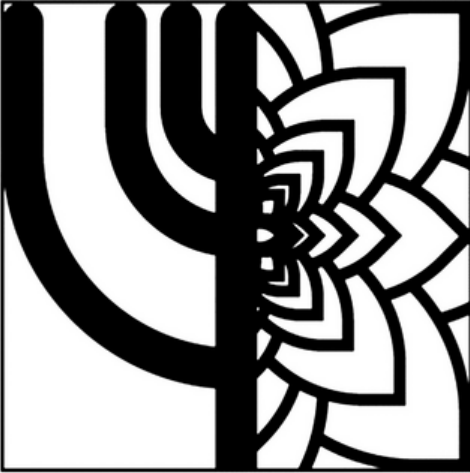


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International Organization
for Succulent Plant Study

Organización Internacional
para el Estudio de
Plantas Suculentas

Organisation Internationale
de Recherche sur les
Plantes Succulentes

Internationale Organisation
für Sukkulenten-Forschung

IOS

**Repertorium
Plantarum
Succulentarum
LXX (2019)**

A short history of *Repertorium Plantarum Succulentarum*

The first issue of *Repertorium Plantarum Succulentarum* (RPS) was produced in 1951 by Michael Roan (1909–2003), one of the founder members of the International Organization for Succulent Plant Study (IOS) in 1950. It listed the ‘majority of the new names [of succulent plants] published the previous year’. The first issue, edited by Roan himself with the help of A. J. A. Uitewaal (1899–1963), was published for IOS by the National Cactus & Succulent Society, and the next four (with Gordon Rowley as Associate and later Joint Editor) by Roan’s newly formed British Section of the IOS. For issues 5–12, Gordon Rowley became the sole editor. Issue 6 was published by IOS with assistance by the Acclimatisation Garden Pinya de Rosa, Costa Brava, Spain, owned by Fernando Riviere de Caralt (1904–1992), another founder member of IOS.

In 1957, an arrangement for closer cooperation with the International Association of Plant Taxonomy (IAPT) was reached, and RPS issues 7–22 were published in their *Regnum Vegetabile* series with the financial support of the International Union of Biological Sciences (IUBS). Issues 23–25 were published by Abbey Garden Press of Pasadena, California, USA, after which IOS finally resumed full responsibility as publisher with issue 26 (for 1975).

Gordon Rowley retired as editor after the publication of issue 32 (for 1981) along with Len E. Newton, who had assisted him with issues 13 onwards. Starting with issue 33, RPS was compiled and edited by Urs Eggli and Nigel Taylor, who enhanced it by adding data on nomenclatural types and enlarging the ‘Bibliographia’ section, first introduced in issue 20 (for 1969). After issue 45 (for 1994), Nigel Taylor handed over as co-editor to his wife Daniela Zappi, who assisted with issues 46–59. Reto Nyffeler joined the editorial team for issues 55–65.

Starting in 1986, a nomenclatural and bibliographical database was created at the Zürich Succulent Plant Collection to compile the individual issues. Over the years all earlier issues were added to this database, making it possible to produce the ‘IOS Index of Names of Cactaceae published 1950–1990’. This was published by the Royal Botanic Gardens Kew in 1991, and followed by an equivalent list for the ‘other succulents’ in 1994.

After 60 issues conventionally printed, *Repertorium Plantarum Succulentarum* has been made available in digital form in pdf format (‘portable document format’) from issue 61 onwards, as an ‘open access’ publication, accessible over the internet (e.g. <http://succulentresearch.org/publications/>).

Repertorium Plantarum Succulentarum LXX (2019)

*Index nominum novarum plantarum succulentarum anno MMXIX
editorum nec non bibliographia taxonomica ab U. Egli compositus.*

International Organization for Succulent Plant Study

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Conventions used in Repertorium Plantarum Succulentarum

- Repertorium Plantarum Succulentarum attempts to list, under separate headings, newly published names of succulent plants and relevant literature on the systematics of these plants, on an annual basis. New names noted after the issue for the relevant year has gone to press are included in later issues. Specialist periodical literature is scanned in full (as available at the libraries at ZSS and Z or received by the compilers). Also included is information supplied to the compilers direct.
- Validly published names are given in **bold face** type (except for epithets of new cultivars), accompanied, in the case of newly described taxa, by an indication of the nomenclatural type (name or specimen dependent on rank), followed by the herbarium acronyms of the herbaria where the holotype and isotypes are said to be deposited (first acronym for holotype), according to the Index Herbariorum database. Invalid, illegitimate, or incorrect names are given in *italic* type face. In either case a full bibliographic reference is given. For new combinations, the basionym is listed. For invalid, illegitimate or incorrect names, the articles of the ICBN / ICN or ICNCP which have been contravened are indicated in brackets. For names before 2012, the articles cited are those of the ICBN (Vienna Code, 2006), while the ICN (Melbourne Code, 2012) is used for newer names.
- The compilers would like to point out that they do not accept any names that might be inadvertently validated in this volume of RPS.
- Bibliographic details of papers dealing only with the names of one or few new taxa are usually not repeated in the bibliographic section.
- Starting with RPS 61, abbreviations for periodicals are those suggested in Bibliographia Periodicorum Huntianum Ed. 2 (BPH2), or are constructed according to BPH2 guidelines for other periodicals. For some titles where BPH2 has incomplete data, the abbreviations suggested in the ‘Bibliography of Succulent Plant Periodicals’ (U. Eggli in Friciana 60: 1-139, 1998 (‘1995’)) are used.

Compiled by:

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Message from the IOS President

The first issue of *Repertorium Plantarum Succulentarum* (RPS) came to light in 1951, soon after the birth of the International Organization of Succulent Plant Study (IOS) in 1950. More than 70 years later, after an uninterrupted publication process, issue 70 (2019) is coming to light. RPS has been an extremely useful tool, primarily for investigations dealing with succulent plants. It has been produced thanks to the effort of IOS members who have carefully compiled and assessed the newly published names of succulent plants and relevant literature on the systematics of these plants.

The first 60 issues of the RPS were printed, and distributed by mail. Then, in order to avoid the cost of printing and postage, from issue 61 onwards, it was decided to convert it in an "open access" publication, accessible in PDF format in the IOS (<http://succulentresearch.org/publications/>) and other webpages.

Over a period of seven decades, several members of the IOS have taken the responsibility to produce the RPS and have generously provided a great deal of their time and expertise to compile and edit the RPS (see the "Short History" on the inside front cover). They are to be recognized for their service to our organization and to the international community interested in succulent plants. In particular, we should acknowledge and be grateful for the dedication and careful work of our fellow member Urs Eggli, who has headed the effort to produce the RPS since issue 33 (for 1982, published 1984).

Despite the accelerated development of computer databases and of searching and indexing services in the internet, the RPS will continue to be a valuable resource, facilitating communication among members the scientific and amateur community. Its high scientific standard is guaranteed by the fact that each new name is carefully and consciously evaluated by experts, under the rules of the International Code of (Botanical) Nomenclature.

Héctor M. Hernández
IOS President

Preface by the former Assistant Editor

After the International Organisation for Succulent Plant Study (IOS) was formed in 1950, the first significant publication to be produced was the *Repertorium Plantarum Succulentarum*, edited by Michael Roan. Starting in 1951, listing all new names of succulent plants published in 1950, this was established as an annual publication. Gordon Rowley became Associate Editor for No. 2, and he took over as sole Editor from No. 6. I joined him as Assistant Editor from No. 13.

In those early days there was no Internet, with IPNI and other online databases. The RPS was therefore a most valuable reference for botanists and serious hobbyists. With the continuing description of new species, and name changes following taxonomic studies, the RPS remains as an important resource. The great variety of periodicals and books continuing to appear makes the bibliography section, added from No. 20, also of great value. Gordon and I both stepped down after No. 32. After some further changes in editorship the 70. edition has now arrived, thus completing another decade of publication. Long may it continue !

Len Newton

Compilers' Preface

"Back to normal!" was the opening statement of the previous issue for RPS, published more than one year ago. While the statement was true as far as the size of that issue was concerned, it was certainly far away from the state of almost all aspects of our living in the past almost 2 years, trying to cope with the vagaries of the corona virus pandemic. At the time of writing these lines, many countries continue to have at least minor restrictions on every-day do's and don't's of their citizens.

It has become an unpleasant custom that RPS is published behind schedule, and this unfortunately also applies to this present issue. The pandemic can only partly be blamed for it in so far as the prevailing home office conditions limited access to resources. The main reason as in the past years is the sheer volume of research output dealing with aspects of succulent plant biology, as witnessed by well over 500 new names recorded in this issue, and a slightly lower number of literature references than in the preceding year.

RPS attempts to deal with names and taxonomic literature concerning succulent plants, and it now has done so for 70 years – in total listing 25'430 new names published 1950 - 2019, and 17'353 literature references published 1970 - 2019. While the definition of succulence is a continuous challenge, the application of the term in the context of RPS has been remarkably stable throughout the first 69 issues – there was an obvious tacit consent that neither orchids nor bromeliads were to be covered. Now that the revised second edition of the *Illustrated Handbook of Succulent Plants: Monocotyledons* has been published in March 2020, the time has come to review this tacit consent. Since this Handbook now also covers the succulent taxa of *Bromeliaceae*, the decision was easily taken to include this family in RPS, starting with the present issue. Orchids, however, will continue to be excluded, in line with the concept employed for the Handbook.

As in earlier years, the IPNI team at Kew is acknowledged for sharing their expertise and for discussing nomenclaturally ambiguous cases. The compilation of this RPS has benefitted from the meticulous attention to bibliographical details by Seraina Nuotclà and Julia Hess, science assistants at the Zürich Succulent Plant Collection. I am very grateful for their diligent work.

Corrections to previous volumes

- *Dracaena bella* (L. E. Newton) Byng & Christenhusz 2018 was incorrectly shown as legitimate, but is illegitimate versus *Dracaena bella* T. Moore (Gard. Chron., ser. nov., 4: 616, 1875). Thanks go to L. E. Newton for spotting this error.

NOMINA NOVA

AGAVACEAE

- Agave** Sect. **Antillanae** (Trelease) Thiede & Gideon F. Smith, *Bradleya* 37: 260, 2019. Basionym: *Agave* group *Antillanae*.
- Agave** Sect. **Antillares** (Trelease) Thiede & Gideon F. Smith, *Bradleya* 37: 260, 2019. Basionym: *Agave* group *Antillares*.
- Agave** Sect. **Bahamanae** (Trelease) Thiede & Gideon F. Smith, *Bradleya* 37: 260, 2019. Basionym: *Agave* group *Bahamanae*.
- Agave** Sect. **Caribaeae** (Trelease) Thiede & Gideon F. Smith, *Bradleya* 37: 260, 2019. Basionym: *Agave* group *Caribaeae*.
- Agave** Sect. **Columbianae** (A. Berger) Thiede & Gideon F. Smith, *Bradleya* 37: 260-261, 2019. Basionym: *Agave* [?] *Columbianae*.
- Agave** Sect. **Marmoratae** (A. Berger) Thiede & Gideon F. Smith, *Bradleya* 37: 259, 2019. Basionym: *Agave* group *Marmoratae*.
- Agave** Sect. **Polianthes** (Linné) Thiede & Gideon F. Smith, *Bradleya* 37: 262, 2019. Basionym: *Polianthes*.
- Agave** Sect. **Salmianae** (A. Berger) Verloove & Thiede *ex* Thiede & al., *Bradleya* 37: 257, 2019. Basionym: *Agave* group *Salmianae*.
- Agave** Sect. **Sisalanae** Thiede & Gideon F. Smith, *Bradleya* 37: 257, 2019. Typus: *Agave sisalana* Perrine. *Nom. nov. pro Agave* [infragen. unranked, "Untereihe"] *Sisalanae* A. Berger 1915.
- Agave** Sect. **Viviparae** (Baker) Verloove & Thiede *ex* Thiede & al., *Bradleya* 37: 260, 2019. Basionym: *Agave* [?] *Viviparae*.
- Agave** Ser. **Bravoae** (Lexarza) Thiede & Gideon F. Smith, *Bradleya* 37: 262, 2019. Basionym: *Bravoae*.
- Agave** Ser. **Brunneae** (Hochstätter) Thiede & Gideon F. Smith, *Bradleya* 37: 262, 2019. Basionym: *Manfreda* Ser. *Brunneae*.
- Agave** Ser. **Guttatae** Thiede & Gideon F. Smith, *Bradleya* 37: 262, 2019. Typus: *Agave guttata* Jacobi & C. D. Bouché. To be treated as new name with a direct reference to a previously published English diagnosis, rather than as combination for *Manfreda* Ser. *Guttatae* Hochstätter 2016 (*nom. inval.*, ICN Art. 40.1).
- Agave** Ser. **Polianthes** (Linné) Thiede & Gideon F. Smith, *Bradleya* 37: 262, 2019. Basionym: *Polianthes*.
- Agave** Ser. **Scabraea** (Hochstätter) Thiede & Gideon F. Smith, *Bradleya* 37: 262, 2019. Basionym: *Manfreda* Ser. *Scabraea*.
- Agave** Ser. **Virginicae** Thiede & Gideon F. Smith, *Bradleya* 37: 262, 2019. Typus: *Agave virginica* Linné. To be treated as new name with a direct reference to a previously published English diagnosis, rather than as combination for *Manfreda* Ser. *Virginicae* Hochstätter 2016 (*nom. inval.*, ICN Art. 40.1).
- Agave** Ser. **Yucatanae** Thiede & Gideon F. Smith, *Bradleya* 37: 262, 2019. Typus: *Manfreda paniculata* L. Hernández & al.
- Agave** **garciauruzii** A. Vázquez & al., *Phytotaxa* 422(3): 276, ills. (pp. 277-280), 2019. Typus: *Vázquez-García & al.* 10140 (IBUG, CIMI, MEXU).
- Agave** **gypticola** García-Mendoza & D. Sandoval, *Acta Bot. Mex.* 126: e1461: 6, ills. (pp. 7, 15), 2019. Typus: *García-Mendoza & Franco Martínez* 11218 (MEXU [2 parts], IEB, MEXU, MO).
- Agave** **lexii** García-Morales & al., *Novon* 27(4): 201-203, ills., 2019. Typus: *García* 5580 (ITCV, ANSM, CIIDIR, GBH, HFLA).
- Agave** **lyobaa** García-Mendoza & S. Franco, *Acta Bot. Mex.* 126: e1461: 2-3, ills. (pp. 4, 15), 2019. Typus: *García-Mendoza & Martínez Aguirre* 11091 (MEXU, ENCB, MEXU, MO, OAX).
- Agave** **megalodonta** García-Mendoza & D. Sandoval, *Acta Bot. Mex.* 126: e1461: 11-12, ills. (pp. 13, 15), 2019. Typus: *García-Mendoza & al.* 11145 (MEXU, IEB, MEXU, MO, OAX).
- Agave** **occidentalis** (Art. Castro & Aarón Rodríguez) Thiede & Gideon F. Smith, *Bradleya* 37: 262, 2019. Basionym: *Manfreda occidentalis*.
- Agave** **oteroi** G. D. Starr & T. J. Davis, *Cact. Succ. J.* (Los Angeles) 91(2): 134-137, ills., 2019. Typus: *Starr* 2018-011 (ARIZ, MEXU).
- Agave** **quiotepcensis** García-Mendoza & S. Franco, *Acta Bot. Mex.* 126: e1461: 9, ills. (pp. 10, 15), 2019. Typus: *García-Mendoza*

& al. 10349 (MEXU, ENCB, MEXU, MO, OAX).

Agave santanamichelii (Art. Castro & Aarón Rodríguez) Thiede & Gideon F. Smith, *Bradleya* 37: 262, 2019. Basionym: *Manfreda santanamichelii*.

Agave simplex (Gentry) Salywon & W. C. Hodgson, *Phytoneuron* 2019(219): 2, 2019. Basionym: *Agave deserti* ssp. *simplex*.

Agave venustuliflora (E. Solano & al.) Thiede & Gideon F. Smith, *Bradleya* 37: 263, 2019. Basionym: *Polianthes venustuliflora*.

AIZOACEAE

Drosanthemum brakfonteinense Liede & al., *Bradleya* 37: 226-229, ills., 2019. Typus: *Hartmann & Bayer* 34688 (HBG).

Drosanthemum ecclesianum Liede & H. E. K. Hartmann, *Bradleya* 37: 231-233, ills. (p. 230), 2019. Typus: *Hartmann* 34815 (HBG).

Drosanthemum nollothense Liede & H. E. K. Hartmann, *Bradleya* 37: 233-234, ills. (p. 232), 2019. Typus: *Hartmann & al.* 31547 (HBG).

Drosanthemum obibense Liede & H. E. K. Hartmann, *Bradleya* 37: 234-236, ills. (p. 233), 2019. Typus: *Hartmann & al.* 25979 (HBG).

Lithops burchellii (D. T. Cole) Jainta, *Avonia* 37(1): 6, 2019. Basionym: *Lithops lesliei* ssp. *burchellii*.

Lithops euniceae (de Boer) Jainta, *Avonia* 37(1): 6, 2019. Basionym: *Lithops aucampiae* var. *euniceae*.

Lithops karasmontana ssp. *amicorum* (D. T. Cole) Loots & Ritz, *Pl. Syst. Evol.* 305(10): 997, 2019. Basionym: *Lithops amicum*.

Lithops pseudotruncatella ssp. *schoemaniai* R. A. Earle & Ujjs, *CactusWorld* 37(3): 198, ills. (pp. 198-199), 2019. Typus: *Schoeman & Ujjs* s.n. (WIND 000101857) [Holotype ex cult. Cole Lithoparium].

Tribulocarpus somalensis (Engler) Sukhorukov, *Bot. Letters* 166(4): 404, 2019. Basionym: *Tetragonia somalensis*.

AMARYLLIDACEAE

Rauhia albescens Meerow & Sagástegui, *Phytotaxa* 416(2): 188-190, ills., 2019. Typus: *Sagástegui & Zapata* 17006 (HUT, NA).

APOCYNACEAE

Brachystelma malawiense Peckover, *Cactus-World* 37(2): 114, ills. (pp. 113-115), 2019. Typus: *Peckover* 247 (PRU). [Sphalm. 'malawiensis'.]

Brachystelma megamalayanum Karuppusamy, in Pullaiah & al., *Monogr. Brachystelma & Ceropegia India*, 40-43, ills., 2019. Typus: *Karuppusamy & Ravichandran* 1025 (MH, SGH). [Sphalm. 'megamalayana'.]

Brachystelma tanzaniense Peckover, *Cactus-World* 37(1): 28, ills. (pp. 27-29), 2019. Typus: *Peckover* 298 (PRU). [Sphalm. 'tanzaniensis'.]

Ceropegia adscendens var. *bicolor* (V. S. Ramachandran & al.) Kottaimuthu, *Int. J. Curr. Res. Biosci. Pl. Biol.* 6(1): 34, 2019. Basionym: *Caralluma bicolor*.

Ceropegia adscendens var. *carinata* (Gravely & Mayuranathan) Kottaimuthu, *Int. J. Curr. Res. Biosci. Pl. Biol.* 6(1): 34, 2019. Basionym: *Caralluma adscendens* var. *carinata*.

Ceropegia adscendens var. *gracilis* (Gravely & Mayuranathan) Kottaimuthu, *Int. J. Curr. Res. Biosci. Pl. Biol.* 6(10): 35, 2019. Basionym: *Caralluma adscendens* var. *gracilis*.

Ceropegia ananthapuramensis (K. Prasad & al.) Kottaimuthu, *Int. J. Curr. Res. Biosci. Pl. Biol.* 6(10): 35, 2019. Basionym: *Brachystelma ananthapuramense*. [Sphalm. 'ananthapuramense'.]

Ceropegia annamacharya (K. Prasad & al.) Kottaimuthu, *Int. J. Curr. Res. Biosci. Pl. Biol.* 6(10): 35, 2019. Basionym: *Brachystelma annamacharya*.

Ceropegia chuakulii Kidyoo, *Phytotaxa* 425(5): 274-276, ills. (incl. pp. 271-272), 2019. Typus: *Kidyoo* 1569 (BKF, BCU).

Ceropegia gandhiana Kottaimuthu, *Int. J. Curr. Res. Biosci. Pl. Biol.* 6(10): 35, 2019. Typus: *Law* s.n. (K [holo or lecto]) [If not representing the holotype, the specimen was

- designated as lectotype by Kambale & Janarthanam, *Rheedea* 28: 47, 2018.]. [*Nom. nov. pro Brachystelma maculatum* Hooker *fil.* 1883 (*non Ceropegia maculata* Beddome 1864).]
- Ceropegia gondwanensis** (Govekar & al.) Kottaimuthu, *Int. J. Curr. Res. Biosci. Pl. Biol.* 6(10): 35, 2019. Basionym: *Brachystelma gondwanense*. [Sphalm. 'gondwanense'.]
- Ceropegia jinshaensis** D. T. Liu & Z. K. Wu, *PhytoKeys* 130: 42-45, ills., 2019. Typus: *Wu & al.* LJBG2015130 (KUN, KUN).
- Ceropegia khasiana** Murugesan & al., *Gard. Bull. Singapore* 71(2): 520-523, ills., 2019. Typus: *Murugesan* 137313 (ASSAM, MH).
- Ceropegia mahendragiriensis** (K. Prasad & al.) Kottaimuthu, *Int. J. Curr. Res. Biosci. Pl. Biol.* 6(10): 35, 2019. Basionym: *Brachystelma mahendragiriense*. [Sphalm. 'mahendragiriense'.]
- Ceropegia megamalayana** (Karuppusamy) Kottaimuthu, *Int. J. Curr. Res. Biosci. Pl. Biol.* 6(10): 35, 2019. Basionym: *Brachystelma megamalayanum*.
- Ceropegia moorei** (Aditya) Kottaimuthu, *Int. J. Curr. Res. Biosci. Pl. Biol.* 6(10): 36, 2019. Basionym: *Caralluma moorei*.
- Ceropegia muruganii** Kottaimuthu, *Int. J. Curr. Res. Biosci. Pl. Biol.* 6(1): 34, 2019. Typus: [lecto – icono]: *Bull. Madras Gov. Mus. n.s.* 4(1): t. 2: 7, 1931 [Lectotype designated (for the replaced synonym) by M. G. Gilbert, *Bradleya* 8: 11, 1990.]. [*Nom. nov. pro Caralluma adscendens* var. *geniculata* Gravelly & Mayuranathan 1931 (*non Ceropegia geniculata* R. A. Dyer 1979).]
- Ceropegia nallamalayana** (K. Prasad & B. R. P. Rao) Kottaimuthu, *Int. J. Curr. Res. Biosci. Pl. Biol.* 6(10): 36, 2019. Basionym: *Brachystelma nallamalayanum*. [Sphalm. 'nallamalayanum'.]
- Ceropegia naorojii** (P. Tetali & al.) Kottaimuthu, *Int. J. Curr. Res. Biosci. Pl. Biol.* 6(10): 36, 2019. Basionym: *Brachystelma naorojii*.
- Ceropegia nigidiana** (Raja Kullayiswamy & al.) Kottaimuthu, *Int. J. Curr. Res. Biosci. Pl. Biol.* 6(10): 36, 2019. Basionym: *Brachystelma nigidianum*. [Sphalm. 'nigidianum'.]
- Ceropegia penchalakonensis** (Rasingam & al.) Kottaimuthu, *Int. J. Curr. Res. Biosci. Pl. Biol.* 6(10): 36, 2019. Basionym: *Brachystelma penchalakonense*. [Sphalm. 'penchalakonense'.]
- Ceropegia rangacharii** (Gamble) Kottaimuthu, *Int. J. Curr. Res. Biosci. Pl. Biol.* 6(10): 36, 2019. Basionym: *Brachystelma rangacharii*.
- Ceropegia sahyadrica** var. **karulensis** (Punekar & al.) Kambale & S. R. Yadav, *Rheedea* 29(1): 65, fig. 35 (p. 67), 2019. Basionym: *Ceropegia karulensis*.
- Ceropegia sarkariae** var. **longipedicellata** (Aditya) Kottaimuthu, *Int. J. Curr. Res. Biosci. Pl. Biol.* 6(10): 36, 2019. Basionym: *Caralluma sarkariae* var. *longipedicellata*.
- Ceropegia seshachalamensis** (K. Prasad & Prasanna) Kottaimuthu, *Int. J. Curr. Res. Biosci. Pl. Biol.* 6(10): 36, 2019. Basionym: *Brachystelma seshachalamense*. [Sphalm. 'seshachalamense'.]
- Ceropegia shrirangii** (Kambale & al.) Kottaimuthu, *Int. J. Curr. Res. Biosci. Pl. Biol.* 6(10): 36, 2019. Basionym: *Brachystelma shrirangii*.
- Ceropegia tanzaniensis** Peckover, *CactusWorld* 37(3): 174, ills. (pp. 173-176), 2019. Typus: *Peckover* 291 (PRU).
- Ceropegia truncatocoronata** (Sedgwick) Kottaimuthu, *Int. J. Curr. Res. Biosci. Pl. Biol.* 6(10): 37, 2019. Basionym: *Boucerosia truncatocoronata*.
- Ceropegia vemanae** (A. M. Reddy & al.) Kottaimuthu, *Int. J. Curr. Res. Biosci. Pl. Biol.* 6(10): 37, 2019. Basionym: *Brachystelma vemanae*.
- Clemensiella viracensis** (Kloppenburger & Siar) Kloppenburg, *Hoya New* 9(2): 22, 2019. Basionym: *Hoya viracensis*. [Basionym reference lacks page number but cites the correct work, and thus doubtfully valid under ICN Art. 41.8(d) since an English description is given and the type details for the replaced name are reproduced.]
- Dischidia parasita** (Blanco) Arshed & al., *Gard. Bull. Singapore* 71(2): 430, 2019. Basionym: *Marsdenia parasita*.
- Hoya ambrosiae** Kloppenburg, *Hoya New* 9(4): 3, ills. (pp. 3-6), 2019. Typus: *Hernaez* s.n. (CAHUP 5967).
- Hoya frakei** Kloppenburg, *Hoya New* 9(1): 3, ills. (pp. 3-5), 2019. Typus: *Frake* s.n. in *PNH* 38435 (PNH). [Based on the same collection as *Hoya merrillii* ssp. *frakei* Kloppenburg 2019.]

- Hoya gutierrezii** Kloppenburg, *Hoya New* 9(2): 12, illus. (pp. 12-14), 2019. Typus: *Gutierrez & al.* 645 (PNH 117633). [Based on the same collection as *H. samarensis* ssp. *gutierrezii* Kloppenburg 2014.]
- Hoya gutierrezii** ssp. **concordae** Kloppenburg, *Hoya New* 9(2): 15, illus. (pp. 15-16, 18), 2019. Typus: *Anonymus & al.* 32 (PNH 117016).
- Hoya merrillii** ssp. **frakei** Kloppenburg, *Hoya New* 9(3): 16, illus. (pp. 17-18), 2019. Typus: *Frake s.n.* in *PNH* 38435 (PNH). [Based on the same collection as *Hoya frakei* Kloppenburg 2019.]
- Hoya mindorensis** ssp. **bulusanensis** Kloppenburg, *Hoya New* 9(3): 21-22, illus. (pp. 21-23), 2019. Typus: *Sulit s.n.* (PNH 2792).
- Hoya mindorensis** ssp. **dinagatensis** Kloppenburg, *Hoya New* 9(3): 19-20, illus., 2019. Typus: *Geerlan & al. s.n.* (PNH 4747). [Repeated l.c. 9(5): 3-4, illus., 2019.]
- Hoya pandurata** ssp. **angustifolia** Rodda & K. Armstrong, *Brittonia* 71(4): 430, illus. (p. 431), 2019. Typus: *Armstrong & al.* 2931 (NY, ASM, E, RAF, SING).
- Hoya paziae** ssp. **montelbanensis** Kloppenburg, *Hoya New* 9(3): 10-11, illus., 2019. Typus: *Schlechter s.n.* (UC 13176). [The photograph on p. 9 at the apparent start of the paper does not belong here but with *H. merrillii* ssp. *frakei* on p. 16.]
- Hoya rigidifolia** S. Rahayu & Rodda, *Eur. J. Taxon.* 508: 12-13, fig. 1E-F, 2E-G (pp. 5-6), 2019. Typus: *Rahayu* 865 (BO).
- Hoya sumatrana** S. Rahayu & Rodda, *Eur. J. Taxon.* 508: 15-18, figs. 3-4, 2019. Typus: *Rahayu* 861 (BO, SING).
- Hoya tengchongensis** J. F. Zhang & al., *Nordic J. Bot.* 37(5): e02282: 2-3, illus., 2019. Typus: *Zhang* SCBG-20160702 (IBSC).

ASPHODELACEAE

- Aloe** 'Erensjucc' C. C. Walker & Mace, *CactusWorld* 37(1): 16, illus. (pp. 16-17, 19), 2019. [= *Aloe erensii* (female) × *A. jucunda*.]
- Aloe allochroa** L. E. Newton & Mwadime, *CactusWorld* 37(2): 139-140, illus., 2019. Typus: *Mwadime & Luke* 1979 (EA, K).
- Aloe* × **aubaredensis** Rebman, *Cact. Succ.* 11(2): 28, illus. (pp. 27-29), 2019. *Nom. inval.* (ICN Art. 39.2, 40.1). [= *Aloe droseroides* × *A. descoingsii*.]
- Aloe** × **gemmelliae** Gideon F. Smith & Figueiredo, *Phytotaxa* 423(3): 184-185, illus., 2019. Typus: *Smith* 1092 (PRU). [= *Aloe broomii* var. *broomii* × *A. grandidentata*.]
- Aloe** **sanguinalis** Awale & Barkworth, *PhytoKeys* 117: 89-90, illus. (pp. 87-88, 90-91), 2019. Typus: *Barkworth & al.* S17.001 (HARG).
- Aloestrela** Molteno & Gideon F. Smith, *Bradleya* 37: 4, 2019. Typus: *Aloe suzannae* Decary.
- Aloestrela suzannae** (Decary) Molteno & Gideon F. Smith, *Bradleya* 37: 5, illus., 2019. Basionym: *Aloe suzannae*.
- × **Alonialoe** M. H. J. van der Meer, *Cact. Phantast.* 2: 2, 2019. [= *Aloe* × *Gonialoe*.]
- × **Alonialoe desmetiana** (Baker) M. H. J. van der Meer, *Cact. Phantast.* 2: 2, 2019. Basionym: *Aloe* × *desmetiana*.
- × **Alostaloe** M. H. J. van der Meer, *Cact. Phantast.* 2: 2, 2019. [= *Aloe* × *Aristaloe*.]
- × **Aristeria** M. H. J. van der Meer, *Cact. Phantast.* 2: 3, 2019. [= *Aristaloe* × *Gasteria*.]
- × **Aristeria bedinghausii** (Radl) M. H. J. van der Meer, *Cact. Phantast.* 2: 3, 2019. Basionym: *Aloe* × *bedinghausii*.
- × **Aristeria beguinii** (Radl) M. H. J. van der Meer, *Cact. Phantast.* 2: 3, 2019. Basionym: *Aloe* × *beguinii*.
- × **Aristeria lapaixii** (Radl) M. H. J. van der Meer, *Cact. Phantast.* 2: 4, 2019. Basionym: *Aloe* × *lapaixii*.
- × **Aristeria nowotnyi** (Radl) M. H. J. van der Meer, *Cact. Phantast.* 2: 5, 2019. Basionym: *Aloe* × *nowotnyi*.
- × **Astroworthopsis** M. H. J. van der Meer, *Cact. Phantast.* 2: 9, 2019. [= *Astroloba* × *Ha-worthopsis*.]
- Gasteria langebergensis** (van Jaarsveld) van Jaarsveld & Zonneveld, *Bradleya* 37: 168, illus. (pp. 168-169), 2019. Basionym: *Gasteria disticha* var. *langebergensis*. [Name given as "sp. nov." but with basionym reference and hence treated as combination.]
- × **Gastonialoe pethamensis** (Baker) M. H. J. van der Meer, *Cact. Phantast.* 2: 7, 2019. Basionym: *Gasteria* × *pethamensis*.

- ×**Gastoniae pfrimmeri** (Guillaumin) M. H. J. van der Meer, *Cact. Phantast.* 2: 6, 2019. Basionym: ×*Gasteraloe pfrimmeri*.
- ×**Gastoniae radlii** (L. E. Newton) M. H. J. van der Meer, *Cact. Phantast.* 2: 6, 2019. Basionym: ×*Gasteraloe radlii*.
- ×**Gastoniae rebutii** (hort. ex A. Berger) M. H. J. van der Meer, *Cact. Phantast.* 2: 6, 2019. Basionym: *Aloe rebutii*.
- ×**Gastoniae sculptilis** (G. D. Rowley ex L. E. Newton) M. H. J. van der Meer, *Cact. Phantast.* 2: 6, 2019. Basionym: ×*Gasteraloe sculptilis*.
- ×**Gastoniae smaragdina** (hort. ex A. Berger) M. H. J. van der Meer, *Cact. Phantast.* 2: 7, 2019. Basionym: *Aloe smaragdina*.
- ×**Goniloba** M. H. J. van der Meer, *Cact. Phantast.* 2: 7, 2019. [= *Gonialoe* × *Astroloba*.]

ASTERACEAE

- Crassothonna agaatbergensis** Swanepoel, *Phytotaxa* 427(3): 210-212, ills., 2019. Typus: *Swanepoel* 368 (WIND, PRE, PRU).
- Othonna** Ser. **Disciformes** Magoswana & J. C. Manning, *Ann. Missouri Bot. Gard.* 104(4): 555, 2019. Typus: *Doria gymnodiscus* De Candolle.
- Othonna** Ser. **Heterophyllae** Magoswana & J. C. Manning, *Ann. Missouri Bot. Gard.* 104(4): 525, 2019. Typus: *Othonna heterophylla* Linné *fil.*
- Othonna** Ser. **Perfoliatae** Magoswana & J. C. Manning, *Ann. Missouri Bot. Gard.* 104(4): 549, 2019. Typus: *Cineraria perfoliata* Linné *fil.*
- Othonna** Ser. **Undulosae** Magoswana & J. C. Manning, *Ann. Missouri Bot. Gard.* 104(4): 552, 2019. Typus: *Doria undulosa* De Candolle 1838.
- Othonna lilacina** Magoswana & J. C. Manning, *Ann. Missouri Bot. Gard.* 104(4): 532-533, fig. 12 (p. 535), 2019. Typus: *Hall* 575 (NBG).
- Othonna nigromontana** Magoswana & J. C. Manning, *Ann. Missouri Bot. Gard.* 104(4): 538-539, fig. 16 (p. 539), 2019. Typus: *Compton* 7137 (NBG).

- Othonna revoluta** Magoswana & J. C. Manning, *Ann. Missouri Bot. Gard.* 104(4): 559-561, fig. 31, 2019. Typus: *Hall* 3518 (NBG).
- Othonna sinuata** Magoswana & J. C. Manning, *Ann. Missouri Bot. Gard.* 104(4): 546, fig. 22 (p. 547), 2019. Typus: *Barker* 9726 (NBG).
- Senecio voigtii** van Jaarsveld, *Fl. Pl. Africa* 66: 160, ills. (t. 2359, pp. 162-164), 2019. Typus: *van Jaarsveld & Voigt* 26297 (NBG).

BASELLACEAE

- Basella keralensis** A. Farooqui & al., *Grana* 58(6): 402, ills. (pp. 404-405), 2019. Typus: BSIP Slide No. 15822. [Fossil species, described on the base of pollen.]

BROMELIACEAE

- Dyckia abstrusa** (A. Castellanos) Forzza, *Syst. Biodivers.* 17(5): 484, 2019. Basionym: *Abromeitiella abstrusa*.
- Dyckia agavoides** (Forzza & Zappi) Forzza, *Syst. Biodivers.* 17(5): 484, 2019. Basionym: *Encholirium agavoides*.
- Dyckia andina** Forzza, *Syst. Biodivers.* 17(5): 484, 2019. Typus: *Lorentz & Hieronymus* 947 p.p. (GOET [lecto], CORD). [*Nom. nov. pro Navia brevifolia* Grisebach 1879 (non *Dyckia brevifolia* Baker 1871).]
- Dyckia apiumensis** P. J. Braun & Gastaldi, *Bromelie* 2019(2): 89, ills. (pp. 88-92), 2019. Typus: *Müller & Gastaldi* s.n. (HBR).
- Dyckia ascendens** (Leme) Forzza, *Syst. Biodivers.* 17(5): 484, 2019. Basionym: *Encholirium ascendens*.
- Dyckia brachypoda** (L. B. Smith & Read) Forzza, *Syst. Biodivers.* 17(5): 484, 2019. Basionym: *Encholirium brachypodum*.
- Dyckia brevispicata** (Rauh & L. Hromadnik) Forzza, *Syst. Biodivers.* 17(5): 484, 2019. Basionym: *Deuterocohnia brevispicata*.
- Dyckia caudata** Forzza, *Syst. Biodivers.* 17(5): 484, 2019. Typus: *Belem* 1620 (US, CEP, NY, UB). [*Nom. nov. pro Encholirium*

- gracile* L. B. Smith 1968 (*non Dyckia gracilis* Mez 1896). Author reference incorrectly given with L. B. Smith as bracket author.]
- Dyckia chrysantha** (Philippi) Forzza, Syst. Biodivers. 17(5): 484, 2019. Basionym: *Pitcairnia chrysantha*.
- Dyckia ctenophylla** (Forzza & Zappi) Forzza, Syst. Biodivers. 17(5): 484, 2019. Basionym: *Encholirium ctenophyllum*.
- Dyckia diamantina** (Forzza) Forzza, Syst. Biodivers. 17(5): 484, 2019. Basionym: *Encholirium diamantinum*.
- Dyckia digitata** (L. B. Smith) Forzza, Syst. Biodivers. 17(5): 484, 2019. Basionym: *Deuterocohnia digitata*.
- Dyckia disjuncta** (Forzza) Forzza, Syst. Biodivers. 17(5): 484, 2019. Basionym: *Encholirium disjunctum*.
- Dyckia eddie-estevessii** (Leme & Forzza) Forzza, Syst. Biodivers. 17(5): 484, 2019. Basionym: *Encholirium eddie-estevessii*.
- Dyckia erectiflora** (L. B. Smith) Forzza, Syst. Biodivers. 17(5): 484, 2019. Basionym: *Encholirium erectiflorum*.
- Dyckia fragae** (Forzza) Forzza, Syst. Biodivers. 17(5): 484, 2019. Basionym: *Encholirium fragae*.
- Dyckia gableana** (R. Vásquez & Ibsch) Forzza, Syst. Biodivers. 17(5): 484, 2019. Basionym: *Deuterocohnia gableana*.
- Dyckia haumanii** (A. Castellanos) Forzza, Syst. Biodivers. 17(5): 484, 2019. Basionym: *Deuterocohnia haumanii*.
- Dyckia hennigiana** Gomes-da-Silva & Forzza, Syst. Biodivers. 17(5): 485, 2019. Typus: *Irwin & al.* 23573 (US, NY, UB). [*Nom. nov. pro Encholirium irwinii* L. B. Smith 1970 (*non Dyckia irwinii* L. B. Smith 1967).]
- Dyckia horrida** (L. B. Smith) Forzza, Syst. Biodivers. 17(5): 485, 2019. Basionym: *Encholirium horridum*.
- Dyckia lotteae** (Rauh) Forzza, Syst. Biodivers. 17(5): 485, 2019. Basionym: *Abromeitiella lotteae*.
- Dyckia luxor** (L. B. Smith & Read) Forzza, Syst. Biodivers. 17(5): 485, 2019. Basionym: *Encholirium luxor*.
- Dyckia lymaniana** (E. Pereira & Martinelli) Forzza, Syst. Biodivers. 17(5): 485, 2019. Basionym: *Encholirium lymanianum*.
- Dyckia magalhaesii** (L. B. Smith) Forzza, Syst. Biodivers. 17(5): 485, 2019. Basionym: *Encholirium magalhaesii*.
- Dyckia maxima** (Forzza & Leme) Forzza, Syst. Biodivers. 17(5): 485, 2019. Basionym: *Encholirium maximum*.
- Dyckia meziana* (Kuntze ex Mez) Forzza, Syst. Biodivers. 17(5): 485, 2019. *Nom. illeg.* (ICN Art. 53.1), based on *Deuterocohnia meziana*. [*Non Dyckia meziana* Kuntze 1898.]
- Dyckia meziana* ssp. *carmineoviridiflora* (Rauh) Forzza, Syst. Biodivers. 17(5): 485, 2019. Incorrect name (ICN Art. 11.4), based on *Deuterocohnia meziana* var. *carmineoviridiflora*.
- Dyckia meziana* ssp. *pedicellata* (W. Till) Forzza, Syst. Biodivers. 17(5): 485, 2019. Incorrect name (ICN Art. 11.4), based on *Deuterocohnia pedicellata*.
- Dyckia meziana* ssp. *vallegrandensis* (Gómez Romero & al.) Forzza, Syst. Biodivers. 17(5): 485, 2019. Incorrect name (ICN Art. 11.4), based on *Deuterocohnia meziana* ssp. *vallegrandensis*.
- Dyckia meziana* ssp. *vogtii* (N. Schütz) Forzza, Syst. Biodivers. 17(5): 485, 2019. Incorrect name (ICN Art. 11.4), based on *Deuterocohnia meziana* ssp. *vogtii*.
- Dyckia penduliflora** Forzza, Syst. Biodivers. 17(5): 485, 2019. Typus: *Kranz* 393 (RB). [*Nom. nov. pro Encholirium kranzianum* Leme & Forzza 2015 (*non Dyckia kranziana* Leme 2011).]
- Dyckia pierre-braunii** (Esteves) Forzza, Syst. Biodivers. 17(5): 485, 2019. Basionym: *Encholirium pierre-braunii*. [Sphalm. 'pierrebraunii']
- Dyckia pulchra** (Forzza & al.) Forzza, Syst. Biodivers. 17(5): 485, 2019. Basionym: *Encholirium pulchrum*.
- Dyckia recurvipetala** (E. Gross) Forzza, Syst. Biodivers. 17(5): 485, 2019. Basionym: *Deuterocohnia recurvipetala*.
- Dyckia reflexa** (Forzza & Wanderley) Forzza, Syst. Biodivers. 17(5): 485, 2019. Basionym: *Encholirium reflexum*.
- Dyckia scapigera** (Rauh & L. Hromadník) Forzza, Syst. Biodivers. 17(5): 485, 2019. Basionym: *Abromeitiella scapigera*.
- Dyckia schreiteri** (A. Castellanos) Forzza, Syst. Biodivers. 17(5): 485, 2019. Basionym: *Deuterocohnia schreiteri*.

- Dyckia seramisiana** (R. Vásquez & al.) Forzza, Syst. Biodivers. 17(5): 485, 2019. Basionym: *Deuterocohnia seramisiana*.
- Dyckia splendida* (Forzza) Forzza, Syst. Biodivers. 17(5): 485, 2019. *Nom. illeg.* (ICN Art. 53.1), based on *Encholirium splendidum*. [*Non Dyckia splendida* Esteves & Gouda 2018.]
- Dyckia strobilifera** (Mez) Forzza, Syst. Biodivers. 17(5): 486, 2019. Basionym: *Deuterocohnia strobilifera*.
- Dyckia vilsonii** P. J. Braun & Gastaldi, Bromelia 2019(2): 83, ills. (pp. 82-87), 2019. Typus: Müller & Gastaldi s.n. (HBR).
- Dyckia viridicentra** (Leme & O. B. C. Ribeiro) Forzza, Syst. Biodivers. 17(5): 486, 2019. Basionym: *Encholirium viridicentrum*.
- Dyckia viridis** (P. J. Braun & Esteves) Forzza, Syst. Biodivers. 17(5): 486, 2019. Basionym: *Encholirium viride*.
- Dyckia vogelii** (Rauh) Forzza, Syst. Biodivers. 17(5): 486, 2019. Basionym: *Encholirium vogelii*.
- Dyckia yunguensis** Forzza, Syst. Biodivers. 17(5): 486, 2019. Typus: *Hromadnik* 5167 (WU). [*Nom. nov. pro Deuterocohnia glandulosa* E. Gross 1990 (*non Dyckia glandulosa* L. B. Smith & Reitz 1967).]

CACTACEAE

- Arthrocerus damazioi* Romulski, Kakt. Inne 11(2): 58, ill., 2019. Typus: [icono:] Monatsschr. Kakt.-kunde 28: pl. opposite p. 62, 1918.. *Nom. illeg.* (ICN Art. 53.1). [*Non Arthrocerus damazioi* (K. Schumann) P. V. Heath 1992.]
- Aylostera kupperiana** var. **tenuis** Diers & Jucker, Succulenta (Netherlands) 98(2): 74, ills. (pp. 73-75, 78, 80-81), 2019. Typus: *Jucker* 595 (LPB, WU).
- Aztekium ritteri** var. **rotundum** Snicer & Kunte, Kaktusy (Brno) 50(Speciál 1): 20, ills. (pp. 18, 20), 2019. Typus: *Anonymus (ex cult. R. Grym)* s.n. (PRC 455663).
- ×**Borageocereus** M. H. J. van der Meer, Cact. Phantast. 4(1): 1, 2019. [= *Borzicactus* × *Haageocereus*.]
- Borzicactus fieldianus** ssp. **cajamarcensis** (F. Ritter) Lodé, Int. Cact.-Advent. 31(1): 20, ills. (p. 21), 2019. Basionym: *Borzicactus cajamarcensis*.
- Borzicactus guamanienis* M. Burghardt, Swiat Kakt. (Warsaw, 1966+) [52](1): 72, figs. 50-57 (pp. 33-36), 2019. Based on *Burghardt* 075.02. *Nom. inval.* (ICN Art. 36.1c, 40.1). [Volume erroneously given as vol. 47. Published as synonym and without typification.]
- Borzicactus sepium** ssp. **morleyanus** (Britton & Rose) Lodé, Int. Cact.-Advent. 31(1): 22, ills., 2019. Basionym: *Borzicactus morleyanus*.
- Borzicactus sepium** ssp. **ventimigliae** (Riccobono) Lodé, Int. Cact.-Advent. 31(1): 23, ills. (pp. 23-25), 2019. Basionym: *Borzicactus ventimigliae*.
- Borzicactus sepium** ssp. **websterianus** (Backeberg) Lodé, Int. Cact.-Advent. 31(1): 25, ills. (p. 26), 2019. Basionym: *Borzicactus websterianus*.
- Borzicactus silvaticus** Janke, Kakt. and. Sukk. 70(2): 50, ills. (pp. 49-52, 54), 2019. Typus: *Janke* 10420 (USM).
- ×**Borzicana** M. H. J. van der Meer, Cact. Phantast. 3(3): 26, 2019. [= *Borzicactus* × *Matucana*.]
- ×**Borzicana mirabilis** (Buining) M. H. J. van der Meer, Cact. Phantast. 3(3): 26, 2019. Basionym: *Matucana mirabilis*.
- ×**Borzichocereus** M. H. J. van der Meer, Cact. Phantast. 4(1): 1, 2019. [= *Borzicactus* × *Trichoereus*.]
- ×**Borzivia** M. H. J. van der Meer, Cact. Phantast. 3(3): 26, 2019. [= *Borzicactus* × *Lobivia*.]
- ×**Borzivia cintiae** (Halda & al.) M. H. J. van der Meer, Cact. Phantast. 3(3): 27, 2019. Basionym: ×*Chamaezicactus cintiae*.
- Cephalocereus parvispinus** S. Arias & al., Phytotaxa 392(2): 150-151, ills. (pp. 151-152), 2019. Typus: *Tapia & al.* 038 (ME-XU, FEZA).
- ×**Cephexbaumia** M. H. J. van der Meer, Cact. Phantast. 3(3): 27, 2019. [= *Cephalocereus* × *Neobuxbaumia*.]
- Cereus ayisyen** M. H. J. van der Meer, Cact. Phantast. 4(2): 12, 2019. Typus: *Leonard & Leonard* 13311 (US, NY). [*Nom. nov. pro Cereus haitiensis* A. R. Franck & Peguero 2017 (*nom. illeg.* ICN Art. 53.1), but depending on the interpretation of the involved

- names illegitimate vs. *Cereus serruliflorus* Haworth 1830.]
- ×**Cleovia** M. H. J. van der Meer, Cact. Phantast. 4(1): 2, 2019. [Valid under ICN H6.2 if the letter 'o' is interpreted as "connecting vowel".] [= *Cleistocactus* × *Lobivia*.]
- Copiapoa cinerea** nssp. **scopa** (Doweld) M. van der Meer, Cact. Phantast. 3(3): 28, 2019. Basionym: *Copiapoa* × *scopa*.
- Cylindropuntia acanthocarpa** ssp. **ramosa** (Peebles) M. A. Baker & Cloud-Hughes, Madroño 66(3): 93, 2019. Basionym: *Opuntia acanthocarpa* var. *ramosa*.
- Cylindropuntia alcahes** ssp. **gigantensis** (Rebman) U. Guzmán ex Rebman, Madroño 66(3): 93, 2019. Basionym: *Cylindropuntia alcahes* var. *gigantensis*. [First published invalidly based on the then invalidly published basionym (ICN 39.2, 40.1, cf. RPS 54) by U. Guzmán, Cact. Syst. Init. 16: 16, 2003.]
- Cylindropuntia alcahes** ssp. **mcgillii** (Rebman) U. Guzmán ex Rebman, Madroño 66(3): 93, 2019. Basionym: *Cylindropuntia alcahes* var. *mcgillii*. [First published invalidly based on the then invalidly published basionym (ICN 39.2, 40.1, cf. RPS 54) by U. Guzmán, Cact. Syst. Init. 16: 16, 2003.]
- Cylindropuntia ganderi** ssp. **catavinensis** (Rebman) U. Guzmán ex Rebman, Madroño 66(3): 93, 2019. Basionym: *Cylindropuntia ganderi* var. *catavinensis*. [First published invalidly based on the then invalidly published basionym (ICN 39.2, 40.1, cf. RPS 54) by U. Guzmán, Cact. Syst. Init. 16: 16, 2003.]
- Cylindropuntia imbricata** ssp. **rosea** (De Candolle) M. A. Baker, Madroño 66(3): 93, 2019. Basionym: *Opuntia rosea*.
- Cylindropuntia imbricata** ssp. **spinosior** (Engelmann) M. A. Baker & al., Madroño 66(3): 93, 2019. Basionym: *Opuntia whipplei* var. *spinosior*.
- Cylindropuntia imbricata** ssp. **spinotecta** (Griffiths) M. A. Baker, Madroño 66(3): 95, 2019. Basionym: *Opuntia spinotecta*.
- Cylindropuntia thurberi** ssp. **versicolor** (Engelmann ex J. M. Coulter) M. A. Baker, Madroño 66(3): 95, 2019. Basionym: *Opuntia versicolor*.
- Cylindropuntia whipplei** ssp. **enodis** (Peebles) M. A. Baker, Madroño 66(3): 95, ill. (p. 94), 2019. Basionym: *Opuntia whipplei* var. *enodis*.
- Discocactus heptacanthus** ssp. **goiasensis** P. J. Braun, Kakt. and. Sukk. 70(11): 347, ill. (pp. 342-344, 348), 2019. Typus: *Tank* 1837 (RB, HBR, JOI, SP).
- ×**Disoselenicereus hildmannii** (Hildmann) M. H. J. van der Meer, Cact. Phantast. 4(1): 2, ill. (p. 12), 2019. Basionym: *Phyllocactus* × *hildmannii*.
- ×**Echinocephala** M. H. J. van der Meer, Cact. Phantast. 4(1): 2, 2019. [= *Echinocactus* × *Homalocephala*.]
- Echinocereus engelmannii** ssp. **magnursensis** Berresford & M. Terry, Echinocereenfreund 32(4): 103-104, ill. (pp. 93-100, 115-116, 120), 2019. Typus: *Berresford & Terry* 7479 (SRSC 10092).
- ×**Elbakyanara** M. H. J. van der Meer, Cact. Phantast. 4(1): 3, 2019. [= *Aporocactus* × *Disocactus* × *Epiphyllum*.]
- Epiphyllanthus obtusangulus** fa. **candidus** (Löfgren) Guiggi, Kakt. and. Sukk. 70(7): 200, 2019. Basionym: *Zygocactus candidus*.
- Epithelantha potosina** (D. Donati & Zanovello) D. Aquino & S. Arias, Syst. Bot. 44(3): 612, 2019. Basionym: *Epithelantha greggii* ssp. *potosina*.
- Epithelantha pulchra** (D. Donati & Zanovello) D. Aquino & S. Arias, Syst. Bot. 44(3): 612, 2019. Basionym: *Epithelantha pachyrhiza* ssp. *pulchra*.
- Eriocephala claviceps** ssp. **itaubensis** Gapon & al., Kakt.-Klub 19(1): 54, ill. (pp. 48-53, 55), 2019. Typus: *Gapon* 17-1623/7203 (WU, WU).
- Eriosyce** Sect. **Campanulatae** P. C. Guerrero & Helmut Walter, Taxon 68(3): 566-567, 2019. Typus: *Pyrrhocactus marksianus* F. Ritter.
- Eriosyce** Sect. **Diaguita** P. C. Guerrero & Helmut Walter, Taxon 68(3): 567-568, 2019. Typus: *Thelocephala tenebrica* F. Ritter.
- Eriosyce** Sect. **Horridocactus** (Backeberg) P. C. Guerrero & Helmut Walter, Taxon 68(3): 567, 2019. Basionym: *Horridocactus*.
- Eriosyce** Sect. **Pyrrhocactus** (A. Berger) P. C. Guerrero & Helmut Walter, Taxon 68(3): 567, 2019. Basionym: *Pyrrhocactus*.
- Eriosyce armata** (F. Ritter) P. C. Guerrero & Helmut Walter, Taxon 68(3): 567, 2019. Basionym: *Pyrrhocactus armatus*.
- Eriosyce atroviridis** (F. Ritter) P. C. Guerrero & Helmut Walter, Taxon 68(3): 568, 2019. Basionym: *Pyrrhocactus atroviridis*.

- Eriosyce castanea** (F. Ritter) P. C. Guerrero & Helmut Walter, Taxon 68(3): 568, 2019. Basionym: *Neoporteria castanea*.
- Eriosyce coimasensis** (F. Ritter) P. C. Guerrero & Helmut Walter, Taxon 68(3): 568, 2019. Basionym: *Neoporteria coimasensis*.
- Eriosyce duripulpa** (F. Ritter) P. C. Guerrero & Helmut Walter, Taxon 68(3): 567, 2019. Basionym: *Chileorebutia duripulpa*.
- Eriosyce elquiensis** (Kattermann) P. C. Guerrero & Helmut Walter, Taxon 68(3): 568, 2019. Basionym: *Eriosyce senilis* ssp. *elquiensis*.
- Eriosyce fankhauseri** (F. Ritter) P. C. Guerrero & Helmut Walter, Taxon 68(3): 568, 2019. Basionym: *Thelocephala fankhauseri*.
- Eriosyce fulva** (F. Ritter) P. C. Guerrero & Helmut Walter, Taxon 68(3): 569, 2019. Basionym: *Thelocephala fulva*. [Given as combination for the invalid nude name *Chileorebutia fulva* F. Ritter 1960, but the subsequent validation as *Thelocephala fulva* F. Ritter 1980 is also cited and provides the basionym name.]
- Eriosyce glabrescens** (F. Ritter) P. C. Guerrero & Helmut Walter, Taxon 68(3): 569, 2019. Basionym: *Chileorebutia glabrescens*.
- Eriosyce litoralis** (F. Ritter) P. C. Guerrero & Helmut Walter, Taxon 68(3): 568, 2019. Basionym: *Neoporteria litoralis*.
- Eriosyce malleolata** (F. Ritter) P. C. Guerrero & Helmut Walter, Taxon 68(3): 568-569, 2019. Basionym: *Chileorebutia malleolata*.
- Eriosyce nigrihorrida** (Backeberg ex A.W.Hill) P. C. Guerrero & Helmut Walter, Taxon 68(3): 568, 2019. Basionym: *Chilena nigrihorrida*.
- Eriosyce riparia** (Mächler & Helmut Walter) P. C. Guerrero & Helmut Walter, Taxon 68(3): 568, 2019. Basionym: *Eriosyce napina* ssp. *riparia*.
- Eriosyce spinosior* (F. Ritter) P. C. Guerrero & Helmut Walter, Taxon 68(3): 567, 2019. Incorrect name (ICN Art. 11.4, 52.4), based on *Pyrrhocactus jussieui* var. *spinosior*. [Nomenclaturally superfluous since names with priority at species rank are included in the synonymy.]
- Eulychnia vallenarensis** P. C. Guerrero & Helmut Walter, Phytotaxa 392(1): 89, 2019. Typus: *Guerrero* 1258 (CONC).
- Gymnocalycium** nsubgen. **Macrocalycium** M. van der Meer, Cact. Phantast. 3(1): 5, 2019. Typus: not designated, and not needed. = subgen. *Gymnocalycium* × subgen. *Macrosemineum*.
- Gymnocalycium** nsubgen. **Mascabroseminum** M. van der Meer, Cact. Phantast. 3(1): 5, 2019. Typus: not designated, and not needed. = subgen. *Macrosemineum* × subgen. *Scabroseminum*.
- Gymnocalycium** nsubgen. **Scabrocalycium** M. van der Meer, Cact. Phantast. 3(1): 5, 2019. Typus: not designated, and not needed. = subgen. *Gymnocalycium* × subgen. *Scabroseminum*.
- Gymnocalycium acentracanthum** (F. Berger) Nycz, Gymnocalycium New Classif., 19, 2021. Basionym: *Gymnocalycium ritterianum* var. *acentracanthum*. [Basionym rank erroneously given as ssp.]
- Gymnocalycium cardenasianum* var. *multicostatum* Milt, Cactaceae etc. 39(1): 25, ill., 2019. Based on *LF* 619. *Nom. inval.* (ICN Art. 36.1b, 39.1). [Name used as provisional name in the caption of an illustration.]
- Gymnocalycium cardenasianum** var. **pseudocrassispinum** Milt, Cactaceae etc. 39(1): 29-31, ill., 2019. Typus: *Milt* 959 (OLM).
- Gymnocalycium** × **contractum** (Hildmann) M. H. J. van der Meer, Cact. Phantast. 3(1): 1, 2019. Basionym: *Echinocactus contractus*.
- Gymnocalycium gaponii** ssp. **macrocarpum** Repka, Gymnocalycium 32(1): 1306-1308, ill. (pp. 1303-1309), 2019. Typus: *Repka* 492 (PR).
- Gymnocalycium hyptiacanthum** ssp. **callistum** Prestlé, Gymnocalycium 32(2): 1317-1318, ill., 2019. Typus: *Prestlé* 1062 (RB).
- Gymnocalycium hyptiacanthum** ssp. **rotundatum** Prestlé, Gymnocalycium 32(2): 1317, ill., 2019. Typus: *Prestlé* 933-A (RB).
- Gymnocalycium** × **incurvatispinum** (R. Sperling & Strub) Repka, Gymnocalycium 32(4): 1342, ill. (pp. 1339, 1341-1342), 2019. Basionym: *Gymnocalycium kuehhasii* ssp. *incurvatispinum*. [Interpreted as the hybrid *G. kuehhasii* × *G. quehlianum*.]
- Gymnocalycium** × **intermedium** (Hildmann) M. H. J. van der Meer, Cact. Phantast. 3(1): 2, 2019. Basionym: *Echinocactus denudatus* var. *intermedius*.

- Gymnocalycium kuehhasii** ssp. **corneispinum** R. Sperling & Strub, *Schütziana* 10: 43, ills. (pp. 44-45), 2019. Typus: *Schädlich* 10-807 (WU 4117). [Sphalm. 'corneispinum'.]
- Gymnocalycium kuehhasii** ssp. **incurvatispinum** R. Sperling & Strub, *Schütziana* 10(2): 50-51, ills. (pp. 47-49, 51), 2019. Typus: *Sperling* 142-63-2013 (WU 4116).
- ×**Haagivia** M. H. J. van der Meer, *Cact. Phantast.* 4(1): 3, 2019. [= *Haageocereus* × *Lobivia*.]
- ×**Heuffara** M. H. J. van der Meer, *Cact. Phantast.* 3(3): 29, 2019. [= *Echinopsis* × *Lobivia* × *Rebutia*.]
- Horridocactus aspillagae** (Söhrens) Matuszewski, *Xerophilia* 8(1): 5, ills. (pp. 6-9), 2019. Basionym: *Echinocactus aspillagae*. [Name casually validated in the prosa text.]
- Horridocactus aspillagae** ssp. **maechlerorum** (Helmut Walter) Matuszewski, *Xerophilia* 8(1): 7, ills. (pp. 10-14), 2019. Basionym: *Eriosyce aspillagae* ssp. *maechlerorum*. [Name casually validated in the prosa text.]
- ×**Isillocactus** (P. V. Heath) M. H. J. van der Meer, *Cact. Phantast.* 3(3): 29, 2019. Basionym: ×*Stenilloctactus* nsect. *Isillocactus*. [Probably better treated as new name, rather than new status, since the alleged basionym was published with a problematic spelling ('Isillocactus') and as nothosection under an illegitimate nothogenus.] [= *Isolatocereus* × *Myrtillocactus*.]
- ×**Isillocactus glassii** (P. V. Heath) M. H. J. van der Meer, *Cact. Phantast.* 3(3): 29, 2019. Basionym: ×*Rathbunilloctactus glassii*.
- Kadencarpus horripilus** (Lemaire) Vázquez-Sánchez, *Bot. J. Linn. Soc.* 190(4): 415-416, 2019. Basionym: *Mammillaria horripila*.
- Kadencarpus pseudomacrochele** ssp. **krainzianus** (Gerhart Frank) Vázquez-Sánchez, *Bot. J. Linn. Soc.* 190(4): 416, 2019. Basionym: *Toumeyia krainziana*.
- Kadencarpus pseudomacrochele** ssp. **minimus** (Gerhart Frank) Vázquez-Sánchez, *Bot. J. Linn. Soc.* 190(4): 416, 2019. Basionym: *Turbincarpus krainzianus* fa. *minimus*.
- Leucosteale litoralis** (Johow) P. C. Guerrero & Helmut Walter, *Phytotaxa* 392(1): 90, 2019. Basionym: *Cereus litoralis*.
- Leucosteale nigripilis** (Philippi) P. C. Guerrero & Helmut Walter, *Phytotaxa* 392(1): 90, 2019. Basionym: *Cereus nigripilis*.
- Leucosteale skottsbergii** (Skottsberg) P. C. Guerrero & Helmut Walter, *Phytotaxa* 392(1): 90, 2019. Basionym: *Trichocereus skottsbergii*. [Basionym erroneously given as "*Cereus skottsbergii*", correctable under ICN Art. 41.6.]
- Lobivia** ×**francescae** (Halda & al.) M. H. J. van der Meer, *Cact. Phantast.* 4(1): 3, 2019. Basionym: ×*Chamaebivia francescae*.
- Lobivia haematantha* var. *clavata* Rausch ex Wutzler, *Echinopseen* 16(2): 188-190, ills., 2019. Based on *Rausch* 25. *Nom. inval.* (ICN Art. 36.1, 39.1). [Used as provisional nude name, attributed to Rausch 2008.]
- ×**Loxicactus** M. H. J. van der Meer, *Cact. Phantast.* 4(1): 4, 2019. [= *Loxanthocereus* × *Borzicactus*.]
- ×**Loxoa** M. H. J. van der Meer, *Cact. Phantast.* 3(3): 30, 2019. [Erroneously published with P. V. Heath as bracket author] [= *Loxanthocereus* × *Espostoa*.]
- Maihueiopsis leoncito** (Werdermann) F. Ritter ex P. C. Guerrero & Helmut Walter, *Phytotaxa* 392(1) 91, 2019. Basionym: *Opuntia leoncito*. [First published invalidly (ICN Art. 41.5) by F. Ritter, *Kakt. Südamer.* 3: 875, 1980, and erroneously shown as valid in RPS 31.]
- Mammillaria thomsonii* Füleki & Varga, *Swiat Kakt.* (Warsaw, 1966+) Index cards 799-800, ills., 2019. Based on *Hellinx* 118. *Nom. inval.* (ICN Art. 39.1, 39.2). [Used as provisional name, ascribed to "W. Hellinx 2013". Name apparently first used in an internet paper "Mammillaria of the Month" in April 2013.]
- ×**Mammillivia** M. H. J. van der Meer, *Cact. Phantast.* 4(1): 4, 2019. [Sphalm. 'Mamillivia'.] [= *Mammillaria* × *Lobivia*; without any indication that this hybrid with very unlikely parentage really exists, and merely referring back to ×*Chamaecladodia* P. V. Heath 1992.]
- Matucana intertexta** ssp. **jankei** Ciego & Pino, *Int. Cact.-Advent.* 31(1): 3-5, ills., 2019. Typus: *Ciezo Padilla* RRP-1341 (USM).
- Melocactus heimenii** P. J. Braun & Gonçalves Brito, *Kakt. and. Sukk.* 70(10): 310, ills. (pp. 308, 311-313), 2019. Typus: *Gonçalves Brito* 7 (RB, HBR, SP).
- Melocactus utubambensis* Wittner, *Cact. Explorer* 24: 51-52, fig. 8-9, 2019. *Nom. inval.* (ICN Art. 38.1a, 40.1). [Name used as nude

- name in captions.]
- Neolloydia viescaensis** D. Felix & Dosedal, Mitteilungsbl. Arbeitskreises Mammillarienfr. 43(2): 92, ills. (pp. 82-83, 88, 92, 95), 2019. Typus: *Felix & Hinton* 197.05.07 (GBH 29901).
- ×**Nogginsia** M. H. J. van der Meer, Cact. Phantast. 4(1): 4, 2019. [= *Notocactus* × *Wigginsia*.]
- Notocactus concinnus* fa. *longispinus* Wolfgang Prauser, Internoto 40(4): 127, ill., 2019. *Nom. inval.* (ICN Art. 36.1, 40.1). [Published as provisional name.]
- Notocactus concinnus* fa. *porore* Wolfgang Prauser, Internoto 40(4): 134, ill., 2019. *Nom. inval.* (ICN Art. 36.1, 40.1). [Published as provisional name.]
- Notocactus concinnus* var. *arevaloensis* Wolfgang Prauser, Internoto 40(4): 124, ill., 2019. *Nom. inval.* (ICN Art. 36.1, 40.1). [Published as provisional name.]
- Notocactus concinnus* var. *ballenarensis* Wolfgang Prauser, Internoto 40(4): 93, ill., 2019. *Nom. inval.* (ICN Art. 36.1, 40.1). [Published as provisional name.]
- Notocactus concinnus* var. *brevispinus* Wolfgang Prauser, Internoto 40(4): 98, ill., 2019. *Nom. inval.* (ICN Art. 36.1, 40.1). [Published as provisional name.]
- Notocactus concinnus* var. *bruneispinus* Wolfgang Prauser, Internoto 40(4): 138, ill., 2019. *Nom. inval.* (ICN Art. 36.1, 40.1). [Published as provisional name, with the alternate spelling 'brunispinus' simultaneously used.]
- Notocactus concinnus* var. *caespitosus* Wolfgang Prauser, Internoto 40(4): 92, ill., 2019. *Nom. inval.* (ICN Art. 36.1, 40.1). [Published as provisional name.]
- Notocactus concinnus* var. *fimbriatiflorus* Wolfgang Prauser, Internoto 40(4): 91, ill., 2019. *Nom. inval.* (ICN Art. 36.1, 40.1). [Published as provisional name.]
- Notocactus concinnus* var. *nigrispinus* Wolfgang Prauser, Internoto 40(4): 98-99, ill., 2019. *Nom. inval.* (ICN Art. 36.1, 40.1). [Published as provisional name.]
- Notocactus concinnus* var. *nigroleptacanthus* Wolfgang Prauser, Internoto 40(4): 114-115, ills., 2019. *Nom. inval.* (ICN Art. 36.1, 40.1). [Published as provisional name.]
- Notocactus concinnus* var. *olimarensis* Wolfgang Prauser, Internoto 40(4): 128, ill., 2019. *Nom. inval.* (ICN Art. 36.1, 40.1). [Published as provisional name.]
- Notocactus concinnus* var. *parviflorus* Wolfgang Prauser, Internoto 40(4): 100, ill., 2019. *Nom. inval.* (ICN Art. 36.1, 40.1). [Published as provisional name.]
- Notocactus concinnus* var. *piriapolisensis* Wolfgang Prauser, Internoto 40(4): 139, ill., 2019. *Nom. inval.* (ICN Art. 36.1, 40.1). [Published as provisional name.]
- Notocactus concinnus* var. *quervosensis* Wolfgang Prauser, Internoto 40(4): 130, ill., 2019. *Nom. inval.* (ICN Art. 36.1, 40.1). [Published as provisional name.]
- Notocactus concinnus* var. *rubricurvispinus* Wolfgang Prauser, Internoto 40(4): 116-117, ill., 2019. *Nom. inval.* (ICN Art. 36.1, 40.1). [Published as provisional name.]
- Notocactus concinnus* var. *tabularioides* Wolfgang Prauser, Internoto 40(4): 101, ill., 2019. *Nom. inval.* (ICN Art. 36.1, 40.1). [Published as provisional name.]
- Notocactus concinnus* var. *yerbalitoensis* Wolfgang Prauser, Internoto 40(4): 131, ill., 2019. *Nom. inval.* (ICN Art. 36.1, 40.1). [Published as provisional name.]
- Notocactus horstii** fa. **muglianus** K. Herm ex R. Pontes, Kakt. and. Sukk. 70(8): 242, ills., 2019. Typus: *Horst & Uebelmann* HU 82 (HDCF). [Name first published invalidly (ICBN Art. 37.4 = ICN Art. 40.6) by K. Herm, Internoto 14(2): 63-64, ill., 1993, with possible type material at STU.]
- ×**Opulea** M. H. J. van der Meer, Cact. Phantast. 3(3): 28, 2019. [= *Opuntia* × *Consolea*.]
- ×**Opulea bahamana** (Britton & Rose) M. H. J. van der Meer, Cact. Phantast. 3(3): 28, 2019. Basionym: *Opuntia bahamana*.
- ×**Opulea lucayana** (Britton) M. H. J. van der Meer, Cact. Phantast. 3(3): 28, 2019. Basionym: *Opuntia* × *lucayana*.
- Opuntia mantaroensis** Guiggi, Phytotaxa 420(1): 37, 2019. *Ritter* 151 loc. 1 (ZSS).
- Parodia microsperma** ssp. **gaponiorum** Schelkunova, Kakt.-Klub 2019(1): 34-36, ills. (pp. 32, 37-38), 2019. Typus: *Gapon* 10-992/4689 (WU, WU).
- Parodia unguiculata** Diers, Succulenta (Netherlands) 98(5): 272, ills. (pp. 270, 273-277), 2019. Typus: *Herzog* 122/1 (WU).

- Parodia vallegrandensis* Beckert, Succulenta (Netherlands) 98(4): 235-241, ills., 2019. *Nom. inval.* (ICN Art. 36.1b). [Published as provisional name.]
- Pereskopsis diguetii* ssp. *spatulata* (Otto ex Pfeiffer) M. H. J. van der Meer, Cact. Phantast. 8(2): 3, 2019. *Nom. inval.* (ICN Art. 11.4), based on *Pereskia spatulata*. [The basionym of the subspecies name has priority over the basionym of the species name.]
- Pilosocereus curtisii** (Otto ex Pfeiffer) A. R. Franck, Phytotaxa 411(3): 161, ills. (pp. 139-141), 2019. Basionym: *Cereus curtisii*.
- Pilosocereus jamaicensis** Proctor ex A. R. Franck & al., Phytotaxa 411(3): 163-164, ills. (pp. 143-148), 2019. Typus: *Proctor* 10561 (IJ). [Ascribed to Proctor and based on a manuscript name by Proctor, but Proctor († 2015) is not amongst the authors of the paper.]
- Pilosocereus vilaboensis** ssp. **pluricostatus** N. P. Taylor & al., Bradleya 37: 16, ills. (pp. 13-15), 2019. Typus: *Rosa* 2260 (HEPH, RB, UB).
- Pilosocereus vilaboensis** ssp. **rizzoanus** (P. J. Braun & E. Esteves-Pereira) N. P. Taylor & Zappi, Bradleya 37: 16, ill. (p. 35), 2019. Basionym: *Pilosocereus rizzoanus*.
- Pilosocereus zahrae** P. J. Braun, Kakt. and. Sukk. 70(5): 148, ills. (pp. 145-150), 2019. Typus: *Braun* 405 (RB, HAL, WU).
- Praecereus chinchipensis* M. Burghardt, Swiat Kakt. (Warsaw, 1966+) [52](1): 70, figs. 33-40 (pp. 24-27), 2019. Based on *Burghardt* 018.04. *Nom. inval.* (ICN Art. 40.7). [Volume erroneously given as vol. 47.]
- Praecereus euchlorus* ssp. *jubonesensis* M. Burghardt, Swiat Kakt. (Warsaw, 1966+) [52](1): 69, figs. 29-32 (pp. 22-23), 2019. Based on *Burghardt* 011. *Nom. inval.* (ICN Art. 40.7). [Volume erroneously given as vol. 47.]
- Praecereus euchlorus** ssp. **maritimus** (Britton & Rose) M. Burghardt, Swiat Kakt. (Warsaw, 1966+) [52](1): 19, 2019. Basionym: *Monvillea maritima*. [Volume erroneously given as vol. 47.]
- Praecereus euchlorus** ssp. **pugioniferus** (F. Ritter) M. Burghardt, Swiat Kakt. (Warsaw, 1966+) [52](1): 19, 2019. Basionym: *Monvillea pugionifera*. [Volume erroneously given as vol. 47.]
- Praecereus utcubambensis* M. Burghardt, Swiat Kakt. (Warsaw, 1966+) [52](1): 71, figs. 41-44 (pp. 28-29), 2019. Based on *Burghardt* 047.02. *Nom. inval.* (ICN Art. 40.7). [Volume erroneously given as vol. 47. Epithet variously given as 'utcubabensis', 'utcubambensis' or 'utcumbensis'.]
- ×**Prillea** M. H. J. van der Meer, Cact. Phantast. 4(1): 4, 2019. [= *Praecereus* × *Monvillea*.]
- Pseudozygocactus bradei** (Porto & A. Castellanos) Guiggi, Kakt. and. Sukk. 70(7): 200, 2019. Basionym: *Hariota epiphylloides* var. *bradei*.
- Pyrrhocactus bisii* Efremova, Kakt. Tolko 2019(1): 36, 2019. *Nom. inval.* (ICN Art. 39.1/39.2). [Name casually used in a caption only.]
- Pyrrhocactus multicolorispinus* (Janeba & Slaba) Efremova, Kakt. Tolko 2019(1): 18, 23, 27, 2019. *Nom. inval.* (ICN Art. 41.5), based on *Eriosyce multicolorispina*. [Name casually used in captions only, and basionym casually mentioned on p. 26.]
- Rapicactus ×anomalus** (Halda & Panarotto) M. H. J. van der Meer, Cact. Phantast. 4(1): 4, 2019. Basionym: *Turbincarpus ×anomalus*.
- ×**Rapicarpus** M. H. J. van der Meer, Cact. Phantast. 4(1): 5, 2019. [= *Rapicactus* × *Turbincarpus*.]
- ×**Rapicarpus calopsis** (Halda & Panarotto) M. H. J. van der Meer, Cact. Phantast. 4(1): 5, 2019. Basionym: *Turbincarpus ×calopsis*.
- ×**Raustoa** M. H. J. van der Meer, Cact. Phantast. 3(3): 30, 2019. [= *Rauhocereus* × *Espostoa*.]
- Selenicereus glaber** ssp. **mirandae** (Bravo) S. Arias & N. Korotkova ex M. van der Meer, Cact. Phantast. 8(1): 1, 2019. Basionym: *Selenicereus mirandae*. [First published invalidly (ICN Art. 45.5, cf. RPS 68) by S. Arias & N. Korotkova, Phytotaxa 327(1): 25, 2017.]
- Selenicereus ×stendatus* (E. Meier) M. H. J. van der Meer, Cact. Phantast. 8(1): 1, 2019. *Nom. inval.* (ICN Art. 6.10), based on *Hylocereus ×stendatus*. [The basionym was published as a cultivar group, rather than as a botanical name.]
- Selenicereus undatus** ssp. **luteocarpus** (Cálix de Dios) M. van der Meer, Cact. Phantast. 8(1): 1, 2019. Basionym: *Hylocereus undatus* ssp. *luteocarpus*.

- +**Selenigymnocalycium** M. H. J. van der Meer, Cact. Phantast. 3(1): 7, 2019. [= graft chimera *Selenicereus* + *Gymnocalycium*.]
- ×**Stenolotocereus** M. H. J. van der Meer, Cact. Phantast. 3(3): 30, 2019. [= *Stenocereus* × *Isolatocereus*.]
- ×**Swartzara** M. H. J. van der Meer, Cact. Phantast. 4(1): 5, 2019. [= *Disocactus* × *Epiphyllum* × *Selenicereus*.]
- Tephrocactus abditus** D. J. Ferguson & Janeba, Cact. Succ. J. (Los Angeles) 91(4): 252-253, ill. (pp. 252-256), 2019. Typus: *Slavík* s.n. (PR 954401).
- ×**Trichinovia** M. H. J. van der Meer, Cact. Phantast. 4(1): 5, 2019. [= *Trichocereus* × *Echinocereus* × *Lobivia*.]
- ×**Trivia** M. H. J. van der Meer, Cact. Phantast. 4(1): 6, 2019. [= *Trichocereus* × *Lobivia*.]
- Turbincarpus** ×**aequalis** nssp. **azanthus** (Halda & Panarotto) M. van der Meer, Cact. Phantast. 4(1): 7, 2019. Basionym: *Turbincarpus* ×*azanthus*.
- Turbincarpus** ×**albellus** nssp. **amabilis** (Halda & Panarotto) M. van der Meer, Cact. Phantast. 4(1): 9, 2019. Basionym: *Turbincarpus* ×*amabilis*.
- Turbincarpus** ×**amiantus** nssp. **antiquorum** (Halda & Panarotto) M. van der Meer, Cact. Phantast. 4(1): 10, 2019. Basionym: *Turbincarpus* ×*antiquorum*.
- Turbincarpus** ×**amoenuus** nssp. **calozonus** (Halda & Panarotto) M. van der Meer, Cact. Phantast. 4(1): 9, 2019. Basionym: *Turbincarpus* ×*calozonus*.
- Turbincarpus** ×**amoenuus** nssp. **camelliflorus** (Halda & Panarotto) M. van der Meer, Cact. Phantast. 4(1): 10, 2019. Basionym: *Turbincarpus* ×*camelliflorus*. [*Sphalm.* 'camelliflorus'.]
- Turbincarpus** ×**amoenuus** nssp. **cintiae** (Halda & Panarotto) M. van der Meer, Cact. Phantast. 4(1): 9, 2019. Basionym: *Turbincarpus* ×*cintiae*.
- Turbincarpus** ×**amoenuus** nssp. **pulcherrimus** (Halda & Panarotto) M. van der Meer, Cact. Phantast. 4(1): 10, 2019. Basionym: *Turbincarpus* ×*pulcherrimus*.
- Turbincarpus** ×**assimilis** nssp. **bicolor** (Halda & Panarotto) M. van der Meer, Cact. Phantast. 4(1): 8, 2019. Basionym: *Turbincarpus* ×*bicolor*.
- Turbincarpus** ×**assimilis** nssp. **delicatus** (Halda & Panarotto) M. van der Meer, Cact. Phantast. 4(1): 8, 2019. Basionym: *Turbincarpus* ×*assimilis*.
- Turbincarpus** ×**boedekerianus** García-Morales & al., Phytotaxa 391(2): 160-161, ill., 2019. Typus: *García* 2493 (ITCV, GBH, HFLA).
- Turbincarpus** ×**pseudomacrochele** nssp. **kubesai** (Halda & Kupcák) M. van der Meer, Cact. Phantast. 4(1): 8, 2019. Basionym: *Turbincarpus* ×*kubesai*. [*Sphalm.* 'kubesii'.]
- Turbincarpus** ×**saueri** nssp. **concinus** (Halda & Panarotto) M. van der Meer, Cact. Phantast. 4(1): 7, 2019. Basionym: *Turbincarpus* ×*concinus*.
- Turbincarpus** ×**schmiedickeanus** nssp. **agatolepis** (Halda & Panarotto) M. van der Meer, Cact. Phantast. 4(1): 6, 2019. Basionym: *Turbincarpus* ×*agatolepis*.
- Turbincarpus** ×**schmiedickeanus** nssp. **ascocalyx** (Halda & Panarotto) M. van der Meer, Cact. Phantast. 4(1): 6, 2019. Basionym: *Turbincarpus* ×*ascocalyx*.
- Turbincarpus** ×**schmiedickeanus** nssp. **campanularis** (Halda & Panarotto) M. van der Meer, Cact. Phantast. 4(1): 7, 2019. Basionym: *Turbincarpus* ×*campanularis*.
- Wigginsia tetracantha** (Lemaire) Vích, Kaktusy (Brno) 55(Special 2): 25, ill., 2019. Basionym: *Echinocactus tetracanthus*.

CRASSULACEAE

- Aeonium** ×**chamorgense** O. Arango, Vieraea 46: 142, 2019. Typus: *Bañares* 48695 (TFC 48.695). [*Nom. nov. pro Aeonium* ×*floribundum* *Bañares* 2015 (*nom. illeg.*, ICN Art. 53.1, *non A.* ×*floribundum* *A. Berger* 1930). = *Aeonium liui* × *A. volkeri*.]
- Aeonium** ×**condei** O. Arango, Vieraea 46: 123, ill. (p. 126-128), 2019. Typus: *Arango* s.n. (TFC 53.231, LPA) [Ex cult. O. Arango.]. [= *Aeonium volkeri* × *A. urbicum* ssp. *boreale*.]
- Aeonium** ×**exsul** Bornmüller ex O. Arango, Bot. Macaronés., IV Ci. 30: 146, 2019. Typus: *Arango* s.n. (LPA 36137, ORT, TFC). [= *Aeonium canariense* ssp. *canariense* × *A.*

- ciliatum*. First published invalidly by Bornmüller as synonym of *Sempervivum exsul* in Repert. Spec. Nov. Regni Veg. 13: 2, 1913.]
- Aeonium** × **globosum** O. Arango, *Vieraea* 46: 117-118, ills. (p. 119-121), 2019. Typus: *Arango* s.n. (TFC 53.232) [Ex cult. O. Arango.]. [= *Aeonium spatulatum* × *A. canariense* ssp. *christii*.]
- Aeonium** **liui** O. Arango, Bot. Macaronés., IV Ci. 30: 9, ills. (pp. 10-12, 14, 18), 2019. Typus: *Arango* s.n. (LPA 36140, LPA, TFC).
- Aeonium** × **stoloniferum** O. Arango, *Vieraea* 46: 134, ills. (p. 137-139), 2019. Typus: *Arango* s.n. (TFC 52.854, LPA). [= *Aeonium canariense* ssp. *virgineum* × *A. simsii*.]
- Aeonium** **urbicum** ssp. **boreale** O. Arango, *Vieraea* 46: 14, ills. (pp. 21-22, 25), 2019. Typus: *Arango* s.n. (TFC 52.407, TFMC/PV).
- Aeonium** × **uriosteii** O. Arango, *Vieraea* 46: 129, ills. (p. 131-133), 2019. Typus: *Arango* s.n. (TFC 52.853, TFMC/PV) [Ex cult. O. Arango.]. [= *Aeonium aizoon* × *A. spatulatum*.]
- Cotyledon** **flanagani** ssp. **mzimvubuensis** van Jaarsveld, *Bradleya* 37: 117, ills. (pp. 173-174, 176), 2019. Typus: *van Jaarsveld & al.* 38 (NBG).
- Cremnophila tetzmilia* J. Reyes & al., in *Meyrán García, Crasuláceas México, Vol. II*, 41, ills., 2019. *Nom. inval.* (ICN Art. 39.2, 40.1).
- Echeveria** **argentinensis** Hutchison ex Pino & al., *Cact. Succ. J. (Los Angeles)* 91(3): 183-185, ills., 2019. Typus: *Balls* 5960 (K). [Name first used on a herbarium specimen at K, and cited by Lowry, *Sedum Soc. Newslett.* 119: 9, 2016.]
- Echeveria** **argentinensis** var. **kieslingii** Pino & al., *Cact. Succ. J. (Los Angeles)* 91(3): 186-188, ills. (pp. 186-189), 2019. Typus: *Piccardo* s.n. (UC 088100, UC 088101).
- Echeveria** **michihuacana** L. E. Cruz-López & al., *Brittonia* 71(1): 25, ills. (pp. 27-28, 30), 2019. Typus: *de la Cruz* L. 184 (MEXU, MEXU).
- Echeveria** **saltensis** Pino & al., *Cact. Succ. J. (Los Angeles)* 91(3): 190-192, ills. (pp. 190-193), 2019. Typus: *Ale & Marquiegui* 01/2019 (MCNS).
- Echeveria** **sonianevadensis** A. Vázquez & al., *Brittonia* 71(2): 159, ills. (pp. 158, 164), 2019. Typus: *Muñiz-Castro & al.* 1205 (IBUG, CIMI, ENCB, IEB, MEXU).
- Echeveria** **vulcanicola** Pino & al., *Cact. Succ. J. (Los Angeles)* 91(2): 113-117, ills., 2019. Typus: *Montesinos* 6014 (HUSA).
- Echeveria** **xochipalensis** J. Reyes & al., *Phytotaxa* 399(1): 15, ills. (pp. 15-17), 2019. Typus: *Reyes* 8132 (MEXU).
- Graptopetalum** **sinaloense** Vega, *Acta Bot. Mex.* 127(e1550): 2-5, ills., 2019. Typus: *Vega Aviña & Delgado Vargas* 12123 (UAS, CIIDIR, HCIB, USON). [Sphalm. 'sinaloensis'.]
- Hylotelephium** **telephium** nssp. **bergeri** (Raymond-Hamet) M. van der Meer, *Cact. Phantast.* 8(3): 4, 2019. Basionym: *Sedum* × *bergeri*. [Interpreted as *H. telephium* ssp. *telephium* × ssp. *maximum*.]
- Hylotelephium** **telephium** nssp. **zhiguliense** (Tsvelev) M. van der Meer, *Cact. Phantast.* 8(3): 5, 2019. Basionym: *Hylotelephium* × *zhiguliense*. [Interpreted as *H. telephium* ssp. *telephium* × ssp. *ruprechtii*.]
- Kalanchoe** **beauverdii** var. **juelii** (Raymond-Hamet & H. Perrier) Gideon F. Smith & Figueiredo, *Phytotaxa* 414(2): 119, 2019. Basionym: *Kalanchoe juelii*. [First published (as 'jueli') invalidly (ICBN Art. 41.5, cf. RPS 46) by Rauh & Hebbing, *Succulentent* 18(1): 15, 1995.]
- Kalanchoe** × **gunniae** Gideon F. Smith & Figueiredo, *Bradleya* 37: 147-148, ills. (pp. 142, 147-149), 2019. Typus: *Smith & Figueiredo* 57 (PRU). [= *Kalanchoe paniculata* × *K. sexangularis*.]
- Kalanchoe** **porphyrocalyx** var. **sambiranensis** Humbert ex Gideon F. Smith & Figueiredo, *Phytotaxa* 422(2): 206-207, 2019. Typus: *Humbert* 18607 (P, P). [First invalidly published (ICN Art. 39.1) by Boiteau & Mannoni, *Cactus (Paris)* 17-18: 58, 1948.]
- Petrosedum** **montanum** fa. **lunigianicum** Afferni, *Newslett. Sedum Soc.* 128: 43, ills. (pp. 43-44), 2019. Typus: *Anonymus* s.n. (FI). [Sphalm. 'lunigianica'.]
- Phedimus** **middendorffianus** ssp. **arcuatus** (Voroshilov & Shlothauer) J. M. H. Shaw, *Newslett. Sedum Soc.* 131: 27, 2019. Basionym: *Sedum middendorffianum* ssp. *arcuatum*.
- Phedimus** × **pilosus** (S. B. Gontcharova & Koldaeva) J. M. H. Shaw, *Newslett. Sedum Soc.* 131: 27, 2019. Basionym: *Aizopsis* × *pilosa*. [Sphalm. 'pilosa'.]

Phedimus pseudohybridus (Voroshilov & Shlothauer) J. M. H. Shaw, Newslett. Sedum Soc. 131: 27, 2019. Basionym: *Sedum pseudohybridum*.

Phedimus subcapitatus (Hayata) S. S. Ying, New Taxa New Names 1: 9, 2019. Basionym: *Sedum subcapitatum*. [Cited from IPNI, accessed Jan. 2022.]

Rosularia paluensis Yildirimli & Kiliç, Ot Sist. Bot. Dergisi 26(2): 98, ill. (pp. 99-102), 2019. Typus: *Yildirimli & Kiliç* 41332 (Herb. Yildirimli, HUB).

Sedum hispanicum fa. **durabile** Afferni, Newslett. Sedum Soc. 129: 71-72, ill., 2019. Typus: *Afferni* s.n. (FI). [Sphalm. 'durabilis'.]

Sedum ichangense Y. B. Wang, PhytoKeys 132: 92-95, ill., 2019. Typus: *ycmy* 032 (CTGU, HIB, PE). [Sphalm. 'ichangensis'.]

Sedum ignescens Pino & Montesinos, Cact. Succ. J. (Los Angeles) 91(2): 117-122, ill., (3): 197, 2019. Typus: *Montesinos* 1064 (HUSA, HSP).

Sedum kwanwuense H. W. Lin & al., Taiwania 64(4): 426-428, ill., 2019. Typus: *Lin* 1398 (TNU).

Sedum lipingense R. B. Zhang & al., PhytoKeys 134: 129-131, ill., 2019. Typus: *ZRB* 1479 (ZY, IBK).

Sedum xpraegeri (Fröderström) Afferni, Newslett. Sedum Soc. 131: 23, ill. (pp. 22-23), 2019. Basionym: *Sedum rubens* var. *praegeri*. [= *Sedum rubens* × *S. hispanicum*.]

Sedum taiwanalpinum H. W. Lin & al., Taiwania 64(4): 428-429, ill., 2019. Typus: *Lin & al.* 1345 (TNU, TAIF).

Sedum wrightii ssp. *lahovaryanum* (Raymond-Hamet) J. Reyes & M. Ávila, in Meyrán García, Crasuláceas México, Vol. II, 32, 2019. Incorrect name (ICN Art. 11.2, 11.4). [Sphalm. 'lahovarianum'. Incorrect since the prioritable *S. wrightii* ssp. *densiflorum* Clausen 1981 is cited as synonym.]

Villadia longuetae (Raymond-Hamet) J. Reyes & M. Ávila, in Meyrán García, Crasuláceas México, Vol. II, 33, ill., 2019. Basionym: *Sedum longuetae*.

Villadia porphyrantha (J. Reyes & al.) J. Reyes & al., in Meyrán García, Crasuláceas México, Vol. II, 34, ill., 2019. Basionym: *Sedum porphyranthes*.

EUPHORBIACEAE

Euphorbia addoensis Marx & van Veldhuisen, Euphorbia World 15(1): 5-7, ill. (pp. 5-11), 2019. Typus: *Palmer* 1336 (GRA).

Euphorbia mahafalensis var. **itampolensis** (Rauh) J.-P. Castillon & J.-B. Castillon, Candollea 74(2): 160, 2019. Basionym: *Euphorbia neobosseri* var. *itampolensis*.

Euphorbia marotsipoyana Rebmann, Cact. Succ. 11(2): 43, ill. (pp. 42-45), 2019. Typus: *Rebmann* 33 (TAN).

Euphorbia otavimontana Swanepoel, Namibian J. Environm. 3(Section A): 11-14, ill., 2019. Typus: *Swanepoel* 340 (WIND, PRE).

Euphorbia pseudodidieroides J.-P. Castillon & Rajaovelona, Malagasy Nat. 13: 61-63, ill., 2019. Typus: *Castillon* 63 (TAN, G).

Euphorbia rimoreptans Swanepoel & al., Phytotaxa 414(4): 166-168, ill., 2019. Typus: *Swanepoel & Becker* 358 (WIND, PRE, PRU).

Euphorbia vajravelui var. **theniensis** B. De Jong & R. W. Stewart, Euphorbia World 15(2): 8-12, ill. (pp. 5-17), 2019. Typus: *De Jong* KG1 (CAL, CAL, JCB, L, MA, MH).

GESNERIACEAE

Sinningia flammea Chautems & Rossini, Candollea 74(1): 34, ill. (pp. 35-36), 2019. Typus: *Britto & al.* 134 (MBML).

Sinningia stapelioides Chautems & M. Peixoto, Candollea 74(1): 39, ill. (pp. 35, 40), 2019. Typus: *Chautems* 555 (VIES, G).

HYACINTHACEAE

Austronea acarophylla (E. Brink & A. P. Dold) Martínez-Azorín & al., Phytotaxa 365(2): 107, 2018. Basionym: *Drimia acarophylla*.

Austronea pinguis Martínez-Azorín & al., Phytotaxa 365(2): 123-125, ill., 2018. Typus: *Martínez-Azorín & al.* 1342b (GRA, ABH).

- Austronea trichophylla** (Martínez-Azorín & al.) Martínez-Azorín & al., Phytotaxa 365(2): 108, 2018. Basionym: *Drimia trichophylla*.
- Austronea vermiformis** (J. C. Manning & Goldblatt) Martínez-Azorín & al., Phytotaxa 365(2): 108, 2018. Basionym: *Drimia vermiformis*.
- Drimia** Sect. **Aulostemon** (Martínez-Azorín & al.) J. C. Manning & Goldblatt, Strelitzia 40: 123, 2018. Basionym: *Aulostemon*.
- Drimia** Sect. **Capitatae** J. C. Manning & Goldblatt, Strelitzia 40: 76, 2018. Typus: *Anthericum marginatum* Thunberg.
- Drimia** Sect. **Indurgia** (Speta) J. C. Manning & Lekhak, S. African J. Bot. 123: 67, 2019. Basionym: *Indurgia*.
- Drimia** Sect. **Ledebouriopsis** (Baker) J. C. Manning & Goldblatt, Strelitzia 40: 24, 2018. Basionym: *Ornithogalum* subgen. *Ledebouriopsis*.
- Drimia** Sect. **Litanthus** (Harvey) J. C. Manning & Goldblatt, Strelitzia 40: 151, 2018. Basionym: *Litanthus*.
- Drimia** Sect. **Macrocentrae** J. C. Manning & Goldblatt, Strelitzia 40: 19, 2018. Typus: *Urginea macrocentra* Baker.
- Drimia** Sect. **Rhadamanthopsis** (Obermeyer) J. C. Manning & Goldblatt, Strelitzia 40: 124, 2018. Basionym: *Rhadamanthus* subgen. *Rhadamanthopsis*.
- Drimia** Sect. **Rhadamanthus** (Salisbury) J. C. Manning & Goldblatt, Strelitzia 40: 129, 2018. Basionym: *Rhadamanthus*.
- Drimia** Sect. **Rhodocodon** (Baker) J. C. Manning & Goldblatt, Strelitzia 40: 155, 2018. Basionym: *Rhodocodon*.
- Drimia** Sect. **Sagittanthera** (Martínez-Azorín & al.) J. C. Manning & Goldblatt, Strelitzia 40: 73, 2018. Basionym: *Sagittanthera*.
- Drimia** Sect. **Schizobasis** (Baker) J. C. Manning & Goldblatt, Strelitzia 40: 142, 2018. Basionym: *Schizobasis*.
- Drimia** Sect. **Sclerophyllae** J. C. Manning & Goldblatt, Strelitzia 40: 102, 2018. Typus: *Drimia sclerophylla* J. C. Manning & Goldblatt.
- Drimia** Sect. **Sypharissa** (Salisbury) J. C. Manning & Goldblatt, Strelitzia 40: 111, 2018. Basionym: *Sypharissa*.
- Drimia** Sect. **Urginavia** (Speta) J. C. Manning & Goldblatt, Strelitzia 40: 13, 2018. Basionym: *Urginavia*.
- Drimia anthericoides** (Poiret) Vélá & Bélair, Willdenowia 49(3): 423, 2019. Basionym: *Scilla anthericoides*.
- Drimia monophylla** Obermeyer ex J. C. Manning & Goldblatt, Strelitzia 40: 128, 2018. Typus: *Bayliss* 1345 (NBG).
- Drimia pinguis** (Martínez-Azorín & al.) J. C. Manning & Goldblatt, Bothalia 49(1): a2412: 3, 2019. Basionym: *Austronea pinguis*.
- Ledebouria nitida** (Ecklon) J. C. Manning & Goldblatt, Strelitzia 40: 159, 2018. Basionym: *Drimia nitida*.
- Ledebouria weberi** van Jaarsveld & S. Venter, Phytotaxa 408(4): 284, ill. (pp. 285-286), 2019. Typus: *van Jaarsveld & Weber* 26478 (NBG).
- Massonia** Sect. **Desertia** (Martínez-Azorín & al.) J. C. Manning, S. African J. Bot. 121: 332, 2018. Basionym: *Desertia*. [Volume for 2019, e-published Dec. 2018.]
- Massonia* Sect. *Whiteheadia* (Harvey) J. C. Manning, S. African J. Bot. 121: 332, 2018. *Nom. inval.* (ICN Art. 41.6). [Volume for 2019, e-published Dec. 2018..]
- Merwillia plumbea** ssp. **kraussii** (Baker) J. C. Manning, S. African J. Bot. 125: 418, 2019. Basionym: *Scilla kraussii*.
- Striatula** M. Pinter & al., Phytion (Horn) 59(1-2): 93, 2019. Typus: *Rhadamanthus platyphyllus* B. Nordenstam.
- Striatula oliverorum** (J. C. Manning) M. Pinter & al., Phytion (Horn) 59(1-2): 95, 2019. Basionym: *Drimia oliverorum*.
- Striatula platyphylla** (B. Nordenstam) M. Pinter & al., Phytion (Horn) 59(1-2): 95, 2019. Basionym: *Rhadamanthus platyphyllus*.

LAMIACEAE

- Coleus actites** (P. I. Forster) P. I. Forster, PhytoKeys 129: 12, 2019. Basionym: *Plectranthus actites*.
- Coleus aliciae** (Codd) A. J. Paton, PhytoKeys 129: 14, 2019. Basionym: *Plectranthus madagascariensis* var. *aliciae*.
- Coleus allopectus** (S. T. Blake) P. I. Forster & T. C. Wilson, PhytoKeys 129: 15, 2019. Basionym: *Plectranthus allopectus*.

- Coleus amiculatus** (T. C. Wilson & al.) T. C. Wilson & P. I. Forster, PhytoKeys 129: 18, 2019. Basionym: *Plectranthus amiculatus*.
- Coleus anamudianus** (Smitha & Sunojkumar) Smitha, PhytoKeys 129: 18, fig. 4A (p. 17), 2019. Basionym: *Plectranthus anamudianus*.
- Coleus angulatus** (Hedge) A. J. Paton & Philipson, PhytoKeys 129: 19, 2019. Basionym: *Plectranthus angulatus*.
- Coleus arenicola** (P. I. Forster) P. I. Forster, PhytoKeys 129: 20, 2019. Basionym: *Plectranthus arenicola*.
- Coleus auriglandulosus** (A. J. Paton) A. J. Paton, PhytoKeys 129: 21, 2019. Basionym: *Plectranthus auriglandulosus*.
- Coleus barbatus** var. **grandis** (L. H. Cramer) A. J. Paton, PhytoKeys 129: 24, 2019. Basionym: *Coleus grandis*.
- Coleus batianoffii** (P. I. Forster) P. I. Forster, PhytoKeys 129: 25, 2019. Basionym: *Plectranthus batianoffii*.
- Coleus blakei** (P. I. Forster) P. I. Forster, PhytoKeys 129: 27, 2019. Basionym: *Plectranthus blakei*.
- Coleus caninus** ssp. **flavovirens** (Gürke) A. J. Paton, PhytoKeys 129: 32, 2019. Basionym: *Coleus flavovirens*.
- Coleus crassus** (N. E. Brown) Culham, PhytoKeys 129: 36, 2019. Basionym: *Plectranthus crassus*.
- Coleus cremnus** (B. J. Conn) A. J. Paton, PhytoKeys 129: 36, 2019. Basionym: *Plectranthus cremnus*.
- Coleus cucullatus** (A. J. Paton) A. J. Paton, PhytoKeys 129: 37, 2019. Basionym: *Plectranthus cucullatus*.
- Coleus cyanophyllus** (P. I. Forster) P. I. Forster, PhytoKeys 129: 37, 2019. Basionym: *Plectranthus cyanophyllus*.
- Coleus cylindraceus** (Hochstetter ex Benth) A. J. Paton, PhytoKeys 129: 37, 2019. Basionym: *Plectranthus cylindraceus*.
- Coleus dinteri** (Briquet) A. J. Paton, PhytoKeys 129: 41, 2019. Basionym: *Plectranthus dinteri*.
- Coleus dolichopodus** (Briquet) A. J. Paton, PhytoKeys 129: 41, 2019. Basionym: *Plectranthus dolichopodus*.
- Coleus excelsus** (P. I. Forster) P. I. Forster, PhytoKeys 129: 45, 2019. Basionym: *Plectranthus excelsus*.
- Coleus fasciculatus** (P. I. Forster) P. I. Forster, PhytoKeys 129: 46, 2019. Basionym: *Plectranthus fasciculatus*.
- Coleus foetidus** (Benth) A. J. Paton, PhytoKeys 129: 46, 2019. Basionym: *Plectranthus foetidus*.
- Coleus gibbosus** A. J. Paton, PhytoKeys 129: 49, 2019. Typus: *Rehmann 7359 (Z, K)*. [*Nom. nov. pro Plectranthus rehmannii* Gürke 1898 (non *Coleus rehmannii* Briquet 1903).]
- Coleus gillettii** (J. K. Morton) A. J. Paton, PhytoKeys 129: 49, 2019. Basionym: *Plectranthus gillettii*.
- Coleus grandidentatus** (Gürke) A. J. Paton, PhytoKeys 129: 52, 2019. Basionym: *Plectranthus grandidentatus*.
- Coleus graniticola** (A. Chevalier) A. J. Paton, PhytoKeys 129: 52, 2019. Basionym: *Solenostemon graniticola*.
- Coleus gratus** (S. T. Blake) P. I. Forster & T. C. Wilson, PhytoKeys 129: 53, 2019. Basionym: *Plectranthus gratus*.
- Coleus hadiensis** (Forsskål) A. J. Paton, PhytoKeys 129: 54, 2019. Basionym: *Ocimum hadiense*.
- Coleus laxus** (T. C. Wilson & P. I. Forster) T. C. Wilson & P. I. Forster, PhytoKeys 129: 66, 2019. Basionym: *Plectranthus laxus*.
- Coleus magnificus** P. I. Forster & A. J. Paton, PhytoKeys 129: 98, 2019. Typus: *Blake 20535 (BRI)*. [*Nom. nov. pro Plectranthus spectabilis* S. T. Blake 1971 (non *Coleus spectabilis* Miquel 1858).]
- Coleus marrubatus** (J. K. Morton) A. J. Paton, PhytoKeys 129: 72, 2019. Basionym: *Plectranthus marrubatus*.
- Coleus minutus** (P. I. Forster) P. I. Forster, PhytoKeys 129: 74, 2019. Basionym: *Plectranthus minutus*.
- Coleus mutabilis** (Codd) A. J. Paton, PhytoKeys 129: 77, 2019. Basionym: *Plectranthus mutabilis*.
- Coleus nitidus** (P. I. Forster) P. I. Forster, PhytoKeys 129: 79, 2019. Basionym: *Plectranthus nitidus*.
- Coleus petricola** (J. Mathew & B. J. Conn) A. Paton, PhytoKeys 129: 84, 2019. Basionym: *Plectranthus petricola*.
- Coleus platyphyllus** (A. J. Paton) A. J. Paton, PhytoKeys 129: 84, 2019. Basionym: *Plectranthus platyphyllus*.

- Coleus porcatus** (van Jaarsveld & P. J. D. Winter) A. J. Paton, *PhytoKeys* 129: 85, 2019. Basionym: *Plectranthus porcatus*.
- Coleus prostratus** (Gürke) A. J. Paton, *PhytoKeys* 129: 86, 2019. Basionym: *Plectranthus prostratus*.
- Coleus psammophilus** (Codd) A. J. Paton, *PhytoKeys* 129: 86, 2019. Basionym: *Plectranthus psammophilus*.
- Coleus sanguineus** (Britten) A. J. Paton, *PhytoKeys* 129: 91, 2019. Basionym: *Plectranthus sanguineus*.
- Coleus tetradeniifolius** (A. J. Paton) A. J. Paton, *PhytoKeys* 129: 104, 2019. Basionym: *Plectranthus tetradeniifolius*. [Sphalm. 'tetradeniifolius'.]
- Coleus thalassoscopicus** (P. I. Forster) P. I. Forster, *PhytoKeys* 129: 105, 2019. Basionym: *Plectranthus thalassoscopicus*.
- Coleus torrenticola** (P. I. Forster) P. I. Forster, *PhytoKeys* 129: 106, 2019. Basionym: *Plectranthus torrenticola*.
- Coleus unguentarius** (Codd) A. J. Paton, *PhytoKeys* 129: 107, 2019. Basionym: *Plectranthus unguentarius*.
- Coleus venterii** (van Jaarsveld & Hankey) A. J. Paton, *PhytoKeys* 129: 107, 2019. Basionym: *Plectranthus venterii*.
- Coleus xerophilus** (Codd) A. J. Paton, *PhytoKeys* 129: 110, 2019. Basionym: *Plectranthus xerophilus*.
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- Fritzschia cordifolia** R. Romero & al., *Syst. Bot.* 44(3): 664-667, ill.s., 2019. Typus: *Romero & al.* 8679 (HUFU, BHCB).

MONTIACEAE

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- Calandrinia uncinella** Obbens, *Nuytsia* 30: 242, ill.s. (p. 243), 2019. Typus: *Beaglehole* 12257 (PERTH, CANB).
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- Calyptridium** Sect. **Spraguea** (Torrey) Hershkovitz, *Phytoneuron* 2019-27: 61, 2019. Basionym: *Spraguea*.
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- Calyptridium martirensae** (Guilliams & al.) Hershkovitz, *Phytoneuron* 2019-27: 61, 2019. Basionym: *Calyptridium parryi* var. *martirensae*.
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- Cistanthe aegialitis** (F. Philippi) Carolin ex Hershkovitz, *Phytoneuron* 2019-27: 55, 2019. Basionym: *Calandrinia aegialitis*. [Sphalm. 'aegialitis'. First used in an unpublished preprint (p. 17) available at preprints.org (10.20944/preprints201808.0496.v2) in 2018.]

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- Cistanthe subspeciosa* Hershkovitz, Phytoneuron 2019-27: 56, 2019. Based on *Werdermann* 405. *Nom. inval.* (ICN Art. 40.6). [Subsequently validated l.c. 2020-42: 1, 2020.]
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- Cistanthe vicina** (Philippi) Carolin ex Hershkovitz, Phytoneuron 2019-27: 58, 2019. Basionym: *Calandrinia vicina*.
- Cistantheae** Hershkovitz, Phytoneuron 2019-27: 54, 2019. Typus: *Cistanthe* Spach.
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- Philippiamra calycina** (Philippi) Hershkovitz, Phytoneuron 2019-27: 63, 2019. Basionym: *Calandrinia calycina*.

- Philippiamra densiflora** (Barnéoud) Hershkovitz, Phytoneuron 2019-27: 63, 2019. Basionym: *Calandrinia densiflora*.
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PORTULACACEAE

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- Hydnophytum dauloense** Jebb & C. R. Huxley, *Blumea* 64(1): 60-61, ills., 2019. Typus: *Jebb* 338 (LAE, A, BRI, CANB, K, L).
- Hydnophytum davisii** Jebb & C. R. Huxley, *Blumea* 64(1): 52, ill., 2019. Typus: *Davis & Mayar* 800 (K, BO, L, MAN).
- Hydnophytum dentrecastense** Jebb & C. R. Huxley, *Blumea* 64(1): 71-72, ills., 2019. Typus: *Jebb* 387 (LAE, A, BRI, CANB, K, L).
- Hydnophytum fusiforme** Jebb & C. R. Huxley, *Blumea* 64(1): 61-62, ills., 2019. Typus: *Lloyd Hamilton* s.n. (UPNG 3482, LAE).
- Hydnophytum mamberamoense** Jebb & C. R. Huxley, *Blumea* 64(1): 75, ills., 2019. Typus: *Docters van Leeuwen* 9540 (L, A, BO, K, SING).
- Hydnophytum morotaiense** Jebb & C. R. Huxley, *Blumea* 64(1): 36, fig. 4 (p. 35), 2019. Typus: *Kosterman* 985 (BO, A, K, L).
- Hydnophytum multituberosum** Jebb & C. R. Huxley, *Blumea* 64(1): 55-56, ills., 2019. Typus: *Jebb* 998 (BO, K, L).
- Hydnophytum reevii** Jebb & C. R. Huxley, *Blumea* 64(1): 65-66, ills., 2019. Typus: *Reeve* 1069 (LAE, CBG, FHO, K, L).
- Hydnophytum terrestris** Jebb & C. R. Huxley, *Blumea* 64(1): 66-67, ills., 2019. Typus: *Kairo* 459 (LAE, A, Bulolo Herb., CBG, K, L, UPNG).
- Nolina orbicularis** L. Hernández, *Phytoneuron* 2019(12): 1-2, ills. (pp. 3-4), 2019. Typus: *Hernández* 7900 (QUMEX, IEB, MEXU, UASLP, XAL).
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- Nolina rodriguezii** Ruiz-Sanchez & al., *Phytotaxa* 402(4): 190, ills. (pp. 193-194), 2019. Typus: *Guzmán & McVaugh* 1324 (IBUG, MEXU).
- Sansevieria ascendens** var. **bhwirei** R. H. Webb, *Sansevieria* 40: 22, ills. (p. 24), 2019. Typus: *Bhitala* 1017 (MO).
- Sansevieria brevifolia** L. E. Newton, *Sansevieria* 39: 25-26, ills., 2019. Typus: *Powys* 352 (EA).
- Sansevieria conduplicata** T. C. Cole & T. G. Forrest, *Cact. Succ. J. (Los Angeles)* 91(2): 148-149, ills. (pp. 147-151), 2019. Typus: *Cole* 19015 (MHU).
- Sansevieria enchiridiofolia** R. H. Webb & L. E. Newton, *Sansevieria* 41: 14-15, ills. (pp. 13-14), 2019. Typus: *Webb & Newton* 1055 (MO).
- Sansevieria forestii** L. E. Newton & R. H. Webb, *Sansevieria* 41: 15-16, ills. (pp. 14-15), 2019. Typus: *Webb & Newton* 1000 (EA).
- Sansevieria rugosifolia** R. H. Webb & L. E. Newton, *Sansevieria* 41: 11-13, ills., 2019. Typus: *Bhitala* 1008 (MO).
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- Nolina caxcana** Ruiz-Sanchez & al., *Phytotaxa* 402(4): 188, ills. (pp. 191-192), 2019. Typus: *Carrillo-Reyes & al.* 7749 (IBUG, MEXU).
- Tetraena smithii** (Hadidi) Lodé, *Int. Cact.-Advent.* 31(1): 28, ills. (pp. 28-29), 2019. Basionym: *Zygophyllum smithii*.

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