

## **Succulent Plant Diversity after the Lexicon Publications**

*Mats Hjertson*

*Museum of Evolution, Botany Section, Uppsala University, Uppsala, Sweden.*

After the publication of the New Cactus Lexicon, and other recently published succulent lexicons, it is tempting to lean back and think that we now have solved most, if not all taxonomic problems in these groups. This is obviously not the case, and these publications may rather represent a starting point from which problematic areas can be identified, at species, generic or higher taxonomic levels. Molecular phylogenies have in many cases helped us to resolve some of the problems, but until fairly recently sequence data from a very few regions only have been used in these investigations. The use of sequence data from multiple regions would most likely generate more robust phylogenies, and is an area where more efforts should be made. On the other hand, new methods or datasets have always had a tendency to distract the researcher from more traditional disciplines, like morphology and anatomy. Especially the latter seems to have been a much neglected field of research in the Cactaceae. Collaborative projects between experts within their respective fields (molecular systematics, anatomy, morphology etc.) would probably be fruitful and produce very interesting results. Also, there is an urgent need for a more consistent species and subspecies concept in order to be able to make relevant conservation assessments. This also demands a much better knowledge of taxon distributions than we have today, and is one of the areas where the collaboration between amateurs and professionals have been very fruitful and helped in resolving many problems during the work with the New Cactus Lexicon. Herbaria throughout the world generally have very few specimens of cacti, usually due to the fact that the preparation of high quality herbarium specimens is rather cumbersome. This must not prevent today's cactus researchers depositing well-prepared specimens in public herbaria, including, most importantly, voucher specimens for molecular and other laboratory studies.