



SUCCULENTA

Vol 27 No. 2 — APRIL 2019

THE NEWSLETTER OF SUCCULENTA EAST AFRICA

established 1993, a working division of



NatureKenya

THE EAST AFRICA NATURAL HISTORY SOCIETY

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Chairman's Notes

1. An article in this issue, again taken from a past issue of *Ballya*, describes how the author eliminated opuntias - seriously invasive members of the cactus family now found throughout Kenya - from his farm near Naivasha. If this method works at Naivasha, it will also work for everybody, everywhere.
2. Official notice of the 2019 Annual General Meeting, to be held on 25th May at Jacqui Resley's residence, will be going out shortly. Please put this date in your diaries. Jacqui will provide beverages, but, as usual, members will be asked to contribute to lunch. Appended will be the draft of an amended Constitution document, together with notes to explain the changes suggested. Members are asked to study this in order to decide whether to adopt it by vote at the AGM.

Future events

Kenya Horticultural Society show

The 2019 KHS show will take place from 17 to 19 May at SSDS temple, Lower Kabete Road, Nairobi. It has a section for succulents and this is an opportunity not only to show off the attractions of succulent plants, but also to encourage others to become enthusiasts and waterwise gardeners. Keen members should already be planting suitable material in containers, ready to make an impact: there are prizes to be won at the show. There will also be a plant sale, supplied by members and others. Prospective buyers should arrive early if they hope to buy succulents as they sell out rapidly.

We will use our new projector at the show to display a rolling series of shots of succulent plants in the wild as well as in members' gardens: the functions committee is already preparing the material for screening.

Happenings

Visit to Tumaren, 4th to 7th February 2019 – Ed.

Where to start? Members so fortunate as to join this trip enjoyed three treats – Dee Roberts’s marvellous garden, Tumaren itself and Kate & David Hewett’s new garden at Mpala Ranch.

Members assembled at the Roberts’ house “Kiluma” at Mogwooni. After refreshments Dee kindly provided a tour of her garden which, despite the very dry conditions, looked amazing. There is a reason for this and it is an education for those who would garden with succulents. If you study its layout, structure and planting, rather than simply enjoying the spectacle, the amount of thought and hard work that have gone into its development become apparent. Now well-established, the garden hosts some magnificent specimen plants amongst a marvellous diversity of succulents and other complementary plants: aloes, euphorbias, adenias, kalanchoes, crassulas, cotyledons, adromischus, alluaudias, pachypodiums and much else, in all shapes and sizes, several of which were in flower. Dee is a seriously knowledgeable succulent enthusiast and collector and her garden is a reward for all lucky enough to see it.

And the co-operative picnic lunch we tucked into later was pretty good, too.

Magnificent specimens at Dee Roberts’s garden



Aloe helena (L), *Pachypodium lamerii* (M) + *Alluaudia procera* (R) – all from Madagascar



Adenia globosa subsp. *pseudoglobosa*, moulded to the stones it rests upon.



Adenia globosa subsp. *globosa*



Aloes spicata (L) + *speciosa* (R) – South Africa

Without Julia Glen leading the way, finding Tumaren might have been interesting. But driving through the now-parched ranchlands of Laikipia is always a pleasure, one's progress marked by those massive granite and sandstone kopjes and silver-barked boscia trees, many festooned with leopard look-alike bee hives, acacias and low scrub, though noticeably little grass. Across the Ewaso Ngiro river bridge we were into Samburu territory and soon, at some invisible boundary in a maze of tracks, suddenly the grass was longer, not over-grazed, with increasing wildlife – impala, gerenuk and common zebras: we had arrived at Tumaren. At the lodge we were welcomed with flannels and cool drinks, then, after sorting into our tents, there was tea and cake and introduction to our hostess, Kerry Glen, and the Samburu guides who would escort us, but who first ensured/tested our walking capabilities with a very welcome leg-stretcher through the open bush before the lodge, where, to tell us we really were in Laikipia proper, there were Grevy zebra, reticulated giraffe, fringe-eared oryx and some rather battered acacias, they having been munched by elephants, plus bustards, francolins, startlingly-blue vulturine guinea fowl, then sand grouse whizzing overhead as the sun went down and our circular walk brought us back to hot showers. Later, round the fire, there was cold beer and wine for those who had remembered (and thank you again, Julia, for your kindness to this fool who had not). A delicious dinner, a quick next-day's plan, then bed.

A soft "Hodi?" announced the dawn arrival of tea, hot water for my camp basin and a new day. Our principal guide, Anne Powys, joined us for breakfast, then we collected our hats and climbed into Land Cruisers, to be driven to the base of a rocky hill and let loose to fossick and wander, gathering often round Anne and the local guides to hear the identities of various plants they found, some succulent, most found sheltering from the sun behind rocks (*Euphorbia sp.*) or amongst grasses at the bases of shrubs (eg *Kleinia abyssinica*, *Kalanchoe citrina*), and to learn from their collective lore.



Let loose to fossick and wander



Euphorbia sp.

Augmenting Anne's extensive knowledge of Laikipia's plant kingdom, the Samburu, being pastoralists, knew their local vegetation well and explained the uses of many plants for nutritional or medicinal value, both for their livestock and themselves, and peeled some for us to sample.



Confab of experts



Peeling samples for tasting

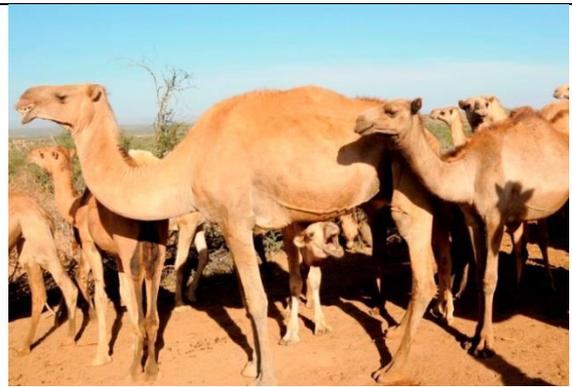
It was interesting to hear how sansevieras colonise over-grazed land (some patches were thick with *S. volkensii*, with *S. robusta* and *S. frequens* also present), which then protect re-establishing grasses whose roots, in time, squeeze out those same sansevieras, in a continuous cycle. And that horrid *Anthericopsis sepalosa*, whose seeds are excruciatingly painful to unshod feet, turns out to be valued forage, sprouting quickly after rain and available before the growth of grasses. Who knew?

Our meanderings, subtly herded, led us to the river bank, where open-sided marquees had been set up against the scorching sun, and by some process of magic lunch appeared. Rehydrated, fed and recuperated, we returned to the lodge to rest during the worst of the heat, then emerged for tea and more cake and walked out from the lodge again in the cool of the evening: in addition to the larger wildlife, African hares were everywhere and investigation around the base of a tree surprised a pair of hedgehogs hidden down a burrow, waiting for nightfall.

Next morning we forewent breakfast to catch the lodge's walking-safari camel herd at its boma before they left for work. Interesting beasts they are – some, perhaps after too long in the bush, even say endearing.



Herd of Succulenta with camels



Little sister

Behind the boma loomed the massive kopje that was today's target, hyrax on every top. Although grazed bare, this country's rocky, sandy soil yielded even more succulent interest than yesterday, if mostly small and hard to find, including *Kleinias*, *Euphorbias*, *Kalanchoes* and *Cyphostemma serpens*. Many plants were noticeably pale coloured and/or had hairy leaves – all indicators of defence against the sun. For similar reasons, shrubs, including *Plectantrus sp.* and *Hibiscus greenwayii*, were seen to inhabit the Eastern side of boulders, their roots in shady crevices between.

An extended circle took us back to the vehicles and portable breakfast with lots of water. Then it was back to the camp via the local market, where livestock brought from far and wide was up for sale, and all manner of mitumba, simis and utensils available to go in the other direction. The evening walk yielded a rufous bush chat and d'arnaud's barbet, before welcome showers, craic around the fire and dinner.



Kalanchoe citrina



Cyphostemma serpens



Kleinia sp.



Portulaca quadrifida

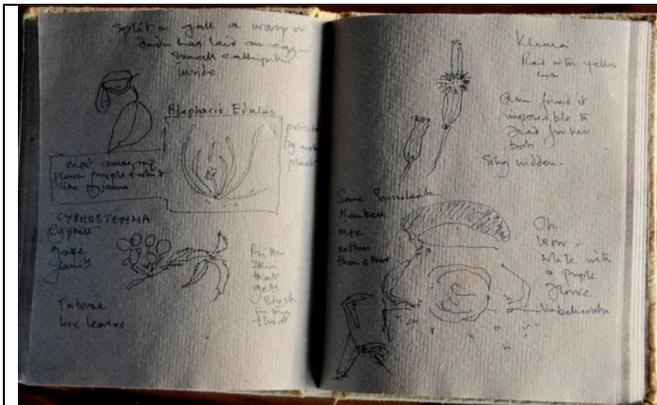


Kleinia odora



S. frequens (foreground) + S. volkensii

As the examples below illustrate, Finchie's enviable talent with a sketch book, used to record what we see while walking, captures both detail and the immediacy of what we saw - a terrific memento.



The tale above might suggest a safari enjoyed more for wildlife and the comforts of the excellent lodge than succulent interest: not so, we had both. Fossicking in the kopjes was great fun and the guiding provided by Anne and the Samburu absolutely right, Anne's quiet authority and their combined wisdom adding greatly to members' enjoyment of this Succulenta excursion. Her list of succulents seen at Tumaren appears below.

SUCCULENTS at TUMAREN - 2019			
SPECIES	FAMILY		
SPECIES	FAMILY	SPECIES	FAMILY
Adenia volkensii	PASSIFLORACEAE	Kalanchoe schweinfurthii	CRASSULACEAE
Aloe scabrifolia	ASPHODELACEAE	Kleinia odora	ASTERACEAE
Aloe secundiflora	ASPHODELACEAE	Kleinia petrea	ASTERACEAE
Ceropegia variegata	APOCYNACEAE	Kleinia sp. Orange fls	ASTERACEAE
Cissus rotundifolia	VITACEAE	Orbea dummeri	APOCYNACEAE
Cynanchum gerrardii	APOCYNACEAE	Plectranthus caninus	LAMIACEAE
Cynanchum viminale	APOCYNACEAE	Portulaca oleracea	PORTULACACEAE
Echidnopsis sharpei?	APOCYNACEAE	Portulaca quadrifida	PORTULACACEAE
Euphorbia magnicapsula var. magnicapsula	EUPHORBIACEAE	Sansevieria robusta	DRACENACEAE
Euphorbia sp.	EUPHORBIACEAE	Sansevieria volkensii	DRACENACEAE
Kalanchoe citrina	CRASSULACEAE	Talinum portulacifolium	PORTULACACEAE
Kalanchoe mitejea	CRASSULACEAE		

I am especially grateful to Anne for putting names to the succulents pictured above, plus many of the other plants we saw.

Kate & David Hewett's garden

On the way back next morning we were met at the Mpala cattle dip by David Hewett, who took us the back way to the house where he and Kate have established not only a home, but also a quite astonishing succulent garden: astonishing on account of its splendours, yes, but more particularly because it has been created, in just over a year, from the most unpromising, barren area of open plain, separated from the short-grazed grassland surrounding it only by a simple wire fence. But therein lies its secret: before the fence there was a dry stone wall, and Kate has had the wit to disassemble it and use the generally-flattish rocks both to construct the rockeries and act as a permanent mulch, with plants poking up through gaps and spaces left open. The rockeries successfully cover what might otherwise be a septic tank eyesore and also sit in a "V" either side of a grassed area, leaving clear long views to nearby rocky hills of the sort likely teeming with actual leopards, possibly even aloe-munching greater kudu; and between the garden and the hills a solitary Grevy stallion stands, patiently waiting and hoping for migrating females to return to his territory. Good luck, dude.



Rocks as mulch



Fabulous Adeniums

Wonderful Laikipia. And the end of a wonderful, interesting Succulenta trip in good company.

Visit to Lauren & Paul Mackenzie's garden at Rosslyn River Gardens, Saturday 9th March.

– Lauren Mackenzie/Ed.

Paul Mackenzie is a cycad collector, expert and breeder and the garden hosts a remarkable collection of cycads native to Kenya, Tanzania and Sudan, as shown in the background of photo 2 below. Cycads proved to be the day's focus, a subject new to Succulenta members.



1. Lauren & Paul Mackenzie in their lovely 5 acre garden



2. Cycad collection at rear, on a well-drained slope



3. *Caudex above ground

Cycads (*Encephalartos* spp.) are ancient plants, having existed since the time of the dinosaurs. Several species survive in Kenya - *E. hildebrandtii*, *E. tegulanus*, *E. kisambo*, *E. powysii* and *E. sclavoi* TZ, while many others thrive in South Africa, India, Australia and other equatorial regions.

The species of which Paul is probably most proud is *E. mackenzii* from Sudan, named for him after an arduous process to prove what was, in fact, a new species, as yet unnamed. *Encephalartos* magazine described the type locality as an area frequented by "only the most suicidal of plant collectors!"

Before flowering plants evolved, cycads thrived 300 million years ago. Today, of the 11 living genera most are on the verge of extinction due to loss of habitat, slow growth and infrequent reproduction.

Plants are either male or female, the females producing cones of seeds which are fertilised by pollen from nearby males. Because pollen can be collected and stored, breeders need only one male to fertilise many females and unscrupulous collectors often strip all of the female plants out of a colony; thus they are partly culpable for the reduction of plant numbers remaining in their natural habitats. They produce viable seed in their nurseries and the scarcity of wild plants drives high prices for it.

In a joint project with Fairchild Tropical Garden, Dr. Dennis Stevenson of The New York Botanical Garden confirmed that cycads in the wild are pollinated by specific species of weevils and beetles, showing symbiosis between plants and pollinators. The project demonstrated that cycad survival depends upon the preservation of their ecosystems - if the weevils are lost, the cycads will be lost too.

Field researchers looking for cycads often make the mistake of asking locals for a palm-like plant and are then led to a river with phoenix palms or similar. In fact, cycads prefer to grow on rocky, well-draining hillsides (*and thus lend themselves to rockeries, mixed with succulent plants - ed*). Their leaf structure is quite distinct from palms and they have a caudex-like, shallow rooted centre.

When planting *Encephalartos* spp. in cultivated gardens, it is important to provide a very well drained spot and not to plant the caudex too deeply, but instead have it above ground as it would be in nature (as shown in photo 3 above).

Lauren, a gifted gardener herself, then led us on a tour of the superb gardens, pointing out how the five-acre garden was formed and planted and answering the questions put to her by members.

She showed us a new red and green striped hybrid dwarf Canna lily, an Alocacia Black Devil growing on the bank of the stream, a new dwarf papyrus and a very striking dark blue dwarf Agapanthus, as well as many other interesting plants.

A pair of fish eagles looked on as we enjoyed our picnic lunch in the cool and quiet surroundings.

Letters, miscellany

From Rupert Watson. Sir: Some years ago I saw an article named "Will the real Aloe vera Please Stand Up?" Was it in "Ballya"?

Rupert, it was not in *Ballya*. However, the bibliography at the back of "Aloes of Uganda", which was reviewed in the January 2019 *Succulenta*, notes that it was an article written by Prof. Len Newton and appeared in "SWARA": the 2008 issue Jan-Mar: 48-51. I hope this helps you to track it down.

Sir: Appropos the January letter suggesting that plants on the Uhuru Highway survived on exhaust fumes and despite splats from Marabou storks nesting above on the fever trees, perhaps it was the other way round: the bird poo acting as guano and despite exhaust fumes?

You may well be right!

Articles and features

This article first appeared in ***Ballya* Vol. 2 No 2 June 1995** published by Succulenta EA, a division of the East African Natural History Society (Nature Kenya) and was authored by the Derek Dames

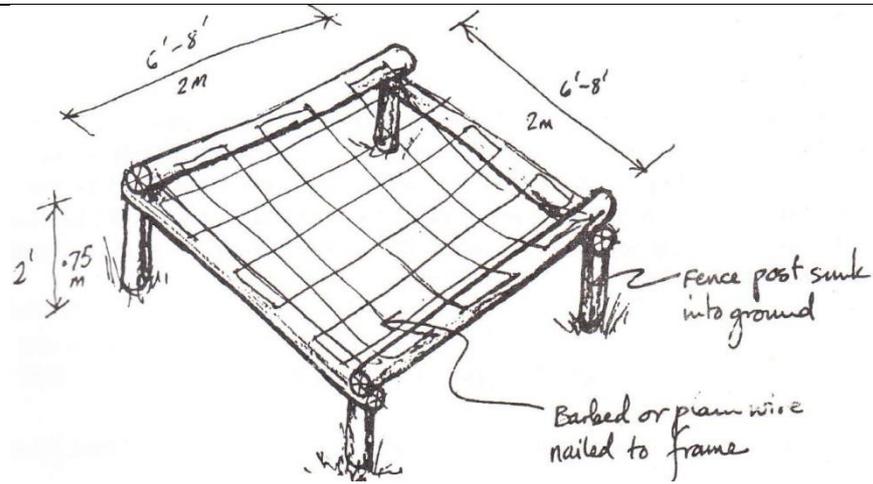
GETTING RID OF THE PRICKLY PEAR

I feel sure that you all know *Opuntia vulgaris**, commonly known as the prickly pear. It has big plate-like stems that are flat and look like thick leaves, has fruit about the size and shape of a large egg, soft, green, reddening as it ripens, and is covered in unpleasant spines. It was introduced in East Africa after the turn of the century by farmers as a hedge plant in ranching country below 2,000 m. It seems to have spread all over this part of the world and in some countries it has become a major menace. I have seen cattle eating it (they must have been very hungry), and I remember eating the fruit as a young boy; one had to skin the fruit without pricking one's fingers-but it tasted quite good.

Last year we decided to free our 8 ha at Naivasha of this plant, and set about digging it up. We were told that it was no good to simply dig it up, because it would just start growing on itself, and it would not burn because of the high moisture content in the plant.

Some plants can be killed by simply up-rooting them, but this plant is very resourceful as it contains a great deal of moisture and is capable of surviving in areas with little rainfall. We did not want to use weed killers because of the polluting side effects, and chemicals are often expensive and require special handling.

We found a very successful, environmentally-friendly way of getting rid of the prickly pears at Naivasha, which was not expensive. Dee Raymer has asked me to share our strategy. We took six fence posts (each approximately 2 m long), and made a kind of 'four-poster bed' by cutting two of the posts, in half and sinking them in the ground for half a metre, then spanning the four corners with the four remaining posts. Across this frame we stretched and nailed barbed wire strands every 25 cm in both directions (see diagram below).



DRYING BED

Upon this woven spiky death bed we laid out the vulgar points to dry!

We had four beds on the 8 ha, positioned within easy carrying distance from the places where the prickly pear grew. We found a pitchfork worked well for carrying and that if the plates were split the drying process went much quicker.

So, once every two weeks, we would walk around the bed, cutting off the new shoots that sprouted from the decaying parent plates and laid them out to dry on the pile. It was also quite easy to split anything that wanted to grow again with a sharp knife, secateurs or a panga. After six months most of the prickly pear was dry enough to burn. This we did in a shallow pit. Ashes were used in composting. A year later there is no trace of prickly pear on the land and with the dismantling of the drying beds there is no evidence that murder has taken place at all. Even the extra green grass that grew beautifully under the drying bed has reverted to its dusty dry former self!

Notes by Barry Cameron

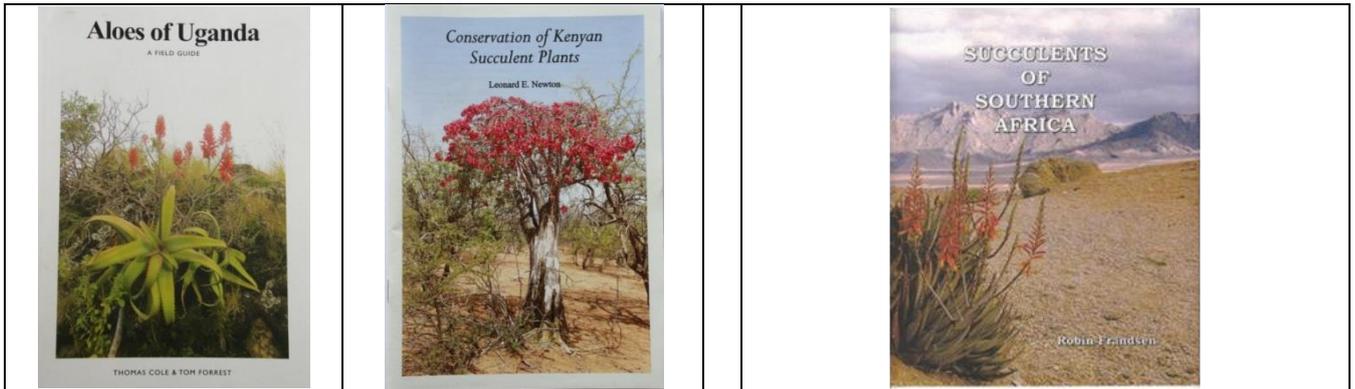
*Subsequent to 1995 when this article was written there have been many changes to botanical names and *Opuntia vulgaris* is now a synonym of *Opuntia ficus-indica* (photo1)

This system of eradicating invasive spiny succulent alien invaders from land can equally be applied to several other invasive *Opuntia* species including *Austrocylindropuntia subalata* (photo2), the extremely spiny species that is so often seen used in hedging in semi-arid areas which quickly forms an ever-increasing wide, thick spreading mass. Both photos taken by Arne Witt.



Book reviews

Firstly, errata – the January 2019 issue omitted photos of the covers of the books reviewed: here they are, at photos 1 and 2, both soft-back. Photo 3 depicts the cover of the substantial hardback book reviewed here.



Succulents of Southern Africa by Robin Frandsen, Honeyguide Publications – 2017

This is a heavy book, weight wise, running to just on 500 pages and containing numerous excellent photos and descriptions of succulent plants on good quality paper.

Following a Foreword by John Lavranos (a co-author of “Aloes – the Definitive Guide”) and Acknowledgements by the author, there follow 20 pages of Introduction, which include sections on What is a Succulent?, Cultivation, Conservation, Notes on Taxonomy and Biographies. The section on Biographies includes some 40 major players in the fields of taxonomy, conservation and promotion of succulent plants.

Basically, this is a high quality picture book containing some 2,500 photographs of various sizes, with none too small to be able to view the plant details. Each photo bears the plant’s name and information on where photo was taken, together with credit to the photographer.

The author has adopted a style for a book of this type that is slightly unusual in order to portray the taxonomic description in a more readable way, which it is hoped the reader will find more interesting; more importantly, the descriptions are on the page opposite the appropriate photos so there is no hunting around to find that related to each description.

The plant descriptions and photos are arranged by families with genera and species following the latest APG III system as revealed by DNA analyses, identifying their common ancestry rather than using the traditional taxonomy and morphology.

For Succulenta members who have an interest in African succulents and the growing of them this is a very useful book, as it covers many genera and species and broadens one’s knowledge of the richness of South African flora.

Two pages are shown below as they appear in the book, text and photos side by side



(apologies for the poor scanning - Barry Cameron)

New Literature

Newton, L.E. (2019) A new distribution record for *Monadenium sheбелиense*. *Euphorbia World* 15: 26–27.

Plants of a *Monadenium*, up to about 2 metres in height, were found by Gilfrid Powys and Len Newton in 2001 near Malka Mari, on the Ethiopian border west of Mandera. They appeared like a giant form of *M. ellenbeckii*. They were identified as *Monadenium sheбелиense*, previously known only from Ethiopia, at a locality about 450 km ENE of Malka Mari. This is an additional species for the Kenyan flora.

LN



Members

Errata! The January newsletter erred in stating that the subscription cost for Nature Kenya is the same as for Succulenta at Shs1,000/-, whereas in fact it varies according to the member’s status: the correct amount may be found on NK’s website, from NK’s own monthly newsletters, or from NK’s subscription renewal notices.

Please remember to pay Shs1,000/- to renew your 2019 subscription on the anniversary of your joining. It will coincide with the renewal date for your membership of Nature Kenya. Please pay both together to Nature Kenya, making sure that you inform Nature Kenya so that they will know to allocate Succulenta’s portion accordingly – thank you.

Questionable! plants

This space is to allow members to ask their fellows' help in identifying plants they just cannot find in the usual sources. A photo or two, a brief description – someone out there might recognise it or point in the right direction and finally put that frustration to rest.

Dee Roberts kindly cleared up the identity of item 1 in January's newsletter: it is Aloe camperi. A. camperi and A. sinana are illustrated below – these two have confused many in the past. The jury is still out on the second January item.



Aloe camperi



Aloe sinana – much greyer

Denise Campbell found this plant trailing along the ground beside the road on flat, sandy, gravelly, even stony ground with sparse acacia trees en route across the Chalbi Desert from North Horr to Marsabit, somewhat before Mayidhad. Across the flower it measures c. ½ inch. Its harsh habitat lends to possibility it could be a succulent, possibly a type of Kalanchoe. Can anyone identify it?



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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.