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*Haworthia 'Sneha-Neer'. S. Aditya*

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# Bastard Beauties

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Many Haworthia enthusiasts are somewhat surprised when they visit haworthias in the field for the first time. Those who have visited haworthias in habitat will know that during dry periods the plants can be shrivelled beyond recognition and, even when turgid after rains, the plants are still often covered with dirt and have some scars from insect damage or trampling by animals. But even the occasional plant that is clean and unscarred in the wild is often not nearly as attractive as the plants we have in cultivation. This is, firstly, because the original stock plants from the wild were, in most cases, selected for their exceptional striking features and, secondly, because it was inevitable that the most attractive offspring of these plants would be the ones that became most propagated and treasured in cultivation. Therefore, we should never take the material we have in cultivation for granted as they are mostly far more attractive than the average plant encountered in the wild.

In fact, by selecting the most attractive seedlings and crossing them with each other, one can breed cultivars that are so far removed from the general plant in the wild that it can be hard to believe that they are the same species! Figs. 2 & 3 show the differences in selected *Haworthia retusa* seedlings compared with plants growing in the wild, fig. 1.

It is surprising to what extent certain characters can be bred by cross-pollinating selected plants. If one would select, for example, two plants of *H. pygmaea* var. *argenteo-maculosa* that both have rather dense white flecks and cross-pollinate them, the majority of the seedlings will have denser flecks than the average plant of that species. Often there will also be a few that will be even denser flecked than the two parent plants and, should one then cross them with each other when flowering, one may get even more extreme dense flecking, until someday you will get a plant with almost solid white flecked windows and which may actually qualify to get a cultivar name.

The same principle applies when one wants to create attractive hybrids between different species. If one should cross-pollinate just an average looking *H. splendens* with a plain looking *H. badia* then the result may not be spectacular, but if you choose the most attractively flecked and glossy *H. splendens*, fig. 4, with a *H. badia*, fig. 5, with strongly re-curved, glossy leaves, then most of the resulting seedlings will also have the dense flecking of *splendens* combined with the re-curved leaf-shape of *badia*.

**My pollination technique.** It was Mary Parisi who brought me one of the best gifts I ever received many years ago when she gave me a pair of 'Optivisor' magnifying glasses that clips over one's head. This allows both hands free to work while looking through the magnifying lenses.

I use fine watchmakers' forceps (tweezers) to transfer the pollen. My method involves partially tearing open

each of the flowers to be pollinated. Most Haworthia flowers open very easily when one pulls the upper three lobes and lower three lobes apart and then one can easily see the stamens with pollen and the stigma hidden lower down below them. I simply take the tips of the pollen-bearing stamens together in a bunch and transfer them to the stigma tip of an older flower on another plant. Care must be taken not to grab the stigma tip together with the stamen tips, but in most cases the stigma is situated well below the stamen tips. It is best to move pollen from younger flowers to the stigma tip of an older flower on the second plant. In most haworthias the stigma tip is curved upward (towards the upper perianth lobes) and one can slide the tweezers' tip with the bunch of pollen along the roof (perianth) and move it slightly down to press the pollen onto the stigma tip.

This is how I also do pollination between pure species in my greenhouse and you may now wonder just how do I make sure that I know in the end which fruits contain hybrid seeds and which ones do not?

My wife has an embroidery machine and as a result has a huge collection of coloured threads, which come in very handy. I would, for example, pollinate the flower of *H. badia* with that of *H. splendens* and then tie small pieces of the same red thread around each of the pollinated flowers. I may then pollinate another flower on the same *H. badia* plant with *H. mutica*, for example, and I will then use two pieces of green thread to mark the flowers. This way I can easily see which fruit resulted from the other plant's pollen.

Hand-pollinating one's plants in this way ensures very good fruit formation (as the stigma tips get really flooded with a whole lot of pollen!) and I found that the fruits and even the seeds of plants in cultivation are larger and more viable than wild collected seed.

## A few favourites:

I have to admit that I find some of the most attractive haworthias in my collection to be hybrids. I think that the work of producing attractive Haworthia cultivars and hybrids has a huge potential and, due to the rarity of these plants in the wild, it should be encouraged so that more collectors start concentrating on growing and breeding beautiful cultivars instead of only concentrating on purist collections of plants with data.

This short article is meant to share with you a few of the best that I have been able to breed so far.

**1. Haworthia 'Lombard Star'. Cultivar nova. Fig. 6.a,b**  
**Parentage.** [(*H. mutica* x *H. mutica* 'White Window') x *H. 'Ginsekai'*] x *H. badia*.

**Description.** Rosette a compact, white star. Leaves re-curved; large, retuse leaf ends are completely covered with dense, white flecking except for up to five longitudinal, dark, greenish-brown lines which are continuous with the upper lower leaf epidermis. Leaf tips end in a short spine. Plant illustrated is 7cm in diameter.

**Comments.** This hybrid is named in honour of George





1. *Haworthia retusa* in habitat.
2. Selected *Haworthia retusa* seedling.
3. Selected *Haworthia retusa* seedling.
4. *Haworthia splendens*.
5. *Haworthia badia*.





6a,b. *Haworthia* 'Lombard Star'

7a,b. *Haworthia* 'Black Knight'

8a,b. *Haworthia* 'Aluminum Star'



Lombard from Phoenix, Arizona. The reasons for naming it for him are very valid, as he was partly responsible for the creation of this hybrid. During 1996 George Lombard visited South Africa with the main purpose to see haworthias in the wild. Both Kobus Venter and I took George on trips to various habitats as we both had known him for a long time via correspondence and valued him as an exceptionally kind and dear friend. We also knew that he was a grower and propagator with exceptional skills.

At the end of the trip I took George to Kobus Venter's house and we used the opportunity to look at Kobus's collection. At that time Kobus had just obtained plants of *H. mutica* from Klippoort, a new locality found by Peter Bruyns to the south-east of Drew. These plants of *H. mutica* differed slightly from other forms of *H. mutica* by having very clear white facial lines, as well as a few white 'dusky dots' in the windows. Unfortunately only one of the plants was in flower and George and I regretted the fact that we would have to wait another year before Kobus might be able to pollinate these plants and share seed with us. Then George noticed that Kobus's plant of *H. mutica* 'White Widow' was also in flower. The leaf-propagated 'White Widow' plant of Kobus was the same clone as the exceptional plant at the Karoo Botanic Gardens with large milky clouds in the windows. This plant originated from Sanddrift, which is situated to the north-west of Drew.

George then asked Kobus whether he would mind if we pollinated the Klippoort plant with the flowering 'White Widow' from Sanddrift. Kobus agreed and promised to send the seed to us. George and I went ahead and pollinated the two plants. A few months later Kobus sent the seed to me as promised.

The resulting seedlings yielded many pleasant surprises. Unlike the 'White Widow' that develops the white cloudy windows only gradually during maturity, many of these seedlings already showed densely white-flecked windows from an early age. A few had almost solid white windows and those I kept for further breeding.

Having a special liking for plants with dense white-flecked windows, I could not wait to cross these white *mutica* seedlings with other white plants like *H. splendens*, and the very white forms of *H. wimii*, and the Japanese cultivar *H. 'Ginsekai'*.

The seedlings of the white *H. mutica* x *H. 'Ginsekai'* turned out very beautiful although they looked rather similar to some white *H. wimii* cultivars. I then decided that I needed to cross these seedlings with a longer and larger leaf plant. *H. badia* became a very good choice and the seedlings developed into beautiful, white, compact 'stars' with the attractive re-curved leaves of *H. badia*.

*H. badia* has always been George Lombard's favourite *Haworthia* and I then suddenly realized that the most appropriate name for these silver-white stars would be 'Lombard Star', particularly because the white *H. mutica* parents resulted directly from his clever pollination efforts.

## 2. *Haworthia* 'Black Knight'. Cultivar nova. Fig. 7a,b

**Parentage.** *H. marumiana* var. *dimorpha* ♀ x *H. splendens* ♂.

**Description.** Rosette compact. Leaves dark blackish-green, pimples in more or less longitudinal rows in the short retuse leaf-ends dark blackish-green in the centre surrounded by a ring of light green, the leaf ends terminate

in a spine. Marginal spines short. Diameter of plant illustrated is 7.5cm in.

**Comments.** In particularly the summer rainfall areas of South Africa, it is tricky to get certain summer flowering haworthias to complete the flowering and fruit development process. Some species like *Haworthia marumiana* (*archeri*) and its var. *dimorpha*, *H. wittebergensis*, *H. maraisii*, *H. marxii* and some members of *H. mirabilis* have rather thin flower peduncles that tend to develop wilting. The peduncle simply gets a soft spot and collapses. At first I thought it to be the result of a fungus due to summer heat and humidity, but I am told that it is a tiny insect that stings the peduncle, causing it to collapse.

This happened frequently while I was still living in Grahamstown and it was always a struggle to get flowers and fruit on my summer-flowering haworthias. During 1998 all but one of the peduncles on my *H. marumiana* var. *dimorpha* plants collapsed. I decided to pollinate the one which did not with pollen of *H. splendens*. The resulting seedlings were quite beautiful and most of them displayed the beautiful dark almost black-green colour of *dimorpha* and with the attractive glossy 'pimples' of *splendens* in the windows. These glossy pimples gave me the impression of scutes or rivets on the black-green armour of a fictional knight and the name 'Black Knight' felt quite appropriate.

## 3. *Haworthia* 'Aluminum Star' Cultivar nova. Figs. 8a,b.

**Parentage.** *H. badia* x *H. splendens*.

**Description.** Rosette of large re-curved, narrowly pointed leaves. The dark green of the retuse leaf-ends is largely obscured by aluminum-white (aluminium) raised spots running in slightly ridged, longitudinal rows. The leaf edges are tinged red. Plant illustrated is 8.5cm in diameter.

**Comments.** *H. badia* stands out as one of the haworthias with the most gracefully re-curved leaves, which are tightly packed into a neat and compact rosette. This character is a very desirable one to add to the 'recipe' of a hybrid, particularly if the other parent is an attractive densely marked *H. splendens* 'Dream Walk' (GM 452).

One of the best results I obtained from this pollination is the seedling I name 'Aluminum Star' as it has a peculiar metal-like colour reminding me of aluminium with a glossy pimpled surface in combination with the typical re-curved leaves of *H. badia*.

I decided to use the American spelling of 'aluminum'.

## 4. *Haworthia* 'Chock Wonder' Cultivar nova. Fig. 9a,b

**Parentage.** *H. 'Chocolate'* x [*H. wimii* Hayashi {=*H. emelyae* var. *major* (G.G. Smith) M.B. Bayer} x *H. badia*].

**Description.** Rosette small, clumping; leaf colour dark-chocolate, windows glossy-white, raised spots (pimples) arranged in irregular longitudinal lines, a few spot continue into the lower upper leaf surface. The base of the leaf is broad, the retuse end tapers sharply to a point with a spine. Plant illustrated is 8cm in diameter.

**Comments.** It was George Lombard who gave me a plant of *Haworthia* 'Chocolate' years ago and it does indeed have a very striking, dark-chocolate colour. It clusters easily and as a result the rosettes stays small. But the unique colour made it a very good potential parent for





11a,b. *Haworthia* 'Chockwonder'  
 10a,b. *Haworthia* 'Pink Nebula'  
 11a-c. *Haworthia* 'Someno'





hybrid production.

I have been using it as a parent in many hybrid attempts and several turned out quite good. The best in my opinion was the cross between *H. 'Chocolate'* and another hybrid which was the result of crossing a very nice white plant of *H. wimii* (*emelyae* var. *major*) with *H. badia*. This is the same combination that Bob Kent used to produce his series of 'Bev's Wonder' hybrids. So, one could say that *H. 'Chockwonder'* is a cross between *H. 'Chocolate'* and *H. 'Bev's Wonder'*, (only if the clone used conformed to the description of 'Bev's Wonder - Ed) although my 'Bev's Wonder' was a 'home-made' one by using the same combination of parents. The specific plant that I used has the white and toothed leaves of *H. wimii*, but the longer acuminate leaves of *H. badia* and does look somewhat similar to Kent's 'Bev's Wonder' called 'Imagine'. *H. 'Chock-wonder'* has very attractive irregular chocolate island lines bordering glossy white windows decorated with pimples which almost look as if *H. splendens* may have been a parent!

#### **5. *Haworthia* 'Pink Nebula'. Cultivar nova. Fig. 10a,b.**

**Parentage.** *H. 'Marx Red'* x (*H. 'White Window'* x *H. mutica*).

**Description.** Rosette large; leaves re-curved, very bright pink, but in mid spring and mid autumn the pink loses some of its intensity, but never completely. Plant illustrated is 7.5cm in diameter.

**Comments.** This is the result of crossing a rather red cultivar of GM 447 *H. splendens* (given the cultivar name 'Marx Red' by Dr Hayashi) with the milky white *H. mutica* from Drew area (*H. 'White Widow'* x *H. mutica* from Klippoort).

'Pink Nebula' is very attractive during spring and fall when the pink colour shows up very bright. During mid winter and mid summer the pink colour seem to fade to some extent although it is never completely absent.

It is also a rather large plant and like 'Aluminum Star'. It also inherited to some extent the beautiful re-curved acuminate leaves of *H. badia*.

#### **6. *Haworthia* 'Someno'. Cultivar nova. Fig. 11a-c.**

**Parentage.** (*H. marginata* x *H. minima*) x *H. koelmaniorum* var. *koelmaniorum*.

**Description.** Young rosettes rather flat and open, with age the leaves become semi-erect; leaves dark green with slightly raised, white spots in longitudinal rows on both surfaces, occasionally amalgamating to form short lines in the centre of a leaf; leaf margins brown, cartilaginous, fig. 11a. The exposure to sun darkens the overall colour of a plant, fig. 11c. Plant illustrated is 8cm in diameter.

**Comments.** *H. koelmaniorum* (var. *koelmaniorum*) has a long flowering season and flowers prolifically throughout summer. As a result one has many opportunities to cross it with most other members of the *Hexangulares* and even with most of the *Robustipedunculares* although the latter efforts seldom produce results.

One successful case was the pollination of a hybrid between the small form of *H. marginata* and *H. minima* (both from Bredasdorp area) with *H. koelmaniorum*. The *H. marginata* x *H. minima* looks almost identical to *H. mortonii*. As young plants these 'Someno' hybrids had rather flat, open rosettes closer to *H. koelmaniorum*, but as they age they seem to develop more semi-erect leaves and

more reminiscent of *H. marginata*.

The name 'Someno' is derived from 'south-meets-north' and refers to the fact that *H. koelmaniorum* is one of the northernmost species in South Africa while both the miniature *H. marginata* and *H. minima* are found very close to the southernmost tip of the country.

#### **7. *Haworthia* 'Kent's Wonder'. Cultivar nova. Fig. 12a,b page 8.**

**Parentage.** (*H. wimii* (= *H. emelyae* var. *major*) x *H. badia*) x (*H. 'Ginsekai'* x *H. splendens*).

**Description.** Rosette flattish; leaves reddish green, re-curved lanceolate, margins white with fine white teeth; white windows cover the retuse leaf ends and are separated by longitudinal lines of epidermis reddish-brown in colour, the windows have many prominent raised white spots some of which end in short spines. Plant illustrated is 7cm in diameter.

**Comments.** I was one of the first people to receive plants of Bob Kent's well-known and beautiful 'Bev's Wonder' hybrids. In fact, at the time that Bob sent these to me he had not decided on a name and was initially considering calling it 'B-Bev'. Only later did he decide upon 'Bev's Wonder' and also divided them into A, B, C, D, etc. clones. By then I already had seedlings of the plants he sent me and therefore I could not quite link my self-produced offspring to his A,B,C,D etc. clones. 'Kent's Wonder' is a hybrid between one of the many 'Bev's Wonder' seedlings I have and a plant that is a cross between the Japanese 'Ginsekai' with *H. splendens*.

#### **8. *Haworthia* 'Toff-O-Lux'. Cultivar nova. Fig. 13a,b.**

**Parentage.** *H. splendens* x *H. 'Ginsekai'*.

**Description.** Rosette compact; leaves brownish black; green retuse leaf-ends re-curved, with longitudinal whitish lines with raised white spots some of which terminate in a small spine; short marginal spines white, backward pointing. Plant illustrated is 7.5cm in diameter.

**Comments.** This is a hybrid between a very white plant of *H. splendens*, GM 452, and the Japanese *H. 'Ginsekai'*. It may be a good parent to use for further hybrids as it would be very beautiful if one can get the caramel-brown lines more prominent and bordered by bold, cloudy-white lines.

It is named after a brand of caramel toffee that is no longer in production as far as I know, but which consumed a large portion of my pocket money (and teeth) as a young child.

#### **9. *Haworthia* 'Tripple B'. Cultivar nova. Fig. 14a,b.**

**Parentage.** (*H. wimii* [*H. emelyae* var. *major*] x *H. badia*) x (*H. badia* x *H. 'Ginsekai'*).

**Description.** Rosette large, compact flattish; leaves dark green with reddish margins and small backward pointing teeth; the windows in the retuse leaf ends are white and have many raised, white scattered spots, longitudinal lines of dark green can be seen between the windows. Plant illustrated is 9.5cm in diameter.

**Comments.** This plant is the result of crossing one of my 'home-made Bev's Wonder's' mentioned above with a cross between *H. badia* and 'Ginsekai', fig. 15. Most of its siblings look almost like pure *H. badia* for some reason, but this one stood out from an early age as it was larger and considerably rougher than the others.





12a,b. *Haworthia* 'Kent's Wonder'  
13a,b. *Haworthia* 'Toff-O-Lux'



14a,b. *Haworthia* 'Tripple B'





It almost looks as if it has some *H. splendens* blood and I have wondered whether I have not made a mistake or a seed from another hybrid batch landed amongst these. Yet, none of the other hybrid batches have similar plants although some of the 'Lombard Star's look a bit like this although not quite as rough. Nevertheless, it is quite a nice hybrid and its large size is a very desirable feature. Triple B stands for 'Big Beautiful Bastard'.

**10. *Haworthia* 'Glass Emblem'. Cultivar nova. Fig. 16a,b.**

**Parentage.** *H. pygmaea* 'Crystallina' x *H. splendens*.

**Description.** Rosette compact; dark-green leaves short, rough, retuse leaf-ends with up to seven white lines converging, but not connecting, near the rounded leaf tip and covered in glossy, crystalline projections which appear glassy and transparent. Plant illustrate is 7cm diam.

**Comments.** Over the years I have selected the most crystalline plants from batches of seedlings of JDV 84-15 *H. pygmaea* from Great Brak River. The seedlings originally received from Kobus Venter were already nicely 'crystalline', but by seed propagation and selection some results far exceeded the original parents.

By crossing one of the roughest *H. pygmaea* 'Crystallina' with a very white plant of *H. splendens* GM 452 some rather nice seedlings resulted, the best of which was 'Glass Emblem'. It has the same rough sugar-coated leaf-tops as *H. pygmaea* 'crystallina' but with the glossiness of *H. splendens* that gives it a glassy transparency.

**11. *Haworthia* 'Protorose' Cultivar nova. Fig. 17.a,b.**

**Parentage.** *H. pygmaea* 'Crystallina' x *H. 'Ginsekai'*.

**Description.** Rosettes small; leaves blackish-green, the white windows cover the retuse leaf ends except for blackish-green, longitudinal lines (circ. 3 to 8) , the windows are studded with fine, whitish tubercles some of which have terminal spines in longitudinal rows. Plant illustrated is 7.5cm diameter.

**Comments.** This is the result of crossing one of the best *H. pygmaea* 'Crystallina' JDV 84-15 with *H. 'Ginsekai'*. The plant is small and reminds me a bit of *H. wimii* although the rough texture on the upper leaves is very fine and delicate.

**12. *Haworthia* 'Gothlet'. Cultivar nova. Fig. 18a,b.**

**Parentage.** *H. pulchella* x *H. 'Bev's Wonder'*

**Description.** Rosette small; leaves narrowly attenuate, dark-green; longitudinal rows of white teeth along the leaf edges and keel and on the upper surface converging towards, but not linking at the leaf tip. Plant illustrated is 6cm diameter.

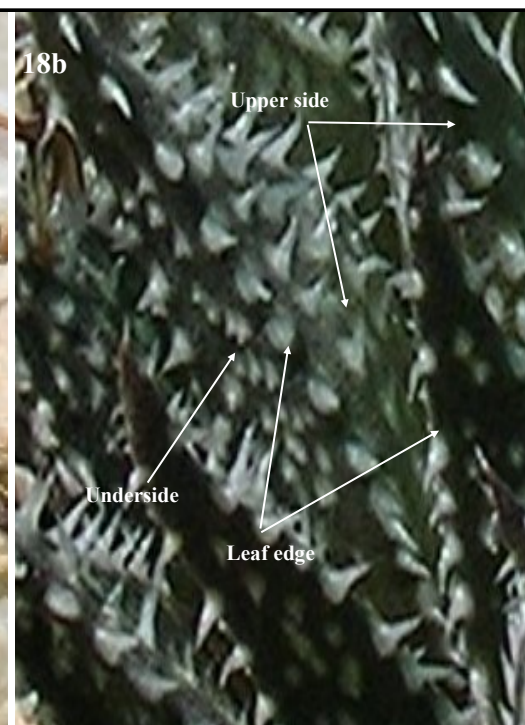
**Comments.** This dark little rosette covered with white teeth is the result of crossing *H. pulchella* from Die Draai, north-east of Touwsrivier with *H. 'Bev's Wonder'*. All the seedlings are almost identical and the tray of seedlings looks like a uniform batch of a new species! The plants are obviously much closer to the *H.*



**15. *Haworthia* 'Ginsekai' x *Haworthia badia***

**16a,b. *Haworthia* 'Glass Emblem'**





*pulchella* mother plant than 'Bev's Wonder'.

17a,b. *Haworthia* 'Protorose'  
18a,b. *Haworthia* 'Gothlet'



**13. *Haworthia mutica* 'Drew White' Cultivar nova. Figs. 19a,b.**

**Parentage.** *Haworthia mutica* (from Klippoort) x *Haworthia* 'White Widow'.

**Description.** Rosette medium size; leaves recurved, slightly acuminate, brown-green; upper windowed areas densely covered in white dusky flecks, becoming almost solid in the central leaf area. The retuse ends have five to seven white longitudinal lines, some of which have a few opaque brown-green islands inside. Plant illustrated is 7.5cm diameter.

**Comments.** The *Haworthia mutica* used for the cross came from Klippoort; the *Haworthia* 'White Widow' is a selected clone of *Haworthia mutica* from Sandrift which develops a white, milky cloud in the centre of the leaf with maturity.



**14. *Haworthia* 'Sago Jelly'. Cultivar nova. Figs. 20a,b.**

**Parentage.** *Haworthia bayeri* x *Haworthia mutica*.

**Description.** Rosette flat and compact, retuse leaf ends somewhat rounded, flat to slightly concave, spotted white; circa 4-6 longitudinal white lines the ends of which curve outwards generally, but inwards occasionally. Plant illustrated is 7.6cm in diameter.

**Comments.** Superficially similar to *Haworthia mutica* 'Drew White' but differing significantly in the detail.



**15. *Haworthia* 'Dream Walk'. Cultivar nova. Figs. 21a,b**



**Parentage.** *Haworthia bayeri* x *Haworthia mutica*.

**Description.** Rosette medium size; leaves recurved, chocolate brown, windowed retuse leaf-ends brownish-green-grey with soft-edged, white, longitudinal lines that curve outward towards leaf-tips, tessalately connected. Plant illustrated is 8cm in diameter.

**Comments.** Although the parentage is the same as for *Haworthia* 'Sago Jelly' the two clones are quite different.







**16 *Haworthia splendens* 'Toffee'. Cultivar nova. Fig. 22a,b.**

**Parentage.** A selected clone of the species.

**Description.** Rosette compact, medium size and flattened; leaves triangular ending in sharp spine, chocolate brown, retuse leaf ends densely flecked with pale, purplish white flecks, interrupted by several

prominent but irregularly- broken, opaque chocolate-brown longitudinal lines that blend into another towards the leaf-tips. Plant illustrated is 8cm in diameter.

**Comments.** *Haworthia splendens* has attractive makings which vary from clone to clone. This one was selected for cultivar status because of its outstanding beauty.

## Cultivar Publication Dates

The publication date for all new cultivars published in *Alsterworthia International* Volume 9 Issue 2 is June 14th, 2009, the date on which the first distribution of journals took place.  
Proof of postage is held.

The publication date for all new cultivars published in *Alsterworthia International* Volume 9, Issue 3 will be announced in the March 2010 *Alsterworthia International*.  
It will be the date on which the first journals are posted

The descriptions for all new cultivars published by *Alsterworthia International* are sent to the Herbarium, RHS Garden Wisley, Woking, Surrey, GU23 6BQ, UK for recording as the *Standards* for these cultivars

## Membership Renewal for 2010

2010 is our 10th anniversary. Please renew you membership promptly in order to receive the March 2010 issue on time

For our 10th anniversary may we ask you to help recruit further members for *Alsterworthia International*?

Two membership renewal forms are included with this issue. One for your own use and the other to pass on to a anyone or any organisation interested in the genera we cover.  
Many thanks for your help and support.



# Molecular phylogenetic studies in *Haworthia* Duval (Asphodelaceae)

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## Introduction

The southern African centred succulent genus *Haworthia* comprises c. 61 species (Bayer, 1999). *Haworthia* is placed in the subfamily Alooideae (Asphodelaceae; Asparagales). Bayer (1999) divided the genus into three subgenera (*Haworthia*, *Hexangularis* and *Robustipedunculares*) based primarily on floral characters. The genus has a complicated taxonomy with numerous closely related species. A complex alpha taxonomy and considerable amateur interest in *Haworthia* has resulted in a plethora of names at species-level (and lower ranks) and conflicting species limits. Consequently, species limits and relationships are contentious and poorly understood. Molecular studies by Treutlein *et al.* (2003a, 2003b) have shown that *Haworthia sensu lato* is not monophyletic but with limited sampling. Here we report preliminary findings of a molecular phylogenetic study based on nrDNA (ITS1) and cpDNA (*trnL-F* spacer) sequence data of *Haworthia*.

## Material & Methods

**DNA extraction, amplification & sequencing:** Total genomic DNA was extracted using the CTAB procedure of Doyle & Doyle (1987). ITS1 was amplified with primers 'ITS1' (White *et al.*, 1990) and 'Chromo 5.8SR' (Barker *et al.*, 2005). The *trnL-F* spacer was amplified with primers 'E' and 'F' (Taberlet *et al.*, 1991). Sequencing was done with primers used for amplification.

**Sequence editing & alignment:** Sequences were edited and aligned manually. Additional Asphodelaceae sequences from GenBank were retrieved and aligned manually in the respective data sets.

**Phylogenetic analyses:** The nrDNA and cpDNA data were analyzed separately. Maximum Parsimony (MP) analyses were conducted with PAUP\* version 4.0b10 (Swofford, 2002). Bayesian Inference (BI) was performed using MrBayes version 3.1.1 (Huelsenbeck & Ronquist, 2001) with the model of sequence evolution identified by the Akaike Information Criterion implemented in MrModel version 2.2. (Nylander, Uppsala University, Sweden). *Bulbine* and *Kniphofia* (Asphodeloideae) were used as outgroups.

## Discussion

Using ITS1 data, Treutlein *et al.* (2003b) showed that subgenera *Haworthia* and *Hexangularis* formed monophyletic lineages but *Haworthia sensu lato* is not monophyletic, and with both lineages nested within *Aloe*. Our results for ITS1 (Fig. 4) show that with an expanded data set for *Haworthia* and *Aloe*, most samples of subgenus *Hexangularis* and the single sample of subgenus *Robustipedunculares* forms a well supported lineage with



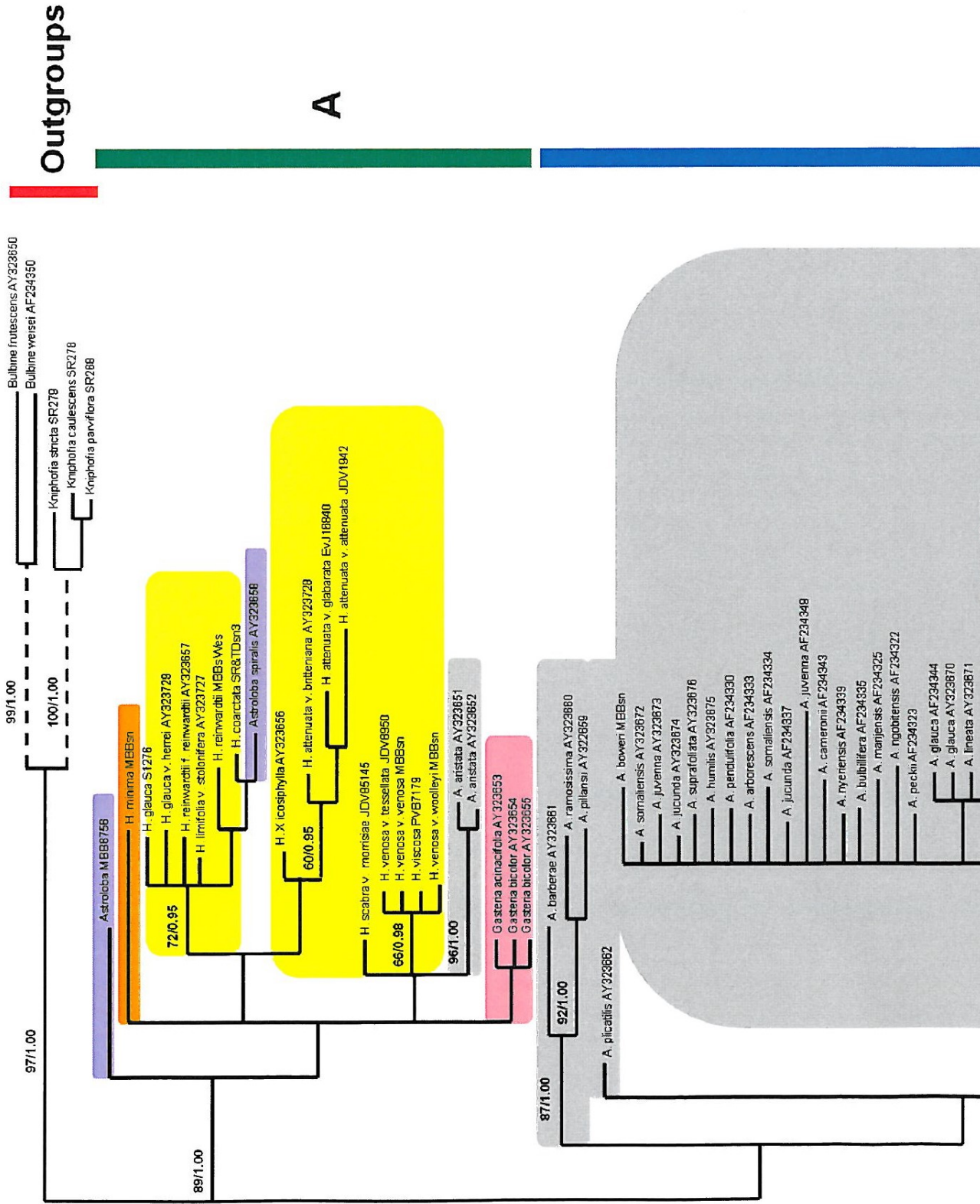
Fig. 1. *H. cymbiformis*. Subgenus *Haworthia*.

Fig. 2. *H. glauca*. Subgenus *Hexangularis*.

Fig. 3. *H. pumila*. Subgenus *Robustipedunculares*.

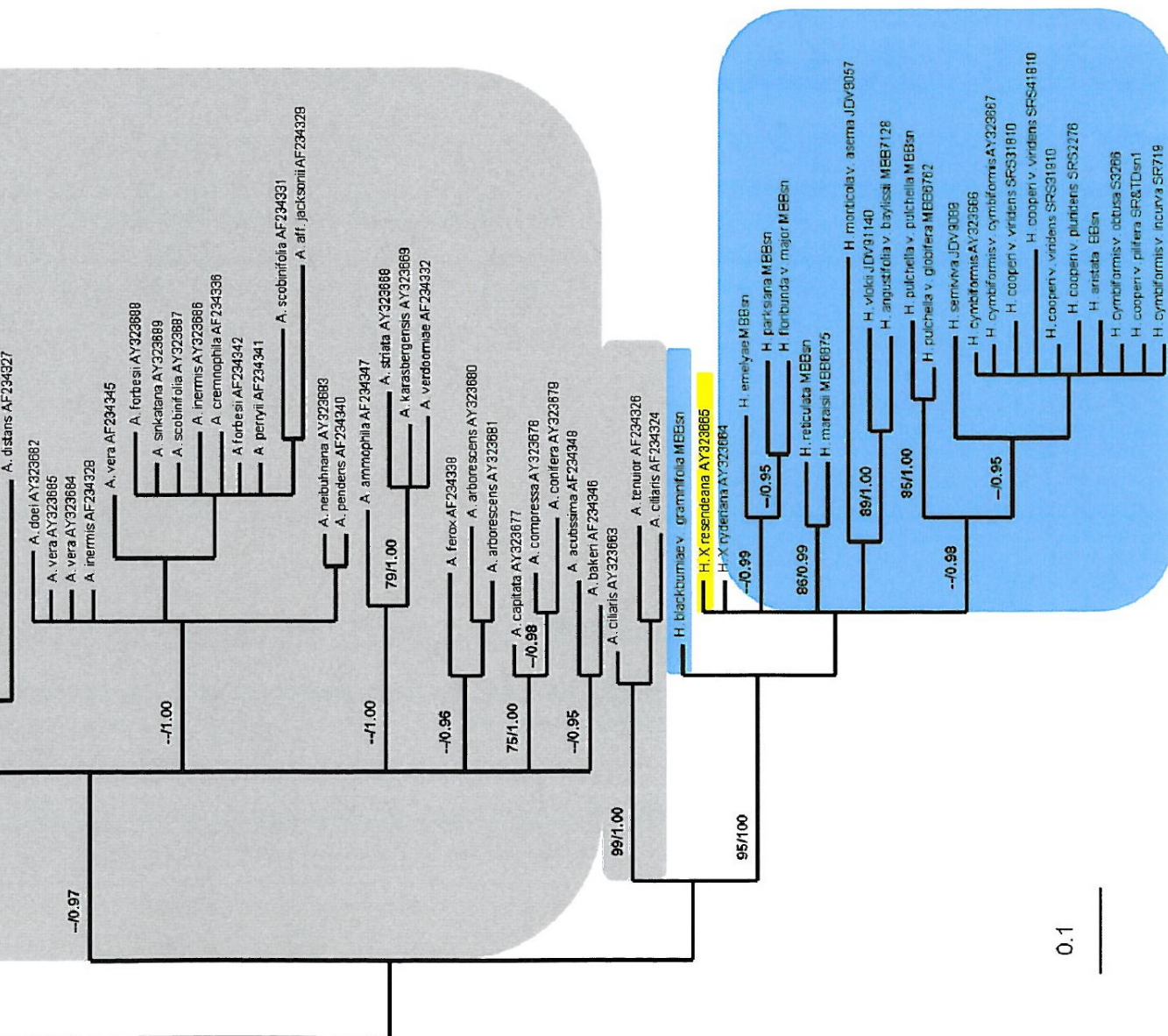


**Fig. 4. Bayesian inference tree of the ITS1 region estimated using the HKY+G model. Numbers above the branches indicate bootstrap (MP) /posterior probability (BI) values (only values > 70BS & 0.90PP are shown).**





B





*Astroloba*, *Aloe aristata* and *Gasteria* (Clade A, Fig. 4). Subgenus *Hexangularis* is non-monophyletic. Monophyly for subgenus *Robustipedunculares* cannot be assessed as we have a single sequence. Most *Aloe* samples, subgenus *Haworthia* samples and a single *Haworthia* hybrid (*H. X resendeana*, AY323665; subgenus *Hexangularis*) forms a lineage with no support (Clade B, Fig. 4).

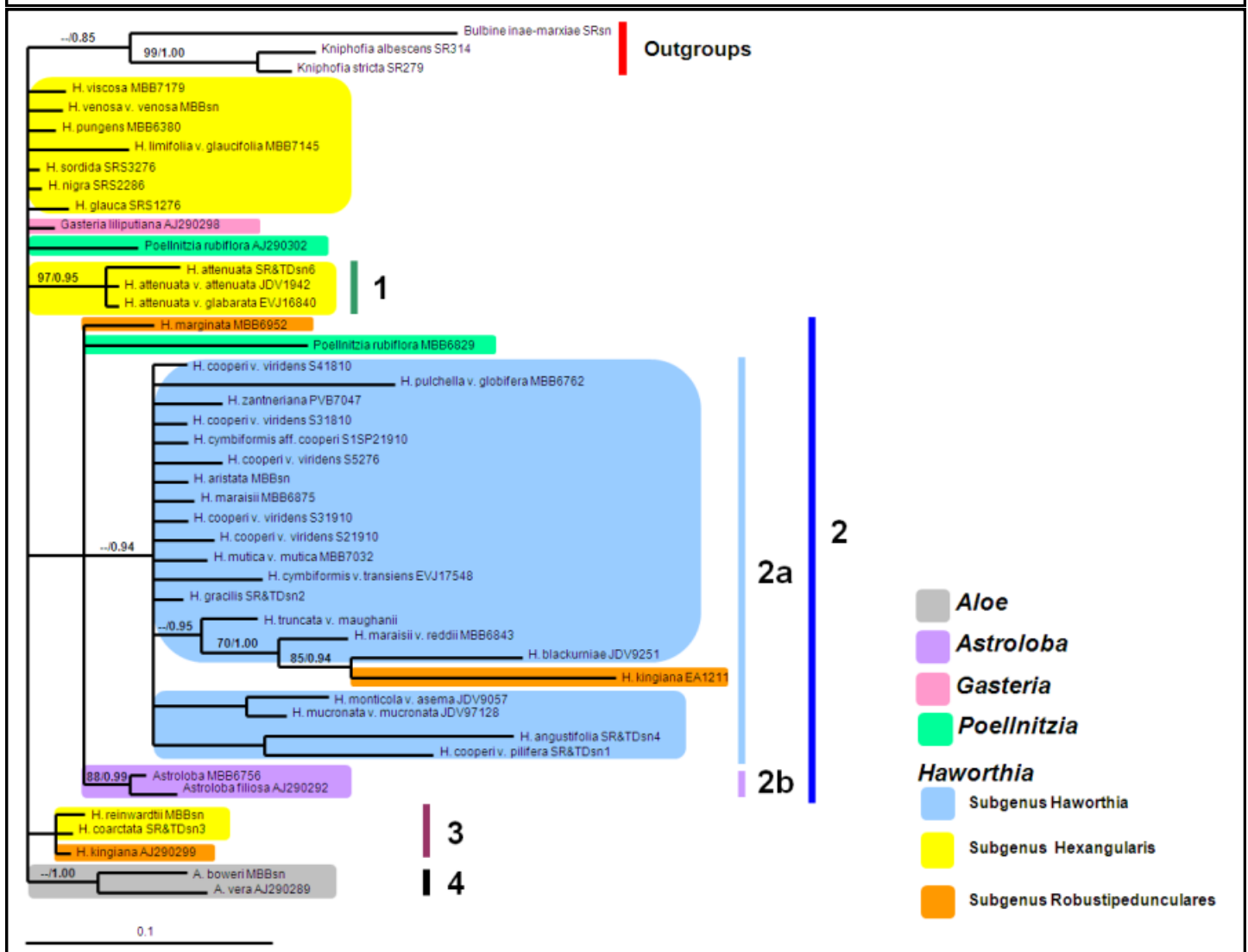
Using chloroplast data (*rbcl* & *matK*), Treutlein *et al.* (2003b) found that subgenus *Haworthia* is monophyletic but basal, while subgenus *Hexangularis* was polyphyletic and nested within *Aloe* along with *Gasteria* and *Astroloba*. Our results for the *trnL-F* spacer revealed a polytomy comprising most samples of subgenus *Hexangularis* (i.e. non-monophyletic), *Gasteria* and *Poellnitzia* (Fig. 5). *H. attenuata* samples (subgenus *Hexangularis*) formed a well supported lineage (Clade 1, Fig. 5). *H. coarctata* and *H. reinwardtii* (subgenus *Hexangularis*) formed an unsupported lineage with *H. kingiana* (subgenus *Robustipedunculares*) (Clade 3, Fig. 5). *Aloe* samples formed a single lineage with good PP support (Clade 4, Fig. 5). Clade 2 (Fig. 5) which has no support contains a well supported lineage with *Astroloba* samples (Clade 2b, Fig. 5), a single *Poellnitzia* sample, a single *H. marginata* sample (subgenus *Robustipedunculares*), and a lineage

which contains all subgenus *Haworthia* samples (Clade 2a, Fig. 5) with a single *H. kingiana* sample (subgenus *Robustipedunculares*) nested within.

The results above indicate that *Haworthia sensu lato* is non-monophyletic and that the presently recognized *Aloioideae* genera cannot be studied in isolation. Non-monophyly of *Aloioideae* could be due to hybridization and/or incomplete lineage sorting. Many genera of *Aloioideae* form interspecific and intergeneric hybrids. We hypothesize that there has been a recent radiation of the *Aloioideae* in southern Africa, which may also account for the high diversity and complex taxonomy in the region.

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**Fig. 5. Bayesian inference tree of the *trnL-F* spacer estimated using the GTR+G model. Numbers above the branches indicate bootstrap (MP)/posterior probability (BI) values (only values > 70BS & 0.90PP are shown).**





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## Japanese Cultivar Names.

The Japanese Haworthia Society was formed a year before Alsterworthia International and attained its 10th anniversary this year. We extend our hearty congratulations to them for a decade of informative and well illustrated articles and for a comprehensive introduction to Japanese cultivars.

The names used for cultivars in Japan have been very much influenced by Japanese traditions and have proved entirely satisfactory for local use. As the International Code of the Nomenclature for Cultivated Plants aims to standardise cultivar names for world wide use, Dr. Hayashi, who is not only the editor of Haworthia Study but also one of the foremost creators of Haworthia cultivars, has, together with his colleagues, reviewed Japanese cultivar names published in Haworthia Study and just published a list of names adjusted as necessary for compliance with the ICNCP. This is an excellent example of what can be done by people active in the creation of cultivars to ensure compliance with the Code.

This comprehensive list is also published in the following pages so that all who are interested in cultivars can have up-to-date information for many of the Japanese Haworthia cultivars.



Table 1. *Haworthia* cultivars published in Haworthia Study No. 1~20. ハオルシア研究(1~20号)掲載品種リスト(アルファベット順)

(Bold faced: correct name. 太字=正名, Bold red: corrected/new name in this list. 赤太字=このリストで訂正、新命名された正名.)

Bold blue: new name published in this issue. 青太字=本号(20号)で新たに発表された正名, Light faced: invalid/temporary name &amp; miss-transcription. 細字=無効名等)

Table 1-A-1. Soft leaf group (except Truncata group) 軟葉グループ(玉万類を除く)

Cultivar/Group name	品種名/グループ	Species*/Group	Breeder/Author	Year	No.: p. (pic.)	Other issues	Comments (meaning)
'Abokyo'	阿房宮	<i>comptoniana</i> hyb.	Hayashi	2001	6: 10 (4)	14: 15 (6)	(An extra large palace of Qin)
'Akagitsune'	赤狐	<i>tricolor</i>	Tsukahara	2004	11: 16 (2)		(Red fox) <b>Dairi</b> Group
'Albinusta'	アルビヌスタ	<i>albispina-venusta</i>	Marx	2004	11: 7 (4)		Temporary name of 'Hedgehog' 仮名
'Anitra'	アニトラ	<i>splendens</i> hyb.	Yoshida	2007	18: 3 (5)		
'Aogitsune'	青狐	<i>tricolor</i>	Tsukahara	2004	11: 16 (3)		(Blue fox) <b>Dairi</b> Group
'Aoi Yōsei'	青い妖精	<i>bella</i>	Hayashi	2006	16: 14 (5)		(Blue fairy)
'Arowana'	アロワナ	<i>laeta</i> hyb.	Hayashi	2006	16: 1		コレクタ系最高峰 Jupiter Group
'Atlantis'	アトランティス	<i>cooperi-wimii</i> ?	Bob Kent	2004	11: 5 (1)		
'Bacchus'	バッカス	<i>badia</i>	Bob Kent	2004	11: 5 (5)		野生株 A field plant.
'Ballerina'	バレリーナ	<i>vitris</i>	Hayashi	2009	20: 6	8: 2 (3), 19: 8 (3)	重複のため「シャンデリア」からここで改名。
'Benite'	紅亭	<i>retusa</i> hyb.	Banno	2006	15: 2 (1)	17: 8 (2)	(Red house)
'Benizakura'	紅桜	<i>sucinea</i>	Ohkubo	2004	11: 6 (5)		
'Beukmanii Nishiki'	ベークマニー錦	<i>beukmanii</i>	Ohkuwa	2003	9: 4 (5)		Temporary name. invalid 無効名
Beverly's Wonder Gr.	ビバリーワンダー	<i>splendens</i> hyb.	Bob Kent	2005	13: 8 (1~6)		グループ名
'Black Mask'	ブラックマスク	<i>springbokvl.</i> hyb.	Tsuruoka	2005	14: 15 (5)		
'Black Pearl'	ブラックパール	<i>springbokvl.</i> hyb.	Oikawa	2009	20: 6	6: 7	新命名。
'Black picta'	大黒ピクタ	<i>tricolor</i> hyb.	Hagiwara	2002	8: 5 (4)		Miss-translation of 'Ō Kuro Pikuta' 英文表記誤り
'Black Splendens'	ブラックsplendens	<i>splendens</i> hyb.	Ohkuwa	2005	13: 3 (1)	15: 10	紫宸殿の旧名。Old name of 'Shishinden'. Invalid.
Blue Dolphin Group	ブルードルフィン	<i>retusa</i> hyb.	Ohkubo	2007	17: 9 (2)		
'Blue Fox'	青狐	<i>tricolor</i>	Tsukahara	2004	11: 16 (3)		Translation of 'Aogitsune'
'Blue Haze'	ブルーヘイズ	<i>comptoniana</i> hyb.	Ohkuwa	2001	6: 15 (2)	17: 3 (1)	<i>H. comptoniana</i> x <i>Picta</i> series
'Bob's Red'	ボブズレッド	<i>splendens</i>	Bob Kent	2007	17: 6 (7)	11: 4 (2)	マルクスレッドと並ぶ第3の産地の銘品。
'Byakko'	白虎	<i>wimii</i> hyb.	Matsuno	2007	18: 2 (4)		(White Tiger) 白虎隊の最優個体
Byakkotai Group	白虎隊	<i>wimii</i> hyb.	Matsuno	2009	20: 12 (5)		(White Tiger Party) 白虎、ボラリスなど白夜城実生。
'Carmen'	カルメン	<i>joubertii</i>	Ohkubo	2008	19: 8 (2)		
Cascade Group	カスケード	<i>retusa</i> hyb.	Ohkubo	2007	17: 9 (1)		
'Cassiopeia'	カシオペア	<i>comptoniana</i> hyb.	Horioka	2007	18: 2 (3)		'Karakusa' hyb.
'Chandelier'	シャンデリア	<i>vitris</i>	Hayashi	2008	19: 8 (3)		重複名。「バレリーナ」に改名。Later homonym.
'Chō-ami'	超網	<i>laeta</i>	Hayashi	2000	4: 11 (5)		(Super reticular) 特網実生 Tokunami Group
'Chocolate'	チョコレート	<i>tricolor</i>	Nishi	2000	3: 14 (2)		Old name of 'Orfeu' (Homonym) 「オルフェ」と改名。
'Collasony Nishiki'	コラソニー錦	<i>Obu Dan</i>	Hayashi	2009	20: 21 (6)		(mini Ollasonii variegated) “オプツーサ錦”を新命名。
'Commonju'	子紋寿	<i>retusa</i> hyb.		2007	18: 2 (6)		Changed to 'Kamen Butōkai' by the breeder.
'Crystal Eye'	クリスタルアイ	<i>bayeri</i> hyb. ?	Mr. F	2006	15: 3 (2)		
'D-1'	(小林) D-1	<i>splendens</i>		2007	17: 4 (3)		紫式部。Temporary name of 'Murasaki Shikibu'
da Vinci Group	ダビンチ	<i>Pikuta</i> Gr.	Ohkubo	2009	20: 17 (9)		マーブルx白雪姫の実生グループ
'Daiginjo'	大銀城	<i>wimii</i> hyb.	Hayashi	2001	5: 3 (6)		(Big silver castle)
'Daikoku Pikuta'	大黒ピクタ	<i>tricolor</i> hyb.	Hagiwara	2002	8: 5 (4)		(Large black Pikuta) “Black picta” is translation.
'Daikokuten'	大黒天	<i>laeta</i> ?	Hayashi	1999	2: 3 (8)	3: 14 (1)	(God of wealth)
'Dairi'	大理	<i>tricolor</i> hyb.	Tsukahara	2003	10: 16 (1)	17: 3 (4)	(Marble) “Dali” is translation. Dairi Group.
'Daisekkei'	大雪渓	<i>picta</i>	Kawahigashi	2009	20: 6	6: 4 (5)	育成者命名。Named here. (Large snow valley)
'Daisetsu'	大雪	Galaxy Group	Hayashi	2003	10: 3 (3)		(A mountain name of Japan)
'Daruma Star'	ダルマスター	<i>imperialis</i> hyb.	Tsuruoka	2009	20: 21 (3)		“Daruma” is a famous priest.
'Day Dream'	デイドリーム	<i>ciliata</i>	Hayashi	2006	16: 14 (2)		
'Diana'	ダイアナ	<i>mutica-splendens</i>	Marx	2008	19: 16 (2)		ダイアナは月の女神
Dream Ball Group	ドリームボール	<i>cooperi</i> hyb.	Yoshida	2007	17: 15 (3)	17: 15 (4~6)	Clones 1~4. 1号から4号までである。
'Ebisu Nishiki'	えびす錦	<i>cooperi</i> hyb.	Hirose	2006	16: 3 (2)		(Ebisu = God of wealth)
'Emperor'	エンペラー	<i>imperialis (pilifera)</i>	Hayashi	2006	15: 7	15: 10	マキシマから改名。オプツーサ系最大型
'Enku'	円空	<i>pygmaea</i> hybrid	Horioka	2009	20: 12 (3)		(A famous priest)
'Frost Morn'	フロストモーン	<i>wimii</i> hyb.	Ohkuwa	2001	5: 3 (1)		<i>H. badia</i> x <i>H. wimii</i> ?
'Frosty'	フロスティ	<i>badia</i>	Kawahigashi	2004	12: 3 (1)		白鳳とは別個体。
'Fuga'	風雅	<i>comptoniana</i> hyb.	Nishi	2009	20: 15 (10)		(elegant)
Galaxy Group	銀河系ピクタ	<i>Pikuta</i> Dan	Tsukahara	2002	8: 16	9: 1, 9: 16, 10: 16	グループ名
'Gekkō'	月光	<i>comptoniana</i> hyb.	Hayashi	2004	11: 7 (2)		旧名: スプリングトB (Moon light)
'Gesekai'	月世界	<i>wimii</i> hyb.	Oikawa	2007	17: 3 (5)		(Moon world) マキアージュ = シュガーリップと同じ?
'Gian-A'	ジャイアン-A	<i>pilifera</i> hyb.	Nishi	2005	13: 2 (4)		
'Giant Panda'	ジャイアントパンダ	<i>pygmaea</i> hyb.	Nishi	2007	18: 1		
'Giga-pulchella'	ギガブルケラ	<i>gigas-pulchella</i>	Ohkuwa	2003	9: 5 (6)		Temporary name. 仮名
'Gigas Nishiki'	ギガス錦	<i>gigas</i>	Ohkuwa	2006	16: 2 (2)		(Variegated gigas) Temporary name. invalid 仮名
'Ginga Tetsudo'	銀河鉄道	<i>pygmaea</i>	Hayashi	2001	6: 11 (1)	18: 16 (2)	(Galaxy train)
'Gingitsune'	銀狐	<i>tricolor</i>	Tsukahara	2004	11: 16 (1)		(Silver fox) <b>Dairi</b> Group
'Ginrei'	銀麗	<i>pygmaea</i> hyb.	Kobayashi	2006	15: 3 (3)	18: 15 (3)	(Silver grace)
Ginsa Group	銀沙	<i>Pikuta</i> Dan	Ohkubo	2009	20: 17 (8)		(Silver sand)
'Ginseki'	銀世界	<i>wimii</i> hyb.	Nishi	2001	5: 3 (3)		(Silver world)
'Ginteijo'	銀帝城	'Green Gem' hyb.	Ohkuwa	2006	15: 3 (6)		(Silver emperor's castle) 白帝城枝変わりとは別。
'Glass Compto'	ガラスコンプト	<i>comptoniana</i> hyb.	Hayashi	2001	5: 2 (3)		'Garasu' (15: 10) is synonym. 「ガラス」は異名。
'Godzilla'	ゴジラ	<i>pallida</i>	Ohkuwa	2001	6: 3 (4)		(A monster of Japan)
'Grace'	グレース	<i>retusa</i> hyb.	Ohkubo	2007	17: 8 (5)		
'Grace Lady'	グレースレディ	<i>aoki</i> hyb.	Aoki/Hayashi	2006	16: 2 (5)		Daruma Pikuta Group
'Green Haze'	グリーンヘイズ	<i>comptoniana</i> hyb.	Nishi	2001	6: 15 (3)		<i>H. comptoniana</i> x <i>Picta</i> series

\*: Some species names are *nomen nudum*.



Table 1-A-2. Soft leaf group (continued) 軟葉グループ (玉万類を除く)

Cultivar/Group name	品種名/グループ	Species*/Group	Breeder/Author	Year	No.: p. (pic.)	Other issues	Comments (meaning)
'Green Phantom'	グリーンファントム	<i>comptoniana</i> hyb.	Tsuruoka	2007	17: 15 (2)		
'Green Woodii'	グリーンウッディ	Pikuta Dan hyb.	Nishi	2001	6: 15 (4)	9: 5 (1)	
'Gremlin'	グレムリン	<i>pygmaea</i> hyb.	Bob Kent	2004	11: 5 (6)		
Hakugin Emaki Gr.	白銀絵巻	<i>venusta</i> hyb.	Harada	2006	15: 2 (4)	11: 7 (5), 15: 10, 15: 15 (3)	(Silver Roll) <i>H. venusta</i> x ' <i>Hakuginjo</i> '
Hakugin Pikuta Gr.	白銀ピクタ	Pikuta Dan		2001	5: 9 (2)		(Hakugin = Silver) Silver is translation.
'Hakuginjo'	白銀城	<i>wimii</i> hyb.	Horikawa	2001	5: 3 (5)		(Silver castle) 白魔は異名 ' <i>Hakuma</i> ' is synonym.
'Hakuji'	白磁	<i>pygmaea</i>	Ohkuwa	2009	20: 12 (4)		(White Porcelain) 粉雪兄弟. 青磁実生。
'Hakuteijo'	白帝城	<i>wimii</i> hyb.	Yamashiro	1999	2: 5 (18)	3: 2 (3), 4: 15 (4)	(White emperor's castle) ' <i>Green Gem</i> ' x ' <i>H. wimii</i> '
'Hama-chidori'	浜千鳥	<i>wimii</i> hybrid	Bob Kent	2009	20: 13 (12)		(Plover)
'Hana-aoi'	花葵	<i>splendens</i> hyb.	Hayashi	2005	13: 3 (2)		(Flower mallow)
'Hanakage'	花影	<i>comptoniana</i> hyb.	Gehou/Hayashi	2005	13: 2 (2)	18: 15 (2)	(Flower shadow)
'Hanayome Ningyō'	花嫁人形	<i>aokiae</i> hyb.	Hayashi	2009	20: 17 (11)		(Bridal Doll) Daruma Pikuta Group
'Hedgehog'	ヘッジホグ	<i>albispina-venusta</i>	Marx	2006	15: 10	11: 7 (4)	'Albinusta' 改名. ハリネズミ. 白翁は販売名
Hikaru Genji Gr.	光源氏	Pikuta Dan	Ohkubo	2009	20: 16 (1, 2)		(Hero of Genji) A seedling group of Galaxy Gr.
'Hime Hakutei'	姫白帝	'Green Gem' hyb.	Ohkuwa	2004	11: 7 (3)	13: 3 (4)	(Grace white emperor)
'Hitomi'	瞳	<i>retusa</i> hyb.	Ohkubo	2007	17: 8 (6)		(Pupil, Eye)
'Honma'	本間	<i>mutica</i> hyb.	Honma	2007	18: 3 (2)		(Name of Breeder)
'Horikawa Pikuta'	堀川ピクタ	Galaxy Group	Tsukahara	2000	3: 3 (2)	7: 15, 15: 10	'Horikawa' is a synonym.
'Hoshikage'	星影	<i>comptoniana</i> hyb.	Imai-Ohkuwa	2007	18: 2 (5)		(Star shadow)
'Ice Candy'	アイスキャンディー	<i>wimii</i> hyb.	Yoshida	2007	18: 2 (2)		
'Ichigo Daifuku'	苺大福	<i>splendens</i> hyb.	Hayashi	2008	19: 4 (4)		(Rice cake with strawberry)
'Imagine'	イマジン	<i>splendens</i> hyb.	Bob Kent	2004	11: 1		Best clone of Beverly Wonder Group.
'Inazuma Korekuta'	稲妻コレクタ	Korekuta Dan	Horikawa	2000	4: 11 (1)		'Scott' seedling? (Lightning correcta)
'Iris'	イリス	<i>lilacea</i>	Breuer	2008	19: 9 (6)		イリスは虹の女神
'Ivory'	アイボリー	Galaxy Group	Tsukahara	2003	9: 16 (2)		銀河系ピクタ2次品種
'Juhyō'	樹氷	'Isogani'- <i>bolusii</i>	Nishi	2005	13: 16 (2)		(Rime on trees)
'June Bride'	ジュンブライド	<i>virginia</i>	Breuer	2008	19: 9 (1)		
'Jupiter'	ジュピター	<i>laeta</i> hyb.	Hayashi	2000	4: 11 (3)		
'Jupiter Seedling Nishiki'	ジュピター実生錦	<i>laeta</i> hyb.	Hayashi	2004	12: 2 (5)		主殿(Ōden)錦と命名。Ōdenは北畠神話の大神。
'Kabuki'	歌舞伎	<i>comptoniana</i> hyb.	Kawahigashi	2008	19: 5 (4)		(Kabuki drama)
'Mōsen Gusa'	毛織草	<i>ciliata</i>	Fukuya	2009	20: 7	15: 8 (6)	(carpet grass) <i>H. ciliata</i> で最も美しい。新命名。
'Kagerō'	陽炎	<i>retusa</i> hyb.	Ohkubo	2002	7: 4 (6)		died before propagation (A shimmer of hot air)
Kaguya Group	かぐや	Pikuta Dan	Ohkubo	2009	20: 16 (3, 4)		(Princess of Old story) Seedling Gr. of Galaxy Gr.
'Kamen Butōkai'	仮面舞踏会	<i>retusa</i> hyb.	Kawahigashi	2008	19: 5 (2)	18: 2 (6)	子紋寿改名 (Mask Ball) Changed from 'Commonju'
'Karakusa'	唐草	<i>comptoniana</i> hyb.		2007	17: 2 (6)		(arabesque)
'Karakusa-jishi'	唐草獅子	<i>comptoniana</i> hyb.	Kawahigashi	2008	19: 5 (3)		(arabesque Lion)
'Karasu-ageha'	カラスアゲハ	<i>dimorpha-splend.</i>	Marx	2008	19: 4 (5)		(Chinese peacock, A butterfly)
'Karasujo'	烏城	<i>splendens</i> hyb.	Ohkuwa/Harada	2005	13: 14 (2)		古都姫姉妹 (Castle of crow)
'Kaze-no-yōsei'	風の妖精	<i>villosa</i>	Hayashi	2009	20: 7	16: 14 (3)	(Fairy of wind = Sylphide) 新命名。
'Kinto-un'	金斗雲	<i>splendens</i> hyb.	Hayashi	2005	13: 3 (3)		淀君は異名。悟空はより大型 (A cloud vehicle)
'Kishi'	貴志	<i>splendens</i>	Kishi	2006	15: 3 (4)	17: 1	(Name of Breeder)
'Klara'	クララ	<i>latispina</i>	Breuer	2008	19: 9 (2)		
'Konayuki'	粉雪	<i>pygmaea</i>	Ohkuwa	2006	15: 2 (2)		(Powder snow)
'Konoha-union Nishiki'	木の葉ユニオン錦	<i>bayeri</i>	Hayashi	2001	6: 3 (2)	12: 2 (6)	(Foliage-marking <i>H. bayeri</i> variegated)
'Konparu'	金春	<i>comptoniana</i>	Hayashi	2009	20: 15 (7)		(Golden spring)
'Kotohime'	古都姫	<i>splendens</i> hyb.	Ohkuwa	2003	9: 5 (4)		Homonym. Changed to 'Otowahime' 「音羽姫」に変更。
'Kōyō'	高陽	<i>pallida</i> hyb.	Hirose	2002	7: 6 (1)		「紅葉錦」は販売名 (Name of Breeder's place)
'Kumadori'	隈取り	<i>tricolor</i> hyb.	Ohkuwa	1999	2: 3 (6)	3: 3 (1)	(A make up of Kabuki actors)
'Kuretake'	呉竹	<i>tricolor</i> hyb.	Hayashi	2009	20: 17 (10)		(Dark bamboo)
'Kurohime'	黒姫	<i>splendens</i> hyb.	Tsuruoka	2005	14: 15 (9)		(Black princess) 黒ダルマは異名。
'Kuroshima'	黒縞	<i>tricolor</i> hyb.	?	1999	15: 10	2: 23 (3), 5: 9 (3)	(Black stripes) A hybrid. 交配種。
'Kyō-murasaki'	京紫	'Kegani' hyb.	Kawahigashi	2005	13: 2 (3)		(Kyoto purple)
'L8 Nishiki'	エル8 錦	<i>bayeri</i>	Kobayashi	2000	4: 11 (4)		=ザラ恋錦。Temporary name of 'Zaramado Nishiki'.
'Lace Queen'	レースクイーン	multi-taxa hyb.	Nishi	2001	6: 15 (1)		( <i>H. comptoniana</i> x <i>H. aranea</i> ) x <i>H. gigas</i>
'Laputa'	ラピュタ	<i>splendens</i>	Hayashi	2007	17: 5 (4)		(Flying island in "Gulliver's Travels")
'Leo'	レオ	<i>jubata</i>	Breuer	2008	19: 8 (5)		(White lion in Tezuka's animation)
'Limelight'	ライムライト	<i>pygmaea</i>	Hayashi	2001	6: 11 (2)		
'Lovely Lady'	ラブリーレディ	<i>splendens</i> hyb.	Bob Kent	2005	14: 2 (4)	12: 3 (2)	Bev's Wonder Group
'Lovely Queen'	ラブリークイーン	<i>wimii-splendens</i>	Marx	2008	19: 4 (1)		ビバリーワンダーグループではない。
'Luna'	ルナ	<i>globosiflora</i> hyb.	Hayashi	2006	15: 9 (4)		月 (Moon)
'Macubilis'	マキュビリス	<i>maculata-mirabilis</i>	Bob Kent	2004	11: 5 (2)		Temporary name
'Magnifica Nishiki'	マグニフィカ錦	<i>magnifica</i>		2002	7: 13		Temporary name. Different from 'Pierrotta'
Majingar Group	マジンガー	'Scott' hyb.	Hayashi	2002	8: 5 (6)		スコット系交配のグループ名。清涼殿を含む。
'Makyo Nishiki'	魔境錦	'Kegani' hyb.	Hayashi	2005	14: 2 (6)		(Makyo = Devil forest)
Marble Group	マーブル (ピクタ)	<i>picta</i>	Ohkubo	2000	3: 16 (3)	5: 10 (7), 15: 10	グループ名
'Marble Star'	マーブルスター	<i>picta</i>	Ohkubo	2000	4: 16 (1)	15: 10	Marble Group "Anonymous" is an error.
'Marilyn'	マリリン	<i>comptoniana</i> hyb.	Hayashi	2001	5: 2 (4)		(Marilyn Monroe) 'Glass Compto' seedling
Mario Group	マリオ	<i>imperialis</i> hybrid	Hayashi	2009	20: 21 (2)		鶴仙園「ビッグモック」や西氏「太鼓腰B」も同グループ。
'Marx Red'	マルクスレッド	<i>splendens</i>	Marx/Hayashi	2009	17: 6 (8)	14: 2 (2), 20: 13 (10)	ボブズレッドと並ぶ第3の産地の銘品。
Marx Son Gr.	マルクスサン	<i>splendens</i>	Marx/Hayashi	2009	20: 7	8: 13 (7), 14: 2 (1), 17: 6 (9)	マルクスレッド実生。新命名。'Marx Red' seedlings.
'Maze picta'	迷路ピクタ	Pikuta Dan	Hayashi	2001	6: 4 (4)		"Maze" is translation of "Meiro". Invalid.

\*: Some species names are *nomen nudum*.



Table 1-A-3. Soft leaf group (continued) 軟葉グループ (玉万類を除く)

Cultivar/Group name	品種名/グループ	Species*/Group	Breeder/Author	Year	No.: p. (pic.)	Other issues	Comments (meaning)
'Medusa'	メドーサ	<i>Joubertii</i>	Fukuya	2008	19: 8 (1)		福屋氏の本の12頁の個体。Fukuya's book, page 12.
'Meiro Pikuta'	迷路ピクタ	Pikuta Dan	Hayashi	2001	6: 4 (4)	15: 10	"Maze" is translation of "Meiro".
'Mellow'	メロウ	<i>splendens</i>	Hayashi	2007	17: 5 (5)		
'Mirror'	ミラー	Pikuta Dan	Oikawa	2006	15: 10	5: 9 (4)	旧 (老川) 白銀ピクタ (Oikawa's Silver picta)
'Mirror Ball'	ミラーボール	<i>wimii</i> hyb.	Ohkuwa/Nishi	2005	13: 15 (5)		
'Mitohime'	御津姫	<i>splendens</i> hyb.	Ohkuwa	2005	13: 15 (1)		古都姫姉妹 (Princess of Mito)
Moe Group	もえ	<i>retusa</i> hyb.	Ohkubo	2007	17: 9 (3)		(Yellow green)
Moegi Group	萌黄	<i>janvlokii</i> hyb.	Ohkuwa	2006	15: 10	5: 10 (6)	(Verdure) 旧: 銀緑ピクタ。Old n.: 'Silver Green Picta'
'Monju'	紋寿	<i>retusa</i> hyb.	Kawahigashi	2003	9: 5 (3)		(Retusa with markings)
'Moon Stone'	ムーンストーン	<i>comptoniana</i> hyb.	Tsuruoka	2007	17: 15 (1)		
'Mordor'	モルドール	<i>wimii</i> hybrid	Hanai	2009	20: 1		(Black Land, from "The Lord of the Rings")
Mosaic Pikuta Gr.	モザイク ピクタ	Pikuta Dan	Mr. Y.	2001	5: 10 (8)	6: 4 (2), 9: 3	Mosaic Picta is miss-transcription.
'Mt. Blanco'	モンブラン	Galaxy Group	Sanekata	2003	10: 16 (2)		銀河系ピクタ2次品種
'Murasaki Emperor'	紫エンペラー	<i>imperialis</i> hyb.	Nishi/Hayashi	2009	20: 21 (4)		(Purple Emperor) 西氏「紫牡丹」改名 (重複名)
'Murasaki Taiyō'	紫太陽	multi-taxa hyb.	Kawahigashi	2008	19: 5 (6)		(Purple Sun)
'Murasaki-sikibu'	紫式部	<i>splendens</i>	Kobayashi	2007	17: 4 (3)		小林 D-1. (Author of "The Tale of Genji")
'Musashi'	武蔵	<i>badia</i> hyb.	Ohkuwa	2006	15: 1		(An old Japanese warship)
'Muscat'	マスカット	<i>dielsiana</i>	Hayashi	2009	20: 21 (1)		
'Nautilus'	ノーチラス	<i>splendens</i>	Bob Kent	2009	20: 8	11: 3 (1), 13: 9 (3)	オウムガイ。Proposed name for 'Silvidens-A'
'Nebuta'	ねぶた	<i>retusa</i> hyb.	Hayashi	2007	17: 8 (1)		(Nebuta festival) 西氏「黒船」と同じ?
'Neko Bus'	猫バス	<i>limbata</i>	Kawahigashi	2009	20: 8	15: 8 (5)	(Cat Bus) 新命名。
'Nellii'	ネリー	<i>angiras</i>	Hayashi	2004	12: 3 (3)		<i>H. angiras</i> の特優個体
'Night Dragon'	ナイトドラゴン	<i>atrofusca</i> hyb. ?	Yoshida	2008	19: 4 (3)		
'Nikko'	日光	<i>comptoniana</i> hyb.	Hayashi	2007	17: 3 (2)		(Sun shine) 旧名: スプリントA
'Nishiaki No. 1'	西明 No. 1	<i>splendens</i>	Nishiaki	2001	5: 2 (1)		Temporary name for 'Silver King'
Norifu Compto Gr.	翹斑コンプト	<i>comptoniana</i>	(kaneko)	2009	20: 14 (4)		A pattern of variegation.
'Ō Yumedono'	大夢殿	<i>pygmaea</i>	Horikawa	2003	10: 3 (4)		(Large 'Yumedono')
'Ōboshi Pikuta'	大星ピクタ	Pikuta Dan	Hagiwara	2002	8: 5 (3)		(Large star Pikuta)
'Ōden Nishiki'	王殿錦	<i>laeta</i> hyb.	Sanekata	2009	20: 8	12: 2 (5)	Oden は北政神話の大神 (ジュピター相当)。新命名。
'Odoriko'	踊り子	<i>tricolor</i> hyb.	Hagiwara	2007	17: 3 (3)		(Geisha girl) Daruma Pikuta Group.
'Ōgon Compto'	黄金コンプト	<i>comptoniana</i>	Hayakawa	2009	20: 14 (3)		(Golden comptoniana)
'Okina'	翁	<i>odetteae</i>	Hayashi	2006	16: 14 (4)		
Ōkubo Red Group	大久保赤	<i>splendens</i>	Ohkubo	2001	5: 2 (2)		グループ名
'Onimusha'	鬼武者	<i>dimorpha</i> hyb.	Venter	2005	14: 1		(Devil samurai)
Ō-nyū Group	黄乳	Pikuta Dan	Ohkuwa	2009	20: 17 (8)		(Yellow milk) A seedling Gr. of Galaxy Gr.
'Opal'	オパール	<i>fumosa</i>	Hayashi	2009	20: 21 (5)		ほとんどの葉にオパール様白玉が入る。
'Opera-no-kaijin'	オペラ座の怪人	<i>pygmaea</i> hyb.	Kawahigashi	2008	19: 5 (5)		(The Phantom of the Opera)
'Orfeu'	オルフェ	<i>tricolor</i>	Hayashi	2009	20: 8	3: 14 (2)	旧チョコレート Changed from 'Chocolate'. 新命名。
'Orion'	オリオン	Galaxy Group	Hayashi	2003	9: 16 (1)	12: 2 (3)	
'Orochi'	おろち	<i>retusa</i> hyb.	Ohkubo	2007	17: 8 (4)		コンコルドは販売名。(Giant snake)
'Ō-ruri'	大瑠璃	<i>comptoniana</i>	Hayashi	2009	20: 14 (6)		(Large Lapis Lazuli) 仮名: グリーングラス4
'Otowahime'	音羽姫	<i>splendens</i> hyb.	Ohkuwa	2009	20: 8	9: 5 (4), 13: 14 (1)	(princess of Otowa) 重複のため新古都姫から再改名。
'Ōzora'	大空	<i>laeta</i>	Hayashi	2009	20: 8	2: 3 (7)	(Large sky) Tokumi Group 新命名。
'Paint Glass'	ペイントグラス	<i>mutica</i>	Hosogai	2006	15: 2 (3)		
'Pale Peace'	パールピース	<i>retusa</i> hyb.	Bred in Australia	2007	18: 3 (1)		オーストラリアで作出
Pandora Group	パンドラ (クラシック)	Pikuta Dan	Ohkubo	2009	20: 16 (5, 6)		白雪姫実生。クラシックは特優品の意味。
'Panja'	パンジャ	<i>jubata</i>	Breuer	2008	19: 8 (6)		(Father of Leo) ジャングル大帝レオの父親。
'Parthenon'	パルテノン	<i>mutica-badia-splen.</i>	Marx	2008	19: 16 (3)		
'Passion'	パッション	<i>pallida-picta</i>	Bob Kent	2007	17: 2 (2)		
'Pearl Pikuta'	パールピクタ	<i>aokiae</i> hyb.	Oikawa	2001	5: 8 (1)	15: 10	パールピクタ系。Pearl Pikuta Group. Correct name.
'Pierrota'	ピエロタ	<i>magnifica</i>	Hayashi	2009	20: 13 (9)		Not "Magnifica Nishiki". マグニフィカ錦とは別。
'Pikachū'	ピカチュウ	<i>sakaii</i>	Hayashi	2008	19: 4 (6)		全斑だが中心部が緑。(A Pocket Monster)
'Pinky'	ピンキー	<i>badia-splendens</i>	Sanekata	2002	7: 4 (4)		
'Polaris'	ポラリス	Pigu Dan	Harada	2009	20: 12 (5)		Byakkotai Gr. 意味: 北極星。白虎隊最優品の一つ。
'Princess Dress'	プリンセスドレス	<i>bolusii</i> hyb.	Tsuruoka	2005	14: 15 (7)		
'Puff'	パフ	Galaxy Group	Hayashi	2003	10: 16 (3)		銀河系ピクタ2次品種
'Red fox'	赤狐	<i>tricolor</i>	Tsukahara	2004	11: 16 (2)		Translation of 'Akagitsune'
Red Stripe Group	レッドストライプ	<i>tricolor</i> hyb.	Ohkuwa	2006	15: 10	5: 10 (5)	旧名: 白銀ゼブラ Old name: Silver zebra.
Royal Pikuta Group	ロイヤルピクタ	Pikuta Dan	Hayashi	2001	6: 4 (1)	15: 10	Royal White Group is synonym.
'Ryokko Nishiki'	緑虎錦	Pigu Dan	Hayashi	2009	20: 12 (6)		(Green tiger variegated) 白虎隊系。Byakkotai Gr.
'Ryūju'	竜珠	<i>bayeri</i>	Hayashi	2000	4: 11 (1)	2: 18 (4), 7: 14 (5)	(Dragon ball)
'Ryūju Nishiki'	竜珠錦	<i>bayeri</i>	Hayashi	2000	4: 11 (2)		(Variegated 'Ryūju'. Ryūju = Dragon ball)
Sakai Pikuta Group	酒井ピクタ	<i>janvlokii</i> hyb.	Sakai S.	1999	2: 3 (5)		白銀ピクタの一つ。One of Hakugin Pikuta Gr.
'Sandra'	サンドラ	<i>wimii-spring</i>	Horikawa	2009	20: 13 (11)		
'Sanekata Compto'	実方コンプト	<i>comptoniana</i>	Sanekata	2009	20: 14 (5)		Name of the breeder.
'Sanekata Korekuta'	実方コレクタ	<i>beiyari</i>	Sanekata	2002	7: 4 (1)		Published without Roman scription.
'Sanekata Nishiki'	実方錦	<i>dekenahii</i>	Hayashi	2006	15: 10	5: 10 (9)	"Sanekata's variegated" is translation.
'Sansen-ju'	三仙寿	<i>cooperi</i> hyb.	Nishi	2005	14: 3 (2)		Similar to 'Ollasonii', but very big.
Seiji Group	青磁	<i>pygmaea</i>	Ohkuwa	2006	15: 10	4: 13 (1)	(Celadon) Group name.
'Seiryōden'	青涼殿	'Scott' hyb.	Hagiwara	2009	20: 8	8: 5 (6)	(Imperial house) Majingar Gr. マジンガーGr. 新命名。
'Seiran'	青嵐	Pikuta		2009	20: 17 (12)		(green storm) Mosaic Group?
Sensui Group	千筋	<i>retusa</i> hyb.	Ohkubo	2007	17: 9 (4)		(Thousand lines)

\*: Some species names are *nomen nudum*.



Table 1-A-4. Soft leaf group (continued) 軟葉グループ (玉万類を除く)

Cultivar/Group name	品種名/グループ	Species*/Group	Breeder/Author	Year	No.: p. (pic.)	Other issues	Comments (meaning)
Shachi Group	シャチ	<i>retusa</i> hyb.	Ohkubo	2007	17: 9 (6)		(Shark)
'Shikinjo'	紫金城	<i>splendens</i> hyb.	Hayashi	2001	5: 3 (2)	11: 7 (1)	紫金城は漢字誤り。(Purple-golden castle)
'Shin Kōri-Zatō'	新氷砂糖	<i>wimii</i> hyb.	Tsuruoka	2003	9: 15 (3)		(New rock candy)
'Shin Kotohime'	新古都姫	<i>splendens</i> hyb.	Ohkuwa	2005	13: 14 (1)		Homonym. Changed to 'Otowahime'. 「音羽姫」に変更。
'Shin Mizuho'	新瑞穂	<i>pygmaea</i>	Ohkuwa	2002	7: 4 (5)		(New Mizuho. Mizuho is a place of Nagoya)
'Shinju'	真珠	Galaxy Group	Hayashi	2003	9: 16 (3)		
'Shinryokuzan'	新緑山	<i>comptoniana</i> hyb.	Hayakawa	2009	20: 14 (1)		(Fresh Green Mountain) 銀鏡実生?
'Shinsekai'	新世界	<i>wimii</i> hyb.	Hayashi	2001	5: 3 (4)	18: 16 (3)	(New world) <i>H. wimii</i> x <i>H. beukmanii</i> ?
Shiraginu Emaki Gr.	白絹絵巻	<i>venusta</i> hyb.	Harada	2006	15: 10	11: 7 (6)	(White Silk Roll) <i>H. venusta</i> x ' <i>Ginsekai</i> '
'Shiranui'	不知火	<i>comptoniana</i>	Matsuno	2009	20: 14 (2)		(A famous Sumo wrestler) 名横綱。
'Shirayuki Hime'	白雪姫	Galaxy Group	Tsukahara	2003	9: 1		銀河系ピクタ。(Snow White)
'Shiro Kegani'	白毛ガニ	<i>wimii</i> hyb.	Nishi	2001	6: 15 (5)		(White 'Kegani') <i>H. wimii</i> x 'Kegani'
'Shiroi Yōsei'	白い妖精	<i>bella</i>	Hayashi	2006	16: 14 (6)		(White fairy)
'Shiromusha'	白武者	<i>wimii</i> hyb.	Ohkuwa	2006	15: 3 (5)		(White samurai)
'Shishinden'	紫宸殿	<i>splendens</i> hyb.	Ohkuwa	2006	15: 10	13: 3 (1)	紫宸殿は漢字誤り。(An imperial building)
'Shocking Pikuta'	ショッキングピクタ	Pikuta Dan	Nishi	2005	13: 15 (3)		アケボノ斑? Whole variegation?
'Shunkin'	春琴	<i>comptoniana</i> hyb.	Banno-Harada	2009	20: 15 (12)		(Spring harp)
'Shuten Doji'	酒呑童子	<i>badia</i> hyb.	Aoki/Hayashi	2001	6: 10 (6)	11: 15 (8)	(Red drank ogre)
'Shuten Doji-B'	酒呑童子-B	<i>badia</i> hyb.	Imai	2005	14: 2 (5)		仮名。Aより蒼白色で赤くならない。弁慶より窓透明。
'Sikinjo'	紫金城	<i>splendens</i> hyb.	Hayashi	2001	5: 3 (2)	13: 16 (1)	(Purple-golden castle) 紫金城は漢字誤り。
'Silky'	シルキー	'Yumedono' hyb.	Horikawa	2007	17: 3 (6)		
'Silvania'	シルバニア	<i>mutica</i> hyb.	Hayashi	2006	15: 10	13: 1	Old name: 'Silver mutica'. Changed for registration
Silver (picta) Group	シルバーピクタ	Pikuta Dan		2001	5: 9 (2)	15: 10	= Hakugin Pikuta Group. Miss-transcription.
'Silver Beetle'	シルバービートル	<i>wimii</i> hyb.	Marx/Hayashi	2008	19: 1		
'Silver Chateau'	シルバーシャトー	<i>wimii</i> hyb.	Tsuruoka	2005	14: 15 (4)		
'Silver fox'	銀狐	<i>tricolor</i>	Tsukahara	2004	11: 16 (1)		Translation of 'Gingitsune'
Silver-green Picta Gr.	銀緑ピクタ	<i>janvlokii</i> hyb.	Ohkuwa	2001	5: 10 (6)	15: 10	萌黄の旧名。Old name of Moegi Group
'Silver King'	シルバーキング	<i>splendens</i>	Nishiaki	2006	15: 10	5: 2 (1), 17: 4 (2)	旧: 西明No. 1 Correct name for 'Nishiaki No. 1'
'Silver mutica'	シルバームチカ	<i>mutica</i> hyb.	Hayashi	2005	13: 1	7: 4 (2), 13: 15 (4)	Old name of 'Silvania'
'Silver picta'	シルバーピクタ	Pikuta Dan		2001	5: 9 (4)	15: 10	= 'Mirror' 正名はミラー。
Silver zebra Group	白銀ゼブラ	<i>tricolor</i> hyb.	Ohkuwa	2001	5: 10 (5)	15: 10	レッドストライプの旧名。Old name of Red Stripe Gr.
'Silvidens-A'	シルビデンスーA	<i>splendens</i>	Bob Kent	2004	11: 3 (1)		ノーチラスの仮名。Temporary name of 'Nautilus'
'Snow White'	白雪姫	Galaxy Group	Tsukahara	2003	9: 1		Translation of 'Shirayuki Hime'
Solveig Group	ソルベグ	<i>gigas-venusta</i>	Kawahigashi	2007	18: 3 (4)		グループ名。ギガヌスタは販売名。
'Star Dust'	スターダスト	<i>aokiae</i> hyb.	Kawahigashi	2004	12: 2 (4)		ダルマピクタ系最大型。Daruma Pikuta Group
'Star Wars'	スターウォーズ	<i>wimii</i> hyb.	Horikawa	2003	9: 5 (5)	12: 15 (4)	
'Subaru'	昴	<i>silviae</i> hyb.	Nishi	2007	18: 16 (1)		(Pleiades)
'Sunrise'	サンライズ	<i>splendens</i> hyb.	Bob Kent	2009	20: 9	11: 2 (1), 13: 8 (8)	Proposed name for 'Wimdens-A'
'Sunset'	サンセット	<i>splendens</i> hyb.	Bob Kent	2009	20: 9	11: 2 (2), 13: 8 (7)	Proposed name for 'Wimdens-B'
'Super bold lines'	極太線コレクタ	<i>bayeri</i>	堀川	2000	4: 15 (2)		Temporary name. 仮名
'Taiyo'	太陽	<i>comptoniana</i> hyb.	Gehou/Nishi	2004	12: 15 (7)		(Sun)
'Tamamo'	玉藻	<i>globosiflora</i>	Fukuy	2009	20: 9	15: 9 (3), 17: 11 (1)	玉藻の前 (Legendary beauty) 福屋氏3頁。新命名。
'Tanikaze'	谷風	<i>comptoniana</i>	Horikawa	2009	20: 15 (8)		(A famous Sumo wrestler) 名横綱。
'Tarantula'	タランチュラ	?	Nishi	2007	18: 3 (3)		(Spider)
'Tenho'	天和	<i>beukmanii</i> hyb.	Kawamoto/Nishi	2005	14: 2 (3)		(A super score of mahjong)
'Ten-no-amishima'	天網島	<i>bayeri-picta</i>	Hayashi	2009	20: 13 (8)		(Famous Joruri story) 西氏「スターダスト」は販売名。
'Tiffany'	ティファニー	<i>mutica-badia-splen.</i>	Marx/Hayashi	2008	19: 16 (1)		
'Tsuchinoko'	つちのこ	<i>comptoniana</i>	Nishi	2009	20: 15 (9)		(Legendary snake)
'Tsukiakari'	月明かり	<i>comptoniana</i> hyb.	Hayashi	2001	6: 10 (5)	9: 5 (2)	(Moon light)
'Tsukikage'	月影	<i>comptoniana</i> hyb.	Hayashi	2001	6: 10 (3)		(Moon Shadow)
'Tsurugi-no-mai'	剣の舞	<i>vitrif</i>	Hayashi	2008	19: 8 (4)	14: 16 (1)	(Sword Dance)
Tsuyu-shimo Gr.	露霜	<i>pygmaea</i>	Ohkuwa	2006	15: 10	4: 13 (5)	(Dew frost) 堀川ピグマエアもこの一つ。
'Tutankhamen'	ツタンカーメン	<i>retusa</i> hyb.	Kawahigashi	2008	19: 5 (1)		
'Ura Hannya'	裏般若	'Ollasonii' hybrid?	Hayakawa	2009	20: 13 (7)		(Leaf back female demon)
'Uramado Compto'	裏窓コンプト	<i>comptoniana</i>	Ohkuwa	2005	13: 2 (5)		(Back window comptoniana)
Vivaldi Group	ビバルディ	<i>retusa</i> hyb.	Ohkubo	2007	17: 9 (5)		
'White Silver'	ホワイトシルバー	<i>aokiae</i> hyb.	Oikawa	1999	2: 21		Temporary name of 'Pearl Pikuta'
'White wimii'	ホワイトウイミー	<i>pygmaea</i> hyb.	Tsuruoka	2005	14: 15 (8)		販売名。堀川「白夢殿」と同一か? Trade name.
'White Wolf'	ホワイトウルフ	<i>splendens</i> hyb.	Nishi	2005	13: 15 (2)		御津姫と同一説あり。Same to 'Mitohime'?
'Wimdens-A'	ウイミデンスーA	Bev's Wonder Gr.	Bob Kent	2004	11: 2 (1)		サンライズの仮名。Temporary name for 'Sunrise'
'Wimdens-B'	ウイミデンスーB	Bev's Wonder Gr.	Bob Kent	2004	11: 2 (2)		サンセットの仮名。Temporary name for 'Sunset'
'Yama-arashi'	山嵐	<i>multifolia</i> hyb.?	Sanekata	2006	16: 3 (4)		(Porcupine)
'Yamagata'	山形	<i>celadonis (pygmaea)</i>	Yamagata	2009	20: 9	8: 5 (5)	(Name of Breeder) ブルーピグマエア実生。新命名。
'Yamato-nishiki'	大和錦	<i>splendens</i>	Hayashi	2007	17: 5 (6)		(Japanese name of <i>Echeveria purpurorum</i> )
'Yasō-no-Mori'	夜想の森	<i>retusa</i> hyb.	Ohkuwa	2007	17: 8 (3)		(Night reflection of forest)
'Yayoi'	弥生	<i>tricolor</i> hyb.	Ohkubo	2006	16: 3 (6)		(March)
'Yayoi Nishiki'	弥生錦	<i>tricolor</i> hyb.	Ohkubo	2006	15: 10	5: 10 (10)	掲載後の命名。交配種 (Yayoi = March)
'Yoshiike'	吉池	<i>splendens</i>	Yoshiike	2007	17: 4 (1)		(Name of Breeder)
'Yuki Usagi'	雪うさぎ	Yumedono' hyb.	Tsuruoka	2003	9: 15 (2)		毛ガニ夢殿? (Snow rabbit)
'Yukikage'	雪影	<i>comptoniana</i> hyb.	Banno-Harada	2009	20: 15 (11)		(Snow shadow)
'Yume-ginjo'	夢銀城	<i>pygmaea</i> hyb.	Horikawa	2006	15: 15 (6)		
'Zaramado Nishiki'	ザラ窓錦	<i>bayeri</i>	Kobayashi	2006	15: 10	4: 11	(Scabrid window) New name for 'L-8 Nishiki'. エル8錦。

\*: Some species names are *nomen nudum*.



Table 1-B-1 Truncata (-maughanii) group 玉扇 (-万象)グループ

Cultivar/Group name	品種名/グループ	Species*/Group	Breeder/Author	Year	No.: p. (pic.)	Other issues	注 Comments (meaning)
'Akakage'	赤影	<i>truncata</i>	Harada	2001	5: 5 (3)		(Red shadow)
'Aka-murasaki'	赤紫	<i>maughanii</i>	Sanekata	2004	11: 6 (4)		(Reddish purple)
'Amaterasu'	天照	<i>maughanii</i>	Sakai S.	1998	1: 20 (2)		(A mythical emperor of Japan)
'Aoi-kage'	青い影	<i>truncata</i>	Sanekata	2001	5: 5 (1)		(Blue shadow)
'Arabian Night'	アラビアンナイト	<i>truncata</i>	Fukuya	2008	19: 2 (2)		Seiryū Group
'Araiso'	荒磯	<i>truncata</i>	Sanekata	2000	4: 16 (3)	5: 5 (5), 9: 4 (2)	(Rough shore) 写楽系 Sharaku Group
'Ashibiki'	あしびき	<i>truncata</i>	Fukuya	2008	19: 3 (6)		「山鳥の尾」の掛詞 (Pun of bird's tail)
'Asuka'	飛鳥	<i>maughanii</i>	Horikawa	2006	15: 15 (4)		(Japanese old era)
'Asumori'	敦盛	<i>truncata</i>	Fukuya	2008	19: 2 (4)	15: 3 (1)	(A man of Taira family) Seiryū Group
'Aurora'	オーロラ	<i>maughanii</i>	Daiku	1998	1: 20 (1)		西山氏「M 7」実生
'Byakuren Manzō'	白蓮万象	<i>maughanii</i>	Sanekata	1999	2: 1 (1)		(White Lotus maughanii)
'Byakuren Gyokusen'	白蓮玉扇	<i>truncata</i>	Katsuka	2000	4: 15 (1)		(White Lotus truncata) 白蓮コンゲスタは誤り。
'Chō-atsumado Congesta'	超厚窓コンゲスタ	<i>truncata</i>		2002	8: 5 (2)		青磁レンズの旧名。Temporary name of 'Seiji Lens'
'Cinderella'	シンデレラ	<i>maughanii</i>	Sanekata	2001	5: 1		
'Daiginga Gyokusen'	大銀河玉扇	<i>truncata</i>	Sanekata	2001	6: 16 (2)		(Great galaxy truncata)
'Daiginga Manzō'	大銀河万象	<i>maughanii</i>	Sanekata	2002	7: 5 (2)		(Great galaxy maughanii)
'Daikoku'	大黒	<i>truncata</i>	Sanekata	2007	18: 2 (1)		(God of wealth) 写楽系 Sharaku Group
'Dai-sangen'	大三元	<i>truncata</i>	Nishi	2005	14: 3 (1)		(A super score of mahjong)
'Day dream'	白日夢	<i>truncata</i>	Hayashi	2000	4: 12 (5)		Translation of 'Hakujitsumu' 英文誤り(翻訳)。
'Dragon'	ドラゴン	<i>maughanii</i>	Sakai S.	1999	2: 23 (4)	5: 5 (4)	稲妻実生 'Inazuma' seedling
'Fantasia'	ファンタジア	<i>truncata</i>	Ohkubo	2000	4: 12 (3)		
'Fire Dragon'	ファイヤドラゴン	<i>truncata</i>	Ohkubo	2000	3: 2 (2)		
'First Love'	ファーストラブ	<i>maughanii</i>	Sakai K.	2002	8: 15 (2)		
'Fuku-musume'	福娘	<i>truncata</i>	Kaneko	2004	11: 15 (7)		(Happy girl)
'Genjitsu'	幻日	<i>maughanii</i>	Sanekata	2005	13: 2 (1)		(Parhelion)
'Ginryoku'	銀緑	<i>sanekatai</i>	Sato	2000	4: 7	17: 2 (5)	(Silver green) 'JJ-1' is temporary name(仮名)
'Hagoromo'	羽衣	<i>maughanii</i>	Ohkubo	2007	17: 2 (4)		(Angel robe)
'Hakua'	白亜	<i>truncata</i>	Sanekata	2001	5: 16 (1)		(Chalk) Congesta Group
'Hakuchō'	白鳥	<i>maughanii</i>	Yamamoto	2007	18: 5 (2)		(Swan) Murasaki Group
'Hakuji Lens'	白磁レンズ	<i>maughanii</i>	Ohkubo	2001	6: 16 (1)		(Hakuji = White Porcelain)
'Hakujitsumu'	白日夢	<i>truncata</i>	Ohkubo	2000	4: 12 (5)		(Day dream) "Day Dream" is translation.
'Hakujō-daiya'	白糸ダイヤ	<i>truncata</i>	Ohkubo	2000	4: 12 (2)		(White lined diamond)
'Hakushū'	白秋	<i>truncata</i>	Sanekata	2004	11: 6 (1)		
'Hinotori'	火の鳥	<i>maughanii</i>	Yamamoto	2007	18: 4 (2)		(Phoenix) Shirotae Group
'Hiroshige'	広重	<i>truncata</i>	Sanekata		5: 16 (3)		写楽系 Sharaku Gr. (A famous Ukiyoe painter)
'Hokusai'	北斎	<i>truncata</i>	Sanekata	2003	10: 2 (5)		(A famous Ukiyoe painter) Sharaku Group
'Hoshikage'	星影	<i>truncata</i>	Nishi	2000	3: 15 (4)		(Star shadow)
'Hyōsetsu'	氷雪	<i>maughanii</i>	Yamamoto	2007	18: 4 (1)		(Snow and Ice) Shirotae Group
'Ikazuchi'	雷	<i>maughanii</i>	Yamamoto	2007	18: 5 (4)		(Thunder)
'Ina Bauer'	イナパウワー	<i>truncata</i>	Fukuya/Nishi	2006	16: 2 (6)		
'IS-1'	アイエスワン	<i>truncata</i>	Imai	1998	1: 20 (3)		今井実生-1。ISIは誤り。仮名 Temporary name
'Ishii Raiden'	石井雷電	<i>maughanii</i>	Ishii	1998	1: 6		(Ishii's lightning)
'Isonami'	磯波	<i>maughanii</i>	Sanekata	2002	8: 4 (5)		
'JJ-1'	ジェイジェー1	<i>sanekatai</i>		2007	17: 2 (5)		Temporary name for 'Ginryoku'「銀緑」の仮名。
'Jōmon Aoi-kage'	縄文青い影	<i>truncata</i>	Nagaoka		6: 16 (3)		(Rope marking blue shadow)
'Jumbo'	ジャンボ	<i>truncata</i>	Tsukahara	2001	5: 4 (2)		
'Kaiō-sei'	海王星	<i>truncata</i>	Sanekata	1998	1: 18		(Neptune) 須古星実生 'Sukoboshi' seedling
'Kikkaseki'	菊花石	<i>maughanii</i>	Kawahigashi	2002	8: 15 (1)	6: 2 (1), 7: 16 (2), 9: 4 (1)	紫系。Murasaki Group (Mum stone)
'King of Thunder'	キングオブサンダー	<i>maughanii</i>	Kaneko	2009	20: 12 (1)		
'Kiyomori'	清盛	<i>truncata</i>	Fukuya	2008	19: 2 (1)		平清盛 (A person of Taira family) Seiryū Group
'Kōhaku-hige'	紅白髭	<i>truncata</i>	Ohkubo	2000	4: 12 (1)		(Red & white whiskers)
'Kōhaku-madara'	紅白斑	<i>truncata</i>	Ohkubo	2000	4: 12 (4)		(Red & white maculae)
'Kyodai Inazuma'	巨大稲妻	<i>maughanii</i>	Kaneko	2007	18: 15 (1)		(Large 'Inazuma')
'Kyohō'	巨鵬	<i>maughanii</i>	Yamamoto	2007	18: 4 (3)		(Big Bird) Shirotae Group
'Lamia'	ラミア	<i>truncata</i>	Fukuya	2008	19: 3 (2)		
'M 99-1'	エム99-1	<i>maughanii</i>	Kaneko	2001	5: 15 (4)		Temporary name
'Mammoth'	マンモス	<i>truncata</i>	Unno	2001	5: 4 (1)		
'Michinaga'	道長	<i>truncata</i>	Fukuya	2008	19: 3 (5)		藤原道長 (A famous person of Fujiwara family)
'Miho'	美穂	<i>maughanii</i> hyb.	Miss Miho	2007	17: 2 (1)		(Name of Breeder)
'Millenario'	ミレナリオ	<i>maughanii</i>	Sanekata	2002	7: 5 (1)		
'Millenium'	ミレニアム	<i>maughanii</i>	Tsukahara	2000	3: 1	5: 15 (1)	龍紋(イゲタ5番) x 春雷? 'Ryūmon' x 'Shunrai'?
'ML-1 Nishiki'	エムエル-1錦	<i>maughanii</i>	Nishi	2000	3: 15 (2)		Temporary name
'Myōjō'	明星	<i>maughanii</i>	Yamamoto	2007	18: 4 (4)		(Venus) Shirotae Group
'Nishiaki-kuro'	西明黒	<i>truncata</i>	Nishiaki	2000	3: 15 (5)		(Nishiaki's black)
'Ō kagami'	大鏡	<i>maughanii</i>	Sanekata	2002	7: 16 (3)		(Large mirror)
'Ō Murasaki'	大紫	<i>maughanii</i>	Okano	2001	5: 5 (2)		紫系。Murasaki Group (Large purple)
'Ō Shiragiku'	大白菊	<i>maughanii</i>	Sanekata	2000	4: 16 (2)		(Large white mum)
'Oirase'	奥入瀬	<i>maughanii</i>	Yamamoto	2007	18: 5 (5)		(A famous gentle stream)
'Ōkubo Burukon'	大久保ブルコン	<i>truncata</i>	Ohkubo	2000	4: 12 (6)		Burukon Group
'Omokage'	面影	<i>truncata</i>	Nishi	2000	3: 15 (3)		(Remembrance)
'Pegasus'	ペガサス	<i>truncata</i>	Fukuya	2008	19: 2 (5)		Ōkubo No. 1 Gr./Seiryū Gr. 青竜系にも属する。

\*: Some species names are *nomen nudum*.



Table 1-B-2. Truncata group (Continued) 玉扇 (-万象)グループ

Cultivar/Group name	品種名/グループ	Species*/Group	Breeder/Author	Year	No.: p. (pic.)	Other issues	Comments (meaning)
'Raicho'	雷鳥	<i>maughanii</i>	Yamamoto	2007	18: 5 (3)		(Ptarmigan) Murasaki Group
'Rainbow'	レインボー	<i>maughanii</i>	Tsukahara	2000	3: 16 (2)	2: 2 (2)	七色仮面は不採用の提案名
'Ryūhyō'	流水	<i>maughanii</i>	Nishi	2000	3: 15 (1)		(Ice floe)
'Ryūmon Gyokusen'	流紋玉扇	<i>truncata</i>	Kawahigashi	2004	12: 2 (2)		(Stream-like marking) 龍紋万象と区別のため改名。
'Ryūsei'	流星	<i>maughanii</i>	?	2007	18: 7 (4)		(Meteor)
'Ryūsei-u'	流星雨	<i>maughanii</i>	Kawahigashi	2002	7: 16 (1)		(Meteor shower)
'Sakai Tokushu Gyokusen'	酒井特殊玉扇	<i>truncata</i>	Sakai	2001	5: 15 (3)		(Sakai's special truncata) Temporary name. 仮名。
'Sanekata Gyokusen'	実方玉扇	<i>truncata</i>	Sanekata	1999	2: 1 (4)		
'Sanekata Henmoku'	実方変目	<i>maughanii</i>	Sanekata	2000	4: 13 (4)		(Sanekata's odd marking)
'Sanshokuki'	三色旗 (提案名)	<i>maughanii</i>	Nagaoka	2001	6: 2 (2)		紫系。Murasaki Group トリコロルは無効名。
'Seiji Lens'	青磁レンズ	<i>truncata</i>	Ohkubo	2009	20: 11	8: 5 (2)	(Celadon Lens) 超厚窓コンゲスタ。育成者新命名。
'Seiryū'	青竜	<i>truncata</i>	Kaneko	2004	11: 15 (6)		(Blue Dragon) Seiryū Group
Seiryū Group	青竜グループ	<i>truncata</i>	Kaneko	2004	11: 6 (2)		
'Sharaku'	写楽	<i>truncata</i>	Katsuoka	1999	2: 2 (4)	3: 16 (1)	(A famous Ukiyoe painter) Sharaku Group
'Shiden'	紫電	<i>maughanii</i>	Nagaoka	2002	7: 1		紫系。Murasaki Group (Purple lightning)
'Shigemori'	重盛	<i>truncata</i>	Fukuya	2008	19: 2 (3)		平重盛 (A person of Taira family)
'Shinkirō'	蜃気楼	<i>maughanii</i>	Tsukahara	2001	5: 15 (2)		(Mirage)
'Shiro-murasaki'	白紫	<i>maughanii</i>	Kawahigashi	2002	7: 16 (2)		Temporary name for 'Kikkaseki' 菊花石の仮名。
'Shirotae'	白妙	<i>maughanii</i>	Yamamoto	2000	4: 1	2: 2 (1)	(White dress) 2: 2は育成途中 2: 2 is young stage.
'Shishigami'	獅子神	<i>maughanii</i>	Yamamoto	2000	3: 2 (1)	18: 4 (6)	(Lion God) 'Shirotae' family
'Starmine'	スターマイン	<i>truncata</i>	Fukuya	2008	19: 3 (3)		
'Susano-o'	スサノオ	<i>truncata</i>	Fukuya	2008	19: 3 (4)		(A man of Japanese myth)
'Taihō'	大宝	<i>maughanii</i>	Sanekata	1998	1: 1		(Big treasure)
'Taiyō-jin'	太陽神	<i>truncata</i> hyb.	Nishi	2008	19: 4 (2)		(Sun God)
'Tanchō'	丹頂	<i>maughanii</i>	Yamamoto	2007	18: 5 (1)		(Red crowned crane) Murasaki Group
'Tenkū'	天空	<i>maughanii</i>	Sanekata	2004	12: 2 (1)		(Universe)
'Tenrai'	天雷	<i>maughanii</i>	Kaneko	2009	20: 12 (2)		(Sky Thunder)
'Tōgenkyō'	桃源郷	<i>maughanii</i>	Tsukahara	2001	6: 1		(A paradise)
'Tsukiyomi'	月読	<i>truncata</i>	Fukuya	2008	19: 2 (6)		(Moon God of Japan) Ōkubo No. 1 Gr.
'Utamarō'	歌麿	<i>truncata</i>	Sanekata	2004	12: 1		(An Ukiyoe painter) 写楽系 Sharaku Group
'Yamamoto Henmoku'	山本変目	<i>maughanii</i>	Yamamoto	2000	4: 4		Temporary name for 'Yōten-henmoku'
'Yōten Henmoku'	妖天変目	<i>maughanii</i>	Yamamoto	2007	18: 4 (5)	4: 4	(Odd markings)
'Yukiguni'	雪国	<i>maughanii</i>	Tsukahara	1999	2: 6 (2)	5: 5 (6)	(Snow country)
'Yūzuru'	夕鶴	<i>maughanii</i>	Yamamoto	2007	18: 5 (6)		(Sunset crane) オーロラ実生 "Aurora" seedling
'Zephyrus'	ゼフィルス	<i>truncata</i>	Sanekata	2001	5: 16 (2)	19: 3 (1)	写楽系 Sharaku Group 意味: 西風

\*: Some species names are *nomen nudum*.

Table 1-C-1. Hard leaf group 硬葉グループ

Cultivar/Group name	品種名/グループ	Species*/Group	Breeder/Author	Year	No.: p. (pic.)	Other issues	Comments (meaning)
'Alligator'	アリゲーター	<i>maxima</i> hyb.	Nishi	2006	15: 2 (5)		
'Aranami'	荒波	<i>koelmani</i> - <i>striata</i>	Nishi	2007	18: 3 (6)		(Rough waves)
'Chō-kyodai Donut'	超巨大ドーナツ	<i>maxima</i>	Horikawa	2000	4: 15 (3)		異名 (synonym): LSD (Large Super Donut)
'Cuban Donut'	吸盤ドーナツ	<i>maxima</i>	Ohkuwa	2000	4: 13 (6)		"Cuban" is a pun of octopus sucker.
'Daiginga'	大銀河	<i>maxima</i> x <i>koelmani</i>	Marx/Kobayashi	2009	20: 11	8: 12 (3)	名前の初出はISIJ. First publication is in ISIJ.
'G-1 Star'	ジーワンスター	<i>maxima</i> hyb.	Tsuruoka	2003	9: 15 (1)		
'Ginkaku'	銀角	( <i>Ast.</i> ) <i>bullulata</i>	Hirao/Hayashi	2005	14: 3 (5)		From S.A. Natural hybrid? (Silver edge)
'Gintaikyō'	銀帯橋	<i>coriacea</i> hyb.	Hirose	2005	13: 3 (6)		錦帯橋兄弟 (Silver 'Gintaikyō')
'Hakusen'	白線キンギアナ	<i>kingiana</i>	Hayashi	2003	10: 3 (5)		金折鶴の仮名。Temporary name of 'Kin Orizuru'
'Jashūmon'	邪宗門	<i>koelmani</i> hyb.	Kawahigashi	2009	20: 24 (1)		(Heathendom) 錦帯橋姉妹。
'Jigokumon'	地獄門	<i>koelmani</i> hyb.	Hirose	2006	15: 10	7: 6 (3)	(Hell's gate)
'Jurassic Park'	ジュラシックパーク	<i>maxima</i> hyb.	Bob Kent	2002	7: 5 (5)		
'Kin Orizuru'	金折鶴	<i>kingiana</i>	Hayashi	2009	20: 11	10: 3 (5)	(Golden paper crane) Old name: 'Hakusen' 新命名。
'Kintaikyō'	錦帯橋	<i>coriacea</i> hyb.	Hirose	2001	6: 10 (1)		(A famous bridge in breeder's place)
'Kintaikyō-B'	錦帯橋-B	<i>coriacea</i> hyb.	Kawahigashi	2005	13: 3 (5)		おそらく紫錦帯と同じ。仮名。Temporary name.
'Lotus'	ロータス	<i>marginata</i>	Harada	2005	13: 2 (6)		
'Manta'	マンタ	<i>koelmaniorum</i>	Hayashi/Harada	2009	20: 24 (3)		(Manta ray) コエル最ダルマ型
'Murasaki Kintai'	紫錦帯	<i>coriacea</i> hyb.	Tsuchiya	2009	20: 24 (2)		錦帯橋枝変わり? 常時明紫色。
'Niōmon'	仁王門	<i>koelmani</i> hyb.	Kawahigashi	2006	16: 3 (5)		(A famous red gate)
'Onigawara' (A)	鬼瓦 (A)	<i>nigra</i> hyb.	Oikawa	2001	6: 10 (2)	15: 15 (1)	(Gargoyle)
'Onigawara-B'	鬼瓦B	<i>nigra</i> hyb.	Oikawa	2006	15: 15 (2)		Another clone of 'Onigawara' 別クローン
'Paper crane'	折り鶴	<i>carinata</i> ( <i>marginata</i> )	Ryutanji	2000	4: 13 (2)		'Paper crane' is translation. An error. 白折鶴の誤り。
'Rashōmon'	羅生門	<i>mcmurtryi</i> hyb.	Hirose	2006	15: 10	7: 5 (3)	A famous gate of Kyoto.
'Shiro Orizuru'	白折鶴	<i>marginata</i>	Ryutanji	2000	4: 13 (2)		(White paper crane) 'Paper crane' is an error.
'Sijima'	シジマ	<i>maxima</i> hyb.	Ohkuwa	2001	5: 6 (3)		(Sound of silence) <i>H. maxima</i> x <i>H. zenigata</i>
Subaru Group	スバル	<i>zenigata</i> hyb.	Ohkuwa	2001	5: 6 (1)		(Pleiades) <i>H. marginata</i> x <i>H. zenigata</i>
'Super Shimofuri'	スーパー霜降り	<i>attenuata</i>	Nishi	2005	14: 3 (6)		frosted form of 'Wide band Jyūni-no-maki'
'Tengai'	天涯	<i>maxima-bruynsii</i>	Ohkuwa	2001	6: 8		(Lonely)
'Tenshi-no-namida'	天使の涙	<i>maxima</i> hyb.	Bob Kent	2002	7: 5 (6)		(Tear of Angel)

\*: Some species names are *nomen nudum*.



## ***Gasteria* 'Perfection' H. Mays.**



This cultivar was named *Gasteria* 'Perfectus' D. Cumming ex R. Scott in *Haworthiad* 12(2)69.

Gordon Rowley kindly pointed out that 'Perfectus' is a Latin word. As Article 19.13 of the International Code of Nomenclature for Cultivated Plants prohibits Latin words being used for cultivar epithets, except in defined circumstances, which do not apply in this case, Perfectus cannot be used as a cultivar name.

This cultivar is, therefore, renamed *Gasteria* 'Perfection'.

**Parentage.** *Gasteria* (*armstrongii* cv. ?) x *G.* 'Old Man Silver'.

**Comments.** Ascending, pale, silver-green leaves with distinct dark green leaf edges; short, apical point sharp. Scattered greyish white spots and tubercles with tubercles lining the leaf edges. Fig. 150. Offsets freely.

**Propagation.** Offsets.

Because of lack of space in this issue the index for *Alsterworthia* International Volume 9 and full details of Bruce Bayer's *Haworthia* Update 5 will be published in the March 2010 journal.

At the time of printing this journal an additional article for Update 5 was awaited for inclusion. At the moment Update 5 has nearly 200 A4 pages with many, many photographs.

Update 5 should be available when you receive this journal. If you cannot wait till March 2009 please e-mail me for details and prices - [hmays@freenetname.co.uk](mailto:hmays@freenetname.co.uk)



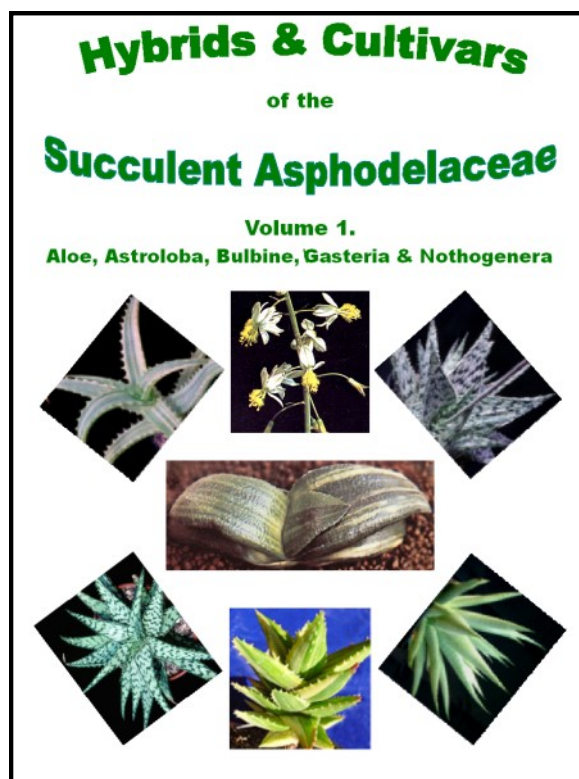
# The Cultivar Project.

This project is concerned with collecting worldwide cultivar names, photographs for them, tracing the publications which originally published the names, verify that the published names are in accordance with the International Code of Nomenclature for Cultivated Plants, eliminating duplicate names, validly publishing others as necessary and from time to time publishing a series of soft cover books illustrating and describing cultivars with names established under the ICNCP. Progress is such that we can now publish the first volume. The second will be published in 2010.

Hybrids & Cultivars of the Succulent Asphodelaceae Volume 1 covers *Aloe*, *Astroloba*, *Bulbine*, *Gasteria* and their Nothogenera (hybrid genera). It contains a substantial number of cultivars for which the original publications have been traced. It also includes a number of old cultivars which are still in cultivation. For these, descriptions, brief or otherwise, have been traced back for a number of years, but not necessarily to the original publications. Nevertheless, as these names have been in use for many years the odds are that they are established under the ICNCP by descriptions in articles. Published descriptive material for other cultivars still in circulation has not been traced though the names crop up in dealers lists, in articles etc. These too are likely to be established names. If they are not the descriptions in Hybrids & Cultivars of the Succulent Asphodelaceae Vol.1 should establish them.

Producing books to include solely cultivars for which original publication material, which satisfies the ICNCP, has been traced has never been done and is not possible at this stage. More time needs to elapse so that more people can become conversant with the problems and input more information. In the meantime, we are able to publish the first volume with a large number of cultivar with references which established the names under the ICNCP, with cultivars for which establishment of the names seems certain notwithstanding that original publications have not been traced, though other more recent have, and with hybrids published under the International Code of Botanical Nomenclature.

Haworthia cultivars are the subject of volume 2. It already has more than 100 A4 pages but needs some refinement. It will be published in 2010. Originally it was intended to include haworthias in volume 1, but the advantages of publishing haworthias later as a separate volume allows the earlier publication of the first and gives readers an opportunity to comment on our first efforts and make suggestions for the next.



## Hybrids & Cultivars of the Succulent Asphodelaceae Volume 1

80 A4 pages - gloss paper with card cover.

Over 200 colour photographs.

Recommended retail price is £29.50 + postage.

Alsterworthia member's price (one per member only) is £19.00 + postage. Postage Europe £3.00, rest of the world £4.50

This publication may be ordered from bookdealers or in case of difficulty from Harry Mays.

Please note that the Alsterworthia International member's price is obtainable only from Harry Mays, NOT from bookdealers.

Payments may be made via PayPal but please add 4% to cover deductions made by PayPal.

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Please send additional cultivar information - names, photos, references for original publications for cultivar names, etc - and your comments and suggestions to:

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Email: [hmays@freenetname.co.uk](mailto:hmays@freenetname.co.uk)



# SIX NEW INDIAN CULTIVARS OF THE ASPHODELACEAE.

SOUMEN ADITYA.

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It is well known that the Japanese are famous for their great enthusiasm for variegated and other types of succulent cultivars, which have remarkable features incomparable to those usually found in nature.

Indian, on the other hand, is not known to show interest in such plants, but I began to hybridize *Aloe*, *Haworthia*, and *Gasteria* at least seven years ago. My first collected cultivar plant was *Haworthia* 'Mantellii', which was given to me by my friend Mr. S.L. GUPTA. Then I saw for the first time in Alsterworthia International {July and November 2003} Mr. H.C.K. Mak's cultivar articles with fine photographs of wonderful cultivars. I am glad to say that these two article inspired me to create cultivars in India. I am not blessed with scientific knowledge, but here I describe some selected cultivars, which I have created. All are F1 hybrids. This article attempts to share some of my young creations. I hope they will appeal to you.



**Fig. 1. *Haworthia* 'Snehanuv' S. Aditya. [SA 02-001]**  
*H. habdomadis* v. *inconfluens*♀ x (*H. bolusii* v. *blackbeardiana* x *H. decipiens*)♂

This is my first cultivar. I have given it my parents' name as they inspired me to pursue this hobby. The rosette is just like a lotus. The very big, stubby leaves are normally a paler yellowish green with large chalky white markings on both leaf surfaces, apex acuminate, with small teeth on the margins. In strong light the leaves sometime develop a pinkish flush. The rosette can grow up to 10cm in diameter and up to 7cm in height. Flowering time Feb-Mar.



**Fig. 2. *Haworthia* 'Shankar' S. Aditya. [SA 05-018]**  
*H. springbokvlakensis*♀ x (*H. cooperi* v. *pillifera* x *H. truncata* v. *maughanii*)♂

This is a very wonderful cultivar, combining features of *Haworthia springbokvlakensis* with a very large, solitary *H. truncata* v. *maughanii*. Leaves chocolate coloured, windows translucent blue, leaf end short-retuse with a slightly pointed apex. It can grow to 6cm across and 4cm in height. Very slow growing and has not offset to date. Leaf propagation is very easy. In the summer months the plant body may turn a deeper chocolate-reddish-brown colour. Flowering time is early in Feb. It is now four years old.



**Fig. 3. *Haworthia* 'Maju-E-Mallika' S. Aditya [SA 05-0031]**  
(*H. emelyae* v. *comptoniana* x *H. springbokvlakensis*) x (*H. retusa* v. *multilineata* x *H. bayeri*)

This cultivar is the prettiest one in my garden. It bears the name of my wife, who helped me to develop all the cultivars. The leaves are very attractive, upright with long, retuse ends ending in a very sharp apex. Leaves are non-glossy green all the year round and bear dark-green longitudinal lines in the retuse ends which are rarely linked by side branches. There are also white flecks some



of which amalgamate to form short, latitudinal lines. Leaf margins bear many short, green teeth. It can grow about 8cm across and 4.5cm in height. It is now 4 years old.

**Fig. 4. *Haworthia* ‘VIVI-DR’** S. Aditya. [SA- 07-0052] (*H. parksiana* x *H. heidelbergensis*)♀ x *H. emelyae* v. *multifolia*♂

This cultivar name was provided by my good friends in the U.K, Mr. & Mrs Rowland. Leaves recurved with acuminate apex, very hard, small; marginal teeth dark green, sharp; windowed leaf ends barely retuse. A few greenish white lines extend from near the leaf base into the windows. It can grow to 3cm across and 1.2cm in height. It is now three years old. Peduncle very short to 5-8cm long. Plants mostly solitary.

**Front cover & fig. 5. *Haworthia* ‘Sneha-Neer’.** S. Aditya [SA -22-1121] [*H. maughanii*♀ x (*H. emelyae* v. *major* x *H. springbokvlakensis*)♂]

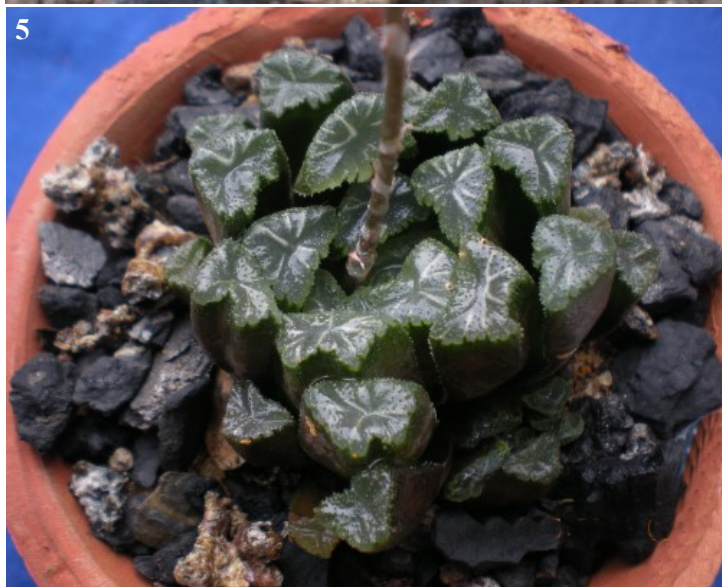
I cannot compare my *H. maughanii* cultivar with the Japanese, but mine has virgin beauty! The windowed leaf ends are sunken in the centre and crinkled round the edges. The crinkling forms ridges down the leaf sides with teeth. The entire leaf is covered with scattered white spot ending in a prickle. White lines of varying thickness run from near the leaf centre to the leaf edge linking either completely or partly to form a (partial) white rim. Leaves are a very dark glossy green throughout the year. The roots are not thick. This cultivar is of easy growth, but slow. It pups very easy. The plant illustrated is now five years old. Diameter 5-7cm, height 4cm. It flowers throughout the year.

**Figs. 6a,b. ×*Gasteraloe* ‘Manik-Anita’.** S. Aditya [SA-50-1111] [(*G. carinata* v. *verrucosa* x *G. Batesiana*)♀ x (*Aloe deltoideodonta* x *Aloe descoingsi*)♂]

This is a very handsome plant. Leaves hard, boat shaped; margins with sharp, short, whitish teeth; terminal point sharp; surface green, but raised whitish spots arranged in variable latitudinal bands on both surfaces provide an overall whitish appearance. New leaves and the peduncle are initially glaucescent. Peduncle bifurcate and very long up to 2 feet. Flowering time early in May. The plant in the photograph is now 10cm across and 8cm in height.

All photographs are by the author.

**ACKNOWLEDGMENTS.** Thanks are due to Mr. H. Mays for encouraging me to write this article and my family for their precious support and advice.







*Haworthia 'Aluminum Star' - G. Mary*