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TWENTY FIVE YEARS OF HAWORTHIA STUDY - CONTINUED

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In the January, 2007 Alsterworthia International I concluded my article with “Now, my main interest in Haworthia, as well as Gasteria and small Agave plants, is in the selections and hybrids made by Japanese growers”. Photographs of a number of these were presented. Further photographs of more of these magnificent plants in my collection are published here with the names at present applied to them in so far as is known. Some have not been given cultivar names whilst the names of others have not been checked for want of reliable information as to the location of the original descriptions.

Haworthia comptoniana × Haworthia picta

Haworthia springbokvlakensis × Haworthia picta

Haworthia truncata variegated

Haworthia maughanii variegated, very large.

Haworthia truncata ‘Kiganjou’

Haworthia truncata variegated
Variegated *Haworthia truncata* variegated

The Japanese commonly introduce variegation into a species in which variegation has not occurred naturally by crossing it with a variegated species and then backcrossing the successive best variegated progeny with the original non-variegated species. Over several generations this produces a plant like the original non-variegated species, but with variegation. These are still hybrids and technically should not be recorded as a variegated species, though in Japan they are. It is more than likely that many of the variegated *Haworthia truncata* and *Haworthia maughanii* are hybrids, but this is not always obviously so. The twisting and spiralling leaves in fig. 7, however, do suggest a hybrid.

Photographs continued bottom of page 4.

*Haworthia truncata* variegated DSC 0188

*Haworthia truncata* variegated

*Haworthia truncata* - variegated large form from Japan

*Haworthia truncata* variegated

*Haworthia truncata* variegated DSC 0197

*Haworthia truncata* variegated

*Haworthia maughanii* HMJ BROWN clone

*Haworthia Ginsekai*
Driving down Skitterykloof pass, with the flat arid Ceres Karoo spread out in the distance, a tall, blue/pink, smooth-leaved Aloe came into sight growing alongside the steep, rocky outcrops along the road verges. Their numbers appeared to increase with decreasing altitude.

It was identified as Aloe comosa - commonly called the Clanwilliam Aloe. Its distribution is normally cited as north of Clanwilliam, rather than a fair way south at Skitterykloof. The aloes observed were restricted in distribution. They were not seen in the higher (and presumably colder) locations at the top of the pass nor were they found in the open and flat areas outside of the pass or in the dry riverbed flats. They were found exclusively on the rocky slopes. They appear to have a restricted environmental niche associated with the micro-environment of the pass.

At the bottom of the pass there is a small picnic area. A few trees provided some shade. This turned out to be a good place to park and explore the dry river bed and surrounds for succulent goodies such as Adromischus liebenbergii & hemisphaericus, Hoodia sp, Tylecodon wallichii & paniculatus, a number of shrubby Crassula, Euphorbia sp, Cotyledon orbiculata and Sarcocaulon crassicaule, which were found here. It is also where the photographs of the Aloe were taken. Aloe comosa is single stemmed and can reach up to two meters in height.
The stem is usually covered with old leaves. Leaves are recurved and up to 700mm in length. Leaf margins are pinkish in colour and armed with small reddish-brown teeth. Leaf surfaces are smooth and vary in colour from pinkish-red to blue-green.

I was not there during its summer flowering period, but the flower spike is reported to reach heights of up to three meters. The name ‘comosa’ means ‘bearing a tuft of leaves’ and it refers to the rosette. *Aloe comosa* has been given tree status in South Africa. Its national tree number is 28.7 and its status is regarded as rare due to its small, total population numbers and human threats.

Photographs 1 - 3 & back cover by the author
The brutality of the reality of *Haworthia.*

M. B. Bayer
PO Box 960, 7579 Kuilsriver, SA.

My experience is that Latin names definitely mean different things to different people. I submitted this manuscript as a draft to various people and the response varied from one which was nil to some sort of general accord. I am, however, no longer confident that botanists either do or will agree with my contention that the real essence of Latin names should, in addition to their many other usages, be in the relation of plants to their origins, relationships, behaviour and imagined future. A classification can only have the authority that experience and knowledge permit, and be really evaluated and understood by persons with the same sort of evidence before them. In coming to closure I have been exploring some more and, with my wife Daphne, made two finds which further convince me that we have to come to a classification by agreement. However, the requirement is that species are seen to be highly complex systems with none of the rigidity and inflexibility that nomenclatural rules imply, nor any of the egocentric authoritarianism that a history, of which I have been a part, suggests.

I have recently written two papers. One deals with the *H. nortieri* complex and the other with *H. pygmaea*. In writing the latter I interwove the comments of observers whose opinions I value, and conclude with the proposal that the elements *acuminata*, *splendens*, *dekenahii*, *argenteo-maculosa*, *fusca* and *vinctentii* all be included in the super-species *H. pygmaea*. Concomitantly I suggest that *H. turgida* and its variants be absorbed in *H. retusa*. Behind these two propositions, I was intending to re-enforce my view expressed in Haworthia Update Vol. 3, that *H. mirabilis* too be re-structured to include *magnifica*, *maraisii*, *heidelbergensis* and any associated varieties. The reason of course been the problem of continuity, however that is understood; and I suggest it is best understood by familiarity with the plants in the field and some recognition of biogeographical factors and the role these may play in driving change, adaptation and evolution.

In Update Vol. 3 I illustrate examples from many of the populations known to me, and also draw attention to populations in the lower Breede River valley which are significant. Chapter 13 is entitled “Haworthia is confusing” and Kobus Venter kindly used this material to make a presentation to the Succulent Congress at Calitzdorp in 2006. In addition I sent a draft of this recent manuscript to Bob Kent who replied that he was not sure what I meant by agreement. My missive to Bob included two collections made subsequent to Kobus’s presentation and that are a harsh reality check. These need to be added to the material touched on by Kobus. The plants I illustrate come from only a few populations that I know of and I believe that the only logical conclusion that one can draw from that greater body of known populations is that there is one super species, *H. mirabilis* – among others. My view now is that we need to take ALL the populations known at the very least to me and try to build a rational, consistent and coherent classification which might fit an imagined model of a product for botanical science. Therefore what I mean by “agreement” is virtually that readers have to submit to the uncomfortable situation that I may be right and that there is no alternative but to go along with what I have concluded. The reservation is that new material may necessitate modification and my opinion is that it will probably drive the classification towards a still more conservative position.

My most recent excursion has in fact been to try and resolve the dramatic juxtaposition of variants that we find lower down the Breede River. In summation of these, we have Adam Harrower’s collection (Fig.21) from Sandhoogte and Chris Burger’s collection (Fig. 22) at Buffelsfontein. These are both south of the Potberg. Then there are my collections from Stoffelsriver (Fig. 23), one nearer to Infanta (Fig. 24) and then two from Kleinberg (Figs 25 & 26). A curious addition that I have yet to see in the field, is a collection by Ismael Ebrahim (Fig. 27) of SA Biodiversity Institute from southwest of Vermaaklikheid. That collection resembles my Stoffelsriver collection and so provides the inevitable link to *paradoxa*.

At two localities near Melkhoutrivier (Figs 28 & 29), between Stoffelsriver and the Infanta collection, we found plants which have to be related to those mentioned above. The plants are highly variable as I have now come to expect, and individuals can be likened to *badia*, *acuminata* and *mutica*. The surfaces have a curious sheen and may be incipiently spiny as the Sandhoogte and Buffelsfontein plants also are. The paradox is that we are also driven to the conclusion that the very small plants at Ziekenhuis (Fig. 30) are the same species. Collections, figures 21 to 30, are a set within an incontestable biogeographic zone where geology is probably the most notable primary variable.

What re-enforces this seemingly improbable juxtapositioning of such different things, apart from my lengthy dissertation on the matter in Update 3, is a second find we made southeast of the Bromberg (Figs 31 & 32). This is near the locality for what I suggest is *H. rossouwii* var. *elizae*, and also for several variants
of what have, in the past, been classified as maraisii and mirabilis or variants thereof. My new find is a remarkable array of large very dark-green (nearly black), plants which dramatically enforce the close association between mirabilis and maraisii as well as with heidelbergensis. These plants include the elements of both "species" as they might have been understood. What is striking is again the huge variation in the population that I have come to expect in this complex. The plants do lack the opaque dots on the under-leaf surfaces, while the upper surfaces may be clearly windowed or opaque. They bring forcibly to my mind a sequence of populations from Heidelberg in the east to Verdiwaalskloof near Riviersonderend in the west that I suggested forged the interface of mirabilis and maraisii. Coupled with this is the array of populations both north and south which enforce that continuity and that also lead on to heidelbergensis. So while collection 11 & 12 may fall outside the compass of a Lower Breede biogeographic zone, it is unlikely that evidence can be found to suggest that it is not in a continuum of many other populations that link it with that zone. We are thus dealing with elements which are grossly different in imagery that constitute one system that can be said to be a "species". (Note that the pictures are of single plants and they convey neither the respective sizes of the plants, nor the gross variability within those populations. It is nevertheless true that generally one could probably assign a given specimen to each population – if required to do so).

My recommendations are:-

1. deficiencies in respect of a species definition be admitted and rectified.

2. the nomenclatural code is summarily assigned a secondary role to a dispensation which is more flexibly attuned to the realities of a truly asymmetric species structure with more emphasis on reflecting field relationships, and to the competence of its users.

3. the illusion of reality that the ranks of genus, subspecies and variety provide should be admitted. Genera should be recognised for their historical and artificial value, but for species I would suggest that much more attention be given to the huge asymmetric and asynchronous variability that underlies capacity to change and adapt.

With the adoption of, say, H. mirabilis as a super species, variants can be indicated by the addition of

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(Continued on page 9)
During the time I have worked with plants, I have met many botanists and taxonomists and I particular had the opportunity to associate closely with one of the most prominent in succulent plant taxonomy. I could never hope to emulate the energy, application, thoroughness and zeal with which that person approached the subject, nor the academic and written achievements. The sharing of ideas was however, a problem and I never felt much more than student. My discomfort with the taxonomic product of this person’s work eventually resulted in alienation and eventually I wrote in frustration “Taxonomy as a science has to answer the question, Are species real?, starting and ending with proper definition of the word “concept.”

The reply I received was this “Yes, species are real, and defined well by their ability to cross freely and produce offspring which again crosses freely. This has been studied and demonstrated since 1750 or so (you may remember that I talked about this in one of our discussions on the subject), but it is naturally not easy to dive into so much work including following up several generations etc. And since related individuals are similar looking, the reciprocal conclusions that similar objects are related has unfortunately been used as being true, which it is not. And yet, species are the only natural unit in the whole of taxonomy, which to determine is the crucial point.

“Perhaps this sounds rather like the famous Dicta of Bessey, but after having dealt extensively over 38 years by now with species boundaries in teaching, reading, theory and practice, in different vegetation zones and many different groups, I come back to old definition first given by Ray in 1682 ‘Group of plants derived from common seeds, reproducing their typical features by sowing’ and used by most taxonomists since.”

The point I have been trying to make in writing about Haworthia is that, consciously or unconsciously, this definition describes the underlying perceptions of most persons. The very problem is the use of this simplistic definition and the fact that it does not work. I do not think I have ever been able to argue this adequately and this response from this paragon of academic botany leads me to this response. The Ray definition of the species flies in the very face of Darwin’s concept of their evolution and adaptation. If species did in fact breed true, there would be no adaptation and no evolution. The nature of creation is change and living things have the capacity in terms of inherent variability to meet this constant change whether it is by slow degree or by cataclysmic event. My contention is that “most taxonomists” have indeed thus been using a faulty definition and wholly underestimate the degree of variability in plants. Their contention may be that they are only providing an approximation of the truth, but this is not the effect achieved nor is it the impression I obtained from long association with this particular taxonomist and others. In Haworthia particularly, variation is pronounced. In some populations, where field examination may suggest the plants are all very similar, when grown from seed no two individuals look alike. Vegetative propagation may have contributed to an illusion that plants breed true.

My own definition is that species are a dynamic and fractal group, or groups, of living or past living organisms, which are morphologically, genetically and behaviorally continuous in space and time. Quite obviously the discontinuities are not going to be any easier to determine whether one uses Ray’s definition or mine. But what mine does is that it covers the reality that species are spread in geographic space and they have both the variability associated with the range of habitats they occupy as well as the inherent variability which provides them with the flexibility to respond to changes in habitat. Few people have the necessary experience in the field with enough living systems, and with cultivation, to truly encounter the phenomenal variability which underlies capacity to adapt and change.

(Continued from page 8) any other epithet in inverted commas; thus H. mirabilis “maraisii”, H. mirabilis “heidelbergensis”, H. mirabilis “Melkhoutrivier” in the knowledge that there is in fact no clear and infallible distinction, or pretension that minor ranks have any reality either.

In completing this manuscript and re-reading it, I could not help but keep referring to the book by Felipe Fernández-Armesto entitled “Truth”. The cover blurb includes the words “We need a history of truth - though until now no-one has tried to write one”. There is also a note by Robert Winder which reads “A sharp and interesting work bound to enrage specialists in the fields he sprints through”. My own summation is that I have tried to write a truthful account of Haworthia. It will surely also enrage others who try to do the same, as well as others who may perceive the truth in some other fashion. To them I truly apologize. I do not have the answers and find my own writing quite as pompous and irritating as my readers may too. It does appear to me that we have as a society “lost faith in the reality of it and lost interest in our search for it (truth)”.

×Gasterhaworthia Guillau min - Continued.

The descriptions for ×Gasterhaworthia, commenced in the January, 2007 Alsterworthia International, which I have selected over the last fifteen years for formal recognition, are continued below. The measurements given are for plants growing under a certain set of conditions, lots of light & sun in South Africa, but no fertilising. A ×Gasterhaworthia grown in a European nursery can be twice the size of the same cultivar grown under my conditions.

×Gasterhaworthia ‘Silky Oaks’
D. M. Cumming.

Hybridist: D. M. Cumming.
Parentage: Haworthia mucronata Haworth × Gasteria bicolor v. liliputana (von Poellnitz) van Jaarsveld.
Description: Plant: rosette, diameter 55mm, 40 mm high. Leaf: number 20, 30mm long, 20 mm wide, light green with few white spots towards the tip, keeled.
Representative Specimen: DMC (Gra).
Etymology: The cultivar name commemorates the name of the nursery run by the author at the time of production in Australia.

×Gasterhaworthia ‘Coolill’ D. M. Cumming.

Hybridist: D. M. Cumming.
Description: Plant: rosette, 70 mm, 35 mm high. Leaf: number 14, 40mm long, 15 mm wide, reddish green with small white spots, many fine teeth along edge.
Representative Specimen: DMC (Gra).
Etymology: The cultivar name is derived in part from the parentage.

×Gasterhaworthia ‘Revoke’ D.M. Cumming.

Hybridist: D. M. Cumming.
Parentage: Haworthia koelmaniorum Obermeyer & D.S. Hardy × Gasteria carinata v. verrucosa (Miller) van Jaarsveld.
Description: Plant: rosette, diameter, 140 mm, 50 mm high. Leaf: number 12, 55 mm long, 35 mm wide, reddish green with large reddish white/green tubercles.
Representative Specimen: DMC(Gra).
Etymology: The cultivar name is derived from the parentage, an anagram of the first three letters from both parent species.
X Gasterhaworthia ‘Varput’
D. M. Cumming.

Hybridist: D. M. Cumming.

Parentage: Haworthia variegata L. Bolus hybrid (ex Dawson & Gill) x Gasteria bicolor v. liliputana (von Poellnitz) van Jaarsveld.

Description: Plant: rosette, diameter, 100mm, 40 mm high, offsetting. Leaf: number 16, 45 mm long, 10mm wide, few small spots, black/green.

Representative Specimen: DMC (Gra).

Etymology: The cultivar name is derived from the parentage.

×Gasterhaworthia ‘Pyglill’
D M Cumming.

Hybridist: D. M. Cumming.

Parentage: Haworthia pygmaea von Poellnitz x Gasteria bicolor v. liliputana (von Poellnitz) van Jaarsveld.

Description: Plant: rosette, diameter, 35 mm, 20 mm high, offsetting slowly. Leaf: number 11, 25 mm long, 15 mm wide, dark green with white markings/spots.

Representative Specimen: DMC (Gra).

Etymology: The cultivar name is derived in part from the parentage.

×Gasterhaworthia ‘Duan’ D. M. Cumming.

Hybridist: D. M. Cumming.


Description: Plant: rosette, diameter 50mm, 30 mm high. Leaf: number 18, 30mm long, 10 mm wide, reddish green, fine teeth along edge.

Representative Specimen: DMC (Gra).

Etymology: The cultivar name commemorates the Christian name of Rock Guitarist Duan Eddi.
×*Gasterhaworthia* 'Mutill' D. M. Cumming.

**Hybridist:** D. M. Cumming.

**Parentage:** *Haworthia mutica* Haworth × *Gasteria bicolor* v. *liliputana* (von Poellnitz) van Jaarsveld.

**Description:** Plant: flattish rosette, diameter 85mm, 25 mm high. Leaf: number 15, 35 mm long, 15 mm wide, reddish with fine spots.

**Representative Specimen:** DMC (Gra.).

**Etymology:** The cultivar name is derived in part from the parentage.

×*Gasterhaworthia* 'Villonis'

D. M. Cumming.

**Hybridist:** D. M. Cumming.


**Description:** Plant: rosette, diameter 60 mm, 50 mm high, forming clumps. Leaf: number 10, 30 mm long × 10 mm wide, reddish brown/green, minutely tuberculate. Note: The *H. viscosa* used in this cross is a longer leaved form from the Graaff-Reinet area.

**Representative Specimen:** DMC (Gra.).

**Etymology:** The cultivar name is derived from the parentage, anagram of the first three letters of each of the parent species, (less one L).

×*Gasterhaworthia* 'Lorial'

D. M. Cumming.

**Hybridist:** D. M. Cumming.


**Description:** Plant: distichous, diameter 50 mm, 10 mm high. Leaf: 25 mm long × 15 mm wide, dark shiny green, leaf imprint noticeable as in some forms of *Gasteria nitida* v. *armstrongii*.

**Representative Specimen:** DMC (Gra.).

**Etymology:** The cultivar name is derived from the parentage, an anagram of the first two letters from each of the parent species.
X Gasterhaworthia ‘Simnil’
D. M. Cumming.

Hybridist: D. M. Cumming.

Parentage: Haworthia limifolia
Marloth x Gasteria ‘Missu Fuji’ (Japanese Hybrid).

Description: Plant: non-symmetrical rosette, diameter 100mm, offsetting.
Leaf: number 14, 50 mm long, 25 mm wide, white ribbing as in some Haworthia limifolia.

Representative Specimen: DMC (Gra).

Etymology: The cultivar name is derived from the parentage, an anagram of the first three letter from both of the parent species.

×Gasterhaworthia ‘Double Trouble’
D. M. Cumming.

Hybridist: D. M. Cumming.

Parentage: Haworthia angustifolia
Haworth x Gasteria bicolor v. liliputana (von Poellnitz) van Jaarsveld.

Description: Plant: rosette, diameter, 70mm, 35 mm high, ‘Viviparous-prolific’, producing up to six plants per peduncle. Leaf: number 15, 35 mm long, 10 mm wide, reddish green.

Representative Specimen: DMC (Gra).

Etymology: Taken from the fact that this plant produces many offsets on the peduncles after flowering, fig. 44.
×*Gasterhaworthia* ‘Yambin’ D. M. Cumming.

**Hybridist:** D. M. Cumming.

**Parentage:** *Haworthia minima* (Aiton) Haworth x *Gasteria bayliissiana* Rauh.

**Description:** Plant rosette, diameter 70 mm, 25 mm high. Leaf: number 10, 45 mm x 15 mm, many small white spots, edge serrated.

**Representative Specimen:** (DMC Gra).

**Etymology:** The name is an anagram of the first three letters of the names of the parents.

×*Gasterhaworthia* ‘Loga Grill’

**Hybridist:** D. M. Cumming.

**Parentage:** (*Haworthia granulata* Marloth x *Gasteria bicolor* v. *liliputana* (von Poellnitz) van Jaarsveld) x *Gasteria glomerata* van Jaarsveld.

**Description:** Plant: rosette, diameter 60 mm, distichous when young, 10mm high. Leaf: 35 mm long x 15 mm wide, grey green.

**Representative Specimen:** DMC (Gra).

**Etymology:** The name is an

×*Gasterhaworthia* ‘Demas’ D. M. Cumming.

**Hybridist:** Unknown, origin USA?

**Parentage:** *Haworthia limifolia* Marloth x *Gasteria* sp. unknown

**Description:** Plant: rosette, diameter 60 mm, 35 mm high. Leaf: number 14, 40 mm long, 20 mm wide, dark olive green, fine lines and warts.

**Representative Specimen:** DMC (Gra).

**Etymology:** The cultivar name was obtained from a book of names for babies.
×Gasterhaworthia ‘Longlill’ D. M. Cumming.

**Hybridist:** D. M. Cumming.

**Parentage:** *Gasteria bicolor* v. *liliputana* (von Poellnitz) van Jaarsveld × *Haworthia longiana* von Poellnitz.

**Description:** Plant: rosette, diameter 90 mm, 40 mm high, slowly offsetting. Leaf: number 10, 45 mm long, 20 mm wide bright green, small spots, finely serrated, acute.

Note: partially fertile.

**Representative Specimen:** DMC (Gra).

**Etymology:** Derived in part from the names of the parents.

×Gasterhaworthia ‘Limuk’ D. M. Cumming.

**Hybridist:** D. M. Cumming.

**Parentage:** *Haworthia limifolia* Marloth × *Gasteria sp./hybrid*.

**Description:** Plant: rosette, diameter 40 mm, 35 mm high, offsetting. Leaf: number 10, 35 mm long, 20 mm wide, reddish green/brown, ribbed as in *limifolia*.

Note: Many forms of *limifolia* are tetraploid, most gasterias are diploid, therefore most hybrids resemble the *Haworthia*.

**Representative Specimen:** DMC (Gra).

**Etymology:** The cultivar name is derived in part from the names of the parents.

×Gasterhaworthia ‘Grinil’ D. M. Cumming.

**Hybridist:** D. M. Cumming.


**Description:** Plant: rosette, diameter 60 mm, 45 mm high, slowly forming clumps. Leaf: number 12, 35 mm long, 20 mm wide, reddish black, hard, acute. Note: leaves easily split with over-watering.

**Representative Specimen:** DMC (Gra).

**Etymology:** The cultivar name is derived from an anagram of the first two letter of the names of the parents.
×Gasterhaworthia ‘Rimal’ D. M. Cumming.

**Hybridist:** D M Cumming.

**Parentage:** [Haworthia limifolia Marloth x Gasteria ‘Missu Fuji’ (Japanese Hybrid)] x Gasteria nitida v. armstrongii (Schonland) van Jaarsveld.

**Description:** Plant: distichous, 40mm, forms clumps. Leaf: number 8, 22 mm long, 15 mm wide, dark green, warty.

**Representative Specimen:** DMC (Gra).

**Etymology:** The cultivar name is derived from an anagram of the first two letters of the names of the parents.

×Gasterhaworthia ‘Bragil’

D. M. Cumming.

**Hybridist:** D. M, Cumming.

**Parentage:** (Haworthia granulata Marloth x Gasteria bicolor v. liliputana (von Poellnitz) van Jaarsveld) x Gasteria baylissiana Rauh.

**Description:** Plant: distichous, 40 mm. Leaf: number 10, 20 mm long, 15 mm wide, light green some faint markings.

**Representative Specimen:** DMC (Gra).

**Etymology:** The cultivar name is derived from an anagram of the first two letters of the names of the parents.

×Gasterhaworthia ‘Li Lion’

D. M. Cumming.

**Hybridist:** D. M, Cumming.

**Parentage:** (Gasteria bicolor v. liliputana (von Poellnitz) van Jaarsveld x Haworthia longiana von Poellnitz) x Haworthia nigra (Haworth) Baker.

**Description:** Plant: rosette, diameter 35 mm. Leaf: number 8, 25 mm long, 15 mm wide, dark green, some reticulation, warty.

**Representative Specimen:** DMC (Gra).

**Etymology:** The cultivar name is derived from an anagram of the first two letters of the names of the parents.
Amendment of *Haworthia limifolia* ‘Stripes’ to *Haworthia* ‘Stripes’

H.C.K. Mak

In Alsterworthia International (Vol. 4 Issue 1 p.2), *Haworthia limifolia* ‘Stripy’ was corrected to *Haworthia limifolia* ‘Stripes’. However, some variegated *Haworthia limifolia* hybrids are found to be no difference in appearance from *Haworthia limifolia* ‘Stripes’. According to the International Code of Nomenclature for Cultivated Plants Article 2.17(2004) “In considering whether two or more plants belong to the same or different cultivar, their origins are irrelevant. Cultivars that cannot be distinguished from others by any of the means currently adopted for cultivar determination in the group concerned are treated as one cultivar.” They should be given the same cultivar name. To include those hybrids in the same cultivar name and avoid confusions, the cultivar name *Haworthia limifolia* ‘Stripes’ is amended to *Haworthia* ‘Stripes’. Thanks are extended to Harry Mays for the suggestions.

**Front Cover Photograph**

An alternative title for this note could be *A Search for Information* or even *An Apology*. I inadvertently deleted the e-mail message during a long-delayed, essential bout of tidying up my computer before I had transferred the text to this journal but, fortunately, not before I had transferred the photograph to the front page. The photograph is unusual and interesting. The growth at the base of the plant is clearly normal but growth at the top is different. No matter how hopeful one might be grafting can be ruled out, so we are left with monstrose growth resulting from spontaneous mutation. The leaves are deformed and variable, they have lost their markings, the colour is different and the growing point seems to be dividing dichotomously. It should therefore be possible to propagate and perpetuate the cultivar by vegetative means, but slowly! Can anyone provide information about this plant please? Does it have a cultivar name and if so where was it published?

My apologies to the sender for not being able to credit him/her for the photo. Could he/she please resend me the notes and his/her name?

Harry Mays
hmays@freenetname.co.uk
Woodsleigh, Moss Lane,
St Michaels on Wyre,
Preston, PR3 0TY, UK
Haworthia ×sampaiana (Resend) Resend (pro sp.)

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¹Vijverberglaan 5, 2675 LC Honselersdijk, The Netherlands.
²Woodisleigh Moss Lane, St Michaels on Wyre, Preston, PR3 0TY, UK

Haworthia coarctata var. sampaiana Resende was published as a variety nova in Feddes Repertorium specierum novarum regni vegetabilis 45:177, 1938. It was then raised to species status by Resende in 1940 - Haworthia sampaiana (Resende) Resende (Estudos Caryologicos nas Aloineae, III. poloidia n seccad Tessalatae do genera Haworthia e as actuais leis de prioridade em sisematica; Boletim da Sociedade Broteriana, Lissabon 14:192, 1940). The original description was without locality data and without collector details. However, the plant was know to have been grown at the Hamburg Botanical Gardens prior to 1905 when it first seems to have been noted. It is now regarded as a garden hybrid and under Articles 22 & 50 of the ICBN, 2006 should be cited Haworthia ×sampaiana (Resende) Resende v. sampaiana (pro sp.)

In 1941 Resende published the new species Haworthia broteriana Resende (Suculentas Africanas I; Boletin de Sociedade Broteriana Lissabon 15:159) without locality data and without collector details. It was cultivated in the Botanical Gardens, Lisbon. In 1946 he and Pinto Lopes reduced broteriana to forma status of sampaiana, Haworthia sampaiana f. broteriana (Resende) Resende & Pinto Lopes (Suculentas Africanas IV: Contribution to a better genosistmatical knowledge of the coarctatae section of the genus Haworthia Duval; Portugaliae acta biologica Ser. B2:178.). As the species is now regarded as of hybrid garden origin it should be cited Haworthia ×sampaiana f. broteriana (Resende) Resende & Pinto Lopes (pro sp.). The publication of this name automatically established Haworthia ×sampaiana v. sampaiana. Other spellings may be encountered e.g. H. sandaiana, but they are erroneous and should be corrected.

Thus Haworthia ×sampaiana has quite a long history but it can still be found in collections and on offer occasionally today in various parts of the world. You will not find it dealt with in Bruce Bayer’s books as he concentrates on species, but you will find full references in Ingo Breuer’s books THE WORLD OF HAWORTHIAS VOLUMES 1 & 2. Vol. 2 in particular contains original descriptions and b & w photos of all published species up to 2000. Although sampaiana would not be accepted at species level these days, the original names are validly published and recognised at the hybrid cultivar level. As indicated by the use of the term forma there is not much difference between sampaiana and broteriana. Original descriptions have sampaiana (170mm tall, 100mm diameter) larger than broteriana (to 150mm tall, to 80mm diameter), but growing conditions can influence size. The two forms that Cok has in his collection (and occasionally for sale) are shown in figure 59 to 61. Cok stresses that the two photographs of Haworthia ×sampaiana f. broteriana are the same clone. The differences in colour, bluish-grey-green and reddish, are the result of cultivation conditions. He also notes that although both are the same clone one grows much more slowly than the other. These compact, proliferous hybrid cultivars make valuable additions to collections. We have been left a welcome legacy.


Photographs. Figs. 57 & 58 from the World of Haworthias Volume 2. Figs. 59-61 Cok Groutscholten.

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A note from Harry Mak.

Referring to Alsterworthia International Vol. 7, Issue 1, Harry Mak writes “I have encountered the plant on the cover on a number of occasions. I have at least 3 plants - one from John Henshaw ex Cok; one from Alan Butler and one from Dorothy Minor. They all look different. This plant must have been circulating around for many years (at least 5 years). It must have originated in Japan. The correct name should be Gasteria ‘Araiso-no-Matsu’. However I am inclined not to treat it as cultivar as it is not stable. It can easily reverted to its normal form. Also, morphologically, they are different after growing for a while. I may have more information on it later after contacting a friend in Japan”.

Subsequently Harry Mak sent the following information from his friend in Japan:

‘Araiso’ means ‘rough rocky beach’.
‘Matsu’ means ‘pine tree’.
Araiso-no-Matsu means pine tree forests along a rough rocky beach.
In Japan, the pine trees serve as a windbreak and these views are very popular.
Haworthia Duval

1a. Plants generally acaulescent, grossly polymorphous; non-fibrous leaves and stems; flowers with free segments and inner whorl included ... subgenus Haworthia.

*angustifolia* Haw.
Proliferous from base. Leaves slender acuminate 30–150 mm long, 10–20 mm wide, erect or spreading, dark green becoming blackish green in exposed conditions, margins barely denticulate. Flowering time Oct.-Nov. Rocky situations with low vegetative cover. Eastern Fynbos Renosterveld (Zuurberg to Grahamstown).

*arachnoidea* (L.) Duval
Seldom proliferous. Leaves in compact rosettes 40–70 mm diam., oblong-lanceolate, incurving, opaque, dark green with no surface patterning, margins spinose with white bristly spines to 10 mm. Flowering time Nov.-Dec. Rocky southern slopes. Rainshadow Valley Karoo (common to Western Cape, rare in Steytlerville area).

*aristata* Haw.
Seldom proliferous. Leaves in small compact rosettes 30–60 mm diam., incurving, dark bluish-green, barely translucent and faintly reticulate, margins moderately spaced to 2 mm. Flowering time Oct.-Nov. Skeletal soils with surface rock. Lower Karoo (S Somerset East between Darlington Dam and Commanagga).

*bolusii* Baker
Usually solitary. Leaves in compact spinescent rosettes 30-50 mm diam., oblong-lanceolate, incurving, translucent bluish green, margins moderately to densely spinescent with white hairlike spines to 10 mm, occasionally spineless. Flowering time Oct.-Nov. Among low-growing sparse mesic vegetation. Upper Karoo, Sub-escarpment Grassland, Dry Highland Grassveld, Sub-escarpment Savannah (rare W Middelburg, common N to Aliwal North and E to Tsolo, S to near Jansenville and from there E to Commanagga, and Eastpoort).

*cooperi* Baker
Extraordinarily polymorphous. Leaves in compact generally spineless rosettes, from small 40 mm diam. to large 120 mm diam. rosettes, solitary or proliferous, swollen, erect oblong lanceolate, obtuse, truncated, or even attenuate often as thick as wide when truncated, usually bluish-green in colour with purplish hues, margins smooth, denticulate or spinose, ecotypic adaptations to diverse habitats, often withdrawn to soil surface level, or in dense clusters on moderate rock faces. Flowering time Sept.-Dec. In skeletal and rocky situations with low biomass potential. Eastern Fynbos Renosterveld, Albany Thicket, Sub-escarpment Savannah (from Uniondale E to Umtata, from Eastpoort S to Alexandra).  

*cymbiformis* (Haw.) Duval.
Clump forming. Leaves in open rosettes 50–180 mm diam., broadly ovate to lanceolate, flat to slightly concave, generally >1/3 as thick as wide, generally opaque and non-windowed, bright green often reddening in exposed situations, margins and keel usually smooth. Flowering time Sept.-Oct. Invariably on riverine rock faces and kranzes. Albany Thicket, Lower Karoo, Sub-escarpment Grassland, Sub-escarpment Savannah (from Baaken’s River, Port Elizabeth, E to Uitenhage, Aliedale, Fort Beaufort, Butterworth, to coast).

*decipiens* Poelln.
Seldom proliferous. Leaves in open rosettes 60–150 mm diam., broadly ovate, sometimes acuminate, 3–4mm thick, usually bright green with reticulate patterning and some windowing, margins with spines sparse and broad at the base. Flowering time Aug.-Oct. Local populations in karoid shrubland or marginal thicket, skeletal soils. Lower Karoo. Albany Thicket, Rainshadow Karoo (Kendrew, Pearston S to Darlington Dam, SE to Coega and W to Merweville, Uniondale).

*marumiana* Uitewaal

*monticola* Fourc.
Proliferous. Leaves slender acuminate, incurving, 30–50 mm long, elongate lanceolate, dark green, opaque and with or without reticulate patterning, margins and keel lightly spined. Flowering time Jan.-Feb. Mountain situations, rocky slopes and faces. Rainshadow Karoo, Eastern Fynbos Renosterveld (Calitzdorp, Klarstroom E
to Willowmore, from George E to Baviaanskloof).

springbvlakensis C.L. Scott
Solitary. Leaves thumb-like, retracted to soil level, 30–40 mm long, 15–20 mm wide, 15 mm thick, reddish-brown, smooth with translucent end-area and longitudinal or reticulate venation, margins scabrid. Flowering time Sept.-Oct. Karoid shrubland. Rainshadow Karoo (SE Steytlerville to near Kirkwood). Rare.

transiens (Poeil.) Hayashi

zannteriana Poeilnn.

[Species excluded:

reddii Scott .
Poorly understood and treated here as conspecific with marumiana. Occurs in upper Black Kei Valley (Waterdown Dam to Inversomo) and treated in revision questionably as variant of cymbiformis.)

1b. Plants often caulescent; usually fibrous leaves and stems; flowers with fused or tightly adnate segments, inner whorl partially included… subgenus Hexangulares Uitewaal ex Bayer.

attenuata (Haw.) Haw.

brunnii M.B. Bayer
Solitary. Leaves thumb-like, retracted to soil level, 25–30 mm long, 12-15 mm wide, 10-15 mm thick, slightly scabrid with small raised tubercles, opaque, truncated flat end-area. Flowering time Jan.-Feb. Karoid shrubland. Rain Shadow Karoo (South Steytlerville to Springbkvlakes). Rare.

ecoarcta Haw.
Proliferous, caulescent. Leaves multifarious on elongated stems to 300 mm high, 120 mm diam., 20–50 mm long, 10-15 mm wide, incurved and tightly packed on stems, ratio stem diam.:leaf width 1:1.7, brownish-green with rounded whitish tubercles. Flowering time Oct.-Jan. Rocky sparsely vegetated sites. Albany Thicket, Lower Karoo, Sub-escarpment Savannah, Eastern Fynbos Renosterveld (From Motherwell and eastern Zuurberg to Fish River).

fasciata (Willd.) Haw.
Proliferous, acaulescent to semi-caulescent. Leaves lanceolate-deltoid, 70–100 mm long, 10–15 mm wide, incurving to spreading, scabrid with white tubercles, with fibres. Flowering time Nov.-Jan. Rocky sparsely vegetated sites. Eastern Fynbos Renosterveld (from Joubertina E to Port Elizabeth and Uitenhage).

glaucua Baker
Proliferous, caulescent. Leaves multifarious on elongated stems to 700 mm high, 60mm diam., 20–70 mm long, 10–12 mm wide, incurved or spreading, tightly packed on stems, glaucous, greyish-green, seldom tuberculcate except on western Zuurberg. Flowering time Jan.-Mar. Rocky sparsely vegetated sites. Lower Karoo, Rainshadow Karoo, Eastern Fynbos Renosterveld (E from Willowmore to Zuurberg, S to Uitenhage).

longiana Poeilnn.

nigra (Haw.) Baker
Stoloniferous, spreading, usually caulescent or semi-caulescent with short stems. Leaves nearly trifarious on stem to 80 mm high, 30 mm long, 12–15 mm wide, erect or recurving towards tips, blackish to dark greyish green, opaque, surfaces scabrid with distinct raised non-confluent concolorous tubercles. Flowering time Nov.-Jan. Beneath karoid shrub canopy. Upper Karoo, Lower Karoo, Dry Highveld Grassland, Sub-escarpment Grassland, Albany Thicket (Widespread except along coastal area).

pungens M.B. Bayer
Proliferous, caulescent. Leaves congested 5-farious on stems to 250 mm high, 50 mm diam., 35-40 mm long, 12-15 mm wide, leaves sub-erect, smooth, rigid and pungent, blackish to reddish-green, sometimes with black subsurface mottingling. Flowering time Jan.-Feb. In stony conglomerate, sparsely vegetated sites. Eastern Fynbos Renosterveld (Rare between Braamriver and Joubertina).

reinwardii (Salm-Dyck) Haw.

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Proliferous, caulescent. Leaves multifarious on elongated stems to 200 mm long, 80 mm diam., 10-35 mm long, 8-2 mm wide, incurved and tightly packed on stems; ratio stem diam.:leaf width 1:1.2, brownish-green with rounded whitish tubercles. Flowering time Oct.-Jan. Rocky sparsely vegetated sites. Albany Thicket, Sub-escarpment Savanna (Frazer's Camp, S to Hamburg, and E to Peddie and Ncera River).

Scabra Haw.

Slowly proliferous, acaulescent or shortly caulescent. Leaves tri-, 8-farious, 15-70 mm long, 15mm wide, almost as thick as wide, triangular-lanceolate, attenuate, incurved at tips, rigid, blackish or greyish green, surfaces scabrid with raised non-confluent tubercles. Flowering time Sept.-Nov. Dry rocky situations. Eastern Fynbos Renosterveld(from Ladismith in west, Langkloof, Keerom River Valley to Couga River, Baviaanskloof).

Sordida Haw.


Venosa (Lam.) Haw.


Viscosa (L.) Haw.

Proliferous, caulescent. Leaves amplexicaul, congested tri-fariously on erect stems to 250 mm high, 30-60 mm diam., 20–50 mm long, 12–15 mm wide, recurved and spreading, dark green to very red in exposed situations, rigid, minutely scabrid. Flowering time June-Aug. In rocky situations under low shrubs. Upper Karoo, Lower Karoo, Rain Shadow Karoo, Albany Thicket (widespread from Laingsburg and Montagu in west, N to Graaff Reinet and E to Hunt’s Drift).

Species excluded: woolleyii Poelln

Known only from Springbokvlakte and treated as variant of venosa, but probably discrete as a species. Then rare.

References.


E Denotes Eastern Cape species.
**It is risky.**

In an attempt to meet the wishes of members we accept payments in British and EU bank notes, but stress that they are sent at your risk. Using notes left over from a holiday, for example, to make payments to Alsterworthia would seem to be more economical than changing them into local currency, provided that nothing goes wrong when sending bank notes through the post. Although it is by no means uncommon to hear of “money going astray” in the post, we have had little experience of it. However, recently one envelope was received with no money enclosed and no apparent signs of damage, though the flap was secured by clear tape overwritten by a signature in the name of the sender. The large sum of money which had been enclosed was missing. The envelope was returned to the sender so he could take the matter up with his Post Office but, as far as is known to date, without any satisfaction. *We do therefore stress that it is risky to send bank notes by post.* We are quite willing to continue to accept bank notes if you wish to run the risk of sending them, but with the availability of on line money transmission services, which are fast, cost free and risk free in my experience, you might wish to use PayPal as an alternative for any future payments. Please see [https://www.paypal.co.uk/](https://www.paypal.co.uk/)

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At the time this note was prepared no further information was available. Updated information may be obtained from [https://www.paypal.co.uk/](https://www.paypal.co.uk/)

**Thoughts on Haworthia. Bruce Bayer.**

Thoughts on Haworthia was written by Bruce Bayer in 1999. Maggs Bros Ltd Catalogue 1398, titled Mortimer’s Cacti, advertised a second hand copy at £65.00 and, according to rumour, sold it at that price. Presumably Maggs realised the importance of the publication, thought that stocks had been exhausted and set the price at £65. However, there is a small stock of this publication currently available and Bruce has kindly passed them to Alsterworthia International to sell for the benefit of Alsterworthia funds.

Bruce states that “Thoughts on Haworthia was written as an epiphany on the processes of taxonomy as they affect the layman who needs an authoritative and universal set of names for the objects of the hobby of plant collecting. Such an ideal may be outsider of the realms of possibility. It is therefore quite possible that, in trying to achieve it, taxonomy is simply adhering to the creed of a nomenclatural code which is utilitarian rather than the science it is imagined to be. It could be important that we learn to think independently if we really want to know what is true.”

Thoughts on Haworthia is a soft-cover publication, spiral bound with 99 pages of discussion and comment (no photographs) on classifying and naming plants and the International Code of Botanical Nomenclature. You can obtain a NEW copy from Alsterworthia International for the price of £25.00 inclusive of uninsured surface mail postage. Airmail/insurance can be provided at additional cost.

Please send orders and enquiries to Harry Mays < hmays@freenetname.co.uk >. Payment by PayPal is recommended for quickness and safety. If you require a price in foreign currency for payment to an Alsterworthia Representative please contact Harry Mays for a quotation.