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PREFACE

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The family Orchidaceae is well-known for both it's aesthetic as well as evolutionary value. The systematics of orchids presents ongoing challenges. For one, the family has around 28,000 species currently accepted as correct according to the voluminous work of Genera Orchidacearum published by Alec M. Pridgeon *et al.* from 2005 to 2014. The popularity of orchids is both a blessing and a curse as it attracts work from many researchers, but also has led to a proliferation of duplicate names.

Orchids are also a poster child for conservation due to many species having large and showy flowers. Akin to charismatic megafauna (lions, elephants, gorillas), they are charsimatic megaflora (*Vanda*, *Phalaenopsis*, *Stanhopea*, *Dendrobium* and *Bulbophyllum*), and can help to promote conservation efforts. The trifecta of illegal collection of wild orchids for the horticultural trade, folk medicinal purposes, and continued habitat loss due to a still growing human populations, have put strains on natural populations. It has to be stressed that while ethnobotanical studies have led to scientifically proven therapeutical products, the vast majority of folk remedies are unproven. While only around 1799 species (as of October 2021) of orchids are IUCN redlisted, which comprises mere 6% of the large family, 2% of these are insufficiently known to make any conclusion, *i.e.*, they are data deficient (DD).

The present collection of contributions exemplifies the broad range of topics studied and the global nature of orchid research. The largest number of authors are from India, reflecting the home of Rheedea. Other countries represented include Australia, China, Denmark, Japan, Laos, Thailand, United Kingdom, USA, and Vietnam. The largest number of contributions address taxonomic issues, also reflecting the primary scope of the journal published by the Indian Association for Angiosperm Taxonomy (IAAT). In a refreshing countertrend, only a single new name is introduced in the genus *Cymbilabia* by Souvannakhoummane *et al*. (this volume), but more existing duplicate names are synonymized. Confirmed or new synonyms are discussed and introduced in the genera *Bulbophyllum* by Shankar (this volume), *Gastrochilus* by Bhattacherjee *et al*. (this volume), and *Oberonia* by Geiger *et al*. (this volume).

New distributional records are established by Kamba & Deb (this volume) for *Phalaenopsis wilsonii* Rolfe, by Geiger *et al*. (this volume) for *Oberonia brachystachys* Lindl. and *O. subligaculifera* J.J.Sm., by Bhattacherjee *et al*. (this volume) for *Gastrochilus sessianus* A.N.Rao, by Tiwari *et al*. (this volume) for *Chamaegastrodia poilanei* (Gagnep.) Seidenf. & A.N.Rao, by Pedersen *et al*. (this volume) for *Brachycorthis peitawuensis* T.P.Lin & W.M.Lin, for *Mycaranthes latifolia* Blume by Dang *et al*. (this volume), for *Odontochilus putaoensis* X.H.Jin, L.A.Ye & A.T.Mu by Sun *et al*. (this volume), and for *Nervilia concolor* (Blume) Schltr., *N. plicata* (Andrews) Schltr., and *N. simplex* (Thouars) Schltr. by Atthanagoda *et al.* (this volume). The new synonymies and distributional records typically also note greater variability in the species than had previously been known. It highlights a critical shift in taxonomic approaches in orchidology from typological to population thinking as pointed by Ernst Mayr in 1994.

Some basic questions in orchid biology are also addressed. Rasmussen and Rasmussen (this volume) consider the attachment quality of seeds in natural environment, while Schuiteman (this volume) examines the prevalence and types of variegated leaves in all orchids. Adit *et al*. (this volume) provide a review of orchid research in India with recommendations for future directions. It highlights the fact that orchids remain a vast intellectual resource for ongoing research in fundamental biology.

Collaborations across national borders and cultural divides are becoming critical in producing the best orchid research possible. A large number of such contributions in this special issue bear witness to this trend in globalized research: the India-USA collaboration on *Oberonia* systematics (Geiger *et al*., this volume), the India-China-Japan collaboration on *Chamaegastrodia* distribution (Tiwari *et al*., this volume), the Denmark-United Kingdom-Thailand collaboration on *Brachycorythis* (Pedersen *et al*., this volume), the Laos-Thailand-China collaboration on a new *Cymbilabia* species (Souvannakhoummane *et al*., this volume), the Vietnam-Australia collaboration on *Mycaranthes* distribution (Dang *et al*., this volume), and the Sri Lanka-China collaboration on *Nervilia* from Sri Lanka (Atthanagoda *et al*., this volume).

Such a special issue is only possible with many pieces of a larger puzzle coming together. We would like to thank the authors for contributing their work to this issue and working patiently with the editors through the editorial process. External reviewers helped to ensure the quality of the presented work. There are additional heroes behind the scenes who helped with various tasks required. Our heartfelt thanks to everybody.

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