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Kenya Horticultural Society North Coast District





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North Coast District News



Chairman's Notes

Welcome to the April 2021 edition of The Shamba Times which comes to you at a difficult time for Kenya, with an apparent surge in Covid taking place while vaccination against the virus is only at its earliest stage. There is still a long way to go before we are back to any kind of normality..

As many of you will be aware, we had planned to hold our 2020/21 AGM in Malindi on the 23 March, but events overtook us. New governmental restrictions on public gatherings were introduced on March 12, and so reluctantly we have postponed out AGM and the Raffle Draw until April 27.

However, despite the difficulties that Covid places on all of us, we have planned a full program of meetings, garden visits and horticultural events for 2021 to take place in Malindi, Watamu and Kilifi and I hope that many of you will be able to attend at least some of them.

We are also going to run our very popular Gardeners' Courses this year, and more details of the course content and dates and places of delivery will follow soon. The courses are targeted at our gardener employees, but all members are very welcome to enroll on a course and to attend with or without their gardeners. This year we are featuring the art of pruning, and the next edition of The Shamba Times will include a piece on tips for effective pruning compiled by one of Gardeners' Courses gurus, Katana Baya.

Our WhatsApp group continues to thrive, and fresh shoots and ideas come from all over the place. Thank you to each and every member who has posted photos, tips, queries, advice, sources of seeds, plants and pots, or comments that have informed or amused the rest of us.

Once again may I thank you all for your participation in and support of the KHS North Coast District. KHS exists to promote gardening within Kenya, and our aim is simply to share the joy of gardening with as many people as possible, and to furnish them with the knowledge and skills they need to make their garden, be it large or small, as rewarding as it can be. It is only with your support that we shall continue to deliver on that ambition.

Crispin Sharp.

Ruspolia pseudoranthemoides.



Our cover picture of the wonderfully named and beautiful Ruspolia pseudoranthemoides was taken by Norbert Rottcher and posted to our WhatsApp group as part of our Dry January season.

The flowers of *Ruspolia* are very attractive to butterflies as they produce large amounts of nectar. Good to know.

This plant likes full sun, or will tolerate semishade and needs to be planted in well drained soil.

Why not get hold of some *Ruspolia pseudoran-themoides* and get it going in your garden? It's a beautiful plant.

Gardening Kenya

The Kenya Horticultural Society was established in 1923 for the purpose of stimulating and increasing interest and knowledge of gardens and plants in Kenya. The North Coast District extends from Vipingo in the South to Malindi in the North. Annual membership is Ksh 1000 per person (Ksh 1300 per couple). Corporate Membership is offered at Ksh 2000. Members gardeners are accepted for limited membership at a fee of Ksh 500 per annum. Of course we welcome new members, so why not see if you can introduce a new member to us? this quarter?

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What's up on WhatsApp?



A collection of items and stories which started life from members' postings on the KHS NCD WhatsApp over the last few months, and occasionally from yellowgardening.com.

The picture of this plump fig was posted by Marion Langham on her yellowgardening platform with the words: "My first fig from this garden. I hope the start of many." Here she tells how achieving fruiting figs can be achieved...



The fig, *Ficus carica*, is a flowering plant in the mulberry family (*Moraceae*). It produces delicious eating figs several times a year, it is easy to grow and it does well at the coast. Figs can be propagated from seeds, cuttings, layer-



ing and air layering: I use cuttings and layering propagation to grow mine. Seeds germinate easily and grow well once established. Cuttings need to be

cared for and kept well-watered until they are established. Layering is a little more technical though possibly the surest method.

When first planting, use good fertile soil then, before the rains, top dress with a rich compost. The fig can be grown as a large shrub or a small tree depending on how it is pruned. It can be grown in the open ground against a wall or in a large container. Given the right conditions and care, the fig can reach 7 metres high. When growing figs in open ground, it is necessary to restrict the root system as the plant should use its energy in producing fruit and not too many leaves, which the fig is apt to do, so extra fertiliser should not be added. Leafy plants may cause loss of fruits. When growing fig plant against a wall, it can be trained into a 'fan' without much difficulty.

Figs are well-suited to container cultivation. This is a good option especially where water is in short supply. The pot should be at least 45cm in diameter. The container will automatically restrict the plant's roots. Ensure that there are drainage holes in the container and use 'crocks' in the base to help the drainage. Fill the pot with good soil and compost, then plant the fig no deeper than the original planting. Leave 2" at the rim for watering. Discourage any large roots from growing through the drainage holes. Repot every three to five years during the dry season ready for the rains. To replant, remove about 20% of the old soil, cut away some of the larger roots and, whilst working at the soil, check for any nasty creatures. Refill the container with a mixture of fresh soil and compost, then water thoroughly.

Fig plants can grow in full sun although some dappled shading from the mid-day sun never comes amiss.

Water plants regularly: never over water nor let the soil become too dry. A lack of water at any time is harmful to the plant, more so when the fruit is developing, causing loss of fruit or a poor crop. Even container plants are vulnerable to poor watering, either too little or too much. Figs cannot take saline water. On the two occasions when my fig plants have been carelessly watered with saline water, they have died. Due to this, it is not advisable to plant figs on the sea front.

Apart from suffering from careless watering, figs are generally trouble-free although, if scale and red spider mite problems do occur, they can do much damage in a short time. Treat immediately if either of these problems arise.

Footnote:

For further information on:

layering, refer to Chapter 17, Plant Propagation, *Gardening in Eastern Africa*, KHS available via the NCD Shop

scale and red spider mite treatment methods, refer to Marion Langham's book, *Tropical Flowering Plants*, available direct from her or from the NCD Shop.

My Garden

In 1985, we bought a house in Shanzu overlooking Mtwapa Creek which had a garden comprising two acres of grass and some old trees growing on mainly soil rather than coral. As this was my first own garden, I took a serious interest in it. It has evolved over time, never being landscaped but depending, for instance, on old trees falling down after storms or because of their age and gradually being replaced by trees and palms grown from the seeds which I had



collected or acquired from friends or nurseries. Indeed, I love collecting! One of my first collections was anthuriums but thereby hangs a tale. I had collected over 100 of them when they all started looking miserable and dying. Unbeknownst to me, there had been a change in water with my well water being used instead of the mains water: scrap dealers had stolen some 300m of the mains water connecting pipe and hence, no supply. The pipe has never been replaced and our rainwater supply does not suffice. So, over the years, I have had to come to terms with this realising that many varieties of the garden and pot plants which I grow will not survive on well water and will have to be removed.

Another thing is that I do not like using chemicals and am never patient enough to bother with the natural bug *dawas*. So, what does not do well gets yanked out and forgotten including the different *Hibiscus* given to me which always suffered "crinkly leaf disease" except for the indigenous kind.

I also developed a craze for *Gloriosa superba* which flowered prodigiously over the years until about five years ago when a *dudu* found them. I am still fighting the latter but so far unsuccessfully. Fewer flowers are produced but I do occasionally find a bloom with eight petals instead of six (See Shamba Times Issue January 2021).



by Ursula Brenneisen

The Casuarina, Neem and Sorindeia trees that were here in 1985 are now big and many of the others I have planted have caught up in size. A Feretia apodanthera (Mfyofio) with its delicate perfumed flowers was already here and I planted another scented shrub for which I have not found a name. I am very proud of my Mkilua fragrans grown from seed while my Eugenia uniflora produce lovely cherries for delicious jam (if the birds and monkeys don't get



them). Other than these, I have no fruit trees because I have hungry Vervet and Sykes monkeys visiting at least twice a day! They are also the reason why I do not have much colour in my garden. They eat flowers and seeds to the point that I am often left without seeds of my own for propagation.



I have also collected aloes but the only ones I recognise with a name are: *Aloe vera, Aloe pembanus* and *Aloe marlothii*.



I have never tried too hard with orchids as they seem to need more attention than I can give them. But I do have a lovely bunch of *Ansellia africana* and a *Brassavola nodosa* which flower quite frequently. *Eulophia petersii*, a succulent species of orchid, found its way into my garden quite by itself and is spreading and the *Cymbidium finlaysonianum*, which is not indigenous, is also very prolific.



What I am very fond of is my succulent collection: the two Caralluma speciosa with the dark flowers, Stapelia grandiflora, Caralluma dummeri, Edithcolea grandis and others. The Stapelia grow like weeds and the dummeri also likes to spread.





My favourite spot in the garden? I do not really have one as the view over the creek and towards the sea is best from our veranda.

Stingless Bees: Small but Steady Pollinators

Stingless Bees: Small But Steady Pollinators by Dino J. Martins

It's a warm, sunny morning along the Kenyan coast. In many gardens, bees and butterflies are busy visiting flowers. Among the many dozens of pollinators that can be spotted in a coastal garden, there is one group of tiny bees who are among the most frequent and frenetic visitors to flowers. If you are patient, willing to stand still in the hot sun and watch very closely, you will spot these tiny, shiny black bees at work on most days.

Stingless bees are one of the most important, yet perhaps most overlooked of pollinators on the Kenyan coast. Stingless bees are also called 'Sweat Bees' in East Africa, as they are attracted to sweat and will sometimes make a minor nuisance of themselves by furiously landing on sweaty bodies and crawling about, including into nostrils and ears if given a chance! Stingless bees are one of the many thousands of bee species that are found across the world. Like the better-known honeybees, these bees are social and live in groups. While many people think that bees typically live in colonies, this is actually only a feature of a few species and the vast majority of bees are solitary loners, making their individual nests in the soil, hollow stems or hidden cavities. Stingless bees are found throughout the tropics and there are hundreds of different species across the world.

Stingless Bees do live in large colonies, and they construct nests in many different locations - including in buildings and furniture, as well as hollows in trees and even termite mounds. The more common species along the East African coast and drylands have classic tubular entrances that mark their hidden nests. These are made from resin and vary in size from a few millimetres to a few inches in length depending on the genus, and include species of both Hypotrigona and Meliponula. These tiny tubes, which are often guarded by the bees, are a great place to watch these tiny creatures coming and going. The tubes serve as a means of protecting the entrance to their nest, and especially limiting access by uninvited guests like ants, who would quickly raid the honey and larvae within given a chance.



The tiny resin tubes lead into a hidden world of wonder within the nest: golden stores of pollen, tiny, exquisite pots of honey, and complex cells and structures to house the workers, queen and larvae. In contrast with the orderly, mathematical precision of honeybee hives, peering inside a stingless bee hive at first looks like a jumbled mess, but a closer look will reveal a complex and intricate organised structure.

By Dino J. Martins.



And one of the more unique Stingless Bees along the Kenyan coast does not build a hidden nest, but constructs a dense, packed home typically high up in the safety of an overhanging branch of a tall tree. These are the striking and wonderful *Dactylurina* stingless bees. *Dactylurina* are amazing bees, sleek and shiny black, with a narrow, streamlined bodies and tapered legs. Up close they look almost like robots inspired from a science-fiction fantasy.

Lean, efficient and organised, this particular genus of bees is arguably one of the Kenyan coast's most effective pollinators. *Dactylurina* visit a wide range of plants in search of nectar and pollen. In Malindi I've watched them on the flowers of many trees and shrubs and some of the species they pollinate including endangered species like the rare croton, Croton megalocarpoides, the majestic *Conocarpus*, and many other trees and shrubs including acacias, neem and coconut palms.





Nests of Dactylurina are instantly rec-

ognisable: large black 'blobs' typically on the lower parts of branches or high up on tree trunks, sheltered from the sun and rain. Their location is carefully chosen so as to be as inaccessible as possible to nosy primates or rodents. Likewise, the small stingless bees that make resin tubes at their nest entrances do their best to hide them from prying eyes. The nests are made from resin carefully gathered and waxes secreted by the bees themselves.

Alas, humans are very good at locating Stingless Bee nests and plundering them. For millions of years, we have exploited wild hives and colonies of both honeybees and stingless bees. However, today the rate of exploitation far exceeds what the bees can cope with. Opening a wild stingless bee nest destroys the colony. A single nest can thrive for many decades. Each and every day thousands of bees will visit flowers in the area and pollinate them, then return to their nest. Once a nest is destroyed, often for just a few spoonfuls worth of honey, an important part of the local ecology is gone forever.

One ray of hope is the field of meliponiculture. This is the keeping of stingless bees, while keeping honeybees is known as apiculture. Traditionally, some communities did keep stingless bees, but much of that knowledge is sadly lost. There is an effort to develop stingless bees as a source of honey and other products, and thereby protect wild colonies. Something we can all do is to simply protect the existing nests. If you are lucky enough to have a wild nest in your farm or garden, please protect it. And when you can, spare a few minutes to watch these remarkable creatures at work. You won't be disappointed!

Photo credits: Dino J. Martins

Threatened species



Explanatory Note

The main term we consider in the Glossary this time is *Threatened Species*. It is discussed in the broader context of the *International Union for Conservation of Nature*, or IUCN, and its *Red List of Threatened Species*.

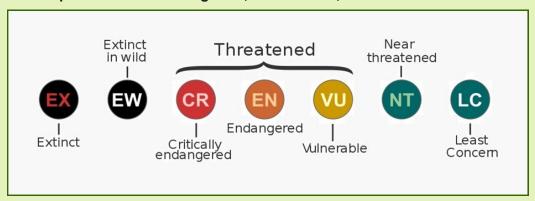
What is a Threatened Species?

A threatened species is any species which is *vulnerable*, *endangered*, or *critically endangered*.

What is the function of the International Union for Conservation of Nature (IUCN) and its Red List?

This organisation is commonly referenced as a leading body in determining whether a species can be considered a threatened species or not. It also defines the category *nearly-threatened species* for any flora or fauna which are likely to become threatened species within the foreseeable future.

The IUCN's complete list of risk categories, the Red List, can be seen below.



Mention should also be made of two additional categories: **Data Deficient (DD) species** - species for which more data and assessment is required before their situation may be determined; and, **Not Evaluated (NE)**.

The Red List of Endangered Species is the world's most comprehensive inventory of the global conservation status of plant and animal species. It is recognised as the most authoritative guide to the status of biological diversity. Although labelled a List, it is a system of assessing the global conservation status of species using a set of five quantitative criteria to evaluate the extinction risk of a given species. These criteria, which are relevant to all species and all regions of the world, are summarised below.

What do the Criteria for a Threatened Species Consider?

In general, they consider:

The rate of population decline

The geographic range

Whether the species already possesses a small population size

Whether the species is very small or lives in a restricted area

Whether the results of a quantitative analysis indicate a high probability of extinction in the wild.

After a given species has been thoroughly evaluated, it is placed into one of the specified categories.



Towards a Shamba Times glossary of botanical terms Part 7.

What are the Species Groups?

Amphibians and other vertebrates make up a disproportionately large portion of the IUCN list followed by birds and reptiles. Fishes/molluscs, plants, insects and some fungi are also represented but to a much lesser extent. There are several reasons for the disparity in the number of species represented from each group. First, vertebrates are by far the most studied group, even though their numbers pale in comparison to invertebrates. Secondly, amphibians are currently experiencing the drastic changing effects of climate change and deforestation, which are destroying their habitats and food sources. For this reason, we see a lot of amphibians as threatened species. Plants, molluscs, insects, and other groups, which are "under-represented" with few threatened species, are not necessarily doing well but scientists just do not have enough information to label them as a threatened species.

Are there any local examples of a Threatened Species?

The near endemic Golden-rumped Sengi or Elephant Shrew (*Rhynchocyon chryssoygus*) and several birds: Clarke's Weaver, Sokoke Scops Owl, Sokoke Pipit and Amani Sunbird, all of which are found in the Arabuko-Sokoke Forest, are classified as *endangered*.







Turning to flora, then the African Violet which is found in three areas within Kilifi County, *Saintpaulia ionantha* subsp. *Rupicola*, appeared on the 2015 IUCN Red List of Threatened Species as *critically endangered*.

Turning to trees, then the following three (illustrated) coastal plants are all classified as *vulnerable*: the indigenous *Erythrina saccleuxii*; the indigenous shrub/small tree, *Pycnocoma littoralis*; and the East African endemic forest tree, *Angylocalyx braunii*. Finally, *Ziziphus robertsoniana* appears on the IUCN Red List as *endangered*.









Sources:

Threatened Species, Biology Dictionary, update of January 15, 2021. Shamba Times, January 2021 Nature Kenya for access to first three photos. below

Join Nature Kenya to save species, protect sites and habitats, empower people and promote ecological sustainability

Photo credits:

Golden-rumped Sengi by Karin Duthie, Clarke's Weaver by Colin Jackson, Sokoke Scops Owl by John Mwacharo; Erythrina saccleuxii and Angylocalyx braunii by Norbert Rottcher; Pycnocoma littoralis by Katana Baya; Ziziphus robertsoniana by Holly Hamilton.

The Wonders of Moringa. By Wendy Taylor

Moringa tree works wonders on dirty water

Many of us will be familiar with the several uses - health, nutrition, and culinary - to which the various parts of *Moringa oleifera* can be put. The leaves, the most nutritious part of the plant,

can be used for teas and infusions, as health supplements (leaf powder, pills and capsules) and as ingredients in soups and pesto. The immature pods, known as drumsticks, can be used in curries, while the seeds from the mature pods can be eaten like peas or roasted like nuts or used for producing seed-oil.



But when I saw this headline to an article in a recent issue of the Daily Nation, I wondered whether there was yet another use for the products of the *Moringa oleifera* - also known as the Miracle Tree.

The article cited recent research showing that the plant is a good *coagulant*, meaning that it can be used to clear and purify muddy water, the lot of many rural Kenyans who rely on unimproved water sources. It was found that moringa seed powder trapped dirt molecules in the muddy water, which became clearer after the first 30 minutes. It also acted as a flocculent, that is, it clumps dirt particles together. However, whilst moringa seeds help to improve water clarification, they do not have antibacterial property which means that water treated with the seeds is not suitable for drinking without further disinfectant.

Interestingly, when turning to other online research, it is found that, in water treatment stations in urban areas, the *M. oleifera* seeds are being used in the same way - as coagulants of organic matter suspended in water - for natural cleaning before performing other cleansing processes. Furthermore, the research showed that seeds have more stable activity in different pH ranges, when compared to *aluminium sulphate*, the most frequently used coagulating substance, and one which may be harmful to human, animal and environmental health. The seeds are also cheaper and more effective than *aluminium sulphate* in reducing the turbidity (opacity) of contaminated water. In conclusion, according to the Kilifi Moringa Estates Ltd. website, the crushed moringa seed-cake, the waste by-product of the moringa seed-oil extraction, is a highly efficient, 100% natural/organic, eco-friendly substitute for Alum-based water flocculators in domestic pools, public utilities and various industrial uses. Finally, it seems, there is scope for developing the seed-cake into cartridges for use in pressurised filtration systems which is presently done with carbon/charcoal ones.

So, yes, certainly other uses...most likely already known to some of you but not to me!

Sources:

Daily Nation, February 2, 2021 edition
Kilifi Moringa Estates Ltd. webpage as of February, 2021

Moringa oleifera, Asian Pacific Journal of Tropical Medicine, July 2017.

North Coast District in bloom.

A gallery of members' recent photographs



NCD monthly meetings

A GARDEN VISIT TO THE GOODHART GARDEN IN MALINDI, 26 JANUARY 2021.

Our first meeting of 2021, attended by nearly 50 members, was held in the delightful garden of the Goodhart home in Malindi. Our host was Deborah Goodhart whose mother created the garden more than 40 years ago when she moved from her farm upcountry to retirement on the coast. The garden is two acres and is on a corally plot. The coral is still evident in parts of the garden but was initially dealt with by bringing lorry loads of topsoil in which to plant grass, beds, citrus trees and much more.

Our meeting began with Deborah giving members a brief history and background to the creation of the garden and its development since she inherited the home a few years ago. In recent years the garden has been substantially redeveloped and replanted, proving that for a garden to thrive it cannot be left to stand still for too long.



Jonathan Baya, who has assisted in the development of the garden, along with freelance garden consultant Kaiungu Goma both spoke to members about their work and how the garden remains a work in progress, as surely all good gardens should be.

Ana Parada then talked to members about bee-keeping in the Goodhart garden, the positioning and management of hives, and the challenges of attracting and keeping bees in a garden.



There was also a lively plant sale, with many plants changing hands and finding new homes. An excellent meeting, thanks to the kindness of Deborah Goodhart in hosting us, and the interest and enjoyment that the garden gave to NCD members.

CREATING A BIOME - A TALK BY KYLE DUBEE. WATAMU 23 FEBRUARY 2021.

More than 60 North Coast District members were fortunate enough to have attended a talk by Kyle Dubee entitled Creating a Biome, and focussed on the art and the science of effective composting.

The talk took place in the coastal garden of Sandra Riches' home in Watamu, and included the sale of essential gardening items from the NCD pop-up shop, 2021 raffle tickets, and a demonstration of the new KHS t-shirts and caps that NCD is planning to produce and make available to our members.

After introductions and some background to her garden by Sandra, we settled down for a very informative, relevant and useful talk by Kyle Dubee, whose experience and expertise is in creating bio-gardens and eco systems that work with nature, not against it, and that are sustainable. Kyle began by talking about the importance of community, be they of humans or of flora and fauna, and how everything is connected and the importance of seeing and understanding those connections if we are to create and maintain gardens that are healthy, bio-diverse, and sustainable.

Following an excellent Q and A session, in which many common coastal garden challenges were aired and in some cases resolved, Kyle then proceeded to give us a practical demonstration of how to build compost 'cakes' that are portable, flexible, reusable, and easy to manage. He stressed the importance of layering our compost green (nitrogen) and brown (carbon), and in supplying a good start to it by using existing well ready compost mixed with a little garden soil.



This was an excellent meeting, very well-attended, and of great utility and interest to all gardeners of every kind. Our thanks go to Kyle for a first-class presentation, and to Sandra Riches for so kindly hosting the event.

Forthcoming NCD meetings



April 2021 - KHS North Coast District 2020/21 AGM and Raffle.

Due to Kenya Government Covid-19 restrictions on public meetings and social gatherings, the KHS North Coast District AGM for 2020/21 will be held on Tuesday April 27th as a restricted entrance event at the home of the Chairman, Crispin Sharp, at Kibokoni Residence in Malindi. The meeting will be attended by no more than 5 NCD committee members and 10 NCD non-committee members. However all NCD members will be fully entitled to have their say and to vote at the meeting either through the use of proxy votes, or by submitting a ballot paper by email ahead of the meeting.



May 2021 - Landscaping and Garden Renovation at Ocean Sports.

We visit Ocean Sports Resort in Watamu for a 'Talk and Walk' by those responsible for the hard and soft landscaping that has transformed this resort in the last 12 months. What were the challenges on a site so close to the ocean? How was the hard landscaping achieved? What has been planted and why? We follow the meeting with an invitation to all members to stay on for drinks and lunch at Ocean Sports and to enjoy its magnificent new look.



June 2021 - We visit two gardens on Vipingo Ridge

Two of our North Coast District members extend a welcome to all members to visit their mature gardens on Vipingo Ridge. If you haven't visited Vipingo Ridge before then this meeting is a must. Drive through beautifully manicured public areas, and around the perimeter of the PGA approved Vipingo Golf Course before we visit the gardens of Vicky Horsey and Colleen Street.

We shall be offering the usual tea and coffee welcome to members, but why not bring a picnic and stay for lunch?

Odds and Ends

KHS T-shirts and Caps

If you and your gardeners would like to be at the cutting edge of style and sophistication, then you simply must invest in some sets of the new locally designed and produced KHS T-shirt and Cap. The designs have been tweaked slightly since we first shared this news with you at our February meeting, and we are now confident that what we are selling will put you and your gardeners amongst the best-dressed horticulturalists in Kenya.

The t-shirts and caps are the best quality that we have been able to find at a reasonable cost, and feature the KHS logo on both shirt and cap. They will be on sale at all our monthly meetings.





T-shirt Cap

KSh 600 for all sizes

KSh 600 the cap is adjustable size

To place an order, please contact Elfried at hoogeweegen@africaonline.co.ke or by Whatsapp on **0733839267**. Payments by Mpesa to **0702767177**.