



# SUCCULENTA

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THE NEWSLETTER OF SUCCULENTA EAST AFRICA

*established 1993, a working division of*



**NatureKenya**

THE EAST AFRICA NATURAL HISTORY SOCIETY

## ***Succulenta Committee members are:***

Chairman & editor:	Robert Entwistle	robertentwistle@gmail.com
Secretary:	Andrena Low	jalow5@gmail.com
Treasurer:	Jacqui Resley	
Nature Kenya liaison officer:	Heather Elkins	
Events & activities:	Julia Glen, Sarah Grant & Gail Paul	
Scientific advisors:	Professor Len Newton & Dr Emily Wabuye	

## ***Chairman's Notes***

1. All the issues of "Ballya", the periodical issued three to four times annually by Succulenta between 1993 and 1998, have been digitised as have all 6 of Len Newton's booklets, including the recently-published "Conservation of Kenyan Succulent Plants". All of "Ballya" is on one DVD and all of the booklets on a second DVD. The committee considered this to be a vital project because:
  - a. Ballya and Len Newton's booklets contain a huge store of knowledge which should not be lost to current and future generations of succulent plant enthusiasts, collectors and students, nor to an increasingly wide public who are coming to see the benefits of gardening with succulents and other indigenous plants in an era of climate change and greater scarcity of water.
  - b. Stocks of the printed versions are dwindling and it would be expensive and difficult to have them reprinted; and
  - c. Once we get our new website complete and hosted on the internet, we will be able to reach a vastly greater audience than we do currently, both in East Africa and beyond. The DVDs will be advertised and made available for sale to all interested parties.

This process of digitisation promises greatly to enhance the availability of information on East African succulents and our Succulenta group, while also promoting Nature Kenya and its good works.

We are most grateful to Nature Kenya for providing the funds both for digitisation and the professional end-stage work of creating the website.

We are also grateful to Prof Len Newton, holder of the copyright of all the booklets and author of many of the articles in Ballya, for allowing us to digitise this material and to sell the DVDs for Succulenta's benefit.

The Succulenta committee has yet to decide on the selling price for the two DVDs, but will inform members shortly. We recommend that every member who does not already possess a full set of these periodicals and booklets should buy copies – not just because we want to sell them but because, if you are interested in succulent plants, you really *ought* to have them for reference and record purposes!

Ballya features articles of serious botanical interest on succulent plant families and individual species and their distribution and habitats, together with information on methods of record-keeping and how to prepare herbarium specimens; and also includes articles of more general interest, including medicinal and other uses, gardening with succulents, the construction of rockeries, labelling in the garden, pollination and propagation from seeds or cuttings, dealing with pests, articles on field trips, discoveries and the explorers and individuals who made them, and much else. In the doing, Ballya tells the story of succulents in East Africa and the early history of Succulenta.

Prof Len Newton's booklets included on the second DVD are:

- A checklist of Kenyan Succulent Plants (2003);
- Taxonomy without (too many) Tears (2003);
- The History of Succulent Plants in Kenya (2004);
- The Pollination of East African Succulent Plants (2005);
- An ABC for Succulent Plant Enthusiasts (2009);
- Uses of Succulent Plants in East Africa (2011);
- Conservation of Kenyan Succulent Plants (2018).

These booklets cover East African succulent plants fairly comprehensively and the "ABC", in particular, gives a sound introduction to newcomers.

2. Old news, of course, but the rains arrived late, at last, in June, at least up here near Timau – and in July there was lots more. Everything is bright green, with waist-high grass in place of bare soil; desiccated aloes and other succulents previously struggling to stay alive were suddenly in danger of drowning; and young trees thought to have given up the ghost are now sprouting new growth. After such an extended dry period it is easy to forget what a boon good rain is and with what enthusiasm plants can grow if only they are properly drenched. Succulents' leaves are filling out, some species are in flower and all is well again. Except that weeds are also being properly enthusiastic. Some of these definitely do not fall into that alternative definition: plants simply in the wrong place. Nope – the herb black jack (*Bidens pilosa*) has *no* redeeming features so far as I am concerned (except, and there's always a but, Kikuyu people use the leaves, chopped and mixed with other herbs and cooked with vegetables, as a booster for the immune system – it is one of several they recommend for AIDS sufferers).

For those with a garden, even a succulent garden, it's time to get gardening again and to be reminded of the adage that, in the end, it all comes down to maintenance.

3. Unfortunately, the rains also bring a multiplication of pests. The aloe snout beetle is revealed by the extremely unwelcome sight of black, rotting centres to too many plants and mealy bug has appeared in fluffy white masses around the joins between stems and leaves of some of aloes. In an article in the March 2019 issue of *Cactus World*, the journal of the British Cactus & Succulent Society, a member recommends a non-toxic product named SB Plant Invigorator for control of mealy bug. I have bought a bottle via Amazon and will comment on its efficacy in the next newsletter.
4. Another snippet from *Cactus World* warns that photos taken on some digital cameras record automatically the GPS locations where they were taken and this carries obvious dangers where plants are endangered or exist in small, local populations. This GPS data can be removed, apparently, and should be removed prior to sending sensitive photos over the internet.

5. In the article on Aloe bubatiana below, Barry Cameron takes a 25 year-old Ballya article and updates it with comment from one author of the recently-published "Aloes of Uganda". There's fascinating history here and it's interesting how Dee Raymer's work encouraged the more recent research.
6. Prof Len Newton has not been idle: he continues to work on new species he discovered in Kenya before he returned to UK and has been most generous in sending us abbreviated descriptions and photos of two newly-described Kenyan species. The full descriptions appear in technical journals where they are protected by copyright. Nevertheless, we are very fortunate to have these descriptions and Succulenta is grateful to Len for sharing them.
7. Errata regarding April's Newsletter: Len Newton has pointed out that the captions describing the Adenia globosa plants in Dee Roberts' garden at Mogwooni were misplaced. The plant resting atop stones in the top right photo is Adenia globosa subsp. pseudoglobosa, while the more robust, tangled plant in the lower left photo is Adenia globosa subsp. globosa.

## ***Future events***

The Functions Committee have arranged the following exciting excursions for members:

1. A two - night trip to Magadi on 14/15 Sept 2019. As most members will be aware, Magadi is low-lying and can be very hot, so take plenty of water to drink. There will be a stop on the way for a picnic lunch at Olorgesailie. Again, refer to Sarah's email for details;
2. A day visit to Waridi near Athi River, possibly in February 2020. Waridi is a major horticultural business, but also has a nursery area where many succulents and other plants are propagated for sale at Plants Galore at Runda. Barry and Andrew Cameron have kindly agreed to a tour round the greenhouses, the rose grading and packing halls and the nursery. Having visited Waridi before, I can recommend this as a most interesting and worthwhile trip. Numbers will be limited to about 21 members. Updates and more details will be issued in due course.

## ***Happenings***

### **1. KENYAN SUCCULENTS – ADAPTATIONS AND INSPIRATIONS**

At the invitation of Nature Kenya, Sue Allan gave a most interesting talk on "Kenyan Succulents – Adaptations and Inspirations" at the National Museums of Kenya on 26<sup>th</sup> June 2019.

Sue opened her presentation by questioning the sense in using thirsty and soft plantings on Kenya's highways and roundabouts, noting that their need for regular watering amounts to a huge waste in a country where the shortage of water is a stark reality for many people. She pointed out that Peter Greensmith's original designs for Nairobi, using a simple formula which combined an occasional Acacia tree, large boulders and succulent plants, required very little water and low maintenance and were infinitely more practical.



Sue described the discovery of Aloe diolii by Gilfrid Powys to show how it is easy for some folk to become almost obsessed about succulents and spoke of how people have been inspired to use them as pot plants, vertical displays and even in wedding bouquets.



Turning to “What is a Succulent?” Sue explained that this was a group of plants that have evolved various strategies to retain moisture. She showed how transpiration works in soft leaved plants and contrasted this with succulent plants, illustrating the various adaptations in succulents that enable them to reduce transpiration and water loss. She highlighted the various strategies of stem succulents, leaf succulents and even spines and powdery stems to deflect the heat; and then followed with an overview of some Kenyan succulents, showing specific adaptations including drought mechanisms observed in various aloes to further reduce the loss of moisture.



Drought-stressed Aloe elgonica curling up to reduce the surface exposed to the sun.



Aloe ballyi using shrub vegetation to protect its stem (sadly, this species is now extinct at this Mwatate location)

Most importantly, Sue pointed out the misuse of the term 'Aloe vera', stressing that whereas this term is commonly used by local people to refer to all aloes, in fact there are over fifty distinct species of aloe in Kenya alone, including three which are extremely toxic. She showed photos of the poisonous Kenyan aloes: *A. ballyi*, *A. elata* and *A. ruspoliana* and emphasised the dangers of using the generic term 'Aloe vera', especially in herbal remedies, as this is not simply dangerous but could prove fatal.

A few notes on gardening with succulents followed, with a caution not to use exotic and invasive species, for example *Opuntia cactus* (prickly pear).

Finally, Sue advised against collecting in the wild and stressed that this should only be done with the utmost care unless an area was being developed and razed, in which case this could be considered the 'Rescue of a species'.

We were delighted to see so many Kenyans present at the talk, some of whom were involved with plants or were safari guides and the questions that followed were both pertinent and stimulating.... We even gained 2 new members.

Thank you, Sue. And thank you to Norman Kiboi of Nature Kenya for organizing the occasion.

*By Heather Elkins (photos Susie Allan)*

## **2. THE SUCCULENTA DISPLAY AT THE KHS FLOWER SHOW ON 18<sup>TH</sup> MAY 2019 (by Andrena Low)**



MUCH TO THE ASTONISHMENT AND DELIGHT OF THOSE INVOLVED IN MOUNTING A SUCCULENT DISPLAY FOR THEIR FIRST TIME AT THE KHS FLOWER SHOW, THE EXHIBIT RECEIVED 3 AWARDS AND WE ARE GRATEFUL TO ALL INVOLVED, ESPECIALLY TO DEE ROBERTS WHO INITIALLY GAVE HER ADVICE ON HOW TO GO ABOUT CREATING THE DISPLAY WITHOUT BREAKING ANY RULES.

### **3. SUCCULENTA TRIP TO MARIA DODDS' GARDEN AT KAKUZI ESTATE, MAKUYU - AUGUST 10<sup>th</sup> 2019**



Some 33 members and friends battled the weekend traffic out to Kakuzi, where Maria's husband Anthony is a manager.

We placed our chairs under a lovely Nandi Flame, from which hung clever holders with air plants and coloured glass balls like Christmas decorations, for a cup of reviving coffee and catch-up gossip with friends while waiting for everyone to arrive.

Maria told us that upon moving here about 4 years ago, she couldn't bear to be wholly separated from the wonderful collection of succulents the Dodds have at their Rumuruti base, so brought down some of her most prized "prickly plants". She told a most amusing story of how she was busted while collecting rocks on the estate to create the succulent beds.

She then took us round her garden, starting with a bed of aloes and described every plant and the many different places they came from, including Northern Kenya, Turbi, Mt. Kulal, Laikipia, Western Kenya, the Chyulus and the Mara in Kenya; the Congo, South Sudan, Swaziland, Ethiopia, Somalia, Pemba and Madagascar; even one which is endemic to Yemen but found on an old Arab grave in Tanzania. Most had been collected by Maria and Anthony themselves, but several had been gifts, one especially from Gilfrid Powys collected in South Sudan. Another from Pemba was a gift from Len Newton.



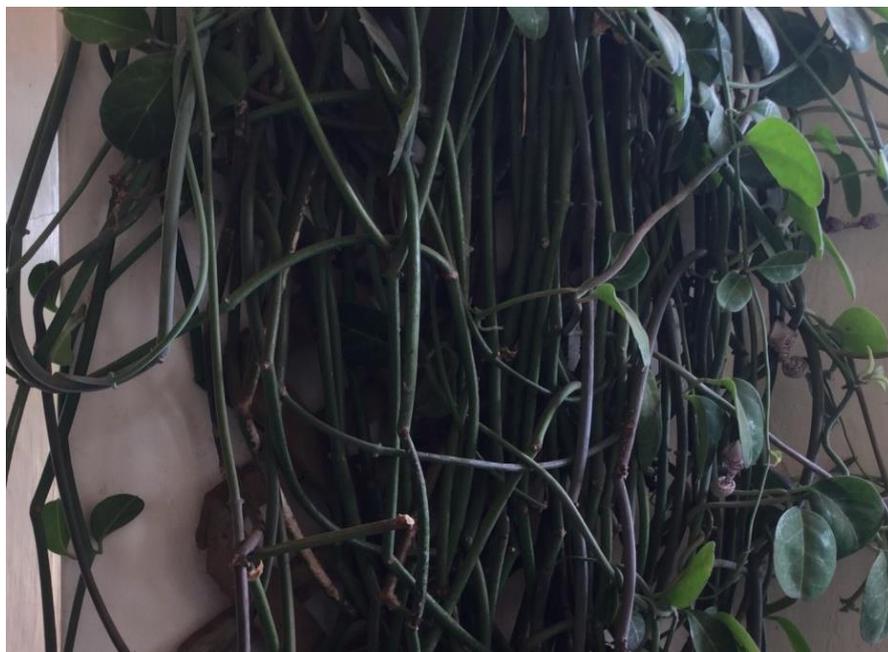
**"I've heard it all before"**

Maria then related how she had spotted a particular plant high on the slopes of a mountain in Samburu through her binoculars. With the help of Anthony and a drunken old Samburu, who was lowered down over a rock overhang on a rope, the unknown specimen was retrieved, turned out to be previously undescribed and now bears the name of *Aloe doddsiorum*. The old Samburu was completely mystified as to why anyone would want to risk their life for a plant and stated that even for a ngombe (cow) he would not do that again!



The medicinal properties of some aloes are well known, with some from Ethiopia having been documented over 100 years ago. Maria keeps a special bed (illustrated) for the medicinal aloes she uses to make soaps and skin creams. She squeezed the juice from a sample to demonstrate their soothing effects on the skin and said they will also ease a headache.

From there we moved onto her verandah where she has several other species in pots. A particularly interesting plant was the *Ceropegia*, a creeper which insists on growing anti-clockwise and whose strange flower is pollinated by fruit flies. Many varieties of these are on the endangered lists.



Near the veranda she had wooden boxes with several plants, mostly *Sansevieria* spp, to keep them from spreading to places they wouldn't be welcome.



We then continued to other beds in which more aloes were growing including an *Aloe citrina*, which Maria recommended as a garden plant due to its lovely pale flowers. Indigenous to Ethiopia, it was found at Archers Post. In this bed is a *euphorbia* from Tanzania, an *Aloe spicata* from South Africa with its yellow flowers (see illustration), one from Swaziland and, from Madagascar, a magnificent *Aloe vaombe* with a multi-branched inflorescence with red flowers and *Aloe bulbilifera*, which sends out long branches with babies which will then put out roots when they touch the ground. Sadly this was not in flower as it has a beautiful delicate pinkish flower.



## Maria's compost "hotel" and propagating shed, full of weird carallumas



I am sure all who attended will agree this was a most enjoyable, interesting and great day. Well done Maria. I, for one, am full of admiration for your knowledge, expertise and enthusiasm and feel that now I am not such an ignoramus as before.

By Diana Shaw (photos Gail Paul)

Editor's note – most of us had never seen many of the plants, including aloes, we saw at Maria & Anthony Dodds' garden at Kakuzi and what makes it so unusual is that many of the plants were collected by the Dodds themselves. I don't think I am wrong in saying that most members' gardens are populated with plants bought or given by friends and therefore have a certain similarity as regards plant material. This was different, an explorer-collectors' garden, something rare and rather special.

### Articles and features

This article first appeared in **Ballya Vol. 1 No 1 October 1993** published by Succulenta EA, a division of the East African Natural History Society (Nature Kenya) and was authored by the late Dee Raymer

#### AN INTERESTING DISCOVERY FROM UGANDA

In June this year, Mrs Mary Binks found a colony of rosette aloes growing on a cliff overlooking Butiaba town and Lake Mobutu (formerly Albert) in western Uganda along the Masindi-Butiaba Road, at 1°43'N, 31°20'E.

They do not appear to correspond with any known aloe species from western Uganda, and everyone who sees the specimen plant takes it to be *Aloe secundiflora*—a neat, dull-green rosette of characteristic leaf-form and shape, with conspicuous brown teeth along the leaf margins, Only when placed alongside *A. secundiflora* for direct comparison, is it evident that the teeth are finer and closer-spaced at approximately 2 mm in length and 7 mm apart, compared with *A. secundiflora*'s, which average 4 mm in length at approximately 15 mm spacing, even on young plants.

*A. secundiflora* has been widely recorded throughout the inland regions of both Kenya and Tanzania, in the Sudan's Equatoria Province near Juba, and at Borana in southern Ethiopia but never in Uganda. Whether or

not the specimen proves, on flowering, to be *A. secundiflora*, this is an interesting find, with the possibility of either a new species, or of extending the known range of *A. secundiflora* by several hundred kilometres into a neighbouring country. Flowering is eagerly awaited, but since the specimen appears to be juvenile, we may have to wait until next year for an answer,

**NOTE by Barry Cameron:**

Since the above article was written 25 years ago considerable progress has been made in identifying and describing this aloe and as suspected in 1993 it is indeed a new species. In 2017 a new book was published, *Aloes of Uganda, a Field Guide*, by Thomas Cole and Tom Forrest, which includes description and photos of *Aloe butiabana*, with the taxonomic work by T.C. Cole & T.G. Forrest. I wrote to Tom Forrest and asked him whether he was aware of Dee's article in Ballya and the following additional comments were received from Tom:

*"I did indeed have copies of Ballya and both Tom Cole and I were aware of Dee Raymer's article, which was partly responsible for our decision to set out for the Butiaba Flats and spurring us to do lots more field work. The story actually starts earlier. Before I met Tom Cole, I collected an aloe from the escarpment above Semliki Wildlife Reserve near Kijura. Quite independently, Tom Cole had collected an aloe from near Murchison Falls some 200 km away. Looking at these aloes in each others' gardens in Kampala we agreed that it could be the same species. When we visited the Butiaba area we first found it on the escarpment where Dee Raymer had found it. We then descended on to the Butiaba Flats by Lake Albert where much more abundant populations of *A. butiabana* are to be found.*

*You are welcome to scan the aloe book and use this information in any way you think fit.*

*Incidentally, and this is entirely by the way, Butiaba Port on Lake Albert was on the route (train, Nile steamer to Masindi port and then road) to the Congo, until the catastrophic storm and flooding of the early 60s which capsized the ferry. In the extraordinary plant catalogue of the Closeburn nursery in Nairobi (early 60s edition I think), details of this route are given for despatching plants to the Congo! Talk of a bygone age!"*

In the Cole/Forrest new aloe book there are excellent photos of *Aloe butiabana* a few of which are reproduced below with kind permission from Tom Forrest.





### ***New Literature***

1. Newton, L.E. (2019) A new dwarf *Sansevieria* in Kenya. *Sansevieria* 39: 25–26.

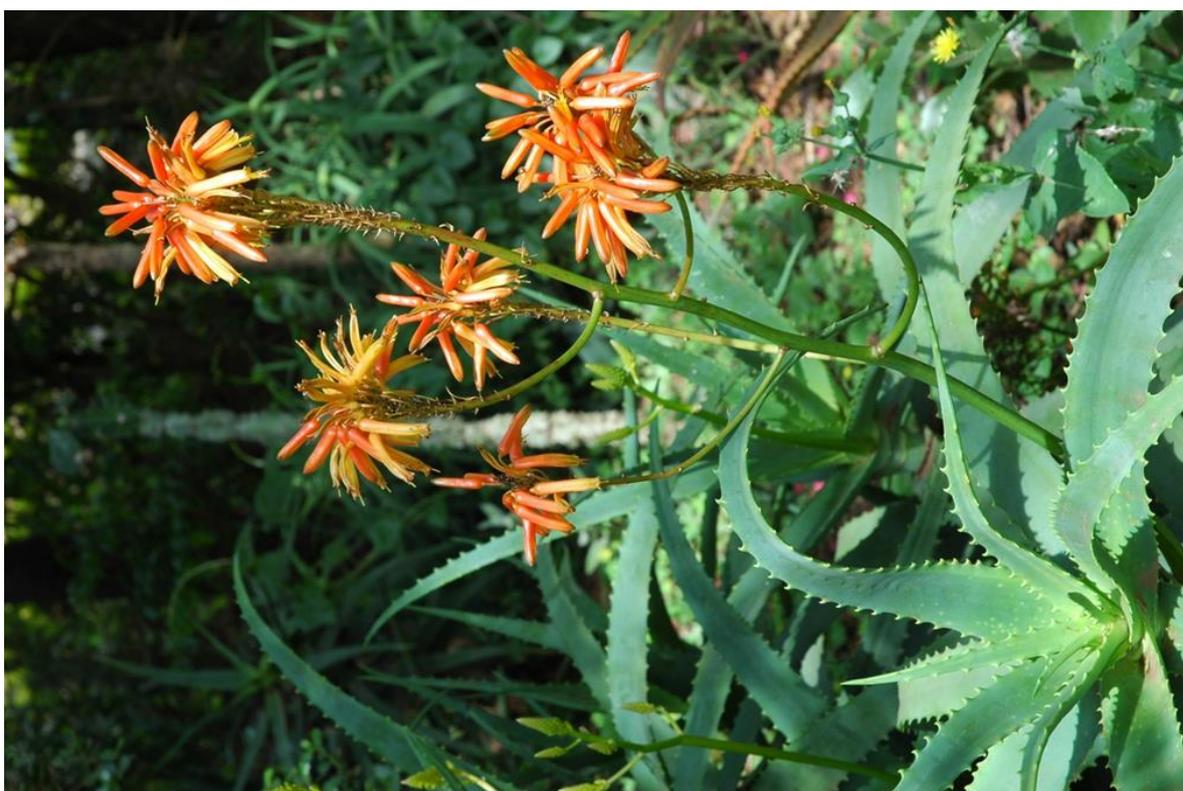
This new species was collected on Galana Ranch by Gilfrid Powys. It resembled a dwarf version of *S. volkensii*, but after growing in his garden for many years the shoots remained small. It has now been described as *Sansevieria brevifolia* (meaning short leaves). A similar dwarf *Sansevieria* was collected by Gilfrid Powys and Len Newton on a hill in Mandera district and is possibly the same species, but its inflorescence hasn't yet been examined to confirm this.



**2. Newton, L.E. & Nyange, M. (2019) A new shrubby species of *Aloe* in Kenya with leaf exudate becoming purple. *CactusWorld* 37(2): 139–140 - *Aloe allochroa***

In March 2011, during a weekend field trip to Baringo, Succulenta members were led to what appeared to be an undescribed shrubby *Aloe* species on the summit ridge of the Tugen Hills. That species has now been described as *Aloe allochroa*, named for the colour change seen when the leaf exudate is exposed to air (Latin *allochrous* = changing colour). As well as the leaf exudate colour change, the new species differs from other shrubby species in the highlands by more densely flowered racemes and smaller flowers. Any members who collected cuttings during the 2011 trip can now put a name to their plants. During a later visit to the locality, in 2014, Newton found that the plants seen during the Succulenta trip had all been destroyed because someone had bought the plot of land where they were growing, and was building a house. However, more plants of the same species had been seen further south along the summit ridge, and by Mwadime Nyangi at two localities on the western escarpment of the Rift Valley.

LN



NB: both photos were sent in horizontal format for reasons of resolution and cannot be made upright.

### **Members**

THE 26<sup>TH</sup> AGM OF SUCCULENTA EAST AFRICA WAS HELD ON SATURDAY 25<sup>TH</sup> MAY 2019 AT JACQUI RESLEY'S LOVELY HOME AND GARDEN.

29 MEMBERS ATTENDED AND AS ALWAYS PRODUCED THE MOST DELICIOUS SPREAD FOR LUNCH WHICH WAS ARRANGED AND SERVED BY JACQUI'S VERY ABLE STAFF – MANY GRATEFUL THANKS.

ON DISPLAY WAS THE NEW PROJECTOR BOUGHT WITH FUNDS FROM SUCCULENTA'S OWN RESOURCES. SARAH GRANT AND HER DAUGHTER MELINDA HAD SET THIS UP INITIALLY AND WERE THANKED BY THE CHAIRMAN. MEMBERS WERE ENCOURAGED TO SEND NEW MATERIAL TO ADD TO THE INTERESTING AND VARIED FOOTAGE ALREADY ON DISPLAY.

AFTER THE CHAIRMAN AND TREASURER'S REPORT, WHICH YOU WILL ALL HAVE SEEN IN THE CIRCULATED MINUTES, BARRY CAMERON VERY KINDLY GAVE A PRACTICAL DEMONSTRATION ON PROPOGATION OF

SUCCULENTS AND PASSED AROUND A LIST OF THE DIFFERENT METHODS USED FOR DIFFERENT SUCCULENTS I.E. SEEDS, STEM CUTTINGS, LEAF CUTTINGS, OFFSET/DIVISION OR GRAFTING. A FASCINATING AND EDUCATIONAL TALK WHICH WAS APPRECIATED BY ALL AND A HUGE VOTE OF THANKS TO BARRY. (by Andrena Low)

### ***Questionable! Plants***

Len Newton responded regarding Denise Campbell's mystery plant, saying that while he could not identify it, it was definitely not a type of kalanchoe.

The editor recently acquired the aloes shown below. During the recent visit to her garden, Maria Dodds identified the first as *Aloe congdonii* from Iringa District, Tanzania. Is the second *A. lepida*? Or is it, as suggested in "Aloes – the Definitive Guide", *A. squarrosa*? Maria?



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Tel: 0750149200/0751624312/0771343138 E-mail: [office@naturekenya.org](mailto:office@naturekenya.org)

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*Succulenta East Africa Newsletter* is produced four times a year. Contributions are most welcome and should be sent to the editor.