

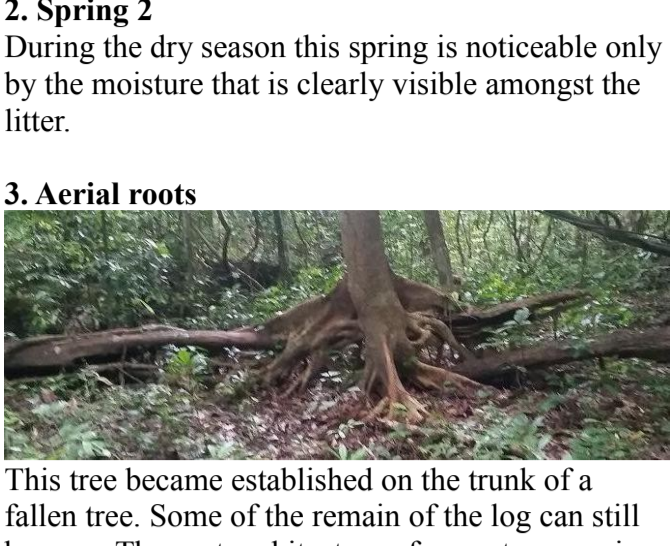
Kimboza's ecological trail

This short trail has been designed in such a way that it provides a first glimpse of the unique features of Kimboza forest right next to the camp site.

You'll need a guide to take you to a number of observation spots over a distance of less than 1 km. In order to disseminate ecological knowledge, this little electronic leaflet has been produced as a PDF and can be downloaded on to your mobile phone or a tablet. The local guide will lead you to the various locations of interest.

Below, for each stop there is a photograph and a short explanation of what you are looking at.

1. Surfacing water

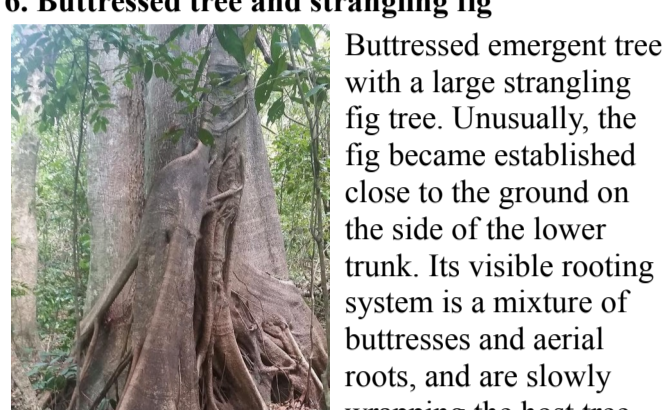


A key feature of Kimboza, but particularly of the area ranging from the Camp site to the Ruvu River, is the number of permanent springs. This feature and the limestone rocky substrate is thought to be a key reason for the occurrence of much of the unique biodiversity that exists here.

2. Spring 2

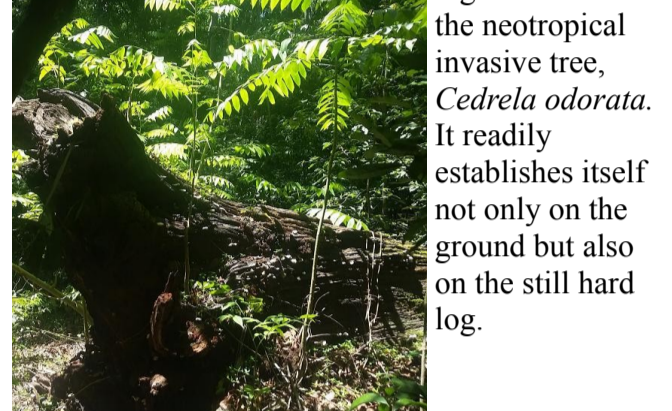
During the dry season this spring is noticeable only by the moisture that is clearly visible amongst the litter.

3. Aerial roots



This tree became established on the trunk of a fallen tree. Some of the remain of the log can still be seen. The root architecture of some tree species provides indication of past tree falls in the forest.

4. Spider tree



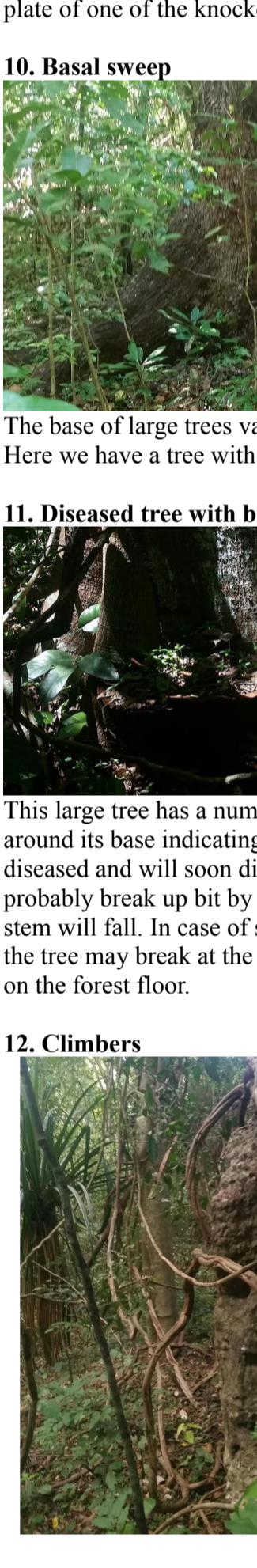
All evidence of original substrate on which this individual became established have vanished. Root collar is in the air.

5. Cola quentinii



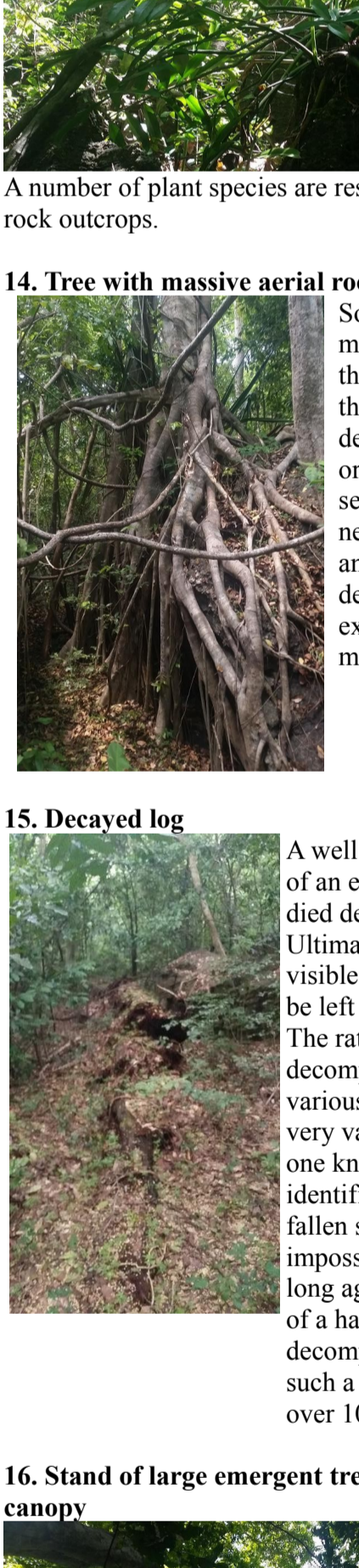
Cola quentinii, here as a small shrub, is one of the endemic species that Kimboza is famous for. Note the angled pulvinus (swelling) at the base of the lamina which is a typical feature of *Cola* species.

6. Buttressed tree and strangling fig



Buttressed emergent tree with a large strangling fig tree. Unusually, the fig became established close to the ground on the side of the lower trunk. Its visible rooting system is a mixture of buttresses and aerial roots, and are slowly wrapping the host tree.

7. Fallen log with Cedrela regeneration



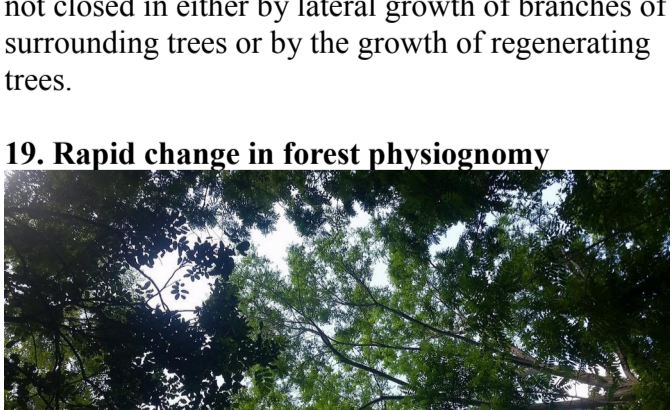
A large tree fell down and in the process formed a canopy gap. Note the prolific regeneration of the neotropical invasive tree, *Cedrela odorata*. It readily establishes itself not only on the ground but also on the still hard log.

8. Spiny trunk



This *Zanthoxylum* sp has a distinct trunk with bosses bearing a sharp spine.

9. Large treefall with associated disturbance



The evidence suggest that the tree died standing and after the crown broke up it fell down and in the process it knocked down at least 4 *Cedrela odorata*. In the foreground you can see the root plate of one of the knocked down trees.

10. Basal sweep



The base of large trees varies between species. Here we have a tree with a marked basal sweep.

11. Diseased tree with bracket fungus



This large tree has a number of bracket fungi around its base indicating that it is seriously diseased and will soon die. After death the tree will probably break up bit by bit and finally the main stem will fall. In case of severe windy conditions the tree may break at the base of the stem and crash on the forest floor.

12. Climbers

Patches of the forest exhibit numerous large climbers whereas in most of Kimboza they are infrequent.

13. Rocky area

A number of plant species are restricted to these rock outcrops.

14. Tree with massive aerial root system

Some species manage to establish themselves on rocks that are largely devoid of soil. In order to grow they send roots to the nearby forest soil and in the process develop an exceptional morphology.

15. Decayed log

A well decomposed stem of an emergent tree that died decades ago. Ultimately only a barely visible organic ridge will be left on the forest floor. The rate of decomposition of the various tree species is very variable and unless one knows the identification of the fallen stem it is impossible to guess how long ago it died. In case of a hardwood that decomposes very slowly such a rotten log could be over 100yrs old.

16. Stand of large emergent trees and dense high canopy

Much of the forest would have looked like this area prior to WWII. However, emergents of timber valuable species were logged out by the 1980s and further to the North trees have been killed by recurrent fires, thus changing the forest structure. Note the high and often dense canopy with a rather open structure below.

17. Branch fall

By shedding a large branch a large emergent dead tree has created a canopy gap with a dense tangle of woody debris on the forest floor.

18. High canopy gap created by a branch fall

A large canopy tree has shed a large branch and created a high canopy gap. Despite the event having occurred quite some time ago the gap has not closed in either by lateral growth of branches of surrounding trees or by the growth of regenerating trees.

19. Rapid change in forest physiognomy

look up to the canopy and one can see a rapid change in tree morphology and amount of light intercepted by tree crowns. This is a shift from near pristine stand to an area dominated by *Cedrela odorata*. It is likely that this area was logged and *Cedrela* took advantage of this disturbance to colonize the place.

20. Oil palm

The oil palm is native to this forest but tends to dominate only in areas with regular supply of ground water.

21. Plank buttresses

This emergent tree has some very fine plank buttresses. The reason for the existence of such structures has long been debated. They occur in only a limited of species and in some species they are only observed in some individuals and not others.