

Kenya horticultural society – Mombasa district

June newsletter

Hallo members, I will touch on subjects relating to the visits at Mombasa cement and the beautiful bonsai at Prachis' garden, unfortunately I have been away, missed these wonderful, and eye opening trips, but would like to say how grateful the Society is for the welcome and kindness of our hostesses.

During this rainy/cool season we tend to do a lot with our gardens and tend to purchase more plants to make our homes/gardens look better, after all it's the best time to plant; but before you run to the next nursery and buy, please plan ahead and consider the environment that you will be placing these new plants into.

Pushing the limits on plants

There is a serious threat to the existing ecosystems due to urbanization/changing lifestyles; increasing our knowledge on the effects of urban expansion is important and so is understanding how we can adjust our lifestyles to improve our quality of life. Due to rapid changing climate and reducing space to create a green living, the need becomes more urgent. It is essential to learn more about the species range limits and growth pattern to establish a beautiful lush garden even in as little as square footage. In addition to climate change, we need to consider elevation (high-rise buildings), shade, sun exposure, drainage, near-by structures, micro-climates(created by other buildings/walls like wind tunnels, full shade etc., or created by other plants), that may affect the health of the plant/s.

While most people consider indoor plants for colour or beauty, it is also great to know that some of these plants help improve the quality of the air in your home. Like me, most of us think that air inside your home/building is better than the outside environment (urban areas); but guess what? The air inside your home is 2 to 10 more times higher in levels of pollutants, this is due to the Volatile organic compounds (VOCs) which are gases emitted from certain solids or liquids. Organic chemicals are widely used as ingredients in household products. Disinfecting, cosmetic, degreasing, hobby products and fuels are made up of organic chemicals. All of these products can release organic compounds while you are using them, and, to some degree, when they are stored.

Sources of VOCs

Household products, including:

1. paints, paint strippers and other solvents
2. wood preservatives
3. aerosol sprays/moth repellents and air fresheners/ pesticides
4. cleansers and disinfectants
5. stored fuels and automotive products
6. hobby supplies

7. dry-cleaned clothing
8. building materials and furnishings
9. office equipment such as copiers and printers, correction fluids and carbonless copy paper
10. Graphics and craft materials including glues and adhesives, permanent markers and photographic solutions.

Plants that can purify the air indoors

Philodendrons

A cousin to the syngonium, philodendrons are one of the best houseplants for purifying indoor air, plus they are hardy, requiring little upkeep.

Mother-in-law tongue - sansevieria

Sansevieria have striking tall, pointy leaves, which would explain the name. There are many species, and while they're not known as one of the *best* houseplants for purifying indoor air, like aloe vera, they cleanse the air at night by producing oxygen and removing carbon dioxide. Better yet, they're easy to grow and resist pest infestation well.

Aloe Vera

Aloe vera is well known for its ability to soothe burned skin. Keeping it around allows you to use the fresh gel at a moment's notice for scrapes and burns. It can also be used internally and can be squeezed into smoothies.

Aloe vera isn't one of the best houseplants to purify indoor air, but it does have the unique ability to [release oxygen and absorb carbon dioxide at night](#), making it a good choice for keeping in a bedroom.

Lavender

Lavender, with its earthy, sweet smell, has a soothing, calming effect. You can use it to make tea, [tinctures](#), and even soaps and [lotions](#). It's also helpful for purifying the air by lowering carbon dioxide levels and cleansing bad smells.

Rosemary

[Rosemary](#) is both a culinary powerhouse as well as an air-purifying plant. Its antimicrobial properties make it a good choice for cleaning the air.

Bamboo Palm

Bamboo palms are effective at removing chemical contaminants from the air like formaldehyde, trichloroethylene and benzene. Bamboo palms give a tropical appearance to the room.

Rubber Plant – ficus elastica

The rubber plant is especially effective for removing formaldehyde from indoor air. It's favored for its ease of growth, as well as its appearance, which features large, rubbery leaves.

The rubber plant can grow up to 8 feet tall in the proper conditions. This large ficus (*ficus robusta*) is bred for toughness, which means that it's not only one of the most effective plants for purifying indoor air, but it's sure to be hardy even in less than ideal conditions.

English Ivy-hedera helix

English ivy is commonly grown as filler plant or creeper, but it makes a lovely feature if grown as a topiary. Like the rubber plant, it is the most effective plant when it comes to absorbing formaldehyde.

English ivy needs lots of light to look its best, but does well when the temperature does not get too hot. It is, however, very adaptable to its environment, as it will climb and spread if not put in check.

Boston fern – nephrolepis exaltata

Ferns are one of the best-known varieties of houseplants, and the Boston fern is known for being the best plant for removing indoor air pollutants, and for adding humidity to indoor air. While it is great at keeping indoor air clean, the Boston is sensitive. Without frequent watering and misting, the leaves will quickly turn brown and fall off.

Factors that affect the indoor plants

While the plants reduce the levels of carbon dioxide in the home, the microorganisms in the potting soil will combat with the VOCs... so how can we ensure the plants stay healthy in our homes and provide the much-needed fresh breath of air; let's look at factors affecting an indoor plant

1. Temperature –refers to the intensity of heat which affects photosynthesis, respiration, (transportation of water in the plant)
2. Moisture supply – it may restrict the plant growth depending on its supply and frequency
3. Radiant energy - the intensity of light (sunlight)
4. Composition of atmosphere – condition of the air (carbon dioxide makes up to 0.03% of air in volume; air pollutants in sufficient quantities are toxic to the plants as well as to the human. Air conditioning is another major factor contributing to plants, health.
5. Soil structure and aeration – do remember if soil is unhealthy so will be the plant (compact soils will not allow air and water to circulate to the roots effectively, leading to poor plants)
6. Biotic factors - this means diseases, pests weeds (for example root knot nematodes reduces the absorption of nutrients from the soil to the plant, which may prompt the

gardener to add more and more soil additives like fertilizers to see changes, which will only worsen the plant condition.

7. Plant nutrients – these are nutrients for the plants to grow well
8. Absence of growth – restricting substances (here we refer to sewage disposal, toxic/chemical waste from industries, over fumigation/incorrect use of pesticides, excess fertilizers, neglect



Armed with the above information all you need is creativity and imagination of what you want to achieve, to maximize the space your home has. Limited space and the container/hanging garden is the next option for you; Vertical gardening is also becoming a very popular way of gardening. Provide drainage, water, light and you will be having herbs and leaf vegetables fresh from your wall to the table.

Bonsai



We have already covered bonsai in other newsletters, now we shall look at the factors to consider when shopping for a bonsai tree/plant.

- 1 look at the trunk of the tree before you buy –one of the best indicators of a healthy bonsai is the trunk , look at the base and ensure that there is no scaring or damage and if it is a double trunk (a twin trunk), the trunk should divide at the base of the plant and not higher up.
- 2 The roots of the tree – as you buy the plant check the roots are securely anchored into the container. Roots shouldn't be sticking out of the soil, or feeling soft when touched
- 3 The branches- take a keen look at the branches of the plant; they should be evenly distributed and fairly low on the trunk. They should be correctly angled (if one branch is angled to the right then the other should be angled to the left).
- 4 Leaves- the foliage of the tree should be proportional to the tree (uniform color, glossy and bright with no areas of dried out or uneven gaps)
- 5 Where are you going to place your new bonsai- indoors? It requires sunlight and fresh air; please note that even when the label says indoors a bonsai cannot prosper with occasional sunlight and air especially homes equipped with air conditioning.
- 6 Size of the plant - this is because the smaller the plant (miniature size can be lifted or held by one hand) will require constant care in terms of feeding, watering; considering it's in a shallow container and drying out is very possible if left unattended. While a larger container will retain moisture/ and nourish the plant for a longer period



And now how to kill the bonsai tree

1. Watering

This is a very common reason why bonsai trees die, due to being under-watered or over watered. These trees are planted in very shallow containers that are made to drain water continuously. Within a day after being watered, the water will completely dispersed out onto the ground. If they are not watered correctly, they will die. To water a bonsai tree, users need a fine water nozzle. Any strong spray can wash away soil in the pot and expose the roots. Each bonsai tree needs to be watered daily.

2. Living in the Wrong Environment

People have an unfortunate tendency of treating bonsai trees like houseplants; they do not do well indoors, they are trees and should be treated as such. Before the bonsai tree's environment is selected; find out what the natural environment is like for the plant. Most bonsai trees will do better on the patio than in the house. Wherever you choose to place it, try to mimic the natural environment the tree is best-suited in. on that note also many bonsai trees are naturally grown outside does not mean they should be left there all year. As temperatures change, the bonsai tree may need some protection from harsh weather. Find out what the specific species requirements and make sure that it is placed in an environment that matches it as closely as possible.

3. The Wrong Soil Type

Bonsai trees do not grow in regular potting soil. These plants require constant drainage ;If they are planted in normal as potting soil, the water will not drain as required leading to roots rot. The bonsai soil should be loose and gravelly.

4. Not Using Fertilizer

Most people believe that bonsai trees stay small because they are lacking in nutrients and are hungry. This concept could not be further from the truth. Bonsai trees are smaller because they are pruned and grown to be that way. Just like every other plant, bonsai trees still need to be fertilized. Without the proper nutrients, the bonsai will not grow and may even die.

5. The Wrong Tools

Using the wrong tools can cause severe damage to the plant. The main tool for growing bonsais is a pair of bonsai scissors. Regular scissors may be sharpened to make the surfaces flat. If not prepared well, the regular pair of scissors will crush and damage the tree. Bonsai scissors are made to cut wires and branches without crushing the plant

6. The Wrong Pot Type

Unlike other plants, bonsais must have a container that promotes proper drainage. The bonsai pot should have at least one hole in the bottom; plastic pots can be used. On an aesthetic level, the selected pot should enhance the beauty of the bonsai. By selecting an elegantly designed pot, users can enhance the beauty of the tree without detracting from it.

7. Transplanting it Wrong

Transferring the plant requires attention and care. Users should put enough soil in the new pot for the bonsai to be at the same height. When the transfer of the plant is incorrectly done, you risk to ruin the health of the plant and cause injury. Be careful about breaking apart the roots and always remember to water it afterward.

8. Over Pruning a Bonsai

At some point, users will have to prune their bonsai to get it into the right shape. Correct pruning can accelerate the growth of the bonsai and make it more aesthetically pleasing. Ideally, pruning

should expose some of the inner branches to extra sunlight. Before pruning is done, users should look up the correct technique for their plant species. Not all bonsai trees need to be pruned in the same way or regularly. If a bonsai is over pruned, it will affect the plants ability to absorb sunlight and create nutrients.

9. Not Enough Sunlight

Too much of anything is bad; Sunlight helps the bonsai to produce food and grow healthily. In sufficient sunlight it can cause it to wilt and become unhealthy. Too much sunlight can produce the same effects. Be informed about requirements of the species and make sure that it is getting its ideal sunlight amount.

10. Sitting in Standing Water

Standing water causes about 90 percent of bonsai tree deaths, If the bonsai is not properly drained, the roots will begin to rot and the plant will die. Buy the correct pot and soil to aid in drainage.

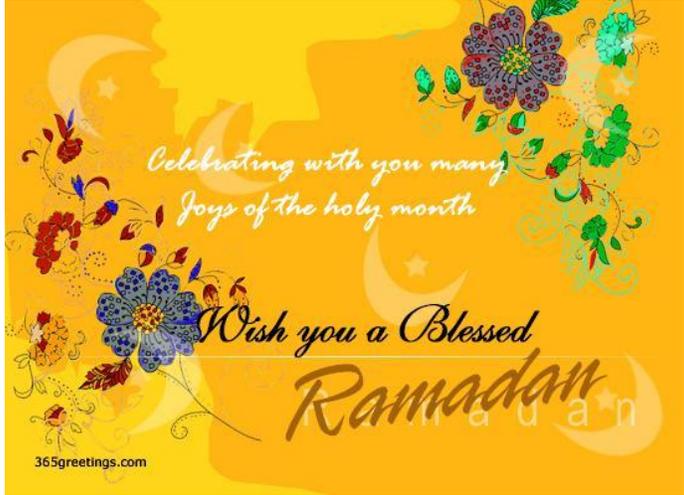
Next meeting

A proposed visit to Haller garden – to be confirmed

A flowershow

A talk on growing a cut flower garden

A happy Ramadan to all our Muslim members



*Celebrating with you many
Joys of the holy month*

*Wish you a Blessed
Ramadan*

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