culture and related industries suited to an urban context.

Beyond special exhibitions designed primarily for audience enjoyment, SNA places strong emphasis on exhibition formats that contribute to the conservation of biodiversity and ex situ practice. Collection-based conservation initiatives already in operation include the Clematis Wall Garden and the Iris Garden, both of which integrate genus-focused ex situ conservation with public interpretation (Fig. 1C and D). In addition, the Rare and Endemic Plant Garden safeguards and interprets rare and endemic Korean taxa across two glasshouses and an outdoor display zone dedicated to temperate native species (Fig. 1E). These

conservation-led collections are maintained for their biodiversity value rather than primarily for ornamental appeal. Collectively, these initiatives demonstrate an institutional model in which the public exhibition functions as a platform for advancing the cultural and ecological values of arboreta and gardens while reinforcing documented living collections and long-term collection management systems.

More broadly, botanic gardens and arboreta have evolved over recent decades from display-oriented landscapes towards becoming conservation institutions grounded in scientific frameworks (Donaldson, 2009). Smith (2016) argues that botanic gardens should operate as components of an integrated global conservation system linking public engagement, living collections and biodiversity policy. Effective ex situ conservation requires systematic institutional programmes with clear objectives and evaluation, rather than relying on unplanned accumulation of plant material (Havens *et al.*, 2006). Recent scholarship further highlights that ornamental plant use can contribute to ex situ conservation capacity when embedded within strategic institutional frameworks (Ismail *et al.*, 2021).

Within this context, SNA has developed an exhibition-led conservation approach comprising: (1) strategic selection of priority plant groups where public interest and conservation relevance intersect; (2) coordinated acquisition and curatorial activation through special exhibitions, interpretation and partnerships with communities of enthusiasts; (3) formal accession documentation and institutional integration of acquired material; (4) establishment of environmentally aligned ex situ conservation zones tailored to species requirements; and (5) longer-term



Fig. 1 Exhibition- and collection-based conservation precedents at the Sejong National Arboretum. **A** The Four Seasons Conservatory complex, comprising the Tropical Garden, Mediterranean Garden and Special Exhibition Garden. **B** A special exhibition integrating public storytelling with biodiversity themes. **C** The Clematis Wall Garden (genus-focused conservation display). **D** The Iris Garden. **E** The Rare and Endemic Plant Garden. Photos: A and E SNA; B–D Wonsoo Park.

conservation planning embedded within institutional management systems.

The development of the *Platyserium* initiative in 2024 represents the application of this approach within the context of an exhibition. As a national arboretum, SNA

assembles, displays and interprets plant resources from around the world, and *Platyserium* was selected from among many potential subjects as the focus for this initiative. In their native region of Southeast Asia, staghorn ferns have long been used

as a horticultural commodity: *Platynerium* and other epiphytes have circulated for decades as ornamental products – including wild-collected material moved across the Myanmar–Thailand border and sold in major plant markets – typically without accompanying accession records or ex situ conservation outcomes (Phelps & Webb, 2015). More broadly, reliable identification of staghorn fern accessions in botanic garden and horticultural collections remains a recognised challenge for ex situ conservation (Wang *et al.*, 2025). Against this background, the deliberate coupling of a public exhibition with taxonomic verification, formal accession and ex situ conservation is what distinguishes the present initiative.

Establishing a conservation platform through exhibition practice

Curatorial strategy and taxonomic verification

The exhibition *The Mysterious Flight of Bakjwi-ran (Staghorn Ferns)*, which ran from August to November 2024, presented over 100 individual plants representing 70 taxa of *Platynerium* (Fig. 2). The title reflects the Korean name for the genus, Bakjwi-ran, which literally means ‘bat orchid’, referring to the bat-like silhouette of its fronds. *Platynerium* are ferns and are entirely unrelated to orchids, which are flowering plants; the name is a vernacular allusion only. While the plants are widely known in English as ‘staghorn ferns’ because of their antler-shaped fertile fronds, the notion of ‘flight’ is an allusion to the image of the bat evoked by the Korean vernacular name.

Among the exhibited material, all 18 recognised species within the genus were introduced and displayed (Figs 3 & 4). These specimens were nursery-propagated

individuals (not wild-collected) of wild species, obtained from a specialist Thai *Platynerium* nursery operated by Somtop Pradidsopit (Fig. 5A). Prior to acquisition, the arboretum conducted a site visit to review propagation facilities and practices and to examine phytosanitary and export requirements for plant introduction. The plantlets were then imported into Korea as bare-rooted material free of growing medium through a licensed importer (Jay’s Aquatic Garden). Consignments passed import plant quarantine inspection by the Animal and Plant Quarantine Agency (APQA), Incheon International Airport Regional Office, under Article 17(1) of the Plant Protection Act and Article 29 of its Enforcement Rule, and were certified free of regulated pests. *Platynerium* is not listed in the CITES appendices.

As part of this collaboration, Somtop Pradidsopit was invited to SNA to deliver a public lecture on the ecology, taxonomy and cultivation of *Platynerium*, extending the partnership beyond acquisition to include knowledge exchange and public engagement (Fig. 5B).

In addition, Hyunwoong Kim, the author of the Korean monograph *The Wild Species Illustrated Platynerium: A Journey into the Life and Ecology of Platynerium* (Kim, 2025), provided substantial support during the preparation of the exhibition. Contributions included the verification and identification of both wild species and cultivated forms, advisory input supporting nomenclatural accuracy and the provision of interpretive content for exhibition panels. Collaboration with Hyunwoong Kim and other plant enthusiasts also informed the interpretation of the genus within contemporary companion-plant culture, particularly in the exhibition’s third zone focusing on domestic horticultural practice (Fig. 2D).



Fig. 2 Overview of the 2024 special exhibition *The Mysterious Flight of Bakjwi-ran (Staghorn Ferns)* (c. 130 m²) at SNA. **A** Exhibition poster featuring an interpretive illustration of *Platycerium*. **B** Wild *Platycerium* display zone. **C** Thai-themed interpretive zone. **D** Companion-plant (home-gardening) display, highlighting mounting techniques and indoor horticultural practices. Illustration A: SNA; Photos B–D: Wonsoon Park.

A key curatorial decision was to use wild species and the associated opportunities to involve visitors in conservation activities. By prioritising species-level material supported by scientific nomenclature and ecological interpretation, the exhibition directed visitor attention from cultivar variation towards biodiversity, habitat specificity and conservation relevance.

The 18 species presented in the exhibition are summarised here, together with brief ecological notes, a horticultural microclimate grouping and a growth form classification (Table 1). Ecological notes were compiled through a synthesis of

published species accounts and phylogenetic treatments of *Platycerium* (Hoshizaki & Price, 1990; Kreier & Schneider, 2006; Zhao *et al.*, 2024), and growth form classifications (colonial vs solitary) follow life-history distinctions discussed for colonality within the genus (Ciarle *et al.*, 2025).

The exhibition space was organised into three thematic zones reflecting this curatorial approach:

- Wild species zone – presenting 18 taxonomically verified species accompanied by ecological and biogeographical interpretation. Scientific

Table 1 *Platycerium* species presented in the 2024 special exhibition at the Sejong National Arboretum, with ecological characteristics, horticultural microclimate grouping and growth form classification.

Species	Native distribution	Ecological characteristics	Microclimate group ^a	Growth form ^b
<i>P. alcornae</i>	Africa, Madagascar	African–Indian Ocean species complex	A	C
<i>P. andinum</i>	Peru, Bolivia	Localised Andean foothill forests	D	S
<i>P. bifurcatum</i>	Australia, New Guinea	Widespread forest epiphyte; naturalised in some regions	A	C
<i>P. coronarium</i>	Southeast Asia	Large canopy epiphyte; ring-forming colonies	A	C
<i>P. elephantotis</i>	Tropical Africa	Forest epiphyte with undivided fertile fronds	A	C
<i>P. ellisii</i>	Madagascar	Mangrove-associated endemic	B	C
<i>P. grande</i>	Philippines, Indonesia	Large solitary canopy species	A	S
<i>P. hillii</i>	Australia (Queensland)	Regional forest epiphyte	A	C
<i>P. holttumii</i>	Southeast Asia	Large canopy species; formerly confused with <i>P. wallichii</i>	A	S
<i>P. madagascariense</i>	Madagascar	Endemic; ant-associated nutrient strategy	A	C
<i>P. quadridichotomum</i>	Madagascar	Partly lithophytic species	C	C
<i>P. ridleyi</i>	Malaysia, Indonesia, Thailand	Upper-canopy epiphyte in humid forests	A	S
<i>P. stemaria</i>	Tropical Africa	Colonial forest epiphyte	A	C
<i>P. superbum</i>	Australia	Large solitary epiphyte; non-pup-forming	A	S
<i>P. veitchii</i>	Australia	Seasonally dry forest species; often lithophytic	C	C
<i>P. wallichii</i>	South & Southeast Asia	Large canopy epiphyte	A	S
<i>P. wandaee</i>	New Guinea	Very large solitary canopy epiphyte	A	S
<i>P. willinckii</i>	Indonesia	Epiphyte widely cultivated ornamentally	A	C

Notes: All specimens were nursery-propagated individuals (not wild-collected) sourced from a specialist Thai *Platycerium* nursery and legally imported as substrate-free plantlets that passed APQA import plant quarantine (Plant Protection Act, Art. 17(1)).

^a Microclimate groups (A–D) represent horticultural interpretation of habitat conditions derived from published species accounts and institutional cultivation experience at SNA: A = humid forest epiphyte (filtered light; moderate to high humidity); B = high-humidity, low-light conditions; C = brighter light with seasonal drying tolerance; D = intermediate moisture regime with distinct wet–dry cycles.

^b Growth form: C = colonial; S = solitary.

names, habitat characteristics and growth strategies were displayed to emphasise species diversity and conservation significance.

- Thai commemorative garden zone – recognising collaboration with Thai growers and specialists through whom wild-origin material was sourced and expert knowledge exchanged. Specimens were displayed in suspended vertical configurations referencing epiphytic canopy growth and established Thai horticultural presentation practices.
- Companion plant zone – interpreting *Platynerium* within contemporary companion plant culture by demonstrating mounting techniques, interior placement strategies and selected cultivated forms.

Following the exhibition, the 18 species were formally accessioned into the arboretum's permanent living collection. In addition, several specimens were donated by participating growers after the exhibition period. The introduction of taxa that had not previously been held expanded the taxonomic scope of tropical epiphytic fern holdings and strengthened institutional ex situ conservation capacity for this group.

Ecologically aligned exhibition infrastructure

Throughout the exhibition, domestically sourced timber was used to create mounting boards scaled to species growth form (Fig. 6). A Wardian-style display case incorporating aged wood, artificial lighting and misting systems recreated microhabitat conditions analogous to epiphytic attachment sites on tree trunks and large branches (Fig. 7).

Establishment of conservation zone

In early 2025, building on the outcomes of the 2024 exhibition, a 90 m² dedicated *Platynerium* ex situ conservation zone was established within SNA's 2,800 m² Tropical Garden (Fig. 8). Vertical mounting systems, species-specific lighting and humidity regulation were installed to support long-term cultivation.

The spatial arrangement of each species was informed by ecological growth habit, with microclimatic conditions within the conservatory carefully considered. Solitary species were mounted individually within the designated conservation zone using vertical systems to support long-term stability and display viability (Fig. 8A). In contrast, gregarious species forming colonial clusters were installed in hanging configurations attached to structural elements, allowing sufficient space for lateral expansion (Fig. 8B).

The vertical growth habit of *Platynerium* enables cultivation in compact environments and lends itself to mounted and suspended display systems. In the present case, the conservation zone was organised according to ecological growth habit and horticultural microclimate requirements (as set out in Table 1). The arrangement functioned not only as a conservation strategy within the institutional collection but also as a demonstrative model for horticultural practice, supporting guided interpretation and practical learning.

Structured community participation

During the exhibition period, events were held to promote community engagement. 'Trade Days' involved 45 participating teams and facilitated the coordinated exchange



Fig. 3 *Platycerium* species displayed in the exhibition.
A *P. alcicorne*. **B** *P. andinum*. **C** *P. bifurcatum*. **D** *P. coronarium*.
E *P. elephantotis*. **F** *P. ellisii*. **G** *P. grande*. **H** *P. hillii*. **I** *P. holttumii*.
J *P. madagascariense*. **K** *P. quadridichotomum*. **L** *P. ridleyi*.
M *P. stemaria*. **N** *P. superbum*. **O** *P. veitchii*. **P** *P. wallichii*.
Q *P. wandae*. **R** *P. willinckii*. Photos: Byungju An.



Fig. 4 Botanical illustrations of the 18 *Platycerium* species produced for interpretive display. Illustrations: SNA.



Fig. 5 International exchange supporting *Platycerium* acquisition and conservation capacity building. **A** Site visit to a specialist *Platycerium* nursery in Thailand operated by Somtop Pradidsopit. **B** Invited public lecture by Somtop Pradidsopit at SNA. Photos: Wonsoon Park.

and redistribution of approximately 300 *Platycerium* specimens (Fig. 9A). These events facilitated peer-based exchange of plant material among participants within a coordinated framework while maintaining institutional oversight. No wild-collected or undocumented-provenance material was

accessioned, and any plants donated or introduced were verified and recorded before incorporation into the collection.

In addition, 'Know-how Day' workshops featured invited specialists from a national *Platycerium* society, Platycerium Korea. Participants received training in mounting



Fig. 6 Exhibition infrastructure supporting epiphytic cultivation of *Platycerium*. **A** Custom wooden mounting boards fabricated from domestically sourced timbers. **B** Custom ceramic mounting panel produced by a white-porcelain artist for attachment of the plant. **C** Commercially available wooden mounting-board set commonly used in *Platycerium* horticulture. **D** Cork board used to enhance root adhesion and establishment. Photos: Wonsoon Park.

techniques, interior plant design (known in Korea as ‘planterior’ – a portmanteau of ‘plant’ and ‘interior’), and species-specific cultivation and management practices (Fig. 9B). Besides offering technical instruction, these sessions functioned as knowledge-transfer platforms

that communicated ecological significance and emphasised responsible plant stewardship.

Within the companion plant zone, enthusiasts contributed not only living specimens but also display materials, artwork,

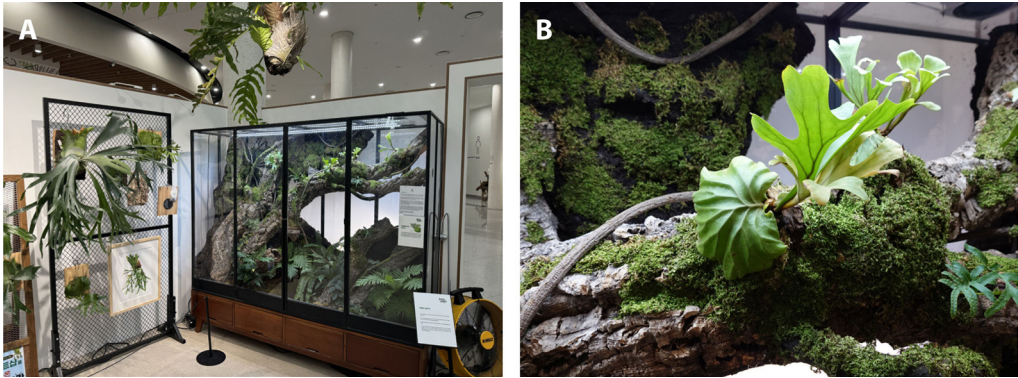


Fig. 7 Wardian-case installation recreating epiphytic microhabitat conditions. **A** Wardian-style display case equipped with controlled lighting and misting systems. **B** Example of *P. ridleyi* attached to a tree trunk in cultivation, illustrating its natural epiphytic growth habit. Photos: Wonsoo Park.



Fig. 8 Dedicated *Platycerium* ex situ conservation zone established within the Tropical Garden at SNA (2025). **A** Mounted display for solitary-growth species. **B** Hanging installations for colonial species. Photos: Wonsoo Park.

plant mounts and exhibition fixtures. This collaborative contribution resulted in a reduction in exhibition-related expenditure amounting to an estimated KRW 22 million (c. USD 16,000). In addition, a regional plant market was operated during the exhibition, generating KRW 15.46 million (c. USD 11,400) in revenue for participating local growers and reinforcing local economic engagement. Visitor satisfaction reached 94.5% ($n = 109$), and the exhibition received coverage in 11 media reports.

Collectively, these outcomes demonstrate that community collaboration extended beyond symbolic participation,

functioning as a resource-generating and collection-building mechanism that strengthened institutional ex situ capacity (Fig. 9).

Curatorial implications and a replicable model

Companion plant markets as conservation entry points

Rather than treating companion plant markets solely as risks, this case illustrates how horticultural popularity may serve as an entry point for building institutional ex situ conservation capacity (Ismail *et al.*, 2021). Demand for visually distinctive and rare taxa

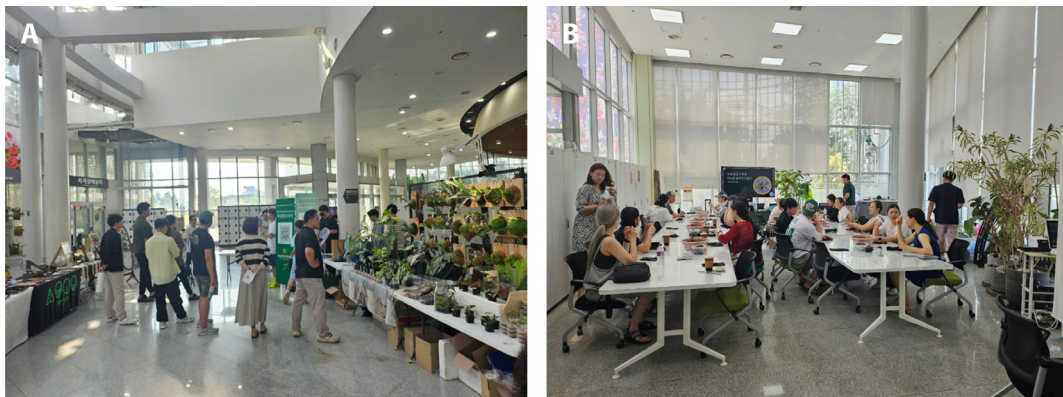


Fig. 9 Public engagement events held during the exhibition period. **A** 'Trade Day' for specimen exchange among enthusiasts. **B** 'Know-how Day' workshop promoting mounting and cultivation practices. Photos: Byungju An.

is often associated with informal trade and weak documentation, but also generates cultivation capacity, distributed collections and skilled grower communities. Channelled through formal accession, taxonomic verification and institutional oversight, enthusiasm can strengthen documented living collections.

Distributed horticultural networks as latent ex situ assets

Collections held by plant enthusiasts are decentralised living reservoirs that often extend beyond institutional holdings, maintaining horticultural knowledge and diversity through informal exchange. Because they typically operate outside accession systems, it is hard to find evidence for their conservation value and integrate this into institutional knowledge. However, if they are linked through documentation, taxonomic validation and accession protocols, they can become complementary ex situ assets. The *Platyserium* initiative demonstrates how collaboration with communities of enthusiasts, combined with collection management and care, can convert dispersed private collections into structured institutional resources.

Institutional mediation

Cultivated material can shift over time through selection, undocumented hybridisation or repeated exchange, reducing clarity of provenance and taxonomic certainty. Conservation value therefore depends not on cultivation alone but on institutional mediation: documented acquisition, species-level verification and accessioning, and sustained curatorial management. In the *Platyserium* initiative, standardised nomenclature, individual accession and controlled environmental management kept cultivated material within an institutional conservation context, ensuring that popularity contributes to – rather than dilutes – ex situ conservation objectives.

Conservation value, risks and safeguards

The dual emphasis on public display and ex situ conservation raises the question of whether an initiative of this kind genuinely benefits wild populations, or whether it merely repackages ornamental demand. We address three concerns directly.

Firstly, there is the question of whether wider propagation relieves collecting

pressure on wild populations. Where attractive species can be supplied reliably as nursery-propagated material, legal cultivation can substitute for wild harvesting and reduce the incentive to remove plants from their habitat (Heywood, 2003; Ismail *et al.*, 2021). All plants displayed and accessioned at SNA were nursery-propagated rather than wild-collected, and the accompanying Know-how Day and Trade Day programmes deliberately promoted propagation and cultivation skill rather than the acquisition of wild-sourced plants. We present this as a plausible contribution rather than a guaranteed outcome: substitution eases pressure only where propagated material is genuinely accessible and provenance is documented, and it does not in itself address habitat loss, which remains the primary threat to several taxa (Cano-Mangaoang & Gumban, 2020).

Secondly, there is the risk that heightened attention increases desirability and, with it, collecting pressure. This concern is real. The value people place on rarity can itself drive exploitation of the rarest taxa – the anthropogenic Allee effect (Courchamp *et al.*, 2006) – so an exhibition that gives prominence to scarce species could, in principle, stimulate the very demand it seeks to redirect. The initiative was designed with this risk in mind. Interpretation emphasised ecology, biogeography and conservation status rather than rarity or collectible value; only nursery-propagated, documented material was displayed and accessioned; and exchange events were held under institutional oversight, with no wild-collected or undocumented material entering the collection. The aim throughout was to direct enthusiasm towards legal, propagated supply and responsible stewardship rather than the pursuit of wild specimens.

Thirdly, there is the issue of whether an aesthetically led approach leaves less ornamental but highly threatened taxa neglected. At SNA, ornamental appeal serves as an entry point, not as the sole criterion for conservation effort. Unlike commercial displays, which tend to feature only the most ornamental species, a botanic-garden exhibition can present a wide range of taxa together – and set them within a landscape shared with other, less showy plants – so that biodiversity itself, rather than ornamental value alone, is communicated to visitors. This principle guided the displays: rather than featuring only a few highly ornamental species, many species were exhibited and integrated with the surrounding plantings, which proved effective in conveying the value of biodiversity conservation. Maintaining this inclusive, biodiversity-led framing alongside high-visibility displays is, in our view, a necessary safeguard against aesthetic preference crowding out unglamorous but threatened species – a risk that is real for the sector.

A four-stage curatorial model

From this case, a replicable four-stage curatorial framework emerges through which enthusiasm for companion plants may be aligned with institutional conservation objectives:

(1) Strategic species selection: targeting taxa where ornamental demand intersects with ecological constraints. This stage identifies plant groups that combine high horticultural visibility with restricted distribution, habitat specialisation or conservation concern, connecting public interest with biodiversity priorities.

(2) Ecologically aligned exhibition design: embedding habitat-informed infrastructure. Infrastructure follows species ecology,

ensuring that display systems support long-term cultivation rather than short-term display. In epiphytic taxa such as *Platynerium*, vertical mounting, controlled humidity and species-specific lighting function as both interpretive devices and conservation-relevant cultivation systems.

(3) Structured community collaboration: incorporating networks of plant enthusiasts into institutional accession and documentation systems. Collaboration extends beyond co-display or exchange: through accession, taxonomic verification and provenance recording, selected material from private collections is integrated into institutional frameworks, transforming informal circulation into documented conservation resources.

(4) Institutional embedding: incorporating exhibition-derived material into long-term collection strategy. Material and infrastructure are embedded within the planning of permanent collections and environmental management. The transition from temporary display to sustained curatorial care ensures that conservation gains persist beyond the exhibition cycle.

Conclusion

The *Platynerium* initiative at SNA demonstrates how the popularity of companion plants can be repositioned as a conservation opportunity rather than treated solely as a potential risk. The 2024 thematic exhibition functioned as a pilot phase that led to taxonomic verification, ecological interpretation and public engagement within the context of an urban arboretum attracting a large number of visitors. Through formal accession of all 18 recognised species following the exhibition, the initiative established a documented institutional foundation.

In 2025, this foundation was consolidated through the formal establishment of a 90 m² core conservation zone, supplemented by distributed hanging installations within the 2,800 m² Tropical Garden. The exhibition thus served as a catalyst for institutional embedding, transforming a temporary interpretive programme into a permanent conservation infrastructure. This phased transition – from exhibition to accession to conservation zone – illustrates how exhibition-led experimentation can precede and inform long-term collection strategy.

More broadly, the case suggests that horticultural demand and biodiversity conservation need not be positioned in opposition. When mediated through accession protocols, taxonomic verification and structured curation, distributed cultivation networks and communities of plant enthusiasts can contribute to the expansion of documented living collections. The critical threshold lies not in cultivation itself, but in the moment of institutional integration. Seen in this light, and as an urban arboretum, SNA can also be regarded as one replicable node within a wider, distributed network of urban ex situ conservation capacity.

Although developed through the lens of *Platynerium*, the four-stage curatorial framework proposed here – strategic species selection, ecologically aligned exhibition design, structured community collaboration and institutional embedding – may be applicable to other ornamental plant groups where popularity intersects with ecological specificity. In this respect, botanic gardens and arboreta are positioned not merely as sites of display, but as mediating institutions capable of translating public interest in plants into durable ex situ conservation capacity.

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