

Convolvulaceae Special Issue

Nearly 350,000 species of flowering plants are known to live on our planet, with nearly half of them already predicted to be threatened (Bachman *et al.*, 2024), and three out of four undescribed species also expected to be at risk (Brown *et al.*, 2023). In an era of biodiversity crisis and a climatic emergency, documenting the diversity of plant species, including their ecology, distribution or traditional knowledge associated with their uses, could not be more urgent - before these species are forever lost. It is fundamental to continue to pursue taxonomic studies at both regional and global scales, filling in knowledge gaps and integrating data across borders and scientific disciplines. Data mobilisation and greater ease of communication through technological media open new avenues for more inclusive and collaborative science including a more seamless integration between fundamental and applied research, and the valuable input from citizen science. In the upcoming years, taxonomic research should become increasingly conservation-driven, prioritising the rescue of described and undescribed species soon to be lost, for which regional expertise on species, habitats and plant uses, will be critical. This is also true for the Indian subcontinent, with an incredibly diverse flora of 22,214 species of angiosperms, c. 4,045 endemic, belonging to 47 families and 141 genera, for which the local expertise and collections are extremely important.

The current issue of this journal focuses on Convolvulaceae, an economically and ecologically important plant family, for which the Indian subcontinent is an important center of diversity and endemism, housing c. 10% of all species diversity. Known for the crop sweet potato, the beautiful ornamental morning glories and bindweeds, and several parasitic or noxious weeds, it has many more

untold stories, and taxonomic and conservation challenges ahead. Molecular phylogenetics have brought helpful insights into the re-interpretation of biological processes and classification systems of Convolvulaceae, but the integration of different sources of evidence is still ongoing, and more work is needed to fully incorporate new data that is being fast generated. This process may not be as fast as desired, but current international collaborations and partnerships are in place which will help to overcome the practical difficulties of tackling large, widespread, taxonomic groups, and hence accelerate progress. Thus, new species are still being described and assessed every year, but more work is needed on this front: only 7% of all Convolvulaceae species have been red listed, and no more than 300 species have been described in the past 25 years. In 36 out of the 57 genera of Convolvulaceae, not a single new species has been described in this period of time. On the other hand, few widespread species have become invasive and threaten local biodiversity. It is evident that, despite exciting progress in the fields of genomic, trait evolution, root storage development or discovery of new phytochemical compounds and pharmaceutical properties, there is still much work ahead when it comes to documenting plant species, as well as their habitats and traditional uses, and assessing their risk of extinction, without which we cannot take action for their effective conservation.

In this Special Issue we present a total of 14 manuscripts (total 28 were received, after review 14 were accepted) with contributions from 84 authors, spanning across 17 countries. An overview of the current progress on a range of research fields in Convolvulaceae is presented, as a means to highlight knowledge gaps and areas of priority for future studies. Three - two *Ipomoea* and one *Argyreia* - new species to science

are described for Indian and Brazilian flora. Three manuscripts add new records to Indian Flora. Two nomenclatural works deal with the reinstatement of paleotropical genera of the *Argyreineae* tribe, and make new combinations to *Distimake*. Three taxonomic accounts focused on tribe *Ipomoeae* are presented for West Africa (Ghana), South America (Brazil) and Asia (India). Finally, a survey of seeds characters in *Evolvulus*, and an investigation on vascular structures across the family complete this collection.

This is the positive result of years of international partnerships, namely through the Convolvulaceae Network platform, founded in 2019, which enables regular exchanges between scientists of all career stages, backgrounds and research fields who work on this plant family, and has enhanced the number of partnerships and opportunities for integrative, more equitable and collaborative research. This Special Issue has presented itself as a unique opportunity to showcase the important work that can be achieved through international partnerships, and highlight the value of articulating regional expertise from different parts

of the world for more efficiently solving global taxonomic and conservation challenges.

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Thank You!!

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