

Preface

With the constant flow of plant species that reached Europe in the times of the great expeditions in the 18th and 19th century, the demand for any form of cataloguing the steadily growing diversity became inevitable. Succulent plants always fascinated plant-loving people above average, and the first handbooks devoted to succulents were published in the 19th century. Initially, however, interest was focussed on the *Cactaceae*. It was only 1954/55 when Herman Jacobsen (1898 - 1978), the former curator of the Botanic Garden of Kiel, made available a first handbook devoted to succulents (excl. *Cactaceae*), the "Handbuch der sukkulenten Pflanzen". An abridged version of this handbook was published by Jacobsen as "Sukkulentenlexikon" in 1970. It included descriptions, synonymies and numerous illustrations. The "Sukkulentenlexikon" represented the long-awaited reference work supporting both Botanical Gardens as well as amateur or professional growers in the navigation through succulent plant diversity. An English edition followed in 1975 as "Succulent Lexicon", and a revised German edition was published in 1981. This second edition had been finished by Jacobsen's successor in Kiel, Klaus Hesselbarth, who, with regard to the *Asclepiadaceae*, was supported by the senior editor of the present publication.

Over twenty years have passed since then, and the knowledge on succulent plants has increased permanently. We saw monographs of formerly little-known groups and many revisions and re-revisions, which often change the taxonomy within single groups considerably. A large amount of new taxa has been published on one hand, and on the other hand, many taxa have been sunk into synonymy. Therefore, a new lexicon-like contribution covering the whole succulent plant world, incl. the *Cactaceae*, was taken into consideration by various members of the International Organization for Succulent Plant Study (IOS) more than 10 years ago. Gustav Fischer-Verlag Jena, the publisher of both Backeberg's "Kakteenlexikon" and Jacobsen's "Sukkulentenlexikon", encouraged the project, which was informally termed the "New IOS Succulent Plant Lexicon", and later "Synopsis Plantarum Succulentarum". This new work was primarily planned to consist of three volumes (*Cactaceae*, *Aizoaceae*, other Succulents), and after a consensus regarding style and format had been found, the compilation of the *Asclepiadaceae* taxa started in 1994. With the disappearance of Gustav Fischer-Verlag, the project was adopted by Springer-Verlag for the English edition, and by Verlag Eugen Ulmer, for the German edition, and the series finally changed its title to "Illustrated Handbook of Succulent Plants". Also with regard to the enormous array of taxa of other succulents finally found worth to be presented, the early concept was adapted. Accordingly, the series in its English version now appears in six volumes altogether: Two volumes cover the *Aizoaceae* (Hartmann 2001); one volume each treats the Monocotyledons (Eggli 2001), the *Asclepiadaceae* (respectively *Apocynaceae* – *Asclepiadoideae* and – *Periplocoideae*, Albers & Meve 2002, this volume), the *Crassulaceae* (Eggli, in preparation for 2003), and the remaining groups in a mixed volume of Dicotyledons (Eggli 2002). The *Cactaceae* will not become available in time to be included in the present handbook series.

Apart from doubling the number of *Asclepiadaceae* genera covered, and their presentation in one volume solely dedicated to this plant group, this new handbook has many additional features such as the vastly expanded descriptions incl. typification data for all accepted taxa, full synonymy and literature references that lead to published illustrations. Keys to main groups and genera are provided. Although desirable, we do not include keys to the species. This would have made an excessive demand, esp. in species-rich genera such as *Ceropegia*, which could not be performed within the frame of this handbook.

It took us tremendous efforts over the years of compilation to keep the taxonomy as actual as possible. Taxonomy means change – this is esp. true with regard to the last years where asclepiad systematic research saw a powerful renaissance. In 2000, we even lost "our family", the *Asclepiadaceae*, because of the formal transposition of the subfamilies *Asclepiadaceae* – *Asclepiadoideae* and *Asclepiadaceae* – *Periplocoideae* to the *Apocynaceae*. For pragmatic reasons (e.g. avoiding the clumsy new taxon names) we nevertheless stick to the *Asclepiadaceae* in the title of the present work.

Sometimes, publications like revisions or monographs that could serve as base for our compilations do not exist. This is esp. true for the two largest genera of the *Asclepiadaceae* – *Ceropegieae*, *Ceropegia* (\pm 180 species) and *Brachystelma* (122 species), as well as for *Hoya* (\pm 200 species), the largest genus of the tribe *Marsdenieae*. While for *Ceropegia* the revision of H. Huber (1957) is outdated, a complete generic treatment has never been produced for *Brachystelma*. Own research and literature studies were unavoidable here. Although not all problems could be solved, the *Brachystelma* treatment published in this volume is the first complete "critical" presentation of this interesting genus at all. The last and only full generic treatments of *Hoya* originate from the 19th century (Decaisne 1844, Hooker 1885). Since then, due to the enormously increased number of taxa described, further revisions of *Hoya* were restricted to a regional scale, their sum being far away from representing a complete generic revision. The presentation of *Hoya* in this handbook is therefore restricted to the better known, mostly cultivated and predominantly succulent taxa.

The core and most popular asclepiadaceous succulents are represented by the stem-succulent stapeliads. Here, recent revisions often compete against each other, and made it difficult to decide which should be followed. Usually, only one revision is followed, though sometimes a pragmatic concept considering the different revisions available plus own assessments have been applied. For the genus *Caralluma* s.l., a conservative circumscription is presented despite the editors' knowledge of the necessary recircumscription of *Caralluma* and its division into a few smaller genera. However, the new taxonomy was not available within the deadline of the present work. In parts, this is also true for the recircumscription of *Cynanchum*.

Apart from the classical succulents of the tribe *Ceropegieae*, several less well-known groups or taxa are presented in this book. Inclusion has been mainly influenced by horticultural value.

Several persons helped during the production process, whether as compiler of texts (Anke Brennecke, Christiane Hoffmann, Janine Kiel, Rainer Kranz, Dr. Sigrid Liede, Birgit Müller, Petra Stegemann, Beate Willke and Ruurd van Donkelaar) or as authors of additional illustrations (Josef Bogner, Dr. Wiebe Bosma, Dr. Urs Eggli, Dr. David Goyder, Dr. Sigrid Liede, Ernst Specks, Dr. Joachim Thiede and Ruurd van Donkelaar). The support of various journals and their editors in publishing necessary new combinations or names is gratefully acknowledged. Many of the above named and further unnamed persons contributed with literature/photocopies, provided us with additional specimens or living plants for study (namely the Sukkulenten-Sammlung Zürich under its former director Dieter Supthut), or with a wide array of any kind of information on taxa, types, distribution etc. We gratefully acknowledge their long-standing interest in the project.

We would like to thank Dr. Johanna Schlüter, Gustav Fischer-Verlag Jena, for fruitful cooperation during the first years of the project. Finally, the endless patience and painstaking accuracy of the series editor responsible for this volume, Dr. Urs Eggli, in transposing our texts into the standard format, tracing the many nomenclatural problems, and composing the final layout of text and colour plates is gratefully acknowledged.

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