THE KENYA FORESTRY RESEARCH INSTITUTE

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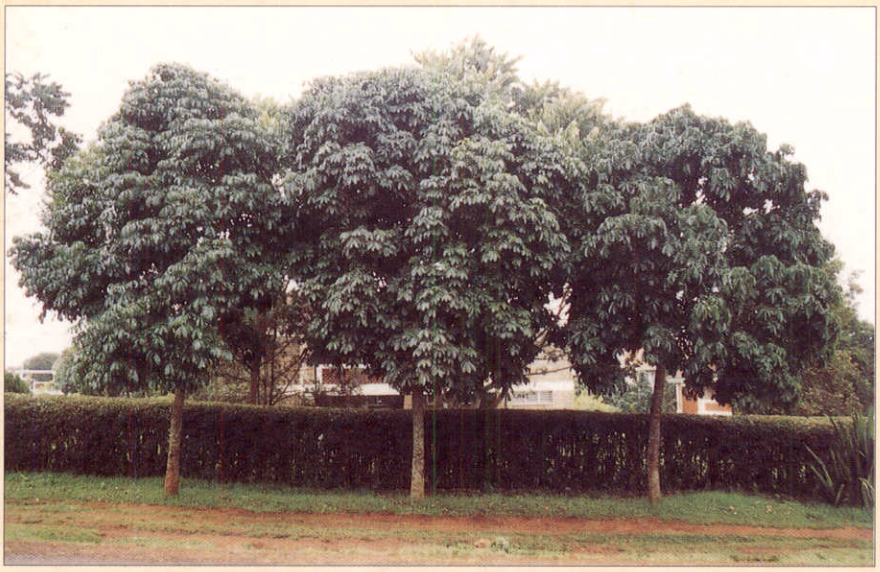

A REVIEW OF BOTANICAL NAME CHANGE OF TREES AND SHRUBS

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(January 2002)

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Photos on Cover Page by Francis Gachathi, Kenya Forestry Research Institute

Top: *Trichilia emetica (Trichilia roka)*
Bottom Left: *Markhamia lutea (Markhamia hildebrandtii, Markhamia plalycalyx)*
Bottom Right: *Zanthoxylum gillettii (Fagara macrophylla)*

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1.0 INTRODUCTION

Unlike vernacular names, botanical names are liable to change from time tc time. One species may be known by a certain name at a certain time and late change to another name or even revert to the original name. For example, *Trichilia emetica* was once changed to *Trichilia roka* and is now back to *Trichilia emetica* This is frustrating to non-botanists, particularly when it involves a familiar anc well established name. Botanical name changes are regulated by the Interna tional Code of Botanical Nomenclature (ICBN), which lays down the rule under which a name may be changed, and the methods used in choosing th correct name. The code aims at providing a stable method of naming plants; i avoids and rejects the use of names that cause ambiguity and confusion. It alsc prevents useless creation of names. Each name applies to one species only and being internationally used, does not vary from place to place like vernacular o common names, regardless of language or dialect. Stability can therefore b achieved only by vigorous application of the rules of the ICBN.

2.0 REASONS FOR BOTANICAL NAME CHANGES

The main reason for botanical name changes is development of systematic botan (naming and classifying plants) worldwide in which systematic revisions of plan families, genera and species are undertaken. After these revisions, discrepancie regarding some botanical names may be discovered making it absolutely neces sary to correct such names to avoid any confusion. According to Stace (1989) botanical name changes result from three main reasons:

1. the name being used is not correct according to the ICBN (nomenclatura change);
2. taxonomic change of opinion, for example combining, splitting or transfe ence of genera or species (taxonomic change) and

3. discovery that a species had mistakenly been given the name of a differen family, genus or species (misidentification).

It is not permitted to change the name of a plant for reasons of convenience, howeve pressing. It is possible that a widespread species has been described by differen

taxonomists under different names. Alternatively systematic revision may cause rearrangement of genera and species, resulting in either the union of two or more species previously considered distinct or splitting what was previously one species into two or more.

For example the three names *Markhamia hildebrandtii, Markhamia platycalx* and *Markhamia lutea* were considered to represent three distinct tree species, but they were later found to be the same. According to the rules of the ICBN, the oldest name, *Markhamia lutea*, which was published earlier, should be retained as the correct name. In another example, the genus *Cassia* was revised and split into three different genera; *Cassia*, *Senna* and *Chamaecrista*. Some species formerly under *Cassia* are now in the genus *Senna*, e.g. *Cassia siamea* is *Senna siamea* and *Cassia didymobotrya* is *Senna didymobotrya*. Some species were retained under the genus *Cassia* e.g. *Cassia abbreviata* and *Cassia afrofistula*. Sometimes a species may be wrongly named and later found to belong to a different genus or even species. The timber tree, Mvule which was previously called *Chlorophora excelsa* is now known as *Milicia excelsa*. It was transferred to another genus in the same family, Moraceae.

Such changes are consequently published in accordance with the rules of the International Code of Botanical Nomenclature and circulated to the major institutions responsible for systematic botany, such as herbaria, botanic gardens and universities. The new names are known as current or accepted names while those which were wrongly applied to the same species become synonyms. For example *Senna siamea* is the accepted name for *Cassia siamea*; *Cassia siamea* is therefore a synonym of *Senna siamea*. The synonyms are usually put into brackets after the accepted names to help cross-reference to other publications e.g. *Senna siamea* (*Cassia siamea*), *Milicia excelsa* (*Chlorophora excelsa*).

3.0 THE PROBLEM

Most people have continued to use the synonyms (old names) instead of the current names because they do not have access to these vital publications on name changes. In Kenya this has brought about confusion particularly in the forestry sector where some species are referred to by two or more names. The problem appears to be because of the use of the two popular books; the

taxonomists under different names. Alternatively systematic revision may cause rearrangement of genera and species, resulting in either the union of two or more species previously considered distinct or splitting what was previously one species into two or more.

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original Kenya Trees and Shrubs (Dale and Greenway, 1961) and Kenya Trees Shrubs and Lianas (Beentje, 1994).

Dale and Greenway, as it is widely known, was published in 1961, when knowledge of the flora of Kenya was inadequate and only 10 years after the start of the authoritative Flora of Tropical East Africa (FTEA) project (Polhill *et al.* 1952-continuing). The FTEA has been published over the past 50 years as a series, each comprising a single family or a section of a large family and it is not yet complete. In the process some of the species in Dale and Greenway have been redetermined and many have changed names. The Kenya Trees Shrubs and Lianas by Beentje is actually a revision of Dale and Greenway with updated names and synonyms of trees and shrubs.

4.0 RECOMMENDATIONS

It is important to have a universal name for every species. For this reason, it is recommended that the names in the Kenya Trees Shrubs and Lianas (1994) or Flora of Tropical East Africa should be used for convenience, reference and communication. These books are available at the East African Herbarium[1] A list of some name changes of trees and shrubs based on the Flora of Tropical East Africa is provided in Appendix 1.

5.0 REFERENCES

Beentje, H. J. 1994. Kenya Trees Shrubs and Lianas. National Museums of Kenya Nairobi. 722p.

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Stace, A.C. 1989. Plant Taxonomy and Biosystematics (2nd ed). Cambridge Unive sity Press, Cambridge

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APPENDIX 1: SOME COMMON BOTANICAL NAME CHANGES OF TREES AND SHRUBS

OLD NAME	NEW NAME	FAMILY
Acokanthera friesiorum	*Acokanthera schimperi*	Apocynaceae
Acokanthera longiflora	*Acokanthera oppositifolia*	Apocynaceae
Boswellia hildebrandtii	*Boswellia neglecta*	Burseraceae
Brachylaena hutchinsii	*Brachylaena huillensis*	Compositae
Buddleja polystachya	*Buddleia polystachya*	Loganiaceae
Canthium hispidum	*Keetia gueinzii*	Rubiaceae
Canthium huillense	*Psydrax livida*	Rubiaceae
Canthium schimperianum	*Psydrax schimperiana*	Rubiaceae
Casaeria engleri	*Casaeria battiscombei*	Flacourtiacea
Cassia didymobotrya	*Senna didymobotrya*	Caesalpiniaceae
Cassia petersiana	*Senna petersiana*	Caesalpiniaceae
Cassia singueana	*Senna singueana*	Caesalpiniaceae
Cassia siamea	*Senna siamea*	Caesalpiniaceae
Cassine buchananii	*Elaeodendron buchananii*	Celastraceae
Celtis durandii	*Celtis gomphophylla*	Ulmaceae
Chlorophora excelsa	*Milicia excelsa*	Moraceae
Cola clavata	*Cola minor*	Sterculiaceae
Combretum binderianum	*Combretum collinum*	Combretaceae
Combretum butyrosum	*Combretum illairii*	Combretaceae
Commiphora caerulea	*Commiphora holtziana*	Burseraceae
Commiphora campestris	*Commiphora samharensis*	Burseraceae
Commiphora coriacea	*Commiphora myrrha*	Burseraceae
Commiphora zimmermannii	*Commiphora eminii*	Burseraceae
Conopharyngia holstii	*Tabernaemontana pachysiphon*	Apocynaceae
Conopharyngia johnstonii	*Tabernaemontana stapfiana*	Apocynaceae
Cordia abyssinica	*Cordia africana*	Boraginaceae
Cordia gharaf	*Cordia sinensis*	Boraginaceae
Cordia ovalis	*Cordia monoica*	Boraginaceae
Dodonaea viscosa	*Dodonaea angustifolia*	Sapindaceae
Dombeya dawei	*Dombeya burgessiae*	Sterculiaceae
Dombeya goetzenii	*Dombeya torrida*	Sterculiaceae

Ekebergia rueppelliana	*Ekebergia capensis*	Meliaceae
Ensete ventricosum	*Ensete edule*	Musaceae
Euclea fructuosa	*Euclea natalensis*	Ebenaceae
Euclea schimperi	*Euclea racemosa*	Ebenaceae
Fagara chalybea	*Zanthoxylum chalybeum*	Rutaceae
Fagara macrophylla	*Zanthoxylum gillettii*	Rutaceae
Fagara usambarensis	*Zanthoxylum usambarense*	Rutaceae
Flacourtia afra	*Flacourtia indica*	Flacourtiaceae
Gyrocarpus jacquinii	*Gyrocarpus americanus*	Hernandiaceae
Heeria reticulata	*Ozoroa insignis*	Anacardiaceae
Hypericum keniense	*Hypericum revolutum*	Hypericaceae
Kigelia aethiopum	*Kigelia africana*	Bignoniaceae
Markhamia hildebrandtii	*Markhamia lutea*	Bignoniaceae
Markhamia platycalyx	*Markhamia lutea*	Bignoniaceae
Newtonia buchanani	*Newtonia buchananii*	Mimosaceae
Olea africana	*Olea europaea ssp. africana*	Oleaceae
Olea hochstetteri	*Olea capensis ssp. hochstetteri*	Oleaceae
Olea welwitschii	*Olea capensis ssp. welwitschii*	Oleaceae
Olinia usambarensis	*Olinia rochetiana*	Oliniaceae
Philippia excelsa	*Erica excelsa*	Ericaceae
Podocarpus gracilior	*Podocarpus falcatus*	Podocarpaceae
Podocarpus milanjianus	*Podocarpus latifolius*	Podocarpaceae
Polyscias kikuyuensis	*Polyscias kikuyuensis*	*Araliaceae*
Pygeum africanum	*Prunus africana*	Rosaceae
Rapanea rhododendroides	*Rapanea melanophloeos*	Myrsinaceae
Rhodognaphalon schumannianum	*Bombax rhodognaphalon*	Bombacaceae
Salix hutchinsii	*Salix subserrata*	Salicaceae
Sclerocarya caffra	*Sclerocarya birrea ssp. caffra*	Anacardiaceae
Spathodea nilotica	*Spathodea campanulata*	Bignoniaceae
Tabernaemontana holstii	*Tabernaemontana pachysiphon*	Apocynaceae
Tecleopsis glandulosa	*Vepris glandulosa*	Rutaceae
Trichilia roka	*Trichilia emetica*	Meliaceae
Vangueria acutiloba	*Vangueria madagascariensis*	Rubiaceae
Ximenia caffra	*Ximenia americana*	Olacaceae