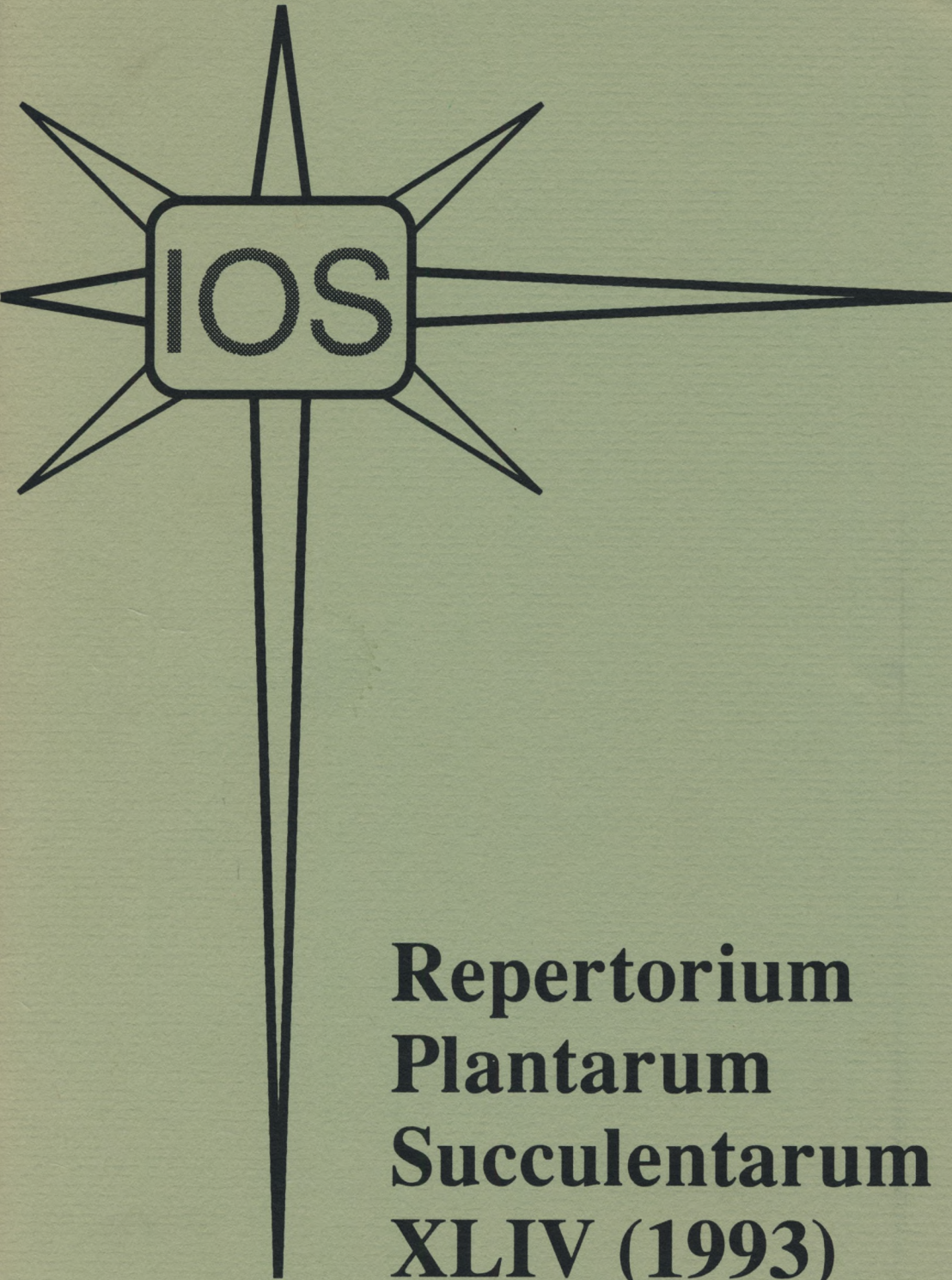


ISSN 0486-4271



IOS

**Repertorium
Plantarum
Succulentarum
XLIV (1993)**

What is IOS ?

The **International Organization for Succulent Plant Study (IOS)** was established to *promote the study of succulent and allied plants* and to *encourage international cooperation amongst those interested in them*. The IOS is a Commission of the International Union of Biological Sciences and seeks to achieve its goal through *biennial international congresses, working sessions*, and its annual *Bulletin* and the *Repertorium Plantarum Succulentarum*. The IOS also is a strong advocate of *conservation* and has an extensive *Code of Conduct*.

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Repertorium Plantarum Succulentarum XLIV (1993)

*Index nominum novarum plantarum succulentarum anno MCMXCIII
editorum nec non bibliographia taxonomica ab U. Egli et N. P. Taylor
compositus.*

International Organization for Succulent Plant Study
Internationale Organisation für Sukkulantenforschung

October 1994

ISSN 0486-4271

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 of K, Z, ZSS or received by the compilers). Also included is information supplied to the compilers direct. It is urgently requested that any reprints of papers not published in readily available botanical literature be sent to one of the compilers.
- Validly published names are given in **bold face** type, accompanied 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 possible isotypes are said to be deposited (first acronym for holotype), according to Index Herbariorum, ed. 8 and supplements as published in Taxon. 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 also listed. For invalid, illegitimate or incorrect names, the articles of the ICBN which have been contravened are indicated in brackets.
- 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 description of one or two new taxa are given in the nomenclatural section and not repeated in the bibliographic section.
- Abbreviations for periodicals are those suggested in 'A Bibliography of Succulent Plant Periodicals' (U. Egli in Bradleya 3: 103-119, 1985, and supplements in l.c. 5: 101-104, 1987) for specialized periodicals, or those of Bibliographia Periodicorum Huntianum for other periodicals.

Konventionen im Zusammenhang mit dem Repertorium Plantarum Succulentarum

- Das Repertorium Plantarum Succulentarum ist eine jährlich herausgegebene Zusammenstellung neuer Namen für sukkulente Pflanzen und der relevanten systematischen Literatur. Neue Namen, die nach der Drucklegung der Ausgabe des betreffenden Jahres bekannt werden, erscheinen in der nächsten erreichbaren Ausgabe. Spezialisierte Zeitschriften werden umfassend durchgesehen, soweit sie in den Bibliotheken von K, Z und ZSS vorhanden sind oder den Herausgebern privat vorliegen. Die Herausgeber bitten alle Autoren dringend, Separata relevanter Publikationen zur Verfügung zu stellen, vor allem wenn es sich um Beiträge in schwer zugänglichen Serien handelt.
- Gültig veröffentlichte Namen werden in **Fettschrift** wiedergegeben unter Angabe des nomenklatorischen Typs (Name oder Belegexemplar je nach Rangstufe; gefolgt von den Herbarabkürzungen [entsprechend Index Herbariorum, ed. 8, und in Taxon publizierten Supplementen] der publizierten Hintelegungsorte für Holotyp [1. Abkürzung] und Isotypen). Ungültige, illegitime oder falsch angewandte Namen erscheinen in *Kursivschrift* unter Angabe (in Klammer) derjenigen Artikel des ICBN, die verletzt worden sind. In allen Fällen folgen die kompletten bibliographischen Angaben. Für Umkombinationen wird auch das Basionym angegeben.
- Die Herausgeber weisen mit aller Deutlichkeit darauf hin, dass sie keinen Namen anerkennen, der zufälligerweise in dieser Ausgabe des RPS validiert worden sein könnte.
- Beiträge, welche nur Beschreibungen eines oder zweier Taxa enthalten, werden in der bibliographischen Liste nicht separat aufgeführt.
- Die Abkürzungen für spezialisierte Sukkulente-Zeitschriften richten sich nach 'A Bibliography of Succulent Plant Periodicals' (U. Egli in Bradleya 3: 103-119, 1985, sowie Supplementen in l.c. 5: 101-104, 1987), für allgemeine botanische Zeitschriften nach Bibliographia Periodicorum Huntianum.

Compiled by / Zusammengestellt von:

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Preface

Unfortunately, a number of errors have crept into the last volume of RPS (vol. 42). These are partly due to editorial oversights, partly based on the fact the Repertorium database is not all-inclusive when it comes to pre-1950 names. Accordingly, names published prior to 1950 are not always automatically taken into consideration when the validity of a new name is evaluated, e.g., for homonymy, or as to the validity of the basionym. This situation will only be rectified once the Repertorium database is completed back to 1753, but this will take many more years.

Acknowledgments

R. Mottram and W. Till have kindly pointed out some errors in the last issue of RPS, and their contributions are kindly acknowledged. J. Thiede has helped with literature references and photocopies of various contributions which otherwise would have gone by unnoticed. R. Nyffeler has again helped in similar matters, and the editors are grateful for all this cooperation.

Vorwort

Leider sind auch im letzten Band des *Repertorium*s wiederum einige Fehler stehen geblieben. Teilweise handelt es sich um Dinge, die von den Redaktoren übersehen wurden, z.T. ist das Problem darin begründet, dass die Repertoriums-Datenbank nicht umfassend über die vor 1950 publizierten Namen orientiert. Dadurch kann es passieren, dass bei der Evaluation des Status' eines neuen Namens z.B. ein älteres Homonym nicht aufgespürt werden kann, oder dass die Gültigkeit des Basionyms nicht überprüft wird. Diese Probleme werden erst aus der Welt geschafft werden können, wenn die Datenbank einmal alle seit 1753 publizierten Namen enthält. Bis es soweit ist, werden allerdings noch zahlreiche Jahre vergehen.

Dank

Auch im vergangenen Jahr wurden wir von Benutzern des *Repertorium* in unserer Arbeit unterstützt. R. Mottram und W. Till haben uns freundlicherweise auf Fehler aufmerksam gemacht, und J. Thiede unterstützte uns mit Literaturhinweisen und Photokopien schwer zugänglicher Publikationen. Ohne diese verdankenswerte Hilfe hätten einige Literaturhinweise den Weg in die Bibliographie nicht gefunden. Auch R. Nyffeler hat die Herausgeber wiederum in ähnlicher Weise unterstützt, und wir sind für alle diese Mitarbeit herzlich dankbar.

Corrections to previous volumes

- *Gymnocalycium ochoterenae* ssp. *herbsthoferianum* H. Till & Neuhuber was incorrectly given as 'var. *herbsthoferianum*' in RPS 43: 13 due to an editorial oversight.
- *Lobivia* subgen. *Neolobivia* (Y. Ito) Ullmann 1992 (RPS 43: 13) is a later homonym of *Lobivia* subgen. *Neolobivia* Backeberg 1941 (Cactaceae (Jahrb. DKG) 1941(2): 33, 76), and is thus illegitimate.
- *Echinocereus pectinatus* var. *ctenoides* (Engelmann) Weniger ex G. R. W. Frank was incorrectly given as invalid in RPS 42: 5, but was in fact validly published.
- *Copiapoa cinerea* ssp. *longistaminea* was erroneously given as having been published without rank in RPS 43: 11. The corrected entry is repeated in this issue of RPS, together with two additional subspecific names for this species.
- The ISSN number given on the cover of previous issues ('0480-4271') is erroneous; the correct ISSN is 0486-4271.

Korrekturen zu früheren Bänden

- *Gymnocalycium ochoterenae* ssp. *herbsthoferianum* H. Till & Neuhuber wurde in RPS 43: 13 durch ein redaktionelles Versehen fälschlich als 'var. *herbsthoferianum*' aufgeführt.
- *Lobivia* subgen. *Neolobivia* (Y. Ito) Ullmann 1992 (RPS 43: 13) ist ein späteres Homonym von *Lobivia* subgen. *Neolobivia* Backeberg 1941 (Cactaceae (Jahrb. DKG) 1941(2): 33, 76) und deshalb illegitim.
- *Echinocereus pectinatus* var. *ctenoides* (Engelmann) Weniger ex G. R. W. Frank wurde in RPS 42: 5 fälschlich als ungültig bezeichnet; die Kombination wurde jedoch gültig veröffentlicht.
- *Copiapoa cinerea* ssp. *longistaminea* wurde in RPS 43: 11 fälschlicherweise als ohne Rangstufe publiziert angegeben. Der korrigierte Eintrag wird in diesem RPS-Heft wiederholt, zusammen mit zwei weiteren Unterart-Namen für diese Art.
- Die auf den Umschlägen der letzten Ausgaben genannte ISSN-Nummer ('0480-4271') ist falsch; die richtige ISSN-Nummer lautet 0486-4271.

NOMINA NOVA

AGAVACEAE

- Agave** sect. **Crenatae** (A. Berger) B. Ullrich, *Piante Grasse* 13(2): 53, 56, 1993. Basionym: *Agave* subser. *Crenatae*.
- Agave isthmensis** García-Mendoza & Palma Cruz, *Sida* 15(4): 565-568, ill., 1993. Typus: *García-Mendoza et al.* 4177 (MEXU, BRIT/SMU, DES, ENCB).
- Agave mitis** var. **albidior** (Salm-Dyck) Ullrich, *Succulentas* 16(1): 32, 1993. Basionym: *Agave micrantha* var. *albidior*.

AIZOACEAE

- Antimima hantamensis** (Engler) H. E. K. Hartmann & Stüber, *Contr. Bolus Herb.* 15: 68, 1993. Basionym: *Mesembryanthemum hantamense*.
- Carpobrotus edulis** ssp. **parviflorus** Wisura & Glen, *Contr. Bolus Herb.* 15: 90, 1993. Typus: *Wisura* 2790 (NBG, PRE).
- Conophytum** sect. **Barbata** Schwantes ex S. A. Hammer, *Genus Conophytum*, 230, 1993. Typus: *Conophytum stephanii* Schwantes.
- Conophytum** sect. **Cataphracta** Schwantes ex S. A. Hammer, *Genus Conophytum*, 230, 1993. Typus: *Conophytum calculus* (A. Berger) N. E. Brown.
- Conophytum** sect. **Cheshire-feles** S. A. Hammer, *Genus Conophytum*, 230, 1993. Typus: *Conophytum maughanii* N. E. Brown.
- Conophytum** sect. **Costata** Schwantes ex S. A. Hammer, *Genus Conophytum*, 230, 1993. Typus: *Conophytum angelicae* (Dinter & Schwantes) N. E. Brown.
- Conophytum** sect. **Cylindrata** Schwantes ex S. A. Hammer, *Genus Conophytum*, 230, 1993. Typus: *Conophytum cylindratum* Schwantes.
- Conophytum** sect. **Herreanthus** (Schwantes) S. A. Hammer, *Genus Conophytum*, 230, 1993. Basionym: *Herreanthus*.
- Conophytum** sect. **Subfenestrata** Tischer ex S. A. Hammer, *Genus Conophytum*, 230, 1993. Typus: *Conophytum subfenestratum* Schwantes.
- Conophytum** sect. **Verrucosa** Schwantes ex S. A. Hammer, *Genus Conophytum*, 230, 1993. Typus: *Conophytum fullerii* L. Bolus.
- Conophytum albiflorum** (Rawé) S. A. Hammer, *Haseltonia* 1: 26, 1993. Basionym: *Conophytum edwardsiae* var. *albiflorum*.
- Conophytum angelicae** ssp. **tetragonum** Rawé & S. A. Hammer, *Genus Conophytum*, 232, 190-191, ill., 1993. Typus: *Hammer et Kirsten* 1327/91 (BOL). [Equals the unpublished manuscript name *C. angelicae* var. *quadratum* Rawé (*nom. inval.*).]
- Conophytum auriflorum** ssp. **turbiniforme** (Rawé) S. A. Hammer, *Genus Conophytum*, 266, 1993. Basionym: *Conophytum turbiniforme*.
- Conophytum bachelorum** S. A. Hammer, *Genus Conophytum*, 233, 71-72, ill., 1993. Typus: *Mitchell* s.n. (HNT).
- Conophytum bilobum** ssp. **altum** (L. Bolus) S. A. Hammer, *Genus Conophytum*, 231-232, 1993. Basionym: *Conophytum altum*.
- Conophytum bilobum** ssp. **gracilistylum** (L. Bolus) S. A. Hammer, *Genus Conophytum*, 242, 1993. Basionym: *Conophytum gracilistylum*.
- Conophytum bolusiae** ssp. **primavernum** S. A. Hammer, *Genus Conophytum*, 234, 73-74, ill., 1993. Typus: *Hammer et Williamson* 1435 (BOL, NBG).
- Conophytum calculus** ssp. **vanzyliae** (Lavis) S. A. Hammer, *Genus Conophytum*, 267, 1993. Basionym: *Conophytum vanzyliae*.
- Conophytum chauviniae** (Schwantes) S. A. Hammer, *Genus Conophytum*, 235, 1993. Basionym: *Mesembryanthemum chauviniae*.
- Conophytum ectypum** ssp. **cruciatum** S. A. Hammer, *Genus Conophytum*, 239, 105, ill., 1993. Typus: *Hammer et Mitchell* 245/82 (BOL).
- Conophytum ectypum** ssp. **sulcatum** (L. Bolus) S. A. Hammer, *Genus Conophytum*, 239, 264, 1993. Basionym: *Conophytum sulcatum*.
- Conophytum ernstii** ssp. **cerebellum** S. A. Hammer, *Genus Conophytum*, 240, 75, ill., 1993. Typus: *Bruyns* 5154 (BOL).
- Conophytum flavum** ssp. **novicium** (N. E. Brown) S. A. Hammer, *Genus Conophytum*, 252-253, 1993. Basionym: *Conophytum novicium*.
- Conophytum gratum** ssp. **marlothii** (N. E. Brown) S. A. Hammer, *Genus Conophytum*, 249, 1993. Basionym: *Conophytum marlothii*.
- Conophytum herreanthus** S. A. Hammer, *Genus Conophytum*, 243, 1993. Typus: *Meyer* 32 (BOL). [*Nom. nov. pro Herreanthus meyeri* Schwantes 1928 (*non Conophytum meyeri* N. E. Brown 1925).]
- Conophytum herreanthus** ssp. **rex** S. A. Hammer, *Genus Conophytum*, 243, 61-62, ill., 1993. Typus: *Hammer* 1245/91 (BOL).
- Conophytum klinghardtense** ssp. **baradii** (Rawé) S. A. Hammer, *Genus Conophytum*, 243, 1993. Basionym: *Conophytum hirtum* var. *baradii*.
- Conophytum limpidum** S. A. Hammer, *Genus Conophytum*, 247, 149, ill., 1993. Typus: *Hammer* 386/85 (BOL).
- Conophytum lithopsoides** ssp. **arturofago** S. A. Hammer, *Genus Conophytum*, 247, 135-136, ill., 1993. Typus: *Rawe et Kennedy* 864 (BOL).
- Conophytum lithopsoides** ssp. **boreale** (L. Bolus) S. A. Hammer, *Genus Conophytum*, 234, 1993. Basionym: *Conophytum boreale*.
- Conophytum lithopsoides** ssp. **koubergense** (L. Bolus) S. A. Hammer, *Genus Conophytum*,

- 245, 1993. Basionym: *Conophytum koubergense*.
- Conophytum maughanii** ssp. **armeniacum** S. A. Hammer, Genus *Conophytum*, 249, 167-168, ill., 1993. Typus: *Hammer* 365/86 (BOL). [Sphalm. 'armenianum' in the caption on p. 168.]
- Conophytum maughanii** ssp. **latum** (Tischer) S. A. Hammer, Genus *Conophytum*, 249, 1993. Basionym: *Ophthalmophyllum latum*.
- Conophytum minusculum** ssp. **leipoldtii** (N. E. Brown) S. A. Hammer, *Haseltonia* 1: 26, 1993. Basionym: *Conophytum leipoldtii*.
- Conophytum obcordellum** ssp. **rolfii** (de Boer) S. A. Hammer, Genus *Conophytum*, 260, 1993. Basionym: *Conophytum rolfii*.
- Conophytum obcordellum** ssp. **stenandrum** (L. Bolus) S. A. Hammer, Genus *Conophytum*, 263, 1993. Basionym: *Conophytum stenandrum*.
- Conophytum obcordellum** var. **ceresianum** (L. Bolus) S. A. Hammer, Genus *Conophytum*, 235, 1993. Basionym: *Conophytum ceresianum*.
- Conophytum obscurum** ssp. **vitreopapillum** (Rawé) S. A. Hammer, Genus *Conophytum*, 268, 1993. Basionym: *Conophytum vitreopapillum*.
- Conophytum pellucidum** ssp. **cupreatum** (Tischer) S. A. Hammer, Genus *Conophytum*, 237, 1993. Basionym: *Conophytum cupreatum*.
- Conophytum pellucidum** var. **lilianum** (Littlewood) S. A. Hammer, Genus *Conophytum*, 247, 1993. Basionym: *Conophytum lilianum*.
- Conophytum pellucidum** var. **neohallii** S. A. Hammer, *Cact. Succ. J. (US)* 65(3): 113-114, ill., 1993. Typus: *Hammer et Brack* 628 (BOL).
- Conophytum pellucidum** var. **neohallii** cv. **Makin's Plum** S. A. Hammer, *Cact. Succ. J. (US)* 65(3): 113-114, ill., 1993.
- Conophytum pellucidum** var. **terrestre** (Tischer) S. A. Hammer, Genus *Conophytum*, 265, 1993. Basionym: *Conophytum terrestre*.
- Conophytum phoeniceum** S. A. Hammer, Genus *Conophytum*, 256, 194-195, ill., 1993. Typus: *Hammer et Dixon* 1212/91 (BOL, PRE).
- Conophytum piluliforme** ssp. **edwardii** (Schwantes) S. A. Hammer, Genus *Conophytum*, 239, 1993. Basionym: *Conophytum edwardii*.
- Conophytum quaesitum** ssp. **densipunctum** (L. Bolus) S. A. Hammer, Genus *Conophytum*, 238, 1993. Basionym: *Conophytum densipunctum*.
- Conophytum quaesitum** var. **rostratum** (Tischer) S. A. Hammer, Genus *Conophytum*, 261, 1993. Basionym: *Conophytum rostratum*.
- Conophytum reconditum** ssp. **buisianum** (Mitchell & S. A. Hammer) S. A. Hammer, Genus *Conophytum*, 235, 1993. Basionym: *Conophytum buisianum*.
- Conophytum stephanii** ssp. **abductum** S. A. Hammer, Genus *Conophytum*, 263, 197-198, ill., 1993. Typus: *Hammer et Brack* 1120 (BOL).
- Conophytum swanepoelianum** ssp. **proliferans** S. A. Hammer, *Haseltonia* 1: 27-28, fig. 9 (p. 24), 1993. Typus: *Mitchell* 121 (NBG).
- Conophytum taylorianum** ssp. **ernianum** (Lösch & Tischer) de Boer ex S. A. Hammer, Genus *Conophytum*, 240, 1993. Basionym: *Conophytum ernianum*.
- Conophytum taylorianum** ssp. **rosynense** S. A. Hammer, Genus *Conophytum*, 265, 92-93, ill., 1993. Typus: *van Jaarsveld* 5518 (NBG, BOL).
- Conophytum truncatum** ssp. **viridicatum** (N. E. Brown) S. A. Hammer, Genus *Conophytum*, 267, 1993. Basionym: *Mesembryanthemum viridicatum*.
- Conophytum uviforme** ssp. **decoratum** (N. E. Brown) S. A. Hammer, Genus *Conophytum*, 238, 1993. Basionym: *Conophytum decoratum*.
- Conophytum uviforme** ssp. **rauhii** (Tischer) S. A. Hammer, Genus *Conophytum*, 260, 1993. Basionym: *Conophytum rauhii*.
- Conophytum uviforme** ssp. **subincanum** (Tischer) S. A. Hammer, Genus *Conophytum*, 264, 1993. Basionym: *Conophytum subincanum*.
- Conophytum velutinum** ssp. **polyandrum** (Lavis) S. A. Hammer, Genus *Conophytum*, 258, 1993. Basionym: *Conophytum polyandrum*.
- Conophytum wettsteinii** ssp. **fragile** (N. E. Brown) S. A. Hammer, Genus *Conophytum*, 241, 1993. Basionym: *Conophytum fragile*.
- Conophytum wettsteinii** ssp. **francoiseae** S. A. Hammer, Genus *Conophytum*, 268, 95-96, ill., 1993. Typus: *Williamson* 4465 (BOL).
- Conophytum wettsteinii** ssp. **ruschii** (Schwantes) S. A. Hammer, Genus *Conophytum*, 261, 1993. Basionym: *Conophytum ruschii*.
- Delosperma sphalmanthoides** S. A. Hammer, *Cact. Succ. J. (US)* 65(3): 123-125, ill., 1993. Typus: *Hammer et Vlok* 1413 (BOL, K, NBG).
- Gibbaeum** sect. **Mentocalyx** (N. E. Brown) P. V. Heath, *Calyx* 4(1): 27, 1993. Basionym: *Mentocalyx*.
- Gibbaeum** subsect. **Labarreum** P. V. Heath, *Calyx* 4(1): 27, 1993. Typus: *Gibbaeum pubescens* (Haworth) N. E. Brown.
- Leipoldtia alborosea** (L. Bolus) H. E. K. Hartmann & Stüber, *Contr. Bolus Herb.* 15: 70, 1993. Basionym: *Mesembryanthemum alboroseum*.
- Ruschia centrocapsula** H. E. K. Hartmann & Stüber, *Contr. Bolus Herb.* 15: 62, 1993. Typus: *Hartmann et al.* 25672 (HBG).
- Ruschia cradockensis** (Kuntze) H. E. K. Hartmann & Stüber, *Contr. Bolus Herb.* 15: 63, 1993. Basionym: *Mesembryanthemum cradockense*.
- Ruschia cradockensis** ssp. **triticiformis** (L. Bolus) H. E. K. Hartmann & Stüber, *Contr. Bolus Herb.* 15: 64, 1993. Basionym:

Mesembryanthemum triticiforme.

- Ruschia intricata** (N. E. Brown) H. E. K. Hartmann & Stüber, Contr. Bolus Herb. 15: 65, 1993. Basionym: *Mesembryanthemum intricatum*.
Tetragonia retusa Thulin, Nordic J. Bot. 13(2): 165-167, 1993. Typus: *Hemming* 3423 (FT).

ALOACEAE

- × **Alamaealoe** P. V. Heath, Calyx 3(4): 153, 1993. [= *Aloe* × *Chamaealoe* (sub *Asphodelaceae*).]
 × **Allemeea** P. V. Heath, Calyx 3(4): 153, 1993. [= *Aloe* × *Lemeea* (sub *Asphodelaceae*).]
Aloe cv. **Baby Grand** J. Bleck ex S. Riley, Cact. File 1(11): 22, 1993. [= (*Aloe bakeri* × *A. parvula*) × ((*A. descoingsii* × *A. parvula*) × *A. boiteaui*).]
Aloe cv. **Brass Hat** J. Bleck ex S. Riley, Cact. File 1(11): 22, 1993. [= (*Aloe haworthioides* × *A. bakeri*) × ((*A. descoingsii* × *A. calcairophila*) × *A. bakeri*).]
Aloe cv. **Caramba** J. Bleck ex S. Riley, Cact. File 1(11): 22, 1993. [= ((*Aloe descoingsii* × *A. calcairophila*) × (*A. descoingsii* × *A. boiteaui*)).]
Aloe cv. **Cha Cha** J. Bleck, Cact. Succ. J. (US) 65(2): 74, 1993. [= (*Aloe descoingsii* × *A. jucunda*) × (*A. descoingsii* × [*A. parvula* × *A. boiteaui*]).]
Aloe cv. **Cha-Cha** J. Bleck ex S. Riley, Cact. File 1(11): 22, 1993. [= (*Aloe descoingsii* × *A. jucunda*) × ((*A. descoingsii* × *A. parvula*) × *A. boiteaui*).]
Aloe cv. **Fiesta** J. Bleck ex S. Riley, Cact. File 1(11): 22, 1993. [= (*Aloe bakeri* × *A. parvula*) × *A. parvula*.]
Aloe cv. **Grande** J. Bleck ex S. Riley, Cact. File 1(11): 22, 1993. [= (*Aloe descoingsii* × *A. parvula*) × ((*A. albiflora* × *A. bellatula*) × (*A. descoingsii* × *A. parvula*)).]
Aloe cv. **Hey Babe** J. Bleck ex S. Riley, Cact. File 1(11): 22, 1993. [= (*Aloe descoingsii* × (*A. bakeri* × *A. parvula*)).]
Aloe cv. **Macho Pink** J. Bleck ex S. Riley, Cact. File 1(11): 22, 1993. [= (*Aloe descoingsii* × *A. parvula*) × (*A. albiflora* × *A. bellatula*).]
Aloe cv. **Midnight** J. Bleck ex S. Riley, Cact. File 1(11): 22, 1993. [= (*Aloe descoingsii* × *A. calcairophila*) × (*A. descoingsii* × *A. rauhi*).]
Aloe cv. **Olé** J. Bleck ex S. Riley, Cact. File 1(11): 22, 1993. [= (*Aloe bakeri* × *A. parvula*) × ((*A. descoingsii* × *A. parvula*) × *A. boiteaui*).]
Aloe cv. **Olympic Star** J. Bleck ex S. Riley, Cact. File 1(11): 22, 1993. [= ((*Aloe descoingsii* × *A. calcairophila*) × *A. bellatula*) × *A. rauhi*.]
Aloe cv. **Prime Time** J. Bleck ex S. Riley, Cact. File 1(11): 22, 1993. [= (*Aloe descoingsii* × *A. calcairophila*) × *A. bakeri*.]
Aloe cv. **Quicksilver** J. Bleck ex S. Riley, Cact. File 1(11): 22, 1993. [= ((*Aloe descoingsii* × *A. calcairophila*) × *A. bellatula*) × *A. rauhi*.]
Aloe cv. **Sparkling Burgundy** J. Bleck ex S. Riley, Cact. File 1(11): 22, 1993. [= (*Aloe*

albiflora × (*A. descoingsii* × *A. rauhi*)) × *A. glauca*.]

- Aloe aegedonta** L. E. Newton, Cact. Succ. J. (US) 65(3): 138-140, ills., 1993. Typus: *Newton* 3643 (K, EA).
 × **Aloptaloe** P. V. Heath, Calyx 3(4): 153, 1993. [= *Aloe* × *Leptaloe* (sub *Asphodelaceae*).]
 × **Gasteraloe** cv. **Firefly** Kimmach & Trager, Cact. Succ. J. (US) 65(2): 80, 1993. [Sub *Gastrolea*. Based on *Aloe* cv. *Firefly*.]
 × **Gasteraloe** cv. **Pink Lace** Kimmach & Trager, Cact. Succ. J. (US) 65(2): 80, 1993. [Sub *Gastrolea*. Based on *Aloe* cv. *Pink Lace*.]
Lemeea P. V. Heath, Calyx 3(4): 153, 1993. Typus: *Aloe haworthioides* Baker. [Based on *Aloe* sect. *Aloinella* A. Berger 1908; = *Aloinella* (A. Berger) Lemée non *Aloinella* Cardot].
Lemeea haworthioides (Baker) P. V. Heath, Calyx 3(4): 153, 1993. Basionym: *Aloe haworthioides*.

ANTHERICACEAE

- Chlorophytum graniticola** Kativu, Nord. J. Bot. 13(5): 501-502, map, 1993. Typus: *Kativu* 285 (SRGH, K).
Chlorophytum minor Kativu, Nord. J. Bot. 13(5): 502-503, ills., 1993. Typus: *Richards* 22872 (K).
Chlorophytum perfoliatum Kativu, Nord. J. Bot. 13(5): 503-505, ills., 1993. Typus: *Robinson* 4344 (K).
Chlorophytum velutinum Kativu, Nord. J. Bot. 13(5): 503-505, ills., 1993. Typus: *Fanshawe* 9628 (K, NDO).

ASCLEPIADACEAE

- Angolluma decaisneana** (Lemaire) Munster ex L. E. Newton, Cact. Succ. J. (US) 65(4): 198, 1993. Basionym: *Boucerosia decaisneana*. [First proposed invalidly (Art. 33.2; cf. RPS 41) by Munster, Cact. Succ. J. New South Wales 17(4): 64, 1990].
Angolluma semitubiflora L. E. Newton, Cact. Succ. J. (US) 65(4): 197-199, ills., 1993. Typus: *Newton* 3419 (K, EA).
Anomalluma Plowes, Cact. Succ. J. (US) 65(2): 167, 1993. Typus: *Caralluma dodsoniana* Lavranos.
Anomalluma dodsoniana (Lavranos) Plowes, Cact. Succ. J. (US) 65(4): 167-168, ills., 1993. Basionym: *Caralluma dodsoniana*.
Brachystelma christianeae Peckover, Aloe 29(3/4): 56-57, ills., 30(1): 13 [erratum], 1993. Typus: *Peckover* 0141 (PRE). [Dated 1992, publ. autumn 1993].
Brachystelma lutea Peckover, Aloe 29(3/4): 66, ills., 1993. Typus: *Peckover* 0157 (GMT). [Dated 1992, publ. autumn 1993].
Brachystelma malwanese Yadav & N. P. Singh, Kew Bull. 48(1): 59-61, ills., 1993. Typus: *Yadav* 4678A (CAL).

- Caralluma baradii** Lavranos, Cact. Succ. J. (US) 65(5): 246-247, ill., 1993. Typus: *Lavranos et al.* 23338 (UPS).
- Ceropegia** group *Atubuliflorae* Rauh, Trop. subtrop. Pfl.-welt 85: 28, 1993. *Nom. inval.* (Art. 36.1, 37.1).
- Ceropegia** group *Tubuliflorae* Rauh, Trop. subtrop. Pfl.-welt 85: 28, 1993. *Nom. inval.* (Art. 36.1, 37.1).
- Ceropegia hofstaetteri** Rauh, Trop. subtrop. Pfl.-welt 85: 17-20, ill., 1993. Typus: *Hofstätter s.n. in BG Heidelberg* 73340 (HEID).
- Ceropegia petignatii** Rauh, Trop. subtrop. Pfl.-welt 85: 8-17, ill., 1993. Typus: *Rauh* 72226 (HEID).
- Ceropegia razafindratsirana** (Rauh & Buchloh) Rauh, Trop. subtrop. Pfl.-welt 85: 25, ill. (p. 27), 1993. Basionym: *Ceropegia bosseri* var. *razafindratsirana*.
- Ceropegia simoneae** Rauh, Trop. subtrop. Pfl.-welt 85: 20-25, ill., 1993. Typus: *Rauh* 73113 (HEID).
- Cynanchum absconditum** Liede, Bull. Mus. Nation. Hist. Nat. Paris, ser. 4, sect. B, *Adansonia* 14(3-4): 430-432, ill., 1993. Typus: *Decary* 13298 (P).
- Cynanchum bosseri** Liede, Bull. Mus. Nation. Hist. Nat. Paris, ser. 4, sect. B, *Adansonia* 14(3-4): 432-434, ill., 1993. Typus: *Humbert et Cours* 23686 (P).
- Cynanchum chouxii** Liede, Bull. Mus. Nation. Hist. Nat. Paris, ser. 4, sect. B, *Adansonia* 14(3-4): 434-436, ill., 1993. Typus: *Descoings* 1821 (P).
- Cynanchum descoingsii** Rauh, Trop. subtrop. Pfl.-welt 85: 37-41, ill., 1993. Typus: *Rauh* 68639 (HEID).
- Cynanchum itremense** Liede, Bull. Mus. Nation. Hist. Nat. Paris, ser. 4, sect. B, *Adansonia* 14(3-4): 436-438, ill., 1993. Typus: *Bosser* 18799 (P).
- Cynanchum junciforme** (Decaisne) Liede, Bull. Mus. Nation. Hist. Nat. Paris, ser. 4, sect. B, *Adansonia* 14(3-4): 449, 1993. Basionym: *Pycnoneurum junciforme*.
- Cynanchum leucanthum** ssp. *elongatum* Liede, Bull. Mus. Nation. Hist. Nat. Paris, ser. 4, sect. B, *Adansonia* 14(3-4): 445-447, ill., 1993. Typus: *Humbert et Capuron* 25670 (P).
- Cynanchum moratii** Liede, Bull. Mus. Nation. Hist. Nat. Paris, ser. 4, sect. B, *Adansonia* 14(3-4): 438-440, ill., 1993. Typus: *Morat* 2291 (P).
- Cynanchum sessiliflorum** (Decaisne) Liede, Bull. Mus. Nation. Hist. Nat. Paris, ser. 4, sect. B, *Adansonia* 14(3-4): 449, 1993. Basionym: *Pycnoneurum sessiliflorum*.
- Cynanchum subtile** Liede, Bull. Mus. Nation. Hist. Nat. Paris, ser. 4, sect. B, *Adansonia* 14(3-4): 440-442, ill., 1993. Typus: *Liede et Conrad* 2827 (P, MO, TAN). [Sphalm. 'subtilis'.]
- × **Dernia** Kimmach, Trager & Tufenkian, Cact. Succ. J. (US) 65(2): 75, 1993. [= *Duvalia* × *Huernia*.]
- × **Dernia** cv. **Surprise** Kimmach, Trager & Tufenkian, Cact. Succ. J. (US) 65(2): 75, ill., 1993. [= *Huernia nouhuysii* × *Duvalia* sp. (probably *D. reclinata*); spontaneous hybrid which occurred at Huntington Bot. Gard. (61 686).]
- Echidnopsis chrysantha** ssp. *filipes* (Lavranos) Plowes, *Haseltonia* 1: 75, 1993. Basionym: *Echidnopsis chrysantha* var. *filipes*.
- Echidnopsis flavicorona** Plowes, *Haseltonia* 1: 72-74, ill., 1993. Typus: *Lavranos* 6722 (SRGH, ZSS) [Ex cult. sub *Plowes* 3872.].
- Echidnopsis hirsuta** Plowes, *Haseltonia* 1: 74, ill. (p. 73), 1993. Typus: *Lavranos et Newton* 13178 (SRGH, ZSS) [Ex cult. sub *Plowes* 5054.].
- Echidnopsis jacksonii** P. R. O. Bally ex Plowes, *Haseltonia* 1: 78, 1993. Typus: *Jackson in Bally* S112 (K). [First mentioned (as invalid name, Art. 36.1) by P. R. O. Bally, Cact. Succ. J. Gr. Brit. 18: 108, in clavi, 1956.]
- Echidnopsis lavraniana** Plowes, *Haseltonia* 1: 79-80, ill., 1993. Typus: *Gilbert* 2497 (SRGH) [Ex cult. sub *Plowes* 4263.].
- Echidnopsis milleri** Lavranos, Cact. Succ. J. (US) 65(6): 294-295, ill., 1993. Typus: *Miller et al.* 10145 (E).
- Echidnopsis modesta** P. R. O. Bally ex Plowes, *Haseltonia* 1: 77, 1993. Typus: *Ritchie in Bally* S47 (K). [First mentioned by Bally in J. East Afr. Nat. Hist. Soc. 16: 164, fig. 29, 1942 and published invalidly in Cact. Succ. J. Gr. Brit. 18: 108, in clavi, 1956 (Art. 36.1).]
- Echidnopsis rubrolutea** Plowes, *Haseltonia* 1: 76, ill. (p. 73), 1993. Typus: *Lavranos et Horwood* 10421 p.p. (SRGH, ZSS) [Ex cult. sub *Plowes* 4762.].
- Echidnopsis similis** Plowes, *Haseltonia* 1: 82, 1993. Typus: *Bally* 11726 (K).
- Echidnopsis socotrana** Lavranos, Cact. Succ. J. (US) 65(6): 293-294, ill., 1993. Typus: *Miller et al.* 10139 (E).
- Echidnopsis virchowii** var. *stellata* (Lavranos) Plowes, *Haseltonia* 1: 69, 1993. Basionym: *Echidnopsis stellata*.
- Echidnopsis yemensis** Plowes, *Haseltonia* 1: 71, 1993. Typus: *Plowes et Barad* 7764 (SRGH).
- × **Gonodentea** P. V. Heath, *Calyx* 3(1): 3, 1993. [= *Gonostemon* × *Tridentea*.]
- × **Gonodentea bijliae** (Pillans) P. V. Heath, *Calyx* 3(1): 3, 1993. Basionym: *Stapelia bijliae*. [= *Gonostemon pillansii* × *Tridentea gemmiflora*.]
- Gonostemon** subgen. **Kerstonia** P. V. Heath, *Calyx* 3(1): 9, 1993. Typus: = *Gonostemon* subgen. *Stapeltonia* × *G.* subgen. *Kersia*.
- Gonostemon** subgen. **Clavicornona** P. V. Heath, *Calyx* 3(1): 8, 1993. Typus: *Stapelia clavicornona* Verdoorn (given as 'autotype').
- Gonostemon** subgen. **Kersia** P. V. Heath, *Calyx* 3(1): 9, 1993. Typus: *Stapelia kwebensis* N. E. Brown (given as 'prototype').
- Gonostemon** subgen. **Massonia** P. V. Heath, *Calyx* 3(1): 9, 1993. Typus: *Stapelia concinna* Masson (given as 'prototype').
- Gonostemon** subgen. **Nellia** P. V. Heath, *Calyx*

- 3(1): 9, 1993. Typus: *Stapelia fissirostris* Jacquin (given as 'autotype'). Based on *Stapelia* sect. *Fissirostrum* A. Berger 1910 (first published version) or *Stapelia* sect. *Fissirostres* N. E. Brown 1891 (erratum sheet received at ZSS).
- Gonostemon** subgen. **Stapeltonia** (Endlicher) P. V. Heath, Calyx 1(3): 7, 1993. Basionym: *Stapelia* group *Stapeltonia*.
- Gonostemon acuminatus** var. **brevicuspis** (N. E. Brown) P. V. Heath, Calyx 3(1): 8, 1993. Basionym: *Stapelia acuminata* var. *brevicuspis*.
- Gonostemon asterias** var. **gibbus** (N. E. Brown) P. V. Heath, Calyx 3(1): 8, 1993. Basionym: *Stapelia asterias* var. *gibba*.
- Gonostemon asterias** var. **lucidus** (De Candolle) P. V. Heath, Calyx 3(1): 8, 1993. Basionym: *Stapelia lucida*.
- Gonostemon deflexus** var. **atropurpureus** (A. Berger) P. V. Heath, Calyx 3(1): 8, 1993. Basionym: *Stapelia deflexa* var. *atropurpurea*.
- Gonostemon flavopurpureus** var. **fleckii** (A. Berger & Schlechter) P. V. Heath, Calyx 3(1): 8-9, 1993. Basionym: *Stapelia fleckii*.
- Gonostemon fuscopurpureus** (N. E. Brown) P. V. Heath, Calyx 3(1): 8, 1993. Basionym: *Stapelia fuscopurpurea*.
- Gonostemon giganteus** nvar. **pallidus** (Phillips) P. V. Heath, Calyx 3(1): 7, 1993. Basionym: *Stapelia gigantea* var. *pallida*. [= *G. giganteus* var. *giganteus* × *G. giganteus* var. *nobilis*.]
- Gonostemon giganteus** var. **marlothii** (N. E. Brown) P. V. Heath, Calyx 3(1): 7, 1993. Basionym: *Stapelia marlothii*.
- Gonostemon giganteus** var. **nobilis** (Hooker) P. V. Heath, Calyx 3(1): 7, 1993. Basionym: *Stapelia nobilis*.
- Gonostemon giganteus** var. **youngii** (N. E. Brown) P. V. Heath, Calyx 3(1): 7, 1993. Basionym: *Stapelia youngii*.
- Gonostemon glabricaulis** var. **forcipis** (Phillips & Letty) P. V. Heath, Calyx 3(1): 8, 1993. Basionym: *Stapelia forcipis*.
- Gonostemon glanduliflorus** var. **ambiguus** (Masson) P. V. Heath, Calyx 3(1): 9, 1993. Basionym: *Stapelia ambigua*. [Combination erroneously made under *G. grandiflorus*.]
- Gonostemon glanduliflorus** var. **emarginatus** (N. E. Brown) P. V. Heath, Calyx 3(1): 9, 1993. Basionym: *Stapelia glanduliflora* var. *emarginata*.
- Gonostemon grandiflorus** var. **apicalis** (N. E. Brown) P. V. Heath, Calyx 3(1): 7, 1993. Basionym: *Stapelia desmetiana* var. *apicalis*.
- Gonostemon grandiflorus** var. **arnotii** (N. E. Brown) P. V. Heath, Calyx 3(1): 7, 1993. Basionym: *Stapelia arnotii*.
- Gonostemon grandiflorus** var. **desmetianus** (N. E. Brown) P. V. Heath, Calyx 3(1): 7, 1993. Basionym: *Stapelia desmetiana*.
- Gonostemon grandiflorus** var. **fergusoniae** (R. A. Dyer) P. V. Heath, Calyx 3(1): 7, 1993. Basionym: *Stapelia desmetiana* var. *fergusoniae*. [Basionym incorrectly given as *Stapelia fergusoniae*, here treated as bibliographical error and corrected.]
- Gonostemon grandiflorus** var. **fulvus** (Sweet) P. V. Heath, Calyx 3(1): 7, 1993. Basionym: *Stapelia ambigua* var. *fulva*.
- Gonostemon grandiflorus** var. **lineatus** (N. E. Brown) P. V. Heath, Calyx 3(1): 7, 1993. Basionym: *Stapelia grandiflora* var. *lineata*. [Basionym incorrectly given, here treated as bibliographical error and corrected.]
- Gonostemon grandiflorus** var. **pallidus** (N. E. Brown) P. V. Heath, Calyx 3(1): 7, 1993. Basionym: *Stapelia desmetiana* var. *pallida*.
- Gonostemon grandiflorus** var. **senilis** (N. E. Brown) P. V. Heath, Calyx 3(1): 7, 1993. Basionym: *Stapelia senilis*.
- Gonostemon grandiflorus** var. **sororius** (Masson) P. V. Heath, Calyx 3(1): 7, 1993. Basionym: *Stapelia sororia*.
- Gonostemon hirsutus** var. **affinis** (N. E. Brown) P. V. Heath, Calyx 3(1): 7, 1993. Basionym: *Stapelia affinis*.
- Gonostemon hirsutus** var. **comatus** (Jacquin) P. V. Heath, Calyx 3(1): 7, 1993. Basionym: *Stapelia comata*.
- Gonostemon hirsutus** var. **depressus** (Jacquin) P. V. Heath, Calyx 3(1): 7, 1993. Basionym: *Stapelia depressa*.
- Gonostemon hirsutus** var. **gratus** (N. E. Brown) P. V. Heath, Calyx 3(1): 7, 1993. Basionym: *Stapelia hirsuta* var. *grata*.
- Gonostemon hirsutus** var. **longirostris** (N. E. Brown) P. V. Heath, Calyx 3(1): 7-8, 1993. Basionym: *Stapelia patula* var. *longirostris*.
- Gonostemon hirsutus** var. **luteus** (N. E. Brown) P. V. Heath, Calyx 3(1): 8, 1993. Basionym: *Stapelia hirsuta* var. *lutea*.
- Gonostemon maccabeanae** (White & Sloane) P. V. Heath, Calyx 3(1): 8, 1993. Basionym: *Stapelia maccabeanae*.
- Gonostemon macowanii** var. **abrasus** (N. E. Brown) P. V. Heath, Calyx 3(1): 8, 1993. Basionym: *Stapelia conformis* var. *abrasa*.
- Gonostemon** × **marginatus** P. V. Heath, Calyx 3(1): 8, 1993. *Nom. inval.* (Art. 33.2). [Bracket author cited as 'White & Sloane', and basionym given as *Stapelia marginata* White & Sloane 1933. While *S. marginata* is a name attributed variously to Willdenow and Rüst, the page reference cited refers to *Stapelia margarita* White & Sloane. Because of the errors involved and the consequent uncertainty, the combination cannot be regarded as being based on a bibliographical error.]
- Gonostemon pillansii** var. **attenuatus** (N. E. Brown) P. V. Heath, Calyx 3(1): 8, 1993. Basionym: *Stapelia pillansii* var. *attenuata*.
- Gonostemon** × **plantii** (Hooker) P. V. Heath, Calyx 3(1): 8, 1993. Basionym: *Stapelia plantii*.
- Gonostemon rufus** var. **attenuatus** (N. E. Brown) P. V. Heath, Calyx 3(1): 9, 1993. Basionym: *Stapelia rufa* var. *attenuata*.

- Gonostemon rufus** var. **fissirostris** (Jacquin) P. V. Heath, *Calyx* 3(1): 9, 1993. Basionym: *Stapelia fissirostris*.
- Gonostemon similis** var. **juttae** (Dinter) P. V. Heath, *Calyx* 3(1): 9, 1993. Basionym: *Stapelia juttae*.
- Gonostemon similis** var. **portae-aurinae** (Dinter) P. V. Heath, *Calyx* 3(1): 9, 1993. Basionym: *Stapelia portae-aurinae*.
- Gonostemon surrectus** var. **primosii** (Luckhoff) P. V. Heath, *Calyx* 3(1): 8, 1993. Basionym: *Stapelia surrecta* var. *primosii*.
- Hoodia** sect. **Trichocaulon** (N. E. Brown) Bruyns, *Bot. Jahrb. Syst.* 115(2): 210, 1993. Basionym: *Trichocaulon*.
- Hoodia currorii** ssp. **lugardii** (N. E. Brown) Bruyns, *Bot. Jahrb. Syst.* 115(2): 205, 1993. Basionym: *Hoodia lugardii*.
- Hoodia grandis** (N. E. Brown) Plowes, *Asklepios* No. 56: 9, 1992. Basionym: *Trichocaulon grande*. [Previously overlooked.]
- Hoodia longispina** Plowes, *Brit. Cact. Succ. J.* 11(2): 56-58, ills., 1993. Typus: *Plowes* 5321 (SRGH).
- Hoodia officinalis** ssp. **delaetiana** (Dinter) Bruyns, *Bot. Jahrb. Syst.* 115(2): 216, 1993. Basionym: *Trichocaulon delaetianum*.
- Hoodia pilifera** ssp. **annulata** (N. E. Brown) Bruyns, *Bot. Jahrb. Syst.* 115(2): 235, 1993. Basionym: *Trichocaulon annulatum*.
- Hoodia pilifera** ssp. **pillansii** (N. E. Brown) Bruyns, *Bot. Jahrb. Syst.* 115(2): 238, 1993. Basionym: *Trichocaulon pillansii*.
- Hoodia triebneri** (Nel) Bruyns, *Bot. Jahrb. Syst.* 115(2): 222, 1993. Basionym: *Trichocaulon triebneri*. [Non *Hoodia triebneri* H. Schuldt, *Desert* 1933: 92 (*nom. nud.*, cf. P. V. Bruyns, *South Afr. J. Bot.* 59(3): 342, 1993, where the combination is concurrently published).]
- Hoya** sect. **Ambystemma** Kloppenburg, *Hoya Sections*, 17, 1993. Typus: *Hoya meliflua* (Blanco) Merrill. Undated, received Dec. 1993.
- Hoya** sect. **Rudimentalia** Kloppenburg, *Hoya Sections*, 15, 1993. Typus: *Hoya darwinii* Loher. Undated, received Dec. 1993..
- Hoya** sect. **Skenostemma** Kloppenburg, *Hoya Sections*, 12, 1993. Typus: *Hoya heuschkeliana* Kloppenburg. Undated, received Dec. 1993.
- Hoya** subsect. **Angusticarinatae** Kloppenburg, *Hoya Sect. Sperlingia*, 3, 1993. Typus: *Hoya diptera* Seemann.
- Hoya** subsect. **Ventralilobatae** Kloppenburg, *Hoya Sect. Sperlingia*, 3, 1993. Typus: *Hoya parvifolia* Schlechter.
- Hoya dennisii** P. I. Forster & Liddle, *Austrobaileya* 4(1): 51-53, ills., 1993. Typus: *Whitmore* RSS6073 (L, A, BSIP, K, LAE).
- Hoya flavida** P. I. Forster & Liddle, *Austrobaileya* 4(1): 53-55, ills., 1993. Typus: *Liddle* IML118 (BRI [sheet & spirit]) [Ex cult.].
- Hoya wayetii** Kloppenburg, *Fraterna* 1993(2): 9-10, ills., 1993. Typus: *Wayet* 1989 (CHUP, UC [status ?]).
- Huernia rosea** L. E. Newton & Lavranos, *Cact. Succ. J. (US)* 65(6): 279-280, ills., 1993. Typus: *Lavranos et Newton* 13071 (E, ZSS).
- Lavrania** sect. **Cactoidea** (White & Sloane) Bruyns, *Bot. Jahrb. Syst.* 115(2): 245, 1993. Basionym: *Trichocaulon* sect. *Cactoidea*.
- Lavrania cactiformis** (Hooker) Bruyns, *Bot. Jahrb. Syst.* 115(2): 257, 1993. Basionym: *Stapelia cactiformis*. [Concurrently published in *South Afr. J. Bot.* 59(3): 342, 1993.]
- Lavrania marlothii** (N. E. Brown) Bruyns, *Bot. Jahrb. Syst.* 115(2): 246, 1993. Basionym: *Trichocaulon marlothii*. [Concurrently published in *South Afr. J. Bot.* 59(3): 342, 1993.]
- Lavrania perlata** (Dinter) Bruyns, *Bot. Jahrb. Syst.* 115(2): 261, 1993. Basionym: *Trichocaulon perlatum*. [Concurrently published in *South Afr. J. Bot.* 59(3): 342, 1993.]
- Lavrania picta** (N. E. Brown) Bruyns, *Bot. Jahrb. Syst.* 115(2): 250, 1993. Basionym: *Trichocaulon pictum*. [Concurrently published in *South Afr. J. Bot.* 59(3): 342, 1993.]
- Lavrania picta** ssp. **parvipuncta** Bruyns, *Bot. Jahrb. Syst.* 115(2): 256-257, ills., 1993. Typus: *Heunis* 6 (BOL).
- Leachiella tirasmontana* Plowes, *Brit. Cact. Succ. J.* 11(2): 57-59, ills., 1993. Based on *Plowes* 4306. Incorrect name (Art. 11.3).
- Sarcostemma viminale** ssp. **orangeanum** Liede & Meve, *Bot. J. Linn. Soc.* 112: 7-10, ills., map, 1993. Typus: *Liede et Meve* 579 (K, Bot. Inst. Münster).
- Sarcostemma viminale** ssp. **thunbergii** (Don) Liede & Meve, *Bot. J. Linn. Soc.* 112: 10, ills., 1993. Basionym: *Sarcostemma thunbergii*.
- Stapelia** subgen. **Diplocyatha** (N. E. Brown) P. V. Heath, *Calyx* 3(1): 37, 1993. Basionym: *Diplocyatha*.
- Stapelia** subgen. **Heurnelia** P. V. Heath, *Calyx* 3(1): 38, 1993. Typus: *Stultitia paradoxa* Verdoorn. *Nom. nov. pro Orbea* sect. *Codonidium* (sphalm. 'Cononidium') Leach 1978.
- Stapelia** subgen. **Ruestago** P. V. Heath, *Calyx* 3(1): 38, 1993. Typus: *Stapelia prognatha* P. R. O. Bally. *Nom. nov. pro Orbea* subsect. *Librilobae* Leach 1978.
- Stapelia** subgen. **Stisserina** P. V. Heath, *Calyx* 3(1): 38, 1993. Typus: *Caralluma maculata* N. E. Brown. *Nom. nov. pro Orbea* subsect. *Carenitilobae* Leach 1978.
- Stapelia** subgen. **Stultitia** (Phillips) P. V. Heath, *Calyx* 3(1): 38, 1993. Basionym: *Stultitia*.
- Stapelia ciliata** var. **cristata** P. V. Heath, *Calyx* 3(1): 37, 1993. Typus: [icono] Verbeek-Wolthuys, *Raadsel Ontstaan Monstr. Crist. Succ.*, ed. 2, fig. 4, 1948.
- Stapelia fergusoniae* (R. A. Dyer) P. V. Heath, *Calyx* 3(1): 7, in synon., 1993. *Nom. inval.* (Art. 34.1), based on *Stapelia desmetiana* var. *fergusoniae*.
- Stapelianthus insignis** ssp. **tongoboryensis** Rauh, *Trop. subtrop. Pfl.-welt* 85: 33-36, ills., 1993. Typus: *Rauh* 21874 (HEID).

- Tridentea gemmiflora** var. **densa** (N. E. Brown) P. V. Heath, Calyx 3(1): 6, 1993. Basionym: *Stapelia hircosa* var. *densa*.
- Tridentea gemmiflora** var. **hircosa** (Jacquin) P. V. Heath, Calyx 3(1): 6, 1993. Basionym: *Stapelia hircosa*.
- Tridentea herrei** var. **neliana** (White & Sloane) P. V. Heath, Calyx 3(1): 6, 1993. Basionym: *Stapelia neliana*.
- Tridentea jucunda** var. **deficiens** (N. E. Brown) P. V. Heath, Calyx 3(1): 6, 1993. Basionym: *Stapelia jucunda* var. *deficiens*.
- Tridentea longipes** var. **namaquensis** (Luckhoff) P. V. Heath, Calyx 3(1): 6, 1993. Basionym: *Stapelia longipes* var. *namaquensis*.
- Tridentea marientalensis** var. **albipilosa** (Giess) P. V. Heath, Calyx 3(1): 6, 1993. Basionym: *Stapelia albipilosa*.
- Tridentea marientalensis** var. **auobensis** (Nel) P. V. Heath, Calyx 3(1): 6, 1993. Basionym: *Stapelia auobensis*.
- Tridentea pusilla** R. Frandsen, Aloe 29(2): 40, ills., 1993. Typus: *Frandsen 5* (PRE). [Dated 1992, received at ZSS April 1993.]
- × **Tromostapelia mutabilis** var. **americana** P. V. Heath, Calyx 3(1): 34, 1993. [*Nom. nov. pro Stapelia comparabilis* White & Sloane 1933.]
- × **Tromostapelia mutabilis** var. **angulata** (Todaro) P. V. Heath, Calyx 3(1): 34, 1993. Basionym: *Stapelia angulata*.
- × **Tromostapelia mutabilis** var. **incomparabilis** (N. E. Brown) P. V. Heath, Calyx 3(1): 34, 1993. Basionym: *Stapelia incomparabilis*.
- Tromotriche revoluta** var. **fusca** (Jacquin) P. V. Heath, Calyx 3(1): 33, 1993. Basionym: *Stapelia fusca*.
- Tromotriche revoluta** var. **tigrida** (Decaisne) P. V. Heath, Calyx 3(1): 33, 1993. Basionym: *Stapelia tigrida*.

ASTERACEAE

- Kleinia schwartzii** L. E. Newton, Cact. Succ. J. (US) 65(6): 287-288, ills., 1993. Typus: *Schwartz et Powys 73K* (K, EA).

CACTACEAE

- Acanthocalycium klimpelianum** var. **macranthum** (Rausch) J. G. Lambert, Cact. Argentine, 7, 1993. *Nom. inval.* (Art. 33.2), based on *Lobivia spiniflora* var. *macrantha*.
- Acanthocalycium thionanthum** var. **munitum** (Rausch) J. G. Lambert, Cact. Argentine, 14, 1993. *Nom. inval.* (Art. 33.2, 34.1a), based on *Lobivia thionantha* var. *munita*.
- Arrojadoa eriocalis** var. **rosenbergeriana** van Heek & Strecker, Kakt. and. Sukk. 44(12): 258-262, ills., SEM-ills., 1993. Typus: *Anonymus 85/216* (KOELN [Succulentarium ?]).
- Cereus artificiosus** var. **lanzarotensis** G. R. W. Frank, Echinocereenfreund 6(2: Beilage): 1a-3a, ill., 1993. *Nom. inval.* (Art. 43.1). [Name

- published as April joke.]
- Coleocephalocereus pluricostatus** ssp. **uebelmanniorum** P. J. Braun & E. Esteves Pereira, Kakt. and. Sukk. 44(7): 150-154, ills., SEM-ills., 1993. Typus: *Horst et Uebelmann HU 1502* (UFG 13.011).
- Copiapoa cinerea** ssp. **columna-alba** (F. Ritter) Meregalli, Piante Grasse 11(4): 20, 1992. *Nom. inval.* (Art. 24, 32), based on *Copiapoa columna-alba*. [Dated 1991, publ. 1992. Rank cryptically indicated l.c. p. 2.]
- Copiapoa cinerea** ssp. **gigantea** (Backeberg) Meregalli, Piante Grasse 11(4): 19, 1992. *Nom. inval.* (Art. 24, 32), based on *Copiapoa gigantea*. [Dated 1991, publ. 1992. Rank cryptically indicated l.c. p. 2. Combination attributed to N. P. Taylor.]
- Copiapoa cinerea** ssp. **longistaminea** (F. Ritter) Meregalli, Piante Grasse 11(4): 19, 1992. *Nom. inval.* (Art. 24, 32), based on *Copiapoa longistaminea*. [Dated 1991, publ. 1992. Rank cryptically indicated l.c. p. 2; erroneously given as rank-less in RPS 43.]
- Discocactus bahiensis** ssp. **subviridigriseus** (Buining & Brederoo) P.J. Braun & E. Esteves Pereira, Kakt. and. Sukk. 44(3): 63, 1993. Basionym: *Discocactus subviridigriseus*.
- Discocactus catingicola** ssp. **rapirhizus** (Buining & Brederoo) P.J. Braun & E. Esteves Pereira, Kakt. and. Sukk. 44(6): 112, 1993. Basionym: *Discocactus rapirhizus*.
- Discocactus catingicola** var. **griseus** (Buining & Brederoo) P.J. Braun & E. Esteves Pereira, Kakt. and. Sukk. 44(6): 112, 1993. Basionym: *Discocactus griseus*.
- Discocactus catingicola** var. **nigrisaeetosus** (Buining & Brederoo) P.J. Braun & E. Esteves Pereira, Kakt. and. Sukk. 44(6): 112, 1993. Basionym: *Discocactus nigrisaeetosus*.
- Discocactus diersianus** var. **goianus** (Diers & E. Esteves) P.J. Braun & E. Esteves Pereira, Kakt. and. Sukk. 44(6): 113, 1993. Basionym: *Discocactus goianus*.
- Discocactus heptacanthus** ssp. **melanochlorus** (Buining & Brederoo) P.J. Braun & E. Esteves Pereira, Kakt. and. Sukk. 44(4): 103, 1993. Basionym: *Discocactus melanochlorus*.
- Discocactus heptacanthus** var. **semicampaniflorus** (Buining & Brederoo) P.J. Braun & E. Esteves Pereira, Kakt. and. Sukk. 44(4): 103, 1993. Basionym: *Discocactus semicampaniflorus*.
- Discocactus latispinus** ssp. **pseudolatispinus** (Diers & E. Esteves) P.J. Braun & E. Esteves Pereira, Kakt. and. Sukk. 44(4): 105, 1993. Basionym: *Discocactus pseudolatispinus*.
- Discocactus latispinus** ssp. **pulvinicapitatus** (Buining & Brederoo) P.J. Braun & E. Esteves Pereira, Kakt. and. Sukk. 44(4): 105, 1993. Basionym: *Discocactus pulvinicapitatus*.
- Discocactus placentiformis** ssp. **multicolorispinus** (Buining & Brederoo) P.J. Braun & E. Esteves Pereira, Kakt. and. Sukk. 44(4): 105, 1993. Basionym: *Discocactus multicolorispinus*.

- Discocactus placentiformis** var. **alteolens** (Lemaire) P. J. Braun & E. Esteves Pereira, *Kakt. and. Sukk.* 44(4): 105, 1993. Basionym: *Discocactus alteolens*.
- Discocactus placentiformis** var. **pugionacanthus** (Buning & Brederoo) P.J.Braun & E.Esteves Pereira, *Kakt. and. Sukk.* 44(4): 105, 1993. Basionym: *Discocactus pugionacanthus*.
- Discocactus zehntneri** ssp. **buenekeri** (Abraham) P. J. Braun & E. Esteves Pereira, *Kakt. and. Sukk.* 44(3): 64, 1993. Basionym: *Discocactus buenekeri*.
- Discocactus** sect. **Macranthi** Kimmnach, *Haseltonia* 1: 106, 1993. Typus: *Pseudorhipsalis macrantha* Alexander.
- Discocactus** sect. **Pseudorhipsalis** (Britton & Rose) Kimmnach, *Haseltonia* 1: 106, 1993. Basionym: *Pseudorhipsalis*.
- Discocactus** sect. **Wittia** (K. Schumann) Kimmnach, *Haseltonia* 1: 106, 1993. Basionym: *Wittia*.
- Discocactus ramulosus** fa. **angustissimus** (F. A. C. Weber) Kimmnach, *Haseltonia* 1: 127-128, 1993. Basionym: *Rhipsalis angustissima*.
- Discocactus ramulosus** var. **jamaicensis** (Britton & Harris) Kimmnach, *Haseltonia* 1: 128, 1993. Basionym: *Rhipsalis jamaicensis*.
- Echinocereus chloranthus* ssp. **cylindricus** (Engelmann) Fürsch, *Kakt. and. Sukk.* 44(7): 137, 1993. *Nom. inval.* (Art. 33.2, 34.1), based on *Cereus viridiflorus* var. *cylindricus*. [Published as provisional name.]
- Echinocereus chloranthus* ssp. **neocapillus** (Weniger) Fürsch, *Kakt. and. Sukk.* 44(7): 137, 1993. *Nom. inval.* (Art. 33.2, 34.1), based on *Echinocereus chloranthus* var. *neocapillus*. [Published as provisional name.]
- Echinocereus parkeri* var. **mazapilensis** K. Neumann, *Kaktusblüte* 1993: 55, 53 (ill.), 1993. *Nom. inval.* (Art. 36.1, 37.1). [Published as provisional name.]
- Echinocereus toroweapensis** (P. C. Fischer) Fürsch, *Kakt. and. Sukk.* 44(12): 266-268, ills., 1993. Basionym: *Echinocereus triglochidiatus* var. *toroweapensis*.
- Echinocereus waldeisii** Haugg, *Kakt. and. Sukk.* 45(1): 6-7, ills., 1993. Typus: *Waldeis* s.n. (WU). [Dated 1994, publ. late Dec. 1993.]
- Echinopsis densispina* var. **amblayensis** (Rausch) J. G. Lambert, *Cact. Argentine*, 44, 1993. *Nom. inval.* (Art. 33.2), based on *Lobivia amblayensis*.
- Echinopsis densispina* var. **pectinifera** (Wessner) J. G. Lambert, *Cact. Argentine*, 45, 1993. *Nom. inval.* (Art. 33.2), based on *Lobivia pectinifera*.
- Echinopsis fallax* var. **cylindrica** (Backeberg) J. G. Lambert, *Cact. Argentine*, 47, 1993. *Nom. inval.* (Art. 33.2), based on *Lobivia cylindrica*.
- Echinopsis haematantha* var. **elongata** (Backeberg) J. G. Lambert, *Cact. Argentine*, 49, 1993. *Nom. inval.* (Art. 33.2), based on *Lobivia elongata*.
- Echinopsis haematantha* var. **hualfinensis** (Rausch) J. G. Lambert, *Cact. Argentine*, 49, 1993. *Nom. inval.* (Art. 33.2), based on *Lobivia hualfinensis*.
- Echinopsis haematantha* var. **kuehnrichii** (Fric) J. G. Lambert, *Cact. Argentine*, 49, 1993. *Nom. inval.* (Art. 33.2), based on *Lobivia kuehnrichii*.
- Echinopsis saltensis* var. **nealeana** (Backeberg) J. G. Lambert, *Cact. Argentine*, 55, 1993. *Nom. inval.* (Art. 33.2), based on *Lobivia nealeana*.
- Echinopsis saltensis* var. **pseudocachensis** (Backeberg) J. G. Lambert, *Cact. Argentine*, 56, 1993. *Nom. inval.* (Art. 33.2), based on *Lobivia pseudocachensis*.
- Echinopsis stilowiana* (Backeberg) J. G. Lambert, *Cact. Argentine*, 59, 1993. *Nom. inval.* (Art. 33.2), based on *Lobivia stilowiana*.
- Floribunda bahiensis** P. J. Braun & E. Esteves Pereira, *Pabstia* 4(3): 11-16, ills., 1993. Typus: *Esteves Pereira* 337 (UFG 13007).
- Gymnocactus roseiflorus** G. Frank, *Succulenta* 72(1): 40-42, ill., SEM-ill., 1993. Typus: WU [Ex cult. coll. G. Frank sub T.16.]. [Based on *Turbinacarpus roseiflorus* Backeberg 1963 (*nom. inval.*).]
- Gymnocalycium baldianum* fa. **sanguiniflorum** (Werdermann) J. G. Lambert, *Cact. Argentine*, 78, 1993. *Nom. inval.* (Art. 33.2), based on *Echinocactus sanguiniflorus*.
- Gymnocalycium baldianum* fa. **venturianum** (Fric ex Backeberg) J. G. Lambert, *Cact. Argentine*, 78, 1993. *Nom. inval.*, based on *Gymnocalycium venturianum*, *nom. inval.* (Art. 36.1).
- Gymnocalycium bodenbenderianum** ssp. **intertextum** (Backeberg ex Till) H. Till, *Gymnocalycium* 6(1): 83, 1993. Basionym: *Gymnocalycium intertextum*.
- Gymnocalycium castellanosi** var. **armillatum** Piltz, *Gymnos* 9(18): 47-51, 42-43, 45, ills., SEM-ills., 1993. Typus: *Piltz* 217/2 (U).
- Gymnocalycium castellanosi** var. **bozsingianum** (Schütz) Piltz, *Gymnos* 9(18): 43, ills., 1993. Basionym: *Gymnocalycium bozsingianum*.
- Gymnocalycium monvillei** fa. **villamercedense** H. Till & Neuhuber, *Gymnocalycium* 6(3): 104-105, ills., 1993. Typus: *Neuhuber* 88-79/197 (WU).
- Gymnocalycium monvillei** ssp. **achirasense** (Till & Schatzl ex Till) H. Till, *Gymnocalycium* 6(3): 102, 1993. Basionym: *Gymnocalycium achirasense*.
- Gymnocalycium monvillei** ssp. **brachyanthum** (Gürke) H. Till, *Gymnocalycium* 6(3): 102, 1993. Basionym: *Echinocactus brachyanthus*.
- Gymnocalycium monvillei** ssp. **horridispinum** (G. Frank ex H. Till) H. Till, *Gymnocalycium* 6(3): 102, 1993. Basionym: *Gymnocalycium horridispinum*.
- Gymnocalycium monvillei** var. **chacrasense** Neuhuber, *Gymnocalycium* 6(3): 105-106, ills., 1993. Typus: *Neuhuber* 90-269/859 (WU).
- Gymnocalycium monvillei** var. **echinatum** Neuhuber, *Gymnocalycium* 6(4): 108, ills., 1993. Typus: *Neuhuber* 91-346/1186 (WU).
- Gymnocalycium monvillei** var. **gertrudae**

- Neuhuber, *Gymnocalycium* 6(4): 110, ills., 1993. Typus: *Neuhuber* 88-29/50 (WU).
- Gymnocalycium monvillei** var. **grandiflorum** (Backeberg) Till ex Tománek & Procházka, *Gymnofil* 21(4): 17, 1993. Basionym: *Gymnocalycium grandiflorum*. [Dated 1992, received July 1993.]
- Gymnocalycium monvillei** var. **kainradliae** Neuhuber, *Gymnocalycium* 6(4): 107-108, ills., 1993. Typus: *Neuhuber et Kainradl* 88-29/47 (WU).
- Gymnocalycium monvillei** var. **orientale** Neuhuber, *Gymnocalycium* 6(3): 103-104, ills., 1993. Typus: *Neuhuber* 91-341/1157 (WU).
- Gymnocalycium monvillei* var. *steineri* Till ex Tománek & Procházka, *Gymnofil* 21(4): 18-19, 1993. Based on Till 88-219. *Nom. inval.* (Art. 36.1). [Dated 1992, received July 1993.]
- Gymnocalycium ochoterena** ssp. **vatteri** (Buining) Papsch, *Gymnocalycium* 6(1): 79, 1993. Basionym: *Gymnocalycium vatteri*. [Sphalm. 'ochoterena'.]
- Gymnocalycium ochoterena** var. **altautinese** Papsch, *Gymnocalycium* 6(1): 79-81, ills., 1993. Typus: *Amerhauser et Strigl* STO90-412/6 (WU). [Sphalm. 'ochoterena'.]
- Gymnocalycium ochoterena** var. **vatteri** (Buining) Papsch, *Gymnocalycium* 6(1): 78-81, 1993. Basionym: *Gymnocalycium vatteri*. [Sphalm. 'ochoterena'.]
- Leptocereus carinatus** Areces, *Moscosea* 7: 243-248, ills., map, 1993. Typus: *Areces* 5489 (MNHN, HAC, HAJB, NY).
- Leptocereus scopulophilus** Areces, *Brittonia* 45(3): 226-230, 1993. Typus: *Areces* 4601 (MNHN, HAC, HAJB, NY).
- Mammillaria haasii** J. Meyrán, *Cact. Suc. Mex.* 38(2): 27-30, ills., cover-ill., 1993. Typus: *Haas* s.n. (MEXU) [Ex cult. J. Merán no. 5219].
- Mammillaria lindsayi** var. **cobrensis** Reppenhagen ex Hils, *Mitteilungsbl. AfM* 17(1): 21, 26-30, ills., SEM-ills., 1993. Typus: *Hils* M8/90 (ZSS). [Name first used as provisional name by A. B. Lau ex Reppenhagen, *Gattung Mammillaria* 2: 667, 1992 (cf. RPS 43).]
- Mammillaria lindsayi** var. **rubriflora** Hils, *Mitteilungsbl. AfM* 17(1): 23, 31-35, ills., SEM-ills., 1993. Typus: *Hils* M9/90 (ZSS).
- Mammillaria voburnensis** var. **gerhardii** Diers, *Kakt. and. Sukk.* 44(11): 244-246, ill., 1993. Typus: *Freudenberger* s.n. (KOELN [Succulentarium]).
- Melocactus perezassoi** Areces, *Phytologia* 74(6): 421-427, 1993. Typus: *Figueredo et al.* 2366 (MNHN, HAC).
- Notocactus concinnoides* Hort. Buining ex Prauser, *Internoto* 14(2): 53-58, ills., 1993. *Nom. inval.* (Art. 36.1, 37.1). [Published as provisional name; first used in the late 1960s by Buining for *Horst & Uebelmann* HU 77, later also used by Stockinger for FS 196; also published as *Notocactus concinnus* var. *aceguensis*.]
- Notocactus horstii* fa. *muglianus* Herm, *Internoto* 14(2): 63-64, ill., 1993. Based on *Horst et Uebelmann* HU 82. *Nom. inval.* (Art. 37.4).
- Notocactus horstii** fa. **purpureiflorus** (F. Ritter) Herm, *Internoto* 14(2): 64, 1993. Basionym: *Notocactus horstii* var. *purpureiflorus*.
- Notocactus horstii** fa. **purpureus** (F. Ritter) Herm, *Internoto* 14(2): 64, 1993. Basionym: *Notocactus purpureus*.
- Notocactus laetevirens** fa. **densispinus** Bergner, *Internoto* 14(1): 3-12, ills., 1993. Typus: *Gerloff* 124 (STU).
- Notocactus langsdorffii* fa. *eddiewarasii* Gerloff, *Internoto* 14(2): 77-78, ill., 1993. *Nom. inval.* (Art. 36.1, 37.1). [Published as provisional name.]
- Notocactus langsdorffii** fa. **prolifer** (F. Ritter) Gerloff, *Internoto* 14(2): 76, 1993. Basionym: *Wigginsia prolifera*.
- Notocactus langsdorffii** var. **leprosorum** (F. Ritter) Hofacker, *Internoto* 14(4): 124, ill., 1993. Basionym: *Wigginsia leprosorum*.
- Notocactus langsdorffii** var. **longispinus** (F. Ritter) Gerloff, *Internoto* 14(2): 78, 1993. Basionym: *Wigginsia longispina*.
- Notocactus megapotamicus* fa. *multiflorus* (Fric ex Buining) Stuchlik, *Rod Notocactus*, 85, 1993. *Nom. inval.*, based on *Notocactus ottonis* var. *multiflorus*, *nom. inval.* (Art. 36.1).
- Notocactus neohorstii** fa. **juvenaliformis** (F. Ritter) Gerloff, *Internoto* 14(2): 73, 1993. Basionym: *Wigginsia horstii* var. *juvenaliformis*.
- Notocactus ottonis** cv. **Janousek** Papousek ex Havlicek, *Internoto* 14(3): 106, 1993. [Based on *Notocactus ottonis* var. *janousekianus* Papousek 1975.]
- Notocactus ottonis** cv. **Venclu** Schütz ex Havlicek, *Internoto* 14(3): 105-106, 1993. [Based on *Notocactus ottonis* var. *vencluianus* Schütz 1965.]
- Notocactus oxycostatus** fa. **acutus** (F. Ritter) Gerloff, *Internoto* 14(3): 93, 1993. Basionym: *Notocactus acutus*.
- Notocactus oxycostatus** fa. **miniatispinus** (F. Ritter) Gerloff, *Internoto* 14(3): 93, 1993. Basionym: *Notocactus securituberculatus* var. *miniatispinus*.
- Notocactus oxycostatus** fa. **securituberculatus** (F. Ritter) Gerloff, *Internoto* 14(3): 93, 1993. Basionym: *Notocactus securituberculatus*.
- Notocactus ruoffii** Gerloff, *Internoto* 14(4): 115-119, ills., 1993. Typus: *Ruoff* 88 (STU).
- Notocactus rutilans** cv. **Stor** Pazout ex Havlicek, *Internoto* 14(3): 106, 1993. [Based on *Notocactus rutilans* fa. *storianus* Pazout.]
- Notocactus sellowii** fa. **macracanthus** (Arechavaleta) Gerloff, *Internoto* 14(2): 72, 1993. Basionym: *Echinocactus sellowii* var. *macracanthus*.
- Notocactus sellowii** fa. **pauciareolatus** (Arechavaleta) Gerloff, *Internoto* 14(2): 72, 1993. Basionym: *Echinocactus pauciareolatus*.

- Notocactus sellowii** var. **courantii** (Lemaire) Gerloff, Internoto 14(2): 73, 1993. Basionym: *Echinocactus courantii*.
- Notocactus tephraanthus** var. **depressus** (Spegazzini) Stuchlík, Rod Notocactus, 147, 1993. Basionym: *Echinocactus acutus* var. *depressus*.
- Notocactus uebelmannianus** fa. **gilviflorus** Gerloff & Königs, Internoto 14(2): 70, 1993. Typus: Gerloff 52b (STU). [Nom. nov. pro *Notocactus uebelmannianus* fa. *flaviflorus* Gerloff & Königs (nom. illeg., non fa. *flaviflorus* Buining).]
- Opuntia** cv. **Rutilans** Jankalski, Hardy Cact. Succ. Bull. 2(1): 18, 1993. [Selection of apparent hybrid swarm *Opuntia erinacea* var. *utahensis* × *O. fragilis* var. *brachyarthra*, based on *Opuntia rutila* sensu Boissevain & Davidson 1940, quoad fig. 24.]
- Parodia amblayensis** F. H. Brandt, Letzeb. Cacteeffren 2(4): 1, ills., 1981. *Nom. inval.* (Art. 36.1). [Attempted transfer of *Parodia tuberculosi-costata* var. *amblayana* F. H. Brandt (nom. inval., Art. 43.1).]
- Parodia aureicentra** var. **muhrii** (F. H. Brandt) J. G. Lambert, Cact. Argentine, 190, 1993. *Nom. inval.* (Art. 33.2), based on *Parodia muhrii*.
- Parodia aureicentra** var. **rauschii** (Backeberg) J. G. Lambert, Cact. Argentine, 192, 1993. *Nom. inval.*, based on *Parodia rauschii*, *nom. inval.* (Art. 9.5).
- Parodia aureicentra** var. **varicolor** (F. Ritter) J. G. Lambert, Cact. Argentine, 193, 1993. *Nom. inval.* (Art. 33.2), based on *Parodia varicolor*.
- Parodia cabracorralensis** Piens, Tijdschr. Liefhebb. Cact. Vetpl. Kamerpl. 6(4): 56-58, ill., 1993. Based on Herzog 128. *Nom. inval.* (Art. 36.1). [Published as provisional name.]
- Parodia candidata** F. H. Brandt, Letzeb. Cacteeffren 2(2): 1-5, ills., 1982. Typus: HEID [Ex cult. F. H. Brandt Nr. 50/a.]. [Omitted previously.]
- Parodia catamarcensis** var. **riojensis** (F. Ritter & Weskamp) J. G. Lambert, Cact. Argentine, 208, 1993. *Nom. inval.* (Art. 33.2), based on *Parodia riojensis*.
- Parodia microsperma** var. **weberiana** (F. H. Brandt) J. G. Lambert, Cact. Argentine, 220, 1993. *Nom. inval.* (Art. 33.2), based on *Parodia weberiana*.
- Parodia nigresca** F. H. Brandt, Letzeb. Cacteeffren 2(5): 1-6, ills., 1981. Typus: HEID [Ex cult. F. H. Brandt Nr. 63/a.]. [Omitted previously.]
- Parodia salitrensis** F. H. Brandt, Letzeb. Cacteeffren 2(1): 2-5, ills., 1981. Typus: HEID [Ex cult. F. H. Brandt Nr. 38/a.]. [Omitted previously. Further data in l.c. 2(2): 5-6, 1982.]
- Pseudopilocereus coeruleus** (Lemaire) P. V. Heath, Calyx 2(2): 53, 1992. *Nom. illeg.* (Art. 63.1), based on *Pilocereus coeruleus*. [Omitted previously.]
- Pseudopilocereus polyedrophorus** (Lemaire) P. V. Heath, Calyx 2(2): 53, 1992. *Nom. illeg.* (Art. 63.1), based on *Pilocereus polyedrophorus*. [Omitted previously.]
- Pyrrhocactus marayesensis** (Backeberg) J. G. Lambert, Cact. Argentine, 245, 1993. *Nom. inval.*, based on *Pyrrhocactus umadeave* var. *marayesensis*, *nom. inval.* (Art. 9.5).
- Rebutia einsteinii** var. **atrosinosa** (Rausch) Sida, Kaktusy 28(6): 124, 1993. Basionym: *Lobivia einsteinii* var. *atrosinosa*. [Dated 1992, received June 1993.]
- Rhipsalidopsis** × **graeseri** (D. R. Hunt) P. V. Heath, Calyx 3(1): 31, 1993. Basionym: *Hatiora* × *graeseri*. [Name first used invalidly by Moran (Gentes Herbar. 8(4): 342, 1953) in a combination for *Rhipsalis* × *graeseri* Werdermann (*nom. inval.*) (cf. RPS 4).]
- Rhipsalis spinescens** Lombardi, Acta Bot. Bras. 5(2): 71-73, ills., 1993. Typus: *Hutchison et Matthes* 9039 (MO, SPF, UEC). [Dated 1991, received at ZSS Aug. 1993.]
- Schlumbergera** cv. **Hatherton Surprise** Horobin, Epiphytes 17(65): 14-15, ill., 1993. [= *Schlumbergera* × *buckleyi* × *S. orssichiana*.]
- Schlumbergera** cv. **Ruth Day** K. Petersen, EPIG 5(2): 32-33, ill., 1993. [= *Schlumbergera orssichiana* × *S. 'Delicata'*.]
- Sclerocactus wetlandicus** var. **ilseae** Hochstätter, Succulenta 72(2): 86-89, ills., 1993. Typus: *Hochstätter* 0700 (HBG).
- Selenicereus rubineus** Kimmach, Cact. Succ. J. (US) 65(1): 16-18, ills., 1993. Typus: *MacDougall* A245 (HNT, MEXU).
- Stenocereus littoralis** (K. Brandegee) L. W. Lenz, Annot. Cat. Pl. Cape Reg. Baja Calif., 45, 1992. *Nom. inval.* (Art. 33.2), based on *Cereus thurberi* var. *littoralis*.
- Tephrocactus aoracanthus** var. **paediophilus** (A. Castellanos) J. G. Lambert, Cact. Argentine, 271, 1993. *Nom. inval.* (Art. 33.2), based on *Opuntia paediophila*.
- Trichocereus** cv. **Stern von Nürnberg** Rippe, Kaktusblüte 1993: 5-8, ill., 1993. [A hybrid with *Trichocereus thelegonus* as one of the parents.]
- Trichocereus walteri** (Kiesling) J. G. Lambert, Cact. Argentine, 295, 1993. *Nom. inval.* (Art. 33.2), based on *Lobivia walteri*.
- Turbincarpus jauernigii** G. Frank, Succulenta 72(3): 113-115, ills., 1993. Typus: *Jauernig* 210 (WU).
- Turbincarpus pseudomacrolele** var. **sphacelatus** Diers & G. Frank, Kakt. and. Sukk. 44(8): 158-161, ills., 1993. Typus: KOELN [Succulentarium ?] [Ex cult. ?]. *Nom. inval.* (Art. 37.3). [Sphalm. 'sphacellatus', 'spacellatus'.]
- Turbincarpus schwarzii** var. **rubriflorus** G. Frank, Succulenta 72(2): 77-79, ills., SEM-ills., 1993. Typus: *Bonatz* 1590 (WU).
- Weingartia callecallensis** F. H. Brandt, Letzeb. Cacteeffren 2(3): 1-6, ills., 1981. Typus: HEID [Ex cult. F. H. Brandt Nr. 82/a.]. [Omitted previously.]
- Weingartia flavida** F. H. Brandt, Letzeb. Cacteeffren 2(6): 3-9, ills., 1981. Typus: HEID [Ex cult. F. H. Brandt Nr. 83/a.]. [Omitted previously.]

CRASSULACEAE

- Combesia campestris** (Ecklon & Zeyher) P. V. Heath, Calyx 3(4): 121, 1993. Basionym: *Tetraphyle campestris*.
- Combesia campestris** var. **pharnaceoides** (Fischer & C. A. Meyer) P. V. Heath, Calyx 3(4): 121, 1993. Basionym: *Crassula pharnaceoides*.
- Combesia campestris** var. **rhodesica** (Merxmüller) P. V. Heath, Calyx 3(4): 121, 1993. Basionym: *Crassula pharnaceoides* ssp. *rhodesica*.
- Combesia lanceolata** (Ecklon & Zeyher) P. V. Heath, Calyx 3(4): 122, 1993. Basionym: *Tetraphyle lanceolata*.
- Combesia lanceolata** ssp. **denticulata** (Brenan) P. V. Heath, Calyx 3(4): 122-123, 1993. Basionym: *Crassula pentandra* var. *denticulata*.
- Combesia lanceolata** ssp. **transvaalensis** (Kuntze) P. V. Heath, Calyx 3(4): 123, 1993. Basionym: *Sedum transvaalense*.
- Combesia muscosa** (Linné) P. V. Heath, Calyx 3(4): 121, 1993. Basionym: *Crassula muscosa*.
- Combesia muscosa** var. **acuminata** (G. D. Rowley) P. V. Heath, Calyx 3(4): 121, 1993. Basionym: *Crassula lycopodioides* fa. *acuminata*.
- Combesia muscosa** var. **anguinea** (Harvey) P. V. Heath, Calyx 3(4): 121, 1993. Basionym: *Crassula anguinea*.
- Combesia muscosa** var. **fragilis** (G. D. Rowley) P. V. Heath, Calyx 3(4): 121, 1993. Basionym: *Crassula lycopodioides* fa. *fragilis*.
- Combesia muscosa** var. **fulva** (G. D. Rowley) P. V. Heath, Calyx 3(4): 121, 1993. Basionym: *Crassula lycopodioides* fa. *fulva*.
- Combesia muscosa** var. **litoralis** (Ecklon & Zeyher) P. V. Heath, Calyx 3(4): 121, 1993. Basionym: *Tetraphyle litoralis*.
- Combesia muscosa** var. **obtusifolia** (Harvey) P. V. Heath, Calyx 3(4): 122, 1993. Basionym: *Crassula lycopodioides* var. *obtusifolia*.
- Combesia muscosa** var. **parvula** (Ecklon & Zeyher) P. V. Heath, Calyx 3(4): 122, 1993. Basionym: *Tetraphyle parvula*.
- Combesia muscosa** var. **polpodacea** (Ecklon & Zeyher) P. V. Heath, Calyx 3(4): 122, 1993. Basionym: *Tetraphyle polpodacea*.
- Combesia muscosa** var. **pseudolycopodioides** (Dinter) P. V. Heath, Calyx 3(4): 122, 1993. Basionym: *Crassula pseudolycopodioides*.
- Combesia muscosa** var. **purpusii** (G. D. Rowley) P. V. Heath, Calyx 3(4): 122, 1993. Basionym: *Crassula lycopodioides* fa. *purpusii*.
- Combesia muscosa** var. **variegata** (E. Lamb) P. V. Heath, Calyx 3(4): 122, 1993. *Nom. inval.*, based on *Crassula lycopodioides* (?) *variegata*, *nom. inval.* (Art. 36.1).
- Combesia phyturus** (Mildbraed) P. V. Heath, Calyx 3(4): 122, 1993. Basionym: *Crassula phyturus*.
- Crassula** cv. **Baby's Surprise** Rud. Schulz, Austral. Succ. Rev. Newslett. 3(1): 12, ill., 1993. [A spontaneous mutation produced from stock of *Crassula* cv. *Baby's Necklace*.]
- Crassula** cv. **Frosty** Rud. Schulz, Austral. Succ. Rev. Newslett. 3(2): 1, ill., 1993. [= *Crassula tecta* (thin-leaved form) × *C. deceptor*.]
- Creusa** P. V. Heath, Calyx 3(3): 103, 1993. Typus: *Crassula acutifolia* Lamarck. [*Nom. nov. pro Crassula* group *Acutifolia* Schönland 1929.]
- Creusa biplanata** (Haworth) P. V. Heath, Calyx 3(3): 103, 1993. Basionym: *Crassula biplanata*.
- Creusa biplanata** var. **punctulata** (Schönland & Baker) P. V. Heath, Calyx 3(3): 103, 1993. Basionym: *Crassula punctulata*.
- Creusa corallina** (Thunberg) P. V. Heath, Calyx 3(3): 103, 1993. Basionym: *Crassula corallina*.
- Creusa corallina** ssp. **macrorrhiza** (Tölken) P. V. Heath, Calyx 3(3): 103, 1993. Basionym: *Crassula corallina* ssp. *macrorrhiza*.
- Creusa deltoidea** (Thunberg) P. V. Heath, Calyx 3(3): 103, 1993. Basionym: *Crassula deltoidea*.
- Creusa elizabethae** P. V. Heath, Calyx 3(3): 103, 1993. *Nom. illeg.* (Art. 55). [*Nom. nov. pro Crassula elsieae* Tölken 1975.]
- Creusa ericoides** (Haworth) P. V. Heath, Calyx 3(3): 103, 1993. Basionym: *Crassula ericoides*.
- Creusa ericoides** ssp. **tortuosa** (Tölken) P. V. Heath, Calyx 3(3): 103, 1993. Basionym: *Crassula ericoides* ssp. *tortuosa*.
- Creusa** × **garciae** P. V. Heath, Calyx 3(3): 103, 1993. Typus: *Smith* 2758 (PRE). [= *Creusa biplanata* × *C. ericoides*.]
- Creusa** × **mixta** P. V. Heath, Calyx 3(3): 103, 1993. Typus: *Paterson* 27 (GRA). [= *Creusa ericoides* × *C. tetragona* ssp. *acutifolia*.]
- Creusa planifolia** (Schönland) P. V. Heath, Calyx 3(3): 103, 1993. Basionym: *Crassula planifolia*.
- Creusa revolvens** (Haworth) P. V. Heath, Calyx 3(3): 104, 1993. Basionym: *Crassula revolvens*.
- Creusa revolvens** var. **harveyi** (Britten & Baker) P. V. Heath, Calyx 3(3): 104, 1993. Basionym: *Crassula harveyi*.
- Creusa revolvens** var. **intermedia** (Schönland) P. V. Heath, Calyx 3(3): 104, 1993. Basionym: *Crassula harveyi* var. *intermedia*.
- Creusa sarcocaulis** (Ecklon & Zeyher) P. V. Heath, Calyx 3(3): 104, 1993. Basionym: *Crassula sarcocaulis*.
- Creusa sarcocaulis** ssp. **elliptica** P. V. Heath, Calyx 3(3): 104, 1993. [*Nom. nov. pro Crassula parvisepala* Schönland 1897.]
- Creusa sarcocaulis** ssp. **rupicola** (Tölken) P. V. Heath, Calyx 3(3): 104, 1993. Basionym: *Crassula sarcocaulis* ssp. *rupicola*.
- Creusa tetragona** (Linné) P. V. Heath, Calyx 3(3): 104, 1993. Basionym: *Crassula tetragona*.
- Creusa tetragona** ssp. **acutifolia** (Lamarck) P. V. Heath, Calyx 3(3): 104, 1993. Basionym:

- Crassula acutifolia*.
- Creusa tetragona** ssp. **connivens** (Schönland) P. V. Heath, Calyx 3(3): 104, 1993. Basionym: *Crassula connivens*.
- Creusa tetragona** ssp. **lignescens** (Tölken) P. V. Heath, Calyx 3(3): 104, 1993. Basionym: *Crassula tetragona* ssp. *lignescens*.
- Creusa tetragona** ssp. **robusta** (Tölken) P. V. Heath, Calyx 3(3): 104, 1993. Basionym: *Crassula robusta*.
- Creusa tetragona** ssp. **rudis** (Schönland & Baker) P. V. Heath, Calyx 3(3): 104, 1993. Basionym: *Crassula rudis*.
- Creusa vestita** (Thunberg) P. V. Heath, Calyx 3(3): 104, 1993. Basionym: *Crassula vestita*.
- Echeveria setosa** var. **ciliata** (Moran) Moran, Cact. Succ. J. (US) 65(1): 32-33, 1993. Basionym: *Echeveria ciliata*.
- Echeveria setosa** var. **minor** Moran, Cact. Succ. J. (US) 65(1): 33-35, ills., 1993. Typus: *Fittkau* s.n. (SD 93245, BH, CAS) [Ex cult. San Diego (R. Moran 19059)].
- Echeveria setosa** var. **oteroi** Moran, Cact. Succ. J. (US) 65(1): 33-34, ills., 1993. Typus: *Otero* 26 (SD 93237, BH, CAS, HNT, SD).
- Gomara pellicida** (Linné) P. V. Heath, Calyx 3(2): 73, 1993. Basionym: *Crassula pellicida*.
- Hylotelephium ussuriense** var. **tsugaruense** (H. Hara) H. Ohba, J. Jap. Bot. 68(3): 150, 1993. Basionym: *Sedum tsugaruense*.
- Kalanchoe bogneri** Rauh, Kakt. and. Sukk. 44(9): 181-185, ills.; 45(1): 11 [erratum], 1993. Typus: *Bogner* 2138 (M, HEID).
- Kalanchoe subrosulata** Thulin, Nordic J. Bot. 13: 51-52, ills., 1993. Typus: *Thulin et al.* 7756 (UPS, K, MOG).
- × **Lenophytum** C. H. Uhl, Cact. Succ. J. (US) 65(6): 273, 1993. [= *Lenophyllum* × *Pachyphytum*.]
- × **Lenoveria** C. H. Uhl, Cact. Succ. J. (US) 65(6): 272, 1993. [= *Lenophyllum* × *Echeveria*.]
- Pachyphytum caesium** Kimmach & Moran, Cact. Succ. J. (US) 65(2): 59-62, ills., 1993. *Nom. inval.* (Art. 37.1). [Based on 2 syntypes, *W. Baker* 7073 given in the Latin diagnosis, *W. Minnich* 12101 as holotype after the English description.]
- Pyrgosea orbicularis** (Linné) P. V. Heath, Calyx 3(2): 44, 1993. Basionym: *Crassula orbicularis*.
- Sarcolipes strigosa** (Linné) P. V. Heath, Calyx 3(3): 114, 1993. Basionym: *Crassula strigosa*.
- Sedum** cv. **Spiral Staircase** R. Stephenson, Brit. Cact. Succ. J. 11(2): 60-62, ills., 1993.
- Sedum** × **lorenzoii** nssp. **hommelsii** ('t Hart) 't Hart, Sedum Soc. Newslett. No. 28: 20, 1993. Basionym: *Sedum* × *hommelsii*.
- Sedum** × **luteolum** nssp. **hegnaui** ('t Hart) 't Hart, Sedum Soc. Newslett. No. 28: 19, 1994. Basionym: *Sedum* × *hegnaui*.
- Sedum susannae** var. **subgaleatum** (K.-T. Fu) K.-T. Fu, Vasc. Pl. Hengduan Mount. 1: 668, 1993. Basionym: *Sedum subgaleatum*.
- Sedum triactina** var. **leptum** (Fröderström) K.-T. Fu, Vasc. Pl. Hengduan Mount. 1: 662, 1993. Basionym: *Sedum triactina* ssp. *leptum*.
- Sedum vuralianum** J. Metzger, Brit. Cact. Succ. J. 11(4): 100-102, ills., 1993. Typus: *Metzger* 2012.1 (GAZI, herb. J. Metzger) [Ex cult. J. Metzger].
- Sempervivum minutum** fa. **glabrescens** Jankalski, SempWorld 1(4): 2, 1993. [*Nom. nov. pro Sempervivum nevadense* Wale 1941.]
- Sempervivum tectorum** var. **andreaum** (Wale) O. Bolòs & Vigo, Fl. Paisos Catalans 2: 821, 1990. Basionym: *Sempervivum andreaum*.
- Septas alaicornis** (Schönland) P. V. Heath, Calyx 3(3): 106, 1993. Basionym: *Crassula alaicornis*.
- Septas capensis** var. **albertiniae** (Schönland) P. V. Heath, Calyx 3(3): 106, 1993. Basionym: *Crassula albertiniae*. [Spelling of the varietal epithet and of the basionym disputed by P. V. Heath.]
- Septas capensis** var. **leipoldtii** (Schönland) P. V. Heath, Calyx 3(3): 106, 1993. Basionym: *Crassula capensis* var. *leipoldtii*.
- Septas capensis** var. **promontorii** (Schönland & Baker) P. V. Heath, Calyx 3(3): 106, 1993. Basionym: *Crassula promontorii*. [Sphalm. 'promuntorii'.]
- Septas dentata** (Thunberg) P. V. Heath, Calyx 3(3): 106, 1993. Basionym: *Crassula dentata*.
- Septas nemorosa** (Ecklon & Zeyher) P. V. Heath, Calyx 3(3): 106, 1993. Basionym: *Petrogeton nemorosum*.
- Septas** × **putativa** P. V. Heath, Calyx 3(3): 106, 1993. Typus: *Barker* 4865 (NBG). [= *Septas capensis* var. *capensis* × *S. dentata*.]
- Septas saxifraga** (Harvey) P. V. Heath, Calyx 3(3): 106, 1993. Basionym: *Crassula saxifraga*.
- Septas simulans** (Schönland) P. V. Heath, Calyx 3(3): 106, 1993. Basionym: *Crassula simulans*.
- Septas umbraticola** (N. E. Brown) P. V. Heath, Calyx 3(3): 106, 1993. *Nom. inval.* (Art. 33.2), based on *Crassula umbraticola*. [Sphalm. 'unbraticola'. The generic name of the basionym was erroneously omitted.]
- Septimia** P. V. Heath, Calyx 3(3): 104, 1993. Typus: *Crassula spatulata* Thunberg. [*Nom. nov. pro Crassula* group *Spatulatae* Schönland 1929.]
- Septimia crenulata** (Thunberg) P. V. Heath, Calyx 3(3): 104, 1993. Basionym: *Crassula crenulata*.
- Septimia inandensis** (Schönland & Baker) P. V. Heath, Calyx 3(3): 105, 1993. Basionym: *Crassula inandensis*.
- Septimia multicava** (Lemaire) P. V. Heath, Calyx 3(3): 105, 1993. Basionym: *Crassula multicava*.
- Septimia multicava** var. **integrifolia** (Tölken) P. V. Heath, Calyx 3(3): 105, 1993. Basionym: *Crassula sarmentosa* var. *integrifolia*.
- Septimia multicava** var. **multiflora** P. V. Heath, Calyx 3(3): 105, 1993. [*Nom. nov. pro Crassula multicava* ssp. *floribunda* Tölken.]
- Septimia sarmentosa** (Harvey) P. V. Heath, Calyx

- 3(3): 105, 1993. Basionym: *Crassula sarmentosa*.
- Septimia spathulata** (Thunberg) P. V. Heath, Calyx 3(3): 105, 1993. Basionym: *Crassula spathulata*. [Sphalm. 'spatulata'.]
- Septimia spathulata** var. **cyclophylla** (Schönland & Baker) P. V. Heath, Calyx 3(3): 105, 1993. Basionym: *Crassula cyclophylla*. [Sphalm. 'spatulata' / 'cycophylla'.]
- Septimia spathulata** var. **latifolia** P. V. Heath, Calyx 3(3): 105, 1993. [Sphalm. 'spatulata'. *Nom. nov. pro Crassula latispatulata* Schönland & Baker 1898.]
- Septimia streyi** (Tölken) P. V. Heath, Calyx 3(3): 105, 1993. Basionym: *Crassula streyi*.
- Sphaeritis ciliata** (Linné) P. V. Heath, Calyx 3(2): 41, 1993. Basionym: *Crassula ciliata*.
- Sphaeritis subulata** (Linné) P. V. Heath, Calyx 3(2): 45, 1993. Basionym: *Crassula subulata*.
- Tetraphyle alpestris** (Thunberg) P. V. Heath, Calyx 3(3): 107, 1993. Basionym: *Crassula alpestris*.
- Tetraphyle alpestris** nvar. **acocksii** P. V. Heath, Calyx 3(3): 107, 1993. Typus: *Acocks* 14899b (PRE). [= *Tetraphyle alpestris* var. *alpestris* × *T. alpestris* var. *massonii*.]
- Tetraphyle alpestris** var. **massonii** (Britten & Baker) P. V. Heath, Calyx 3(3): 107, 1993. Basionym: *Crassula massonii*.
- Tetraphyle barklyi** (N. E. Brown) P. V. Heath, Calyx 3(3): 107, 1993. Basionym: *Crassula barklyi*.
- Tetraphyle columnaris** (Thunberg) P. V. Heath, Calyx 3(3): 107, 1993. Basionym: *Crassula columnaris*.
- Tetraphyle columnaris** var. **mitrata** (H.-C. Friedrich) P. V. Heath, Calyx 3(3): 107, 1993. Basionym: *Crassula mitrata*.
- Tetraphyle columnaris** var. **prolifera** (H.-C. Friedrich) P. V. Heath, Calyx 3(3): 107, 1993. Basionym: *Crassula columnaris* ssp. *prolifera*. [Basionym erroneously cited as 'var. *prolifera*' and treated as bibliographical error.]
- Tetraphyle congesta** (N. E. Brown) P. V. Heath, Calyx 3(3): 107, 1993. Basionym: *Crassula congesta*.
- Tetraphyle congesta** var. **laticephala** (Schönland) P. V. Heath, Calyx 3(3): 107, 1993. Basionym: *Crassula laticephala*.
- Tetraphyle** × **hybrida** P. V. Heath, Calyx 3(3): 107, 1993. Typus: *Compton* 22897 (NBG). [= *Tetraphyle alpestris* var. *massonii* × *T. columnaris* var. *columnaris*.]
- Tetraphyle multiceps** (Harvey) P. V. Heath, Calyx 3(3): 107, 1993. Basionym: *Crassula multiceps*.
- Tetraphyle pyramidalis** var. **archeri** (Compton) P. V. Heath, Calyx 3(3): 107, 1993. Basionym: *Crassula archeri*.
- Tetraphyle pyramidalis** var. **cylindrica** (Schönland) P. V. Heath, Calyx 3(3): 107, 1993. Basionym: *Crassula cylindrica*.
- Tetraphyle pyramidalis** var. **quadrangula** (Ecklon & Zeyher) P. V. Heath, Calyx 3(3): 107, 1993. Basionym: *Tetraphyle quadrangula*.
- Thompsonella spathulata** Kimmach, Cact. Succ. J. (US) 65(1): 41-43, ill., 1993. Typus: *Lau* s.n. (HNT, MEXU).
- Tillaea longipes** (Rose) J. Meyrán, in M. A. Villavicencio et al. (eds.), Invest. recientes Fl. Fauna Hidalgo, Mexico, 14, 1993. Basionym: *Tillaeastrum longipes*.
- Toelkenia** P. V. Heath, Calyx 3(3): 105, 1993. Typus: *Cotyledon arborescens* Miller. [*Nom. nov. pro Crassula* group *Arborescens* Schönland 1929.]
- Toelkenia arborescens** (Miller) P. V. Heath, Calyx 3(3): 105, 1993. Basionym: *Cotyledon arborescens*.
- Toelkenia lactea** (Solander) P. V. Heath, Calyx 3(3): 105, 1993. Basionym: *Crassula lactea*.
- Toelkenia ovata** (Miller) P. V. Heath, Calyx 3(3): 105, 1993. Basionym: *Cotyledon ovata*.
- Tylecodon aurusburgensis** G. Williamson, Aloe 29(3/4): 60-62, ill., 1993. Typus: *Williamson* 4417 (NBG) [Ex cult. April 1991.]. [Dated 1992, publ. autumn 1993.]
- Tylecodon buchholzianus** var. **fasciculatus** G. Williamson, Aloe 29(3/4): 62-63, ill., 1993. Typus: *Williamson* 4420 (NBG, BOL). [Dated 1992, publ. autumn 1993.]

CUCURBITACEAE

- Kedrostis psammophila** Bruyns, Bothalia 23(2): 233-235, ill., map, 1993. Typus: *Bruyns* 4569 (BOL, K, M, PRE).

EUPHORBIACEAE

- Euphorbia aureo-viridiflora** (Rauh) Rauh, Collect. Bot. 21: 207, 1993. Basionym: *Euphorbia neohumbertii* var. *aureo-viridiflora*. [Dated 1992, publ. 1993.]
- Euphorbia awashensis** M. G. Gilbert, Collect. Bot. 21: 76, 1993. Typus: *Negri* 1318 (FT). [Dated 1992, publ. 1993.]
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