CONFERENCE PROGRAM

24th WOC

Germany 2026

24th World Orchid Conference
26-29 March 2026 Dresden

OVERVIEW WOC 2026 Map

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24th World Orchid
Conference

Welcome to the 24th World Orchid Conference in Dresden

Dear orchid enthusiasts from around the world,
distinguished guests,
honored members of the German Orchid Society,

It is my great privilege and sincere pleasure, as President of the German Orchid Society (D.O.G.), to welcome you to the 24th World Orchid Conference here in the magnificent city of Dresden — often fondly referred to as the "Florence on the Elbe."

After more than half a century, the premier event of the global orchid community has at last returned to Germany. The previous German host city, Frankfurt am Main, welcomed the WOC in 1975; today, we proudly open a new chapter in Dresden. The opportunity to hold this prestigious conference within the framework of the renowned "Dresdner Ostern" fair underscores the deep and longstanding tradition of orchid culture in our country.

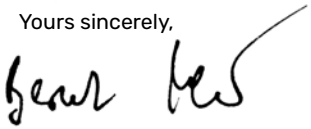
Under the banner of WOC 2026, we unite the captivating beauty of the orchid exhibition with the highest standards of scientific excellence. More than 70 expert presentations will explore current developments in breeding, research, and — of particular importance to us — the protection and restoration of native habitats.

Over the coming days, Dresden will serve as a global hub of botanical knowledge and exchange. I warmly invite you to experience the richness of over 10,000 m² of exhibition space, to build new connections within our worldwide orchid community, and to enjoy the magic of our "Night of the Orchids."

My heartfelt thanks go to the WOC Trust for their confidence, as well as to all the volunteers, partners, and supporters whose dedication has made this monumental undertaking possible.

I wish you an inspiring conference, fruitful discussions, and many lasting impressions of your time in Dresden.

Yours sincerely,



Bernd Treder

President of the German Orchid Society

Distinguished guests,

respected researchers and growers,

members of orchid societies,

partners and sponsors,

and dear friends of orchids — welcome to Dresden,
and welcome to the World Orchid Conference.

It is a great honor to greet you on behalf of our host, the Deutsche Orchideen-Gesellschaft. Thank you to the organizing committee, our volunteers, and all contributing institutions whose dedication has brought this gathering to life.

To everyone who has traveled from near and far—whether from across Europe or from other continents—your presence makes this conference what it is: a truly international exchange of knowledge, experience, and passion. We are delighted to welcome you to Dresden, a city known for its culture, craftsmanship, and resilience.

Orchids invite our curiosity and reward our patience. They connect disciplines—botany and ecology, horticulture and design, taxonomy and technology. At the same time, they remind us of our shared responsibility: protecting habitats, supporting sustainable cultivation, and ensuring that future generations can encounter orchids not only in collections, but also in the wild.

Over the coming days, you will find a rich program of lectures, discussions, exhibits, and opportunities to learn from one another. I encourage you to attend a talk outside your usual specialty, to ask questions, to share practical insights, and to make new connections—because the most valuable outcomes of a conference are often the collaborations that begin in the corridors and continue long after we return home.

We wish you an inspiring and enjoyable stay in Dresden, a successful conference, and many memorable moments—both in the lecture halls and among the orchids. With that, it is my pleasure to declare the World Orchid Conference officially open.

Thank you.

George Hatfield

President of the WOCT

Ladies and gentlemen,

I would like to welcome you to the World Orchid Conference here in Dresden, a city renowned for its cultural diversity and love of nature. I am particularly proud that Saxony is hosting this important international meeting, which brings together scientists, breeders and enthusiasts from all over the world to exchange the latest findings on the diversity and protection of orchids.

The orchid is not only a symbol of elegance and uniqueness, but also represents the fragility of our natural habitats. Its preservation is a joint task that transcends borders and disciplines. Only cooperation between agriculture and environmental protection can ensure the sustainable protection of native orchids, the gene pool for the diversity of all the sometimes world-famous hybrids in gardens, greenhouses and on windowsills.

In Saxony, numerous committed individuals have been working for many years to protect endangered plant species and preserve species-rich habitats. It is important to us, as it is to you, that this is also linked to economic and scientific activity. This is also the reason for the cooperation partnership between the State Ministry for the Environment and Agriculture and the D.O.G. — German Orchid Society WOC. We are happy to support the extensive voluntary and at the same time highly professional commitment of the D.O.G.'s organisational and support teams.

The decades-long cooperation between the D.O.G. and MESSE DRESDEN guarantees that the World Orchid Conference, which is finally taking place in Germany again after fifty years, will be a lasting experience for all involved. The accompanying programme, ranging from the International Orchid Show and the "Botanical Art" exhibition to the travel programme on offer, provides a fitting and colourful backdrop to the WOC.

I am particularly pleased that the spirit of the WOC is also being passed on to young people. Schoolchildren and trainees are using this supporting programme to learn about and appreciate the world of orchids as part of their future.

I wish you inspiring encounters, exciting discussions and a fruitful exchange. May this conference provide impetus for international orchid experts and strengthen cooperation. Enjoy your time in Dresden and let yourself be enchanted by the fascinating world of orchids.

With kind regards

Georg-Ludwig von Breitenbuch

Saxon State Minister for the Environment and Agriculture

ABOUT US

Every three years, **the WOC brings together orchid enthusiasts** from around the world – from renowned breeders and esteemed scientists to dedicated orchid societies and hobbyists. Here, they have a unique opportunity to exchange ideas about the latest developments in the world of orchids, both in cultivation and in nature.

Between 1954 and 2023, the WOC has taken place in numerous cities, including St. Louis, Honolulu, London, Tokyo, Rio de Janeiro, Sydney and many more. In Europe, it has only been held three times, most recently 20 years ago in Dijon. Germany hosted this prestigious event only once, **50 years ago.**

The World Orchid Conference Trust ensures that each WOC maintains the highest quality and continues to evolve. Increasingly, the focus is on the **responsibility for preserving** diverse orchid species. Their global distribution provides the perfect opportunity for international exchange that not only brings together professionals but also offers an **outstanding platform for supporters, sponsors, and advocates.**

Since its founding in 1906, the D.O.G. has been committed to **promoting orchidology** and making this captivating subject accessible to all enthusiasts. The diversity of our membership reflects the broad interest in orchids, with approximately **2,200 members worldwide,** ranging from passionate flower lovers to botanists, breeders, and large-scale growers. Many of these individuals actively engage with the D.O.G. and contribute to its mission.

Each member brings their **unique passion** – whether as a collector of orchid-themed stamps or coins, a hobbyist nurturing orchids on their windowsill or in a greenhouse, or a filmmaker and author specializing in orchids. Even after more than a century, the German Orchid Society remains a vibrant and internationally recognized organization that fosters friendly and collaborative connections across the globe.

We collaborate closely with esteemed organizations such as the Royal Horticultural Society, the American Orchid Society, and neighboring orchid societies in Austria, Switzerland, Hungary, Denmark, and Sweden.

A key objective of the D.O.G. at the World Orchid Conference is to **raise awareness about species conservation** and share valuable knowledge. We place particular emphasis on **engaging youth** to attract new members to our association and ensure the sustainability of our goals beyond the WOC.

Together, we are dedicated to promoting the protection and diversity of orchids!

COMMITTEES

of the 24th World Orchid Conference

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WOC 2026 Vice President
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Vice Chairman of the Show
Norbert Dank

Chairman of Judging
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Vice Chairman of Judging
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Chairwoman of Educational Program
Heike Rampelt

Vice Chairman of Educational Program
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Sabine Heymann

Oliver Hildenbrand

Martin Kirsch

Sina Müller

Heike Rampelt

Angelika Richardt

Franz-Josef Richardt

Walter Rost

Bernd Treder

D.O.G.

Deutsche Orchideen-Gesellschaft e. V.

The German Orchid Society e. V. is a vibrant organization dedicated to the study and appreciation of orchids. With nearly **2,200 members worldwide,** we bring together a diverse community ranging from casual flower enthusiasts to professional botanists, breeders, and large-scale gardeners. Our members contribute in various way, whether as collectors of orchid-themed stamps or coins, cultivators on windowsills or in greenhouses, or as filmmakers and authors focused on orchids.

OUR HISTORY

Founded in 1906, the D.O.G. has a rich history spanning over a century. Throughout this time, we have established ourselves as a respected society in the global orchid community. We maintain deep and cooperative relationships with organizations such as the American Orchid Society and neighboring orchid societies in Austria, Switzerland, Hungary, Denmark, Sweden, Poland, and beyond.

OUR MISSION

Our primary mission is to **promote the study of orchids** and make this knowledge accessible to everyone interested. We achieve this through various initiatives, including our highly regarded bi-monthly **journal "Die Orchidee",** which features 80 A4 pages of articles rich in imagery for both novice and experienced orchid lovers.

Additionally, we support and **initiate symposia and scientific reports** focused on sustainable propagation and conservation of all orchid species, asymbiotic seed germination, vegetative propagation through division, habitat studies, and cultivation practices.

To **raise public awareness** about orchids, our members **organize exhibitions** that educate visitors about the incredible diversity of these plants and their specific needs. The D.O.G. is committed to caring for and studying orchids entirely on a voluntary basis.

We invite everyone to join us in preserving these remarkable flowers!

www.orchidee.de

OUR BOARD

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President

Evaluation, exhibition and groups

Monika Eckert
Vice president

Editorial Management "Die Orchidee"

Franz-Josef Richardt
Vice president

Membership administration and finances

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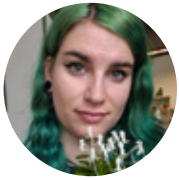

Vanessa Thierling

Matthias Wystub

WOC Trust

Word Orchid Conference Trust

Welcome to the World Orchid Conference Trust (WOC Trust), an organization dedicated to the promotion, conservation, and appreciation of orchids worldwide. Established as a response to the growing interest in orchids and their significance in biodiversity, the WOC Trust serves as a global platform for orchid enthusiasts, researchers, and conservationists.

OUR HISTORY

The WOC Trust was founded in conjunction with the World Orchid Conferences, which have been held since 1954. These conferences bring together experts, hobbyists, and industry leaders from around the globe to share knowledge, showcase new discoveries, and discuss challenges facing orchid conservation. Over the years, the WOC Trust has evolved into a vital resource for those interested in orchids, providing funding for research projects and educational programs that benefit both people and ecosystems.

OUR MISSION

At the WOC Trust, our mission is to foster a deeper understanding of orchids and their ecological importance. We aim to support research initiatives, promote sustainable practices, and facilitate education about these remarkable plants. By connecting individuals and organizations passionate about orchids, we strive to create a collaborative network that enhances conservation efforts and encourages responsible cultivation.

JOIN US

Whether you are an avid orchid collector or simply someone who appreciates the beauty of these extraordinary plants, we invite you to join us in our mission. Together, we can make a difference in preserving orchids for future generations while fostering a global community united by a shared passion for these remarkable flowers.

For more information about our initiatives or how you can get involved with the WOC Trust, please explore our website or contact us directly.

www.woctrust.org

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(AOS)

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(AOF)

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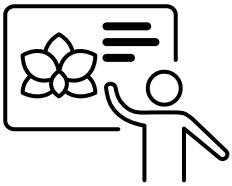
THE ADVISORS

Kiat Tan



PRESENTATIONS & POSTERS

THE VOICES OF WOC 2026

We're proud to present the full speaker roster for the **World Orchid Conference 2026** in Dresden!

Combining insightful reports and breathtaking photography, our **international speakers** — from established luminaries to up-and-coming orchidologists — will bring to Dresden exciting presentations on orchids in their habitats, orchid cultivation and breeding, science and ecology, and feature a special focus on conservation.

Each talk has been carefully selected to **inspire, inform and spark new conversations** across our three parallel conference streams. Whether you're a seasoned botanist or a passionate hobbyist, there's plenty here for everyone.

PRESENTATIONS

CONFERENCE SCHEDULE

Subject to change, please check the latest version online or on-site

THURSDAY – March 26, 2026

10:00	11:30	**Opening ceremony**		
11:30	12:30	**Harold Koopowitz** Conservation of Orchids in the Face of Global Climate Change		
12:30	13:30	Lunch break		
13:30	14:15	**Stefan Kattari** Terrestrial Orchids of Chiemgau region: old and new threats by land use and climate change	**Elbert Wijaya** Revisiting habitat of Phalaenopsis amabilis f. elysia	**Carol Klonowski** Beyond the Wallace Line: Bulbophyllums of New Guinea
14:15	15:00	**Marta Kolanowska** Estimation of the distribution of climatic refugia for plants and their ecological partners as an element of effective orchid conservation strategies	**Jie-Yu "Jerry" Wang** Plastid phylogenomics resolves the phylogenetic relationship and classification of moth orchid, Phalaenopsis	**Julien Baruch** Modern Breeding with Genus Bulbophyllum
15:00	15:30	Coffee break		
15:30	16:15	**Stefanie Reska, Jasmin Langhammer** Conservation at Wilhelma Botanical Garden: Fundraising, launching the IUCN CSS Orchids and establishing an ex situ Palau orchid collection	**Olaf Gruss** Lesser-known and some newer Species of the Genus Phalaenopsis	**Rafaël Govaerts** Orchids names, the old, the new and the hopeful future of their providers
16:15	17:00	**Heinfried Block, Christy Powell** Palau Orchid Conservation	**Yung-I Lee** The history of Phalaenopsis breeding in Taiwan	**Chariya Peterson** Exploring OrchidRoots: Tools, Growth, and What's Next in the AI Era
17:00	17:45	**José Lázaro Bocourt Vigil** History of the Soroa Orchid Botanical Garden. Contribution to the study & conservation of Cuban Orchids	**Vitor Garcia de Almeida** Growing Phalaenopsis species on window sills and in indoor living spaces	**Ian Chalmers** Accepted species "academic (DNA) vs practical"

FRIDAY – March 27, 2026

10:00	11:00	**Chu Xuan Canh** Slipper orchids of Vietnam in their habitat		
11:00	11:30	Coffee break		
11:30	12:15	**Frank Cervera** Phragmipedium Section Himantopetalum; The ecology and taxonomy of a group of Phragmipedium species unlike any other	**André Schuiteman** Orchids of the Bird's Head Peninsula, New Guinea	**Erica Hannickel** Empresses and Orchids of the 19th Century
12:15	13:00	**Alexander Portilla** Phragmipedium: Insights into In-Situ Growth and Hybridization Approaches at Ecuagenera	**Roland Schettler** Seldomly seen Dendrobiums and their cultivation	**Wenqing Perner** Chinese Cymbidiums & Their Cultivation in the West
13:00	14:00	Lunch break		
14:00	14:45	**Carol Klonowski** Master of The Slipper Orchids: Honoring the Legacy of Dr. Norito Hasegawa	**Philip Spence** Dendrobium Section Latouria, species and their hybrids	**Deborah Boersma** Sobralias, The Exotic Ephemerals of Central and South America
14:45	15:30	**Yojiro Ishibashi** Paphiopedilum breeding in Japan	**Gary Yong Gee** Should Dendrobium be a Gigantic Genus?	**Hildegard Crous** Deciduous Disas - a further investigation of in situ growth patterns
15:30	16:00	Coffee break		
16:00	16:45	**Reza Saputra** Racing Extinction: In-situ Conservation Efforts and Field Discoveries in the Remote Forests of West Papua	**Ron Kaufmann** The Orchid Conservation Alliance	**Michael & Wesley & Barbara Homoya** The Hoosier Orchid Big Year: A Status Survey of Indiana (USA) Orchidaceae
16:45	17:30	**Gregory Griffis** The Eric Young Orchid Foundation: A Path to the Future	**Bijaya Pant** Orchid Conservation and Sustainable Use Initiative: Research and Community Engagement	**Johan Hermans** The fabulous orchids of the Vercors, South-east, France
17:30	18:15	**Manuel Aybar** Orchids Species of the Dominican Republic	**Sankar Prasad Das** Orchids in India: Biodiversity to Bioeconomy	**Matthias Kropf** Monitoring of the largest Central European population of Orchis (Anacamptis) coriophora in Austria

PRESENTATIONS

CONFERENCE SCHEDULE

Subject to change, please check the latest version online or on-site

SATURDAY – March 28, 2026

10:00	11:00	**Nora de Angelli** A Comprehensive Exploration of Romanian Orchid Diversity and the Fascinating Predator-Prey Dynamics within Orchid Ecosystems		
11:00	11:30	**Deborah Boersma**, Gift a Youth program **European Orchid Council**, Poster Awards		
11:30	12:00	Coffee break		
12:00	12:45	**Stig Dalström** New species of Cyrtochilum… or not?	**Audrey Reilly & Esmée Winkel** The art of painting Orchids	**Clare Hermans** The history of Mascarene orchid discoveries through the centuries
12:45	13:30	**Guido Deburghgraeve** Re-discovery of Odontoglossum hunnewellianum	**Peter T. Lin** Hybridising Miniature and Compact Vanda Hybrids	**Jean-Michel Hervouet** In situ conservation of wild orchids in Madagascar
13:30	14:30	Lunch break & Auction by the International Odontoglossum Alliance		
14:30	15:15	**Norbert Dank** A Brief History of Odontoglossum Breeding	**Judith Rapacz-Hasler** The enchanting flowers of the genus Cattleya: Culture requirements for the labiata-type unifoliate species	**Julian Hummel** A low-cost in vitro culture model for conservation of endangered endemic orchids in Reunion Island, “the Orchids 3.0 project”
15:15	16:00	**Robert Hamilton** Cultural Observations for the Raising of Odontoglossum and Associated Oncidiinae	**Arthur Chadwick** Cattleya breeding and cultivation	**Michael Tibbs** Disa… Update on a commercial cut flower project
16:00	16:30	Coffee break		
16:30	17:15	**Luke Callaghan** Growing Odontoglossums in Scotland, my journeys in hybridising & in-vitro propagation	**Leslie Ee** Cattleya warscewiczii: The Last Frontier of the King of the Andes	**Claudia Obermüller** Angraecoids in Tyrol and thoughts on species conservation
17:15	18:00	**David Mathers** Ex situ Conservation: Caring for Six National Collections of Orchids	**Cássio van den Berg** Cattleya and related genera: insights from phylogenomics	**Thomas Ederer** Simplified and cost-efficient seed sowing methods for orchid conservation

Please note that **daylight saving time** begins in Germany on Sunday, March 29, 2026. Please make sure to **adjust your clocks** accordingly so you are not late for the Sunday program.

SUNDAY – March 29, 2026

10:00	10:45	**Emrys Chew** Vandacious breeding in Singapore	**Antonio Miranda Zapata** Bolivia: South America's Best Kept Secret	**Monika Lipińska** It takes three to tango? Presentation of the ORCHIDBIOM project and its aims. (How floral microbiome shapes plant-pollinator interactions in orchids)
10:45	11:30	**Martin Motes** Vanda coelestis (Rchb.f.) Motes, a new combination with wide ranging horticultural significance	**Manfred Speckmaier** Orchids "on the rocks" ... but do they really need it?	**Ludger A. Wessjohann** Orchids - a Huge Plant Family with Little Phytochemistry Known - Can this be Overcome by Modern Methods?
11:30	12:15	**Daniel L. Geiger** Microimaging techniques suggest pollination mechanisms in *Oberonia*	**Adam Karremans** Demystifying orchid pollination	**Promila Pathak** Medicinally important orchids of India - Their status, threats and conservation strategies
12:15	13:15	Lunch break		
13:15	14:00	**Manuel Lucas García** Ants & Orchids: stories of love and deception	**Helen Jean Millner** A very close look at Restrepia form and function - Restrepia pollination biology and the consequences for its survival	**Sharif Hossain Sourav** Wild orchid species in Bangladesh
14:00	14:45	**Julita Minasiewicz** Unveiling Mycoheterotrophic Symbiosis: Transcriptomic Insights from Terrestrial Orchid Protocorms	**Kyle Lucyk** Popular Masdevallia Species and their contribution to modern hybrids	**Kanchit Thammasiri** Development of Orchid Biotechnology in Thailand
14:45	15:15	Coffee break		
15:30	17:00	**Closing ceremony**		

Keynote | Thursday | March 26, 2026 | 11:30 – 12:30 CET (UTC+1)

Keynote Speaker

Harold Koopowitz

University of California at Irvine

PROFESSOR OF BIOLOGY

A professor at the University of California at Irvine since graduating, he was also the Director of the UCI Arboretum for twenty years. He is now Professor Emeritus of Biology in the Department of Ecology and Evolutionary Biology at UCI, where he did research on conservation and ecology.

He was also Editor-in-Chief of the Orchid Digest for ten years and still works on the editorial committee and writes for that Journal. Harold has written over a hundred scientific papers and book chapters as well as many other popular articles on orchids. He has authored eleven books, among which is Tropical Slipper Orchids and Orchid Conservation.

Currently he grows and breeds paphiopedilums and disas.

PRESENTATIONS

THURSDAY

March 26, 2026

Conservation of Orchids in the Face of Global Climate Change

Email: haroldkoopowitz@gmail.com

Keywords: Conservation, Reserve design

Global climate change will have both direct and indirect effects on our ability to conserve orchid species in the wild. The direct effect is primarily due to increasing temperatures in habitats where orchids occur and the effects of temperature on physiology and pollinator interactions. Indirect effects include rising sea levels, especially in south-east Asia where island areas will become diminished. This will change the number of species that are maintained.

The traditional method of orchid species conservation has been to set up preserves in the country of origin. In the face of changing global temperatures this is no longer sufficient and new rules for preserve design must be developed, these include altitudinal flexibility and methods for pollinator protection.

Ex situ conservation will become more important if in situ methods become ineffective. Two options here are cryogenic gene-banking (seed storage) and cultivation of species, both by hobbyists and institutions. Unfortunately, institutions have proven unreliable. Perhaps orchid societies will need to play a more active role in conservation. In ex situ-conservation the size of the population under cultivation becomes important to avoid inbreeding depression, as well as selection of parent stock. Unconscious biases will affect the selection of parents and ability to maintain genetic diversity.

PRESENTATIONS

Stream A | Thursday | March 26, 2026 | 13:30 – 14:15 CET (UTC+1)

Speaker

Stefan Kattari

Markt Grassau, Bavaria, Germany

Terrestrial Orchids of Chiemgau region (Alps of Bavaria, Tirolia and Salzburg including foothills): old threats by land use and new threats by climate change?

Email: kattari@alpenpflanzen.eu

Keywords: terrestrial orchids, decline, land use, climate change, natural protection

The Alpine foothills and the northern limestone Alps have been used for centuries for agriculture.

Extremely species-rich biotopes have developed in Bavaria, Tyrol, and Salzburg around Lake Chiemsee. At least 50 different species out of 23 genera of native terrestrial orchids have been documented in this area, such as *Dactylorhiza* and *Epipactis* (comprising 7 and 6 species, respectively), *Cypripedium, Neottia, Gymnadenia, Chamorchis* or *Traunsteinera*.

As in many other places, species diversity has suffered a massive decline. The reasons for this have long been the change of land use patterns of agriculture, settlements, and transport routes. Climate change is a new factor.

Which nature conservation concepts are suitable for preserving biodiversity? Which measures are needed furtherly? The speaker is a systematic botanist, has experience in practical nature conservation, and is a local politician.

Speaker

Marta Kolanowska

Department of Geobotany and Plant Ecology,
University of Lodz, Lodz, Poland

Estimation of the distribution of climatic refugia for plants and their ecological partners as an element of effective orchid conservation strategies

Email: marta.a.kolanowska@gmail.com

Keywords: climate change, climate refugia, ecological niche modelling, pollination, magnet species, mycorrhiza

Climate change has been identified as one of the main drivers of global biodiversity loss. Estimating the location of areas that will be suitable for rare species under global warming is crucial for planning effective conservation strategies. However, relatively few studies have addressed the future overlap of niches of plants and their ecological partners. Stable ecological networks are critical for the long-term survival of orchids, as these plants are particularly vulnerable to loss of mycorrhizal partners and disturbances in pollination systems. Here I present the results of several research conducted using ecological niche modelling (ENM) aimed to assess the impact of global warming on orchids, their pollen vectors, mycorrhizal fungi and magnet species. The maps produced by the analyses should be considered when establishing new protected areas and modifying the extent of existing national parks and nature reserves.

The main problem for the application of ENM techniques in orchid research that has been identified during the study is the lack of sufficient data on orchid pollinators and fungal symbionts. Also, the role and specificity of different orchid endophytes remains poorly understood.

Speaker

Stefanie Reska

Head of Conservation at the Zoological-Botanical Garden Wilhelma, Stuttgart, Germany

Developing our impact on global Conservation at the Zoological-Botanical Garden Wilhelma in Stuttgart, Germany

Email: stefanie.reska@wilhelma.de

Keywords: Fundraising, Conservation-Euro, habitat conservation, CSS Orchids Wilhelma

In 2019, the Zoological and Botanical Garden in Stuttgart, Germany, embarked on its journey to become a global conservation stakeholder by implementing the Conservation Euro, a voluntary surcharge on entry tickets. This has enabled Wilhelma to support 40 conservation projects globally, with an annual budget of over one million euros, since 2023. To apply these funds as effectively as possible, Wilhelma allocates 10 – 25 % of yearly donations towards acquiring land in biodiversity hotspots. To date, over a million euros have been invested in securing tropical forests in Belize and Ecuador, the latter of which is a hotspot for orchids. This development has been made possible by emphasising Wilhelma's responsibility for fauna and flora alike, and it has received strong public support. The latest development is Wilhelma's signing of an agreement with the IUCN Species Survival Commission to host the newly founded Centre for Species Survival (CSS) Orchids.

Speaker

Jasmin Langhammer

Department of Botany, zoological-Botanical Garden Wilhelma, Stuttgart, Germany

The Palau ex-situ collection at the Zoological-Botanical Garden Wilhelma in Stuttgart, Germany

Dr. Björn Schäfer*[1], **Jasmin Langhammer**[1]

[1] Department of Botany, zoological-Botanical Garden Wilhelma, Stuttgart, Germany

Email: bjoern.schaefer@wilhelma.de

Keywords: Palau, ex-situ collection, endemic species, habitat

The Republic of Palau is an island country in Micronesia, western Pacific, consisting of about 340 islands. These islands are home to unique ecosystems and 130 endemic plant species, including several orchids like *Bulbophyllum hatusimanum, Cleisostoma porrigens, Dendrobium brachyanthum, Dipodium freycinetioides, Liparis dolichostachya, Oberonia palawensis, Peristylus palawensis, Phreatia kanehirae,* and *Robiquetia palawensis*.

To preserve this botanic treasure, a memorandum of understanding was signed between the Zoological-Botanical Garden Wilhelma in Stuttgart, Germany, the Belau National Museum, and the Palau Community College-Cooperative Research Extension. The Wilhelma has signed up to establish an ex-situ collection of endemic and endangered Palauan plant species and to create a public Palau habitat exhibition at the Zoological-Botanical Garden Wilhelma. Supported by local experts, Wilhelma horticulturalist Jasmin Langhammer has successfully undertaken several field trips to collect seeds in the unique wilderness of Palau.

PRESENTATIONS

Stream A | Thursday | March 26, 2026 | 16:15 – 17:00 CET (UTC+1)

Speakers

Heinfried Block & Christy Powell

Horticulture, San Diego Zoo Wildlife Alliance, San Diego, USA

Palau Orchid Conservation

Email: hblock@sdzwa.org

Keywords: Palau, Orchid Conservation, Micropropagation, Micropropagation Training

The sovereign country of Palau is part of a chain of islands called the Caroline islands in Micronesia. Since it never has been connected to any landmass, a high number of endemic orchid species and fringe populations of orchid species arose in this isolated environment. Palau is home to an estimated 80 species of orchids, with dozens of endemics. Over the last 10 years, the San Diego Zoo Wildlife Alliance (SDZWA) partnered with Palau and other botanical organizations, building capacity through the micropropagation of native orchid species, native plant nurseries and micropropagation training and equipment. SDZWA is also developing ex situ conservation collections in San Diego, California USA to back up and preserve the genetic diversity of Palauan orchids and native plants. Horticulture staff test and develop protocols for the micropropagation of orchids and native Palauan plants and share those findings with partners. SDZWA also shares propagules with partnering botanical organizations in the United States, Europe and returns orchid seedlings to Palau to further safeguard these unique species.

Speaker

José Lázaro Bocourt Vigil

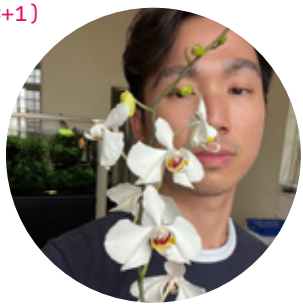
Jardín Botánico Orquideario Soroa.
Universidad de Artemisa, Artemisa, Cuba

A brief history of the Soroa Orchid Botanical Garden – Contribution to the study and conservation of Cuban Orchids

Email: joselazarobocourtvigil@gmail.com

Keywords: botanical garden, history, orchid conservation

The Soroa Orchid Botanical Garden founded in 1952 by Mr. Tomás Felipe Camacho is located at the geographic region of Western Cuba and is part of the Sierra del Rosario Biosphere Reserve. It occupies an area of 35,000 m² dedicated primarily to the cultivation of orchids. This study aims to provide an overview of the history of the garden since its inception and its role in the study and conservation of Cuban Orchids. To achieve this objective a historiographical reconstruction was applied based on bibliographical and photographic records as well as personal information. The most significant results in the study and conservation of Cuban orchid flora carried out by the research team is also described. These results include the identification of new species for the Cuban flora and the detection of species with some degree of threat according to criteria of the International Union for Conservation of Nature.



Speaker

Elbert Wijaya

Ten Shin Gardens Co., Ltd.

Revisiting habitat of *Phalaenopsis amabilis* f. *elysia*

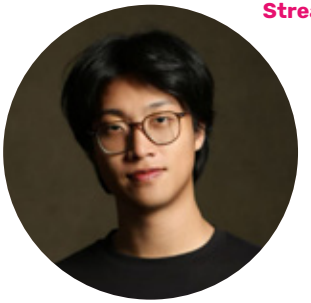
Elbert Wijaya*[1], James M. Sim[1]

[1] Ten Shin Gardens Co., Ltd.

Email: elbert@tenshinorchids.com

Keywords: *Phalaenopsis, Phalaenopsis amabilis, Phalaenopsis amabilis* f. *elysia, Phalaenopsis aphrodite, Phalaenopsis aphrodite* f. *dayana*

Phalaenopsis amabilis is a commercially significant species used as a parent in many long-stalked *Phalaenopsis* hybrid cultivars. *Phalaenopsis amabilis* was first described in 1752 as *Epidendrum amabile*. Its look-alike cousin *Phalaenopsis aphrodite* was described in 1834. *Phal. aphrodite* has red-labellum form which *Phal. aphrodite* f. *dayana* first described in 1881. Two hundred seventy years following its first description in 1752 by Pehr Osbeck, at last it was revealed to us *Phalaenopsis amabilis* f. *elysia* is the red-labellum form of *Phalaenopsis amabilis*.



Speaker

Jie-Yu "Jerry" Wang

BGI Research, Shenzhen 518083, China

Plastid phylogenomics resolves the phylogenetic relationship of moth orchid, *Phalaenopsis (Aerideae, Epidendroideae)*

Jie-Yu Wang*[1], Zhong-Jian Liu[2]

[1] BGI Research, Shenzhen 518083, China
[2] Key Laboratory of National Forestry and Grassland Administration for Orchid Conservation and Utilization, Fujian Agriculture and Forestry University, Fuzhou 350002, China

Email: wjybio@163.com

Keywords: Moth orchid, Phylogeny, Taxonomic framework, Chloroplast

Phalaenopsis is currently the most important and popular orchid genus in cultivation for the houseplant and cut-flower trade. The infrageneric classification of the *Phalaenopsis* and its relationships to the closely related *Hygrochilus* and *Ornithochilus* have been debated for decades. Here, a plastome phylogenomic analysis sampled 54 species (account for more than 80%) to resolve the phylogenetic relationships, and the specific pseudogenization or loss events of the genes were analyzed phylogenetically. Phylogenomic analyses provided uniformly strong support and showed that *Phalaenopsis* can be subdivided into four clades: subgen. *Ornithochilus* (including *Ornithochilus* and *Hygrochilus* sections), subgen. *Parishianae* (including *Aphyllae*, *Esmeralda*, *Deliciosae*, and *Parishianae* sections), subgen. *Phalaenopsis*, and subgen. *Polychilos* (including *Fuscatae*, *Manniae*, *Polychilos*, and *Zebrinae* sections). The topology also supports sect. *Fuscatae* should be recovered, and *P. mannii* is on the base of all sect. *Polychilos* species excluding sect. *Fuscatae* while the hair in mid-lip and Z-shape rachis should be treat as the apomorphies. Then, we characterized the plastid genomes, and found both the pseudogenization and gene loss show lineages specificity support the lineages relationship in the phylogenetic tree. Based on the evidence beyond, we provide a update taxonomic framework considering both morphological and molecular features for *Phalaenopsis*. This study shad a new light for the better understanding of *Phalaenopsis* classification and also provide a typical case for solving the phylogenetic problem of other orchid taxa.

Supported by the **World Orchid Conference Trust**

PRESENTATIONS

Stream B | Thursday | March 26, 2026 | 15:30 – 16:15 CET (UTC+1)

Speaker

Olaf Gruss

Deutsche Orchideen-Gesellschaft

Lesser-known and some newer Species of the Genus *Phalaenopsis*

Email: a-o.gruss@t-online.de

Keywords: *Phalaenopsis, Phalaenopsis honghenensis, Phalaenopsis mysorensis*

The genus *Phalaenopsis* comprises 80 – 90 species from Southeast Asia, depending on the opinion. The classification of most species is completely undisputed, but some of the species are only known from the descriptions, others are often traded and cultivated under false names. Especially in the trade, false or dubious names are often used in order to achieve better prices. *Phal. robinsonii, Phal. bornëense, Phal. chuxiongensis* or *Phal. minor*, for example, are only known from the original description, even if plants are sometimes offered under this name. *Phal. mysorensis* from India is only known from very few plants and is not on the market. In the following, some lesser-known species will be presented, such as *Phalaenopsis honghenensis, Phal. malipoensis, Phal. mysorensis, Phal. putaoensis* and also representatives of the *Phal. wilsonii* complex and the *Phal. taenialis* complex.

Speaker

Yung-I Lee

Department of Life Science, National Taiwan University;
Institute of Ecology and Evolutionary Biology,
National Taiwan University, Taipei, Taiwan

The History of *Phalaenopsis* Breeding in Taiwan

Email: leeyi26234@ntu.edu.tw

Keywords: hybridization, introgression, polyploidization, *Phalaenopsis*

Taiwan has played an important role in shaping the modern *Phalaenopsis* orchid industry, developing from small-scale hobbyist collections in the mid-20th century to becoming a global leader in breeding and production. This presentation traces the historical development of *Phalaenopsis* breeding in Taiwan, introducing key breeding lines and parental stocks, as well as the contributions of influential breeders. Early breeding efforts focused on improving flower form and color, while later decades were marked by the adoption of complex hybridization strategies, the incorporation of wild species, and the use of hybrids introduced from the United States, Europe, and Japan. The advent of tissue culture technology further accelerated breeding cycles.

The establishment of coordinated breeding programs, industry–academia collaborations, and international germplasm exchange greatly expanded genetic diversity and fostered innovation. Taiwanese breeders have also responded to changing global market demands by developing compact potting forms with multiple spikes, extended vase life, novel color patterns, and enhanced shipping tolerance. Drawing on historical records and cultivar lineages, this presentation will review the achievements and challenges that have shaped *Phalaenopsis* breeding in Taiwan.

Speaker

Vitor García de Almeida

Deutsche Orchideen-Gesellschaft, Berlin, Germany

Growing *Phalaenopsis* orchids on windowsills and in indoor living spaces

Email: vitorartist@web.de

Keywords: Genus *Phalaenopsis*, growing orchids in indoor places, cultivation for amateur growers, *Phalaenopsis* species in the living room

Especially among hobbyists with a deep interest in orchid care, this genus is a popular focus due to its appealing appearance, ease of care, and broad variety of species. This presentation is aimed specifically at such enthusiasts and seeks to provide a platform for practical exchange and shared experience. Drawing from ten years of personal experience in growing *Phalaenopsis* species in home environments, I will present methods and care techniques that have proven effective in everyday conditions — including challenges like dry indoor air during heating season or limited light in winter.

The presentation deliberately avoids focusing on the geographical distribution or historical discovery of the genus. While these topics are fascinating, they are of secondary importance when it comes to successful home cultivation. Most species must be grown under fairly similar conditions indoors, which is why the talk will emphasize hands-on topics such as light, humidity, choice of substrate, watering, and fertilization — all tailored to typical living room settings. A brief introduction to the natural origins of the genus will be included to provide basic context. However, the core of the presentation is centered on practical advice and peer exchange, with the goal of promoting both joy and success in cultivating these remarkable plants at home.

Speaker

Carol Klonowski

American Orchid Society, Miami, USA

Beyond the Wallace Line: Bulbophyllums of New Guinea

Email: cklonowski@aol.com

Keywords: *Bulbophyllum*, Tropical Biome, Cloud Forest, Montane Forest, *Cirrhopetalum*, New Guinea, Papua New Guinea, Orchid

The genus *Bulbophyllum* comprises over 2,000 species with a wide distribution in the pan-tropical regions of the world. There are over 100 taxonomic sections. However, *Bulbophyllum*, the largest orchid genus in the world, is perhaps better understood as a genus of regional clades: Neotropical, Asian/Australasian, African and Madagascar. They are found in diverse habitats, with the largest concentration of species found in the Asian/Australasian clade and, especially, the island of New Guinea.

In the mid-1800's, the deepwater channel midway through Indonesia was considered the boundary between Asian flora and fauna and those of Oceania and Australia. Proposed by Alfred Russell Wallace in 1859, this boundary became known as the Wallace Line. It is here, eastward beyond the Wallace Line, that we will review the *Bulbophyllums* of New Guinea.

New Guinea is the largest equatorial landmass on Earth. Divided into the two nations of Indonesia and Papua New Guinea, it has an enormous range of climates and habitats. As a 'hotspot' for flora, it has a greater plant diversity than Madagascar or Borneo, and is on par with Colombia, Ecuador and Peru.

Within the lowland coastal areas, montane forest and dense highland cloud forest, over 600 *Bulbophyllum* species in 36 sections are represented. No wonder New Guinea is considered by many to be the central point of distribution for the entire genus.

Despite the enormous size and variety in the genus, *Bulbophyllum* orchids can be classified more simply as having fleshy leaves, with a sympodial growth habit on creeping rhizomes, and hinged lips that are sensitive to touch or air movement. Flowers have specialized pollinator mechanics in a dazzling array of shapes, textures, lip movements, scents and other mechanisms. And, most strikingly, the scent of Bulbophyllums are often famous (or infamous) for their odors, many of which imitate the smell of rotting flesh, dung, or dead fish to attract their pollinators.

Many species are 'narrow endemics', or species with a restricted geographic range, often found in relatively few localized areas. Taking a look at this genus from the perspective of the landscape of New Guinea gives us the chance to visit the island and view Bulbophyllums in their own habitat.

Stream C | Thursday | March 26, 2026 | 14:15 – 15:00 CET (UTC+1)

Speaker

Julien Baruch

Krull-Smith, Florida

Modern Breeding with Genus *Bulbophyllum*

Email: orchids@krullsmith.com

Keywords: *Bulbophyllum*, *Cirrhopetalum*, *Sestochilos*, *Bulbophyllum* section *Macrobulbon*

We will run through an overview of older breeding with Section *Cirrhopetalum* (particularly the *rothschildianum* group) and *Sestochilos* for older breeding lines, then move to visit current breeding lines involving *Bulbophyllum echinolabium* breeding and the newer hybrids with *Bulbophyllum* section *Macrobulbon*. When looking towards the future of *Bulbophyllum*, we start seeing new hybrids with species in section *Beccariana* such as *beccarii*, *kubahense*, and *ericssonii* and we can show the first initial stages with breeding in these sections.

Speaker

Rafaël Govaerts

Royal Botanic Gardens, Kew

Orchid names, the old, the new, and the hopeful future of their providers

Email: R.Govaerts@kew.org

Keywords: Taxonomy, Nomenclature, World Checklist of Vascular Plants, WCVP, POWO

There is a long history of cataloguing orchids. I will first look at the nomenclatural index IPNI, which started with a legacy left by Charles Darwin in 1882 and continues to this day. We will then look how I build upon those names the taxonomy of the World Checklist of Vascular Plants (WCVP), when this was completed and how this is now accessible through the Plants of the World Online (POWO) website.

The Orchid data of WCVP is now widely used, not just for scientific research and data providers like Catalogue of Life (CoL), GBIF and CITES but also general users like iNaturalist and specialist orchid groups like the RHS orchid register and many orchid societies and their judging panels. I explore on how speaking with one voice has improved communication on Orchids globally.

Many projects these days suffer from short-term funding, 2 – 3 years and researchers move on. For a programme that has been running for 143 years this is not an option and a sustainable future must be found. In 2012 the World Flora Online programme was started with whom we closely collaborate. Taxonomic Expert Networks (TEN) are set up for the different plant families and the botanical community takes ownership of maintaining the data going forward. This and other future paths will be explored.

PRESENTATIONS

Stream C | Thursday | March 26, 2026 | 16:15 – 17:00 CET (UTC+1)

Speaker

Chariya Peterson

President, OrchidRoots, Ashville, North Carolina, USA

Exploring OrchidRoots: Tools, Growth, and What's Next in the AI Era

Email: cpeters5@yahoo.com

Keywords: orchid website, orchid taxonomy, orchid hybrids lineage, pictorial encyclopaedia

OrchidRoots is a nonprofit website created and maintained by volunteers designed for orchid lovers, educators, and researchers to explore the remarkable diversity of orchids and their intricate hybrid relationships. Built over the past seven years, it brings together detailed taxonomy, vibrant imagery, and intuitive tools to help users trace linages, explore variation, and confidently identify species and hybrids. In this talk, we'll highlight OrchidRoots' core features and introduce some powerful yet often-overlooked tools — such as ancestry visualizations, variety browsing, and synonym tracking. We'll also share how the site has begun expanding to include other plant and animal groups, and briefly reflect on future possibilities for collaboration and continued stewardship of this growing biodiversity resource.

Speaker

Ian Chalmers

Fellow of Australian Orchid Council (AOC);
Deputy AOC Registrar of Judges AOC-NSW;
President of the Australasian Native Orchid Society;
Vice President Australian Orchid Council

Practical Nomenclature vs Academic

Email: ianchalmers73@gmail.com.au **Keywords:** DNA, Nomenclature, Morphology

Practical nomenclature, is a nomenclature system that is designed to identify orchids and is universally accepted. If it is going to be practical it must be:
1. Primarily based on morphology. (DNA cannot be seen)
2. The genera must be of manageable groupings. (not lumped like *Dendrobium* and *Bulbophyllum*)
3. Universally accepted and accessible (Plants of the World online)

Academic nomenclature, is a nomenclature system that is based on scientific analysis that cannot be used to identify orchids and is of only academic interest. Recent taxonomic changes have produced some highly contentious new classifications in *Orchidaceae*. Most of these are the result of DNA analyses where the number of characters produced is high so that, even when morphological, anatomical, cytological and other biochemical data are included in the analyses, the DNA predominates. Alongside this is the prevailing view amongst cladists that small genera are unnecessary and should be subsumed into larger ones. The result is the recognition of an increasing number of very large genera, such as *Dendrobium*, *Bulbophyllum*, *Oncidium* and *Calanthe* and the loss of well-known and readily recognised genera such as *Odontoglossum*, *Sigmatostalix*, *Phaius*, *Cadetia* and *Flickingeria*. In my opinion, this does not help the identification and naming of orchids and has confused orchid growers to a degree that has caused some disquiet.

Classification has traditionally been a tool to help users identify and name plants. For example, horticulture still uses several classifications of plants that are not based upon phylogeny, for example, into herbs, shrubs and trees and into hardy, trendy and tropical. Until the late 20th century the widely accepted classification was a natural one that placed plants that were considered on their morphology and other macro-characteristics to be closely related. The advent of DNA-sequencing and the increasing ability of computers to analyse vast amounts of data has led to the increasing acceptance that classification should reflect phylogeny as closely as possible. I have no problem with that idea. However, practically, this has produced a degree of confusion amongst users of classifications, in our case, orchid growers who either must accept the work of the scientists or question it without the means of challenging its veracity. The new classifications that are proposed in these phylogenetic studies are just that – proposals to be tested not necessarily accepted without further study. These classifications or biased to ancestral heritage (academic) rather than practical morphology. This classification is distorted by the preoccupation with eliminating genera with small numbers of species and non-acceptance of paraphyletic genera.

In summary, I believe that some of the proposed new classifications, particularly of genera in cultivation, should be accepted only after a suitable period for testing the new proposals are allowed.

It gets confusing when we try to match the keys to cladograms of the phylogenetic analysis as they look at two vastly different data systems. In an effort to define monophyletic genera in combining the two system makes the identification of orchids confusing and unstable. The keys are based on morphology are used to identify orchids the phylogenetic analysis defines the genetic relationships between species. Morphology and phylogenetics are complimentary and not exclusive.

Keynote | Friday | March 27, 2026 | 10:00 – 11:00 CET (UTC+1)

Keynote Speaker

Chu Xuan Canh

Project Manager, Fauna & Flora International

BOTANIST & RESEARCHER

Chu Xuan Canh is not a professional biologist or botanist, but an orchid lover initiating from his curiosity about the natural world.

Being a project manager in nature preservation projects together with personal interest, Canh has spent more than 30 years travelling to different regions across Vietnam to study about orchids in their habitat, take pictures and collect/grow.

PRESENTATIONS

FRIDAY

March 27, 2026

Slipper orchids of Vietnam in their habitat

Email: cxcanh@gmail.com

Keywords: slipper orchids, Vietnam, natural habitat

I am Canh Chu from Vietnam. I am not a professional biologist or botanist, but an orchid enthusiast. For more than 30 years, I have been traveling through the natural habitats of slipper orchids in different regions of Vietnam to study, photograph, collect, and cultivate same. The presentation is the result of all my research on species, my travels to observe and study them in nature, and my photographic documentation. I have compiled a collection of images and information on 25 *Paphiopedilum* species (excluding natural hybrids) that have been described and recorded in Vietnam.

During the session, I will introduce 25 species of slipper orchids in Vietnam in their natural habitat and provide important information about each species, including how it grows, its preferred altitude, temperature, light conditions, and light direction, as well as its flowering period. Vietnam is known as one of the countries in the region with the richest orchid population, especially slipper orchids. This also means that the ecosystems in many areas of Vietnam are still well preserved.

Orchids are very sensitive to their environment and are therefore indicators of the ecological richness of the areas in which they grow. Where orchids grow, the natural environment is still in good condition.

By December 2024, 25 native species and 9 natural hybrids of slipper orchids of the genera *Paphiopedilum* and *Cypripedium* had been registered in Vietnam.

These figures confirm that Vietnam has one of the highest levels of slipper orchid diversity in the region. However, in recent years, the popularity and desire to own these beautiful orchids, as well as the interference with nature, have threatened many species with extinction.

I hope that throughout the presentation, participants will be able to learn about and discuss slipper orchids in Vietnam while also taking a journey through the beautiful landscape.

Supported by the **Slipper Orchid Alliance** and the **German Orchid Society (D.O.G.)**

PRESENTATIONS

Stream A | Friday | March 27, 2026 | 11:30 – 12:15 CET (UTC+1)

Speaker

Frank Cervera

Biology, Independent, Westtown, United States

Phragmipedium Section *Himantopetalum:* The ecology and taxonomy of a group of *Phragmipedium* species unlike any other

Email: frankrc@optonline.net

Keywords: *Phragmipedium,* ecology, biology, taxonomy, habitat, conservation

Phragmipedium section *Himantopetalum* is unique not only within the genus *Phragmipedium* but also in the Orchid Family, as each species in this subsection is attached to rocks in rivers below the high water line. Each species is subjected to periodic or seasonal submersion in swiftly moving floodwaters. Based on current knowledge, this group of closely related species is the only one in the Orchid Family that thrives in ecosystems characterized by strong and rapidly moving floodwaters, which can submerge plants up to three meters for weeks at a time. Some species are common in cultivation, while others are extremely rare and difficult to cultivate due to the lack of cultural knowledge stemming from the unique and misunderstood ecology of this section.

Despite nearly two hundred years of publications, attempts to define the species in this section have yielded descriptions that are vague, overlapping, and congruent, using language that seemingly applies to all species in the section simultaneously. The species in section *Himantopetalum* include *Phrag. hirtzii, Phrag. pearcei, Phrag. cabrejosii, Phrag. richteri,* and *Phrag. klotzschianum*.

This study aims to examine in detail two hundred years of literature on these species, which contains contradictory statements and errors regarding their definition, natural range, taxonomy, and biology while remaining silent on their ecology and topography. A thirty-year study of natural populations of *Phrag. hirtzii, Phrag. pearcei, Phrag. cabrejosii, Phrag. richteri,* and *Phrag. klotzschianum* revealed errors in our understanding of these species' ecology, and, consequently, their cultivation.

The unique ecology and habitats of these species were investigated and documented, facilitating a better understanding of the restrictive nature of their ecology and habitat range. This knowledge aims to empower both ex-situ conservation programs and commercial breeding efforts to alleviate pressure on natural populations. Taxonomic errors were noted and corrected. Two species, *Phrag. ecuadorense* and *Phrag. anchicayense* are synonyms of *Phrag. pearcei* and *Phrag. hirtzii* respectively and were reduced to the synonymy of those species.

Speaker

Alexander Portilla

Ecuagenera, Gualaceo, Ecuador

Phragmipedium: Insights into In-Situ Growth and Hybridization Approaches at Ecuagenera

Email: alex@ecuagenera.com

Keywords: *Phragmipedium*, orchids, hybridization, in-situ, conservation

Phragmipedium, a unique and captivating genus within the *Orchidaceae* family, continues to draw the interest of botanists, horticulturists, and orchid enthusiasts worldwide. This presentation explores the ecological and environmental conditions in which various *Phragmipedium* species thrive in situ, based on field observations and documentation gathered across their native habitats. Special focus is given to altitude, humidity, light, and substrate preferences that define their natural growth patterns and ecological niches.

Building on this ecological foundation, the presentation also provides an in-depth look at the strategies employed by Ecuagenera to develop new *Phragmipedium* hybrids. The discussion includes the selection criteria for parent species, desired morphological and ecological traits, and the challenges associated with hybridization within this genus.

Through the integration of detailed in-situ knowledge and innovative breeding techniques, Ecuagenera has achieved outstanding results producing hybrids that display exceptional coloration, improved form, increased vigor, and enhanced adaptability to cultivated environments. These outcomes not only advance the horticultural potential of the genus but also contribute to the conservation and appreciation of *Phragmipedium* on a global scale.

Speaker

Carol Klonowski

American Orchid Society, Miami, USA

Memorial to a Paph Fanatic: The Legacy of Dr. Norito Hasegawa

Email: cklonowski@aol.com

Keywords: Hasegawa, Koopowitz, *Paphiopedilum*, hybridizer, Slipper Orchids, Paphanatics, *Cymbidium*

Dr. Norito Hasegawa was a distinguished orchid hybridizer and a globally recognized authority on the genus Paphiopedilum. With approximately 1,400 awards for his hybrids, he started on the orchidist path in the late 1960's, creating hybrid crosses from *Cymbidium*, *Cattleya*, and *Phalaenopsis*, but ultimately specializing in *Paphiopedilum*. For most of this time, he was also an American Orchid Society judge, and a prominent member of the Cymbidium Society of America. He met Dr. Harold Koopowitz at an orchid society meeting, both fascinated by the display of slipper orchids. Not long afterward he teamed up with Dr, Koopowitz to form Paphanatics unLimited. The name was prophetic: both men thought there could be an endless number of possibilities for hybrids and breeding.

Dr. Hasegawa combined his professional background as a dentist with a deep scientific curiosity about orchids. He lived and worked in Orange, California, USA, for over 50 years, where the mild weather and orchid community support allowed him to pursue his passion just as the slipper orchid world was awakening to one new discovery after another. Dr. Hasegawa specialized in creating compact, floriferous plants with vivid colors and robust growth habits, making them more appealing for hobbyists and collectors. His hybrids remain highly prized, and blended science and art to significantly shape modern *Paphiopedilum* cultivation.

In 1991 Dr Hasegawa co-authored a book with Dr, Koopowitz, "Novelty Slipper Orchids: Breeding and Cultivating *Paphiopedilum* Hybrids". He spent most of that decade traveling worldwide to share his knowledge and act as an ambassador for both orchids in general and the American Orchid Society. Dr Hasegawa was lucky, in many ways. He caught the orchid wave during one of its most prolific periods of popular interest and new discoveries. He had, in Dr Harold Koopowitz, an equal partner in moving *Paphiopedilum* breeding forward.

And all of us who knew him were lucky as well. Perhaps his greatest skill was reserved for the mentoring of judges, hobbyists and orchid breeders around the world. His patient, personable manner launched the judging and orchid careers of hundreds, if not thousands, of people. He will be remembered for his breeding, and expertise, but revered for his personal touch.

Speaker

Yojiro Ishibashi

Senior Vice-President, All Japan Orchid Society, Tokyo, Japan

Paphiopedilum breeding in Japan

Email: yojiro1226@cd5.so-net.ne.jp

Keywords: The latest *Paphiopedilum* Complex Hybrid, Line Breeding

This paper presents recent developments in *Paphiopedilum* Complex Hybrid breeding in Japan, with emphasis on morphological innovation, breeding lineage, and the emergence of new directions in hybridization. Japanese breeders — both professional and advanced amateurs — have long respected the achievements of pioneers such as Ratcliffe, Orchid Zone, Dr. Kimura, Mr. Sugiyama and others, and continue to build upon their foundations.

Today, leading breeders including Mr. Mukoyama, Mr. Ozawa, Mr. Takahashi, Mr. Ota, and Mr. Nunoura and others are producing Complex Hybrids of exceptional quality. Section 1 highlights award-winning examples across major color groups — White, Pink, Yellow, Falltone, Spot, and Red/Vinicolor and Complex × *Parvisepalum*, which have recently shown remarkable progress in Japan — documented with measurements, parentage, and ancestral notes. Section 2 introduces challenging but promising hybridizations between Complex types and species or primaries.

PRESENTATIONS

Stream A | Friday | March 27, 2026 | 16:00 – 16:45 CET (UTC+1)

Speaker

Reza Saputra

West Papua Natural Resources Conservation Agency,
Ministry of Forestry, Sorong, Indonesia

Racing Extinction: In-situ Conservation Efforts and Field Discoveries in the Remote Forests of West Papua

Email: reza.saputraa21@gmail.com

Keywords: in-situ conservation, orchid exploration, biodiversity, West Papua, darkspot area

The forests of West Papua, Indonesia, are among the most biologically rich and least explored regions on Earth. This presentation highlights over 28 in-situ orchid exploration expeditions across the Bird's Head Peninsula and surrounding areas in New Guinea, focusing on threatened orchid species such as *Paphiopedilum*. These field-based efforts have led to the rediscovery of several orchid species not recorded for more than a century, numerous new regional records, and even the discovery of new species. Detailed documentation — including photographs, habitat data, and coordinates — has contributed to conservation assessments and scientific publications. The work underscores the urgent need for habitat-based conservation strategies in response to increasing threats such as habitat loss, illegal collection, and climate change. By sharing these findings, this presentation aims to encourage international collaboration and draw greater attention to the conservation needs of New Guinea's unique orchid flora, one of the planet's last great biodiversity frontiers.

Supported by the **World Orchid Conference Trust** and the **German Orchid Society (D.O.G.)**

Speaker

Gregory Griffis

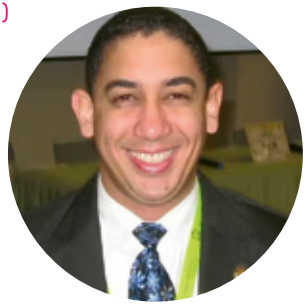
Curator, Eric Young Orchid Foundation,
Trinity, Jersey

The Eric Young Orchid Foundation: A Path to the Future

Email: greg@eyof.co.uk

Keywords: orchids, hybridization, strategic planning, innovation, future

Forty years ago Eric Young envisaged the Eric Young Orchid Foundation as a world-class institution, innovating in hybridization, pursuing excellence in display, and sharing the joy of orchids with all people through research and education. We now live in a fast-paced, ever-changing world and it is the demands of this world that we are adapting to meet while retaining our identity, refusing to compromise on our mission, and pursuing excellence in everything that we do, that we might accomplish Eric Young's vision. In 2025 we initiated a strategic planning process that will guide the Foundation for the next three years. This has streamlined our organization, eliminating ineffective protocols and enacting new, efficient, and effective ones to accomplish our goals. From our cultivation practices to our hybridization program, we have streamlined production, accelerated our stud plant selection protocol, and are maximizing greenhouse space utilization to increase our hybridizing capacity. We are working to make seedlings and select divisions available to the public regularly. The completion of our first comprehensive inventory now enables us to interpret our displays more meaningfully, helping the public to understand and connect with the orchids they see in our displays. We are also focusing on increasing our capacity for shows, speaking engagements, and education. Our journey into the future is full of exciting opportunities, and we look forward to making incredible progress over the next few years and to sharing that progress and the benefits of it with the entire orchid world.



Speaker

Manuel Aybar

American Orchid Society – AOS

Orchids of the Dominican Republic

Email: mannyaybar@gmail.com

Keywords: Dominican Republic, *Tolumnia, Hispaniola, Quisqueya, Psychilis*

The Orchids of the Dominican Republic boast a captivating array of colors and shapes, adding a touch of exotic beauty to the island's lush landscapes. With over 200 species identified, these delicate flowers thrive in the diverse ecosystems ranging from coastal areas to mountainous regions.

The diverse microclimates within the Dominican Republic provide ideal conditions for orchid cultivation, making it a heaven for enthusiasts and researchers alike. Orchid gardens, such as the one in Santo Domingo Botanical Garden, showcase a stunning collection of native species, offering visitors a chance to witness the breathtaking diversity firsthand. Despite their aesthetic appeal, many orchid species face threats from habitat loss and illegal harvesting. Conservation efforts are underway to protect these treasures, emphasizing the importance of preserving the unique flora that defines the Dominican Republic's natural heritage.

In this talk, Manny covers the diverse species of Dominican Orchids such as *Quisqueya, Psychilis, Tolumnia, Tetramicra*, amongs other lesser known genera, and takes us to a journey into the orchids of his home country.

Speaker

André Schuiteman

Herbarium, Royal Botanic Gardens, Kew, Richmond, United Kingdom

Orchids of the Bird's Head Peninsula, New Guinea

Email: a.schuiteman@kew.org

Keywords: Biogeography, Conservation, Indonesia, Taxonomy, Tropical Important Plant Areas

The island of New Guinea is the greatest hotspot of orchid diversity outside the Neotropics. The island is almost equally divided into an Indonesian half in the west and an eastern half formed by the nation of Papua New Guina. Almost 2900 orchid species are known from New Guinea and many still await discovery and formal publication. The westernmost part of the island is a peninsula known in English as the Bird's Head Peninsula. Joint research by the Royal Botanic Gardens, Kew, the University of Papua, and other Indonesian partners, has in recent years much increased our knowledge of the orchid flora of the Bird's Head Peninsula. About 600 orchid species are now known from this area. In this lecture we will highlight recent discoveries and describe some of the challenges and opportunities for the conservation of the local orchid flora. We will also discuss the New Guinea Tropical Important Plant Areas project, for which information about the geographical distribution and the IUCN Red List status of orchid species is of vital importance.

Speaker

Roland Schettler

Deutsche Orchideen-Gesellschaft,
Mittelcarthausen 2, 58553 Halver, Germany

Seldom seen Dendrobiums and their cultivation

Email: schetorch@online.de

Keywords: *Dendrobium*, cultivation

The genus *Dendrobium* has approximately 1,800 species, some are of botanical interest only but very often they are very showy. Over 50 years I came across with a lot of species which are more or less worth to be cultivated in a hothouse. Some of them die within a short period, some are with me for decades. To cultivate dendrobiums in Europe is a question of temperature and lightlevel. To get flowers the lightlevel is the main fact. To know the origin of a species is to know how to cultivate it. For example the dendrobiums of the *Oxyglossum* group from PNG are coolgrowing and have difficulties during hot european summers. When temperature in small hothouses raise over 35 °C. Another important factor is the growing media and even the size of the pot, because dendrobiums hate to be overpotted. Some of them do better mounted on a slap of bark or baked clay with a thin layer of moos. During growthperiod most dendrobiums benefit fertilizer and some of them need low temperature and a dry period with good light to flower. Seldom seen dendrobiums just like *D. azureum, chrysopterum, dickasonii, obrienianum, hughii* and *tobaense* will be shown with a map of distribution, the elevation of the habitat. Details for cultivation are given if necessary.

Speaker

Philip Spence

Orchid Productions, PO BOX 3525,
Wamberal 2260, Australia

Dendrobium Section *Latouria*

Email: philspenceorchidpro@msn.com

The potential of some lesser known species of *Dendrobium* Section *Latouria* to produce plants with a wide range of climates, free flowering hybrids for the pot plant and cut flower trade is discussed. Desirable characteristics aimed for included cold-tolerance, freedom from bud drop and colorful, fragrant, long lasting flowers.

While additional genetic material from the wild would greatly benefit the further development of the author's hybridization program, the results to date have been very pleasing. The characteristics of the most promising parent species and their hybrids are summarized.

Much has been published on this section of *Dendrobium* and with the extensive paper recently published as a supplement by the AOR that did covered this section of *Dendrobium* in great depth, it will take longer than the time allocated to fully cover this section, so I will only cover as much as I can of the species and especially the high altitude ones that I feel are producing outstanding hybrids.

Speaker

Gary Yong Gee

Australian Orchid Council member,
Brisbane, Australia

Should *Dendrobium* be a Gigantic Genus?

Email: gary@yonggee.name

Keywords: *Dendrobium*, cultivation, *Dendrobieae*, classification, taxonomy

Over the years, *Dendrobium* has been divided into many sections. Species that have shared growth habit and floral characters have usually been grouped into separate sections. Many of these taxa have been popular subjects for cultivation.

Sometime around the early 1980s, a few taxonomists began to use DNA sequence data studies to determine the relationships between the various orchid taxa. This tool has been very helpful in clarifying relationships.

Some taxonomists prefer smaller, more succinct genera, which have rather similar plant habit and floral characteristics. Other useful characteristics are their distribution, ecology, pollination syndrome, and breeding behaviour. All of these features or roles have evolved together over numerous years to give us the orchids that we have with us today.

How does one classify a genus? Should a genus like *Dendrobium* contain plants that primarily share a long distant ancestor? Alternatively, should a genus only have orchids that have a close common ancestor, as well as sharing similar visual and other characteristics, such as hybridisation?

As a cultivator of *Dendrobium* who is not a taxonomist, I believe that smaller taxa are much more useful for orchid growers to recognise and understand their cultural requirements. Taxonomists can still see the big picture under *Dendrobieae*, and see the individual taxa as individual genera.

Speaker

Ron Kaufmann

Department of Environmental and Ocean Sciences,
University of San Diego, San Diego, California, USA

Conserving Orchids with the American Orchid Society

Email: kaufmann@sandiego.edu

Keywords: conservation, habitat, in situ, ex situ, circa situm

The American Orchid Society's Conservation Committee is dedicated to conserving orchid species in their natural habitat and in cultivation and to sharing knowledge about orchid conservation. This is accomplished by supporting and promoting conservation-related activities, disseminating information related to orchid conservation, and honoring those whose work advances the conservation of orchids. The Conservation Committee distributes conservation grants through an annual funding process, sometimes in collaboration with the AOS Research Committee and Education Committee. While in situ conservation is a primary goal, we also fund efforts to support effective ex situ conservation and the development of circa situm conservation programs.

Important contributions to orchid conservation made by individuals and organization are recognized through two types of awards: the Philip E. Keenan Award and the Conservation Recognition Award. Information about orchid conservation is disseminated through various means, including articles in Orchids magazine and through the AOS website and social media channels, principally Facebook and Instagram. Recipients of AOS conservation grants and awards produce articles that are published in these various outlets, highlighting the conservation activities that the AOS supports and honors.

In the future, the AOS Conservation Committee plans to expand the scope of its efforts and develop more substantial relationships with organizations and individuals throughout the world to enhance the conservation of orchids and orchid habitat. This poster will highlight examples of grants and awards that the AOS Conservation Committee has made in the past and opportunities for future collaboration that support orchid conservation.

PRESENTATIONS

Stream B | Friday | March 27, 2026 | 16:45 – 17:30 CET (UTC+1)

Speaker

Bijaya Pant

Central Department of Botany, Tribhuvan University, Kathmandu, Nepal;
Annapurna Research Center, Kathmandu, Nepal

Orchid Conservation and Sustainable Use Initiative: Research and Community Engagement

Bijaya Pant*[1,2], Pusp Raj Joshi[2], Mahendra Thapa[2], Nima Chaudhary[1,2], Suraksha Khanal[1], and Krishna Chand[1]

[1] Central Department of Botany, Tribhuvan University, Kathmandu, Nepal
[2] Annapurna Research Center, Kathmandu, Nepal

Email: bijaya.pant@cdb.tu.edu.np

Keywords: Ex situ conservation, Orchids, tissue culture, cultivation, reintroductions

Nepal's orchids, a precious national treasure, are facing severe threats, with decline of many species in alarming rate. To address this urgent challenge, we have launched a conservation program aimed at protecting and promoting valuable and endangered orchid species. By the application of tissue culture technique, which is an excellent method for mass propagation, we are working to safeguard these rare and endangered orchid species. We have built institutional collaboration to establish a lab-to-land procedure. Our initiative actively engages orchid enthusiasts, local communities, and partner organizations to ensure a collaborative and sustainable approach to preservation. Each species requires a targeted conservation effort. Their cultivation can help promoting ex situ conservation efforts while supporting the broader preservation of biodiversity by reducing pressure on wild populations. In wild, orchids face multiple intrinsic threat, such as reliance on specific pollinators for their reproduction and mycorrhizal fungi for seed germination and extrinsic threats such as habitat destruction, climate change invasive species, and illegal collections. By cultivating tissue culture raised orchids in different environments such as botanical gardens, nurseries, public parks, private collections and tissue culture labs, we can safeguard endangered species from extinction, maintain genetic diversity, and reduce pressure on wild populations. Additionally, orchid cultivation can serve as a tool for education, research, and public awareness, highlighting its importance on biodiversity conservation. Through these efforts, cultivated orchids can also contribute to economy, habitat restoration and reintroduction programs, helping to restore ecosystems and of these economically, ecologically and culturally significant plants.

Our study has contributed to disseminate knowledge and demonstrate to the policy makers and public, how the conservation efforts and the cultivation of artificially propagated species can also contribute to economy, habitat restoration and reintroduction programs, ensuring their sustainable use.

Supported by the **World Orchid Conference Trust**

Speaker

Sankar Prasad Das

ICAR-National Research Centre for Orchids,
Pakyong-737106, Sikkim

Orchids in India: Biodiversity to Bioeconomy

Sankar Prasad Das*[1], Nikhila Vaagdevi Anumala[1], Siddhartha Sankar Biswas[1], N. S. Kalaivanan Nagaranai Shanmugam[1], Chandan Gowda[1], Suman Natta[1], Lakshman Chandra De[1]

[1] ICAR-National Research Centre for Orchids, Pakyong-737106, Sikkim

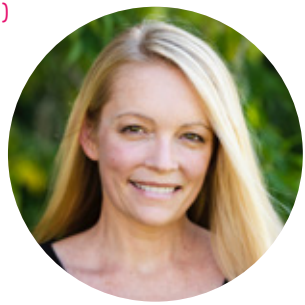
Email: sankar.das68@icar.org.in

Keywords: Orchids, biodiversity, bioeconomy, ethnobotany and livelihood

India, recognized as one of the Orchids biodiversity hotspots, harbours not lesser than 1,256 orchid species across 155 genera (Singh et al., 2019). Beyond their ecological significance, orchids are crucial to floriculture sector and traditional medicine system in India. Orchids have the potential to contribute substantially to rural livelihoods and biodiversity led bio-economy. India's orchid sector is in a transitional phase, witnessing a paradigm shift from conservation-oriented research and allied activities to innovation driven commercial cultivation for exploitation of their economic potential as successful commercial commodity in Indian floriculture with an optimistic eye to capture a bite in the ever-increasing global orchids market. Continued and more focused research into orchid genetics, breeding and precision cost effective orchid farming remains essential to fully unlock their potential for conservation, commerce and community development. The journey for orchid in India "Biodiversity to Bio-economy" has a very long path to cover, but the journey has begun. In the present paper an effort will be made to look into the historical perspectives on Orchids with special reference to India, orchid biodiversity in India, ethno botanical significance, conservation challenges, and rise of orchids as commercial commodity in the country.

PRESENTATIONS

Stream C | Friday | March 27, 2026 | 11:30 – 12:15 CET (UTC+1)



Speaker

Erica Hannickel

Professor of Environmental History, Department of Humanities, Northland College, Ashland, Wisconsin, USA

Empresses and Orchids of the 19th Century

Email: erica.m.hannickel@gmail.com

Keywords: orchid history, garden history, *Coelogyne cristata*, *Cymbidium ensifolium*, women's history

"Empresses and Orchids" tells a tale of two 19th century empresses — inimitable women of their age and avowed political rivals — who both loved orchids. Empress Cixi of China (1835 – 1908) utilized the beauty and fragrance of *Cymbidium ensifolium* and its vaunted status in Chinese culture, as well as the symbolic meanings of other Chinese orchids, in her meteoric rise to power from concubine to China's head of state. Empress Eugénie of France (1826 – 1920) flaunted orchids to gain fame as a new royal and in establishing international "soft power" as the 19th century's foremost fashion maven. *Coelogyne* and *Dendrobium* species, as well as dozens of additional genera grown in her greenhouses festooned her hair, clothes, parties, and palaces. Two orchids were named for Eugénie in her lifetime: *Cattleya mossiae* 'Empress Eugénie' and *Odontoglossum* Empress Eugénie. This talk highlights powerful women in orchid history, the fraught military and political connection between Cixi and Eugénie in East-West trade wars, and their attendant destruction of invaluable orchids and other ornamental plants. Surprising and previously unknown moments in orchid history have the power to shed light on international politics today.

Speaker

Wenqing Perner

Hengduan Mountains Biotechnology Ltd. Chengdu, China

Chinese Cymbidiums and their Cultivation in the West

Email: info@hengduanbiotech.com

Keywords: Chinese Cymbidiums, Culture of Chinese Cymbidiums, Cultivation of Chinese Cymbidiums in the West

Cymbidiums (*Cymbidium sinense*, *Cymbidium goeringii*, etc.) are revered in East Asia for their elegance, fragrance, and deep cultural symbolism. Unlike the large-flowered hybrid Cymbidiums popular in Western horticulture, these species are prized for their slender leaves, subtle blooms, and intoxicating scent.

Key Characteristics:
- Graceful foliage: Arching, narrow leaves (unlike the broad, rigid leaves of standard Cymbidiums)
- Delicate, fragrant flowers: Small but exquisitely formed, often in shades of green, yellow, or maroon
- Cultural significance: Represent nobility, humility, and scholarly refinement in Chinese tradition

Growing Chinese Cymbidiums in the West. While still rare outside Asia, these orchids are gaining appreciation among collectors. However, their cultivation differs from typical Western Cymbidiums:
- Light: Prefer bright shade (direct sun scorches their leaves)
- Temperature: Need cool drier winters (5 – 15 °C / 40 – 59 °F) to initiate blooming
- Humidity and Airflow: Thrive in moderate humidity (50 – 70 %) with gentle air movement
- Watering and Media: Require well-draining mixes (pine bark, perlite) and drying slightly between waterings

Why Grow Them:
- A living art form — their beauty lies in simplicity and fragrance
- Connection to ancient Chinese horticultural traditions
- A challenge for refined growers seeking beyond commercial hybrids

For those who appreciate subtlety and history, Chinese Cymbidiums offer a deeply rewarding orchid experience.

Speaker

Deborah Boersma

American Orchid Society, Great Lakes Judging Center,
Ann Arbor, Michigan, USA

Sobralias, The Exotic Ephemerals of Central and South America – Exploring Trait Modeling and Conservation

Email: debul8ter@outlook.com

Keywords: *Sobralia* orchids, ecological diversification, conservation strategy

Sobralia, a genus of orchids native to Central and South America, offers a compelling lens through which to explore ecological resilience, constrained diversification, and conservation strategies. With dozens of species distributed across a range of elevations and habitats, *Sobralia* exemplifies both botanical richness and vulnerability. This paper examines sustainable cultivation, trait-based restoration, and evolution-aware conservation approaches. Emphasis is placed on floral morphology and pollination strategies, which reveal genetic diversity, niche conservatism, and pollinator-driven speciation while challenging climate-centric assumptions. Broad ecological patterns and habitat associations help clarify evolutionary timelines and species distributions. As habitat pressures intensify, species-specific conservation and ex situ cultivation become essential to ensure Sobralia's continued presence in both natural ecosystems and curated collections. These orchids reflect biodiversity and embody the delicate interplay between adaptation and care. Ensuring their continued flourishing in native habitats and cultivated settings requires integrated efforts in cultivation, restoration, and habitat preservation. The story of *Sobralia* underscores that conservation depends not only on scientific insight, but on sustained commitment and thoughtful stewardship

Speaker

Hildegard Crous

Cape Institute of Micropropagation,
Barrydale, South Africa

Deciduous Disas – a further investigation of in situ growth patterns

Email: disahouse@gmail.com

Keywords: *Disa*, cultivation, environmental features

Deciduous disas have been and still are of the most challenging orchids of the Cape Floristic Region to cultivate. Their unique flower morphology and diversity in shape and colour make them most alluring and desirable to orchid enthusiasts. Occurring over widespread areas, from low coastal regions to high inland montane areas in diverse habitat niches, makes their cultivation a challenge. Maintaining correct soil temperatures, as well as moisture levels, is crucial in ensuring tuber survival during the dry seasons as well as the wet seasons. Some are fire dependant to initiate a flowering cycle, some are not. Seed viability appears to be good over many years, however, dormancy factors inhibit germination success in in vitro and conventional sowing practices. Understanding what these plants require culturally is an ongoing quest of documenting their environmental 'stories'. We will follow some of these stories and have a closer look at data collected on individual species and possible implications.

PRESENTATIONS

Stream C | Friday | March 27, 2026 | 16:00 – 16:45 CET (UTC+1)

Speakers

Barbara, Michael & Wesley Homoya

Indiana Native Plant Society, Indianapolis, Indiana, USA

The Hoosier Orchid Big Year: A Status Survey of Indiana (USA) Orchidacea

Email: michaelhomoya@gmail.com

Keywords: Indiana, USA, population status, big yeary

It has been over 30 years since the publication of Orchids of Indiana (Homoya 1993, Indiana Academy of Science). For the purposes of comparing the status of orchid species in the state since that publication we conducted an extensive statewide survey in 2021. In our orchid "Big Year" we were able to view 37 native species along with 2 additional varieties, 1 hybrid and 1 non-native species. All were in anthesis at the time of observation. The earliest species observed was *Galearis spectabilis* (April 30), with the last being *Spiranthes ochroleuca* (September 27). Data collected prior to this survey by the senior author indicate that while some species have increased in occurrence, e.g., *Epipactis helleborine*, some others, such as *Cypripedium acaule*, have declined. The good news is that, save for one (*Platanthera dilatata*), all taxa documented as extant in 1993 continue to exist. One considered extirpated in 1993 has since been found, namely, (*Platanthera leucophaea*). In an engaging travelogue style, the authors will present their 2021 Indiana Orchid Big Year findings.

Speaker

Johan Hermans

HRA Royal Botanic Gardens, Kew, United Kingdom

The remarkable orchids of the Vercors, and the Rhône-Alpes in South-east, France

Email: j.hermans@kew.org

Keywords: France, Habitats, Natural Hybrids, Species Diversity, Vercors

The Vercors National Park, in the Rhône-Alpes region of France is an overlap area between the Mediterranean and Northern floras of Europe which makes it so interesting botanically. The underlying geology is mainly limestone and forms the western flank of the Alps; it features many deep gorges and caves. A few summits are above 2,000 m along the eastern edge, the western slopes are gentler and have higher sun exposure than the eastern ones. The Vercors has a well-above average orchid diversity with over 100 different taxa in almost 20 genera and as many natural hybrids. Highlights include *Cypripedium*, *Himantoglossum*, *Ophrys*, *Orchis*, *Corallorhiza*, *Dactylorhiza*, *Neotinea* and many others. The author has explored the region and its rich flora for over 10 years; habitats and culture will be illustrated through several photographic journeys. Natural hybridisation and the increase of hybrid numbers alongside the proliferation of botanists in a specific area will also be explained.

PRESENTATIONS

Stream C | Friday | March 27, 2026 | 17:30 – 18:15 CET (UTC+1)

Speaker

Matthias Kropf

Institute of Integrative Nature Conservation Research,
BOKU University Vienna, Gregor-Mendel-Str. 33,
1180 Vienna, Austria

Monitoring of *Orchis (Anacamptis) coriophora* on 'Heißländen' in the Donau-Auen Nationalpark (Austria) – the most individual-rich populations in Central Europe

Email: matthias.kropf@boku.ac.at

Keywords: *Anacamptis coriophora*, Brenne, dry grasslands, fire, grazing, Heißlände, nature conservation management, monitoring, *Orchis*, population dynamics

Based on the initial monitoring project implemented together with sheep grazing at the 'Heißlände Fuchshäufel' in the Viennese part 'Lobau' of the Donau-Auen National Park (GRASS et al. 2012), monitoring plots have continuously been studied since 2006. On permanently marked plots population development (based on counts of flowering and non-flowering individuals) of four orchid species is monitored. After the initial project, monitoring has been performed in the framework of different projects and University theses conducted at our Institute at BOKU University (KROPF 2023). Here, I will focus my results on presenting the population dynamics of the most outstanding orchid species of these dry grasslands, i.e. *Orchis (Anacamptis) coriophora*. This species is listed under the most threatened orchids in Austria (EN) but shows probably its largest populations of whole Central Europe in the 'Lobau' (SCHRATT-EHRENDORFER et al. 2022). The Viennese part 'Lobau' of the Donau-Auen National Park is famous inter alia for its so-called 'Heißländen' – foodplain-specific dry grasslands on gravel and sand. These dry grasslands represent an extremely species-rich vegetation, partly explaining the orchid richness of the 'Lobau', covering altogether 24 orchid species! However, these 'Heißländen' are at risk due to vegetation succession. Orchid population dynamics presented will therefore be related to environmental factors and nature conservation measures (like sheep grazing) as well as fire. Generally, results indicate differentiated responses and respectively differing population dynamics of the four monitored orchid species. Interestingly, *Orchis (Anacamptis) coriophora* is the orchid species with the most positive population growth related to grazing.

PRESENTATIONS

SATURDAY

March 28, 2026

Keynote | Saturday | March 28, 2026 | 10:00 – 11:00 CET (UTC+1)

Keynote Speaker

Nora De Angelli

University of Agronomic Sciences and Veterinary Medicine of Bucharest, 59 Marasti Blvd., 011464, District 1, Bucharest, Romania

MOLECULAR BIOLOGIST & BOTANIST

Nora De Angelli (aka Nora E. Anghelescu) is an Associate Fellow Researcher at the University of Agriculture and Veterinary Medicine of Bucharest (USAMVB). She holds a degree in Molecular Biology from the University of Bucharest and earned her PhD in the Netherlands, with additional research fellowships at University College London and Imperial College London.

In 2024, she received a summa cum laude PhD in Horticulture (Orchidology) from USAMVB. Her research focuses on orchid biology, taxonomy, pollination ecology, and propagation biotechnologies. She has authored around 70 scientific publications and co-authored the monograph Orchids of Romania (2020; 2023).

A Comprehensive Exploration of Romanian Orchid Diversity and the Fascinating Predator-Prey Dynamics within Orchid Ecosystems

Email: noradeangelli15@gmail.com

Keywords: orchids, Romania, taxonomy, pollination, deceit, mimicry, hybrid, conservation, spiders

The first part of the presentation summarises an eight-year study (2018 – 2025) on Romanian orchid taxonomy. As of the spring of 2026, the orchid flora of Romania includes three subfamilies, 25 genera, two subgenera, and five nothogenera. It comprises about 84 species, 23 subspecies, 72 varieties/forms, 25 intrageneric hybrids and 10 intergeneric hybrids. The taxonomy follows recent classifications from Plants of the World Online, Kew Science and Euro+Med PlantBase. Particular attention is paid to the abundance of endemic (En) and subendemic (Sub-En) taxa, including several new species and several natural hybrids, both intra- and intergeneric. The list is continuously updated with new discoveries.

The second part explores the complex relationships between orchids, their pollinators, and arthropods belonging to a different trophic level – namely, the pollinators' predators. In temperate regions, various spider families (order *Araneae*) are the predominant predators that temporarily inhabit orchid inflorescences. These spiders employ cryptic colouration, also known as aggressive mimicry, to blend seamlessly with orchid flowers, exploiting the communication signals exchanged between orchids and insects. They can recognise and adapt to different floral signals intended for insects, making them effective ambush predators of both casual visitors and true pollinators. This creates an ironic situation in which the orchids, famous for their deceptive pollination strategies, face these skilled masters of mimicry and camouflage, who exploit them by preying on most visiting insects.

Supported by the **World Orchid Conference Trust**

PRESENTATIONS

Stream A | Saturday | March 28, 2026 | 12:00 – 12:45 CET (UTC+1)

Speaker

Stig Dalström

National Biodiversity Centre, Royal Government of Bhutan;
Lankester Botanical Garden, University of Costa Rica

New species of *Cyrtochilum*, or not?

Email: stigdalstrom@gmail.com

Keywords: *Cyrtochilum,* new species, natural hybrids

The defining characteristics of what constitutes a *Cyrtochilum* are discussed and illustrated with color photographs of representative taxa from all sensu lato alliances of the genus assembled in natural groups. The groups' classification is based on access to limited molecular examination, extensive morphological analysis and many years of ecological observations. The specific diversification within and between each group appears to be driven by spontaneous mutations followed by geographic isolation, but also by alleged natural hybridization to a speculative degree. Some of these alleged natural hybrids and their speculative validity, primarily involving *Cyrtochilum macranthum*, are discussed and exemplified with color photographs. Whether they already have, or will evolve into distinct natural species is a hypothetical discussion at best.

Speaker

Guido Deburghgraeve

Belgium

The Rediscovery of *Odontoglossum hunnewellianum*

Email: guidodeburghgraeve@belgacom.net

Keywords: *Odontoglossum hunnewellianum* rediscovery

The once popular orchid *Odontoglossum hunnewellianum* disappeared completely from collections and literature some hundred years ago. Due to its original rarity and later complete absence from horticulture, it was years later believed by some to be an obscure natural hybrid of uncertain parentage. This was not accepted by everybody, so a search team launched intense studies of contemporary orchid literature, which revealed some geographic clues to *Odontoglossum hunnewellianum's* natural origin. A color slide of the natural hybrid *Odontoglossum* × *adrianae (Odm. crispum* × *Odm. hunnewellianum)* serendipitously enabled narrowing down the search area in northern Colombia, which eventually led to the rediscovery of this attractive orchid in the field.

Speaker

Norbert Dank

Deutsche Orchideen-Gesellschaft, Burscheid, Germany

A Brief History of *Odontoglossum* Breeding

Email: nurelias@nurelias.de

Keywords: *Odontoglossum*

When the orchid fever began around 150 years ago, *Odontoglossum* species were among the most sought-after orchids. Millions of these plants were imported from South America to Great Britain and continental Europe. Soon after, the first hybrids with *Odontoglossum* species were created. Between 1900 and 1980, countless new *Odontoglossum* crosses were developed, selections were made, and breeding lines were established.

Famous nurseries such as Charlesworth, Vuylsteke, Stewart Lowe & Co, McBeans, Mansell & Hatcher, Orchideenfarm Hambühren, Golden Gate Orchids, and many others contributed to this *Odontoglossum* craze. These nurseries flourished during this period but many of them eventually ceased operations.

Odontoglossum hybrids, more than many other orchid groups, boast flowers with splendid colors and intricate patterns, often arranged on branching inflorescences, creating a spectacular display of shades. Consider the white Odontoglossums with red spots, the brilliant red *Odontiodas*, the yellow *Odontocidiums*, or the white *Odontonias* with a lilac picotee. For many enthusiasts, hybrids like *Odontioda* Feuerkugel, *Odontoglossum* Golden Guinea, and the famous *Vuylstekeara* Cambria are still well-remembered.

This presentation will trace the history of the first *Odontoglossum* hybrids, shed light on intergeneric hybridization, present examples of significant game changers in breeding lines, and provide insights into more current hybridization trends.

Stream A | Saturday | March 28, 2026 | 15:15 – 16:00 CET (UTC+1)

Speaker

Robert Hamilton

Co-owner Hawk Hill Orchids

Horticulture Practices for Odontoglossums and *Odontoglossum* Hybrids

Email: roberthamilton@berkeley.edu

Keywords: Cultural methods, Whys and Hows

This presentation addresses the best-known methods for growing Odontoglossums and their hybrids. It is based on decades of personal experience as well as observations of other growers' successes. The presentation is visual demonstrating both the how and their basis. Physics, chemistry and physiology are explained in simple terms understandable to both novice and advanced growers. I begin in the Andes and end in the greenhouse. The topics of climate, potting, feeding, flowering, insects, vermin and pathogens are addressed.

PRESENTATIONS

Stream A | Saturday | March 28, 2026 | 16:30 – 17:15 CET (UTC+1)

Speaker

Luke Callaghan

Growing Odontoglossums in Scotland, my journeys in hybridising and in-vitro propagation

Email: luke.a.callaghan.11@gmail.com

Keywords: *Odontoglossum,* in-vitro, hybridising

The presentation I give will detail:

My own orchid journey from starting out at age 9.

My experience growing *Odontoglossum* type orchids in Scotland.

Why I chose to focus on *Odontoglossum*, after growing other orchids for over 15 years.

How I have started making my own hybrids, and what I am aiming to achieve.

My experience doing my own in-vitro propagation in my kitchen using kitchen equipment and a home built glove box using items found in typical hardware store. Replating protocorms onto fresh agar and how to successfully transition seedlings from the in-vitro environment to established seedlings and ultimately blooming and naming the resultant hybrids.

The presentation will be a mix of text and lots of pictures of my orchids, the glove box set up, produced seedlings, etc.

Speaker

David Mathers

Founder, The Mathers Foundation;
Board Member and Trustee Plant Heritage;
Board Member and Trustee, Chelsea Physic Garden

Ex situ Conservation: Caring for Six National Collections of Orchids

Email: admin@orchid.foundation

Keywords: *Oncidium*, *Pleione*, *Stanhopea*, *Acineta*, *Anguloa*, *Masdevallia*, *Cymbidium*, Plant Heritage, Persephone, ex situ, conservation, culture

Opened in 2019, The Mathers Foundation is responsible for six of the UK's National Plant Collections®: *Oncidium*, *Pleione*, *Stanhopea* & *Acineta*, *Anguloa*, *Masdevallia* and *Cymbidium*. The plants are grown in ~1,000 sq. m. of greenhouse space in Sussex, England, divided into six different climatic zones under computer control of the heating, shading, venting and fogging systems. Heating is provided by biomass boilers and heat exchangers while rainwater capture ensures that the nursery is largely self-sufficient in its water usage.

For each genus, TMF looks to maintain multiple plants of as many of the species as possible, as well as a representative sample of the key hybrids. Plants are propagated asymbiotically in our laboratory and surplus plants are sold to support the Foundation, as well as being donated to botanic gardens. Details of the plants are logged in the Persephone database maintained by Plant Heritage, the UK charity under the patronage of His Majesty King Charles III that oversees the UK's National Plant Collections®.

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Speakers

Audrey Reilly &
Esmée Winkel

The art of painting Orchids

Audrey Reilly*[1], Esmée Winkel[2]

[1] President, Verein für Botanische Kunst Deutschland,
(German Botanical Art Society), Germany
[2] Botanical artist, Naturalis Biodiversity Center, Leiden, the Netherlands

Email: audrey.reilly@gmx.de

Keywords: botanical art, exhibition, Verein für Botanische Kunst Deutschland

To celebrate the botanical art exhibition “Orchids, Orchids, Orchids”, here at the WOC, Audrey Reilly and Esmée Winkel seek to put a spotlight on botanical art. Audrey Reilly begins with a short account of the significance of botanical art in German history and points out some notable German contributions to the depiction of orchids in the past. She then describes the founding of the German Botanical Art Society, its development and targets in promoting botanical art and artists in Germany.

Esmée Winkel continues with why botanical paintings and illustrations are still important for science today and how the artwork and projects by botanical artists can support the orchid community as well. Botanical art captures orchids and their beauty for centuries to come and she presents paintings by world-renowned contemporary artists. She also shares various tips and techniques on how to start your own drawings and paintings of your favourite orchid species.

Speaker

Peter T. Lin

Diamond Orchids, AOS Judge

Hybridising Miniature and Compact *Vanda* Hybrids

Email: lin.petert@yahoo.com

Keywords: *Vanda,* hybridising

The presentation I give will detail:

Miniature *Vanda* species

Popular *Vanda* hybrids

New trends in miniature and compact *Vanda* hybrids

The fast paced presentation will be mostly pictures of miniature *Vanda* species, popular *Vanda* hybrids, and the new trends in miniature and compact *Vanda* hybrids. These will be some of my own hybrids as well as others from hybridizers around the world.

Speaker

Judith Rapacz-Hasler
Fort Myers, Florida 33908 U.S.A.

The enchanting flowers of the genus *Cattleya:* Culture requirements for the labiata-type unifoliate species

Email: jorapacz@wisc.edu

Keywords: *Cattleya,* species, culture

Cattleya orchids are one of the most popular kinds of orchids for beginners and advanced hobbyists alike. William Cattley was an English dealer in tropical plants, and he received a specimen of a new plant that William Swainson discovered in Pernambuco, Brazil. The plant successfully bloomed under the care of *Cattley*, and it became the type specimen from which Lindley described the unifoliate *Cattleya labiata* (*Cattleya* Lindl. 1824). There are 18 large-flowered unifoliate *Cattleya* species distributed from northeastern Brazil, Guyana, Venezuela, Colombia, Ecuador, Peru to Costa Rica. Their habitats are close to the equator providing similar day and night-time hours all year around. Plants grow in bright, filtered light on lichen- or moss-covered, semi-vertical tree trunks. For most of the *Cattleya* species the dry season, or resting period, is from December to March, rainfall occurs from July to September, and elevations range from 100 to 2,000 meters.

These factors need to be considered when purchasing a *Cattleya* plant to grow in the northern hemisphere. Species vary in their growing and flowering period, some grow in wintertime when light is sparse, so they need extra light, others grow in summer with maximum light. Does your available space accommodate the need of a particular species you are interested in growing? Observing a few essential factors in growing this genus will give you the pleasure to enjoy delightful blooms for years to come.

Speaker

Arthur E. Chadwick

Chadwick & Son Orchids, Inc, Powhatan, Virginia, U.S.A.

Cattleya Breeding and Cultivation

Email: art@chadwickorchids.com

Keywords: *Cattleya,* culture, hybrids, species

Most people start their orchid hobby with *Phalaenopsis* (the gateway drug) and are used to long lasting flowers. Sadly, there are no cattleyas that last 3 months, but we can offer 6 weeks if we hybridize with long lasting species. Cattleyas are better than *Phalaenopsis* because they are fragrant, more exclusive, more sophisticated and sentimental. Among cattleyas buyers, there is renewed interest in the species, early hybrids and the "classics". Cattleyas require more light than phalaenopsis but with the recent introduction of L.E.D. bulbs, anybody can grow cattleyas. Commercial cattleya growers in the U.S. are best described as "traditional nurseries" that raise an assortment of popular genera in relatively low tech greenhouses. *Cattleya* culture has remained relatively unchanged for over a century except that growers no longer use osmunda fiber as a potting media. In general – "Duplicate what they get in nature."

Stream B | Saturday | March 28, 2026 | 16:30 – 17:15 CET (UTC+1)

Speaker

Leslie Ee

American Orchid Society (Toronto Judging Centre, Canada)

Cattleya warscewiczii: The Last Frontier of the King of the Andes

Email: drleslieee@hotmail.com

Keywords: *warscewiczii,* conservation, hybridizing, gigas, genes

Cattleya warscewiczii (syn: *Cattleya gigas*) has the largest flowers in the unifoliate group, sometimes reaching up to 30 cm (12 inches). Due to its size, dark lip color (with yellow eyes), various rare color forms and floriferous nature (up to 10 flowers), it has been used in breeding numerous times since its discovery in 1854. Its genetic contribution to spectacular hybrids like Hardyana, Enid, Norman's Bay, Oconee and hundreds more made it an extremely popular species. Due to this popularity internationally and locally, it was widely collected from its habitat in Colombia, hastening the near extinction of the species from the wild. This article will highlight one of the Colombian Andes locations that this species is thriving, in a niche within the boundaries of man's encroaching destructions, possibly the last frontier of this remarkable species.

Speaker

Cássio van den Berg

Departmento de Ciências Biológicas,
Universidade Estadual de Feira de Santana, Bahia, Brazil

Cattleya and related genera: insights from phylogenomics

Cássio van den Berg*[1], César Zanello[2]; Caroline G. Bertocco[3], M. Rosim[4], Maria I. Zucchi[5]

[1] Departmento de Ciências Biológicas, Universidade Estadual de Feira de Santana, Bahia, Brazil
[2] Programa de Pós-Graduação em Genética e Biologia Molecular, Universidade Estadual de Campinas, Brazil
[3] Programa de Pós Graduação em Genética e Melhoramento de Plantas, Universidade de São Paulo, Brazil
[4] Sociedade Orquidófila de Santo André, São Paulo, Brazil
[5] APTA Regional, Piracicaba, São Paulo, Brazil

Email: vcassio@uefs.br

Keywords: *Orchidaceae*, genomics, RAD-Seq, Phylogeny

Cattleya comprises 120 species and is divided in 4 subgenera, 3 sections and 5 series. Here, we provide an updated phylogeny of *Cattleya* and related genera based on genomic data of full plastomes and SNP data. Genomic sampling included >250 samples with all species of *Cattleya*, *Brassavola*, *Rhyncholaelia* and *Guarianthe*, and one species of Myrmecophila for rooting the tree. A library of ddRAD was prepared with enzymes pstI and mseI, and whole genome sequencing (WGS) was performed for 25 samples for complete plastid genomes assembly. Trimming and demultiplexing clustering and locus identification were performed de novo with the software Ipyrad, while plastid assembly was performed Novowrap. Furthermore, the data was reanalized for the smaller groups in a hierarchical manner. At first, a single analysis with all samples was performed to study the relationships of the major clades in *Cattleya*, that corroborated previous analysis with Sanger sequencing data, and resembling more closely the ITS phylogenies than plastid trees. After this overall analysis, we reanalized the samples of several subgroups corresponding to the infrageneric taxonomy from the raw data, that, due to increased taxonomic similarity, provided 100 – 1,000 times more SNP loci than the overall analysis. Within the subgroups the progress in clarifying the phylogenetic relationships was much more pronounced due to the large number of loci obtained. With SNP data, we obtained species phylogenies with high resolution and 100 % support in most nodes, providing significant advance in clarifying species relationships with high support in closely related species groups.

PRESENTATIONS

Stream C | Saturday | March 28, 2026 | 12:00 – 12:45 CET (UTC+1)

Speaker

Clare Hermans

The Royal Horticultural Society, United Kingdom

The history of Mascarene orchid discoveries through the centuries – Exploring the orchid connection to the spice trade and missions circumnavigating the globe

Email: Clare.Jepson@btinternet.com

Keywords: Bosser, Commerson, Cordemoy, Mascarene, Thouars

The botanical history of the Mascarenes is interwoven with the changing occupation of the Islands by European powers, the location of the Islands on spice routes, and the slave trade. East India Company personnel, doctors, writers, geographers, astronomers, and botanists employed on expeditions circumnavigating the globe or monitoring the transit of Venus all played a significant part. Principal among these are Bertrand François Mahé de La Bourdonnais, Pierre Poivre, Philibert Commerson, Louis Marie Aubert-Aubert Du Petit-Thouars, Jean-Baptiste Bory de Saint-Vincent, Wencelas Bojer, Louis Sulpice Bouton, Isaac Bayley Balfour, and Jean-Michel Bosser. Their stories will be described and illustrated together with some of the orchids associated with them. Several participated in the creation of botanic gardens at Pamplemousses (Seewoosagur Ramgoolam), in Mauritius and Jardin du Roi (Le Jardin de l'État), in Réunion. Some of them established sugar, and spice cultivation, improved the economies of the Islands, and provided sustenance for the inhabitants and visiting ships. All helped to share the flora and fauna of the Islands with the larger world; ironically the larger world shared its most destructive flora and fauna with the Islands, with devastating effect.

Speaker

Jean-Michel Hervouet

Fédération France Orchidées (FFO), Paris, France;
Association Des Amis de la Forêt d'Ambodiriana-Manompana (ADAFAM), Saint-Leu, La Réunion;
Muséum national d'histoire naturelle (MNHN), Paris, France

In situ conservation of wild orchids in Madagascar

Jean-Michel Hervouet*[123], Chantal Misandeau[2], Benjamin Kabouche[1]

[1] Fédération France Orchidées (FFO), Paris, France
[2] Association Des Amis de la Forêt d'Ambodiriana-Manompana (ADAFAM), Saint-Leu, La Réunion
[3] Muséum national d'histoire naturelle (MNHN), Paris, France

Email: jmhervouet@free.fr

Keywords: Orchids, Madagascar, conservation

Orchids cannot be protected if their habitats are not, but carefully chosen habitats allow protecting large numbers of species, it will be shown by two case studies, the Ambodiriana forest in the Analanjirofo region in Madagascar, and the Iaroka forest in Alaotra-Mangoro region. Both are managed with the help of two French Non-Governmental Organisations, ADAFAM in the first case and FFO in the second. For their conservation actions both NGOs are funded by a corporate sponsorship.

The Ambodiriana forest, located near the village of Manompana on the East Coast, is one of the latest coastal forests in Madagascar. Despite a small area, 240 hectares, it is blessed with at least 130 species of wild orchids, and new ones are still found after 30 years of surveys. Among them some are considered endangered or critically endangered by IUCN, some are potentially new to science, and others are known only in this forest. Along with these orchids, rare palms, frogs and lemurs have been observed. After years of deforestation in the region, Ambodiriana is the last remaining primary forest around the village of Manompana.

The Iaroka forest is a much larger forest (3,300 ha) near Andasibe. Surveys in Iaroka have started recently but the number of orchid species is already larger than 120 and will certainly exceed 200. The conservation program is a collaboration between FFO, a Malagasy NGO called Impact-Madagascar and an association of villagers. For both forests the goal is to give them an official status of New Protected Area.

Speaker

Julian Hummel

Independent researcher, Bayreuth, Germany

A low-cost in vitro culture model for conservation of endangered endemic orchids in Reunion Island, "the Orchids 3.0 project"

Julian Hummel*[1], Camille Depagniat[3], Arnaud Rhumeur[4], Henri Hoarau[4], Baptiste Roux[4], Sarah Roussel[4], Dominique Oudin[4], Dominique Strasberg[2], Florent Martos[5],Claire Barel[2], Orane Lelaidier[2], Nancy Nehmé[2], Lola Rouelle[2], Lucas Praint[2], Rachel Gusset[2]

[1] Independent researcher, Bayreuth, Germany
[2] UMR PVBMT, Faculté des Sciences et Technologies, Université de La Réunion, Saint-Denis, La Réunion, France
[3] Kay Orchid Flask Factory, Chamigny, France
[4] Conservatoire Botanique National de Mascarin, Saint-Leu, La Réunion, France
[5] ISYEB, UMR 7205, Museum National d'Histoire Naturelle, Paris, France

Email: info@julianhummel.de

Keywords: ex situ conservation, in vitro culture, Mascarene Islands, Indian Ocean

Orchids 3.0 is an endemic orchid conservation project in Réunion Island through a low-cost in vitro culture laboratory bringing together 4 partners, the University of La Réunion, the National Botanical Garden of Mascarin, an in vitro culture company with strong expertise in orchid propagation and a student naturalist NGO. The objectives have been to set up a small laboratory with recycled materials (9 m²) to practice in vitro culture with less than 500 euros of small equipment for producing substrate, sowing, transplanting and lighting plants. This low-cost and lightweight in vitro culture concept has been created in order to develop this technique in regions facing with poverty such as Comoros archipelago or Madagascar, thereby implementing locally sustainable ex situ conservation programs of genetic resources.

The project is active at Reunion University since 2022; where daily control of parameters (conductivity, pH of substrate, grow light spectra, temperature) allows to optimize growth conditions of plants. From current asymbiotic culture substrate we are now able to extend this culture to symbiotic way using mycorrhiza to strengthen the plants that could be reintroduced in its habitat according to the national conservation strategy of the National Botanical Garden. By practicing the ex situ preservation techniques for the native orchids of Reunion Island, the project allows students to be put in a real-life situation and quickly gives them autonomy. Highlighting everyone's skills and promoting open source scientific dissemination of knowledge is one of our principal aims to make native plant conservation effective.

Speaker

Michael Tibbs

Exotic Plant Company, Netherlands

Disa … Update on a commercial cut flower project

Email: miketibbs1@yahoo.com

Keywords: *Disa, Disa* cutflower, *Disa uniflora*

The genus *Disa* has gripped so many with fear over the years, with a perception of being hard and tricky to grow. I believe that fear has long since dissipated with many hobbyists now growing and even raising their own plants from seed.

A hobby that grew into a passion and then a business has seen the genus *Disa* even become a cut-flower of choice during the summer months in Europe and even the USA. We will take a look at Disas used in the cut-flower business today.

PRESENTATIONS

Stream C | Saturday | March 28, 2026 | 16:30 – 17:15 CET (UTC+1)

Speaker

Claudia Obermüller

Tyrol, Austria

Angraecoids in Tyrol and thoughts on Species Conservation

Email: obermueller.c@hotmail.com

Keywords: Angraecoids, conservation, cultivation, networking, private collectors

Orchids are among the most fascinating and diverse plants in the world – and they have held a special fascination for me for many years. African species, in particular, captivate me. In my talk, I will present some representatives of the Angraecoids that I cultivate myself.

The passion for orchids goes beyond a mere hobby – every collector carries a certain responsibility, which one should be aware of, especially in view of the worldwide threat to these plants. Conservation and species preservation are becoming increasingly urgent, and every collector and enthusiast can contribute. Even the successful cultivation of botanical species helps ensure their survival. By networking with one another, we can preserve many species and avoid inbreeding through self-pollination.

Additionally, bringing more species into in-vitro propagation allows us to make a targeted contribution to the rescue of endangered plants while reducing demand for wild-collected specimens. Looking ahead, it should also be considered how collectors and public institutions might collaborate – because many hands are needed in the fight against species loss.

Orchids symbolize the resilience of nature. Through joint efforts, we can secure their survival for future generations.

Speaker

Thomas Ederer

Orchideenvermehrung Ederer, Neusiedl am See, Austria

Simplified and cost-efficient seed sowing methods for orchid conservation

Email: thomas@orchideenvermehrung.at

Keywords: orchid seeds, germination, sowing, conservation

Habitat destruction, removal from the wild, and climate change are making it increasingly difficult for orchids to survive. We can reduce this pressure by propagating cultivated orchids from seed. Not only does this make it less attractive for collectors to take plants from the wild, often the resulting young plants also adapt better to cultivation conditions than imported plants. This presentation covers sowing methods that can be implemented on a small budget with minimal equipment. Around 25 years ago, the lecturer carried out his first successful sowings in the kitchen, using steam from a pot of boiling water. Over time, he has used and simplified other sowing methods. During the talk, he will share his experience with the audience to encourage them to give it a try. The presentation will begin with an explanation of what makes orchid seed germination so special. The first method to be discussed is sowing under non-sterile conditions in the presence of a symbiotic fungus. As this fungus is often unavailable, a culture medium must take over its role. Its composition and inexpensive alternatives will get presented, followed by an explanation of how to create sterile conditions at home and how to use it for sowing the seeds. The presentation will conclude with some tips on how to acclimatise the seedlings to life outside their culture containers.

DAYLIGHT SAVING TIME

Please note that daylight saving time begins in Germany on Sunday, March 29, 2026. During the night from Saturday to Sunday, clocks will move forward by one hour (from 02:00 to 03:00). Please make sure to **adjust your clocks** accordingly so you are not late for the Sunday program.

All times listed for Sunday are given in **Central European Summer Time** (CEST, UTC+2).

PRESENTATIONS

SUNDAY

March 29, 2026

Stream A | Sunday | March 29, 2026 | 10:00 – 10:45 CEST (UTC+2)

Speaker

Emrys Chew

Co-Chair, Judging Subcommittee, Training and Education Coordinator, Orchid Society of South East Asia (OSSEA), Singapore, Republic of Singapore

Vandaceous Breeding in Singapore

Email: emkc100@yahoo.co.uk

Keywords: Singapore, globalization, hybridization, *Aeridinae,* intergeneric

Singapore's heritage of experimentation and excellence in orchid breeding demonstrates an ability to transcend the island's natural limitations by capitalizing on 'orchid globalization' at the crossroads of the Indo-Pacific. For well over a century, since the introduction of the first vandaceous hybrid *Papilionanthe* Miss Joaquim (1893), the creative efforts of amateur and professional orchid hybridizers have enlivened both private and public collections, as well as enriched the fields of floriculture worldwide. This paper examines the distinctive Singaporean contribution to hybridizing orchid genera of the Vanda Alliance that thrive under tropical lowland conditions — including *Aerides*, *Arachnis*, *Papilionanthe*, *Paraphalaenopsis*, *Renanthera*, *Rhynchostylis*, *Vanda*, and their intergeneric combinations.

Speaker

Martin Motes
Research, Fairchild Tropical Botanic Garden, Miami, USA

Vanda coelestis (Rchb.f) Motes, a new combination with implications for taxonomy and breeding

Martin Motes, Ph.D.*[1], Jason Downing, Ph.D[1]

[1] Research, Fairchild Tropical Botanic Garden, Miami, USA

Email: martinmotes@gmail.com

Keywords: *Vanda,* taxonomy, breeding

Vanda coelestis was removed from *Rhynchostylis* and placed in *Vanda* based on plant and flower morphology. One recent molecular study comparing *V. coelestis* to several Chinese species in the genus confirms this placement. The present molecular analysis refines this placement affirming the flower morphology which indicated that *V. coelestis* belongs in section *Flabellata* of the genus. This analysis also affirmed the proximate affinity of *V. coelestis* to species in section *Ascocentrum*. These facts clarify our understanding of the genus *Vanda* and illuminate much historical breeding. Such knowledge is also shown to be valuable to future breeders of the *Aeridinae*.

Speaker

Daniel Geiger

Invertebrate Zoology, Santa Barbara Museum of Natural History, Santa Barbara, USA

Micro-imaging techniques suggest pollination mechanisms in *Oberonia*

Daniel L. Geiger*[1], Andreas Erhardt[2]

[1] Invertebrate Zoology, Santa Barbara Museum of Natural History, Santa Barbara, USA
[2] Department of Environmental Sciences, Botany, University of Basel, Switzerland

Email: geiger@vetigastropoda.com

Keywords: deceptive pollination, ESEM, EDS-mapping, raphides, osmophores

The pollination mechanism of the old-world microfloral orchid genus *Oberonia* is little studied. Assessment of live flowers (15 species) for presence of nectar in the sac using environmental scanning electron microscopy was negative. It suggests a deceptive pollination strategy, which implies a model flower with reward. Electron dense spots on the flowers shown by secondary electron images are identified by energy dispersive spectroscopy (EDS) to be calcium oxalate raphides. The distribution of raphides was visualized in situ using EDS mapping at high accelerating voltages of 20 kV and analytical probe current of 1 – 2 nA to reach the embedded raphide bundles (~250 samples). The association of raphides with warts with surface-enlarging cell sculptures suggests osmophore function. The combined evidence, including the absence of patterns on the flowers in simulated insect vision by UV reflectance z-stack imaging suggests small *Diptera* being attracted by scent to the flowers of *Oberonia* spp. Abiotic (rain, wind) and biotic (ant, bugs) geitonogamy may be responsible for occasional high fruit set in those rather rare epiphytic orchids.

Speaker

Manuel Lucas García

Orquidario de Estepona. Estepona (Málaga) Spain

Ants and Orchids: stories of love and deception

Email: mlucasgarcia@hotmail.com

Keywords: Myrmecophilia, myrmecophite, orchids, ants, symbiosis, mutualism

Too often, plant lovers in general, and orchid lovers in particular, believe that ants are harmful to their plants. However, the close relationship that exists between some orchid species and many other ant species is surprising. Sometimes, it's so close that it's difficult to distinguish who started seducing the other. In some cases, the lover wasn't invited, but as it is said, "close contact breeds affection"... And all's well! Other times, it's nothing more than a deceitful flirtation with an insect whose heart is about to be broken. Quite often, it's an arranged marriage, even with the right to divorce! But there are cases in which it's a passionate relationship in which the plant cannot thrive without the attention of its hexapod lover, and after many years of living together, any unexpected divorce will spell ruin for both. What's more, sometimes there will be third parties wanting to participate in a strange and complex "ménage à trois." Well, these things happen ...

After this story, you'll think twice before separating your orchid from these little visitors.

Speaker

Julita Minasiewicz

University of Gdańsk, Faculty of Biology, Department of Plant Taxonomy and Nature Conservation, ul. Wita Stwosza 59, 80-308, Gdańsk, Poland

Unveiling Mycoheterotrophic Symbiosis: Transcriptomic Insights from Orchid Protocorms

Julita Minasiewicz*[1], Marcin Jąkalski[2], Konrad Ślusarz[1], Tomas Figura[3], Marc-André Selosse[1,4], Etienne Delannoy[5]

[1] University of Gdańsk, Faculty of Biology, Department of Plant Taxonomy and Nature Conservation, ul. Wita Stwosza 59, 80-308, Gdańsk, Poland
[2] University of Gdańsk, Center for Applied Genomics and Bioinformatics, ul. Wita Stwosza 59, 80-308, Gdańsk, Poland
[3] Institute of Botany ASCR, Department of Mycorrhizal Symbioses, Lesní 322, 252 43 Průhonice, Czech Republic
[4] Institut de Systématique, Évolution, Biodiversité (UMR 7205 – CNRS, MNHN, UPMC, EPHE), Muséum national d'Histoire naturelle, Sorbonne Universités, 57 rue Cuvier, 75005, Paris, France
[5] Université Paris-Saclay, CNRS, INRAE, Université Evry, Institute of Plant Sciences Paris-Saclay (IPS2), 91190, Gif sur Yvette, France

Email: julita.minasiewicz@ug.edu.pl

Keywords: mycorrhizal interactions, protocorms, gene expression, RNAseq

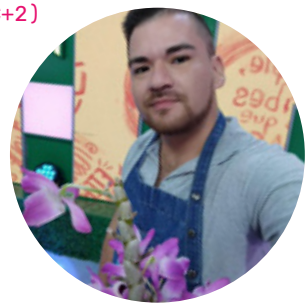
The earliest developmental stages of orchids depend on intimate interactions with mycorrhizal fungi, yet the molecular basis of protocorm-fungus communication remains only partially understood. Transcriptomic studies to date have focused primarily on symbiotic and asymbiotic protocorms cultivated in vitro, generating valuable insights into nutrient exchange, hormonal and redox signalling, defence modulation and early developmental transitions. Considerably less is known about how these processes unfold in natural environments, where protocorms experience complex and dynamic ecological inputs.

In this contribution, we synthesise current transcriptomic knowledge on orchid protocorm development and examine how in vitro systems have shaped prevailing models of early symbiosis. When relevant, we reference our recent transcriptomic work on in situ germination of Dactylorhiza majalis, which suggests differences that reflect ecological context. By integrating these findings with broader conceptual perspectives, we outline key regulatory pathways that underpin symbiosis and the metabolic adjustments required for nutrient acquisition from the fungus.

This review provides a coherent framework for interpreting transcriptomic patterns in orchid-fungus interactions, identifying both established mechanisms and areas where future experimental work is needed. Such synthesis is essential for informing conservation strategies and improving propagation methods for orchids across their diverse ecological niches.

PRESENTATIONS

Stream B | Sunday | March 29, 2026 | 10:00 – 10:45 CEST (UTC+2)



Speaker

Antonio Miranda Zapata

RARE BOLIVIA

Bolivia: South America's Best Kept Secret

Email: orquitarija@gmail.com

Keywords: Bolivia, orchids, biodiversity

While often overshadowed by its neighbors, Bolivia harbors one of the richest and most diverse orchid floras in South America. Its unique geography, ranging from Amazonian lowlands to Andean cloud forests, provides ideal habitats for thousands of orchid species.

Biodiversity Highlights:
- Over 1,900 native orchid species
- At least 120 endemic species found nowhere else on Earth
- Key genera include *Catasetum*, *Cycnoches*, *Masdevallia*, *Pleurothallis*, *Epidendrum* and *Oncidium*

Hidden Gems
Bolivia is home to rare species such as: *Masdevallia chaparensis, Catasetum dupliciscutula,* and *Vasqueziella boliviana*. Many are still being discovered and scientifically described today.

Threats and Conservation:
- Habitat loss due to agriculture and deforestation
- Illegal collection and lack of awareness

Efforts are underway to promote sustainable cultivation and ex-situ conservation through local nurseries and education programs.

The Role of Exhibitions
Events like the International Orchid Exhibition of Bolivia (EIOB) serve to:
- Raise awareness
- Support conservation
- Promote ecotourism and sustainable trade Conclusion

Bolivia remains a hidden jewel in the orchid world, offering endless opportunities for discovery, conservation, and appreciation. It is truly South America's best kept secret.

Supported by the **German Orchid Society (D.O.G.)**

Speaker

Manfred Speckmaier

Botanical Garden of the University of Vienna,
Rennweg 14, A-1030 Vienna, Austria

Orchids "on the rocks" ... but do they really need it?

Email: mcsk@gmx.net

Keywords: Brazil, Campos Rupestres, cultivation

As an introduction for a discussion about whether it is necessary or not to imitate the natural habitat of a specific orchid species as best as possible for its successful cultivation, a short presentation about the orchid flora observed by the author on so-called „Campos Rupestres" in Minas Gerais, Brazil, is offered. The conditions in this environment are harsh (often very dry and very hot during the day), and the question is whether the species growing there need these harsh conditions to thrive and flower, or whether they would also grow — maybe even better — under less stressful conditions.

Because many of the orchids shown during this presentation are quite popular species (several rupiculous *Cattleya spp., Bifrenaria sp.,* etc.) the audience is asked to share their personal experiences of cultivation — successes and failures — made with these types of orchids. The expected outcome of the resulting discussion is an exchange of knowledge which will be interesting and useful for all members of the audience to improve their own cultivation methods.

Speaker

Adam P. Karremans

Centro de Investigación Jardín Botánico Lankester, Universidad de Costa Rica. PO Box 302–7050, Cartago, Costa Rica

Demystifying Orchid Pollination

Email: adam.karremans@ucr.ac.cr

Keywords: deception, fertilization, floral visitors, *Orchidaceae*, reward

We delve into the fascinating natural history of orchid pollination by exploring the extraordinary means by which these plants reproduce based on current and historical observations in the light of up-to-date scientific knowledge. From the cruel, and often obsessive, deception-based mechanisms, to the sweet and nutritious rewards of nectar and pollen, through strategies as diverse as the mimicry of other organisms, the offering of fragrances, and antagonism. The key role of bees, flies, beetles, hummingbirds, moths and butterflies to ensure the survival of orchids, as well as the role of groups of unusual pollinators such as ants, crickets and lizards, are discussed. The colorful details that most of us consider to be facts about the reproduction of orchids are explored and are placed in the light of past and present scientific knowledge, proving that some of our preconceived ideas can turn out to be false. Orchids are presented as an evolutionary model with an intrinsic element of mysticism, emphasizing its structural modifications to promote, and sometimes avoid, the fertilization of its flowers. Finally, the importance of conservation is addressed through effect of climate change and forest fragmentation and their influence on orchid pollination.

Speaker

Helen Jean Millner

University of Wolverhampton, Wulfruna Street, Wolverhampton, WV1 1LY, U.K.

Floral micromorphology and pollination biology of the genus *Restrepia (Orchidaceae)*

Helen J. Millner*[1], Timothy C. Baldwin[1]

[1] University of Wolverhampton, Wulfruna Street, Wolverhampton, WV1 1LY, U.K.

Email: helenjmillner@gmail.com

Keywords: *Restrepia*, cirrhi, calli, osmophores, pollination mechanism, self-incompatibility, SEM, false nectar guides, myophily

Restrepia is a small *Pleurothallid* genus comprising 57 species indigenous to Central and South America. Their montane forest habitats are under increasing pressure from accelerated changes in land use. When faced with dwindling numbers and fragmented habitats, the pollination systems of obligate out-breeding orchid genera, such as *Restrepia*, may no longer function efficiently. This could add to the extinction risk for such species.

Our original study performed an in-depth investigation of the floral structures in the genus, and formulated a possible pollination mechanism and established the link with its breeding system. The floral micro-morphology of the *Restrepia* flower using scanning electron microscopy (SEM), macrophotography and ultra violet photographic images will be illustrated in this talk. From these the following will be discussed:

- The secretory nature of floral papillae of the labellum, synsepal and osmophores
- The possible role of osmophore papillae arrangement in 'scent triangulation' to attract the pollinator.
- The non-secretory structures of the cirri and calli, both of which were not studied in depth before.

A surprisingly, complex potential pollination mechanism for this unique genus emerged which represented a link between the breeding system (gametophytic self-incompatibility) and non-nectar rewarding, deceit myophily for the genus *Restrepia*.

Speaker

Kyle Lucyk
Canada

Popular *Masdevallia* species and their contributions to modern hybrids

Email: KyleLucyk@gmail.com

Keywords: *Masdevallia*, hybridizing, coccinea, cool growing, warm growing

The genus *Masdevallia* is a large genus whose range extends from Mexico all the way south to Peru and Brazil. There are upwards of 500 species describe with more being discovered every year. Flowers are colourful and vibrant.

Primarily thought of as a cool or cold growing genus that requires high humidity, modern hybridizers are making progress towards plants that grow in a wider range of conditions while still keeping their vibrant flowers. These new hybrids appeal to a wider segment of the hobbyist market.

Some of the most beautiful species are also the most difficult for a hobbyist to grow. Hybridization of this genus has increased since the 1990's and we now have a better understanding of the traits the popular species contribute.

The popular *Masdevallia* species and what they bring to hybridization will be reviewed.

Stream C | Sunday | March 29, 2026 | 10:00 – 10:45 CEST (UTC+2)

Speaker

Monika Lipińska

Department of Plant Taxonomy and Nature Conservation, Faculty of Biology, University of Gdańsk, Gdańsk, Poland; Lankester Botanic Garden, University of Costa Rica, Costa Rica; Institute for Research in Natural Sciences and Technology (IARNA), Rafael Landívar University, Guatemala City, Guatemala

It takes three to tango? Presentation of the ORCHIDBIOM project and its aims

Email: monika.lipinska@ug.edu.pl

Keywords: floral microbiome, orchids, ornithophily, pollination, tropics

For a long time, plants were viewed as isolated organisms, operating independently within their ecosystems. However, recent advances in ecology and plant biology have illuminated the profound interconnectedness of plants with other life forms, including fungi, bacteria, and insects. These relationships are crucial, as microorganisms can significantly impact plant physiology, development, and distribution. A notable focus has emerged around the floral microbiome — the community of bacteria and fungi residing in flowers — especially regarding its role in pollination. Traditionally, pollination was seen as a straightforward interaction between plants and their pollinators, but it has become evident that the process is far more intricate, involving the floral microbiome that can modify flower attractiveness through changes in scent, nectar composition, and structural appearance. Orchids, captivating both scientists and enthusiasts, exemplify this complexity, particularly in tropical regions where their pollination mechanisms remain underexplored. One fascinating mode of pollination is ornithophily, where birds facilitate the process, often characterized by flowers that are red or orange, bell-shaped, and rich in sucrose while lacking scent and nectar guides. Current hypotheses suggest that bird pollination evolved from bee pollination, yet the factors driving this transition are still unclear. Our research aims to explore these dynamics by characterizing and comparing the floral microbiomes of bee- and bird-pollinated orchids in Costa Rica, investigating how microbiome influences floral attractant chemistry and pollinator visitation patterns. Through fieldwork and laboratory analyses, we hope to uncover the evolutionary mechanisms underlying these intricate pollination systems, contributing valuable insights into orchid conservation and ecology.

Speaker

Ludger A. Wessjohann

Leibniz-Institute of Plant Biochemistry,
Dept. Bioorganic Chemistry, 06120 Halle (Saale), Germany

Orchids – a Huge Plant Family with Little Phytochemistry Known – Can this be Overcome by Modern Methods?

Ludger A. Wessjohann*[1], Mehdi Davari-Dolatabati[1], Katrin Franke[1]

[1] Leibniz-Institute of Plant Biochemistry, Dept. Bioorganic Chemistry,
06120 Halle (Saale), Germany

Email: wessjohann@ipb-halle.de

Keywords: bioinformatics, chemoinformatics, phytochemistry, metabolomics, biodiversity, medicinal plants

Natural Products (NPs) are the basis of over 50 % of our current drugs, many of them based on plant constituents. The same applies for flavor, fragrance and cosmetic ingredients. Independent of this success, and compared to the amount of species represented by orchids, these are vastly underrepresented in medicinal chemistry and in phytochemistry in general. This is mostly due to the often limited availability of sufficient material (legal issues, small and rare species). We will present a chemo- and bioinformatics based overview of orchids and their (medicinal) chemistry, and discuss how modern (rule and ai based) computational and analytical methods licke metabolic profiling can help to identify relevant species and constituents even with the limited sample size availability from orchids.

Speaker

Promila Pathak

Orchid Laboratory, Department of Botany,
Panjab University, Chandigarh-160 014 (UT), India

Medicinally Important Orchids Of India – Their Status, Threats and Conservation Strategies

Email: ppathak_2007@yahoo.com

Keywords: medicinal orchids, phytochemicals, Ashtavarga, Consevation, in vitro propagation

India is one of the world's 17 mega diverse countries, occupying 2.4 % of the world's land area and accounting for nearly 8 % of global biodiversity; the country is with huge diversity of plants amongst which *Orchidaceae* is one of the largest families of flowering plants with about 1,256 species belonging to 155 genera of which nearly 307 are endemic to India. Orchids, being very rich in their phytochemical contents have high medicinal value; these are extensively used to cure a variety of ailments including nervous disorders *(Cypripedium pubescens, Epipactis helleborine)*, skin disorders *(Dendrobium alpestre, Eulophia dilecta)*, tuberculosis *(Anoectochilus roxburghii, Malaxis acuminata)*, dysentery *(Bletia campanulata, Coelogyne flaccida)*, malaria *(Acriopsis javanica, Corymborkis longiflora)* and malignancy *(Dendrobium nobile)*. Ashtavarga is important ingredient of various classical ayurvedic formulations like Chavyanprash; out of eight constituents of Ashtavarga, four [Riddhi *(Habenaria intermedia),* Vriddhi *(Habenaria edgeworthii)*, Jivaka *(Malaxis muscifera)* and Rishbhaka *(Malaxis acuminata)*] have been reported to be orchids. Knowledge of different ethno pharmacological studies, linking of the indigenous knowledge of medicinal orchids to modern research activities may provide a new reliable approach, which will make the chances of discovery of drugs much more effective. Unfortunately, heavy pressures of unscrupulous collections for commercial and scientific purposes and habitat destruction under the constraint of heavy urbanization and natural calamities have detrimentally affected the size and frequency of their natural populations. Immediate remedial measures for the conservation of natural sites to ensure their sustainable utilization and development of in vitro mass propagation protocols are urgently required, in the country.

Supported by the
German Orchid Society (D.O.G.)

Speaker

Sharif Hossain Sourav

German Aerospace Center (DLR), Cologne, Germany

Wild orchid species in Bangladesh

Email: nature.sourav@gmail.com

Keywords: Orchid, Bangladesh, Conservation

The Chittagong Hill Tracts (CHT) are part of the Indo-Burma Biodiversity Hotspot, featuring diverse wild plants and animals in tropical forests along the borders of India and Myanmar. The CHT and evergreen forests of greater Sylhet host numerous wild orchid species, making it one of Bangladesh's best orchid habitats. Orchid exploration in Bengal began with British botanists, and after Bangladesh's independence in 1971, researchers documented 179 species. However, the remoteness and political instability in the CHT hinder further exploration, leaving many species recorded during the colonial period unverified. However, ongoing research has led to the discovery of new orchid species. Based on a review of past and latest published literature and personal field data, it is concluded that 193 wild orchid species are found in Bangladesh under 68 genera. Despite this, forest degradation poses a significant threat to these orchids. This presentation summarizes the latest findings on wild orchid species, threats, and conservation efforts in Bangladesh.

Speaker

Kanchit Thammasiri

Center for Gardening and Horticulture, Xishuangbanna Tropical Botanical Garden, Chinese Academy of Sciences, Menglin, Mengla, Yunnan 666303, China

Development of Orchid Biotechnology in Thailand

Email: kanchitthammasiri@gmail.com

Keywords: Thailand, orchid tissue culture, a complete cycle of orchid production

Development of orchid biotechnology, namely tissue culture, breeding, and production technology, in Thailand started from tissue culture research in some universities in 1967. Later in 1972, orchid tissue culture business expanded rapidly to over 30 million plantlets and employed over 300 workers in 15 labs with about 2.4 million US$. The suitable protocols and low-cost tissue culture were developed, as well as breeding program by the government organizations, institutions, growers, and private companies for about 50 years. The export value started from a few million baht to about three billion baht in 2024. Major growing factors in natural growing habitats are concerned for appropriate production technology after tissue cultured plantlets. They are altitude, light, temperature, relative humidity, nutrients, and air movement. At present, saran houses constructed with cement poles, cement benches, galvanized pipes for hanging orchid baskets, and black netted nylon roof with 50 – 60 % shade and open sides are developed for low cost, long lasting, and suitability for growing tropical orchids for cut-flower and potted orchids. The cultivation is mostly for many outstanding cultivars of pink-red, white, and yellow-green flowered dendrobiums and blue, pink, and yellow flowered vandaceous orchids which need hot and humid conditions. A complete cycle of orchid production which need breeding program, micropropagation, planting materials (mainly coconut husks, charcoal, and cement block), plastic containers, watering, fertilizer, pest control, post-harvest technology, and transport from farm to packaging houses are effectively implemented. Thailand is famous for exporting cut-flower orchids applying low-cost cultivation but high production. Orchids continue to dominate other ornamental crops in Thailand due to better technology know-how, suitable climatic conditions for dendrobiums and vandaceous orchids, experienced and skillful growers, and exporters, as well as their nationwide popularity. Apart from all these, orchids are a symbol of Thailand that reflects the country's pride internationally.

SPEAKER INDEX

POSTER ABSTRACTS

The lecture program is complemented by a **scientific poster presentation** that visually represents further topics, focusing on the exploration of individual species and genera. The WOC offers an excellent opportunity to present the **latest findings on selected orchid species**, their **pollinators**, **phylogenetics**, and **evolution**. Particularly intriguing is the comparison of orchids across (almost) all continents and climate zones, which opens up numerous avenues for discussion.

The EOC covers the full costs of the poster session, including printing and mounting of all posters, as well as the poster awards.

The poster prizes (each €200) are awarded in the following categories: Horticulture and Propagation, Conservation, Ecology and Pollination, Phylogenetics and Science, and Young Researcher.

Poster Prize Selection Committee:
Amelie Detterbeck
Clare Hermans
Manuel Lucas García
Heike Rampelt
André Schuiteman
John Varigos

POSTER INDEX

POSTERS

No. 01

Microsatellite-based genetic diversity of *Cypripedium parviflorum*

Haadya Ahsan[1], Alana DeFoor[1], Samiksha Sanjeev[1], Samyuktha Sanjeev[1], Lyla Eve Kaur Bauer[1], Brynne Spaeth[1], Olivia Streit[2], Alyson Michael[3], Jesse Mast*[1]

[1] Department of Molecular Biology, New Hampshire Academy of Science, Lyme, NH, USA
[2] Department of Ecology, New Hampshire Academy of Science, Lyme, NH, USA
[3] Department of Chemistry, New Hampshire Academy of Science, Lyme, NH, USA

Email: nhacadsci@gmail.com

Keywords: *Cypripedium,* Microsatellite, PCR, Phylogenetics

Members of the genus *Cypripedium* are considered indicator species due to their sensitivity to environmental stressors. One of the four *Cypripedium* species found in the northeastern United States, *Cyp. parviflorum*, has undergone relatively little genetic analysis in comparison to other members of the genus. A better understanding of the genetic diversity within and among populations of *Cyp. parviflorum* is needed to provide information for conservation efforts. Samples of DNA were purified from leaf-tip samples of *Cyp. parviflorum* from two locations in Vermont, USA: Strafford Town Forest and Eshqua Bog. Microsatellites, non-coding regions of DNA with small sequence repeats, are used in population genetics due to their lack of selective pressure which leads to higher mutation rates. Polymerase chain reaction (PCR) was conducted on these samples with primers designed for *Cyp. calceolus, Cyp. kentuckiense,* and *Cyp. japonicum*. Gel electrophoresis was used to confirm the success or failure of the amplification of the target sequences. This presence/absence data was encoded as binary character state data and used in the calculation of a maximum likelihood phylogenetic tree. This analysis yielded insignificant bootstrap values at every branching point, suggesting that there is little genetic diversity within and between the sampling sites. Future directions will include sequencing of the amplified DNA to allow for more robust determination of genetic differences between individuals within each population.

Comparative Study of Photosynthesis and Leaf Anatomy of Selected *Habenaria* Species in Thailand

Thada Amsungnoen[1], Kamonchanok Umnajkitikorn[2], Santi Watthana[1], Nooduan Muangsan*[1]

[1] School of Biology, Institute of Science, Suranaree University of Technology, 111 University Avenue, Muang, Nakhon Ratchasima, 30000, Thailand
[2] School of Crop Production, Institute of Agricultural Technology, Suranaree University of Technology, 111 University Avenue, Muang, Nakhon Ratchasima, 30000, Thailand

Email: nooduan@g.sut.ac.th

Keywords: diurnal, *Habenaria*, leaf anatomy, photosynthesis

Photosynthesis and leaf anatomy are fundamental aspects of plant physiology that provide insights into adaptation, ecology, and cultivation strategies of terrestrial orchids. In the genus *Habenaria*, which is of horticultural and conservation importance, such studies remain limited. In this study, photosynthetic characteristics and leaf anatomical traits were investigated in four species from Thailand: *H. rhodocheila* (yellow form), *H. rhodocheila* (pink form), *H. roebellinii, H. xanthocheila*, and *H. dentata*, all cultivated under greenhouse conditions. Photosynthetic performance was analyzed through diurnal measurements and light response curves, while anatomical features were examined using cross-sections and epidermal peels. Results revealed that diurnal photosynthesis peaked between 10:00 and 12:00 and declined after 14:00, with light saturation points ranging between 200 – 400 PPFD. According to anatomical observations, *H. roebellinii* and *H. xanthocheila* had the smallest guard cell size but the highest stomatal density. However, there was no difference in guard cell size between the two floral forms of *H. rhodocheil*a, only in stomatal density. In the midrib and margin areas, *H. dentata* had the thickest leaves, while *H. roebellinii* had the thinnest. Furthermore, *H. dentata* had the highest absolute mesophyll thickness overall, but the lowest mesophyll proportion because of its relatively thick upper epidermis, whereas *H. rhodocheila* (yellow and pink) featured the thickest mesophyll layers at the midrib. These results demonstrate the range of anatomical adaptations and photosynthetic responses among *Habenaria* species, laying the groundwork for future studies on their ecological strategies and possible uses in horticulture and conservation.

POSTERS

No. 03

From Orchid to Insect: A Catalogue of Bee-Pollinated Neotropical Orchid Genera

Nicol Araya[1], Noelia Belfort-Oconitrillo[1], Adam P. Karremans*[1]

[1] Centro de Investigación Jardín Botánico Lankester, Universidad de Costa Rica, Apartado 302-7050, Cartago, Costa Rica

Email: adam.karremans@ucr.ac.cr

Keywords: *Apidae*, bees, *Euglossini*, *Hymenoptera*, *Meliponini*, morphology, pollinaria

Documenting the complex ecological interactions between flowers and their pollinators is crucial to understanding plant evolution. With approximately 30,000 species, *Orchidaceae* is arguably the largest family of flowering plants and represents a good model for studying how ecological interactions influence evolutionary trends. In the Neotropics, bees are the main pollinators for dozens of orchid genera, and retrieving pollinaria attached to bees is not uncommon.

Characteristics such as the number, texture, and shape of pollinarium parts are often consistent and diagnostic across orchid taxonomic groups. The exact attachment site of the pollinarium can provide information about the morphology of the orchid and the pollinator. These features – in addition to information regarding the behavior of the insect, as well as the place and date of the capture – help accurately identify the plant-pollinator pair. Preliminary DNA data obtained from the pollinaria from captured bees suggest that, in most cases, orchid identity can be diagnosed to at least genus level based on ecological and morphological traits.

However, diagnostic power increases with the availability of databases of orchid pollinaria and their pollinators. To support this, we have compiled a catalogue of high-resolution images of Neotropical orchid genera and their pollinating bees. The catalogue displays the diversity of pollinaria morphology, placement, structure, and scale, and is intended as a tool to serve botanists, entomologists and ecologists across the Neotropics. We hope this resource will encourage further contributions from the scientific community to increase our collective diagnostic capacities.

Orchids of the Principality of Asturias (Northwestern Spain)

Víctor González García*[1], **Ángel Argüelles Longo**[1], Luis Carlón Ruiz[1]

[1] Biodiversity Research Institute (IMIB), University of Oviedo-CSIC-Principality of Asturias, Mieres, Asturias, 33600 Spain

Email: gonzalezgvictor@uniovi.es

Keywords: Atlantic flora, Cantabrian Mountains, Citizen science, Herbarium, *Orchidaceae*

We present an updated, summarised review of the orchid family in the Principality of Asturias, Northwestern Spain. For this territory, we compiled and curated up to 9197 records coming from fieldwork, herbaria, specialized publications, grey literature, citizen science platforms, Global Biodiversity Information Facility (GBIF) and social media. Our results comprise 53 confirmed species and 14 hybrids, with other 15 possibly present species being discussed and still other six explicitly dismissed. Five species represent novelties for the area. Our review demonstrates how the Principality of Asturias, despite its marginal geographic position and the scarcity of detailed floristic studies focused on orchids, qualifies as a significantly orchid-rich region within the European context.

POSTERS

No. 05

Youth-Led Orchid Conservation: In Vitro Propagation, Gardens & Engagement: Building a Sustainable Future through Education, Innovation, and Community Action

Awang Naufal Thaqif Awang Kusyairi[1], **Ian Anthony Raj**[1], **Jezmeralda Gwen Jout**[1], Afif Jazimin Redzuan Safri[1], Dayang Nur Zaidawati Awang Jamali[1], Hatsuko Pawa Kree[1], Syarifah Nur Afeefa Nadhira Wan Fadillah[1], Danielscha Anyim Brian Damian[1], Alvence Kalvincoren[1], Tengku Dr Auvaroza Tengku Abraham*[2]

[1] Sarawak Orchid Society (SARORSO), MRSM, Kuching, Malaysia
[2] Sarawak Orchid Society (SARORSO), Kuching, Malaysia

Email: tengku62@gmail.com

Keywords: Youth-Led Conservation, In Vitro Orchid Micropropagation, Peer Mentoring, Innovation, *Dendrobium anosmum, Arundina graminifolia*

The Juma'ani In Vitro Orchid Micropropagation Project (JIVOM), established in July 2019 under the Sarawak Orchid Society (SARORSO), is a pioneering youth-led initiative that integrates education, innovation, and community engagement in orchid conservation. Beginning with only four Form 1 students, JIVOM has expanded to involve 52 students by 2025, developing a multi-batch structure that sustains knowledge transfer through a peer-mentoring model.

Students are trained in in vitro propagation using orchid seeds, focusing on two native species which are *Dendrobium anosmum* (an epiphyte) and *Arundina graminifolia* (a terrestrial species). Both are valued for their medicinal, pharmacological, and gastronomic potential, and naturally occur in the region surrounding the school, an area historically associated with local economic activity linked to native flora. To date, students have successfully produced over 21 protocorm types and maintain 80 rescued orchid species in the school's Mini Orchid Botanical Garden. All specimens are systematically documented using standardised data forms for both laboratory and field observations, ensuring scientific accuracy and traceability. When SARORSO mentors are unavailable, the teacher-in-charge oversees laboratory safety and procedural compliance. Alumni from earlier batches continue to return during holidays to mentor new students, reinforcing a sustainable cycle of learning and leadership.

Through early scientific exposure, documentation, and mentorship, JIVOM empowers youth to engage in conservation, innovation, and advocacy, advancing SDGs 4 (Quality Education), 13 (Climate Action), and 15 (Life on Land) while safeguarding Sarawak's orchid heritage for future generations.

Safeguarding Archipelagic Orchids of Raja Ampat, Southwest Papua

Yanuar I.D. Cahyo*[1], Dwi Suratman[2], Abdul M. Ibrahim[3], Arief Hamidi[1]

[1] Fauna & Flora, Margasatwa Street No. 7A, South Jakarta, Jakarta 12450 Indonesia
[2] Kasuari Tanah Papua Foundation, Rambutan Street, Aimas, Sorong, Southwest Papua, 98414 Indonesia
[3] Indonesian Society of Botanical Artist, Ir. H. Juanda Street No.13, Bogor, West Java, 16122 Indonesia

Email: Yanuar.Idc@fauna-flora.org

Keywords: Orchids Diversity, Raja Ampat, Threats, Conservation, Community

The Raja Ampat archipelago in Southwest Papua hosts exceptional orchid diversity shaped by complex geology and heterogeneous ecosystems, with surveys documenting more than 180 species, nearly 20 % of them endemic and potentially more with broader exploration. Richness peaks in mid-elevation forests (600 – 1,000 m), and land-cover analysis shows orchid habitats remain relatively stable, with a low annual deforestation rate of 0.096 %. Despite this, direct pressures from harvesting persist, as species such as *Grammatophyllum scriptum* and the CITES Appendix I *Paphiopedilum glanduliferum* are collected for trade, and community interviews confirm that destructive methods like tree felling further threaten orchids and their habitats. Beyond their ecological value, orchids are integral to cultural identity and traditional knowledge in local communities, particularly within reserves and village forests, where they shape stewardship practices and sustainable use. Community-based initiatives, including patrols, inventories, and awareness campaigns, have begun to reduce illegal harvest and foster Indigenous leadership in conservation. Recognizing orchids simultaneously as ecological assets and cultural heritage provides a holistic pathway to safeguard biodiversity, strengthen local pride, and build resilience, offering a replicable model for community-centered orchid conservation in the Raja Ampat archipelago.

POSTERS

No. 07

Climate change and conservation of *Caladenia* orchids in Western Australia

Jacopo Calevo[*1,2], Kingsley Dixon[3], Michael F. Fay[1,3], Karl Duffy[4]

[1] Royal Botanic Gardens, Kew, Richmond, Surrey, TW9 3DS, UK
[2] School of Molecular and Life Sciences, Curtin University, Bentley, WA, 6102, Australia
[3] School of Plant Biology, University of Western Australia, Crawley, WA, 6009, Australia
[4] Department of Biology, Complesso Universitario Monte Sant'Angelo, University of Naples Federico II, Via Cinthia, Naples, 80126, Italy

Email: j.calevo@kew.org

Keywords: conservation, climate change, temperature, terrestrial orchids

Understanding how species distributions are being shaped by current rises in atmospheric temperature is of immediate conservation importance. Using 26 rare and common *Caladenia* orchid species in Western Australia, we first performed a conservation assessment by calculating the proportion of populations that currently occur in conservation areas. We then compared current range extents with past and future climate scenarios. We performed a niche overlap test with a future climate scenario to test how the current population level climatic niche of these species will change. Only 27% of all *Caladenia* populations are currently found in protected areas. Most species had reduced range extents in historically warmer climates. However, only three species will experience range extent contractions under future climate scenarios. The current population climatic niche has a 36% overlap with future climates, indicating that current population level climate conditions will change. Ecogeographical isolation will potentially increase in hybridizing species, thereby acting as a stronger barrier against hybridization. As *Caladenia* species evolved in seasonally dry conditions, this suggests that there is potential preadaptation to survive under elevated temperatures. However, conservation of *Caladenia* species will depend on the availability of habitat to allow migration, and the presence of their key mutualists. In vitro experiments aimed at testing the temperature tolerance of both seeds and fungi of *Caladenia huegelii* are in line with the suggested models and will be presented together with demographic studies of its main population over the past decades, and in situ seasonal fungal metabarcoding correlated to soil temperature and humidity.

Molecular phylogeny of the genus *Pseudolaelia (Laeliinae, Orchidaceae):* preliminary contributions to endemic orchids from eastern Brazil

Antonio Edmilson Camelo Júnior[1]

[1] Departamento de Ciências Biológicas, Universidade Estadual de Feira de Santana, Programa de Pós-Graduação em Botânica, Feira de Santana, Bahia, Brasil

Email: antonioedmilsom@hotmail.com

Keywords: Neotropical flora, Conservation, Molecular systematics

Pseudolaelia Porto & Brade belongs to the family *Orchidaceae*. Endemic to Brazil, its species are mainly distributed across the states of Minas Gerais, Espírito Santo and Rio de Janeiro. Constructing a molecular phylogeny for the genus is essential for understanding its evolutionary relationships within the family and for providing a robust and well-supported classification. Total genomic DNA was extracted following a standard protocol. The samples were subsequently quantified using 2% agarose gel, aliquoted, diluted 10×, and stored at −80 °C. DNA was then amplified using specific primers and subsequently purified. Electropherograms were manually edited and checked, and phylogenetic analyses were performed using Maximum Likelihood (ML) and Bayesian Inference (BI). The study generated 16 new sequences for the genus *Pseudolaelia*. The species of the genus formed a strongly supported clade (posterior probability [PP] = 0.99). The species previously identified as *P. canaanensis* emerged as sister to all other *Pseudolaelia* species, forming a moderately to strongly supported clade (PP = 0.88, bootstrap percentage [BP] = 82). The sister clade to *P. canaanensis* was highly supported (PP = 1, ML = 100); however, the remaining infrageneric relationships showed some polytomies and lacked greater resolution. The data presented here provide a preliminary, yet substantial and informative contribution toward clarifying the evolutionary relationships within *Pseudolaelia*, a genus endemic to Brazil and of great importance to its flora.

POSTERS

No. 09

Orchid flora of Cabo Blanco Natural Absolute Reserve, Costa Rica

Paola Carrera*[1], Diego Bogarín[1], Adam P. Karremans[1], Mario Blanco[1]

[1] Jardín Botánico Lankester, Universidad de Costa Rica, P. O. Box 302-7050 Cartago, Costa Rica

Email: maria.carrera@ucr.ac.cr

Keywords: Orchid flora, *Orchidaceae*, taxonomy, Costa Rica, protected areas

Costa Rica is internationally recognized for its extensive system of protected areas, which plays a fundamental role in safeguarding biodiversity and mitigating the effects of habitat fragmentation. The Absolute Natural Reserve Cabo Blanco (RNACB), established in 1963, is the first protected area in Costa Rica and Central America, and it represents a historical milestone in conservation. Despite its ecological importance, the orchid flora of the RNACB remains poorly documented, with limited and scattered information and incomplete records from herbarium collections and databases.

The lack of information is particularly striking given the importance of *Orchidaceae*, the most diverse plant family in Costa Rica. Consequently, this study aims to produce the first illustrated floristic inventory of the orchid species present in the RNACB. Fieldwork is conducted throughout the reserve using systematic monthly surveys over a one-year period, complemented by herbarium revision and the cultivation of the collected specimens at Lankester Botanical Garden (JBL). Species are documented through high-quality photography, scientific illustrations, taxonomic descriptions and dichotomous identification keys. In addition, new data on species distribution and phenology, are generated, and voucher specimens are deposited in national herbaria (CR, USJ, JBL).

Overall, the research fills a knowledge gap for the RNACB, support conservation and management efforts an contributes to a broader understanding of orchid diversity within Costa Rica's protected areas.

Sharing Experience on Breeding *Paphiopedilum* at Cocoa Orchid Farm

Shu-Ying (Elizabeth) Chen[1,2,3,4]

[1] President of Cocoa Orchid Farm
[2] Vice President of Taiwan Orchid Breeders Society
[3] Founder of Cocoa Trading Company Ltd.
[4] Winner of the 2nd Elite Breeding Award of TOBS

Email: cocoa88.ec@gmail.com

Keywords: *Paphiopedilum*, breeding, *Cyperipediodeae*, *Pavisepalum*, *Brachypetalum*, *Polyantha*, *Barbata*, *Cochlopetalum*

Paphiopedilum has always been a very favorite flower species all over the world, especially its special bag-shaped lips that attract everyone's attention and healing mood. Therefore, ever since the first *Paphiopedilum* was discovered, there has been a boom in the breeding and collection of *Paphiopedilum* in horticulture. I believe that no matter how advanced technology is, the pursuit of beautiful things and things will never change. Moreover, it is still difficult to produce by clone, so continuous breeding and improvement are still needed to produce the next generation.

If you want to breed slipper orchid, first you must understand its classification. There are four genera in the subfamily *Cypripediodeae*. The most important one that is collected and cultivated by everyone is the genus *Paphiopedilum*. There are 6 subgenera of the genus *Paphiopedilum*. Today I would like to share with you my experience in breeding these 6 subgenus:

1. *Parvisepalum:* Mating between *Parvisepalum* and *Parvisepalum* with standard complex type.
2. *Brachypetalum:* Mating between *Brachypetalum* and *Brachypetalum* with standard complex type.
3. *Polyantha:* I remade the cross of *rothschildianum* and *philippinense*.
4. *Paphiopedilum:* Matings between *Paphiopedilum* and *Paphiopedilum* with standard complex type.
5. *Barbata:* Mating between *Barbata* and *Barbata* with *Brachypetalum*, and *Barbata* with standard complex type.
6. *Cochlopetalum*: Mating between *Cochlopetalum* and *Cochlopetalum* with standard complex type.

I start my first crossing since 2005, and I successfully made a cross between Standard Complex type. Since that year I made crossing every year and I got more and more seeds every year. Now I have more than 100,000 plants of *Paphiopedilum*. So every year I will see new flowers blooming, and it makes me so happy to wait for the results each year. Living with slipper orchids is all my life and I enjoy it!

POSTERS

No. 11

Producing Vanillin (and Other Flavor Components) in vitro

Martin Dippe[1], Susann Hermann[1], Benjamin Weigel[1], Anne-Katrin Bauer[1], Annegret Laub[1], Jürgen Schmidt[1], Ludger Wessjohann*[1]

[1] Department Bioorganic Chemistry, Institute of Plant Biochemistry, D-06120 Halle (Saale), Germany

Email: wessjohann@ipb-halle.de

Keywords: vanillin, aroma, flavor, cell-free biocatalysis, enzyme cascades, flavonoids, immobilization

The biotechnological production of natural products (metabolites) from plants can improve availability, does prevent extinction if raw material is sourced from wild collected plants, and allows the scalable production in high quality. Few orchid natural products are yet sourced bioeconomically. Vanillin is an exception. It is the world´s leading aroma compound and largest non-ornamental orchid product. It is sourced either from the fruit pods of the genus *Vanilla*, usually *Vanilla planifolia*, or, alternatively, by chemical transformation of wood-derived lignin. In the poster, we describe a cell-free modular system to access this commercially important orchid compound by biocatalysis. Therefore, the biosynthetic pathway to vanillin was reconstituted in vitro, using a set of eight enzymes for a cascading conversion from the precursor compound p-coumaric acid. The enzymes required for each reaction step (including aromatic hydroxylases, methyltransferases, lyases and tributary enzymes for cofactor (re) generation) were immobilized in interchangeable modules containing balanced activities of the biocatalysts. This flow system imitates the enzyme cascades and compartmentalization of plant biosynthesis, but without the need to detoxify products, e.g. as glycosides, as seen in unfermented *Vanilla* pods. In addition, the biosynthetic method can be used to produce other valued biogenic phenolics, as exemplified for the basal flavonoid naringenin, or non-natural derivatives like the stronger flavor ethyl-vanillin.

Orchid Flora of Serbia: Chorological Spectrum, Pollination Syndromes and Life Forms

Vladan Djordjević[1]

[1] Institute of Botany and Botanical Garden, Faculty of Biology, University of Belgrade, Belgrade, Serbia

Email: vdjordjevic@bio.bg.ac.rs

Keywords: *Orchidaceae,* Serbia, taxonomy, chorology, ecology, pollination, life forms

The Balkan Peninsula is recognised as one of the most important centres of orchid diversity in Europe, but the orchid flora of the Central Balkans has not been sufficiently studied. The aims of this study were to analyse the orchid flora of Serbia from chorological and taxonomic perspectives and to provide insight into the pollination syndromes and life forms of orchids. The overview of Serbian orchids is based on personal field research, herbarium material, and literature sources. In total, 77 orchid species and subspecies belonging to 23 genera were recorded in Serbia. The most species-rich genera are *Epipactis* (11 taxa) and *Dactylorhiza* (10 taxa), followed by *Anacamptis* (nine taxa), *Orchis* (eight taxa), and *Ophrys* (eight taxa). Phytogeographical analysis indicates that the orchids of Serbia belong to nine basic chorological groups.

Representatives of the Central European chorological group dominate (with 24 taxa), followed by orchids of the Mediterranean-Submediterranean (18 taxa), Eurasian (13 taxa), and Boreal (10 taxa) groups. The deceptive pollination system is present in the largest number of orchids, followed by the rewarding pollination system, while the smallest number of orchids exhibit self-pollination. Analysis of life forms revealed that tuberous geophytes are the most numerous, followed by rhizomatous geophytes. Furthermore, orchids with spherical or ovoid tubers are dominant (with 35 taxa), followed by orchids with rhizomes (22 taxa) and those with palmately lobed and fusiform tubers (20 taxa). This study highlights that Serbia represents an area where some orchid species reach their southern or northern distribution limits in this part of Southeastern Europe.

POSTERS

No. 13

Assessment of a Fully Organic In Vitro Culture Medium for Micropropagation of *Dendrobium antennatum* (Lindl.)

Botond Gaál*[1], Andrea Tilly-Mándy Csc.[1], Péter Honfi Ph.D.[1], István Mosonyi Ph.D.[1], Szabolcs Molnár[2]

[1] Department of Floriculture and Dendrology, Institute of Landscape Architecture, Urban Planning and Garden Art, Hungarian University of Agriculture and Life Sciences, Budapest, Hungary
[2] Pro Faber Ltd. – HEXANET, Eger, Hungary

Email: gaalboti02@gmail.com

Keywords: *Dendrobium antennatum*, orchid, in vitro micropropagation, organic additives

Dendrobium antennatum (antelope orchid) is valuable in horticulture and conservation. This study tested a fully organic in vitro medium as a substitute for conventional salt-based media.

The organic medium contained potato (25 g L^{-1}), tomato (25 g L^{-1}), banana (50 g L^{-1}), coconut water (50 ml L^{-1}), yeast extract (125 mg L^{-1}), and linden honey (30 g L^{-1}). Treatments: ½ MS (control), T (fully organic), and MST (½ MS + organic components). After 98 days, T and MST improved root development; T also gave the highest dry biomass. The Anthrone test showed no significant differences in carbohydrate content. Fully organic media may offer a sustainable alternative for micropropagation, supporting commercial production, conservation, and low-resource labs.

The results highlight that a fully organic medium can serve as a viable, sustainable alternative to conventional salt-based media for both commercial and conservation purposes.

The Orchid Conservation Register: a Pilot Study by UK Orchid Societies using a Digital Platform to Support Ex Situ Conservation

Kathryn Garven*[1], Wayne Haywood[2], Penny Ross[3], David Ross[3], Christopher Barker[4], Alan MacKenzie[4], David Mathers[5], Gill Mathers[5]

[1] Scottish Orchid Society, The Barn, Glasgow Road, Kilmarnock, UK
[2] Devon Orchid Society, 16 Ash Way, Newton Abbot, Devon, UK
[3] Plant Heritage, First Floor Offices, Stone Pine, Wisley, Woking, Surrey, UK
[4] British Orchid Council (OCR correspondence address), 17 Surbiton Road, Stockton-on-Tees, UK
[5] The Mathers Foundation, Pulborough, West Sussex, UK

Email: conservation@scottishorchid.org

Keywords: orchid, ex situ conservation, amateur orchid society, database software

There is increasing interest in conservation among orchid enthusiasts. We estimate there are thousands of orchids held in private collections of amateur growers in the UK. Many of these may have potential value for conservationpurposes.

A one year pilot study was undertaken to record the orchids of UK amateur growers, using bespoke online software ('Persephone') created by UK plant conservation charity Plant Heritage, with aims of: legacy planning for importat private collections to safeguard their future in cultivation; propagating and sharing orchids of conservational value with other growers; contributing to ex situ and in situ conservation projects.

We offered members of two amateur orchid societies an opportunity to anonymously enrol in the Orchid Conservation Register database and record their orchids of conservational value. By the end of the pilot, 1765 orchid plants had been successfully recorded including 826 natural species from diverse genera. 65 species were of IUCN-assessed threatened status.

We concluded there was sufficient interest from amateur growers to expand the project to other UK orchid societies. Initial communication networks have been established with three significant botanical orchid collections in the UK and with other individuals skilled in orchid propagation.

We will present the detailed findings and outcome of this pilot, also including: how we hope to use the database; the potential benefits for individual participants; potential benefits for amateur orchid societies seeking new relevance and wider appeal to prospective members; and our practical learnings for those wishing to start a similar initiative in other countries.

POSTERS

No. 15

Oberonia Omnia: global monograph of the fairy orchids, *Oberonia*

Daniel L. Geiger[1]

[1] Invertebrate Zoology, Santa Barbara Museum of Natural History, Santa Barbara, USA

Email: geiger@vetigastropoda.com

Keywords: deceptive pollination, ESEM, EDS-mapping, raphides, osmophores

The global monograph of the taxonomically challenging genus *Oberonia* is scheduled to be published in 2027 by the American Orchid Society. The genus is reduced to approximately 140 correct species from previous estimates of 200 – 300, which is in line with the ~25 – 33 % rule in botany for correct species (119 – 159 species of 476 names in *Oberonia*). Recognition of intraspecific variability is critical and is documented as much as possible using z-stack macrophotography and scanning electron microscopy as main imaging methods for the flowers. As many types as possible were examined in herbaria throughout the world (AMES, B, BM, E, F, K, L, MEL, MICH, MO, NSW, P, SEL, RENZ, SING, US, W, WU, Z). Ecological data was collated from over 1,000 references plus herbarium specimens and data from cultivation.

The print edition will be highly limited and pre-order is strongly encouraged. Once the comprehensive treatment is published (so far > 880 pages, > 500 illustrations), a pocket version *Oberonia* Concisa for growers and field biologist is envisioned.

Micro-imaging techniques suggest pollination mechanisms in *Oberonia*

Daniel L. Geiger*[1], Andreas Erhardt[2]

[1] Invertebrate Zoology, Santa Barbara Museum of Natural History, Santa Barbara, USA
[2] Department of Environmental Sciences, Botany, University of Basel, Switzerland

Email: geiger@vetigastropoda.com

Keywords: deceptive pollination, ESEM, EDS-mapping, raphides, osmophores

The pollination mechanism of the old-world microfloral orchid genus *Oberonia* is little studied. Assessment of live flowers (15 species) for presence of nectar in the sac using environmental scanning electron microscopy was negative. It suggests a deceptive pollination strategy, which implies a model flower with reward. Electron dense spots on the flowers shown by secondary electron images are identified by energy dispersive spectroscopy (EDS) to be calcium oxalate raphides. The distribution of raphides was visualized in situ using EDS mapping at high accelerating voltages of 20 kV and analytical probe current of 1–2 nA to reach the embedded raphide bundles (~250 samples). The association of raphides with warts with surface-enlarging cell sculptures suggests osmophore function. The combined evidence, including the absence of patterns on the flowers in simulated insect vision by UV reflectance z-stack imaging suggests small *Diptera* being attracted by scent to the flowers of *Oberonia* spp. Abiotic (rain, wind) and biotic (ant, bugs) geitonogamy may be responsible for occasional high fruit set in those rather rare epiphytic orchids.

POSTERS

No. 17

Pollination of *Scaphyglottis micrantha (Orchidaceae: Laeliinae):* first study in the genus reveals rewarding system and protandry

Karen Gil-Amaya*[1], Adam P. Karremans[1], Mario A. Blanco[1,2,3]

[1] Centro de Investigación Jardín Botánico Lankester, Universidad de Costa Rica, Apartado 302-7050, Cartago, Costa Rica
[2] Escuela de Biología, Universidad de Costa Rica, San José, Costa Rica
[3] Centro de Investigación en Biodiversidad y Ecología Tropical, Universidad de Costa Rica, San José, Costa Rica

Email: kgilecologa@gmail.com

Keywords: Costa Rica, floral reward, *Meliponini*, orchid pollination, *Tetragonisca angustula*

Scaphyglottis is a Neotropical orchid genus of 78 species in subtribe *Laeliinae*. Although hummingbird and bee pollination have been suggested, the pollinators and pollination mechanisms of the genus remains largely undocumented. This study presents the first report of natural pollination for the genus, focusing on *Scaphyglottis micrantha*, an inconspicuous epiphytic orchid from Central America. Plant-pollinator interactions were documented by photographs and video recordings, while nectar presence was confirmed through morphological evidence and chemical analysis. Breeding system experiments (self and cross-pollination and pollinator-exclusion treatments) revealed self-incompatibility and pollinator dependence, with individual flowers under bagging treatments remaining in anthesis for eight to ten days. Floral visitors from two stingless bee genera (*Tetragonisca* and *Trigona*) were observed, both of which are larger than the flowers. *Tetragonisca angustula* was identified as an effective pollinator, removing and depositing pollinaria attached to its mouthparts while inserting the tongue into the lip searching for nectar. A viscous, sugar-containing secretion was detected at the concave base of the lip. Flowers showed protandry, with the stigma becoming receptive only after release of pollinia, indicating temporal separation of sexual functions. Based on its floral traits, *S. micrantha* exhibits melittophily with a nectar-rewarding system.

Illegal Orchid Trade in Malaysia: Impacts and Conservation Response

Rusea Go*[1], Edward Entalai Besi[1], Qistina Anis Mad Jabar[1], Aldrich Richard[2], Helmy Tariq Othman[2], Puat Dahalan, Eddie T.L. Chan[3], Wong Ing Yung[4], Runi Sylvester Pungga[5]

[1] Department of Biology, Faculty of Science, Universiti Putra Malaysia, 434000 UPM SERDANG, Selangor, Malaysia
[2] Division of Silviculture and Forest Biological Preservation, Forestry Department Peninsular Malaysia, Jalan Sultan Salahuddin, 50660 KUALA LUMPUR
[3] Genting Nature Adventures, Environmental Services Dept., Resorts World Genting Awana, 69000 GENTING HIGHLANDS, Pahang
[4] Zedtee Sdn. Bhd., Management Representative, Anap-Muput Forest Management Unit, Boulevard Commercial Centre, Miri-Pujut Road, 98008 MIRI, Sarawak, Malaysia
[5] Research Development and Division, Forest Department Sarawak, KM10, Jalan Datuk Amar Kalong Ningkan, 93250 KUCHING, Sarawak, Malaysia

Email: rusea@upm.edu.my

Keywords: illegal trade, conservation awareness, diversity protection

Orchidaceae, one of the largest families of flowering plants, is extensively traded worldwide for ornamental, medicinal, cosmetic, and food-related uses. This global market involves thousands of species sourced through both legal and illegal channels, employing practices that range from sustainable to highly destructive. In Malaysia, native orchids continue to be harvested indiscriminately from both protected and production forests to meet livelihood needs and demand from hobbyists and collectors. The first global assessment of the commercial orchid trade by Hinsley et al. (2017) revealed that many traded species are wild-collected illegally and unsustainably, often unrecorded in official trade statistics, yet demonstrably threatened in their natural habitats and in urgent need of conservation intervention. Illegal orchid collection in Malaysia dates back to the early 1970s, predating the establishment of comprehensive national legislation and international agreements. Evidence of this trade includes plant confiscations at airports, roadside sales, night and weekend markets, and, more recently, online platforms. The Covid-19 pandemic further intensified online trading, with collectors openly selling protected species despite national and international legal safeguards. These pressures, compounded by habitat loss from deforestation, dam construction, and agricultural expansion, pose a serious threat to Malaysia's rich orchid diversity. In response, conservation awareness initiatives have been strengthened to highlight threatened and legally protected species. All orchids are listed under CITES Appendices and are protected nationally through the National Policy on Biological Diversity, relevant federal acts, and state-level legislation. To prevent further population declines and species extinctions, the IUCN SSC Orchid Specialist Group has partnered with government agencies and industry stakeholders to conduct training, publish identification materials, and promote public awareness. Notably, collaborations with nature tourism operators and logging companies have supported habitat conservation and the establishment of ex situ nurseries for orchids rescued from forest clearance sites.

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POSTERS

No. 19

Genetic diversity of *Cypripedium arietinum* in the Northeastern United States

Advika Govindaraju[1], Aila Butler[1], Esther Donigian[1], Sofia Thurston[1], Elena Simon[1], Brynne Spaeth[1], Olivia Streit[2], Alyson Michael[3], Jesse Mast*[1]

[1] Department of Molecular Biology, New Hampshire Academy of Science, Lyme, NH, USA
[2] Department of Ecology, New Hampshire Academy of Science, Lyme, NH, USA
[3] Department of Chemistry, New Hampshire Academy of Science, Lyme, NH, USA

Email: nhacadsci@gmail.com

Keywords: *Cypripedium,* Microsatellite, PCR, Phylogenetics, Genetic Diversity

There are four species of *Cypripedium* orchids in the northeastern United States, three of which, *Cyp. parviflorum, Cyp. reginae*, and *Cyp. arietinum,* are threatened or critically imperilled in the region. There has been limited genetic analysis within the *Cypripedium* genus, and population-level genetic analysis of *Cypripedium* orchids has been hindered by a lack of genomic data. Genetic diversity is crucial for a population's overall health. Low genetic variation increases susceptibility to environmental pressures. Assessment of the genetic diversity of *Cyp. arietinum* populations using microsatellite regions of DNA will provide information for conservation efforts. Microsatellite regions are repeat-rich non-coding segments of DNA that accumulate mutations quickly. These mutations can be used to track population genetic diversity. Samples of DNA were purified from leaf-tips of *Cyp. arietinum* from three locations: Strafford, Vermont; Wayne, Maine; and Norridgewock, Maine, USA. Microsatellite regions of DNA from individual *Cyp. arietinum* plants was amplified via polymerase chain reaction (PCR). The microsatellite regions were bracketed by primers originally designed for use with *Cyp. calcleolous, Cyp. kentuckiense,* and *Cyp. japonicum*. The presence or absence of visible bands in gel electrophoresis indicated whether each microsatellite region was present in each plant. This presence/absence data was encoded as binary character state data for the inference of maximum likelihood phylogenetic trees. This analysis produced insignificant bootstrap values and demonstrated no segregation by ecotype. This implies a lack of genetic diversity among and between the three sampling sites. Future analysis will include sequence data to further discern relatedness within and among populations.

Conservation of Endangered Orchid Species in Nyugwe Forest in Rwanda by FAWE Students

Tonny Henry Kasinja[1]

[1] Science Department, FAWE School, Kigali, Rwanda

Email: tkasinja@gmail.com

Keywords: *Eulophia horsfallii, Polystachya spatella, Rhipidoglossum delepierreanum,* in-vitro conservation, endangered species, reintroduction

This study highlights a collaborative conservation initiative led by students from the Forum for African Women Educationalists (FAWE) School in Kigali, focusing on the endangered orchid species of Nyungwe Forest National Park. FAWE School Kigali is a girls' school focused on excellence in science. In partnership with the Writhlington School Orchid Project, FAWE students have been engaging in hands-on fieldwork and laboratory training to understand orchid ecology, propagation techniques, and sustainable conservation practices.

The project is centered on species such as *Polystachya spatella, Eulophia horsfallii, Rhipidoglossum delepierreanum* and *Ypsilopus liae*, which are endemic to Nyungwe and threatened by habitat loss and unsustainable harvesting. Students at FAWE School have been sowing seeds obtained by hand pollinating cultivated plants in the school propagation laboratory in-vitro. The germinated plants in vitro will be shared with other schools to share educational practice and learning around conservation, orchids and laboratory science. Outcomes of experimental reintroductions to be shared with schools across Rwanda linked to the science curriculum and shared globally.

FAWE students conducted surveys, learned seed germination protocols, and participated in awareness campaigns to connect local communities with the ecological value of orchids. Their work not only contributed to biodiversity preservation but also empowered young women in science, fostering leadership and environmental stewardship. This initiative demonstrates the power of youth-led conservation and the importance of integrating education with field-based research. The FAWE students' involvement has laid the groundwork for future orchid conservation programs and inspired a new generation of Rwandan scientists.

POSTERS

No. 21

The Orchid Conservation Alliance: conserving orchids by protecting habitat

Ronald S. Kaufmann, PhD*[1], Mary E. Gerritsen, PhD[1], Peter S. Tobias, PhD[1]

[1] Orchid Conservation Alliance, San Mateo, California, USA

Email: rkaufmann@gmail.com

Keywords: conservation, habitat, in situ

The Orchid Conservation Alliance (OCA) was established in 2005 with the goal of protecting land in orchid-rich regions of the world. Our model is to partner with conservation organizations based in countries where desirable habitat is located and help them purchase land and obtain permanent, legal conservation status. We raise funds through annual membership dues, direct appeals to our members, broad-based funding campaigns, new species naming opportunities, merchandise sales at orchid shows, and proceeds from our Orchids in the Wild Ecotours. We also partner with other organizations (e.g., the Rainforest Trust, Reserva: The Youth Land Trust, the University of Basel) to raise funds for land purchase and protection. As of May 2025, we have contributed nearly $874,000 to conserve approximately 5214 acres of orchid-rich habitat in reserves located in Ecuador, Colombia and Brazil. In Ecuador, these include Reserva Rio Anzu, Reserva Dracula, and the Phragmipedium fischeri Reserve, all managed by Fundación EcoMinga. In Colombia, we helped to acquire Reserva Yumartán (managed by Fundación Yumartán), La Esperanza and Los Magnolios Reserves (managed by Corporación SalvaMontes), and La Palma Reserve (managed by the Biodiversitatis Foundation). We also provided funds to expand Reserva Serra Bonita (managed by Instituto Uiraçu) in Brazil. In addition to land purchase, our donors have directed funding (over $200,000) through the OCA to support these reserves, helping to pay for guard salaries, small equipment, and construction of scientific research facilities, among other important efforts. Detailed information about the activities of the OCA can be found on our website: www.orchidconservationalliance.org.

Novel Biodegradable Pine derived Support Matrix For micropropagation of *Cymbidium finlaysonianum*

Saranjeet Kaur*[1], Shaina Thakur[1]

[1] Department of Biosciences, University Institute of Biotechnology, Chandigarh University, District Mohali, Punjab, India

Email: sarana_123@rediffmail.com

Keywords: gelling agent, biodegradable, culture medium

The ever-increasing exigence for orchid species, with therapeutic importance, calls for the development of applicable and sustainable in vitro cultivation techniques. Agar, which has long been extensively employed in plant tissue culture as a gelling agent, is obtained from marine algae, whose populations are being exploited to a larger extent to extract agar. Other substitutes of agar as a supporting matrix must be discovered to save the plant populations to keep ecosystem healthy.

In the current study, alternative natural materials Pinus needles is investigated for their ability to support in vitro regeneration and multiplication of *Cymbidium finlaysonianum* Lindl. protocorm like bodies in Murashige and Skoog (1962) medium. These pine needles (dry and waste) are plentiful, biodegradable, and costless. The advantage of using such substitutes to agar, in plant tissue culture, has been highlighted through this study. Present study would also support in making culture medium much cost-effective by replacing agar and would support long-term conservation of therapeutically as well as floriculturally important orchid species in vitro.

Future study would explore the efficacy of different substrates, in place of agar. This study would definitely be a step towards the conservation of other terrestrial and marine plant species thus conserves biodiversity.

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No. 23

A Novel Community-Based Restoration Program for *Cypripedium reginae* in Northeastern USA

Grace Lan[1], Nicholas Palifka[1], Ian Sun[1], Kevin Sun[1], Ella Zhang[1], Kastner Anderson[1], Olivia Streit[2], Peter Faletra*[1]

[1] Department of Plant Culture, New Hampshire Academy of Science, Lyme, NH, USA
[2] Department of Ecology, New Hampshire Academy of Science, Lyme, NH, USA

Email: nhacadsci@gmail.com

Keywords: *Cypripedium*, Conservation, Restoration, Community Science, Sanctuary

Cypripedium reginae is critically imperilled in New Hampshire, USA. A novel restoration program was initiated in May of 2025, establishing 30 small *Cyp. reginae* sanctuaries within 80 km of Lyme, NH. Two-year-old *Cyp. reginae* seedlings that had undergone our published method of asymbiotic seed culture and vernalization were planted into 30 softwood boxes, each containing ⅓ sphagnum moss, ⅓ compost, and ⅓ Pro-Mix™ mycorrhizae. Because *Cyp. reginae* naturally grow in clumps, two arrangements of seedlings were tested to determine the optimal planting strategy for survival: three rows or a central clump. All boxes contained ~10 seedlings of a similar size range. During a seminar, box recipients were instructed on how to care for their seedlings.

Data will be collected annually through an online portal over the next six years and include: survival rates, sun exposure, soil amendments, methods for winter mulching, and year of first flowering. As of this writing, data have been received from ~85 % of box recipients. Nearly all seedlings were planted in the recommended environments. Seedlings showed an average survival rate of 60 – 70 %, which was about 10 – 15 % less than the survival rate achieved when seedlings were planted under our complete supervision. These results are promising since most box recipients were inexperienced in terrestrial orchid horticulture. This restoration project will be expanded to more sanctuaries in the coming years.

Land use changes affected endemic orchid distribution in a biodiversity hotspot

Michele Lussu*[1], Alessandro Chiarucci[1]

[1] Biome Lab, Department of Biological, Geological and Environmental Sciences, Alma Mater Studiorum – University of Bologna, Bologna, Italy

Email: michele.lussu@unibo.it

Keywords: Endemic orchids, Mediterranean biodiversity, Land-use change, Conservation prioritization, Biogeography

Endemic species represent irreplaceable threads of evolutionary history, often restricted to narrow ecological niches and highly vulnerable to environmental change. Italy, as a biogeographic crossroads within the Mediterranean Basin, harbors one of the highest numbers of endemic orchid taxa in Europe, yet many of these species persist outside the current network of protected areas. In this study, we integrated georeferenced occurrences of 80 Italian endemic orchids with environmental and land-cover data to identify drivers of endemism and assess exposure to habitat change. Using generalized additive models and multi-variable regressions, we show that elevation, insularity, and climate heterogeneity are key predictors of endemism, with richness peaking in Sicily, Sardinia, the Tyrrhenian coast of Calabria, and the Gargano promontory.

Alarmingly, over 66 % of endemic species have ≥ 25 % of their occurrences in areas that have lost natural or semi-natural habitats since 1990 — most notably calcareous grasslands and coastal wetlands. Endemics were 46 % more likely than non-endemics to be associated with land-use change. We developed a spatial risk index by combining endemic richness with the proportion of land-cover change (1990 – 2018) in each 10 × 10 km grid cell, allowing the identification of conservation priority areas where biological uniqueness intersects with landscape transformation. Our findings highlight the urgency of expanding conservation efforts into lowland and island habitats, where traditional agri-environmental mosaics are rapidly disappearing. We propose a four-pronged strategy: micro-reserves in endemic hotspots, targeted habitat management, long-term monitoring programs scientifically designed and integration of orchid vulnerability into environment schemes. By intersecting biogeography, ecology, and land-use dynamics, our framework not only supports conservation planning for Mediterranean orchids but also offers a transferable model for biodiversity protection in other regions experiencing rapid environmental change.

POSTERS

No. 25

The Reichenbach Herbarium at the Natural History Museum Vienna

Thiago E. C. Meneguzzo[*1,2,3], Andreas Berger[1], Michael Polansky[1], Johannes Walter[1], Heimo Rainer[1]

[1] Natural History Museum Vienna, Department of Botany, Vienna, Austria
[2] Instituto de Pesquisas Jardim Botânico do Rio de Janeiro, Rio de Janeiro, Brazil
[3] Museu Nacional, Departamento de Botânica, Rio de Janeiro, Brazil

Email: botanica@meneguzzo.net.br

Keywords: botany, nomenclature, collections, history of science

The herbarium of Heinrich Gustav Reichenbach (1824 – 1889), curated at the Natural History Museum Vienna, represents one of the world's most significant resources for orchid taxonomy. As the pre-eminent authority on *Orchidaceae*, Reichenbach assembled an orchid collection of unparalleled scale, including 8,000 analytical drawings and 60,000 herbarium sheets, often containing several elements. In addition, Reichenbach also owned a large general herbarium with about 360,000 specimens.

A testamentary disposition stipulated that his collection of orchids should remain sealed for twenty-five years following his death, which substantially impeded the advancement of orchid systematics. Made accessible in May 1914, the herbarium is an indispensable resource for taxonomic revision and typification, as it contains the nomenclatural types for thousands of taxa Reichenbach described and original material of numerous other authors.

Nevertheless, Reichenbach's curation of his collection nowadays presents considerable challenges for data capture and cataloguing. These difficulties originate from Reichenbach's own method of storing loose, unmounted material in folders, and the subsequent mounting of its content on one or more sheets in the Vienna herbarium during the early 1900s. This process often resulted in multiple distinct specimens, fragments, illustrations, notes, etc. being arranged in a single sheet under one single accession number, or, conversely, a single specimen or its derivatives like sketches being distributed across several sheets, which severely complicates physical examination and typification.

To date, approximately 5,300 herbarium sheets have been digitised, with a focus on previously identified types and specimens requested for digitisation. Past projects have also targeted the digitisation of specific subsets, such as subcollections from Costa Rica, and a current project is focusing on the digitisation of all Brazilian orchid specimens. In addition, a comprehensive catalogue of all associated names has been compiled, serving as a basis for the eventual future digitization of the entire phanerogamic herbarium.

Comparative physiological responses of *Habenaria lindleyana* Steude and *Eulophia exigua* M. W. Chase, Kumar & Schuit. under field conditions

Nooduan Muangsan*[1], **Chuthapond Musimun**[1], Santi Watthana[1]

[1] School of Biology, Institute of Science, Suranaree University of Technology, Muang, Nakhon Ratchasima, 30000, Thailand

Email: nooduan@g.sut.ac.th

Keywords: *Eulophia, Habenaria,* photosynthesis, water efficiency

Habenaria lindleyana Steude. and *Eulophia exigua* M.W.Chase, Kumar & Schuit. are terrestrial orchids found in the same forest habitat but exhibit distinct morphological and physiological traits. This study compared their leaf morphology and photosynthetic responses, including (1) daily diurnal patterns, (2) CO_2 response, and (3) light response, using the LI-6800 portable photosynthesis system. *H. lindleyana* had significantly thicker leaves and larger stomata than *E. exigua*. It exhibited higher photosynthetic assimilation (A), peaking at 10:00 (0.44 ± 0.14 µmol m^{-2} s^{-1}), while *E. exigua* peaked at 14:00 (0.30 ± 0.10 µmol m^{-2} s^{-1}). Corresponding peak transpiration (E) and stomatal conductance (Gsw) values were also higher in *H. lindleyana* at 10:00. Incident light (Qin) and water use efficiency (A/E) increased until 14:00 in both species. CO_2 response analysis showed increases in A, Ci, and A/E with elevated CO_2. Under increasing light, A plateaued between 25 – 1,400 µmol m^{-2} s^{-1}, while E and Gsw increased, and Ci decreased. A/E peaked at 1,000 µmol m^{-2} s^{-1}. This study demonstrates that *H. lindleyana* performs better under low to moderate morning light, while *E. exigua* is more responsive in high-light afternoon conditions, suggesting differing adaptive strategies to the same environment. Additionally, this information would inform cultivation practices by identifying optimal growth conditions, thereby supporting both ex situ conservation and sustainable orchid horticulture.

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No. 27

Genetic resources of bee orchid in Poland in the light of its increasing range

Aleksandra M. Naczk*[1], Marta Kolanowska[2], Marcin Wilhelm[3], Anna Kalinka[4], Magdalena Achrem[4], Anna Jakubska-Busse[5]

[1] Department of Plant Taxonomy and Nature Conservation, Faculty of Biology, University of Gdańsk, Wita Stwosza 59, Gdańsk 80-308, Poland
[2] Department of Geobatany and Plant Ecology, Faculty of Biology and Environmental Protection, University of Łódź, Banacha 12/16, Łódź 90-237, Poland
[3] Institute od Marine & Environmental Sciences, University of Szczecin, Wąska 13, Szczecin 71-415, Poland
[4] Institute of Biology, University of Szczecin, Wąska 13, Szczecin 71-415, Poland
[5] Department of Botany, Faculty of Biological Sciences, University of Wrocław, 50-328 Wrocław, Poland

Email: aleksandra.naczk@ug.edu.pl

Keywords: autogamy, bioclimatic variables, climate change, genetic diversity, *Ophrys apifera*

Ophrys apifera, commonly known as the bee orchid, is a species that has expanded its range nortwards in recent decades. This study focuses on its appearance in Poland, analysing possible causes for this expansion, including climate change, autogamy capacity and genetic diversity of new populations. Genetic analyses using nuclear microsatellites and plastid DNA markers revealed low overall variation in Polish populations and in neighbouring countries (Czech Republic, Germany), likely due to the founder effect and bottleneck, as well as the autogamous reproductive strategy of this species. STRUCTURE analysis identified three genetic clusters, with western populations forming a distinct, homogenous group, while southern populations exhibited a higher degree of genetic admixture. The occurrence and proportion of individual haplotypes and alleles in the studied populations of *O. apifera* suggest long-distance dispersal, and it can be hypothesized that genetic variation has been reduced by the bottleneck effect associated with the colonization of new areas towards the north. The small, light seeds of orchids can be carried long distances by the wind, facilitating the natural spread of this species. The accompanying rise in average temperatures and climate change have a direct impact on the geographical distribution of *O. apifera,* enabling the species to successfully colonize new areas.

ORQUILAB: Discover how biotechnology is revolutionizing the study, preservation, and propagation of orchids

Jonathan Ortiz Giraldo[1,2]

[1] ORQUILAB, San Cristóbal, Venezuela
[2] Fundacite San Cristóbal, Venezuela

Email: Jonathanog1506@gmail.com

Keywords: ORQUILAB, orchid conservation, plant biotechnology, *Epidendrum tachirense,* environmental stewardship

ORQUILAB stands as a pioneering community initiative in San Cristóbal, Venezuela, focused on safeguarding the botanical heritage of Táchira state. This region represents a biodiversity enclave harboring over 418 orchid species, including critical endemics such as *Epidendrum tachirense*. The project operates as an emerging plant biotechnology laboratory, integrating digital innovation to consolidate a replicable conservation model. Its central axis is the in vitro propagation unit, which prioritizes the micropropagation of native orchids through asymbiotic germination, thus mitigating extractive pressure on wild populations. In parallel, the ORQUILAB KIDS program drives inclusive scientific literacy aimed at rural and neurodiverse students using sensory tools and augmented reality. At the technological forefront, the initiative projects the implementation of "digital twins" to model phenological responses to climate change, as well as blockchain technology for traceability. Strategically, ORQUILAB is pursuing the establishment of a one-hectare reserve and specialized laboratory in San Cristóbal, positioning itself as an unprecedented environmental model supporting national parks. Through taxonomic systematization and international cooperation, the project transforms local biodiversity into a catalyst for social equity and environmental stewardship.

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Survival of *Cypripedium reginae* after Transplantation from Sterile Culture to Soil

Nicholas Palifka[1], Grace Lan[1], Ian Sun[1], Kevin Sun[1], Kastner Anderson[1], Ella Zhang[1], Nysa Sharma[1], Olivia Streit[2], Peter Faletra*[1]

[1] Department of Plant Culture, New Hampshire Academy of Science, Lyme, NH, USA
[2] Department of Ecology, New Hampshire Academy of Science, Lyme, NH, USA

Email: nhacadsci@gmail.com

Keywords: *Cypripedium,* Conservation, Transplantation, Vernalized, Outplanting

Cypripedium reginae is endangered in much of northeastern North America, and is classified as critically endangered in New Hampshire, USA. A three-year investigation was performed to maximize survival of *Cyp. reginae* seedlings when transplanted from asymbiotic culture to soil. Both seedling planting arrangement and month of transplantation were tested. Two-year-old *Cyp. reginae* seedlings were raised and vernalized using our published method, and transplanted to softwood boxes. Each box contained a mixture of equal parts dried sphagnum moss, compost, and Pro-Mix™ mycorrhizae. Boxes were placed in the ground in Warren, NH, under an average canopy cover of ~31%. Soil was kept damp from May through September. In October, the soil in each box was covered with 1 – 2 cm of the soil mixture followed by ~8 cm of straw mulch for winter preparation. Six boxes were deployed at various times of the year beginning in February 2023. Twenty-nine other boxes containing a total of ~610 seedlings were deployed in May 2025. Results suggest that frost-heaving caused substantial death in boxes lacking leaf litter from the previous autumn. Seedlings planted in May and June showed ~80 % survival, while others had less than 30 % survival. Arrangement in clumps versus rows appeared to improve growth in summer 2025, but survival will not be confirmed until seedlings break dormancy in spring 2026. Approximately 3,100 seedlings are available for transplantation to soil in 2026. Further research will determine optimal winter preparation methods to prevent seedling desiccation from frost heaving.

Symbiotic and asymbiotic germination of an insular orchid from Alcatrazes (Brazil) at different temperatures

Matheus Pena-Passos*[1], Matheus Deus da Costa Silva[1], Fabio Pinheiro[1], Juliana Lischka Sampaio Mayer[1]

[1] Department of Plant Biology, Universidade Estadual de Campinas, Campinas, Brazil

Email: matheusp.pena@gmail.com

Keywords: *Cattleya guttata,* orchid mycorrhizal fungus, orchid seeds, protocorm development

Cattleya guttata var. *compacta* Hoehne & Schltr. is an orchid species native to Alcatrazes (São Paulo, Brazil), a biodiverse archipelago historically affected by navy exercises. Aiming to evaluate symbiotic and asymbiotic seed germination at different temperatures, seeds were incubated respectively in oatmeal agar (OMA) with *Tulasnella* sp. *deliquescens* complex (isolated from *Cattleya purpurata*) and in ½ Murashige-Skoog medium (adding 30 g/L sucrose). Control groups were established by incubating seeds in OMA in the absence of the mycorrhizal fungus. Petri dishes were placed in the dark, at 25, 30, and 35 °C (groups S25, S30, and S35 for symbiosis; A25, A30, and A35 for asymbiosis). We counted germination stages to calculate protocorm development index (DI) — as a weighted arithmetic mean — and germination index (GI) – as a percentage of stages after testa rupture — both indices considering a 1 cm² area. Seeds and protocorms were collected and fixed for analysis by light and scanning electron microscopy. 49.3 % of the seeds were viable (1%-tetrazolium-chloride test), and the embryo is absent in 45.5 % of the total analysed seeds. After three months of germination, A25 has reached the most advanced developmental stages, with DI = 1.72 and GI = 44.6 %, followed by A30 and S25, respectively. Control seeds developed only until the testa rupture. Morphological analyses showed normality in initial protocorm development until expressive elongation of apical regions was observed due to etiolation. Enlarged embryos in symbiotic treatments presented fungal interaction, starting with colonisation of the suspensor.

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Phylogeny of *Miltonia (Orchidaceae)* using molecular markers: preliminary results

André Pinto Lima[1]

[1] Departamento de Ciências Biológicas, Universidade Estadual de Feira de Santana, Programa de Pós-Graduação em Botânica, Feira de Santana, Bahia, Brazil

Email: andre8fsa@hotmail.com

Keywords: Phylogenetic diversity, Brazilian orchids, Taxonomy

The genus *Miltonia* contains 11 species in its current circumscription. Few species have been included in molecular studies involving the genus, and for this reason several taxonomic issues are pending resolution, so this work aims to clarify the relationships within the genus *Miltonia* for taxonomic purposes. To try to resolve the phylogenetic relationships, the methods of Maximum Parsimony and Bayesian Inference analyses were used. The sampling of this genus was expanded in this study with the use of new sequences from ITS (nuclear) and plastid regions (trnL-F and rpl32-trnL), for all species of the genus. The results confirmed the monophyly of the genus, with *M. phymatochila* as a sister species of all other species with 1.0 PP in the Bayesian analysis. The genus *Anneliesia* had all its species in alternate positions with *Miltonia* species, making its recognition unfeasible. The comparison between the obtained topology and some selected morphological characters did not allow the indication of consistent synapomorphies for the clades, which was further complicated by the unresolved position of *M. flavescens*. More regions of DNA will be needed to resolve the position of this species, and a better understanding of phylogenetic relationships in relation to species morphology.

National action plan in favour of the threatened *Epipactis fibri* in the French Rhône valley

Adeline Aird*[1], **Daniel Prat**[2], Nicolas Bianchin[1]

[1] Conservatoire Botanique National du Massif Central, Antenne Massif central rhônalpin, Maison du Parc, Moulin de Virieu, 2 rue Benaÿ, F-42410 Pélussin, France
[2] Université Claude Bernard Lyon 1, LEHNA UMR 5023, CNRS, ENTPE, F-69622, Villeurbanne, France

Email: adeline.aird@cbnmc.fr

Keywords: *Epipactis fibri*, protection, site restoration

Epipactis fibri has been described in 1995 in France as an endemic species growing along 200 km of the Rhône valley. Its genetic proximity to *E. albensis* now allows to be considered as *E. albensis* var. *fibri* despite the distance of several hundreds of kilometers to the nearest populations of *E. albensis* and related taxa. Since its discovery, it has been recorded in 47 stations but has already disappeared from a fourth of them. It grows mainly under poplars on loamy soils and with a limited herbaceous competition. It has been classified as an endangered species in the French RedList of vascular plants. In 2025, a reduced number of plants were recorded in a limited number of stations, probably partly due to the specific climatic conditions of the year. This situation incites to protect its habitat. The vegetative propagation by rhizomes and the autogamous reproduction worsen the poor population dynamics by reducing the genetic diversity of the taxon. In spite of phenological and morphological variation the amount of gene diversity could remain very low; it will be investigated using RAD-Seq. Furthermore, *E. fibri* is associated with mycorrhizal symbionts, and is dependent on forest continuity and maturity. The National action plan (NAP) focuses on the French riparian forests of the Rhône river and is expected to maintain suitable habitats and preserve *Epipactis fibri* populations thanks to conservation and restoration measures (implementation of protected areas, mapping, communication, popularization, restoration of at least 200 hectares of forests and monitoring protocols).

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No. 33

Taxonomic revision of the genus *Epipactis*, in light of the phylogeny

Daniel Prat[1]

[1] Université Claude Bernard Lyon 1, LEHNA UMR 5023, CNRS, ENTPE, F-69622, Villeurbanne, France

Email: daniel.prat@univ-lyon1.fr

Keywords: *Epipactis,* phylogeny, taxonomy

Various orchid genera, including *Epipactis*, consists of taxa mostly described at the species level; species being sometimes difficult to distinguish genetically. Two nuclear regions (ITS, XdH) and two chloroplast fragments (trn L-F, matK) were investigated. All available sequences of ITS were included in the present study. Most species exhibited a small amount of genetic variation; some having, like *E. palustris*, a unique sequence along hundreds of kilometres. *E. helleborine*, despite its wide natural range, exhibited a single ITS sequence in the analysed samples from Europe. Moreover, several taxa shared this unique ITS sequence. If ITS sequences are clearly not sufficient to draw the evolutionary patterns of *Epipactis* they can provide insights on it. Two of the 41 alleles recorded for ITS1-5.8S-ITS2 sequences in 45 taxa of *Epipactis*, represented 60 % of the analysed samples. Clear heterozygous sites were noticed for ITS sequences in *E. atrorubens*. A predominant DNA base recorded across all samples of a species at constant positions revealed a lack of full homogenization of ITS sequences by converted evolution. It was reported for *E. bugacensis, E. placentina* and *E. rhodanensis*, indicating a past hybridization event. Several species related to E. albensis with a quite identical DNA sequences should be considered as varieties of it. The original populations of *E. tremolsii* from Catalonia in Spain did not belong to the *E. helleborine* lineage and could not thus be considered as a subspecies of it. In *Epipactis*, several sections, not supported by the phylogeny should be removed.

Odontoglossum crispum (Oncidium alexandrae): a tale of love, loss and scientific discovery

Philip Seaton[1]

[1] Retired biology lecturer and project manager of Orchid Seeds Stores for Sustainable Use (OSSSU), RBG Kew, UK.

Email: philipseaton@gmail.com

Keywords: *Odontoglossum crispum (Oncidium alexandrae),* habitat, collection, seed, cultivation

This is the story of *Odontoglossum crispum (Oncidium alexandrae)*, from the 19th century to the present day. It is a love story because *Odontoglossum crispum* was considered by many to be the most beautiful of all orchid species. It was collected by the hundreds of thousands from the cloud forests of its native Colombia and exported to Britain, the rest of Europe and the USA. Vast numbers were lost in transit. When they arrived, many perished due to a lack of understanding of its needs in cultivation. Only the 'best' forms were grown, and the remainder discarded. Today, much of its native habitat has either disappeared or been despoiled due to human actions. It was one of the first species to be grown commercially from seed, most notably in the UK by Charlesworth & Co., following the scientific discovery by Noël Bernard that orchid seeds required the participation of a suitable fungus to germinate under natural conditions. Everything changed when Lewis Knudson demonstrated in 1922 that many orchids could be grown from seed without the participation of a fungus, and the plants seen today are grown asymbiotically.

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No. 35

Saving Orchids for future generations

Philip Seaton*[1], Lawrence Zettler[2]

[1] Retired biology lecturer and project manager of Orchid Seeds Stores for Sustainable Use (OSSSU), RBG Kew, UK.
[2] Hitchcock Professor of Biology, Illinois College, Jacksonville, Illinois, USA

Email: philipseaton@gmail.com

Keywords: integrated approach, living collections, reintroduction, education, communities

Whilst we recognise the importance of the retention of orchid populations in intact habitats, both amateur and professional orchidists have a key role to play in the long-term conservation of many orchid species. Living collections can contain rare and endangered species (and hybrids) and are an invaluable resource, providing material for propagation by division and from seed. We emphasise the importance of education and the participation of people of all ages and backgrounds, where professional orchidists can share their skills with the wider orchid community. We highlight inspirational projects involving local communities in Australia, Chile, Colombia, Singapore and Europe where orchids have been successfully reintroduced into suitable habitats.

Optimization of Long-term Asymbiotic Culture of *Cypripedium reginae*

Kevin Sun[1], Ian Sun[1], Nicholas Palifka[1], Grace Lan[1], Kastner Anderson[1], Ella Zhang[1], Ethan Krom[2], Nysa Sharma[1], Maya Turbeville[1], Emelia Ajavon[1], Martina Vale Dwyer[1], Anya Rendahl[2], Alyson Michael[2], Peter Faletra*[1]

[1] Department of Plant Culture, New Hampshire Academy of Science, Lyme, NH, USA
[2] Department of Chemistry, New Hampshire Academy of Science, Lyme, NH, USA

Email: nhacadsci@gmail.com

Keywords: *Cypripedium*, Asymbiotic, Propagation, Activated Charcoal

The *Cypripedium* genus consists of 50 – 60 species; 12 species are found in temperate regions of North America. Three species: *Cyp. reginae, Cyp. parviflorum,* and *Cyp. arietinum,* are endangered in much of northeastern North America. Here, we report the results of a multi-year project that raised ~3,100 *Cyp. reginae* seedlings for a novel restoration program. This investigation extends our published method of efficient asymbiotic seed culture of *Cyp. reginae* by improving the health and survival of seedlings in long-term culture. Seeds were inoculated into our standard asymbiotic culture media consisting of ¼ strength Murashige and Skoog (M6899) basal salts, sucrose, agar, and coconut water. Approximately four months after seed inoculation, seedlings were transferred into new media, with several subsequent transfers over the next 18 – 24 months prior to vernalization. To prevent seedling deterioration during this period, two approaches were tested on healthy seedlings: 1) standard media was supplemented with silver and gold nanoparticles at a concentration of 150 mg/L, 2) media was supplemented with activated charcoal at concentrations of 0.25, 0.50, and 1.00 g/L. Seedlings were monitored regularly and have shown promising results at all concentrations of activated charcoal, and for silver and gold nanoparticles.

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Wild orchids at Piovera Castle (Italy): a conservation and educational project of ALAO

Simone Tumiati[*1,2], Francesca Castiglione[2], Manuel Riva[2], Johnny Allegra[2]

[1] Department of Earth Sciences, University of Milan, Milan, Italy
[2] Lombard Association of Orchid Enthusiasts (ALAO), Lainate, Italy

Email: simone.tumiati@unimi.it

Keywords: environmental education, orchid guardianship, ex situ propagation

Wild orchids represent one of the botanical groups most sensitive to habitat alteration, climate change, and land-use intensification. Italy hosts nearly 230 native orchid species, a richness largely driven by its geomorphological and bioclimatic diversity. However, many of these species are undergoing rapid decline, particularly in dry grasslands and wetland environments, which are extremely vulnerable to the abandonment of traditional land management, urbanisation, and hydrological fluctuations. In this context, the "Wild Orchids at Piovera Castle" project was launched in 2024 by the Lombard Association of Orchid Enthusiasts (ALAO), in collaboration with Piovera Castle (Italy), with the aim of restoring a selected area of the castle grounds and raising public awareness — especially among young people and children — about the conservation of threatened species.

All orchids introduced into the project area derive from in vitro propagation, ensuring full compliance with conservation regulations and avoiding any removal of plants from natural habitats. *Orchis purpurea*, already present on site, was complemented by newly planted individuals of *Anacamptis morio, Ophrys sphegodes, Ophrys apifera* and *Anacamptis coriophora* subsp. *fragrans*. The project uses orchids as effective bioindicators, highlighting their dependence on specific habitats, mycorrhizal fungi, and highly specialised pollination systems.

The Piovera initiative is part of a broader framework of collaboration and shared conservation goals active in regions such as Piedmont, Liguria and Lombardy. Among these partnerships, ALAO collaborates with the LIFEorchids project — an Italian initiative co-funded by the European Union's LIFE Programme — and in 2022 received from it the formal designation as an "Orchid Guardian", in recognition of its commitment to protecting wild orchids typical of high-biodiversity grasslands. The conservation and educational project developed at Piovera Castle demonstrates how small-scale interventions and targeted communication can significantly contribute to safeguarding the most vulnerable orchids, while promoting public engagement and greater environmental responsibility.

Piovera Castle is also home to the "Piovera Orchidea" exhibition, now in its tenth edition, which serves as ALAO's official spring orchid show. In the last years, the exhibition has adopted the D.O.G. judging system, helping to enhance the quality evaluation of the collections on display and to disseminate orchid culture to a wider audience.

ALAO and the liberty greenhouses of Villa Litta (Italy): conservation, heritage, and orchid education in a historic botanical setting

Simone Tumiati[*1,2], Francesca Castiglione[2], Manuel Riva[2], Johnny Allegra[2]

[1] Department of Earth Sciences, University of Milan, Milan, Italy
[2] Lombard Association of Orchid Enthusiasts (ALAO), Lainate, Italy

Email: simone.tumiati@unimi.it

Keywords: community engagement, orchid associations, orchid collections

Founded on 3 January 1981 by Giorgio Zanzani, Luciano Ferrato, Roderich Karl Warnings, Benito Ferdinando "Nando" Natali and Antonio Sorgato, the Lombard Association of Orchid Enthusiasts (ALAO) celebrates its 45th anniversary in 2026. Over four decades, the association has evolved through volunteer commitment, a strong orchid-growing culture, and continuous educational outreach. Since 1986, ALAO has also published Orchis, a members-only magazine that provides four issues per year plus a special monograph dedicated to a single species. The entire archive is available for online consultation to registered members.

A major milestone in the association's recent history was reached on 23 July 2021, when ALAO signed an agreement with the Municipality of Lainate (Milan) for the care and enhancement of the historic Liberty Greenhouses of Villa Visconti Borromeo Litta. These late-19th-century structures, restored between 2015 and 2016, have a long tradition of orchid cultivation. They now host ALAO's living collection following the transfer, in August 2021, of the historic "Approdo" collection from the estate of Nando Natali — former president, founding member, and pioneer of orchid culture in northern Italy. This collection of approximately 3,000 specimens includes *Bulbophyllum, Paphiopedilum, Phragmipedium,* and historically significant *Cattleya* hybrids.

Today the Liberty Greenhouses serve as an active center for orchid conservation, education, exhibitions, and public engagement. This poster presents ALAO's development from its 1981 foundation to its renewed role in 2026, highlighting how historical legacy, community participation, and institutional collaboration converge to support orchid biodiversity and botanical culture in Italy. For further information, please visit www.alao.it or contact info@alao.it.

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No. 39

Genetic analysis of *Cypripedium reginae* using microsatellite markers

Pooja Udayakumar[1], Audrey Boland[1], David Liu[1], Elizabeth Anderson[1], Liam White[1], Laura Schaner[1], Brynne Spaeth[1], Olivia Streit[2], Alyson Michael[3], Jesse Mast*[1]

[1] Department of Molecular Biology, New Hampshire Academy of Science, Lyme, NH, USA
[2] Department of Ecology, New Hampshire Academy of Science, Lyme, NH, USA
[3] Department of Chemistry, New Hampshire Academy of Science, Lyme, NH, USA

Email: nhacadsci@gmail.com

Keywords: *Cypripedium*, Microsatellite, PCR, Phylogenetics, Genetic Diversity

In the northeastern United States, there are four native species of *Cypripedium* orchid: *Cyp. reginae, Cyp. acaule, Cyp. parviflorum,* and *Cyp. arietinum*. *Cypripedium* orchids are indicator species. The health of their populations reflects the overall well-being of the surrounding ecosystems. Assessment of the genetic diversity of these orchids provides insights into the overall health of the population and can inform conservation strategies. Microsatellites, non-coding regions of DNA with short, repeating sequences that easily accumulate mutations, were used for this analysis because they are less well conserved than coding regions. Samples of DNA were purified from leaf-tips of *Cyp. reginae* collected from three locations within 100 km of each other in Vermont, USA: Topsham Forest, Strafford Town Forest, and Eshqua Bog. Primers developed for other species within the *Cypripedium* genus used to bracket segments of DNA during the amplification of those sections using polymerase chain reaction (PCR). Gel electrophoresis was used to visually determine whether a given microsatellite was amplified in each plant. This presence/absence data was used to develop a binary character state matrix for the calculation of a maximum likelihood phylogenetic tree. The calculated tree did not yield significant bootstrap values, and the plants did not separate by location. Taken together, these results imply limited genetic diversity in *Cyp. reginae*, both within and among the sampling sites. In the future, more refined phylogenies will be inferred using the DNA sequences of the amplified microsatellite regions.

Anticontaminant Effect of *Cinnamomum verum* in the in vitro Culture of *Laelia anceps'* embryos

Margarita Velásquez Flores*[1], Dámaris López Velásquez[2]

[1] Faculty of Chemistry, Universidad Veracruzana, Orizaba, Mexico
[2] Universidad Autónoma de Guadalajara, Guadalajara, Mexico

Email: mvelasquez@uv.mx

Keywords: micropropagation, in vitro cultures, endangered plants, *Laelia anceps, Cinnamomum verum*

The *Orchidaceae* family is one of the most widespread and vulnerable in the world, mainly due to the destruction of its habitat and the plundering to which it has been subjected. In Mexico, 181 species of orchids are considered to be in some risk category (NOM-059). This study aims to contribute to the conservation of a Mexican orchid endemic to the Gulf of Mexico (Orizaba Valley, Veracruz) by gener-ating knowledge by measuring the antipollution effect of *Cinnamomum verum* in in vitro culture of *Laelia anceps'* embryos. A master formula was prepared using the salts of Murashige & Skoog (MS) 1962. Plant growth regulators (PGRs) were added: a combination of adenine (cytokinin) 0.058 g/L and naphthaleneacetic acid (auxin) 0.035 g/L. Likewise, activated carbon 0.51 g/L, coconut water 110 mL/L, sucrose 30 g/L and enriched with 1 g/L of *Cinnamomum verum* powder were used to determine the inhibitory effect of contamination on 43-day-old embryos in their early stages. This contamination was measured using a Semantic Differential (SD) scale, a measurement instrument proposed by Osgood et al. (1957) in which observations are transformed into whole numbers (in order to express contamination through a system of crosses). Cinnamomun verum was found to be an alternative for the inhibition of contaminants in the in vitro culture of *Laelia anceps' (Orchidaceae)* embryos.

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No. 41

Wild *Vanilla* and pollinators at risk of spatial mismatch in a changing climate

Charlotte Watteyn*[1,2,3,4], Tobias Fremout[5], **Adam P. Karremans**[2], Koenraad Van Meerbeek[1,4], Steven B. Janssens[3,4,6], Sander de Backer[3], Monika Lipińska[2,7,8], Bart Muys[1,4]

[1] Department of Earth and Environmental Sciences, KU Leuven, Leuven, Belgium
[2] Lankester Botanic Garden, University of Costa Rica, Cartago, Costa Rica.
[3] Meise Botanic Garden, Meise, Belgium
[4] KU Leuven Plant Institute, KU Leuven, Leuven, Belgium
[5] Bioversity International, Lima, Peru
[6] Department of Biology, KU Leuven, Leuven, Belgium
[7] Department of Plant Taxonomy and Nature Conservation, University of Gdańsk, Gdańsk, Poland
[8] Research Institute on Natural Sciences and Technology, Rafael Landívar University, Guatemala

Email: charlotte.watteyn@kuleuven.be

Keywords: climate change, *Euglossini*, ex situ conservation, in situ conservation, *Orchidaceae*, plant-pollinator decoupling, species distribution models, *Vanilla* crop wild relatives

Climate change is expected to drive substantial shifts in species' geographic ranges, potentially leading to a spatial mismatch between interacting species, such as plants and their pollinators. The wild relatives of the cash crop vanilla hold valuable genetic resources for use in crop breeding, but their persistence is dependent on the presence of their pollinators, and at risk due to several anthropogenic pressures. To contribute to the safeguarding of this wild *Vanilla* gene pool, our study aimed to assess the effects of climate change on *Vanilla* species and their pollinators, and to identify spatial mismatches between both. Focusing on the Neotropics, we used MaxEnt species distribution models (SDMs) to predict potential changes in the range overlap between *Vanilla* and their pollinators by 2050 under the SSP2-4.5 and SSP3-7.0 climate change scenarios. We generated SDMs for 11 *Vanilla* species, of which data on pollinator identity was available for four animal-pollinated species. Our models showed varying results among *Vanilla* species, with some predicted to undergo net contractions (–1% to –53%) and others predicted to experience net expansions (+11% to +140%), while the area of suitable habitat for all pollinators was predicted to decline (–7% to –71%). Moreover, our models predicted a decline in range overlap between *Vanilla* species and their pollinators under climate change, and this mismatch was more pronounced for species reliant on a single known pollinator (–60% to –90%). Based on these findings, we propose priority areas for in situ and ex situ conservation to safeguard Vanilla's genetic resources.

Monitoring of *Spiranthes sinensis* populations in the Russian Far East

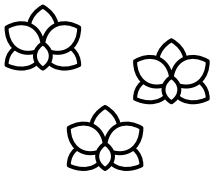
Ekaterina Zheleznaya[1]

[1] Institute of Environmental Engineering, Patrice Lumumba Peoples' Friendship University of Russia, Moscow, Russia

Email: catherinezheleznaya@gmail.com

Keywords: *Spiranthes sinensis*, populations, Russian Far East, anthropogenic disturbance, zoogenic disturbance

Spiranthes sinensis has a Eurasian-Australian range. In Russia, it is protected and is at the northern limit of its range. It prefers meadow habitats with little anthropogenic or zoogenic disturbance. I studied *Spiranthes sinensis* populations from 2018 to 2023 in the Sikhote-Alin Nature Reserve in Primorsky Krai; in 2025 in the Kurilsky Nature Reserve and Malye Kurily Reserve in Sakhalin region. In Sikhote-Alin Nature Reserve *Spiranthes sinensis* grows in dry and wet meadows, transformed with wild boar and sika deer activity, as well as on an old, overgrown road. *Spiranthes sinensis* habitats in Kurilsky Nature Reserve and Malye Kurily Reserve are confined to old, overgrown roads or former military fortifications running through meadows and thickets of shrubby Sasa kurilensis. *Spiranthes sinensis* plants are also present in urbanised settings, such as the central square of the town of Yuzhno-Kurilsk on Kunashir Island. The highest ecological density of individuals, as well as a significant number of young plants, were observed on a wet meadow on Cape Pervenets in Sikhote-Alin Nature Reserve. Generative plants clearly predominated in other habitats. Both during extremely wet and extremely dry periods of the growing season the difference in the ontogenetic structure of *Spiranthes sinensis* populations in wet and dry meadows is minor. Particularly numerous populations of this species were found on Shikotan Island in Malye Kurily Reserve. The population status is stable and does not raise concerns.



SHOW & SALES

EXHIBITORS & VENDORS

We're thrilled to welcome our **international exhibitors and vendors** to the World Orchid Conference 2026 in Dresden! From renowned **orchid nurseries** and **botanical institutions** to passionate **independent growers and artisans,** this year's marketplace will showcase an extraordinary diversity of orchid species, hybrids, and botanical treasures.

Thanks to the expanded exhibition space in 2026, we're able to host **more vendors than ever** before — including many joining us for the first time. Whether you are searching for rare specimens, expert advice, or simply wish to explore the vibrant world of orchid commerce, this is the perfect opportunity to connect with leading voices in the community.

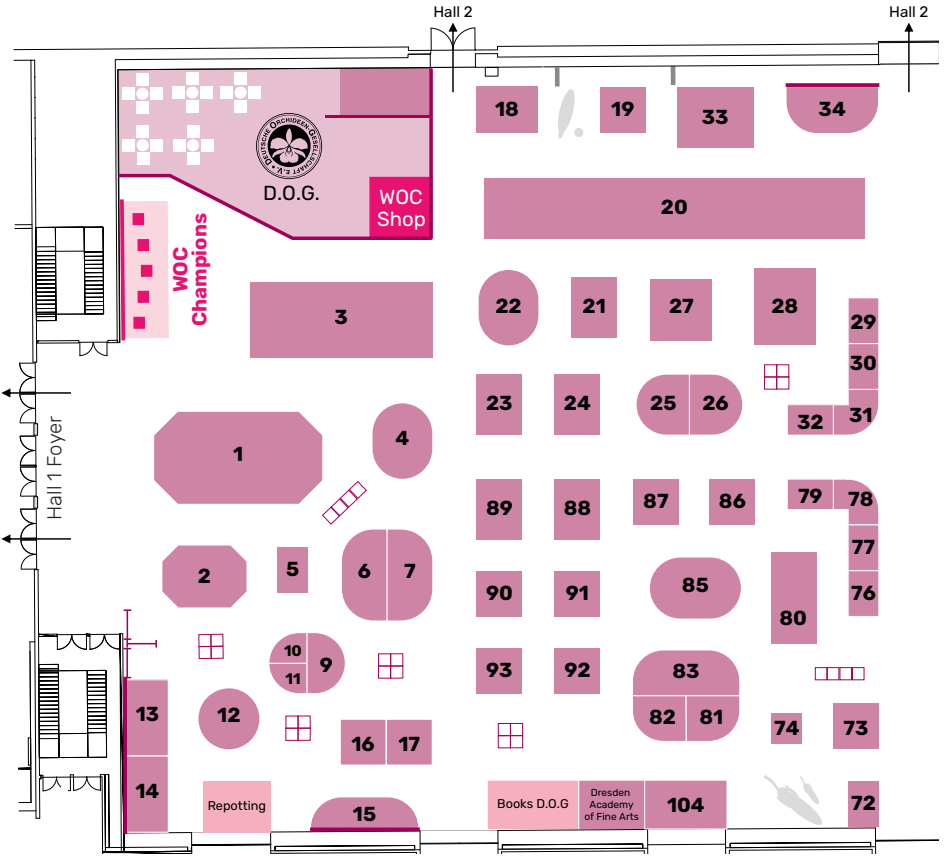
The exhibition is further enriched by a diverse range of artistic interpretations of orchids — from vibrant **paintings** and delicate **origami** to captivating **sculptures** — offering registrants a unique glimpse into the creativity and passion inspired by these remarkable plants.

SHOW & SALES

EXHIBITION HALL 1

Subject to change, please check the latest version online or on-site

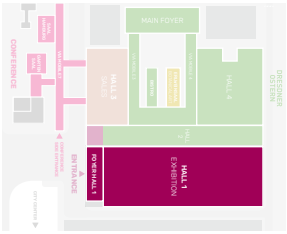
1 Thailändische Orchideen Gesellschaft
2 TOGA
3 VDOB
4 Japan WOC Organizing Committee
5 Dr. Millner
6 Cramer Gärtnerei und Orchideenzucht
7 Orchideen Lucke
9 Mukoyama Orchids & Orchids
10 Bromvari S.L. PlantaBrutt
11 Paph Paradies Orchideen
12 Associazione Italiana di Orchidologia AIO
13 Schweizerische Orchideen Gesellschaft SGO
14 Insel Mainau
15 Orchideenwelt Raffeiner
16 Ching Hua Orchids
17 NT Orchid Nursery
18 Deutsche Kakteengesellschaft D.K.G. / Dresden
19 Orquideas del Valle
20 Exotic Plant Company B.V.
21 Danish Orchid Society
22 Popow-Orchids
23 Varesina Orchideen
24 Green Jaws
25 Gartenwerkstatt Schreiner
26 TropicalExotique Co., Ltd.
27 Herrenhäuser Gärten, Berggarten
28 Zoologisch-Botanischer Garten Wilhelma
29 Tokyo Orchid Nursery
30 Motes Orchids
31 Jumbo Orchids
32 MundiFlora Farm
33 Masožravé Rostliny
34 Asendorfer Orchideenzucht
35 Deutsche Bromelien-Gesellschaft
36 Gartenbau Steffen Poike
37 Orchideen Frenzel
38 Orquideas Katia Colombia
39 Kakteen-PH-Flora
40 Magyar Orchidea Társaság
41 Floralia Brasil
42 Orchidarium of Estepona, ACAO & GECOR
43 Zoltán Udvarhelyi



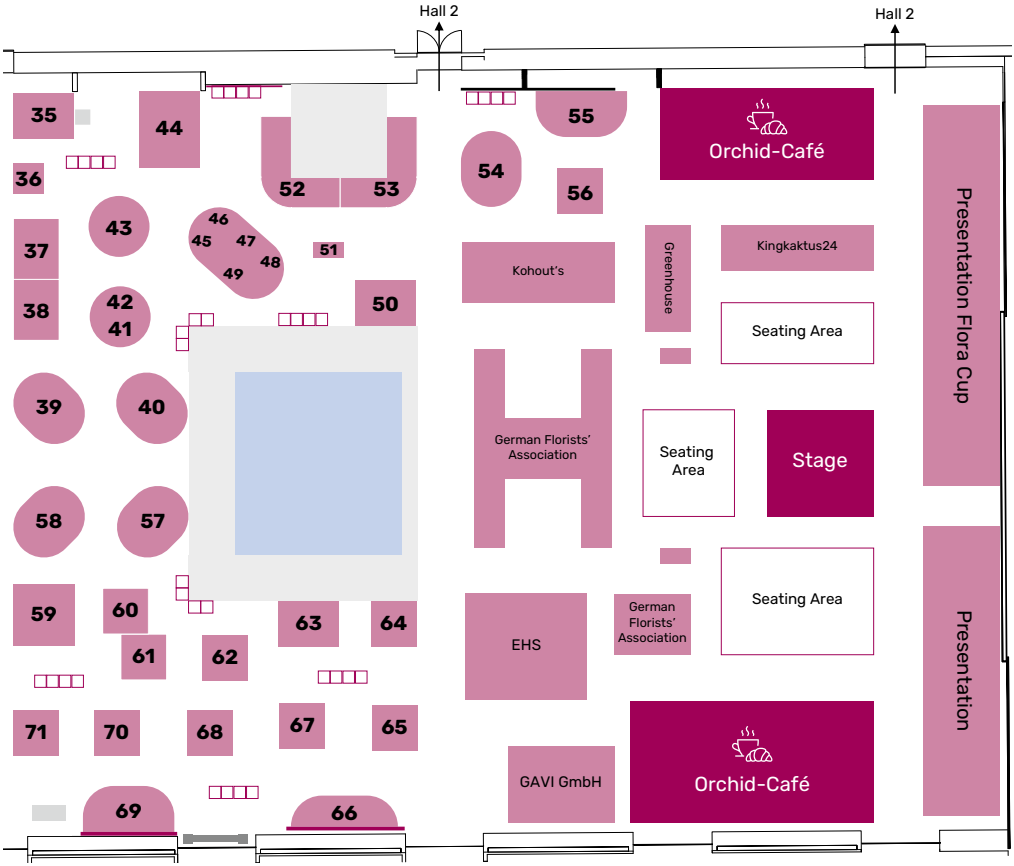
44 ALAO
45 Katrin Aurich
46 Eckard Schuller
47 Leipzig D.O.G.-Group
48 Falk Geißler
49 Berlin D.O.G.-Group
50 Großräschener Orchideen
51 Joachim Philipp
52 Chemnitz D.O.G.-Group
53 Dresden D.O.G.-Group
54 Hamburg D.O.G.-Group
55 Schleswig Holstein D.O.G.-Group
56 Joseph Wu Orchids
57 M&M Orchideen
58 Eisenheimer Orchideen
59 FM Orchideen GbR
60 Taiwan Paph. Society
61 BR Orquídea
62 Ten Shin Gardens
63 Orchideen Grom
64 Water Orchids

65 Ecuagenera Europe
66 Niederlausitzer Orchideen
67 Akerne Orchids
68 Orchidegartneriet
69 Wössner Orchideen
70 Bela Vista Orchids & Hachinohe Orchideen
71 Ecuadorquideas
72 Afri Orchids
73 Peruflora
74 Origami
76 Pépinière Tillandsia PROD
77 Seed Engei シード園芸
78 Tropiscape Orchids
79 Orquidário Tradicao
80 Blumen Kopf Orchideen u. Floristik
81 Gaec Parenthèse Tropicale
82 Les Orchidées Vacherot & Jacq Orchidées
83 Ryanne orchidée
84 APOC RWA/AM
85 Brandorff orchide

SHOW & SALES



86 Koopman Orchids
87 Tropicals-A Plants from South Amerika
88 Marczika Orchid Tillandsia Nursery
89 The Mathers Foundation
90 Orchideen Dürbusch GbR
91 Orchis Floriculturing inc.
92 Orquideas Amazonicas
93 Hanajima Orchids Co. Ltd
104 Orchideen Malerei Annelore Römhild



ADDING TO THE SHOW

The exhibition is enriched by a diverse array of artistic expressions that beautifully interpret the theme of orchids.

From vibrant **paintings** and delicate **origami** to captivating **sculptures,** these varied forms of artistic expression offer registrants an exclusive glimpse into the stunning collections curated by passionate orchid enthusiasts.

Visitors can also look forward to a collaboration with the **Dresden Academy of Fine Arts,** whose contributions will enrich both the exhibition displays and the festive evening programme.

STUDENT POSTER COMPETITION "ORCHIDS FOR FUTURE"

As part of the 24th World Orchid Conference, the German Orchid Society (D.O.G.) invited students from German UNESCO project schools (grades 7 – 10) to participate in the poster competition "Orchids for Future."

The students explored the fascination of orchids and their importance for biodiversity, sustainability, and conservation. Schools were also encouraged to collaborate with international partner schools.

The winning posters are exhibited in Hall 1.

Project coordinators:
Amelie Detterbeck and Gerhard Ziegenfuß.

unesco
Mitglied im Netzwerk der UNESCO-Projektschulen

SHOW & SALES

SALES HALL 3

Subject to change, please check the latest version online or on-site

6 Cramer Gärtnerei und Orchideenzucht
7 Orchideen Lucke
9 Mukoyama Orchids & Orchids Ltd
10 Bromvari S.L. PlantaBrutt
11 Paph Paradies Orchideen
16 Ching Hua Orchids
17 NT Orchid Nursery
19 Orquideas del Valle
20 Exotic Plant Company B.V.
22 Popow-Orchids
23 Varesina Orchideen
24 Green Jaws
25 Gartenwerkstatt Schreiner
26 TropicalExotique Co., Ltd.
29 Tokyo Orchid Nursery
30 Motes Orchids
31 Jumbo Orchids
32 MundiFlora Farm
33 Masožravé Rostliny
34 Asendorfer Orchideenzucht
37 Orchideen Frenzel
38 Orquideas Katia Colombia
39 Kakteen-PH-Flora
41 Floralia Brasil
50 Großräschener Orchideen
56 Joseph Wu Orchids
57 M&M Orchideen
58 Eisenheimer Orchideen
59 FM Orchideen GbR
60 Taiwan Paph. Society
61 BR Orquídea
62 Ten Shin Gardens
63 Orchideen Grom
64 Water Orchids
65 Ecuagenera Europe
66 Niederlausitzer Orchideen
67 Akerne Orchids
68 Orchidegartneriet
69 Wössner Orchideen
70 Bela Vista Orchids & Hachinohe Orchideen
71 Ecuadorquideas
72 Afri Orchids
73 Peruflora
76 Pépinière Tillandsia PROD
77 Seed Engei シード園芸
78 Tropiscape Orchids
79 Orquidário Tradicao
80 Blumen Kopf Orchideen und Floristik
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82 Les Orchidées Vacherot & Jacq Orchidées
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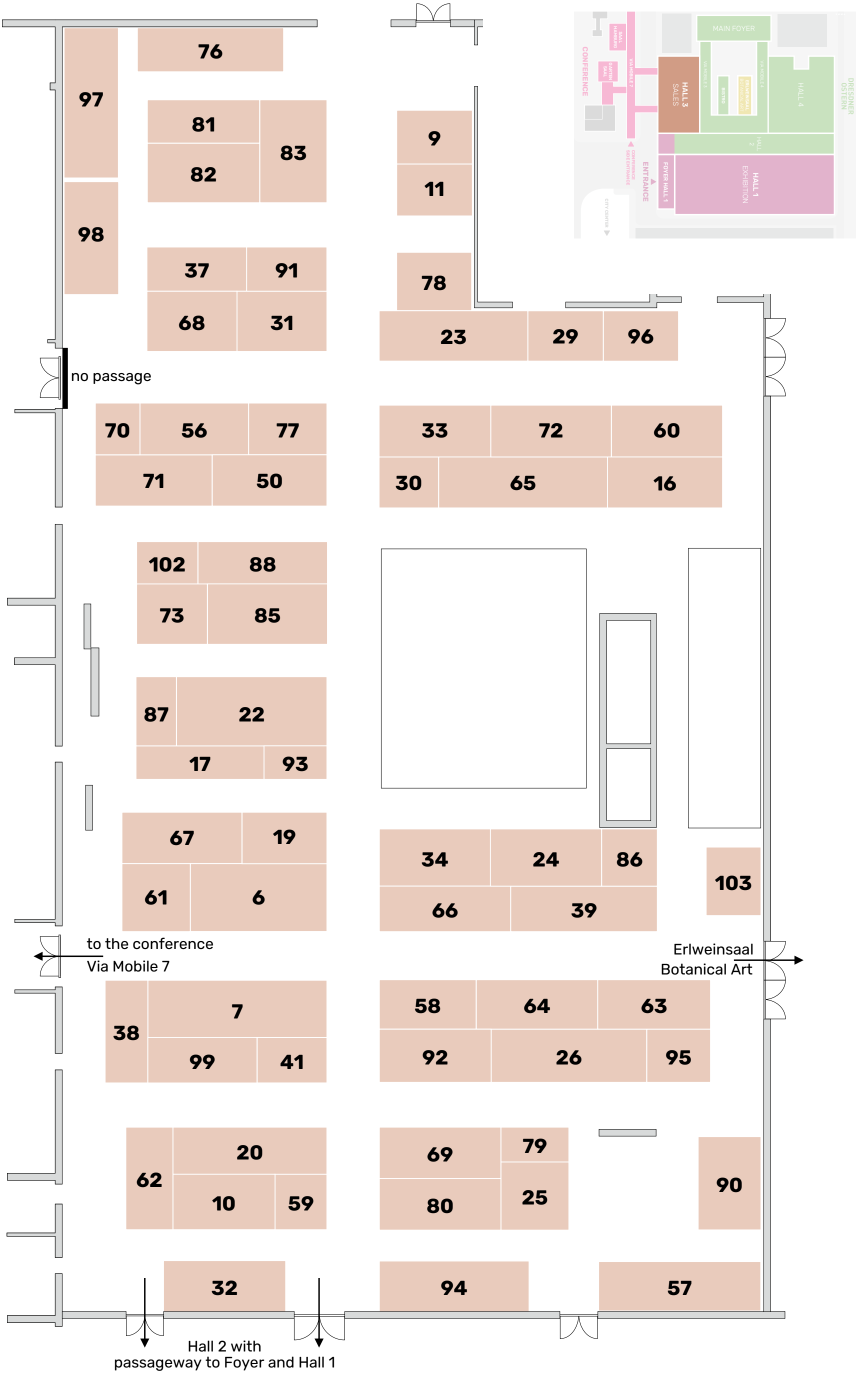
90 Orchideen Dürbusch GbR
91 Orchis Floriculturing inc.
92 Orquideas Amazonicas
93 Hanajima Orchids Co. Ltd
94 Orchideen Zubehör Manfred Meyer
95 Dresden Moos
96 Dusk Tropic Sweden
97 LINDENIA.NET
98 Verlag Orchideenzauber Buchverkauf
99 ecoTEXpert BV
102 Lava Pottery
103 San Diego Zoo – Botanical Garden


MAIN FOYER
CONFERENCE
ENTRANCE
HALL 3 SALES
HALL 1 EXHIBITION
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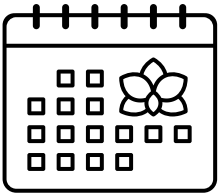
Hall 2 with
passageway to Foyer and Hall 1



EVENTS

EVENTS & FRAMEWORK PROGRAM

WOC 2026 offers a diverse social program planned to enrich the conference experience for both participants and visitors. The exhibition opens with a festive ceremony featuring a special artistic performance, setting the tone for an inspiring week. A further highlight is the **Gala Dinner** at one of Dresden's exceptional venues, combining fine dining with opportunities for networking and exchange.

Participants can also make use of dedicated spaces for satellite meetings of their orchid societies. Open to all visitors, the **"Night of the Orchids"** transforms the exhibition into a vibrant evening event with a celebratory atmosphere. In addition, designated **Social Areas** throughout the venue provide informal meeting points for online communities, forums, and social media groups to connect in person.

Together, these elements create an **engaging framework program** that enhances the WOC 2026 for every guest.

EVENTS & FRAMEWORK PROGRAM

WEDNESDAY – March 25, 2026

OPENING PARTY

Start: 17:45 CET (UTC+1) | 5:45 PM
Admission: From 17:00 CET (UTC+1) | 5:00 PM
End: 21:00 CET (UTC+1) | 9:00 PM

Location: Hall 1

Required ticket type: Full Registration

Full registrants may access the sales area (Hall 3) from 15:00 CET onward.

The evening will feature a performance by Dresden Dance Art, welcome addresses by representatives of the German Orchid Society and the Mayor of Dresden, the announcement of the Champion and Grand Champion of Exhibit, and musical contributions from Berchtesgaden.

THURSDAY – March 26, 2026

OPENING CEREMONY

Start: 10:00 CET (UTC+1) | 10:00 AM
Admission: From 9:00 CET (UTC+1) | 9:00 AM

Location: Hall Hamburg

Required ticket type: Full Registration

The Opening Ceremony, moderated by Jörg Frehsonke, marks the official start of the conference and will be followed by keynote and the lecture program.

The ceremony will feature musical contributions by the City of Dresden, welcome addresses by WOC President Bernd Treder and official representatives, as well as the ceremonial handover to the WOC Trust President and the presentation of the WOC Trust and OSSEA medals.

See **page 18** onward for the full conference schedule.

FRIDAY – March 27, 2026

NIGHT OF THE ORCHIDS

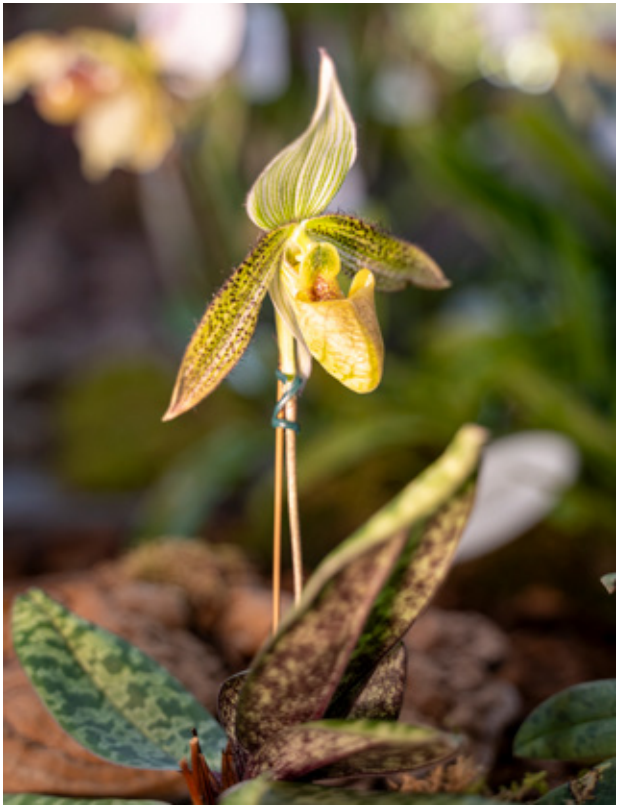
Approximate start: 19:00 CET (UTC+1) | 7:00 PM

Required ticket type:
Full Registration, Single-Day Registration*, D.O.G. Season Pass
or Single Event Ticket

The Night of the Orchids is a special evening event featuring a spectacular lighting display in the orchid show area. The sales area will remain open, allowing visitors to shop throughout the evening.

A live concert with Anthony Weihs (vocals) and renowned saxophonist Tina Tandler will create a unique musical atmosphere.

*If you validate a Single-Day Registration for Friday, you will be able to attend this exclusive event.



American Orchid Society
Education. Conservation. Research.

&

EOC
European Orchid Council

SATURDAY – March 28, 2026

GIFT A YOUTH PROGRAM & POSTER AWARDS

Time: 11:00 – 11:30 CET (UTC+1) | 11:00 AM – 11:30 AM

Required ticket type: Full Registration **or** Single-Day Registration

The Gift a Youth Program of the American Orchid Society will be presented by Deborah Boersma.

Then the winners of the Poster Awards will be announced by the European Orchid Council. See **page 104** onward for more information and the poster abstracts.

SATURDAY – March 28, 2026

GALA DINNER

Admission: From 19:30 CET (UTC+1) | 7:30 PM

Approximate start: 20:00 CET (UTC+1) | 8:00 PM

Location: Ball- & Brauhaus Watzke

Required ticket type: Gala Dinner Ticket

Additional details will be shared in advance with guests who have purchased a Gala Dinner ticket.

For convenient travel, a complimentary shuttle service is available from selected partner hotels.

SUNDAY – March 29, 2026

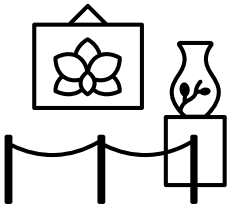
CLOSING CEREMONY

Start: 15:30 CEST (UTC+2) | 3:30 PM

Location: Hall Hamburg

Required ticket type: Full Registration

The Closing Ceremony will conclude the conference and includes the official announcement of the next WOC host location.



BOTANICAL ART

ORCHIDS, ORCHIDS, ORCHIDS …

One of the highlights of the World Orchid Conference 2026 in Dresden will be the Botanical Art exhibition titled **"Orchids, Orchids, Orchids ..."** presented in the Erlweinsaal at MESSE DRESDEN.

We are delighted that the **Verein für Botanische Kunst Deutschland e.V. (VBKD)** has taken on the organization and execution of this event. Our sincere thanks go to **Audrey Reilly** (Chair) and **Sue Hénon** (First Vice Chair and curator of the exhibition).

BOTANICAL ART

EXHIBITION

ORCHIDS
ORCHIDS
ORCHIDS...

26–29 March 2026

At the 24th World Orchid Conference 2026

Verein Botanische Kunst Deutschland e.V. & international guest artists

A BOTANICAL ART EXHIBITION

verein-botanischekunst.de

Messe Dresden,
Messering 6,
01067 Dresden,
im Erlweinsaal

Illustration © Dieter Schiela
„Dendrobium Oriental Smile"

Esmée Winkel

Audrey Reilly

A total of **50 exclusive orchid-themed artworks** will be showcased, created specifically for this occasion by VBKD members and other renowned artists from seven different countries. In addition, visitors will have the unique opportunity to watch one of these artists work live each day — a truly special experience.

As part of the conference program, **Esmée Winkel** (NL) and **Audrey Reilly** (Chair of the VBKD) will also introduce participants to the fascinating world of botanical art.

The Botanical Art Exhibition is part of the Dresdner Ostern fair. Public visitors can access it with a regular Dresdner Ostern ticket.

Registered participants of the World Orchid Conference have free access to the exhibition by showing their valid conference entry badge.

BOTANICAL ART

SPOTLIGHT

Artist

Sophie Crossart

Email: contact@sophiecrossart.com

Instagram: @sophiecrossart

www.sophiecrossart.com

Sophie Crossart is a fine artist, illustrator and botanical art tutor. Currently, she is based in the Netherlands and is one of our founding members.

She studied art history in the Netherlands and Germany (B.A. & M.A.) and obtained her doctoral degree in Munich (Ph.D).

Sophie paints directly from life (using natural light), paying close attention to intricate details. She mostly works with watercolour on paper and vellum.

She says “The artist in me is still that little girl collecting flowers and berries in the basket of her bike, finding beauty in the simplest moments”.

Artist

Mary Adler

Email: info@mary-adler.de

Instagram: @mary.adler.illustration

www.mary-adler.de

Mary Adler is an illustrator and designer who lives in Berlin. She is particularly interested in watercolour illustrations of plants, animals and children.

She is also the illustrator of several children's books. Mary likes to use watercolour, coloured pencils and fineliner pens as well as acrylics, and a digital drawing pen to complete some of her designs and graphics. Mary has also worked on the catalogue for our exhibition "Orchids, Orchids, Orchids…".

BOTANICAL ART

SCHEDULE

THURSDAY – March 26, 2026

10:00 CET (UTC+1) | 10:00 AM

OPENING OF EXHIBITION HALLS

11:30 CET (UTC+1) | 11:30 AM

PEN AND INK DEMONSTRATION

Line drawing and illustrating plants with pen and ink

Margareta Pertl – Austria
Founder of the Society "Vienna School of Botanical Illustration"

16:00 CET (UTC+1) | 4:00 PM

VERNISSAGE

Exhibition 'Orchids, Orchids, Orchids …'

Location Erlweinsaal

Required ticket type
Full Registration

You will be welcomed by
George Hatfield,
President WOC Trust
Bernd Treder,
President D.O.G.
Audrey Reilly,
President VBKD

Introduction
Sue Hénon,
Vice President VBKD and Exhibition Curator

Illustration © Dieter Schiela
„Dendrobium Orientał Smile"

FRIDAY – March 27, 2026

10:00 – 12:00 CET (UTC+1) | 10:00 AM – 12:00 PM

EXHIBITION REVIEW

Artworks will be judged by the appointed adjudication panel and subsequently the results will be displayed in the exhibition.

12:30 CET (UTC+1) | 12:30 PM

DRAWING DEMONSTRATION

“From the first stroke to the last”. The creation of a botanical drawing with coloured pencil, based on an orchid blossom.

Bettina Bücker – Germany
Member of the German Society of Botanical Artists (VBKD)

15:30 CET (UTC+1) | 3:30 PM

DRAWING DEMONSTRATION

Production of a botanical art journal page. To include all the useful information necessary to paint/draw a botanical artwork

Daria Beizerov – Germany
Member of the German Society of Botanical Artists (VBKD)

Most of the artists here are also members of other societies or organisations

The demonstrations will have a duration of 2 – 3 hours depending on the time available.

BOTANICAL ART

SCHEDULE

SATURDAY – March 28, 2026

10:00 CET (UTC+1) | 10:00 AM

'ALLA PRIMA' OIL PAINTING DEMONSTRATION

Vanda Hybrid in oil on canvas board.
Obtaining tonal and chromatic effects while the paint is still wet.

Enzo Forgione – Italy
Member of the "Society of Botanical Artists" (SBA)

12:00 – 12:45 CET (UTC+1) | 12:00 PM – 12:45 PM

LECTURE IN THE CONFERENCE ROOMS

'The art of painting Orchids'

Audrey Reilly – Germany
President of the German Society of Botanicial Artists (VBKD)

& *Esmée Winkel – The Netherlands*
Member of the Dutch Society of Botanical Artists (VBKN)
and illustrator at Naturalis, Leiden

See **page 72** for more information.

13:00 CET (UTC+1) | 1:00 PM

PAINTING DEMONSTRATION

Watercolour study of an Orchid bloom from observation to composition.
Looking at shape and form, light, colour nuances, and perspective.

Kristin Tessen – Germany
Member of the German Society of Botanical Artists (VBKD)

15:00 CET (UTC+1) | 3:00 PM

PAINTING DEMONSTRATION

Painting Yellow Flowers
Many artists are uncertain about tackling painting yellow flowers as they are considered to be very challenging. Deborah will demonstrate how to do this and share a few tricks that will make this more enjoyable.

Deborah Lambkin – Ireland/UK
Member of the Society of Botanical Artists (SBA)
and orchid artist to the RHS

SUNDAY – March 29, 2026

11:00 CEST (UTC+2) | 11:00 AM

PRESENTATION OF AWARDS

Botanical art awards from juried exhibition
and 'Peoples Choice' award.

On the stage.

14:00 CEST (UTC+2) | 2:00 PM

DRAWING DEMONSTRATION

Delicate whites: the Orchid in Coloured Pencil
Exploring how to suggest light and transparency, and how to bring depth and vibrancy into white through soft tonal variations.

Hilde Orye – Belguim
President of the Belgian Society of Botanical Artists (VBKB)

18:00 CEST (UTC+2) | 6:00 PM

END OF EXHIBITION

18:30 CEST (UTC+2) | 6:30 PM

COLLECTION OF ARTISTS ARTWORKS

Artists can now collect and repack their artwork
to take home (where applicable).

Most of the artists here are also members of other societies or organisations

The demonstrations will have a duration of 2 – 3 hours depending on the time available.

DRESDEN & FAQ

BEYOND ORCHIDS

The WOC 2026 in Dresden is set to be a significant event that, after 50 years, will showcase our role in Germany and Europe as more than just importers of exotic orchids. It highlights our growing **awareness of the responsibility we have for sustainable breeding and cultivation,** as well as the protection of native orchid habitats. The appreciation for these captivating plants can begin right at our doorstep.

Dresden is undeniably a city of beauty, with its **stunning backdrop** revealed at first glance. It is shaped by an irresistible blend of romantic landscapes, **baroque architecture,** and one of the most beautiful **historic old town ensembles** in Germany, captivating visitors from the moment they arrive. Upon closer inspection, this “Florence on the Elbe” entices with a wealth of **art and culture** that is truly unmatched on an international scale.

DISCOVER DRESDEN & GERMANY

WELCOME TO DRESDEN

Dresden, the capital of the Free State of Saxony, is known for its baroque architecture, vibrant cultural life and its location along the River Elbe.

Rebuilt after World War II, the historic city center today combines restored landmarks with contemporary architecture and a lively creative scene.

TOP SIGHTS

We have **selected a little inspiration** for you to help you discover some of the cultural and historical highlights awaiting you in and around Dresden.

For further information, please visit: **www.dresden.de**

We recommend checking in advance whether tickets need to be booked online, as some attractions may sell out at the ticket counter.

Enjoy the impressive historical **City Panorama** on a night-time stroll along the Elbe …

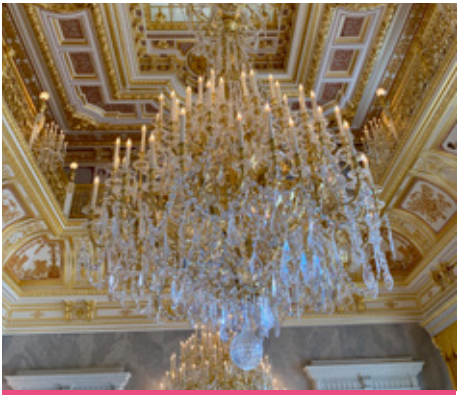
… be speechless in the face of the baroque beauty of **Dresden's Frauenkirche,** from the outside …

… and all the more from the inside …

… enjoy music in the **Semperoper** …

… and don't forget to drink and eat. 😄

Explore the **Historic Old Town** …



… visit the magnificent **Residenzschloss** …

… be inspired by the incredible craftsmanship …

… examine jewels that are not orchids in this case …

… and floral arrangements like at the conference – here, however, in mother-of-pearl.

Visit the **Dresden Zwinger** and its Old Masters Gallery …

… get up close and personal with iconic great art …

… immerse yourself in the **Albertinum** and its multifaceted modern and contemporary art …

… sculpture …

… and room-filling installation works.

But then please return to what you came for. 😉

GETTING AROUND

Dresden has an efficient public transport network (tram, bus and S-Bahn). Full conference registration includes a **free ticket** valid from **March 25 – 29, 2026.**

You can reach local taxi services at:

Taxi Dresden	**+49 351 211 211**
Taxi Funkzentrale	**+49 351 288 8888**

TRAVEL INFORMATION

Nearest Train Station:
Dresden Hauptbahnhof
Approx. 15–20 minutes by tram

Nearest Airport:
Dresden International Airport (DRS)
Approx. 20 minutes by taxi

GERMANY AT A GLANCE

Currency: Euro (€)
Time Zone: Central European Time (UTC+1)
Language: German

Credit cards are widely accepted, but smaller shops may require cash.

Emergency number in Germany and across the EU: **112**
International emergency number: **911**

CONFERENCE INFORMATION

CONFERENCE VENUE

MESSE DRESDEN, Messering 6, 01067 Dresden, Germany

The official language of the Conference is English.

ARRIVAL

BY PUBLIC TRANSPORT

From Dresden city center, **tram line 10** reaches the venue in approximately 15 minutes. Please get off at **"Dresden Messe"**. From there it is a 5-minute walk to Hall 1 and the registration desk.

Full conference registration includes a **free public transport ticket** for Dresden (tram, bus, S-Bahn) valid from **March 25 – 29, 2026.**

The ticket will be sent by email prior to the event and is valid within the Dresden city area. It must be shown together with an ID.

BY CAR

Paid and signposted **parking** is available on site. Direct vehicle access to the fairgrounds is restricted to exhibitors.

Further information: www.messe-dresden.de/en/visitors/arrival-parking

REGISTRATION & ACCESS

REGISTRATION DESK

Tuesday, March 24	**15:00 – 18:00** CET (UTC+1)
Wednesday, March 25	**07:00 – 18:00** CET (UTC+1)
Thursday, March 26 – Sunday, March 29	**09:00 – 18:00** CET / CEST

Badges can be collected during these hours.

The Registration Desk is located in the foyer of Hall 1.
Please refer to the WOC overview map on **page 2**.

EXHIBITION & SALES

Exhibition opening hours:

Thursday, March 26 – Sunday, March 29	**10:00 – 18:00** CET / CEST
Early access for registered participants:	**09:00** CET (UTC+1)

Sales booths follow the exhibition opening hours.
Exclusive access for registered participants:

Wednesday, March 25	**15:00 – 18:00** CET (UTC+1)

For more information on exhibitors and vendors, see **page 150** onward.

CONFERENCE SERVICES

In the conference area you'll find the registration desk, an info point, a small lost-and-found, and a plant hotel where you can temporarily store purchased orchids. These areas are accessible only to **registered conference participants.**

INFO POINT & PLANT HOTEL

Thursday, March 26 – Sunday, March 29 **09:00 – 18:00** CET / CEST

Plants must be collected by **18:00** CET / CEST each day.
Overnight storage is not possible.

The Info Point and Plant Hotel are located the foyer of Hall 1.
For the exact location, please refer to the WOC overview map on **page 2**.

TRANSLATION TOOL

At the beginning of each talk, you can **scan a QR code** with your phone to receive live subtitles directly on your device. The subtitles appear in real time, matching the speed of the speaker. You can choose the language that best fits your personal preference.

FOOD & REFRESHMENTS

Refreshments and snacks are included in the conference fee and will be served during the scheduled **coffee breaks.**

During the **lunch break**, a variety of food options will be available in the courtyard, including regional, vegetarian and international dishes. Please note that lunch is not included in the conference fee and must be purchased individually.
Please refer to the map on **page 2** for the location of the food court.

Coffee and lunch break times can be found in the conference schedule on **page 18** onward.

PAYMENT

In Germany, credit and debit cards are widely accepted. However, some vendors require cash. An ATM is available at the venue. **Cash withdrawal prior to visiting the venue is recommended.**

CONFERENCE INFORMATION

THE TICKET TYPES

To illustrate the different ticket types – all of which grant access to the exhibition and sales area – please refer to the following overview:

DESCRIPTION	SINGLE DAY TICKET	FULL REGISTRATION	SHOW & SALES DAY TICKET	SHOW & SALES SEASON PASS
Regular price per person **D.O.G. member**	▲ € 120 **€ 120**	▲ € 350 **€ 250**	€ 14 **€ 7**	not available **€ 21**
Validity in days	1	4	1	4
Early entry to the show & sales area (1 hour before regular opening)	✓	✓	✗	✗
Lectures by renowned experts	~20 talks, 3 streams	~70 talks, 3 streams	✗	✗
Drinks & snacks during the breaks	✓	✓	✗	✗
Entry to the special exhibition "Botanical Art"	✓	✓	✓	✓
Filled conference bag	✓	✓	✗	✗
Admission to the social events	*	✓	✗	✗
Access to the "Night of the Orchids"	*	✓	✗	✓
Public transport ticket Dresden	✗	✓	✗	✗
Digital Proceedings	✗	✓	✗	✗
Participation in judging possible	✗	✓	✗	✗

* Access to the opening party, the opening and closing ceremonies, and the "Night of the Orchids" is only possible on the day of the valid WOC day pass.

▲ Late registration fee from 01 Feb 2026: WOC day pass € 120 instead of € 100, full registration € 350 instead of € 300.

TIME & TIME ZONE

All times in this conference program are given in local Dresden time.

From **Wednesday to Saturday**, times are listed in **Central European Time** (CET, UTC+1).

Please note that **daylight saving time begins in Germany on Sunday, March 29, 2026.** During the night from Saturday to Sunday, clocks will move forward by one hour (from 02:00 to 03:00).

All times listed for **Sunday** are therefore given in **Central European Summer Time** (CEST, UTC+2). Please make sure to adjust your clocks accordingly so you are not late for the Sunday program.

PLANT PURCHASES & EXPORT

Local authorities will assist with issuing required export documents **(CITES and phytosanitary certificates)**. Capacity is limited.

Participants are responsible for checking plant import regulations in their home countries prior to purchase. Certain examinations (e.g. virus testing) cannot be carried out on site in Dresden.

- Buyers from the EU do **not require** phytosanitary certificates or CITES.
- Buyers from Switzerland apply for a plant health certificate on site (Dresden).
- Overseas buyers must find out in advance in their own countries what documents they need to bring with them when entering the country with the plants they have purchased.

For some countries (incl. Australia, Ecuador and Taiwan) taking plants home will most likely **not be possible.** Participants from these countries should refrain from purchasing plants or applying for a phytosanitary certificate.

Inspections take place **Thursday to Friday**, applications are submitted online.

Inspection hours: **09:00 – 17:00** CET (UTC+1)

Last application on Friday: **14:00** CET (UTC+1)

Fees must be paid in cash (EUR). The certificates can be collected at the registration desk from Saturday afternoon.

General note: As we cannot estimate how high the demand for phytosanitary certificates or CITES papers will be, we ask buyers who are traveling together to apply for phytosanitary certificates and CITES papers for their plants collectively. This not only simplifies the process of issuing the necessary documents, but is also usually less expensive than isaluing individual documents for smaller quantities of plants.

FREQUENTLY ASKED QUESTIONS
about registration, CITES & phyto regulations, general information and more can be found on our website:

www.woc-2026.com/faq

SUPPORTERS

We would like to extend our sincere gratitude to the sponsors and supporters of the 24th World Orchid Conference:

World Orchid Conference Trust

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Slipper Orchid Alliance

Verein für Botanische Kunst Deutschland

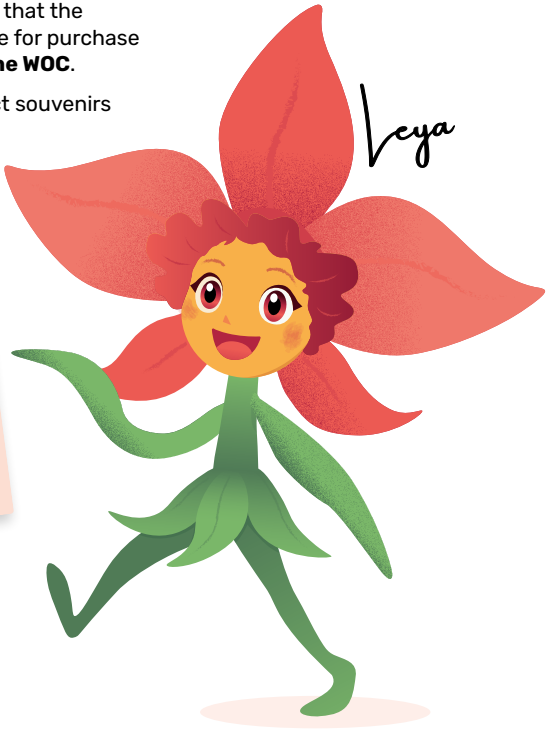
Zoologisch-Botanischer Garten Wilhelma, Stuttgart

Herrenhäuser Gärten, Hannover

TAKE HOME A MEMORY

Our D.O.G. kids' mascot Leya is happy to share that the official kids' coloring book (German) is available for purchase at the **merchandising booths throughout the WOC**.

You'll also find mugs, shirts, and bags – perfect souvenirs to take home as a memory of the conference.



Thank you for being part of the WOC 2026!

We hope you enjoyed the lectures, exhibitions and the wonderful diversity of orchids from around the world.

Stay connected and share your memories from the conference with us.

Follow us on Instagram and Facebook for photos, updates and future events.

Safe travels – and see you again at the next World Orchid Conference.


24th World Orchid
Conference

IMPRINT

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