

# ALSTERWORTHIA INTERNATIONAL

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*Haworthia* 'Sikinjoh'

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# Alsterworthia International

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## New dwarf-*Aloe* cultivar released in New Zealand.

Mrs Sandra Spence  
PO Box 932, New Plymouth, New Zealand

**Parents:** *Aloe* 'Spence's Superb' is a cross between *Aloe bellatula* and *Aloe haworthioides*.

**Description:** It is a dwarf *Aloe* with attractive foliage, fig. 2, which forms clumps readily. *Aloe haworthioides* is the pollen parent, whose characteristics appear to be more dominant.

This dwarf hybrid has more open rosettes than *A. haworthioides* and the narrow leaves are more robust. They are a brighter green and shinier, while the fine white teeth are more pronounced and sparser. It is free flowering, compact and forms dense clumps. The inflorescences, which are borne profusely, make an eye catching display and are similar to *A. haworthioides*, the flowers being pinkish with a white tip to the tepals, fig. 1.

*Aloe* 'Spence's Superb' is an appealing plant which forms a tidy rosette and is suitable for growing in a glasshouse or outdoors in a very dry, frost-free, sheltered location.

The first release was at the Succulent Society Conference in New Plymouth this year, 2006.



1



2

# *Aloe krapohlina v. dumoulinii.*

Russel Scott

39 Wellington Street, West Footscray, Victoria 3012, Australia

Alexander Bay, on the mouth of the Orange River in the North West Cape, is a curious place. The town has a police checkpoint to enter it and visitors need to show their passports to get in. Presumably, this is because the Orange River is the border to Namibia and the border police want to ensure visitors do not cross the river and enter Namibia, or else, as this is the southern limit of the diamond area, diamond interests may like to keep a check on visitors.

Just a few kilometres south-east of Alexander bay the area comprises barren-looking, sandy flats, low sand dunes, and a few small white quartzite hills. These hills contain a rich variety of miniature succulents, including *Anacampseros*, *Bulbine*, *Cephalophyllum*, *Cotyledon*, *Crassula*, *Cheiridopsis*, *Euphorbia*, *Fenestraria*, *Othonna*, *Pelargonium*, *Zygophyllum* and various *Stapelia*, particularly good populations of *Larryleachia dinteri*.

Wildlife was far less common. The only things I saw were a few insects and a number of small fast moving, but very attractive, spotted sand lizards (possibly *Pedioplanis lineocellata*).

In these hills can also be found *Aloe krapohlina v. dumoulinii*. These are widely scattered and low in numbers. They grow in full sun, the only shelter being afforded by small rocks and a few of the shrubbier succulents. From a very casual observation, there appear to be two forms of *Aloe krapohlina* in this area. A form that remains solitary tends to grow larger and is found in very low hills (close to the road), and a form that is smaller, tends to cluster and is found at the tops of the higher hills (i.e. the five sisters).

The smaller form is easily identified as the variety

*dumoulinii*. It is small. Individual plants are around 10cm in diameter with blue-green incurving leaves which have red tips in the sun. This superficially resembles a small, plump *Aloe brevifolia*.

It is unclear to me whether the larger form is the variety *dumoulinii* or the variety *krapohlina*. This is a matter for the taxonomists who, in this case, seem to have made the distinction based on leaf size. The variety *krapohlina*, which I have encountered much further south (north of Lutzville), is larger still and in this southern location as well as in my hothouse it has much more lax rosettes rather than the tightly incurved ones at Alexander Bay. However, the intermediate size and incurved leaves etc may simply be due to the environmental conditions in this area.

This is the winter rainfall area and rainfall is very low. Winter is also the flowering time for these plants. The flowering raceme of *Aloe krapohlina* is quite large in proportion to this small aloe. Flowers are typically bright orange/red.

Both varieties are relatively easy to raise from seed, but I tend to have trouble with the variety *krapohlina*, which tends to attract mould and mealy bugs (even when outside) and dampening off. In contrast, I have grown the variety *dumoulinii* for around 15 years. It presents few problems grows with all of my other aloes, receiving no special treatment, and rewards me with flowers every winter. These features recommend the variety *dumoulinii* as a plant to grow.



Fig. 1.  
*Aloe krapohlina v. dumoulinii*  
&  
*Fenestraria aurantiaca*  
Van Dum.

Figs. 2 & 3  
*Aloe krapohlina v. dumoulinii*  
East of Alexander Bay.

Fig. 4 & back cover.  
*Aloe krapohlina (v. dumoulinii?)*  
Five Sisters.

Fig. 5.  
Spotted Sand Lizard.

Fig. 6.  
*Larryleachia dinteri*  
Alexander Bay.



# *Aloe humilis* 'Reach-for-the-Sky'

Jozef Verhoeven  
Leonard Meestraat 21, Leopoldsburg 3970, Belgium.



Fig. 1. *Aloe humilis* 'Reach for the Sky'  
Rooted offset just beginning to offset.

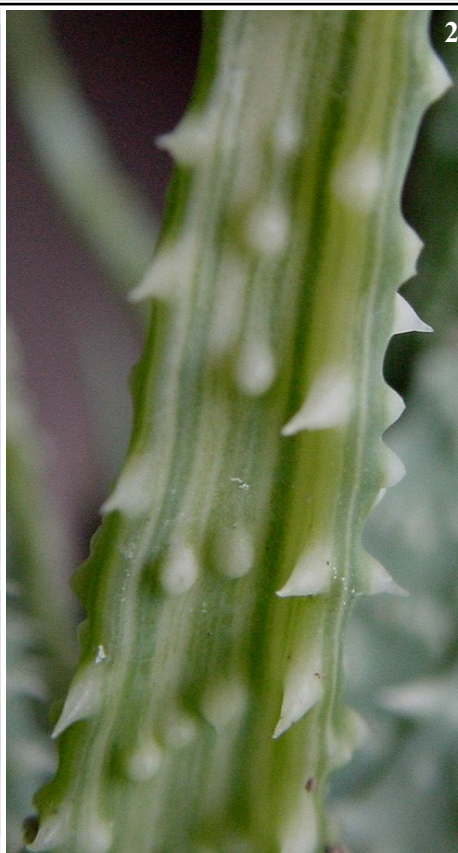


Fig. 2. *Aloe humilis* 'Reach for the Sky'  
Upper leaf surface.



Fig. 3. *Aloe humilis* 'Reach-for-the-Sky'  
Lower leaf surface.

*Aloe humilis* 'Reach for the Sky', named here for the first time as far as is known, has the form and branching propensity of the normal species, but with variable, yellow variegation on both side of the leaves, fig. 1. Some leaves may be totally devoid of variegation, some may have a few to many, narrow, yellow stripes with an occasional broader stripe, others may be almost all yellow with a few, narrow, green stripes. Both surfaces of the leaves have prominent tubercles with rounded apices, but a few may have developed terminal spines. The density of tubercles is much less on the upper leaf surfaces than it is on the lower. The margins of the leaves have prominent spines. Tubercles and spines are distinctly yellow on variegated leaves, figs 2-3, but on non-variegated leaves they appear dull white, almost grey. The plants flower freely at the beginning of the year. In our part of the world the inflorescences begin to emerge at the end of January/February and the flowers open around March. More than one inflorescence may be produced per plant.

Propagation is simply a matter of detaching the offsets, which appear around the base of the plant. Some may have a few roots, some may not. They root easily. Offsets should have a short stem. If you cut them off when the stem has formed, you will avoid finishing up with a bunch of loose leaves, which quickly separate. Individual *Aloe* leaves cannot be persuaded to produce offsets. To encourage the development of variegated offsets, it is best to remove non-variegated ones as soon as possible. You can also remove non-variegated leaves from the base of a plant to improve its appearance.

Fig. 1 Joseph Verhoven. Figs 2 & 3 Harry Mays.

# Haworthiaphila recorded in the genus *Brachystelma*. BR. in the Eastern Cape!

David M. Cumming.  
Apodytes Brae, PO Box 170, BATHURST, South Africa.

## Abstract

Haworthias can be both easy and extremely difficult to find in the field. Mention has been made of the use of 'indicator' plants to help locate haworthias.

## Discussion - sympatric association

Haworthiaphila has been observed at a number of localities in the Eastern Cape Province over the last four years. It is however unfortunate that the use of this information is unlikely to assist the field worker in their search for haworthias due to the difficulty in finding the 'indicator' plant, in this case *Brachystelma campanulatum* N.E.Br.

Dyer (1983) notes that *B. campanulatum* was first recorded in 1823 from Linch's Post near Bathurst and was not then further recorded until Roy and Estelle Bayliss collected it in 1965 and again in 1970 from the same area of poor grassveld. This paucity of records does not properly reflect the distribution in the field of this species, but rather the difficulty of finding a small geophyte in long grass.

What has all this to do with haworthias? Dold & Cumming (2002) lists three localities where this species has so far been found by this author. A further three populations were not mentioned. At each of the sites an *Haworthia* was found to be present.

At Holling Grove, the first site, where in 1995, while searching for *H. coarctata*, *B. campanulatum*, DMC 6181, was found growing a few metres from it. At the second site in the Kasouga River Valley the *Brachystelma*, DMC 6361, was found cohabitating with *H. cooperi* v. *venusta*, with *H. coarctata* occurring along with *Gasteria nitida* some metres away. In this

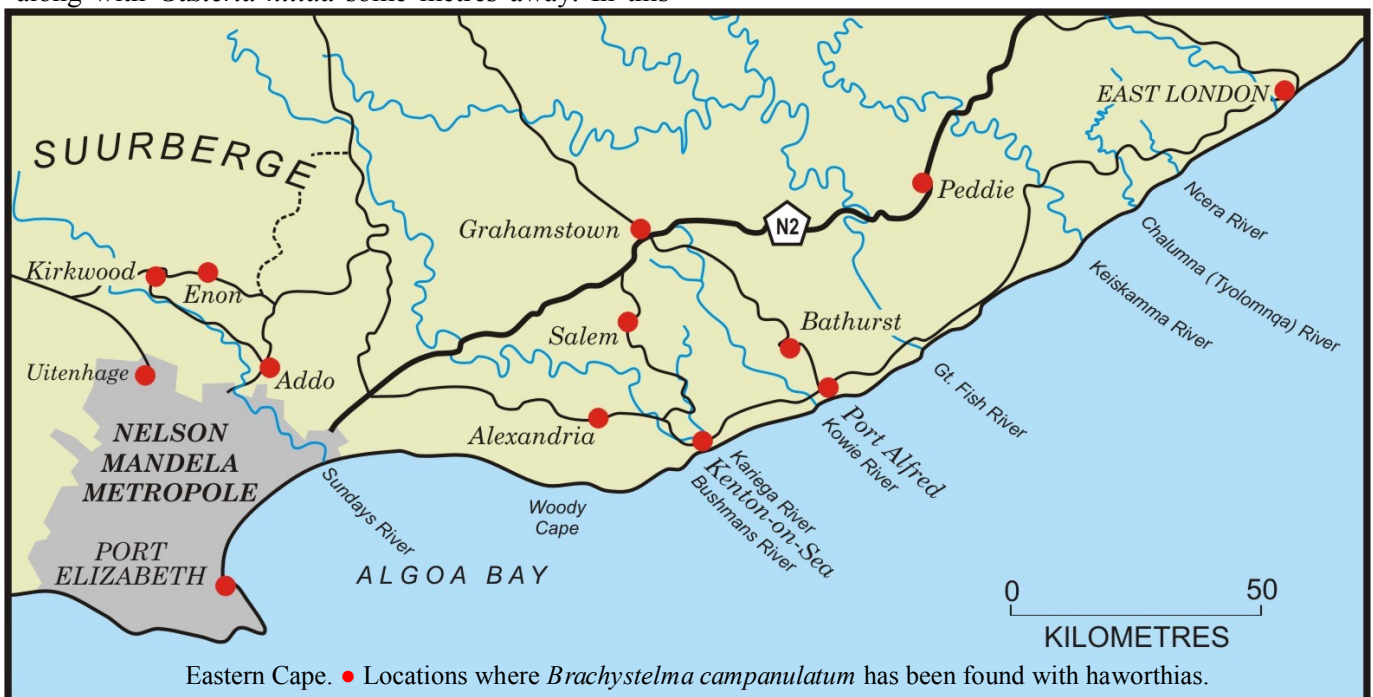
instance the soil was very sandy compared with the first locality, which had a poor clay soil. In 1996 a third locality, DMC 6540, was found very close to the coast in the Reit River Valley, again with very sandy soil. This time the *Haworthia* was *angustifolia*. Near Brooklands, in the Kariega River Valley, 1997, in a rocky area with a clay soil where *H. coarctata* grew, DMC 7734, *B. campanulatum* was also found. In 1999 a fifth site was found with *H. reinwardtii* growing nearby followed by a sixth locality, DMC 8575, by the roadside on the N2 near Driver's Bush, where *H. angustifolia* v. *paucifolia* was growing a few centimetres distant and *H. coarctata* a few metres away in a sandstone derived gravelly soil.

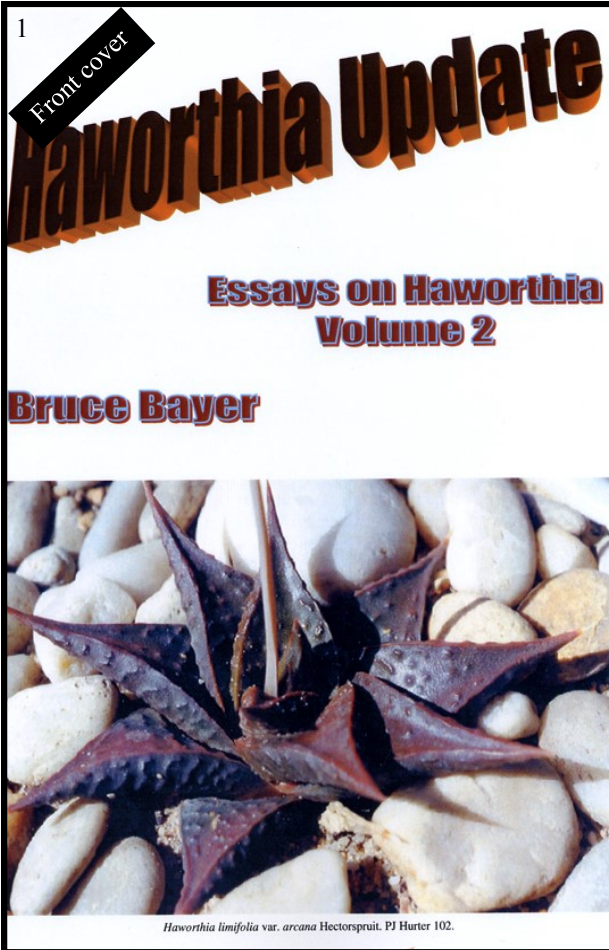
## Conclusion

At the six localities where *B. campanulatum* has so far been found by the author an *Haworthia* has been found, a total of five different taxa, surely a case of *Brachystelma* haworthiaphila?

## References

- Dold & Cumming, (2002): Notes on the Species of *Brachystelma* R. Br. Occurring in the Eastern Cape Province of South Africa. *Asklepios* 84: 4-11.  
Dyer, R. A. (1983): *Ceropegia*, *Brachystelma* and *Riocreuxia* in Southern Africa. A.A Balkema.





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Fig. 21.  
*H. cooperi* var. *isabellae*!, Buffelsnek, MBB7012.  
Fig. 22.  
*H. bolusii* var. *blackbeardiana*, Inverbolo, JDV92/44.  
Fig. 23.  
*H. mucronata* var. *habdomadis*, Seweweekspoort, MBB6730.  
Fig. 24.  
*H. aristata*. Paddafontein. MBB6899.  
Fig. 25.  
*H. cooperi* "graciloid". Buffelsnek, W Kaboega. MBB7012.  
Fig. 26.  
*H. bolusii* var. *blackbeardiana*. Bolokei, NE Stutterheim. JDV92-44.  
Fig. 27.  
*H. mucronata* var. *habdomadis*.  
Seweweekspoort, E Ladismith. MBB6730



# Suspension for I.S.I. trade with the E.U.

John N. Trager<sup>1</sup> & Harry Mays<sup>2</sup>

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<sup>2</sup>ISI EU Honorary Representative, Woodsleigh, Moss Lane, St Michaels on Wyre, Preston, PR3 0TY, UK.

## Letter from John Trager.

It is with great regret that I announce the indefinite suspension of all ISI exports to the EU.

It was not until the final phase of preparing the first shipment of 2006 orders that I was informed of the new, stringent EU regulations governing the issue of phytosanitary certificates for export from the US. These regulations for pest monitoring and exclusion mandate weekly inspections by authorized agricultural inspectors for nine weeks prior to export. While such involved procedures may be feasible for major agricultural exporters, as a necessary cost of doing business, they are beyond the means of a small export operation like the ISI.

The ISI program has been hampered over the years by increasing international governmental regulations (e.g., CITES). These hurdles impede the Huntington's missions of plant conservation and botanical education. This has also been a source of personal disappointment as I have passionately pursued those missions.

I extend my heartfelt gratitude to all ISI customers for their support and interest over the years. Special thanks are due to Harry Mays who has capably and energetically represented the ISI in Europe for the past several years.

As international plant exchanges become more complicated, I hope that this will not dampen our mutual interest in, and enjoyment of, succulent plants and the friendships these pursuits have nurtured.

Sincerely,  
John Trager

## Comments by Harry Mays.

The first distribution of ISI (International Succulent Institute as it was then known) plants was in 1958. The ISI was formed by a small group of USA succulent enthusiasts, including Myron Kimmach and Jay Dodson, with the objective of propagating documented plant and new introductions for distribution to both institutions and individuals, so that they could in turn propagate and further distribute the plants. Each annual list of plants was different. They operated entirely on a voluntary basis and were remarkably successful over several decades. They all achieved status in the botanical world in one form or another. It was only age which eventually forced them to seek a successor to continue their work.

The Huntington Botanical Gardens was ideally suited to take over the ISI work. It had a policy of plant conservation and botanical education and firmly believed in using its vast plant resources for propagation and distribution on as wide a basis as possible. So, the ISI became International Succulent Introductions, a non-profit arm of the Huntington. Whilst some botanical gardens have limited plant

production to sell on site, the Huntington is the only one I am aware of which has made plants available by post not only throughout their own country, but also abroad. This is a magnificent contribution to conservation, education and the satisfaction of wants of both botanical gardens and individuals, which is now in suspension because of draconian "conservation" and plant health laws.

Does this mean that ISI plants will no longer reach the EU? Probably not, though the quantity will be seriously reduced. ISI plants are bought by some nurseries in the USA and propagated and sold. Some nurserymen in the EU are able to visit the USA and buy these plants with all the necessary documentation. They in turn will propagate and sell the plants. Keep your eye on future EU plant lists! None EU countries may still be able to obtain ISI non-CITES plants from the USA because their plant health legislation may not be the same as the EU's.

So, of the genera we are interested in, what have we been deprived of this year? All of the following, the information for which is from John Trager's 2006 ISI plant notes. The USA prices have been included as a guide to what you might have to pay if/when they become available in the EU.

**ISI 2006-12. *Aloe calcairophila* Reynolds.** This is a choice and slow-growing miniature with distichous (fan-shaped) rosettes of leaves and urceolate (urn-shaped) white flowers, though with ample light the buds may be red at first. As indicated by its name (*calcair* = lime, *phila* = loving), it exhibits a preference for lime-bearing substrates, perhaps one of the challenges to its successful cultivation. Depending on the quality of one's water (i.e. if excessively acidic) it might be helpful to add some agricultural lime to one's mix. These plants are from seed by the controlled pollination of plants collected in 1988 by A. Razafindratsira at Ambatofinandrahana, Madagascar, where it grows with other limestone endemics like *A. capitata* var. *cipolinicola* and *Euphorbia stenoclada* var. *ambatofinandranae* (ISI 2005-23, \$12). \$15.

**ISI 2006-13. *Aloe fievetii* Reynolds.** This relative of *A. capitata* produces especially showy displays of capitata inflorescences with red buds opening orange. It differs from *A. capitata* in its smaller size, narrower dark green leaves and in the lowest flowers opening first, as is typical of most aloes. We offer HBG 94012, second generation seedlings from seed originally obtained from Alfred Razafindratsira without further data. However, the species is known only from grassy pockets in granite, at 1200 m, around Fianarantsoa, Madagascar. \$8.

**ISI 2006-14. *Aloe hoffmannii* Lavranos.** Discovered by Swiss explorers Walter Rösli and Ralph Hoffmann in 1995, this new *Aloe* was described, along with another new species, in the C&SJ USA



Fig. 1. *Aloe fievetii*.  
 Fig. 2. *Haworthia* 'Whirlpool'.  
 Fig. 3. *Gasteria nitida* var. *armstrongii*.  
 Fig. 4. *Aloe calcairophila* flower.  
 Fig. 5. *Aloe calcairophila*.  
 Fig. 6. *Aloe hoffmannii*.



(Vol. 74: 116-120, 2002). It is an attractive ally of *A. parallelifolia* (ISI 2000-44), differing in its leaves bearing prominent teeth on the leaf margins and in its showy capitata inflorescences of red buds opening yellowish-orange. The species is known only from a shallow valley of the quartzitic sandstone that composes the Itremo Mountains. HBG 93960, from controlled pollination of Rööslü & Hoffmann 4395, coll. Dec. 4, 1995, at 1700 m on the Col d'Itremo, Madagascar. \$14.

**ISI 2006-22. *Gasteria nitida* var. *armstrongii* (Schönland) van Jaarsveld** This is a distinctive neotenic miniature with distichous rosettes of two to four leaves. These lie flat and have a rough, bumpy, tongue-like appearance, sometimes with paler tubercles that may develop with age. Seedlings of var. *nitida* appear much the same until they produce erect pointed leaves. Not surprisingly the inflorescences of var. *armstrongii* are also smaller and are unbranched, but bear 20 mm long flowers comparable in size to those of the larger variety. Var. *armstrongii* is restricted to a small coastal region within the wider range of var. *nitida*. It is not rare in cultivation but little sales material is documented. ISI plants are from the controlled pollination of seedlings collected by W. Massyn near Humansdorp, E. Cape, S. Africa. \$5.

**ISI 2006-23. *Haworthia* 'Whirlpool'** Trager. *H. truncata* has played a role in numerous *Haworthia* hybrids, controlled and otherwise. This new cultivar, a hybrid with *H. retusa*, was apparently controlled, but by whom is uncertain. Nevertheless, it is worthy of recognition and has been given a cultivar name. It has the deep dark-green windows of *H. truncata* embedded within opaque tissue of the more vivid green of *H. retusa*. Rosettes are initially distichous like *H. truncata* (but with rounded leaf tips) and slowly spiral, reminiscent of a vortex in a dark pool. Rooted cuts of

HBG 94015, a plant received from G. Barad, July 11, 2000. \$8.

**Footnote.**

I asked John Trager when my appointment as Honorary ISI EU representative would be terminated. He responded that I was "on call" for the future. Heaven also has me "on call". I wonder which will come first?

**ISI plant details.**

"The Directory of plants distributed by ISI 1958-2001 with alphabetical index" and "The Directory of plants distributed by ISI 2002-2006 with alphabetical index", compiled by Harry Mays from ISI notes, contain details of all the plants distributed by the ISI with their original descriptions.

The price of the former is £10, of the latter £3.

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We state that Alsterworthia International operates on a non-profit basis. We have not categorically stated that Alsterworthia International also operates on a non-loss basis though that is also an objective.

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*italics* = scientific names; normal type = common and cultivar; **bold** type page nos. = colour photographs

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## North West Cactus Mart

Saturday, 31 March 2007. 10.00am to 3.00pm

Woolston Leisure Centre, Warrington - just a few minutes from Junction 21 M6

There will be a wide range of cacti and other succulents, new and second hand books, pots in variety and other sundries for sale.

For further information please contact:

Philip Barker. Tel: 01942 256440 Email: philip@barker3832.freemove.co.uk

Do not miss this event if you are in the NW of England on that date. May we suggest you organise a branch visit?



# Growing *Haworthia* and related genera in Malta

George Borg Marks  
48 North Street, Tarxien, Malta.

My interest in succulent plants knows its origins during my childhood. I was introduced into the world of plants by my father, a keen gardener. Originally, I was mostly attracted to cacti but, nonetheless, I cultivated other succulent plants to a smaller extent. The 'Haworthia' bug, followed by an infestation of 'Other Succulent' bugs, struck some years ago after a lucky encounter with Ingo Breuer, the well-known expert and grower. Indeed, I owe most of my success in the cultivation of these plants and many other genera of succulents to his constant advice and support.

## Introduction.

For the benefit of those readers who have never heard of my place of birth and residence, Malta is a small independent nation consisting of one main island, Malta, a smaller one called Gozo and three other smaller islands, two of which are uninhabited. This archipelago covers an area of 316 sq km (122 sq miles) and now forms part of the European Union. It is situated in the middle of the Mediterranean Sea (35°55'N 014°30'E) about 100 km (60 miles) south of the island of Sicily.

The climate is one of long, hot summers with day temperatures soaring to above 40°C (104°F) during August and mild winters with temperatures dropping to between 6°C (43°F) and 10°C (50°F) during the night in January and February. Rain normally falls between the months of October and February and averages around 500mm (20 inches) every year. Snow never falls, but hail is quite frequent during the worst of winters.

The climate is ideal for growing many of the "other succulents" outside in the open all the year round while certain cacti, notably those of the cereus type, can also be grown outside.

## Cultivation and propagation of *Haworthia*.

To come back to Haworthias, it is not advisable to grow these outside due to the strong sunshine during the summer period. No doubt, this intense light would bring out nice coloration in certain species, but would otherwise stunt their growth, especially those that are soft-leaved. Experience in their cultivation has shown that they can be grown quite well in a well-ventilated greenhouse equipped with 50% shade cloth. Due to the strong light, growth is quite compact and good coloration is also obtained in certain species.

The *Haworthia* collection, which now consists of over 1200 different plants from different localities, is grown in square plastic pots. After many trials, the preferred growing medium is perlite (pumice is not available locally as otherwise this would also be a good medium to use). This allows good aeration of the roots together with excellent water absorption properties. In contrast with other growing mixes (compost, coarse sand and their combination with perlite in varying

percentages), all the water is absorbed by the medium and, therefore, the roots of the plants do not stand in a wet mass for a long time. In fact, if the plant is watered from the top, water starts coming out of the drain holes at the bottom of the pot very soon afterwards, almost immediately. These factors combine together to enable the plants to develop strong roots in an open medium where air circulation is at its best.

Since we are on the subject of watering, the season starts early in the year, around February with only a little water being given, usually in spray form, to start them off. As soon as good steady growth is noted, usually about two or three weeks later, water may be given more frequently, in my case from below because the pots are placed in large trays for practical purposes. The frequency of watering is steadily increased until an interval of around 10 days is reached by April or May. Watering continues until mid-July, depending on the ambient temperature. The plants are then given a six-week rest when they stop growing due to the intense summer heat. During this period a light spray is given in order to avoid undue shrinkage due to the heat. Normal watering resumes in September when the heat starts subsiding a little and continues until the end of October. When the temperature starts dropping, watering is progressively reduced until all water is completely withheld by the end of the year. A winter rest follows during the coldest months of the year, January and February. A slight spray may be given during this period, but this is not absolutely necessary.

Since the plants are grown in perlite it is imperative to fertilize the plants regularly. A good foliar fertilizer, applied at half strength, is added during every watering. The same fertilizer is also added to the water used for spraying the plants during the growing season. Spraying is done early in the day so that the plants are dry by the evening. This avoids any possibility of rotting of the growing centre especially in the more delicate species.

As any *Haworthia* grower will know, these plants have a habit of losing their roots. This should not be cause for alarm because it is a natural process. Most haworthias lose their roots every year and use up the material to renew their root systems. Therefore, in order to remove any dead or decaying material, repotting is done every two years, also during the winter rest period. This will facilitate close inspection of the plants and removal of dead leaves (another natural process); this is done at the onset of winter every year. The removal of dead roots will be beneficial to the plants and will avoid rotting of the remaining roots and, indeed, possibly the plant itself. Certain plants that have outgrown their original pots may need to be repotted into larger pots, while offsets may be taken during this process for further propagation. This is where the good qualities of perlite are demonstrated, where the excellent aeration



Fig. 1. *Haworthia acuminata* & *Haworthia arachnoidea*.  
 Fig. 2. *Haworthia bolusii* v. *blackbeardiana*.  
 Fig. 3. *Haworthia bayeri*.  
 Fig. 4. *Haworthia chloracantha*.  
 Fig. 5. *Haworthia magnifica*.  
 Fig. 6. *Haworthia pilifera*.  
 Fig. 7. *Haworthia chloracantha* and varieties & *H. maculata* in greenhouse.



provided will prevent rot and assist the plant in producing new roots. Trials in root production using perlite, coarse sand and compost have shown that the rate of root production is highest in perlite and lowest in compost and mixes using compost.

The only problem with using perlite is its light weight although sometimes this may also be a blessing because repotting is easier and the whole pot is lighter making the transportation of trays of pots easier as well. In order to prevent the perlite from being blown away with the slightest breeze or floating away during watering, if this is done from above, a top layer of gravel or coarse grit is applied. This will also enhance the overall appearance of the potted plant since the plant contrasts better with the coloured pebbles than if it were left standing in the white perlite.

One very important point to remember is to ensure good ventilation. Especially in the hot summer months ventilation is of paramount importance, as otherwise this may induce plant collapse and with consequential loss. It is, therefore, necessary to provide good air circulation, either naturally by opening the sides and/or top of the greenhouse or forcibly by the use of a fan.

Propagation is best done either by seeds or by offsets. On a smaller scale, leaf cuttings or roots have also been taken in cases of 'emergency', but normally only for those species that either remain solitary or that have thick roots.

Offsets are usually taken either through accidental breakage or during repotting. Propagation by offsets is the easiest method and one that provides reasonably sized plantlets immediately. It is common for offsets to have roots while on the mother plant and so this method is fairly easy. Offsets are placed either in small pots or in trays and left in a shady part of the greenhouse at least until growth is noticed.

Seeds are sown in the autumn when the heat of summer has started to subside. Seed is placed on compost (not perlite) and kept in a moist environment either in a sealed plastic bag or in a propagator until the following summer. By this time the little plants will have attained a reasonable size and are usually transplanted into individual pots or trays, depending on their size. The medium used here is a mixture of compost and perlite and is kept constantly moist. The plants will not be transplanted into perlite before reaching a height of approximately 2 cm, usually after they are two years old.

Leaf cuttings or roots have been used occasionally, mostly after the mother plant has started to collapse or rot. All possible parts of the plants are separated and dried for a few days in a shady spot. Leaf cuttings are placed upright in trays containing perlite, while roots are inserted into the perlite leaving the cut surface about 1 cm above the surface of the perlite. The perlite is kept slightly moist by occasional spraying.

My experience in the cultivation of haworthias has shown that these plants require good air circulation around the plant and around the roots. A light open medium is absolutely necessary so that they can produce a strong root system. Good light is also important in order to achieve a good overall appearance and prevent elongation. Given these conditions, these

plants should not present any serious problems except in the very few really difficult species. In these cases, there is not much that can be done and one has to try and find the best way of keeping these difficult plants in the best way that one can depending on local conditions.

### **Cultivation and propagation of *Gasteria* and *Aloe*.**

The cultivation of gasterias and aloes is very similar to that used for haworthias with one very important difference. Due to the local climate, these plants are generally grown outside in the open all year round.

As in the case of haworthias, the medium used is perlite. No difficulty has been encountered by using this medium for plants that are left outside in an exposed location. It is obvious that tall aloes should be placed close to the walls in order to minimize the effects of wind – tall plants being prone to swaying and may consequently topple over. Watering is needed practically only during the dry summer months or after a long dry spell during winter. In all cases, a good fertilizer is used during each watering. If plants are being grown outside, exposed to the elements, this is even more important, as rain will wash any residual substances away from the perlite.

Propagation of these plants follows the usual methods, offsets and seeds. In the case of gasterias, leaf cuttings have been used frequently. It has been found that leaf cuttings root very well in perlite and produce lots of little plants easily and very quickly too. Obviously, these leaf cuttings, as well as little seedlings less than two years old, are kept in the greenhouse as otherwise they would not stand a chance of survival if left outside in the sun. Offsets usually have a reasonably good root system when still attached to the mother plant. These can be detached quite easily and treated in the same manner as the older more mature plants. Offsets of aloes that do not have any roots when taken, usually in the spring, are also rooted in perlite and then placed outside when a good root system has developed.

The process of propagation by seeds is identical to that used for haworthias with the difference that *Aloe* seedlings grow much faster than the others and usually produce good sized plants earlier. This necessitates earlier potting on into perlite and, therefore, the little plants may be moved to a more sunny location earlier.

### **Cultivation and propagation of *Poellnitzia*, *Astroloba* and *Bulbine*.**

The cultivation methods for *Poellnitzia* and *Astroloba* are identical to those used for *Haworthia*. The plants are also grown in perlite and placed in the greenhouse in the company of the haworthias, but on the top shelf where they can benefit from stronger light intensities in order to ensure good compact growth. As most growers of these genera will know, astrolobas may be a little more difficult to propagate at times. So far, the propagation of *Poellnitzia* and astrolobas has always been through cuttings, as these are more readily available. Again, no problems have been encountered although, in the case of the astrolobas, the production of roots has been noticed as being slightly slower than

that of the other genera.

On the negative side, not much success has been registered with bulbines. Although at one time they were thriving and even flowering, suddenly they just dried up without ever growing again. Regrettably, the cause of this is not known. It is possible that the intense heat adversely affects them when they are resting and probably it would have been better if they had been placed in a very shady spot during their summer rest period - an incentive for a further attempt at growing them again in the future.

**Summary and conclusion.**

It is fairly evident that these plants are very well suited to growing in the Mediterranean climate. Haworthias may suffer a little bit if they are not given good air circulation in summer, but otherwise make good growth without too many problems. *Astrolobas* and *Poellnitzia* present no problems when grown in the greenhouse as well, while gasterias and aloes can easily be grown outside in the open, not only in pots but even in the ground or, better still, in a rock garden or for landscaping. In fact, no problems have been encountered in any of the gasterias nor in the *Aloe* species being grown so far, even those originating from places other than South Africa. The most important thing is never to give up and one should not be afraid to try out different techniques. However, it is also important to monitor the plants for any obvious signs

of rot, irregular growth or signs of stress, especially during the hot months, as immediate action is required to prevent, as much as possible, plant loss.

Photographs by the author.



Gasterias in full sun.



Aloes in full sun.



Gasterias in full sun.



Astrolobas in the glasshouse.

# A well-developing hybrid with potential cultivar status.

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Like many hobbyists and nursery owners I cross selected species and cultivars in an attempt to produce even more attractive plants.

Just over three years ago I crossed *Haworthia attenuata* 'White Band' ♀ with *Aloe descoingsii* ♂. Few seeds were sown and only one germinated. This seedling was dark and shiny all over with tubercles, which became more prominent as the plant aged. Now, three years old, it has just started to produce whiter markings on the leaves, which are made up of coalescing tubercles, fig. 1. Some of these are longitudinal, others are latitudinal. The hybrid offsets freely. It has not yet flowered. I am hoping it will inherit coloured flowers from the male *A. descoingsii* and of course prominent white markings from the *Haworthia*. This clone seems to have the potential for named cultivar status. Its development will be studied closely.



Fig. 1. The hybrid between *Haworthia attenuata* 'White Band' ♀ and *Aloe descoingsii* ♂.  
Fig. 2. *Aloe descoingsii*, the pollen donor.  
Fig. 3. *Haworthia attenuata* 'White Band', the seed bearer.



# Six New Cultivars

created by

Jean-André Audissou

36 avenue du Stade, 17450 Fouras, France.

<http://www.audissou.com>

## *Haworthia* 'Fouras'

**Parents:** *H. pubescens* LAV 23558 x *H. pulchella* v. *pulchella* JDV 87-187.

**Description:** Rosette with spreading, recurved leaves, offsets occasionally. Leaves dark green with opaque spots, rarely small tubercles, on the end-half of the upper leaf surface, which could almost be described as slightly retuse, opaque marginal teeth and terminal spines. Plants have a regular shape and clean look. The opaque spots and teeth on a dark-green background are impressive. Fig. 1.

This cultivar is quite unlike the parents which have incurved leaves in compact rosettes.

This cultivar is named after the town where it was developed.

**Propagation:** Leaf cuttings and occasional offsets.



*Haworthia* 'Pearl of Dew'

**Parents:** *Haworthia retusa* fa. *geraldii* x *H. cymbiformis* var. *reddii* JDV 92-43.

**Description:** Rosette freely offsetting. Leaves light green with dark-green windows in the form of interrupted, longitudinal lines of variable width and length on the retuse leaf ends. Each leaf terminates in a prominent recurved spine. The leaves are rounded and highly turgid. A voluptuous beauty! Fig. 2.

The formation of the dark green windows suggested the cultivar name.

**Propagation:** Offsets.

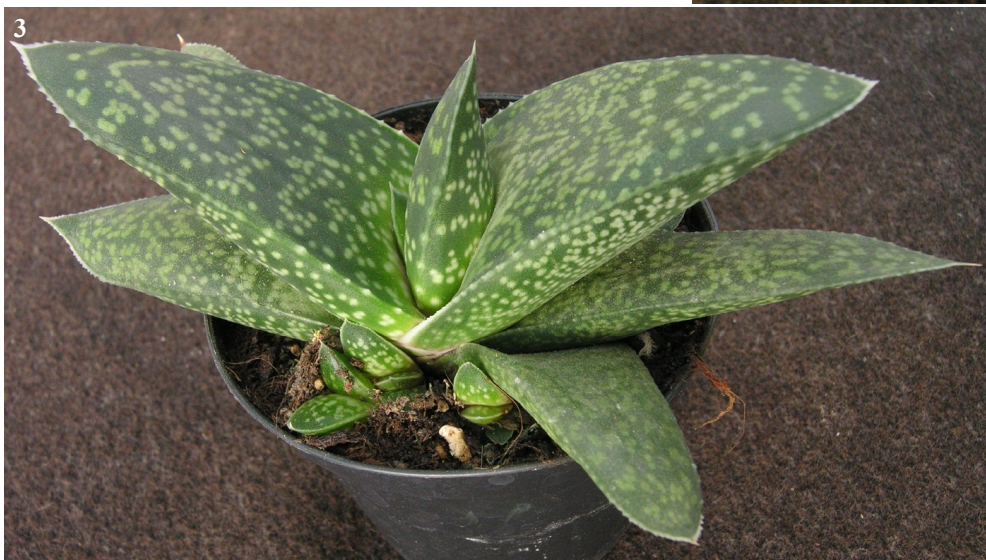


## *Gasteraloe* 'Syrah'

**Parents:** *Gasteria nitida* var. *nitida* 'Beckeri' x *Aloe sladeniana*.

**Description:** Leaves initially distichous, eventually forming a rosette, dark green with many scattered, opaque spots on both leaf surfaces. Short, blunt, opaque teeth on leaf margins, which are horny at the leaf end, with firm terminal spine. Offsets freely. Fig. 3.

**Propagation.** Offsets.



### *Gasteraloe* 'Prince Warty'

**Parents:** *Aloe prinslooii* x *Gasteria* 'Little Warty'.

**Description:** The leaf pattern is clearly influenced by *G.* 'Little Warty', the leaf shape and length by *A. prinslooii*. Leaves lanceolate, yellowish green with green stripes of varying width, scattered with yellowish green dots and occasional lines. Fig. 4.

**Propagation:** offsets.



### *Aloe* 'Chaba'

**Parents:** *Aloe* (*bakeri* x *haworthioides*) x *Aloe* 'Cha Cha' ISI 97-52.

**Description:** Light to medium-green, somewhat-curved leaves with prominent, flat to slightly raised opaque spots, which rarely terminate in a spine. Prominent short, marginal teeth. In strong sun the leaves may turn reddish-brown. This cultivar offsets freely. Fig. 5.

**Propagation:** Offsets.

### *Haworthia* 'Cynara'

**Parents:** *Haworthia arachnoidea* var. *nigricans* x *H. pubescens*.

**Description:** Densely-packed, ascending, turgid leaves abruptly narrowing into a slightly-incurved point with terminal spine; upper surface distinctly rounded with very short spines in one or two longitudinal rows, lower with central keel, keel and margins with short spines. Leaf colour light green with greyish-white spines. Fig. 6.

This cultivar is named 'Cynara' because of its resemblance to an artichoke, genus *Cynara*.

**Propagation:** Reluctant offsets and beheading.



# Haworthia Study.

Harry Mays

Haworthia Study Agent

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The world of haworthias is now comprehensively catered for by two well established and well respected journals - *Alsterworthia International*, with which you are intimately acquainted, and *Haworthia Study*, the journal of the Japanese Haworthia Society. Since the Japanese journal became available through the Alsterworthia International editor, it has received a steady flow of members from the European Union, Australasia and the Americas. As with Alsterworthia International, Haworthia Study has expanded its content to the evident satisfaction of its readers.

Haworthia Study is largely devoted to Japanese hybrids and cultivars and to the taxonomic work of Dr. Hayashi, though not exclusively. It is illustrated with colour photographs including those of unbelievable hybrids and cultivars. They are creations, yes man-made creations, of extraordinary beauty, a few of which have been seen in the pages of Alsterworthia International. There is always more to come, because a number of Japanese continue to hybridise with highly selected plants in order to produce evermore impressive cultivars.

The June 2005 issue (No.13) of Haworthia Study has photographs of 14 Japanese cultivars with diverse forms, markings and colour. They could not fail to impress - for an example see the front cover photograph of this journal, *Haworthia* 'Sikinjoh', said to be one of the best hybrids with thick brown lines. An article by Dr. Hayashi deals with the *Types and names of Hybrids*. There are two major types: hybrids which look like species and hybrids which bear no resemblance to species. The former are species which have had variegation introduced into them by crossing with a variegated species, the best variegated of the progeny then being back crossed to the species without variegation, through several generations if necessary, to produce variegated hybrid which looks like the species. Variegated *H. truncata* are usually produced by this method. The latter types are hybrids evaluated on their beauty and strangeness (colour, markings, shape and size etc) and are often complex hybrids which do not resemble any one species. On an international level, three articles deal respectively with *Haworthia* in China and Taiwan, in Europe and in the USA. There is an advertisement by a nursery of cultivars ranging in price from 8,000 to 25,00 Yen.

Issue No. 14, December 2005, has 13 colour photographs of outstanding cultivars. All are quite impressive, but a rare, red-variegated *H. tessellata* immediately stood out because

of the brilliant red colour. The second article deals with 25 years of studying *Haworthia* in the USA. The final articles deal with the *Lapis* group and the *Setata* group of *Haworthia*. For the *Lapis* group Dr Hayashi outlines diagrammatically the relationships (including new species) he sees in Bruce Bayer's variable *Haworthia aristata*. He publishes 11 new species and one new status nova: *H. dura* Hayashi (fig. 1), *H. doidii* (Bayer) Hayashi, *H. rava* Hayashi (fig. 2), *H. ciliate* Hayashi, *H. erii* Hayashi, *H. ernstii* Hayashi, *H. davidii* (Breuer) Hayashi & Breuer, *H. lazulis* Hayashi, *H. luri* Hayashi, *H. pellucida* Hayashi, *H. incrassa* Hayashi and *H. iantina* Hayashi. Each one is illustrated with a colour photograph. In a second article Dr Hayashi publishes 7 new species in the Setata Group: *Eminens* series: *H. cangoensis* Hayashi, *H. angiras* Hayashi. *Aranes* series: *H. odyssey* Hayashi. *Setata* series: *H. kogmanensis* Hayashi, *H. laxa* Hayashi. Other Group *H. montana* Hayashi. Each one is illustrated with a colour photograph.

Now the time has arrived to renew subscriptions to Haworthia Study for 2007 and, if you are not already a subscriber, to take out a new subscription if you so wish.

## Haworthia Study Subscription.

The annual subscription for Haworthia Study is £17 from 2005. This is much less than the subscription to the Japanese Haworthia Society, which is in the region of £50.

Back issues are available.

1-8 (Issue No. 8 December 2002) = £50.

9-12 (Issue No. 12 December 2004) = £30.

Back issues are sent from Japan direct to subscribers.

To keep down costs, the current year journals are sent in bulk to Harry Mays and distributed by him with the next Alsterworthia International: the June Haworthia Study with the November Alsterworthia International and the December with the March. Thus Alsterworthia International members who have subscribed to Haworthia Study for 2006 will receive the June issue with this journal.





# A Glasshouse Saga.

Harry Mays.

Glasshouses are essential for housing succulent collections in many countries, but they are seldom mentioned in succulent journals. This is surprising because properly designed and correctly erected glasshouses are just as essential for successful cultivation as are, for example, correct composts and correct watering regimes.

As with many people I have graduated from a few plants on the window sill to more and more in succeeding larger conservatories and more and more in succeeding larger glasshouses, encountering only an occasional minor glasshouse problem. As more space became available when we moved to St Michaels (UK) I purchased four 30' x 10.5' bays from the Unique Dutch Light Co. and set them side by side to give a 30' x 42' glasshouse. Such units are mass produced by a number of companies for the commercial market and set side by side and end to end to form massive glasshouses. They are relatively cheap and well serve the purpose for which they were designed - growing a variety of plants. I was very satisfied with mine. Everything was manually operated to keep down costs, but that was not a problem at the time. It did become a problem when my wife could no longer cope with the manual work when I was away (opening and closing vents, filling barrels from a hose, watering by hand, carrying paraffin for the heaters etc), initially because of a car accident and subsequently because of the additional effects of accumulating years. This also highlighted what we already knew - it would be nice to have a fully automatic glasshouse to ease the work load during the inexorable progress of retirement with its enforced limitations on physical ability and stamina. The time had come to replace a good, but labour-intensive glasshouse, with a user friendly one.

Clear Span was a more upmarket specialists in metal and glass structures for a variety of purposes including arcades, conservatories and glasshouses built to design. I specified a glasshouse of similar size to the one I had, but with double glazing, laid on water and electricity, electric heating, overhead watering facility, trays for below watering and attachment points for a hose etc. The sales manger called to assess my requirements. He was impressive. He carefully assessed what I was cultivating and their cultivation requirements. He recommended a single span structure 28' x 47' with double glazed sides, triple polycarbonate roof and one large sliding door on the east side. The electrically operated vents would be at the top of the two sides and at the same level on the south end. The roof would have a low pitch which would be an advantage in this windy area - about 12 miles from the west coast and we are surrounded by fields offering little obstruction to the prevailing west wind. The vents would be centrally pivoted and afford good ventilation when fully opened in the horizontal position. The structure was guaranteed for 10 years. Detailed plans were submitted and approved by me. The deposit was paid and a work schedule agreed. Essentially this provided for the work to be completed during the Agricultural College summer vacation. As their glasshouses were not utilised by students in that period they had given me permission to house my plants there for that period.

The builder, a subcontractor, arrived on time to dismantle the old glasshouse, put in foundations for the new, pave the floor round the existing raised bed and lay down water and electricity supplies. Two weeks had been allowed for this work, but it was completed in one. All was going well. I phoned Clear Span to let them know and asked if it would be

possible for them to commence erection right away. They said not, which did not surprise me as I had assumed they would be working to a schedule. This assumption turned out to be wrong because weeks passed without them turning up to erect my glasshouse. Their response to phone calls was soothing but not very informative - they were very busy, they were doing their best, they would be with me soon and so on. When I went abroad in September the glasshouse had still not been erected and the plants in the raised bed were fully exposed to the elements as were some large potted plants, mainly aloes and a few agaves, which were too large for me to take to the Agricultural College. They did promise the glasshouse would be erected soon and certainly whilst I was abroad.

On my return I found disaster. There had been gale force winds, prolonged, heavy rain and frost. All the exposed plants were dead or so badly damaged that only a few salvageable cutting from column type plants were possible. The glasshouse frame and roof had been erected, but the sides were only partly glazed. I protested to Clear Span. They assured me they were doing their best and that the glasshouse would be completed soon. They agreed to dismantle the raised bed and pave the area at their expense and agreed a sum in compensation for the lost plants. Progress completing the glasshouse was slow. Men arrived at varying times, sometimes as late as late morning, and departed at varying times, sometimes as early as mid afternoon. The men told me they were having to wait for components to become available each day which delayed them setting out and that what they were supplied with was inadequate for a full days work. This happened day after day. The workmen proved to be a fruitful source of information and I learnt that Clear Span had been taken over because of financial difficulties. Further problems arose because some contracts contained penalty clauses and the company was working to avoid these, which had an impact on customers who did not have penalty clauses - and I was one. Eventually the glasshouse was completed. My plants at the Agricultural College now had to be moved urgently as the glasshouses was required for student use. As I had only an estate car Clear Span agreed to supply a van and driver at their expense to facilitate the transfer of plants.

Regrettably, the completion of the glasshouse was not a satisfactory conclusion. Some faults were immediately visible, others became so as rain fell, others when the following summer arrived and others with use.

1. The plinths had been installed narrow side up.
2. The bolt holes in the feet of the arches coincided with the edges of the plinths.
3. The feet were not bolted to the plinths. (because there was a danger of the plinths splitting if bolts were entered too near the edge. I insisted that the feet must be bolted. They inserted the bolts at an angle without damage to the plinths and left them like that. Not particularly professional but a cheap solution.)
4. The ridge had a shallow but visible undulation. (They brought in hydraulic ramps to straighten it.)
5. Water entered at the ridge and via double glazed units. (The units had not been correctly installed. They were taken out and correctly done. Silicone sealant was used on the edges of the ridge plate.)
6. The door, which had finger tip operation when fitted, became very difficult to operate. (This happened several times. Eventually they decided the double glazed door was

too heavy for the top hung mechanism and fixed more and apparently strengthened hangers.)

7. Some of the vent actuating arms fractured as did some of the plates holding the cylinders to the frame. (They were replaced as they broke and in some instances stronger material was used.)

8. An occasional double glazed unit turned milky. (They were replaced.)

9. When the downward orientated overhead sprinklers were turned off they dripped water onto the plants below, over-watering and rotting



some. (No compensation. Pressure release valves were fitted at the end of each bank of sprinklers to allow the gallons of water in the pipes to drain away when the sprinklers were turned off and the sprinklers themselves were turned up to stop any drips. This created another problem. Water now sprayed onto the underside of the suspend shelving causing water to concentrate and drip. The overhead watering could not be lowered as it was just above head height and there was little scope for raising the suspended shelves. As a trial wooden blocks were inserted to raise the trays but with little effect.)

10. When the first spring arrived it became clear that there was inadequate ventilation. I contested their assurance that the ventilation was adequate for the types of plants I kept. The top hung vents provided considerably less airflow than centrally pivoted vents would, which they had failed to supply notwithstanding they were in the plan. (An extractor fan, which a workman told me they had had in stock for some time, was placed in the roof at the north end and I was assured that the louvers would not open in windy condition in winter and negate the beneficial effect of double and triple

glazing, but they did and furthermore all the extractor did when operating was to draw air in from adjacent vents and then expel it. It did nothing to reduce heat build up in the southern two thirds. The fan had to be taken out and the triple roof panel replaced. They then agreed to fit two top hung vents at the tops of the two ends. The theory was that two circulatory fans hung in the roof space would move air from the south end and expel it through the north pair of vents. Its effects have been only marginal. The glasshouse still gets too hot during sunny days in summer and plants go dormant - or worse.)

11. Eventually drips began to develop through the roof. They determined that water was entering because of deteriorating washers used to seal the holes created in the sealed triple glazed units when they were bolted to the framework. The remedial work took the form of applying sealant round the washers and bolts! It did not last.

12. In May 2004 I submitted a claim for further remedial work under the guarantee which included another fractured vent actuating arm, another cloudy double glazed unit and a claim for drips through the bolt fixing points of the triple glazed roof and the elimination of permanent moisture and accumulating algae within the two-layered, small, box-sections which made up the triple glazed roof panels. Though they commissioned three reports on the roof by two of their engineers nothing was done about it though the other items were dealt with. It became clear that they were uncertain what to do and finally suggested power cleaning the many, small, box sections. The last

Fig. 1 Water from leaking roof accumulating on plastic sheeting.  
Figs. 2 & 3 Water and condensation within the triple glazed roof.

inspector told me this would be a major task for two men as the roof would have to be dismantled for cleaning and then reassembled - and he could not guarantee it would be completely successful because of the length of the units. I was subsequently told that the matter would have to be referred to the Managing Director. Then a letter came from the Customer Service Manager to say they considered that they had done enough for me and were not prepared to do any more!!! This was unacceptable to me, consequently I initiated proceedings against Hartley Botanic in the Small Claims, Fast Track Division of the County Court.

Their solicitors contest the claim and moved for it to be dismissed on the grounds that I was prosecuting a company which did not have any responsibility for my glasshouse. My glasshouse had been purchased from Clear Span in November 1994 which became Apropos Tectonic on 20 Jan. 2005. Hartley Botanic was formed as a separate company on 9 May 1995 and could not have any liability. The claim should have been made to Apropos Tectonic. Almost as an aside the solicitors also stated that as my guarantee was verbal it was not enforceable in law (I found out that the issue of written guarantees had been stopped as a result of Clear Span getting into financial difficulties.)

The dates of incorporation were new to me and I had no alternative to accepting them but I did submitted that Hartley Botanic was heavily involved and was able to produce documentation to prove that, whilst my claims for remedial work under the guarantee had been addressed to Clear Span, it was Hartley Botanic which had dealt with my claims and carried out remedial work. Furthermore I was able to provide documentary proof that a) Hartley Botanic had accepted claims as guarantee work and had specifically written that, though the guarantee period had now expired, they would honour my claim dated May 2004, as it had been made within the 10 year guarantee period, b) whilst initial correspondence was under the name Clear Span, shortly after purchase the correspondence was on paper headed Clear Span and Hartley Botanic at the same address and signed by employees who had previously signed under Clear Span only, then finally under Hartley Botanic only.

The judge declined to dismiss the case and added Apropos to Hartley Botanic as co-defendant. A further hearing was to be scheduled to decide my claim but Hartley Botanic Solicitors, now also acting for Apropos Tectonic as well, approached me for an agreed settlement. We agreed £1750.00 and this was approved by the court.

This saga demonstrated what is probably widely known - it pays to keep documentary proof of all ones activities and to create documentary proof when circumstances suggest it might be wise to do so. Print out e-mail and confirm phone calls in writing. It also demonstrates that one should not be taken in with advertising. Hartley Botanic advertisements in the RHS journal states they are approved by The Royal Botanic Gardens, Kew. Does the RBG really approve of the standard of work and methods of operation referred to in this saga, and what does RBG's blanket approval for Hartley Botanic say about RBG?

## Costs and Subscriptions.

Postage is a major item of our expenditure. To keep it under control we changed from the UK Post Office to a private contractor for bulk postings to overseas destinations some years ago, as their rates are more reasonable for bulk, pre-sorted mail. This has not affected delivery of the journal, as we have been able to adjust our printing schedule so that virtually all members receive the journal by, or in the month of, issue. This change enabled us to avoid an increase in the membership subscription at that time. Since then the private contractor's charges have increased once and the Post Office has increased its a number of times, the last on September 1st. The other major cost is printing and, unfortunately, there have been increases in recent years, which tend to be accentuated by our liberal use of good sized colour photographs. Smaller photos could reduce costs, but standards cannot be compromised. Because of the foregoing the annual subscription has been increased by a modest £1.00 from 2007. Adjustments elsewhere have also helped - please see page 12, PayPal.

Journal and publication postings for orders received with membership renewals are bulk postings, but we have a financial problem with late renewals and occasional publication orders received at other times. If we send these out immediately the orders are received they have to be sent via the British Post Office, because the private contractor's minimum service charge for the bulk posting facility is normally well in excess of the PO's charge for single items. The difference between sending an item via the PO and via bulk posting is significant. For example, for posting a parcel of 10 Special Issues No. 8 to certain countries the PO charges almost £15, but the charge by the private firm is £8.77 when it is included in a bulk posting. We feel it would be unfair to increase prices to all members to compensate Alsterworthia International for the losses made on these single postings. *Therefore, from now on, back issues of journals for late renewals and orders for publications received after the March journals have been despatched (mid-February) will be held until the next bulk posting is possible. This change will affect only a few members.*

Please note that the ordinary membership subscription includes uninsured postage at the standard tariff rate for bulk postings (a little quicker than PO surface mail). The premium membership subscription includes uninsured postage at the premium tariff rate for bulk postings (a little slower than airmail). Postage for publications is quoted at the bulk, uninsured standard rate. Publications can be sent by premium or air mail at an additional charge. Any item can be sent insured if required - expensive! For quotes please contact the editor < hmays@freenetname.co.uk >



*Aloe krapohlhiana v. dumoulinii*. 5 Sisters.