ALSTERWORTHIA INTERNATIONAL

Aloe (Aloidendron, Kumara, Aloiampelos, Aristaloe, Gonialoe), Gasteria, Haworthia (Haworthiopis, Tulista), Astroloba, Chortolirion & cultivars.



Contents

Haworthia. Natural Leaf Propagation in Cultivation Conditions using the leaves of some species with	
different inclinations to produce offsets. Soumen Aditya. India	5
My Haworthia Growing Conditions in India. Soumen Aditya	6
Haworthia Tenshi-no-namida	6
Sensu stricto - Into which genus/genera do haworthias fall? - Sensu lato	7
International Code of Nomenclature for Cultivated Plants Ninth Edition 2016	7
Cororooke. A summary of its history and current horticultural development. Andrew Craig, Australia	•
Historic homes of Western Victoria - by Nan Chapman10-1	2
Cororooke Today Andrew Craig	6
Registration of cultivars	6
A selection of photographs of plant grown at Cororooke. Andrew CraigFront cover,17-2	8

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Haworthia. Natural Leaf Propagation in Cultivation Conditions using the leaves of some species with different inclinations to produce offsets.

Soumen Aditya.

Maju, Howrah. India

For the last few years I have been trying to propagate haworthias from leaf cuttings. It is not easy in our humid and hot climate, but I seem to have overcome the problems by developing a technique to replace the old ways to propagated many, rare and very difficult to grow haworthias from leaf cuttings. I started my work early in 2006, first trying to propagated *Haworthia retusa* and *Haworthia cymbiformis* [both are very fast growing] from leaf cuttings from which they grow successfully. Six months later or thereabouts they start to produce many large pups. Following this "success", I planed to propagate very rare species, which do not produce many pups, in a similar manner.

In the years 2007 to 2013 I tried to propagate Haworthia bruynsii, Haworthia arachnoidea var. scabrispina, Haworthia semiviva, Haworthia mirabilis var. splendens, Haworthia pygmaea and it's variety, Haworthias emelyae and its varieties, Haworthia koelmaniorum var. koelmaniorum, H. koelmaniorum var. mcmurtryi, Haworthia sordida, Haworthia scabra, Haworthia scabra var. starkiana and Haworthia springbokvlakensis.

The selection must have been charmed for me. I worried because when I pulled the leaves from the mother plants in mid December each year, I thought I would lose my plants due to our long, hot, humid summers. I did, but all was not lost. Leaf propagation came to my help.

I prepared my propagating soil with 3 parts washed, gritty sand and one part leaf mould flecks, both sterilized in water at 100 degrees centigrade for 30 minutes. I chose 6 inch earthen pots. On the drainage hole, I put a piece of net for filtering, then 1 part leaf flecks, which were then covered with 3 parts of sand.

Leaf cuttings were first washed in fungicide [Mancozeb], then dusted with rooting hormone and keep for 3 days drying under shade. The leaves were then inserted into the sand and keep in a very shady [75% shade cloth] location. They were left to dry for up to 15 days, then I started watering, with a hand spray of diluted grass extracted hormone with a fungicide. The watering schedule was twice a month for our climate, every time watering with fungicide. The leaf mould use in filling a pot was for the new root. I observed new

roots were well. They started to root about 45-60 days latter. Only *H. sordida*, and its variety and *H. limifolia* var. *gigantea* [*striata*] took a very long time to root, nearly 3-4 months latter in our climate. They are produced pups nearly one year latter. Other varieties produced pups after 6 months or latter.

I can record that we lost every year many haworthias due to heavy rain and humidity but am happy that successful leaf propagated of many rare species provided replacements and ensured that the collection survived all the time

I am very grateful to Mr. Harry Mays, Editor, for his friendship and encouragement for articles.

The following photographs taken by Soumen Aditya show a variety of haworthia leaf cuttings and the "density" of their progeny













Haworthia koelmaniorum v. koelmaniorum Obermyer & D.S. Hardy





Haworthia scabra v. scabra Aloe scabra Roemer &Schultes



Haworthia bayeri I.D. venter & S. A. Hammer









Haworthia truncata v. maughanii





Haworthia limifolia v. gigantea Haworthia arachnoidea v. scabrispina pups

Haworthia limifolia v. gigantea = Haworthiopsis limifolia v. gigantea. Haworthia sordida = Haworthiopsis sordida.

Haworthia bruynsii = Haworthia bruynsii.

Haworthia koelmaniorum v. koelmaniorum *= Haworthiopsis koelmaniorum* v. koelmaniorum.

Haworthia scabra v. scabra =Haworthiopsis scabra v. scabra.

Haworthia koelmaniorum v. *mcmurtryi* = Haworthiopsis koelmaniorum v. mcmurtryi.



My Haworthia Growing Conditions

in India.

Soumen Aditya; Winter 2016, 3:18pm, Dec 25

I grow in very heavy, shady condition in a mixture of two part of soil + 1 part vermicompost + 1 part gritty sand +1 part gypsum, bone dust, hoof and horn dust. Plants are not allowed a porous mix. I keep them dry May to October, when the temp is over 35-40 C. and air humidity 80-95%. This seems to suit them very well.

The *Haworthia chloracantha* var. *denticulifera* (right) is an example of one of my adult plants, admittedly not one of the most difficult.



Haworthia Tenshi-no-namida

Leo González, Spain inadvertently acquainted me with this cultivar. Naturally I wrote to him to see if he could provide any information about it. He responded "I do not have too much information about this cultivar. I know that is called like "Tenshi No Namida" or "Tears of Angels". It is very possibly a hybrid of pumila x marginata. People say that Bob Kent made the cross but I am not too sure about it. I got it from Thailand a long time ago and cut the plant so I now I have 4 plants, but not so big. It is a very popular plant in Japan and all the world. He also provided a photograph.

This was useful information so I wrote to Dr. Hayashi to see if he could help. He responded that 'Tenshi-no-namida' was validly published in 2002. This name is listed in Total List of Haworthia Cultivars (TLHC) (2013) as an accepted name.

This publication, which Dr Hayashi prepared, has 271 A4 pages. It is primarily in Japanese



but Japanese names in Japanese have the English equivalent and the plant index is also in English. Note that a Japanese cultivar name may be published in Japanese or English. If a name is published in Japanese it may be converted to English in accordance with a defined formula for converting Japanese to English as recorded in the International Code of Nomenclature for Cultivated Plants. This is not a translation which would simply convert the Japanese meaning into English. This cannot be the cultivar name. Page 141, TLHC records the name both in Japanese and English - *Haworthia* Tenshi-no-namida, the English equivalent of the Japanese, but not as "Tears of Angels" which is a translation and should not be used as the cultivar name. It also records the species name as "maxima hybrid" and the breeder as "R Kent".

If you wish to purchase a copy of Total List of Haworthia Cultivars please contact Dr Hayashi: info@haworthia.net

Sensu stricto Into which genus/genera do haworthias fall? Sen

Considering haworthias only for the time being, *sensu lato* (in the broadest sense), they were and still are, in the minds of some, all included in the genus *Haworthia*, but if you define them in a more limited way, *sensu stricto*, some of the plants we are accustomed to including in *Haworthia* are now included in other genera.

The genus *Haworthia* has quite a long history. In brief, it was included in *Aloe* then graduated into an expanding genus *Haworthia*. For quite a long time *Haworthia* was subdivided into three subgenera but they were all still considered to be haworthias *sensu lato*. So, in spite of some rumblings that the genus should be split up and renamed as other genera this was ignored and we all became used to haworthias as defined *sensu lato*.

With the progress of time, advances in assessing how plants should be classified changed, resulting in a number of classification methods, some related, some not. Perhaps the most significant of these was the DNA studies of Daru *et al.* You can read all about this in *Alsterworthia International Vol. 14, Issue 2, July 2014. The result was that *Haworthia* was split into three genera - *Haworthia, Haworthiopsis and Tulista.* This is reflected in the front cover title of this journal. Note please that the brackets do NOT indicate any disagreement on my part with the new classification. The brackets are provisional and will be removed in due course.

There are already signs of acceptance of the new classification in certain quarters. Please see subsequent issue of this journal to the above*. In Vol. 16. Issue 2, July 2015, pages 3-14 you will find Ingo Breuer's articles which include "Accepted Names in *Haworthia, Haworthiopsis* and *Tulista*". All are illustrated with colour photos of habitat plants in cultivation in Germany.

On page five I have recorded the new genera that should be used if you wish to go along with the new classification. I suggest we should all get used to using the new genera as well as the old!

If you disagree, please send your reasoned and polite disagreements to the editor <hmays@freenetame.co.uk>. They will be published.

* This also deals with the breakup of the genus *Aloe* to which the DNA results also gave rise.



International Code of Nomenclature for Cultivated Plants Ninth Edition 2016 Replaces the previous eighth edition 2009

Published by the International Society for Horticultural Science

This is an important publication: a must for all (buyers and sellers) interested in succulent cultivars.

It records how succulent cultivars (and non-succulent) should be defined and published if they are to be accepted as legitimately named, described and registered, thus helping to supress "the-get-rich -quick" from selling incorrectly named plants. Have you ever bought a plant with a name you were looking for only to find that your purchase was not that plant or only resembled it somewhat?

In brief, for a cultivar to be correctly named, it should be described so that it can be distinguished from other cultivars, the name must meet certain laid down requirements and be published in a manner which also complies with the ICNCP, the most popular of which is publication in a journal or book etc. All these requirements are laid down in the ICNCP edition 9. This new publication is based on previous ones updated to meet current needs.

You can obtain further information by going on to the internet - type in ICNCP edition 9. There you will have access to pages i to xvii and pages 1 to 5. These you may download for private use only. Click on the printer icon at the top of the opening page to download. In pages i–xvii you will find Contents, Foreword, IUBS International Commission for the Nomenclature of Cultivated Plants members, Preface, Comparisons between the 2008 code and the current new code, New

provisions, Important dates on which certain provisions in the new code come into effect and a list of previous editions of this code, In Pages 1-5 you will find: Preamble. Division1: principles, Division II: Rules and Recommendations - Chapter 1: General Provisions. To obtain the complete book of 190 pages you need to purchase it. **Price EUR 30 + shipping & handling. An order form is enclosed with this journal.**

Cultivars "are deliberately selected plants that may have arisen by intentional or accidental hybridization in cultivation, by selection from existing cultivated stock, or from variants within wild population or from genetically modified plants."

Please go to page 16

Cororooke

A summary of its history and current horticultural development. Andrew Craig,

95 Browns Lane, Cororooke, Victoria 3254, Australia. andrew.l.craig84@gmail.com Photographs - Andree Craig except where indicated.



HISTORIC HOMES OF WESTERN VICTORIA - BY NAN CHAPMAN (December 1965) (Copy 287 of 600 copies printed) A HOUSE THAT HEARD THE VOICE OF MELBA

Cororooke House - John Robertson



Cororooke House" — when Mr. and Mrs. John Lang were in residence. The tower referred to in this chapter is shown on the extreme left of the photograph.

At the turn of the 20th century, Australia's Madame Melba was being hailed around the world as the greatest soprano of all time. Linked with her life is this story of a white mansion known as "Cororooke House".

"Cororooke House" was a two-storied building with 30 rooms and a tower, once described as among the most handsome, up-to-date and comfortable country houses in Australia. It was a house that knew the magnificent voice of Melba intimately. For it was here that she found time to relax from the rigors of her profession and to enjoy the congeniality of friendship and mutual admiration.

Melba was a friend of Mrs. Everards Browne, formerly Miss "Muffie" Chirnside, once mistress of the great house. It was built by John Robertson, a Justice of the peace at Colac for many years, and eldest son of William Robertson, of 'The Hill', one of the district's earliest pioneers. John Robertson was born at Hobart Town, Van Diemen's Land, on July 17,1837.

He was educated at Rugby in England and then went to the Agricultural College of Cirencester, Gloucestershire. There he studied agriculture and chemistry. On his return to Australia he settled on the family property, and on the death of his father inherited that portion of the estate known as Cororooke; he was in partnership with his brothers in the firm of Robertson Bros. He later became a Justice of the Peace.

He married at Hobart Town, September 20, 1860 -Sarah Martha, only daughter of Edward Butler, solicitor, of Hobart. She died on October 9, 1925, aged 88. He died at "Cororooke House" on July 18, 1875.

They had one son, Edgar Quartus, born on February 29,1868. He was educated at Clifton College, England, and joined the King's Own Scottish Borderers. He served in the South African War, ranking as captain, and was killed in action in Stephannsdrai, South Africa, July 29, 1900.

Four daughters in the family were Ida Hesse, died May 21, 1864; Laura Annie, married Captain Bush, surgeon, of Clifton, Bristol, England; Eva May, married Dr. George Thomas Myles in December, 1898; and Amy Mary, married, firstly George S. Shuckburgh, R.N., in September, 1898, and secondly, Charles A. Tucker.

Although now demolished, the mansion's early existence is still honoured as historically significant to this district. Nellie Melba and the first Duke of Edinburgh were probably the most noted of many

HISTORIC HOMES OF WESTERN AUSRALIA



The "red hall" of "Cororooke House"; where pillars of oak toped by strange winged creatures form the magnificent fire place.

distinguished guests who stayed there.

Johnstone, of Colac, and wife of the late Mr. John Lang, Red Hall was a striking fireplace formed by pillars of oak was the last woman to live in "Cororooke House" before topped by strange winged creatures with wings it was demolished.

In a special interview with the author, Mrs. Lang described her beautiful old home. Mrs. Lang and her room, also furnished in mahogany and made outstanding husband had bought the mansion in 1918, keeping it on by another magnificent fireplace exquisitely carved in for 28 years, until I946, when it was demolished and the English oak. Its great mantel rested on the broad land was bought by Mr. Kenny. Off the Cororooke Road, shoulders of two life-sized oak figures likened to the the drive to the house was over a mile long, lined initially mythical god - Atlas. by pines and then by stately elms, - known as the 'Elm leafy archway.

Where the elms stopped, a circular drive - once set in spacious and immaculately-kept lawns and gardens formed the approach to the great white house "From the fireplaces and marble mantelpieces.

front door you entered into a tiled hallway, then into the Red Hall," Mrs. Lang said. This once incredibly beautiful Within the precincts of the great mansion, a "Melba hall was aptly named. Everything in it toned to red. Its Room" was so named in tribute to the famous singer. carpet, its curtains and even the walls - handsome in Today, the land on which the mansion once stood is wallpaper patterned with birds and flowers - glowed in owned by Mr. P. Kenny, of Cororooke. Mrs. lsabel Lang, the same vibrant colour. The furniture also toned. It was of Terang, daughter of the late Mr and Mrs. J. G. of mahogany imported from England. At the end of the outstretched like giant eagles in flight.

Off the Red Hall were the billiard room and the dining

Off the Red Hall again was the ballroom, majestically Drive'. Today, the trees still embrace the long drive and chandeliered, panelled in English oak and floored in are greatly admired by the few who travel beneath their jarrah. "Here was another splendid fireplace. It was of oak and bronze," Mrs Lang said. From the ballroom, entrance was made to an office, all oak again.

Upstairs were the bathrooms and bedrooms, all with

Downstairs there was another bedroom and a passage off that room led to a sitting room, nursery and linen room.

The back part of the house included a conservatory, silver pantry, housemaids' pantry and modern kitchen. Off the kitchen was the main dining hall, while another passage led to the maids' bedrooms, laundry, larder, storerooms and cellars.

The tower, ballroom and Melba Room had been added by the Everards Browns when they owned the house. The conservatory, situated between the tower and house, was picturesque with ferns and perfumed by tropical plants - an enchanting place.

When Mrs. Lang came to live at the house, she took an interest in the conservatory and helped it to a state of rare beauty. She and her husband also effected many renovations at the great house. "But when the time came to sell, there was no alternative but to demolish the house, as it was a time when labour just couldn't be come by," Mrs, Lang said.

Sale of the mansion's furniture brought buyers from all over Victoria. Behind the house were the stables. "These really were wonderful," Mrs. Lang recalls. The mangers were lined at the back by

imported Scottish tiles patterned with racehorses. The cases.

November 12, 1918. The notice was issued under country residence. instruction of Mr. Everards Browne by J. G. Johnstone and Co., Thomas Baker, Daley and Co. Ltd., and G. F. splendidly situated. for sale at public auction the whole plant, etc." of the remaining portion of Mr. Everards Browne's Cororooke property, 525 acres in 14 farms, ranging mostly from 15 acres to 30 acres, and including the Duke of Edinburgh from Geelong to Colac and through mansion grounds with 148 acres of very rich land attached.

"Description - It is well known that the land surrounding the Cororooke mansion is the pick soil of the Colac district for growing potatoes and onions, which coaches from Geelong to Colac and Camperdown, but was proved many years ago by the yields and quality of Mr. Scott was connected with the coaching business for both products. Potatoes grown there are free from the 20 years. He had a livery stable in Geelong and kept effects of frost. It has been mostly in grass as dairies for some many years, and is now in the pink of condition for steeplechaser, "Chance", which won many races. cropping with potatoes and onions, equal to new ground. "The land is within a mile of the great butter factory belonging to the Colac Dairying Company, the greatest continued the coaching until that mode of conveyance factory of its kind in Victoria.



Many distinguished people, including Madame Melba, have travelled down the picturesque elm drive to Cororooke House".

"Cororooke House" was described thus - "A two tiles were also let in above fireplaces in the grooms' storied building with tower, is one of the most handsome quarters, a feature of which were handsome glass display up-to-date and comfortable country houses in Australia, equipped with electric light and everything for comfort. The grounds are beautifully laid out and in splendid More interesting information about the house can be order. There are extensive plantations of trees of many gleaned from the following extracts taken from a notice kinds. These advantages, together with the splendid of sale of "Cororooke House Estate" at public auction on climate and scenery of the Colac district, make it an ideal

"Note - After the land sale the magnificent furniture in Sydenham, in conjunction. It read - "Provisional sale of the Cororooke mansion will be sold by auction at the the primest potato and onion land in the Colac district, house. There will also be a clearing sale of livestock,

> It is interesting to note that the man who drove the other Western District centres on his Victorian tour - and who possibly drove Melba here too - was John Scott, who died at Colac in 1882.

Archer and Henry were the first to introduce stage racehorses, amongst others the famous

When Mr. Scott died, his son, Thomas A. Scott, was superseded by the railway.

He then took up grazing pursuits at Pirron Yaloak, his residence there being formerly occupied my Mr. Angus Mackay, an old colonist who died in 1872. In 1881, Mr. Scott married Miss J. Mackay, daughter of the gentleman just named. Mr. Scott had come out to Australia with his parents from Scotland in 1854.

Today, in the grounds that once surrounded "Cororooke House", a collection-of magnificent trees bear witness to the beauty that once existed there.

The author thanks Colac Botanical Gardens curator, Mr. D. E. Greenwood, who contributed the following description of these trees.

"After walking around the area, which at one time formed the grounds of 'Cororooke House', I found quite a number of trees with 100 years of growth to their credit - still flourishing. This is indicative of the splendour which at one time rightly belonged to this estate.

"South of a hedge-like growth of English hawthorn (*Crataegus oxyacantha*) can be seen a number of English elms (*Ulmus campestris*) and oaks (*Quercus Robur*) whilst further on are two oaks which I cannot identify.

"One could not fail to notice good specimens of Chestnut (*Castanea*), Oriental plane (Platanus Californian (Sequoia orientalis), redwood sempervirens), Chinese elm (Ulmus chinesis), Chinese hawthorn (Photinia serrurata), Carob bean (Ceratonia siliqua), Himalayan spruce (Picea smithiana), English holly (Ilex aquifolium), Queensland kauri (Agathis robusta), Portuguese laurel (Prunus lusitanica), a declining Paulownia, Native brush cherry (Eugenia paniculata), Dracena (Cordyline australis) and several ornamental forms of cypress (Cupressus)

"The tree of heaven (Ailanthus glandulosa), with

HISTORIC HOMES OF WESTERN VICTORIA

"This palm, known as Jubaea spectabilis, the treacle or wine palm of Chile, is held in high esteem by the Chileans, who boil down the sugary sap extracted from the trunk and sell it as a delicacy.

"Actually, there are three of these palms, the one at 'Cororooke House' and two at 'The Hill', the adjoining property.

"One of these palms at 'The Hill' was planted by H.R.H. The Duke of Edinburgh in 1867, and another was planted by him at 'Cororooke House'. In this there is more than a clue as to the age of the aforementioned trees.

"Belladonna lillies (Amaryllis sp.) and daffodils (Narcissus) up to about two years ago were to be found growing there in considerable numbers, particularly along the mile drive.

"But regrettably, many of these plants have disappeared. This is due to unauthorised people going in and helping themselves in face of prosecution."

FOOTNOTE: Nellie Melba's father, David Mitchell, arrived in Australia with one pound in his pocket and enough Scottish determination to make him a wealthy landowner and contractor. When holidaying in Queensland with her father, Nellie met the son of an Irish baronet, Charles Nesbitt Armstrong, whom she married. They had one son, George, but her marriage was not a success. Nellie Melba was born in May, 1861, and died at Lilydale on February 23, 1931.

suckers growing over a wide area, is very much in evidence. Because of this sucker growth, I believe 'tree of hades' would be a much better term for it.

"I would like to refer particularly to two genera: Firstly, the Araucarias, which are standing in all their glory with the Norfolk pine (*A. excelsa*), Queensland hoop pine (*A. Cunninghame*), Bunya-Bunya pine (*A. Bidwilli*) and the rarely seen, *A. rulei* - all are beautiful specimens.

"Secondly, two cedars I noted. One the glaucous form of the Atlas cedar (*Cedrus atlantica gla*ucophylla), Is without doubt the finest specimen I have ever seen.

"Near the centre of the grounds stands a huge palm which, by the way, bears small coconuts. These coconuts have a texture and flavour similar to the well-known large form.- But to get to them, one has to be quick or the possums may get there first, as I have found."



I live with my father on 5 acres on a north facing, supposedly frost free (some places in the garden sadly proved otherwise this year), gently sloping hill (called Mount Corangamarah). It's anything but, only rising about 100 metres from nearby Colac. It is generally not written up on maps and locals refer to it as "The Hill" or "Robertson Hill" after the original settlers. The 5 acres we own is a small part of what was a large property of 30,000 acres originally acquired in the 1850s/1860s by one William Robertson (historically important, yet largely forgotten from Australian lore as the place and person who first bred and introduced the FF brand of Hereford cattle to Australia), and later divided evenly amongst his 4 sons who each built opulent mansions and extensive gardens on their landholdings.

The grandest of the 4 homesteads, "Cororooke Mansion", at the time regarded as one, if not the finest, homestead in the new colonies between Melbourne and Adelaide, was a decadent 30-room two story house situated at the end of 1km+ driveway lined with Oaks, Elms, pines and other exotic trees (most of the trees are still standing and make a clear line and clump on Google maps).

Over 50 acres were planted out with trees of favour

of the 1850/60s but some more unusual Australian native rainforest trees from Queensland and New South Wales including *Brachychiton* and extensive plantings of members of the Araucariaceae. In early December 1867, the Duke of Edinburgh passed through the district on a national tour and stayed at "Cororooke mansion", planting (or at least providing seed of) a *Jubaea chilensis* that has since grown into mature specimen (not surprisingly after 149 years, even for this slow growing palm) and stands approximately 17-18 metres to crown. It is registered with the National Trust Victoria.

Next to the *Jubaea* is a massive *Araucaria bidwillii*, the Queensland Bunya (also registered with the National Trust), which has the largest circumference recorded in Victoria for the 7.3 metres at 1.4 metres from the ground.

Sadly the homestead was demolished in the 1940s due to upkeep and the difficulty in obtaining labour during the war. In the years after demolition, the mansion grounds including the 50 odd acres of trees and garden surrounding was bought by a local farmer who saw the trees as an impediment to growing pasture for his cows and systematically cleared more than 80% of the area covered in trees, many rare and at 60-80 years old, well established.

My parents bought the property in the early 1980s and built our house over the top of the original cellars. They planted extensively over the next few years. Some aloes date back from this period though most plants weren't succulents due to the relatively high rainfall back then.

Throughout the 1990s and early 2000s rainfall became less predictable and conditions a lot drier in summer with rainfall dropping from around 600-750mm a year to closer to 500mm (bottoming out in 2006 with 357.1 mm). My mother passed away in 1998 after being diagnosed with cancer in 1994, which coincided with the change in climate conditions, and the garden suffered as a result over the next few years, while dad worked and my brother and I finished off secondary school.

On completion of school, a renewed interest in the garden was taken with the idea of rejuvenating and replacing what was lost in the previous years and extending the garden and continuing mum's vision of it all. A specific focus on drought hardy plants and ones with low water needs brought me back to succulents. There were some *Aloe*, *Gasteria* and *Haworthia* plantings in the '00s but things didn't really get obsessive concerning aloes until a fateful trip to London to visit my brother (who is still over there, married now to a nice Brit) in 2009 which included a guided tour of the large glasshouse area generally out of bounds to the public at Kew Gardens. The main intention of the tour was to see cactus, but when I entered the *Aloe* room I was convinced I had been focusing my attention in the wrong places.

I have a spreadsheet of all the aloes I possess with other relevant information, though it is in an incomplete state as I add more columns or update old ones. There are also plans for over 20 raised garden beds and extensions with plant lists and other information.

Roughly a little over 1/2 of the aloes I have are

Annual Rainfall Cororooke - Millimetres															
YEAR	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	YEAR TO	TAL	COLAC TOTAL
1993	93	27	28.8	9.3	33	67.9	63.7	69.2	105.4	70.1	64	70.8	702.2		1077
1994	44.1	63	2.2	23.9	68.7	43.2	67.1	65.6	65.3	64.3	68.5	26	601.9		943
1995	30.2	17.2	63	105.3	42.8	79	91.9	71.1	57.6	26.4	54.9	47.9	687.3		1067
1996	26.8	44.7	45	63.8	13.6	74.6	93.5	104.3	127.9	42	36.4	49.8	722.4		1129
1997	70.4	19	18	11.9	71.7	25	18.5	67.3	75.7	75.1	31.7	6.1	490.4		317
1998	53.9	12	6.1	60.9	31.1	97.9	53	28.5	85.4	66.6	16.1	24.6	536.1		793
1999	21.5	28.1	50.3	5.2	46.6	46.7	30.7	67.1	32.8	55.6	65.4	38.8	487.8		470
2000															557
2001	24.5	25.5	32.5	99.5	17.1	60.2	26.2	97.6	63	91.6	95	48.8	681.5		789
2002	20.8	90.5	6.7	27.7	45.3	44.5	70.2	48	59.7	51.4	58.4	33.6	553.8		634
2003	23.3	13.2	27.2	45.1	31	64.6	82.8	99.7	58.4	90.5	21.6	46.8	605.2		666
2004	41.5	28.5	44.1	42	40.2	128.1	68.1	73.8	68.8	34.5	50	31.5	651		649
2005	47.6	72.4	17.8	15	15.3	79.8	62.5	74.7	56.5	64.6	23.6	26.7	558		612
2006	50.3	38.5	35.8	37.9	54.5	10.5	27.7	23.2	37.3	12.3	29.1	28	357.1		375.6
2007	69.7	25.5	28	19	63.6	47.1	83.1	40.2	61	26.5	85	80.2	628.9		691.8
2008	27.5	14.4	26	19	43.6	38.8	73.9	91.5	31.7	16.5	32.9	81.9	497.7		512.2
2009	6.3	1.2	38.5	47.8	30.6	56.6	84.8	101.4	76.7	42.4	98.6	49.7	704.2		583.4
2010	10.6	68.2	87.2	74.5	27.2	58.3	36.1	153.9	37.5	102.8	69.5	49.9	815.8		910.1
2011	141.3	55.4	26.7	39.7	34.7	73.5	59.2	49.5	45.5	55.6	67.7	5.6	654.4		692.2
2012	28.2	8	40	42.1	52.1	51.8	69.5	77.9	71	39	25.7	42.7	548		563.2
2013	12	3.5	11	19.1	65.9	50.3	81.1	133.7	91.3	90.1	21.8	49.9	629.7		595.2
2014	20.8	0	32	60.1	37.5	107.1	84.6	35.8	25.8	17	19.6	18.2	458.5		464.4
2015	58.1	52.7	32	17.9	75.6	31.9	45.6	37.2	73.9	35.1	14.8	33.5	508.3		
2016	33	20	34.1	16.4	108.8	82.5	105	59	146.8	108.7	37.6	36.5	788.4		
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planted out in the garden. The rest are in pots either on the veranda or inside a very cramped 45 m square greenhouse that reaches upwards of 55 degrees Celsius on the really nasty summer days. A new 60 square metre greenhouse specifically for storing potted aloes is under construction and should hopefully be completed before the end of the month.

With the massive increase in plants in the last few years (not to mention cuttings from those plants) I have built over 20 new raised garden beds (with another 10 in progress) to accommodate the plants that will survive outdoors, and the search has been on for multiples of the questionable ones to trial. Though just about all the South African species will grow outdoors here, I'm still surprised by some 'accidental' supposedly tropical plantings that seem to thrive including ones from Uganda and Kenya.

The rain shadow from some of the large trees provides adequate protection from the rain that comes predominantly from the west, enough that a number of species from the more arid areas of Southern Africa and some from the Horn of Africa and even Saudi Arabia have been trialled out successfully in these areas.

The rate of growth and health of a plant with a free



Aloe Buhrii-Orange



Arbuscular Mycorrhizal Plant Association *Glomeromycota* sp. - on pot of *Gasteria nitida*



Gasteria batesiana f. barberton

root run eclipses anything I can even remotely achieve in a pot! (though the appearance of a fungi in a few pots of aloes and gasterias I only recognised for what is was last summer, seems to have a beneficial mycorrhizal association, promoting lush, healthy growth and in turn, discouraging mealy bug attack, outgrowing seedlings from the same batch at about 4-5 times the rate of pots without the fungi).

An interest in x*Gasteraloe* hybrids quickly led onto *Gasteria* which also seem quite adaptable to the weather conditions here.

I've only had the collection registered with the GPCAA since early 2016 and there are plans for an

article on the collection in their Autumn 2017 journal. I have been told the collection has been put on a 2 year provisional registration period and wait to see what happens after this.



Registration of Cultivars - an Essential Part of the Story.

Plants correctly published in accordance with the ICNCP are eligible for registration with the appropriate International Cultivar Registration Authority, ICRA. The ICRA for *Haworthia–Haworthiapsis-Tulista* is the Japanese Haworthia Society, Registrar Dr M. Hayashi. Their appointed western country representative is Harry Mays BA BSc (Hons) Editor, Alsterworthia International. Both are willing to publish new cultivars (in Japanese /English respectively). For further information please contact Dr M. Hayashi info@haworthia.net or Harry Mays hmays@freenetname.co.uk *To register any cultivars you may have please complete the enclosed registration form.*

Unfortunately not all genera have ICRAs. There are no ICRAs for the other genera of interest to Alsterworthia. Once upon a time there was one for *Aloe* but no longer. In the meantime a few individuals/societies may try to keep lists of cultivars. Alsterworthia International goes further in that we keep lists of cultivars for Aloe, Gasteria, related small and nothogenera genera including photographs and original descriptions and sort out the validly named from the non-validly. Arrangements have been made for our files to be handed over to the Royal Horticultural Society in the event of my death with no one wishing to take over this time-consuming work. In the meantime please continue to send me names, descriptions and photos of cultivars of *Aloe, Gasteria*, related small genera and their nothogenera. Harry Mays. hmays@freenetname.co.uk

ontinued from page 7.

Aloe speciosa x Aloe ferox.

These two species come from South Africa with overlapping ranges and are known to produce naturally occurring hybrids in the wild. The emerging inflorescence, taken over a period of 5 weeks is shown at 1. The second picture is taken 3 weeks after the first, with the last taken a further 2 weeks later.

Though both parent plants are generally single stemmed. 2+ metres tall, this hybrid is producing copious offsets about 30 cm up the stem, Fig. 3.

There was no forethought in making a slideshow, hence the different lighting, just 3 pictures that were taken roughly from the same position and strangely exactly 3 and 2 weeks apart. So why not?





One Aloe speciosa x Aloe ferox photographed at intervals of 3 then 2 weeks numbered 1-3.



rum x Aloe spectabilis Aloe candelabrum x A. spectabilis. A recent purchase sold as a white flowering Aloe marlothii, but hidden deep in the pot was a tag labelled Aloe candelabrum x A. spectabilis. You can't really complain though about it not being white flowering when the flower looks as nice as this with its contrasting colours.



Aloe thraskii. A common, European, honey bee (Apis mellifera) enjoying both a bit of sun, and the flowers of Aloe thraskii, from the Eastern Cape and KwaZulu-Natal in South Africa and all in Australia!



A close-up of the horizontal racemes *of Aloe mawii*, a tree aloe to about 6 ft, with a natural range extending from Malawi, into Mozambique and up into southern Tanzania. A rarity amongst the aloes species in its horizontal racemes and upright flowers.



Aloe pratensis. Open pollinated - from Silverhill Seeds 2006



Aloe glauca . Developing inflorescence.



Aloe speciosa o-p

Aloe speciosa o-p - flower pointing up.



Aloe longistyla. Flower head with flowers opening basally.

Aloe thraskii flowers pointing down.



Aloe trichosantha, Eritrea, with a subspecies found in nearby Ethiopia. Similar to Aloe pubescens, also from Ethiopia, A. trichosantha is a larger, more robust plant than it's close relative, with a more conspicuous white fuzz covering the flowers.



Aloe erythrophylla - emerging inflorescence.



A few aloes from both ends of the distribution range (and one a bit off to the right) of this genera, with emerging inflorescences. 1. *Aloe striata*, from a wide area of the Western and Eastern Cape Provinces in South Africa. 2. The pine cone shaped flower bud of *Aloe pluridens*, possibly with a bit of another aloe species mixed in it's genetics, from a large coastal area in the Eastern Cape Province, South Africa. 3. *Aloe acutissima* var. *acutissima* from Madagascar with a horizontal emerging flower bud that quickly straightens up as it develops. 4. *Aloe sheliae* from Saudi Arabia, with its thick, slightly rough and virtually toothless leaves. The *Aloe* season has well and truly begun in the Southern Hemisphere.





One of the most commonly grown aloe species, this specimen is approximately 30 years old, starting from a single truncheon. It now covers over 10 square metres and has been used as a mother plant, producing over 150 decent sized cuttings for hedging elsewhere in the garden. The tree in the centre of the background is a Chilean wine Palm, *Jubaea chilensis*, the one to its right, which shows little detail because of shade, is a bunya pine, *Araucaria bidwillii*. The Jubaea and the *Araucaria* are both registered with the National Trust of Victoria. These 2 trees are of approximately 150 years old.





Aloe krapohliana dwarf aloe, only growing to about 8 inches across (this only about 5 inches), from the extremely arid northwest corner of South Africa, usually doesn't survive very well in cultivation due to coming from areas with as little as 50-100mm (about 2-4 inches) of rain a year, nearly entirely during the winter months. The flowers are always disproportionately sized in comparison to the rather small plant. This plant was purchased from Roraimanursery in Lara, Victoria, Australia in winter 2013.





Aloe sheilae - Paul Forster

I obtained my plant from Tek Marko, a grower in Australia, who obtained his from Paul Forster, who apparently grew them from seed.

Aloe sheilae is known from a small area west of Gishah in Hijaz Province, Saudi Arabia and 600 km north-north-east of *sheilae* where the *Aloe cephalothorax*, now synonym of *sheilae*, grows.

Does the combination of *Aloe cephalothorax* with *Aloe sheilae* suggest that some (slight) variation in features of *Aloe sheilae* may be encountered?

My plant is in a 13 inch pot and at least 13 years old. (Label dated April 2003, but most likely acquisition date rather than sowing date)

Aloe congdonii a low growing, clumping Aloe (found in southern Tanzania) though this looks nothing like the named species in flower or leaf structure. Possibly/maybe/??? a hybrid of the version of Aloe sinkatana (from Sudan) long in the speciality nursery trade (now classified as Aloe zubb) with another unknown Aloe. Any guesses anyone? Nice all the same with it's clumping habit, hardiness to rain and cold and lovely multi-coloured flowers.





Aloe plicatilis, left, gorgeousness and gorgeousity made.. Cellulose? A few emerging inflorescences during a brief spell of sunshine today. Recently reclassified as *Kumara plicatilis* the fan aloe,



Aloe pretoriensis with emerging flower spike, showing reptilian-like premature flower racemes. This *Aloe* occurs in North-eastern South Africa, Swaziland and into Zimbabwe. The plant in picture stands about 40 cm from ground to growing point of the plant, plus at last measurement the flower spike rises another 160 cm and is still growing. The flower stem is over 5 inches in circumference, I suppose necessary to handle such a large inflorescence. One of the larger aloe flowers in proportion to the size of the plant.







Aloe pearsonii hybrid, flowering for the second time in the last 6 months. A rare Aloe in cultivation, the species is endemic to the arid Richtersveld in the northwest corner of South Africa, neighbouring Namibia. It favours hillsides and slopes and is found in some of the driest areas of the Richtersveld. The slowest growing of all the aloes, plants in the wild may reach around 2 metres tall, but are believed to be several hundred years old. Unbelievably drought tolerant, they are said to be able to survive with no rainfall for several years, the leaves turning a bright red colour when distressed, painting entire hillsides crimson in the wild. This open pollinated hybrid was described by the grower of the plant as 'pearsonii on steroids'. Its appearance resembles Aloe pearsonii somewhat, except with much larger, less down turned leaves, and a slightly different inflorescence structure, yet still a very choice plant. The flowering period also differs from the true species as it is a summer flowerer, while this one flowers Autumn and Spring. This one is also a relatively quick grower.



Aloe prostrata, flower detail, from north-west Madagascar. It and about 17 other species, all from Madagascar and nearby islands in the Indian Ocean, were separated from the rest of the aloe species for years into the genus *Lomatophyllum* due to the seed being wingless and encased in a berry-like fruit, where all other aloe seed is winged and the seed capsules dry out and release the seed. It has been placed in recent times in *Aloe*, after genetic testing demonstrated that differences between *Aloe* and *Lomatophyllum* didn't warrant separating.



Aloe 'Paul Hutchison', named after the late, distinguished American botanist, plant collector and owner of Tropic World in San Diego, California up until his death in 1997.

Aloe 'Golden Bells'. Hybrid of unknown parentage with large bicolored flowers. Though flowering prolifically in the cooler parts of the year, it seems to sporadically produce flowers during the warmer months also. A large, rapidly offsetting, hardy hybrid ideal for growing out due to its size and quick growth. For example this plant was only 1 rosette, about the size of the ones present, 2 years ago when it was planted and has since had the largest rosettes removed due to it giving plants nearby a hard time. It seems to grow even quicker than *Aloe arborescens*, which I thought was a quick grower, but has nothing on this plant.



Aloe buhrii - yellow flowering form from a very restricted area of the winter rainfall area of South Africa, in the south-west of the Northern Cape Province. near Calvinia. This aloe detests summer rainfall and in it's natural habitat receives very little rain, even in winter. It is closely related to *Aloe striata*.





Aloe buhrii above, open pollinated & flowering well. The orange flowers and shape are typical of *Aloe buhrii*, but the clumping form and quite large marginal teeth, plus the slightly more maculate leaves give this plant away as a hybrid.

Aloe buhrii left, orange flowering form of the non-clumping, stemless species, looking fresh and happy after the first rain in the last 4 weeks of 2015, the hottest start to Spring on record here in Victoria, Australia. The rain-washed leaves really bring out the distressed colourings of the plant. This *Aloe* has been a prolific producer of highly viable seed in the last few years

