

ALSTERWORTHIA INTERNATIONAL THE SUCCULENT ASPHODELACEAE JOURNAL



Haworthia retusa at Kruisrivierm, SA.
Photograph Bruce Bayer

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Alsterworthia International

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Back issue of Alsterworthia International are also on the Web and are free to download by any one.
To access, go to <https://alsterworthia.wordpress.com/> and click on "Journals" at the head of the page.
Current year journals will become back issues the year following publication, with an occasional exceptions e.g. July, 2016 which can be purchased only from Ingo Breuer and Alsterworthia International until further notice.

Please note that the International Cultivar Registration Authority for Haworthia (including Haworthiopsis & Tulista, Astroloba and Chortolirion) is the Haworthia Society of Japan.
Registrar: Dr. M. Hayashi. Harry Mays is their representative for the Western World.

Haworthia Study is the journal of the Japanese Haworthia Society.

The cost of this journal outside Japan is the equivalent in yen of £20.00 plus postage, which is destination dependent. Please send your order with your name and address to:

Harry Mays <hmays@freenetname.co.uk>. He will advise you of the sum due in Yen.

Payments in Japanese Yen only should then be made by PayPal direct to <m-hayashi@nausica.jp>.
Haworthia Study (Japanese) will be sent to you direct from Japan when payment is received/when the journal is published if later.

We have permission to translate Haworthia Study, the journal of the Japanese Haworthia Society, into English.
Haworthia Study was usually published twice a year each with 16 A4 pages. It is now less frequent but the value is still the same, i.e. subscription covers 2 issues. The majority have colour photographs so the amount of text to be translated is minimum.

Could you possibly recommend someone to undertake the translations? Or would anyone like to volunteer?
Please contact Harry Mays. Tel: 01995 679295. e-mail: hmays@freenetname.co.uk

Nomina Nova recorded for the Asphodelaceae for 2015 and 2016 in the Repertorium Plantarum Succulentarum

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), of which IOS remains a member to this day. 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

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.

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ASPHODELACEAE 2015

Repertorium Plantarum Succulentarum.

Aloe anodonta T. A. McCoy & Lavranos, CactusWorld. 33(3): 180, ills. (pp. 179-181), 2015. Typus: McCoy 3420 (FT).

Aloe lukeana T. C. Cole, Cact. Succ. J. (Los Angeles) 87(4): 156, ills. (pp. 154-157), 2015. Typus: Luke & al. 16438 (EA).

Aloe momccoyae T. A. McCoy & Lavranos, Avonia 33(4): 186, ills. (pp. 184-191), 2015. Typus: McCoy 4120 (FT).

Aloe morijensis var. ojonokae Uleh, CactusWorld 33(2): 124, ills. (pp. 123-124), 2015. Typus: Uleh 002 (EA).

Aloe niensiensis L. E. Newton, CactusWorld 33(1): 51-52, ills. (pp. 50-52), 2015. Typus: Roberts 55 (EA).

Aloe nigrimontana T. A. McCoy & Lavranos, CactusWorld 33(3): 183, ills. (pp. 182-184), 2015. Typus: McCoy 3112 (FT).

Aloe zubb T. A. McCoy & Lavranos, CactusWorld 33(1): 31, ills. (pp. 27-34); (2): 122 [erratum], 2015. Typus: McCoy 4016 (FT) [Holotype herbarium first indicated as FI and corrected to FT in the erratum.].

Astroloba cremnophila van Jaarsveld, Bradleya 33: 177, ills. (pp. 172-177), 2015. Typus: van Jaarsveld 25535 (PRE).

Bulbine spongiosa van Jaarsveld, Bradleya 33: 158-160, ills. (pp. 157-160), 2015. Typus: van Jaarsveld & al. 23410 (NBG).

Gasteria barbae van Jaarsveld, CactusWorld 32(4): 257, ills. (pp. 257-260), 2015. Typus: van Jaarsveld & al. 25246 (NBG). [Dated Dec. 2014, publ. Feb. 2015.]

Haworthiopsis attenuata (Haworth) G. D. Rowley, *Alsterworthia Int.* 15(1): 2, 2015. Basionym: *Aloe attenuata*. [First published invalidly (cf. RPS 64, ICN Art. 41.8) in *Alsterworthia Int. Spec. Issue 10: 4*, 2013. Repeated by Breuer, l.c. 16(2): 6, 2016.]

Haworthiopsis attenuata var. glabrata (Salm-Dyck) G. D. Rowley, *Alsterworthia Int.* 15(1): 2, 2015. Basionym: *Aloe glabrata*. [First published invalidly (cf. RPS 64, ICN Art. 35.1) in *Alsterworthia Int. Spec. Issue 10: 4*, 2013. Repeated by Breuer, l.c. 16(2): 6, 2016.]

Haworthiopsis attenuata var. radula (Jacquin) G. D. Rowley, *Alsterworthia Int.* 15(1): 2, 2015. Basionym: *Aloe radula*. [First published invalidly (cf. RPS 64, ICN Art. 35.1) in *Alsterworthia Int. Spec. Issue 10: 4*, 2013. Repeated by Breuer, l.c. 16(2): 6, 2016.]

Tulista subgen. *Astroloba* (Uitewaal) G. D. Rowley, *Alsterworthia Int.* 15(1): 2, 2015. Basionym: *Astroloba*. [First published invalidly in l.c. 14(3): 3, 2014.]

ASPHODELACEAE 2016

Repertorium Plantarum Succulentarum. Compiler's Preface.

It has been becoming an unhappy custom in the preceding issues of RPS to apologize for the delayed publication, and such apologies are once again due – the present volume, covering literature published in 2016, is again published with a significant delay, very much to my dismay.

The observation made in the past few editorials that the flood of new publications accelerates in a frightening manner is – perhaps not unexpectedly – still relevant. The phenomenon involved has been termed "academic spam" in the recent past, and together with the steep increase in fraudulent publishers and "predatory" journals (and even congresses), places a growing burden on the worldwide academic community. The problem is that all these shady publications are not always easily distinguished from "real" and meritorious papers, and that they now and then include papers that communicate valuable research results, and thus cannot be simply dismissed because their author(s)

by chance or ignorance chose a less-than-perfect publisher or publication. A solution to the problem of "predatory publishing" and "academic spam" does not appear to come into sight, and so the associated problems and the flood of publications will accompany us also in the coming years, and take substantial bits of our research time.

As in earlier years, the IPNI team at Kew is acknowledged for sharing their expertise and for discussing nomenclaturally ambiguous cases. Reiner Mailänder, Zürich, continued to generously support RPS by scanning numerous "general" biological journals. A vast proportion of the bibliographical details have been assembled by Ilona Sutter during her 2017 internship at the Zürich Succulent Plant Collection. I am grateful for all this diligent work.

ASPHODELACEAE. 2016.

Aloe ansoultae Rebmann, *Cact. Succ.* 8(2): 36, ill. (pp. 36-37), 2016. Typus: *Rebmann* 830 TAN).

Aloe arneodoi N. Rebmann, *Cact. Succ.* 8(1): 18-20, ill., 2016. Typus: *Rebmann* 27 (BR).

Aloe austrosudanica T. A. McCoy, *Avonia* 34(4): 196-201, ill., 2016. Typus: *Powys* s.n. in McCoy 3722 (FT).

Aloe ×inopinata G. F. Smith & al., *Haseltonia* 22: 60-61, ill. (pp. 57, 59-60), 2016. Typus: *Oosthuizen* 1960 (BNRH). [= *Aloe arborescens* × *A. chortolirioides* var. *chortolirioides*.]

Aloe rouxii van Jaarsveld, *Avonia* 34(1): 12, ill., 2016. Typus: *Roux* s.n. (NBG).

Aloe rulkensii T. A. McCoy & O. J. Baptista, *Cact. Succ. J. (Los Angeles)* 88(4): 173-176, ill., 2016. Typus: *McCoy* 4187 (FT).

Aloe tsitongambarikana J.-P. Castillon & J.-B. Castillon, *CactusWorld* 34(2): 112-113, ill. (pp. 111-113), 2016. Typus: *Castillon* 61 (TAN, TAN).
Aloe varimaculata T. A. McCoy, *Cact. Succ. J. (Los Angeles)* 88(6): 277-280, ill., 2016. Typus: *McCoy*

4269 (FT).

Aloe versicolor ssp. *stefanieana* (Rauh) J.-B. Castillon & J.-P. Castillon, *CactusWorld* 34(2): 114, 2016. *Nom. inval.* (ICN Art. 41.5), based on *Aloe stefanieana*.

Haworthia arachnoidea var. *angiras* (M. Hayashi) Breuer, *Alsterworthia Int.* 16(2): 5, 2016. *Nom. inval.*, based on *Haworthia angiras*, *nom. inval.* (ICN Art. 40.7).

Haworthia arachnoidea var. **calitzdorpensis** (Breuer) Breuer, *Alsterworthia Int.* 16(2): 5, 2016. Basionym: *Haworthia mucronata* var. *calitzdorpensis*.

Haworthia arachnoidea var. *joubertii* (M. Hayashi) Breuer, *Alsterworthia Int.* 16(2): 5, 2016. *Nom. inval.*, based on *Haworthia joubertii*, *nom. inval.* (ICN Art. 40.7).

Haworthia arachnoidea var. *laxa* (M. Hayashi) Breuer, *Alsterworthia Int.* 16(2): 5, 2016. *Nom. inval.*, based on *Haworthia laxa*, *nom. inval.* (ICN Art. 40.7).

Haworthia arachnoidea var. *limbata* (M. Hayashi)

Breuer, *Alsterworthia* Int. 16(2): 5, 2016. *Nom. inval.*, based on *Haworthia limbata*, *nom. inval.* (ICN Art. 40.7).

Haworthia aranea var. **candida** (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 5, 2016. Basionym: *Haworthia candida*.

Haworthia atrofusca var. **enigma** (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 5, 2016. Basionym: *Haworthia enigma*.

Haworthia badia var. **bobii** (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 5, 2016. Basionym: *Haworthia bobii*.

Haworthia badia var. **joleneae** (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 5, 2016. Basionym: *Haworthia joleneae*.

Haworthia batesiana var. **lepida** (G. G. Smith) Breuer, *Alsterworthia* Int. 16(2): 5, 2016. Basionym: *Haworthia lepida*.

Haworthia batesiana var. **reddii** (C. L. Scott) Breuer, *Alsterworthia* Int. 16(2): 5, 2016. Basionym: *Haworthia reddii*.

Haworthia bayeri var. **hayashii** (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 5, 2016. Basionym: *Haworthia hayashii*.

Haworthia bayeri var. **jadea** (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 5, 2016. Basionym: *Haworthia jadea*.

Haworthia blackbeardiana var. **calaensis** (Breuer) Breuer, *Alsterworthia* Int. 16(2): 5, 2016. Basionym: *Haworthia calaensis*.

Haworthia blackbeardiana var. **specksii** (Breuer) Breuer, *Alsterworthia* Int. 16(2): 5, 2016. Basionym: *Haworthia specksii*.

Haworthia bolusii var. **floccosa** (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 5, 2016. Basionym: *Haworthia floccosa*.

Haworthia caerulea var. **pallens** (Breuer & M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 5, 2016. Basionym: *Haworthia pallens*.

Haworthia caespitosa var. **consanguinea** (M. B. Bayer) Breuer, *Alsterworthia* Int. 16(2): 5, 2016. Basionym: *Haworthia mirabilis* var. *consanguinea*.

Haworthia cangoensis var. *kogmanensis* (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 5, 2016. *Nom. inval.*, based on *Haworthia kogmanensis*, *nom. inval.* (ICN Art. 40.7).

Haworthia cangoensis var. *royalis* (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 5, 2016. *Nom. inval.*, based on *Haworthia royalis*, *nom. inval.* (ICN Art. 40.7).

Haworthia cangoensis var. *tradouwensis* (Breuer) Breuer, *Alsterworthia* Int. 16(2): 5, 2016. *Nom. inval.* (ICN Art. 35.1), based on *Haworthia tradouwensis*.

Haworthia cooperi var. **hisui** (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 5, 2016. Basionym: *Haworthia hisui*.

Haworthia cyanea var. **amethysta** (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 5, 2016. Basionym: *Haworthia amethysta*.

Haworthia cyanea var. *ianthina* (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 5, 2016. *Nom. inval.*, based on *Haworthia ianthina*, *nom. inval.* (ICN Art. 40.7).

Haworthia cyanea var. **succinea** (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 5, 2016. Basionym: *Haworthia succinea*.

Haworthia decipiens var. **exilis** (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 5, 2016. Basionym: *Haworthia exilis*.

Haworthia decipiens var. *incrassa* (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 5, 2016. *Nom. inval.*, based on *Haworthia incrassa*, *nom. inval.* (ICN Art. 40.7).

Haworthia graminifolia var. **derustensis** (M. B. Bayer) Breuer, *Alsterworthia* Int. 16(2): 5, 2016. Basionym: *Haworthia blackburniae* var. *derustensis*.

Haworthia hamata var. **subhamata** (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 5, 2016. Basionym: *Haworthia subhamata*.

Haworthia inconfluens var. **crystallina** (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 5, 2016. Basionym: *Haworthia crystallina*.

Haworthia inconfluens var. *lockwoodii* (Archibald) Breuer, *Alsterworthia* Int. 16(2): 5, 2016. Incorrect name (ICN Art. 11.4), based on *Haworthia lockwoodii*. [At species rank, the basionym name has priority over *H. inconfluens*.]

Haworthia indigoa var. **truterorum** (Breuer & Marx) Breuer, *Alsterworthia* Int. 16(2): 5, 2016. Basionym: *Haworthia truterorum*.

Haworthia isabellae var. **arabesqua** (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 5, 2016. Basionym: *Haworthia arabesqua*.

Haworthia isabellae var. **bella** (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 5, 2016. Basionym: *Haworthia bella*.

Haworthia isabellae var. **ligulata** (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 5, 2016. Basionym: *Haworthia ligulata*.

Haworthia jansenvillensis var. *crinita* (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 5, 2016. Incorrect name

(ICN Art. 11.4), based on *Haworthia crinita*. [The name of the basionym has priority at species rank over *H. jansenvillensis*.]

Haworthia jansenvillensis var. *eminens* (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 5, 2016. Incorrect name (ICN Art. 11.4), based on *Haworthia eminens*. [The name of the basionym has priority at species rank over *H. jansenvillensis*.]

Haworthia jansenvillensis var. *flavida* (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 5, 2016. Incorrect name (ICN Art. 11.4 Ex. 10), based on *Haworthia flavida*. [The name of the basionym has priority at species rank over *H. jansenvillensis*.]

Haworthia jansenvillensis* var. *fluffa (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 5, 2016. Basionym: *Haworthia fluffa*.

Haworthia jansenvillensis var. *mollis* (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 5-6, 2016. Incorrect name (ICN Art. 11.4), based on *Haworthia mollis*. [The name of the basionym has priority at species rank over *H. jansenvillensis*.]

Haworthia jansenvillensis var. *regina* (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. Incorrect name (ICN Art. 11.4), based on *Haworthia regina*. [The name of the basionym has priority at species rank over *H. jansenvillensis*.]

Haworthia lapis var. *rava* (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. *Nom. inval.*, based on *Haworthia rava*, *nom. inval.* (ICN Art. 40.7).

Haworthia magnifica var. *asperula* (Haworth) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. Incorrect name (ICN Art. 11.4), based on *Haworthia asperula*. [The name of the basionym has priority at species rank over *H. magnifica*.]

Haworthia magnifica* var. *obserata (Marx) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. Basionym: *Haworthia obserata*.

Haworthia maraisii* var. *schuldtiana (von Poellnitz) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. Basionym: *Haworthia schuldtiana*.

Haworthia marumiana* var. *marmorata (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. Basionym: *Haworthia marmorata*.

Haworthia mirabilis* var. *depauperata (von Poellnitz) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. Basionym: *Haworthia triebneriana* var. *depauperata*.

Haworthia monticola* var. *bronkhorstii (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. Basionym: *Haworthia bronkhorstii*.

Haworthia multifolia* var. *breueri (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. Basionym: *Haworthia breueri*.

Haworthia multifolia* var. *major (G. G. Smith) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. Basionym: *Haworthia schuldtiana* var. *major*. [The name of the basionym of the combination has priority over *H. emelyae* var. *multifolia* M. B. Bayer 1979, which is the basionym of *H. multifolia*.]

Haworthia mundula* var. *calcareo (M. B. Bayer) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. Basionym: *Haworthia mirabilis* var. *calcareo*.

Haworthia nortieri* var. *agnis (Battista) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. Basionym: *Haworthia agnis*.

Haworthia nortieri var. *montana* (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. *Nom. inval.*, based on *Haworthia montana*, *nom. inval.* (ICN Art. 40.7). [*Non* *Haworthia nortieri* var. *montana* G. G. Smith 1950.]

Haworthia notabilis* var. *diversicolor (Triebner & von Poellnitz) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. Basionym: *Haworthia triebneriana* var. *diversicolor*.

Haworthia odetteae var. *odyssei* (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. *Nom. inval.*, based on *Haworthia odyssei*, *nom. inval.* (ICN Art. 40.7).

Haworthia paradoxa* var. *jakubii (Breuer) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. Basionym: *Haworthia jakubii*.

Haworthia parksiana* var. *dentata (M. B. Bayer) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. Basionym: *Haworthia floribunda* var. *dentata*.

Haworthia pephemannieae* var. *albispina (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. Basionym: *Haworthia albispina*.

Haworthia picta* var. *comptoniana (G. G. Smith) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. Basionym: *Haworthia comptoniana*.

Haworthia picturata* var. *pusilla (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. Basionym: *Haworthia pusilla*.

Haworthia pilosa var. *ciliata* (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. *Nom. inval.*, based on *Haworthia ciliata*, *nom. inval.* (ICN Art. 40.7).

Haworthia pilosa* var. *lachnosa (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. Basionym: *Haworthia lachnosa*.

Haworthia pringlei* var. *hastata (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. Basionym: *Haworthia hastata*.

Haworthia pygmaea* var. *esterhuizenii (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. Basionym:

Haworthia esterhuizenii.

Haworthia retusa var. **fouchei** (von Poellnitz) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. Basionym: *Haworthia fouchei*.

Haworthia retusa var. **fusca** (Breuer) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. Basionym: *Haworthia fusca*.

Haworthia rossouwii var. **scabra** (M. B. Bayer) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. Basionym: *Haworthia heidelbergensis* var. *scabra*.

Haworthia rossouwii var. **serrata** (M. B. Bayer) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. Basionym: *Haworthia serrata*.

Haworthia salina var. *venusta* (C. L. Scott) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. Incorrect name (ICN Art. 11.4), based on *Haworthia venusta*. [The name of the basionym has priority at species rank over *H. salina*.]

Haworthia suberecta var. **pallidifolia** (G. G. Smith) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. Basionym: *Haworthia turgida* var. *pallidifolia*.

Haworthia tenera var. **cunningii** (Breuer & M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. Basionym: *Haworthia cunningii*.

Haworthia tenera var. **doldii** (M. B. Bayer) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. Basionym: *Haworthia cooperi* var. *doldii*.

Haworthia transiens var. *florens* (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. Basionym: *Haworthia florens*.

Haworthia trectyrensis var. **pectinis** (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. Basionym: *Haworthia pectinis*.

Haworthia umbraticola var. **obesa** (von Poellnitz) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. Basionym: *Haworthia cymbiformis* var. *obesa*.

Haworthia venetia var. **calva** (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. Basionym: *Haworthia calva*.

Haworthia venetia var. **jeffreisi** (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. Basionym: *Haworthia jeffreisi*.

Haworthia venetia var. **teres** (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 6, 2016. Basionym: *Haworthia teres*.

Haworthiopsis Sect. **Attenuatae** (Pilbeam) Gildenhuis & Klopper, *Phytotaxa* 265(1): 11, 2016. Basionym: *Haworthia* Subsect. *Attenuatae*.

Haworthiopsis Sect. **Koelmaniorum** Gildenhuis &

Klopper, *Phytotaxa* 265(1): 12, 2016. Typus: *Haworthia koelmaniorum* Obermeyer & Hardy.

Haworthiopsis Sect. **Limifoliae** (G. G. Smith) Gildenhuis & Klopper, *Phytotaxa* 265(1): 13, 2016. Basionym: *Haworthia* Sect. *Limifoliae*.

Haworthiopsis Sect. **Tessellatae** (Salm-Dyck) Gildenhuis & Klopper, *Phytotaxa* 265(1): 14, 2016. Basionym: *Aloe* Sect. *Tessellatae*.

Haworthiopsis Sect. **Trifariae** (Haworth) Gildenhuis & Klopper, *Phytotaxa* 265(1): 15, 2016. Basionym: *Haworthia* Sect. *Trifariae*.

Haworthiopsis Sect. **Virescentes** (Baker) Gildenhuis & Klopper, 265(1): 19, 2016. Basionym: *Haworthia* Sect. *Virescentes*.

Haworthiopsis × **broteriana** (Resende) Gildenhuis & Klopper, *Phytotaxa* 265(1): 1916. Basionym: *Haworthia* × *broteriana*.

Haworthiopsis × **cassytha** (Baker) Gildenhuis & Klopper, *Phytotaxa* 265(1): 20, 2016. Basionym: *Haworthia* × *cassytha*.

Haworthiopsis × **curta** (Haworth) Gildenhuis & Klopper, *Phytotaxa* 265(1): 20, 2016. Basionym: *Haworthia* × *curta*.

Haworthiopsis × **expansa** (Haworth) Gildenhuis & Klopper, *Phytotaxa* 265(1): 20, 2016. Basionym: *Aloe* × *expansa*.

Haworthiopsis fasciata var. **browniana** (von Poellnitz) Gildenhuis & Klopper, *Phytotaxa* 265(1): 9, 2016. Basionym: *Haworthia browniana*. [Published 9. June 2016 according to the journal homepage. Repeated by Breuer, *Alsterworthia* Int. 16(2): 7, 25. June 2016 (distribution date according to the cover, received at ZSS 19. July 2016).]

Haworthiopsis granulata var. **schoemanii** (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 7, 2016. Basionym: *Haworthia schoemanii*.

Haworthiopsis × **hybrida** (Salm-Dyck) Gildenhuis & Klopper, *Phytotaxa* 265(1): 20, 2016. Basionym: *Aloe* × *hybrida*.

Haworthiopsis × **kewensis** (von Poellnitz) Gildenhuis & Klopper, *Phytotaxa* 265(1): 20, 2016. Basionym: *Haworthia* × *kewensis*.

Haworthiopsis koelmaniorum var. **mcmurtryi** (C. L. Scott) Gildenhuis & Klopper, *Phytotaxa* 265(1): 13, 2016. Basionym: *Haworthia mcmurtryi*. [Published 9. June 2016 according to the journal homepage. Repeated by Breuer, *Alsterworthia* Int. 16(2): 7, 25. June 2016 (distribution date according to the cover, received at ZSS 19. July 2016).]

Haworthiopsis limifolia var. *striata* (Pilbeam) Breuer, *Alsterworthia* Int. 16(2): 7, 2016. Nom. inval., based on

Haworthia limifolia var. *striata*, nom. inval. (ICN Art. 40.1)

Haworthiopsis × **major** (Salm-Dyck) Gildenhuis & Klopper, *Phytotaxa* 265(1): 21, 2016. Basionym: *Aloe tortuosa* var. *major*.

Haworthiopsis reinwardtii fa. **Chalumnensis** (G. G. Smith) Gildenhuis & Klopper, *Phytotaxa* 265(1): 10, 2016. Basionym: *Haworthia reinwardtii* var. *chalumnensis*.

Haworthiopsis reinwardtii fa. **Kaffirdriftensis** (G. G. Smith) Gildenhuis & Klopper, *Phytotaxa* 265(1): 10, 2016. Basionym: *Haworthia reinwardtii* var. *kaffirdriftensis*.

Haworthiopsis reinwardtii fa. **olivacea** (G. G. Smith) Gildenhuis & Klopper, *Phytotaxa* 265(1): 11, 2016. Basionym: *Haworthia reinwardtii* var. *olivacea*.

Haworthiopsis reinwardtii var. **coarctata** (Haworth) Breuer, *Alsterworthia* Int. 16(2): 7, 2016. Basionym: *Haworthia coarctata*.

Haworthiopsis reinwardtii var. **greenii** (Baker) Breuer, *Alsterworthia* Int. 16(2): 7, 2016. Basionym: *Haworthia greenii*. [Combining author erroneously given as 'Baker'.]

Haworthiopsis reinwardtii var. **olivacea** (G. G. Smith) Breuer, *Alsterworthia* Int. 16(2): 7, 2016. Basionym: *Haworthia reinwardtii* var. *olivacea*.

Haworthiopsis reinwardtii var. **tenuis** (G. G. Smith) Breuer, *Alsterworthia* Int. 16(2): 7, 2016. Basionym: *Haworthia reinwardtii* var. *tenuis*.

Haworthiopsis × **resendeana** (von Poellnitz) Gildenhuis & Klopper, *Phytotaxa* 265(1): 21, 2016. Basionym: *Haworthia* × *resendeana*.

Haworthiopsis × **revendettii** (Uitewaal) Gildenhuis & Klopper, *Phytotaxa* 265(1): 21, 2016. Basionym: *Haworthia* × *revendettii*.

Haworthiopsis × **rigida** (Lamarck) Gildenhuis & Klopper, *Phytotaxa* 265(1): 21, 2016. Basionym: *Aloe cylindrica* var. *rigida*.

Haworthiopsis × **rubrobrunnea** (von Poellnitz) Gildenhuis & Klopper, *Phytotaxa* 265(1): 22, 2016. Basionym: *Haworthia* × *rubrobrunnea*.

Haworthiopsis × **sampaiana** (Resende) Gildenhuis & Klopper, *Phytotaxa* 265(1): 22, 2016. Basionym: *Haworthia coarctata* var. *sampaiana*.

Haworthiopsis scabra var. **johanii** (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 7, 2016. Basionym: *Haworthia scabra* var. *johanii*.

Haworthiopsis scabra var. **smitii** (von Poellnitz) Gildenhuis & Klopper, *Phytotaxa* 265(1): 17, 2016. Basionym: *Haworthia smitii*. [Published 9. June 2016

according to the journal homepage. Repeated by Breuer, *Alsterworthia* Int. 16(2): 7, 25. June 2016 (distribution date according to the cover, received at ZSS 19. July 2016).]

Haworthiopsis sordida var. **agavoides** (Zantner & von Poellnitz) Breuer, *Alsterworthia* Int. 16(2): 7, 2016. Basionym: *Haworthia agavoides*.

Haworthiopsis × **subrigida** (Roemer & Schultes fil.) Gildenhuis & Klopper, *Phytotaxa* 265(1): 22, 2016. Basionym: *Aloe* × *subrigida*.

Haworthiopsis × **tauteae** (Archibald) Gildenhuis & Klopper, *Phytotaxa* 265(1): 22, 2016. Basionym: *Haworthia* × *tauteae*.

Haworthiopsis tessellata var. **crousii** (M. Hayashi) Gildenhuis & Klopper, *Phytotaxa* 265(1): 15, 2016. Basionym: *Haworthia crousii*. [Sphalm. 'craussii'. Published 9. June 2016 according to the journal homepage. Repeated by Breuer, *Alsterworthia* Int. 16(2): 7, 25. June 2016 (distribution date according to the cover, received at ZSS 19. July 2016).]

Haworthiopsis × **tortella** (Haworth) Gildenhuis & Klopper, *Phytotaxa* 265(1): 22, 2016. Basionym: *Haworthia* × *tortella*.

Haworthiopsis × **tortuosa** (Haworth) Gildenhuis & Klopper, *Phytotaxa* 265(1): 22, 2016. Basionym: *Aloe* × *tortuosa*.

Haworthiopsis venosa var. **woolleyi** (von Poellnitz) Breuer, *Alsterworthia* Int. 16(2): 7, 2016. Basionym: *Haworthia woolleyi*.

Haworthiopsis viscosa var. **asperiuscula** (Haworth) Breuer, *Alsterworthia* Int. 16(2): 7, 2016. Basionym: *Haworthia asperiuscula*.

Haworthiopsis viscosa var. **beanii** (G. G. Smith) Breuer, *Alsterworthia* Int. 16(2): 7, 2016. Basionym: *Haworthia beanii*.

Haworthiopsis viscosa var. **variabilis** (Breuer) Gildenhuis & Klopper, *Phytotaxa* 265(1): 19, 2016. Basionym: *Haworthia viscosa* var. *variabilis*.

Tulista marginata var. **mortonii** (Breuer) Breuer, *Alsterworthia* Int. 16(2): 7, 2016. Basionym: *Haworthia mortonii*.

Tulista minima var. **poellnitziana** (Uitewaal) Breuer, *Alsterworthia* Int. 16(2): 7, 2016. Basionym: *Haworthia poellnitziana*.

Tulista opalina (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 7, 2016. Basionym: *Haworthia opalina*.

Tulista opalina var. **zenigata** (M. Hayashi) Breuer, *Alsterworthia* Int. 16(2): 7, 2016. Basionym: *Haworthia zenigata*.

Tulista pumila var. **ohkuwae** (M. Hayashi) Breuer,

Alsterworthia Int. 16(2): 7, 2016. Basionym: *Haworthia ohkuwae*. [Epithet of the basionym sphalm. 'okhuwae']

Tulista pumila var. **sparsa** (M. Hayashi) Breuer,
Alsterworthia Int. 16(2): 7, 2016. Basionym:
Haworthia sparsa.

Japanese Haworthia Society

Haworthia Study, Editor Dr Hayashi

The last issue of the journal *Haworthia Study* I received was No. 32 dated 12-2016. The one before that, No. 31, was dated 9-2015. No. 30 was dated 12-2014 and No. 29 4-2014, two per year, as were the years before. I think it is clear that *Haworthia Study* is now issued about one a year rather than twice as before. You still get two issues for your "annual" subscription. I believe another issues will be available shortly.

Dr Hayashi has "a lot on his plate". In addition to being both editor for the Japanese *Haworthia* Society and Registrar of the International Cultivar Registration Authority for *Haworthia* etc. he also creates cultivars and, together with others in Japan who also produce cultivars, he works hard to ensure that Japanese Law protecting producers rights are adhered to by all. It seems that their efforts in this respect are not having a great deal of success because of lack of prosecutions. They are now looking into having recourse to the courts to get the law enforced. This could be time-consuming and expensive and may still not bring about the desired results. When enforced, Japanese law prevents people from propagating plants produced by others and protected by law. Thus, profit goes only to those who invested time and money in their creations and propagation, not to those who propagates and sells them illegally. We are of course talking about vegetative propagation. The development of tissue culture is perhaps welcomed by collectors who obtain desired new plants at a mass-produced (low) price, but to the detriment of the original creators. Normally, law applies to only the one country which made it. There is nothing stop one or two plants being bought at a high price in the country in which the law applies and then taking them to another country for tissue culture and sale word wide – via the internet. Universal laws are rare. They do apply to certain plants such as cacti but not to haworthias etc. The law concerning infection of plants may restrict the entry of any plants but not if it has a health permit which can be given for healthy plants only. It will be interesting to see the outcome of domestic plant legislation enforcement in Japan.

International Succulent Introductions 2018

Plant Introductions of the Huntington Botanical Gardens

Editor's Note.

I have known John N. Trager for a long time including the annual distributions of ISI plants for Europe which I handled. This had to be discontinued some time ago because of the time-consuming work involved in the USA in connection with plant health checks and paper work in connection with exporting and importing plants. For some time Alsterworthia International has printed the I.S.I. annual offering of plants with John's approval. Regrettably, I have been unable to contact him on this attention for reasons unknown, which is quite out of character for him. I should be grateful if anyone who knows his present situation could advise me of it.

Harry Mays - hmays@freenetname.co.uk

A. bussei ISI 2018—6.



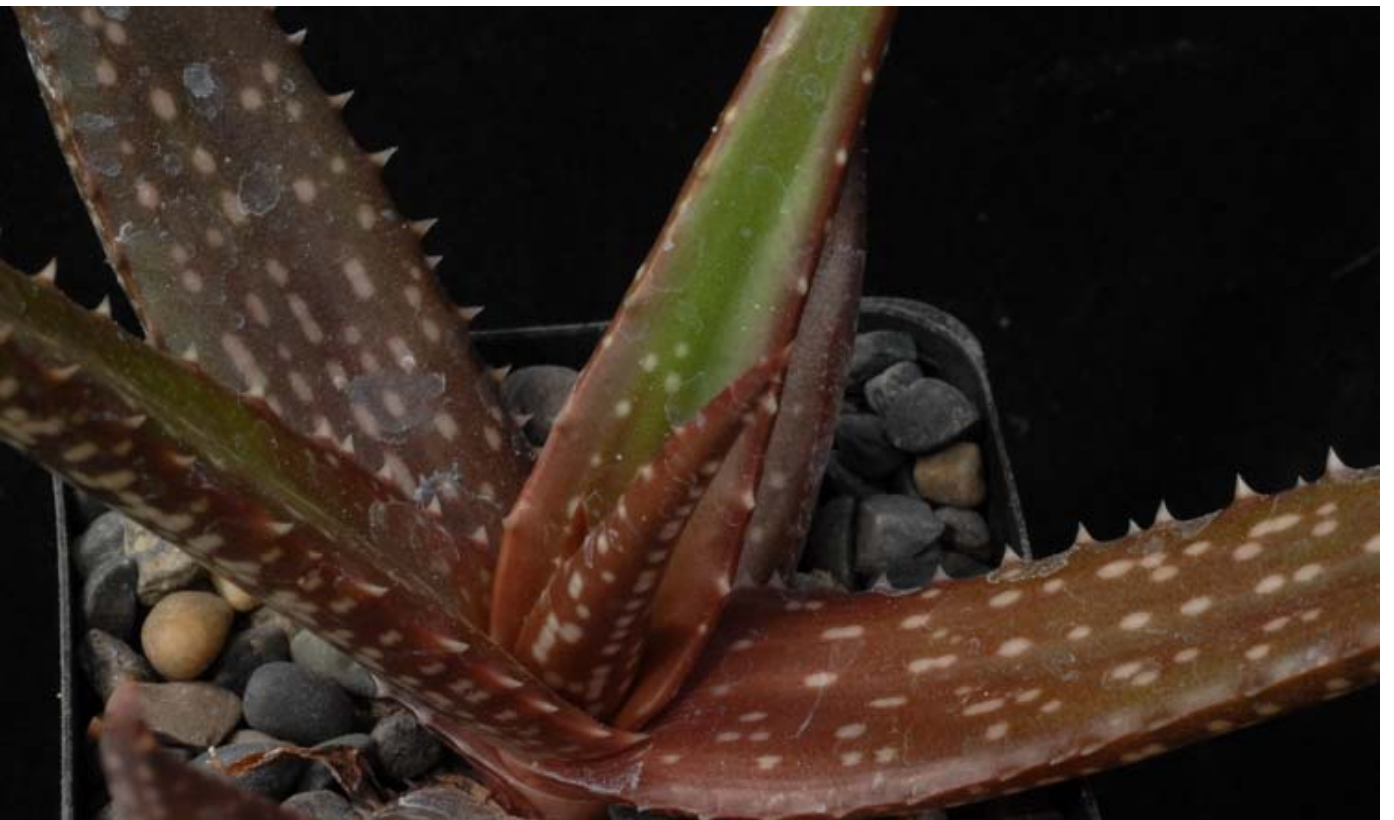
A. bussei ISI 2018—6. Closely related to *Aloe dorotheae*, *A. bussei* also grows on rocky outcrops where its leaves blush a vivid, glossy pinkish colour. A well-drained situation with bright light and not excessive watering is required to achieve this coloration in the garden. *A. bussei* differs from *A. dorotheae* in its usually 1 to 4-branched inflorescences. It is named for Walter Busse, a German agricultural officer in Tanzania at the beginning of the 20th century. We offer tissue-cultured plants of HBG 18918, a plant collected by G. W. Reynolds in April, 1957, at the type locality: Pembamoto, Mpwapwa District, Tanzania. \$7.



The intensity of the colour of the leaves is related to the exposure to sun.

All "scenic" photos in this article were taken in the gardens of the Huntington Botanical Gardens by John Trager

***Aloe classenii* ISI 2018—7.** George Classen (1915 – 1982) was born in Russia and settled in Nairobi, Kenya. He botanized southern Kenya during the 1960s and 1970s while travelling professionally as a hydrologist, bringing a number of new succulent taxa (aloes, euphorbias, etc.) to the attention of botanists who subsequently described them as new to science. *Aloe classenii* is named in Classen's honour in recognition of his contributions. It has subtly coloured, pinkish flowers emerging from greyish buds and inflorescences. The foliage is perhaps more colourful, as it can blush reddish when properly stressed, such as where it grows in nature on low granite domes which are isolated in bushland along the Kenya – Tanzania border. We offer a single clone, multiplied via tissue culture, of HBG 77502, a seedling produced in 1991 by Brian Kemble from two plants obtained some years ago from the ISI. These parent plants were grown from seed collected by John Lavranos in Kenya. There were too few seedlings for distribution at the time, so that generation does not bear an earlier ISI number. \$7.



Aloe eumassawana ISI 2018-8. S. Carter, M. G. Gilbert & Sebsebe This plant has been cultivated in botanical gardens since the 1960s as *Aloe massawana* Reynolds, but has not been widely grown by hobbyists. The Huntington received its material from the UC Berkeley garden (UCBG 70.548) in 1972, which in turn received the plant from Jay Dodson (one of the co-founders of the ISI) who in turn received it from the late John Lavranos, the foremost succulent explorer of his day (1926 – 2018), in 1970. Lavranos undoubtedly received it directly from Reynolds, who described *A. massawana* in 1959, naming the species for the Eritrean port of Massawa. When researching the name for this introduction, I consulted *Aloe, The Definitive Guide* (2011), but was confused by the range for this species given as “Dotted along the coast from Mozambique to Kenya ...”. Eritrea is further yet to the north, and is not included in this range. The write-up goes on to explain that “Reynolds supposed that this species originated from Eritrea, but Carter et al. (1996) found it to be distinct.” What then is the plant from Eritrea? That did not become clear until consulting Carter et al. (1996), *Kew Bulletin* 51: 775 – 776, an article entitled “The identity of the Massawa Aloe”. In case you do not have ready access to *Kew Bulletin*, I’ll repeat here the summary at the head of the article which reads: “*Aloe* populations from Eritrea and Tanzania, formerly considered to represent a single species, are shown to be different and a new name, *Aloe eumassawana*, is provided for the Eritrean plants.” Unfortunately, the write-up for *A. massawana* in the *Definitive Guide* does not refer back to *A. eumassawana* treated 36 pages earlier, and the title of Carter et al. (1996) does not reveal the new name. Hence my confusion! The encapsulated clarification in the *Definitive Guide* entry for *A. eumassawana* reads: “When describing *A. massawana*, Reynolds concluded that the plants associated with old Arab graves near Dar es Salaam in Tanzania had been brought from near Massawa in Eritrea and he used one of these Tanzanian plants as his type. Since then, further material from both regions has been collected and Carter et al. (1996) proved the Eritrean plants to be distinct from the Tanzanian form ...” in that the flowers are minutely pubescent while flowers of the Tanzanian plants are completely glabrous (among other differences). We offer tissue-cultured plants of HBG 29860, Reynolds s.n., collected May 26, 1966, at Massawa, Eritrea. \$7.



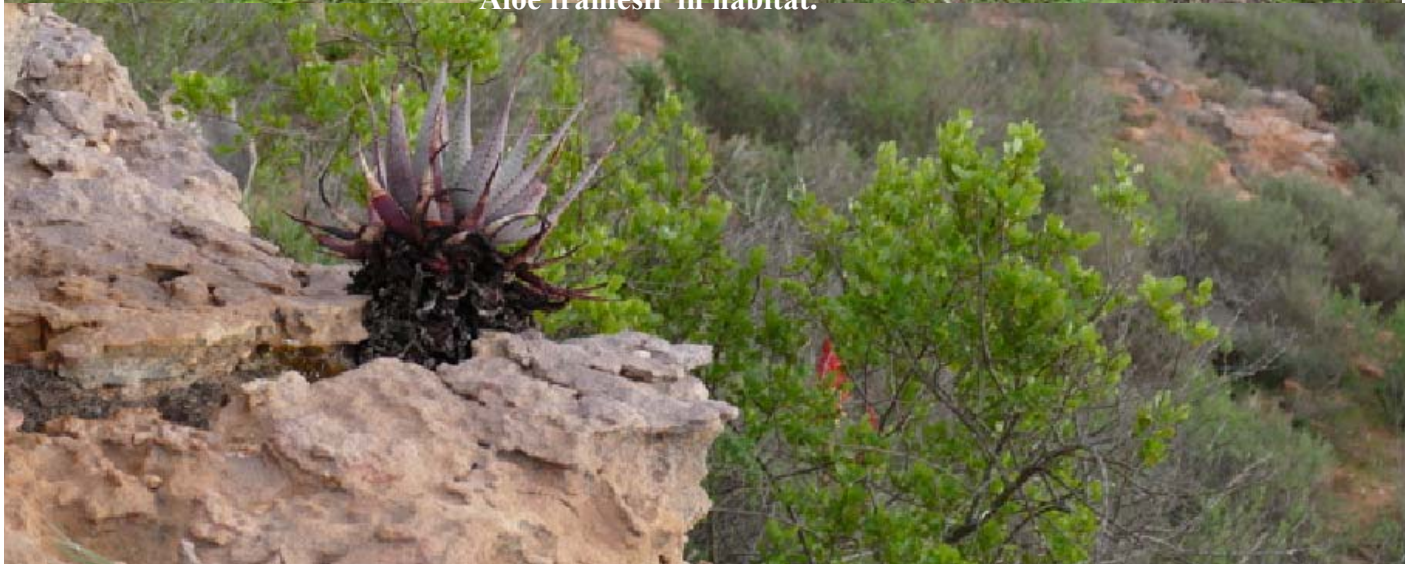
Aloe framesii ISI 2018-9. L. Bolus

This plant has grown at the Huntington since 1965 and has offset to form a 2 m wide colony of about 15 heads, each about 30 cm (1 ft) in diameter. The leaves are a gun-metal grey and bear a prominent, zipper-like bud imprint across each leaf. The precise origin of our plant is uncertain, but the species is restricted to the west coast of South Africa, in the N. Cape north of Port Nolloth, as well as in the adjacent W. Cape, in coastal sand flats on sandstone. This distribution puts the species squarely in the Mediterranean climate zone with predominantly winter rainfall and hot, dry summers. This is very much like the climate we experience in the Desert Garden, explaining the plant's persistence and suitability for southern California gardens. We offer tissue cultured plants of HBG 43768 for \$7.





Aloe framesii in habitat.



Aloe ‘Sawbones’ K. Zimmerman ISI 2018-10

This is the first of two Karen Zimmerman aloe hybrids to be offered this year. The name for this one is inspired by the jagged teeth lining the leaf margins, reminiscent of a coarse-toothed saw or the rostrum of a sawfish. These fascinating fish, related to rays, have a number of remarkable qualities, including the ability to reproduce by parthenogenesis, i.e. unfertilized eggs developing into females genetically identical to the mother. Likewise, all specimens of Aloe ‘Sawbones’ are genetically identical, unless somatic mutation has occurred in tissue culture, a rare, but not unknown, phenomenon that is indicated by an appearance different than the original selection. Ours, however, seem to be uniform. The parentage is complex, but involves backcrosses to a couple of other Zimmerman hybrids including A. ‘Confetti’ and A. ‘Marsha Layhew’. We offer HBG 127581, plants from tissue culture. \$15.



Aloe 'Secret Agent' ISI 2018-11. K. Zimmerman.

This second Zimmerman hybrid for this year is remarkable for its pinkish marginal teeth, which are broad and flattened as if extruded through a cheese grater. These can be joined at the base of the leaf to form a ribbon-like margin while the grey-green leaf surface is studded with irregular teeth, some like elongated molars, others just conical points. The origin of the cultivar name is ... well, secret, but the parentage includes prior Zimmerman hybrids 'Confetti' and 'In Tatters'. HBG 127580, plants from tissue culture. \$15.





Aloe 'Secret Agent'

***Aloe* 'William Hertrich' G. Lyons. ISI 2018-14**

William Hertrich, who is commemorated with this new aloe cultivar, was a consummate plantsman. It was Hertrich who first recognized the potential for the Huntington's Desert Garden and convinced Henry Huntington of the value of such an endeavour. For this we owe him a considerable debt of gratitude for what became, and continues to be, one of the premier collections of its kind in the world. In his spare time from managing Huntington's ranch and gardens, Hertrich dabbled with aloe hybridization. A number of his hybrids persist in the Desert Garden, even though Hertrich's hybridization records do not. Gary Lyons, former Curator of the Desert Garden, thought it only fitting that Hertrich, a luminary in succulent horticulture, should be recognized with this cultivar which is probably of his own creation. Parentage is uncertain, but may include *A. burgersfortensis*, which this cultivar resembles in general appearance. This selection stands out for its tall (to 2 m), stately inflorescence in recognition of Hertrich's place in horticulture, if not his stature (he stood about 5'6"). HBG 16446, plants from tissue culture of the original that has grown at the Huntington since ca. 1929. Since that time it has endured numerous frosts, some quite severe for our area, and now covers a portion of Desert Garden Bed 16. \$7.





***Aloe somaliensis* ISI 2018-12 W. Watson**

Somalia is home to many choice succulents, including this species hailing from Somalia's northern regions. It is the earliest described (1899) of a group of species characterized by their modest-sized rosettes of dark green, glossy leaves with varying degrees of paler spotting. We offer tissue cultured plants of HBG 25495, a plant grown from seed originally collected Dec 16, 1969 by John Lavranos (7555) at Lower Sheikh, Somalia. \$7.



Leaf colour varies with exposure to sun. Number of elongated white marks varies with plants.



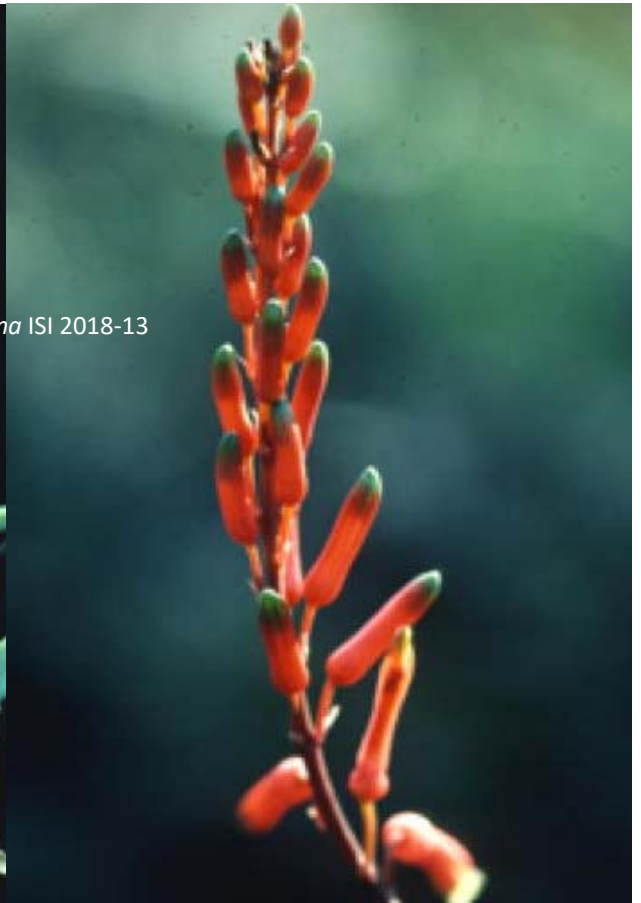
Aloe tororoana ISI 2018-13 Reynolds.

This charming species is of modest proportions, making it an ideal choice for a small residential garden. Rosettes to about 20 cm offset to form small colonies. The light green leaves are speckled with fine white spots and are unusually resistant to any kind of blemishing or leaf dieback to which some species are prone. It is freely flowering with slender racemes to 40 cm of bright red-orange, glossy flowers with greenish tips, lining the upper two fifths or so of the inflorescences. Its rather exotic sounding name is derived from Tororo Rock, in SE Uganda near the Kenya border, to which the species was thought to be endemic. Thomas Cole and Tom Forrest mention a few other nearby populations in their recently published field guide, *Aloes of Uganda* (2017). Additional collections have entered cultivation in recent years, but for most of the half century since its description in 1953, only a single clone (Bally & Reynolds 6594) has been available. This is the type collection made by P. R. O. Bally in 1952 from the NE summit of Tororo Rock. Despite the proximity of this location to the equator, the plants grow above 1300 m which seems to impart a surprising degree of frost hardiness. Though the species can be propagated from offsets, we have foreshortened the process via tissue culture. HBG 24565 (UCBG 65.1558), \$7.





Aloe tororoana ISI 2018-13



ISI 2018-14. Aloe 'William Hertrich'
G. Lyons

William Hertrich, who is commemorated with this new aloe cultivar, was a consummate plantsman. It was Hertrich who first recognized the potential for the Huntington's Desert Garden and convinced Henry Huntington of the value of such an endeavour. For this we owe him a considerable debt of gratitude for what became, and continues to be, one of the premier collections of its kind in the world. In his spare time from managing Huntington's ranch and gardens, Hertrich dabbled with aloe hybridization. A number of his hybrids persist in the Desert Garden, even though Hertrich's hybridization records do not. Gary Lyons, former Curator of the Desert Garden, thought it only fitting that Hertrich, a luminary in succulent horticulture, should be recognized with this cultivar which is probably of his own creation. Parentage is uncertain, but may include *A. burgersfortensis*, which this cultivar resembles in general appearance. This selection stands out for its tall (to 2 m), stately inflorescence in recognition of Hertrich's place in horticulture, if not his stature (he stood about 5'6"). HBG 16446, plants from tissue culture of the original that has grown at the Huntington since ca. 1929. Since that time it has endured numerous frosts, some quite severe for our area, and now covers a portion of Desert Garden Bed 16. \$7.

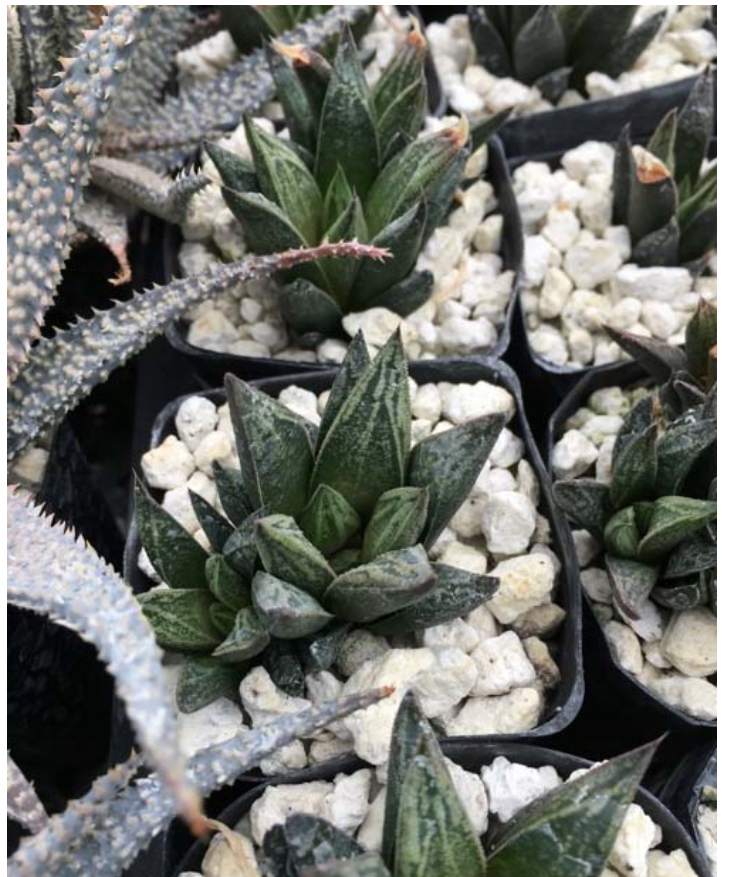


I.S.I text: John N. Trager

Photographs. John N. Trager: ISI 2018—6, ISI 2018—8, ISI 2018—9, ISI 2018—12, ISI 2018—14
Photographs. Karen Zimmerman: ISI 2018-7, ISI 2018—10, ISI 2018—11, ISI 2018—13, ISI 2018-21,
ISI 20 18-22, ISI 2018-23

Haworthia ‘Grain of Salt’ K. Zimmerman ISI 2018-21 .

Karen Zimmerman has become well-known among collectors of dwarf aloe hybrids introduced through this and prior ISI listings. However, she can't help dabbling with other genera when the opportunity presents itself. *Haworthia* ‘Gray Salt’ (*H. truncata* × *H. angustifolia*), introduced as ISI 2003-18, caught Karen's eye as a potential parent in 2006 when she crossed it with *H. pygmaea* var. *argenteo-maculosa*. The result is this plant with stouter, but still erect, leaves imparted by *H. angustifolia*, and with ornamentation influenced by *H. argenteo-maculosa*. Leaves of dark green are patterned with a few irregular, light-green lines surmounted by translucent ridges bearing small pustulate white papillae. This gives the plant a salted look, inspiring the cultivar name. Tissue-cultured plants of HBG 104844, \$10.



Haworthia 'Snow Ball' R. Wong. ISI 2018-22.

This is a choice new cultivar bred and selected in southern California by master breeder and grower Renny Wong. Her work builds on earlier hybridization and selections made mostly in Japan, which she visits regularly in search of new selections worth introducing, or using as breeding stock. 'Snow Ball' is reminiscent of some Japanese cultivars, like 'Kegani', distinguished by densely papillate leaf surfaces, but here achieves a new level. The leaves of 'Snow Ball' are covered with what appear to be white papillae. Under magnification these are bent to one side, mostly pointing toward the leaf bases. They are white at the base, but become transparent toward the pointed apex as if blown from clear glass. When grown hard these papillae can almost completely cover the dark ground from which they emerge, and the leaves become more recurved, giving the rosettes an almost ball-like shape, which inspired the cultivar name. According to Renny, this was a seedling from *H. 'Christmas Light'* (a hybrid of *H. emelyae* var. *major*) crossed with *H. pygmaea* 'HPG-1' (a Japanese selection). We offer plants from tissue culture of HBG 122886, \$20.



Haworthia ‘Sonata’ R. Wong
ISI 2018-23.

This second selection by Renny Wong is an open-pollinated hybrid of uncertain parentage. Originally Renny numbered it D-021 for reference, explaining that the “D” signified the year of the Dragon in the Chinese Zodiac (last in 2012) when she started to propagate this selection. According to Renny, rosettes can become quite large, up to five inches across. The leaves are broad, the retuse apex being about as wide as long, with a beautiful marbling of green and white, blushing pinkish in the new growth, or over the entire plant when grown under leaner conditions. Under magnification the leaf surface is reminiscent of a desert landscape of shallow valleys separated by low ridges. However, it is as if this landscape is being viewed in photographic negative. The “valleys” are the darker lines finely speckled with white spots like evenly spaced shrubs. The “ridges” are composed of pale, translucent tubercles merged into lines punctuated by larger spots than in the “valleys”. We offer plants of HBG 133335, from tissue culture, \$20. (Editor - See high magnifications below.)



Right. High magnification of “valleys” (green) “finely speckled with white spots like evenly spaced shrubs”.

Left. Ridges” (white) are composed of pale, translucent tubercles merged into lines punctuated by larger spots than in the “valleys”



Some thoughts on our plants

When dealing with Mesemb Habitat in the exchange of photographs on Face Book, Judd Kirkel Welwitch posted a photograph dealing with the “Latest News on Mining in Aggenuys again....!!!” a town in South Africa. North of the town is a hill right next to where *Conophytum burgeri* exists. A photograph of the area, a Conservation area, was taken including Prospecting Holes. The reason why is not known but is thought possibly to be for silver this time.

It is appreciated that *Conophytum* do not come within the genera covered by this journal but the messages conveyed do. Throughout the world mining and other industrial activities is destroying valuable vegetation including the chemicals they contain, which could be new and valuable to the science. What can be done to stop this destruction? Because of the expanding world population and improved living conditions probably little or nothing, but succulent plant enthusiast, no matter what their genus of interest, could make a significant contribution by ensuring that they keep full details of the history of their plant when possible. Universities, Botanical Gardens, keen amateurs etc. already record the history of their plants, but more could do the same to preserve wild plants in cultivation with histories (including their DNA) providing an increase in available plants which might be of use to science. This may not occur often but it does and will occur.

By coincidence, the Huntington Botanical Gardens offering of International Succulent Introductions can be found at the beginning of this journal. Please have a look at the information given with each plant and see if you can agree with me that the information adds to the interest of the plant and promotes discussion and interest value.

Via Facebook, cacti and succulent collectors share photographs of their plants with others of like interest. Some of these are supported by informative text but I hope it will not cause resentment if I say that many opportunities to supply additional information with the photographs are not used.

Of course if you do not have additional information you cannot share it. You may buy plants from local sources or from abroad via the internet. Depending on the supplier, the plants you buy may have some or even no information other than a name which may be valid or invalid or even none existent. In the UK some large and respected garden centres sell cacti and other succulents under only the title “Cacti & Other succulents”. Not only are you left to guess the species name but also are faced with having to guess whether it is a cactus or another succulent!!! However, to complete the picture, there are many very reliable sellers who supply correct names and will supply additional information if you request it. Some collectors find that labels have faded and cannot be read and if you sell plants at events do not be surprised if some of your plants finish up with strange names. Purchasers do not always put labels back in the correct pot!

Please always add as much information as you can to your photographs.

Harry Mays



Unspoiled land north of Aggenuys, SA.
Red arrow indicates a prospecting hole





Variation in *Haworthia retusa* at Kruisrivier, South Africa. Note size, shape and colour variation
(See also front cover) Photographs by Bruce Bayer.

