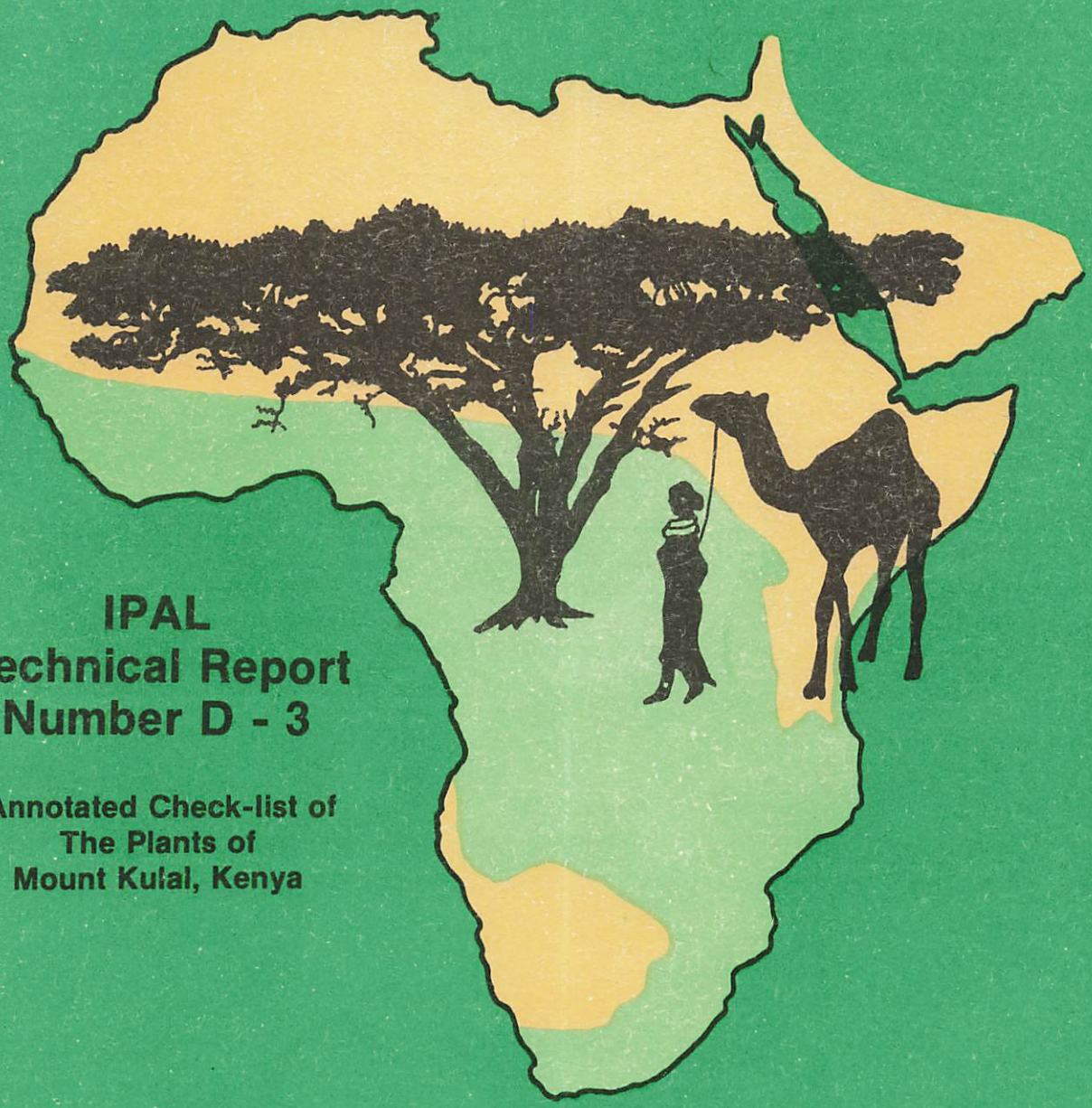
Federal Republic of Germany

Unesco Programme on Man and the Biosphere (MAB)

Republic of Kenya

Integrated Project in Arid Lands (IPAL)



IPAL Technical Report Number D - 3

Annotated Check-list of The Plants of Mount Kulal, Kenya

MAN AND THE BIOSPHERE PROGRAMME

Project 3: Impact of Human Activities and Land Use Practices on Grazing Lands

SUMMARY INTRODUCTION TO IPAL AND THE TECHNICAL REPORT SERIES

The Integrated Project in Arid Lands (IPAL) was established by UNESCO with financial support from UNEP in 1976 with the aim of finding direct solutions to the most urgent environmental problems associated with desert encroachment and ecological degradation of arid lands. It forms part of the international UNESCO programme, Man and the Biosphere (MAB) which has links not only with UNEP's Desertification Unit but also with FAO, in response to the Plan of Action adopted by the 1977 United Nations Conference on Desertification. It is an example of the type of pilot activity that UNESCO and UNEP, together with other organizations and a number of governments, are trying to promote to provide the scientific basis for the rehabilitation and rational management of arid and semi-arid zone ecosystems, through integrated programmes of research (including survey, observation and experimentation), training and demonstration. Phase III of the Project, 1980 - 1983, is supported by funds in trust to UNESCO provided by the Federal Republic of Germany.

During the first phases of IPAL, a co-ordination unit was established in Nairobi and the initial field work started in the arid zone of northern Kenya in a working area of 22,500 km^2 situated between Lake Turkana and Marsabit Mountain. The project now operates five field stations at Mount Kulal, Olturot, Kargi, Korr and Ngurunit, with the project headquarters in Marsabit which is the administrative centre of the District. Since its establishment the project has researched several aspects of experimental management of the region, concentrating upon 'human ecology' of the nomadic pastoralists in dynamic inter-relationship with the animals, plants and the other resources of a drought-prone, uncertain environment.

During the next three years (1980-1983), the investigations in progress will be extended and intensified to develop resource management plans or models for the area, taking into account the increasing human population, the trend towards sedentarization, the degradation of primary productivity, and the increasing incidence of soil erosion, all of which are factors resulting in the necessity for constant famine relief measures in this region. Results obtained in the project are the subject of a number of training workshops and seminars in which Kenyan and regional scientists from the Sudano-Sahelian region participate.

This report is one of a series published by IPAL describing technical findings of the Project and, where appropriate, giving management recommendations relating to the central problems of ecological degradation in the arid zone. The reports are divided into the following categories distinguished by the base colours of their covers:

A. general, introductory and historical: white

B. climate and hydrology: blue

C. geology, geomorphology and soils: brown

D. vegetation: green

E. livestock and other animal life: red

F. social and anthropological: yellow

ACKNOWLEDGEMENTS

The publication of this check-list results mainly from a collecting expedition to northern Kenya undertaken by two of the authors (F.N.H. and P.M.L.J.) in 1978. We would like to take this opportunity to thank the sponsors of that trip: The Royal Botanic Gardens, Kew; The Bentham - Moxon Trust; The Percy Sladen Trust; Glaxo Ltd; The University of Birmingham Graduate Travel Fund; The Science Research Council (U.K.).

We are particularly grateful to Miss C.H.S. Kabuye, the Botanist-in-Charge of the East African Herbarium, Nairobi, for her help and for the use of the facilities and collections of the Herbarium. Many people assisted in various ways, especially Dr. Hugh Lamprey and Dr. Dennis Herlocker and the staff of IPAL.

Special thanks must be recorded for all the painstaking double checking done by Dennis Herlocker. The manuscript has been vetted and amended several times but the authors accept responsibility for any inaccuracies.

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1. INTRODUCTION

Although in the past Mt. Kulal has been visited infrequently by botanists, its vegetation is now sufficiently well collected for a check-list to be published. The aim is to present an up-to-date list of all the species of vascular plants recorded from Mt. Kulal. It is hoped that this list will contribute to the understanding of the flora and may serve as a basis for further studies on the vegetation.

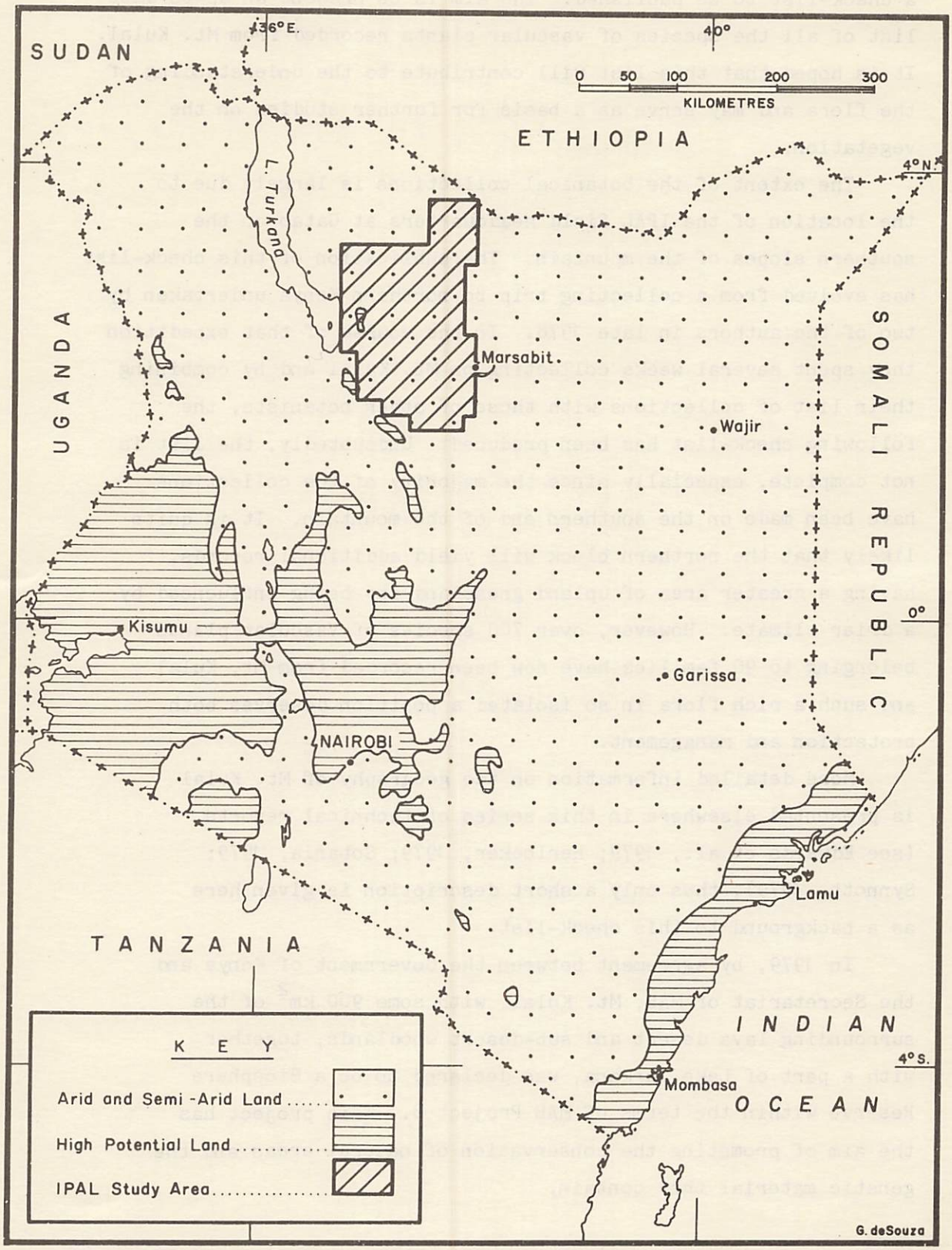
The extent of the botanical collections is largely due to the location of the IPAL field headquarters at Gatab on the southern slopes of the mountain. The publication of this check-list has evolved from a collecting trip to northern Kenya undertaken by two of the authors in late 1978. In the course of that expedition they spent several weeks collecting on Mt. Kulal and by combining their list of collections with those of other botanists, the following check-list has been produced. Undoubtedly, the list is not complete, especially since the majority of the collections have been made on the southern end of the mountain. It is quite likely that the northern block will yield additional records, having a greater area of upland grassland and being influenced by a drier climate. However, over 700 species of Vascular plants belonging to 90 families have now been recorded from Mt. Kulal and such a rich flora in so isolated a position deserves both protection and management.

More detailed information on the geography of Mt. Kulal is presented elsewhere in this series of technical reports (see Edwards et al., 1979; Herlocker, 1979; Sobania, 1979; Synnott, 1979), thus only a short description is given here as a background to this check-list.

In 1979, by agreement between the Government of Kenya and the Secretariat of MAB, Mt. Kulal, with some 900 km^2 of the surrounding lava desert and sub-desert woodlands, together with a part of Lake Turkana, was declared to be a Biosphere Reserve within the terms of MAB Project 8. This project has the aim of promoting the conservation of natural areas and the genetic material they contain.

Figure 1

Location of IPAL Study Area



It is hoped that this check-list will serve as a reference work in connection with MAB 8 and the world network of Biosphere Reserves, as well as a research tool for the IPAL programme.

2. GEOGRAPHY

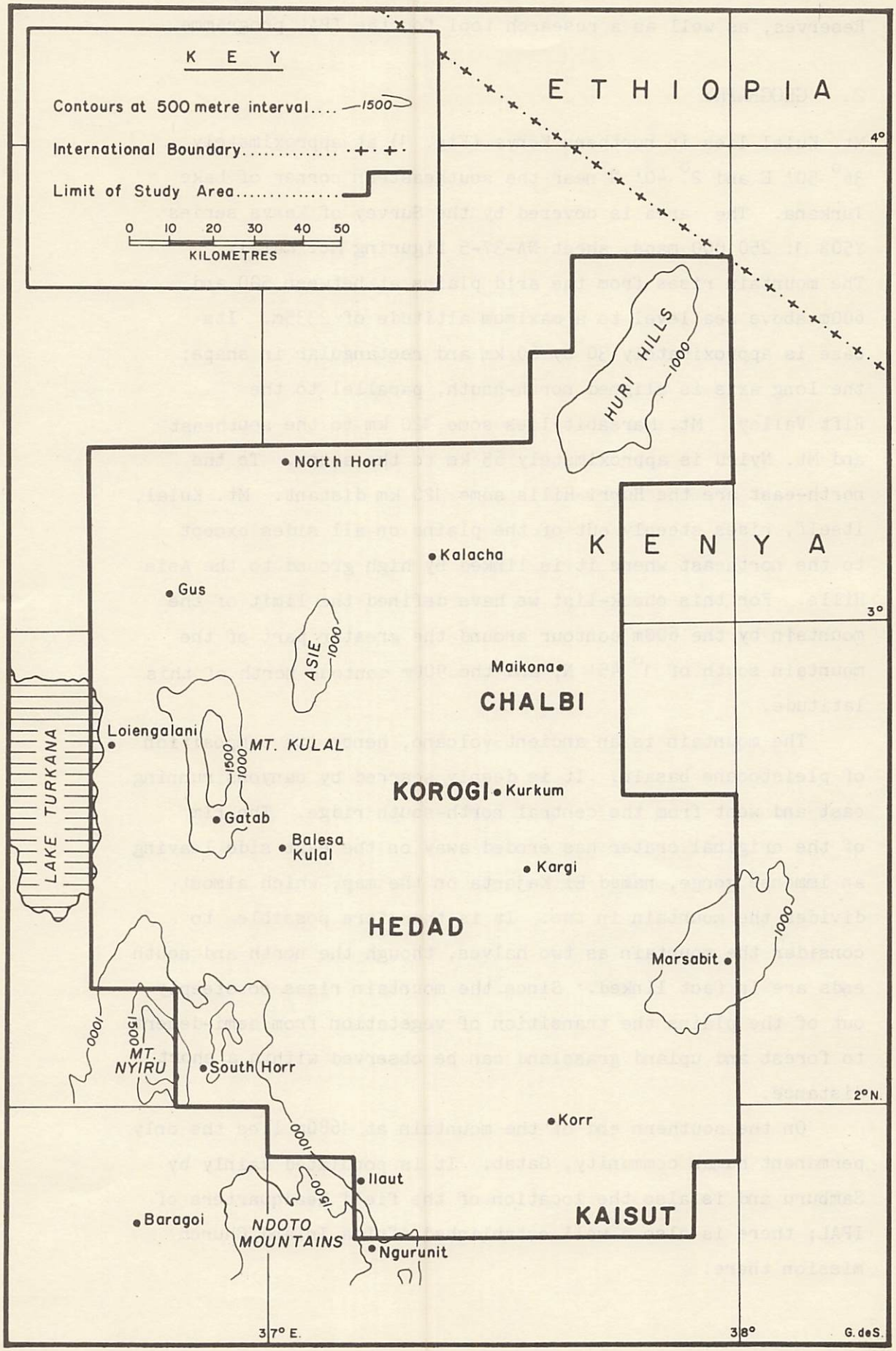
Mt. Kulal lies in northern Kenya (Fig. 1) at approximately 36° 50' E and 2° 40' N near the southeastern corner of Lake Turkana. The area is covered by the Survey of Kenya series Y503 1: 250,000 maps, sheet NA-37-5 figuring Mt. Kulal. The mountain rises from the arid plains at between 500 and 600m above sea level to a maximum altitude of 2335m. Its base is approximately 30 by 60 km and rectangular in shape; the long axis is aligned north-south, parallel to the Rift Valley. Mt. Marsabit lies some 120 km to the southeast and Mt. Nyiru is approximately 65 km to the south. To the north-east are the Hurri Hills some 120 km distant. Mt. Kulal, itself, rises steeply out of the plains on all sides except to the northeast where it is linked by high ground to the Asie Hills. For this check-list we have defined the limit of the mountain by the 600m contour around the greater part of the mountain south of 1° 45' N, and the 900m contour north of this latitude.

The mountain is an ancient volcano, hence its composition of pleistocene basalt. It is deeply scarred by canyons running east and west from the central north-south ridge. The rim of the original crater has eroded away on the east side leaving an immense gorge, named El Kajarta on the map, which almost divides the mountain in two. It is therefore possible to consider the mountain as two halves, though the north and south ends are in fact linked. Since the mountain rises so steeply out of the plains the transition of vegetation from semi-desert to forest and upland grassland can be observed within a short distance.

On the southern end of the mountain at 1680m lies the only permanent human community, Gatab. It is populated mainly by Samburu and is also the location of the field headquarters of IPAL; there is also a well established Africa Inland Church mission there.

Figure 2

The Study Area



Sobania (1979) has reviewed the background history of the area and it appears that the mountain was largely depopulated in the first forty years of this century. In the 1950's the forest was surveyed and considered for reservation but its gazettement did not take place. However, it is understood that gazettement is now imminent and the cutting of the reserve boundary has begun. From around 1960 grazing in the forest was forbidden but there was little enforcement until the 1970's when the Gatab mission employed a guard, largely to prevent intentional burning in the forest. Since 1976 IPAL have also employed a guard to control grazing. Grazing in the forest only becomes a problem during droughts when the local people are obliged to move their cattle up the mountain to feed them. The northern end of Mt. Kulal is less accessible but the large areas of upland grassland there are visited for temporary grazing, especially in the dry seasons. Twelve springs and waterholes are known on the mountain (Synnott, 1979).

Elephants *(Loxodonta africana)* and black rhinoceroses *(Diceros bicornis)* were once plentiful on the lower slopes of Mt. Kulal and were recorded by IPAL until 1976, but have now been exterminated by poaching., Greater kudu *(Tragelaphus strepsiceros)* occur on the middle and upper slopes of Mt. Kulal, dikdik *(Rhynchotragus kirkii)* at all levels, and oryx *(Oryx beisa)*, gerenuk *(Litocranius walleri)*, Grant's gazelle *(Gazella granti)*, giraffe *(Giraffa camelopardalis)* and Grevy's zebra *(Equus grevyi)* on the lower slopes. The last buffaloes *(Syncerus caffer)*, which lived in the higher levels of the montane forest, were seen in 1976 and the species is apparently extinct on Mt. Kulal now.

Compared with other montane forests in East Africa, that of Mt. Kulal supports relatively few endemic animals. Among the birds there is a local race of white-eye *(Zosterops palidus kulalensis)* and among the butterflies an endemic race of *Papilio dardanus*. There are also several endemic molluscs (Vercourt, 1963).

3. CLIMATE

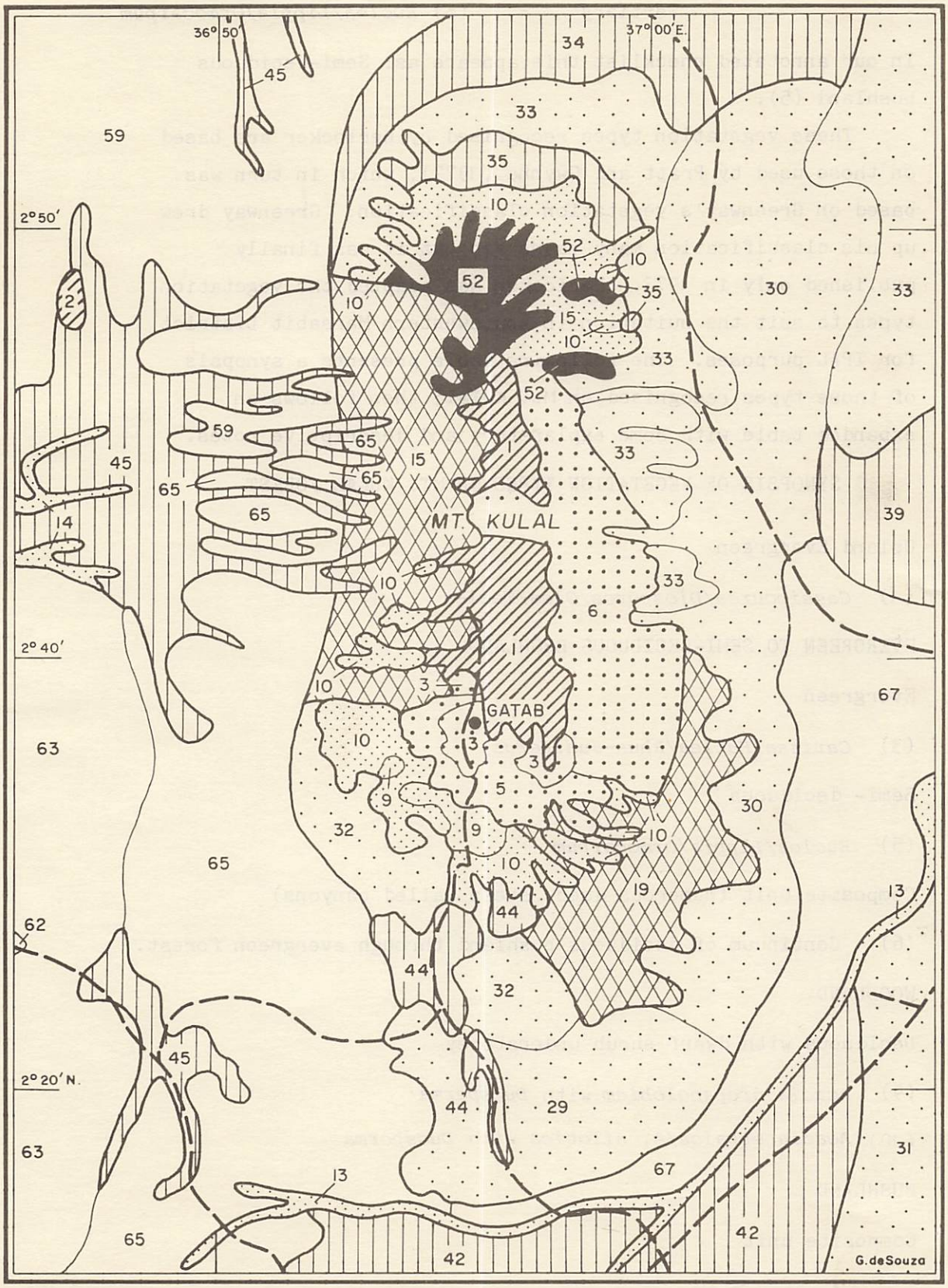
Mt. Kulal stands within the most arid region of East Africa. The plains below the mountain are characterised by a high potential evaporation (exceeding 2600mm, according to Woodhead, 1968; Dagg, 1969 - both cited by Herlocker, 1979) and a low annual rainfall (mean annual rainfall of 150mm in the period 1961 - 1967 at North Horr, see Edwards et al, 1979, cited by Herlocker, 1979). However, with increasing altitude up the mountain the temperature and evaporation decrease and the cloudiness and rainfall increase. Thus the top 600m of the mountain can support montane forest with an estimated mean annual rainfall of 900mm (Herlocker, 1979) around the summit.

The climate of the area is influenced by two monsoon systems. One originates over Arabia to the northeast bringing hot dry winds which result in little rain except for a short season of low rainfall between October and November. The westward flow of one branch of this monsoon system between the Kenyan and Ethiopian highlands causes the characteristic high winds around the mountain. The other monsoon system arises over the Indian Ocean to the southeast. It brings cool moist air masses and it is responsible for the greater part of the annual rainfall which falls primarily in April. Since rainfall on the mountain is largely due to the moist air from the southeast rising up the mountain and cooling, the southeastern flank of the mountain tends to be the wettest.

4. VEGETATION TYPES

In 1979 Dennis Herlocker published his detailed report on the vegetation of the IPAL area in southwestern Marsabit District. This report included a coloured map showing the types of vegetation he recognised as a result of field work. (See Fig. 3 for an enlarged portion of the map covering Mt. Kulal).A three-tiered hierarchy of vegetation types was tabulated; primary, secondary and tertiary types; the latter being numbers 1 - 73.

Figure 3. A part of the vegetation map of South Western Marsabit District (D.J. Herlocker, 1979). The Mt. Kulal region; showing the area covered by the check-list. The vegetation type numbers are those referred to in the Synopsis of vegetation types in the text.



e.g. Primary = Evergreen to semi-deciduous bushland

Secondary = Semi-deciduous

Tertiary = (5) *Euclea/Lippia/Ormocarpum*

In our annotated checklist this appears as: Semi-deciduous bushland (5).

These vegetation types recognised by Herlocker are based on those used by Pratt and Gwynne (1977), which in turn was based on Greenway's vegetation classification. Greenway drew up his classification many years ago but it was finally published only in 1973. Herlocker has adapted the vegetation types to suit the suitation in southwestern Marsabit District for IPAL purposes. The following table presents a synopsis of those types recognised on Mt. Kulal; then follows an expanded table with some explanatory and descriptive notes.

SYNOPSIS OF VEGETATION TYPES ON MT. KULAL FOREST

Upland Evergreen

(1) *Cassipourea/Diospyros/Olea/Teclea*

EVERGREEN TO SEMI-DECIDUOUS BUSHLAND

Evergreen

(3) *Carissa/Euclea/Rhus-Juniperus*

Semi- deciduous

(5) *Euclea/Lippia/Ormocarpum*

Composite unit (numerous deep, steep walled canyons)

(6) Continuum of deciduous bushland through evergreen forest.

WOODLAND

Deciduous with dwarf shrub understorey

(9) *Acacia drepanolobium* with *Duosperma*

(10) *Acacia etbaica/A. nilotica* with *Duosperma*

BUSHLAND

Composite unit

(15) Continuum of deciduous bushland through semi-deciduous to evergreen bushland

Deciduous with succulent dwarf shrub understorey

(19) *Acacia mellifera/A. reficiens/Commiphora* with *Euphorbia/Plectranthus.*

SHRUBLAND

Deciduous with dwarf shrub understorey

(29) *Acacia mellifera/A. reficiens/Commiphora* with *Duosperma*

(30) *Acacia mellifera/A. reficiens* with *Duosperma/Sericocomopsis*

Deciduous with succulent dwarf understorey

(32) *Acacia mellifera/Commiphora* with *Euphorbia/Plectranthus*

DWARF SHRUBLAND

Dwarf shrubland

(34) *Duosperma*

(35) *Duosperma/Plectranthus*

(36) *Duosperma/Indigofera*

Wooded

(44) *Duosperma* with *Acacia tortilis*

PERENNIAL GRASSLAND

Wooded upland

(52) *Bothriochloa (Dichanthium) Themeda* with *Juniperus*

ANNUAL GRASSLAND

Dwarf shrub short

(59) *Aristida* with *Duosperma/Indigofera/Sericocomopsis*

Bushed dwarf shrub short

(63) *Cenchrus* with *Commiphora-Indigofera/Sericocomopsis*

(65) *Aristida* with *Acacia mellifera/Commiphora/Jatropha-Indigofera*

(67) *Aristida* with *Acacia mellifera/A. reficiens - Duosperma/Sericocomopsis.*

EXPANDED TABLE OF VEGETATION TYPES ON MT. KULAL

FOREST

Vegetation type 1. Upland evergreen forest: Cassipourea/ Diospyros/Olea/Teclea. (Fig. 4)

The summit of Mt. Kulal above c. 1800 m is capped by dense forest. It is a moist forest owing to frequent cloud cover providing condensation, and there is less evaporation than at lower altitudes. Rainfall is also greater. Many of the trees are festooned with lichens *(Usnea)* and orchids e.g. *Aerangis brachycarpa, Polystachya cultriformis, Rangaeris amaniensis. Cassipourea malosana* is the dominant species except in the lower belt, where *Juniperus procera*, *Olea africana* and *Teclea simplicifolia* dominate. Other principal trees are *Olea hochstetteri*, *Diospyros abyssinica* and *Teclea nobilis.* The shrub layer consists of shade tolerant species such as *Maytenus undatus*, *Rytigynia* spp., *Brucea antidysenterica* and *Apodytes dimidiata.* The herb layer usually entirely covers the ground; especially charachteristic are species of Acanthaceae *(Dicliptera laxata, Phaulopsis imbricata, Mimulopsis* sp., *Justicia* sp.) Balsaminaceae *(Impatiens meruensis* ssp. *septentrionalis)* and Commelinaceae *(Aneilema pedunculosum).*

Glades occur within the forest, where there is water seepage causing waterlogged ground and pools with the grass *Polypogon monspeliensis.* Also occurring are *Commelina africana* and *Kyllinga* sp. Several glades occur near the summit where shallow soil, wind exposure and fire probably combine to maintain them. Typical species include *Silene burchellii, Hebenstretia dentata, Satureja biflora, Hypoxis obtusa.*

EVERGREEN TO SEMI-DECIDUOUS BUSHLAND

Vegetation type 3. Evergreen bushland: Carissa/Euclea/Rhus-Juniperus (Figs.6&7)

This type was formerly *Juniperus procera* forest at altitudes of 1700-1800 m, now much modified and degraded by man. Occasional junipers still occur, but the thickets form irregular clumps or mosaic within cattle grazed grassland *(Sporobolus macranthelus, S. phleoides, Themeda triandra, Eragrostis papposa, E. tenuifolia etc.)*

The bushes usually form a sharp boundary between the grassland and the thicket. Some are spiny such as *Carissa edulis* and *Scutia myrtina* but most are unarmed e.g. *Euclea divinorum, Pistacia aethiopica*, *Rhus natalensis*, *Jasminum floribundum*.

The grassland is fairly rich in herbaceous flowering plants e.g. *Pentanisia ouranogyne, Crepis rueppellii, Zornia setosa, Linum holstii, Commelina benghalensis, Bulbine abyssinica.* Around the village of Gatab overgrazing has encouraged. *Solanum incanum, Chenopodium schraderanum* and other unpalatable species.

Vegetation type 5. Semi-deciduous bushland / Euclea/Lippia/Ormocarpum (Fig. 8)

This type occurs at an altitude of c. 1600 m at the lower edge of the former juniper zone. Typically it is to be found on steep rocky slopes as dense thickets. Low cliffs are inhabited by succulents, such as *Echidnopsis dammaniana*, *Notonia coccinea*, *Plectranthus igniarius* and *Aloe* species. The thickets have a few small old trees of *Ormocarpum trichocarpum* with the principal shrubs *Euclea divinorum, Lippia somalensis, L. ukambensis, Clerodendrum myricoides.*

Vegetation type 6. Continuum of deciduous bushland through evergreen forest. (Fig. 9)

A composite unit in deep, steep walled canyons on the eastern side of Mt. Kulal, abbreviated in the list as "Composite canyon vegetation".

This is a relatively moist zone with much cloud, but rapid drainage owing to the steepness of the slopes. Most of the species are those encountered in the vegetation types 1, 3 and 5.

WOODLAND

Vegetation types 9, 10. Thorny trees dominate this deciduous woodland. (Figs. 10 & 11)

Type 9, Acacia drepanolobium with Duosperma
Deciduous woodland with dwarf shrub understorey
Type 10, Acacia etbaica/A. nilotica with Duosperma

These types occupy the upper slopes where cloud is less frequent than at higher altitudes, but where rainfall at certain times of the year is still regular enough to support deciduous woodland. It is an intermediate type between the moister evergreen zone and the really dry lower slopes of the mountain.

BUSHLAND

Herlocker, following Pratt & Gwynne (1977), distinguishes bushland from shrubland by the presence of a conspicuous number of trees mixed with dominant shrubs.

Vegetation type 15. Composite unit. Continuum of deciduous bushland through semi-deciduous to evergreen bushland. This type occurs in a large block on the drier western side of Mt. Kulal.

Vegetation type 19. Deciduous bushland with succulent dwarf shrub understorey. Acacia mellifera/A. reficiens/ Commiphora with *Euphorbia/Plectranthus.*

This type covers the rocky south eastern slopes at medium altitudes on lava-derived soils.

SHRUBLAND

This primary vegetation type occurs primarily on relatively unweathered basaltic lava. It is not easy to subdivide. The shrubs are low and deciduous with a layer of ephemeral herbs, including grasses.

Vegetation type 29. Deciduous shrubland with dwarf shrub (Fig. 12) *understorey: Acacia mellifera/A. reficiens/Commiphora with Duosperma.*

Vegetation type 30. A. mellifera/A. reficiens/Duosperma/Sericocomopsis

Besides the acacias there are shrubby *Boswellia neglecta Commiphora boiviniana* and other species, *Cladostigma hildebrandtioides* and *Hildebrandtia sepalosa.*

Duosperma eremophilum in some areas is co-dominant with *Sericocomopsis hildebrandtii.*

Vegetation type 32. Deciduous shrubland with succulent dwarf shrub understorey: Acacia mellifera/Commiphora with Euphorbia/Plectranthus.

The *Euphorbia* species are succulent as is *Plectranthus igniarius*.

DWARF SHRUBLAND

Dwarf shrubland occurs in patches on Mt. Kulal at middle altitudes (c. 1200 m.) where there are dry conditions. Although *Duosperma eremophilum* and *Indigofera spinosa* are the co-dominant dwarf shrub there are many conspicuous succulent species, e.g. *Plectranthus igniarius, Euphorbia uhligiana, E. nubica, Sesamothamnus busseanus, Kleinia kleinioides*.

The following tertiary vegetation types have been recognised by Herlocker on Mt. Kulal:

Vegetation type 34. Dwarf shrubland: Duosperma

Vegetation type 35. Dwarf shrubland: Duosperma/Plectranthus

Vegetation type 36. Dwarf shrubland: Duosperma/Indigofera

Vegetation type 44. Wooded dwarf shrubland: Duosperma with Acacia tortilis.

PERENNIAL GRASSLAND

Vegetation type 52. Wooded upland grassland: Bothriochloa (Dichanthium/Themeda with Juniperus)

This occurs only on North Kulal (Arabel) where it has been derived from juniper forest by frequent burning. Remnant junipers are well spaced among the dominant grasses *Bothriochloa insculpta* and *Themeda triandra*. The zone is subject to much cloud and considerable rainfall.

ANNUAL GRASSLAND

This occurs at low altitude on hot, dry, stony plains.

Vegetation type 59. Dwarf shrub short annual grassland Aristida with Duosperma, Indigofera, Sericocomopsis.

The grasses *Aristida adscensionis* and *A. mutabilis* are annuals, while *Duosperma eremophilum, Indigofera spinosa* and *Sericocomopsis hildebrandtii* are dwarf shrubs. The following types have variations in their composition as indicated.

Vegetation type 63. Bushed dwarf shrub short annual grassland: Cenchrus with Commiphora - Indigofera/Sericocomopsis.
Vegetation type 65. Aristida with Acacia mellifera/Commiphora/ Jatropha-Indigofera. (Fig. 13)
Vegetation type 67. Aristida with Acacia mellifera/A.reficiens-Duosperma/ Sericocomopsis.

The study of the flora of Mt. Kulal suggests many interesting problems in the field of plant geography which some of us hope to discuss more fully in a future paper than could be attempted here.

5. BOTANICAL COLLECTIONS

The main collections from Mt. Kulal have been made by IPAL staff and the authors of this paper. The mountain has been visited by other collectors on several previous occasions and this check-list is a sum of all known records. A survey of all the collectors in chronological order and the present location of their collections is presented below.
Standard abbreviations (P.K. Holmgren and W. Keuken, Index Herbariorum Part 1 1974) have been used for the herbaria possessing material from Mt. Kulal except for IPAL which refers to the herbarium at the field headquarters of the project at Gatab. Most of the specimens are at Nairobi (EA), Kew (K) or Oxford (CHO).

There may well have been other visitors to the mountain whose collections have not been traced. For example, Lord Delamere passed by Mt. Kulal (ca. 1880) on his journey south from Abyssinia, as did Capt. M.S. Welby (1898); however no collections from there by either of them have been located. Also of note are the collections of W.H.R. Martin who died while participating in the 1934 Lake Rudolf Rift Valley Expedition. He collected on both Mt. Marsabit and Mt. Kulal but his notes were lost with him and the collecting localities of his specimens remain unknown.



Figure 4. View of vegetation type 1: upland evergreen forest



Figure 5. Oblique aerial view of vegetation type 1



Figure 6. Vegetation type 3: evergreen bushland with upland evergreen forest and fire-derived upland grassland



Figure 7. Vegetation type 3: evergreen bushland with secondary vegetation in heavily grazed area



Figure 8. Vegetation type 5: semi-deciduous bushland



Figure 9. Vegetation type 6: canyon types

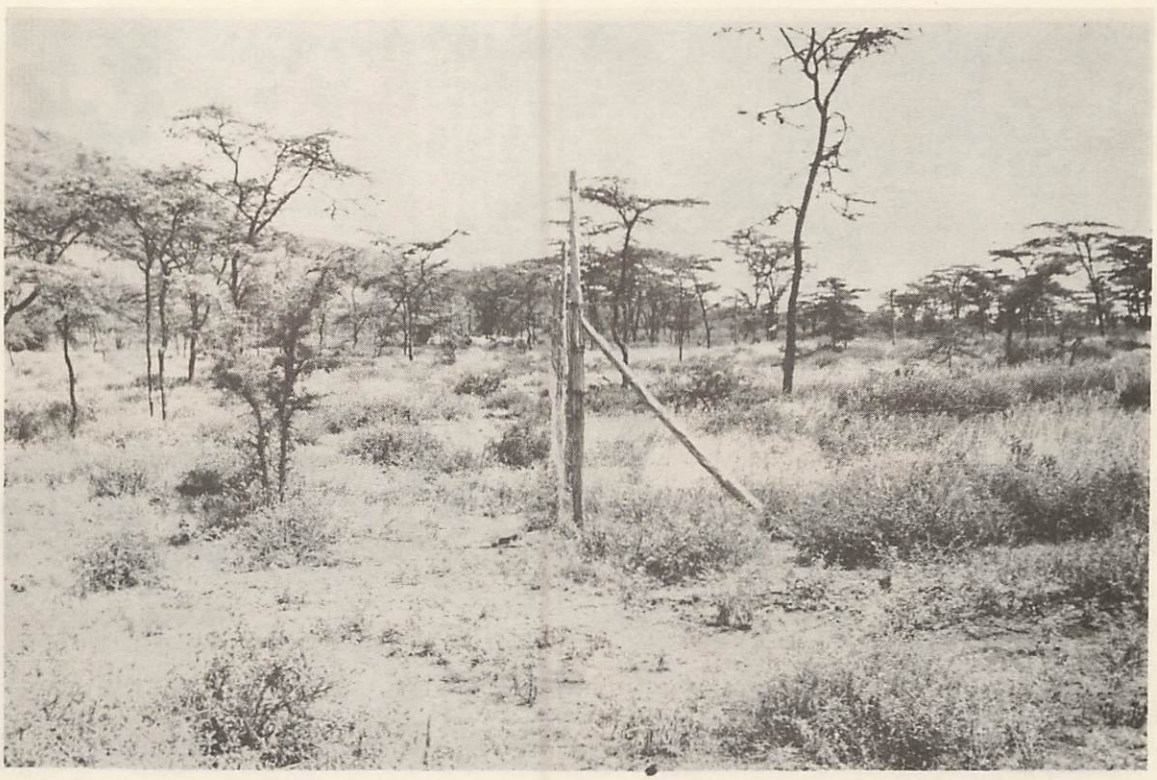


Figure 10. Vegetation type 9: Acacia drepanolobium woodland with Duosperma



Figure 11. Vegetation type 10: Acacia etbaica/A. nilotica woodland with Duosperma. Oblique aerial view



Figure 12. Vegetation type 29: deciduous shrubland with dwarf shrub understory



Figure 13. Vegetation type 65. bushed dwarf-shrub annual grassland

Plant Collectors on Mt. Kulal:

W.H.R. Martin (July 1934) - notes lost, collection K

Mrs. J. Adamson (Sept. 1944, Aug. 1957, Mar-Apr. 1959) - collection EA, K

P.R.O. Bally (Oct. 1947) - collection EA, K

B. Verdcourt (July 1958) - collection EA, K

T. Adamson (Jan. 1959) - collection EA, K

J. Oteke (June 1960) - collection EA, K

J.B.C. Cameron (April 1970) 35 specimens in EA

H. van Swinderen (May 1971) - collection K

Mrs. E.M. Tweedie (March 1972) - collection K, EA

C. Field (1976 onwards) - collection IPAL, EA, K

D. Herlocker (1976 onwards) - collection IPAL, EA, K

J. Lewis (April - June 1977) - collection IPAL, EA, K

P. Kuchar (May 1978) - collection IPAL (EA, K)

F.N. Hepper and P.M.L. Jaeger (Nov. - Dec. 1978) - collection K, IPAL, EA, P, MO, DAR, FI, B, BR (abbreviated 'H & J' in the check-list).

F. White (Jan. 1979) - collection FHO, K, EA

T.J. Synnott (Dec. 1978 - June 1979) - collection EA, FHO

Others noted in the following check-list (*Masheti*, *Gagah* and *Kreulen*) either did their collecting with *D. Herlocker* or did so as part of their duties with IPAL.

6. THE CHECK-LIST

Major groups are arranged in the order of their evolution *Pteridophyta* p., Gymnosperms p., Dicotyledons p., Monocotyledons p.

Pteridophyte families are arranged and numbered according to R.B. Faden's five account in Upland Kenya Wild Flowers (UKWF) (1974). Angiosperm families are arranged and numbered according to J. Hutchinsons 'Families of flowering plants' Dicotyledons 1926, Monocotyledons 1934 which is the best (i.e. most natural) sequence according to which major African floristic works, such as the Horn of Tropical West Africa, The flowering plants of the Sudan and UKWF are arranged. The advantages of a natural arrangement over the alphabetic are that it teaches the reader much about the plants from their position and is an aid to identification. The supposed ease of reference with an alphabetic system is less than might appear firstly because many readers do not know to which family a genus belongs and secondly because many families have more than one name. *Crotalaria* for example is placed in the *Fabaceae, Leguminosae* and *Papilionaceae* by different authors.

The number of families in this list are those used in the E.A. Herbarium Nairobi which is the institution most likely to be employed by users of this list who wish to name plants. Within families and genera an alphabetical sequence is usually adopted except in certain large units where it has been thought helpful to recognise Sub families or Tribes within families or sections within genera or artificial divisions. Synonyms are only listed where„ the name used differs from that in the reference work cited.

Below each species name is the tertiary vegetation type, with number in brackets, taken from Herlocker's (1979) classification, in which that species is known to occur.

The species are not necessarily restricted to these vegetation types and there may well be some errors in placing them in these types; however, this classification does provide some information on the sort of habitats in which the species may be found.

The entry for each taxon includes on the first line its name together with a synonym or synonyms where the name used here differs from that adopted in the reference work or works cited for the family: On the left hand side of the second line the vegetation type or types in which the plant is at present known to occur on Kulal is named using the classification of Herlocker (1979). On the right hand side of the second line the growth form of the species is stated except in such families as the *Gramineae* where it is uniform for all our species and is stated beneath the family name. The following terms are employed.

Tree, - woody, with well-defined trunk, over 2m tall
Shrub, - woody, branching near the base, over 1m tall
Dwarf shrub or shrublet, - as for shrub but under 1m tall
Liane - woody climber
Twiner - herbaceous twining climber
Tendril climber - herbaceous
Tall herb - over 2m tall, not wood,
Herb
Succ. - Succulent
Stem succulent
Geophytic herb - herb with underground storage organs

Finally on the bottom line the altitude, collector and collection number of the voucher specimens is given. Most collections were made on the more accessible southern part of the mountain, thus, when a specimen is known to have been collected on the northern section (Arabel) it has been annotated as such in the list.

REFERENCES AND ABBREVIATIONS

This list includes besides those works referred to in the text others which are likely to be useful to those who may wish to identify plants from Kulal. The Key in Lind and Tallantire (1962 & 1981) will be found particularly useful to those wishing to determine the family to which a plant belongs since it includes almost all the families represented in Kulal while that in UKWF leaves out purely woody families and that in KTS not only leaves out purely herbaceous families but is also extremely difficult, OP Out of Print.

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PTERIDOPHYTA Ferns and Fern Allies

Families numbered according to R. B. Faden in UKWF
All our species are herbs

2 SELAGINELLACEAE

Selaginella phillipsiana (Hieron.) Alston
Cameron in EA 14335

12 ADIANTACEAE

Actiniopteris radiata (Swartz) Link
Compound canyon vegetation (6)
1050m Synnott 1744

Actiniopteris semiflabellata Pic.-Serm.
Semi-deciduous bushland (5)
1700m H & J 6886

Adiantum reniforme L. ssp.
Near summit, on rocks.
T. Adamson in EA 11649; Alexander s.n. (H342/62)

Doryopteris concolor (L.f.) Kuhn var. *kirkii* (Hook.) C.Chr.
Upland evergreen forest (1)
1920m Bally 5599

Pellaea involuta Bak.
Cameron in EA 14334

Pellaea sp.
Semi-deciduous bushland (5)
1700m H & J 6887

Pteris catoptera Kunze
Upland evergreen forest (1)
1900m Synnott 1798

Pteris quadriaurata Hook. s.lat.
Upland evergreen forest (1)
1980-2300m H & J 7085

? Pteris sp.
Upland evergreen forest (1)
1900m Synnott 1801

15 ASPIDIACEAE

Dryopteris inaequalis (Schlecht.) Kuntze
Upland evergreen forest (1)
Verdcourt 2243; 2130m Tweedie 4236

Tectaria gemmifera (Fee) Alston
Synnott 1799

20 ASPLENIACEAE

Asplenium aethiopicum (Burm.) Bech.
Upland evergreen forest (1)
Evergreen bushland (3) Often epiphytic
Bally 5600; 1900m Kuchar 9075; 1550-1700m H & J 7023;
2000m Synnott 1784

Asplenium erectum Willd. var. *usambarense* (Hieron.) Schelpe
Upland evergreen forest (1)
2000m Synnott 1785

Asplenium gemmiferum Schrad.
Upland evergreen forest (1)
2280m Verdcourt 2242; 1900m Synnott 1804, 1811

Asplenium rutifolium (Berg.) Kunze
Upland evergreen forest (1) Sometimes epiphytic
Bally 5601 B

Asplenium sandersonii Hook.
Upland evergreen forest (1) Epiphyte
White 12622

Asplenium theciferum (Kunth) Mett. var. *concinnum* (Schrad.) Schelpe
(Losxoscaphe thecifera (Krunth) Moore var. *concinna* (Schrad.) C. Christ)
Upland evergreen gorest (1)
Evergreen semi-deciduous bushland (3) (5) Epiphyte
1900m H & J 7043; White 12601;1800m Synnott 1704, 1786;
Bally 5601A

Asplenium sp. B of UKWF aff. *A. boltonii* Hook.f.
Upland evergreen forest (1)
1900m Synnott 1800

21 POLYPODIACEAE

Pleopeltis macrocarpa (Willd.) Kaulf.
Upland evergreen forest (1) Epiphyte
White 12602; Synnott 1787

GYMNOSPERMAE 'Conifers'

CUPRESSACEAE

FTEA (1958): KTS (1961)

Juniperns procera Endl.
Upland evergreen forest (1)
Evergreen bushland (3) Tree
Bally 5533; 1600m H & J 6976; White 12627

PODOCARPACEAE

FTEA (1958) : KTS (1961)

Podocarpus gracilior Pilg.
(Perphaps a form of P. falcatus (Thunb.) Mirb.)
Upland evergreen forest (1) Tree
Synnott (doubtful sight record)

ANGIOSPERMS Flowering plants

Families numbered in the sequence of J. Hutchinson Families of Flowering Plants (1926 Dicotyledons, 1934 Monocotyledons)

DICOTYLEDONS : ARCHICHLAMYDEAE (families 1 - 213)

10 MONIMIACEAE

KTS (1961): FTEA (1968)

Xymalos monospora (Harv.) Baill.
Upland evergreen forest (1) Tree
Verdcourt in EA 11862; 2000m Synnott 1778

11 LAURACEAE

KTS (1961)

Ocotea kenyensis (Chiov.) Robyns & Wilczek
Upland evergreen forest (1) Tree
White 12582; Synnott 1777

15 RANUNCULACEAE

FTEA (1952): UKWF (1974)

Clematis brachiata Thunb. *(C. hirsuta* Guill. & Perr.)
Composite bushland (15) Liane
1900m Kuchar 9084

23 MENISPERMACEAE

FTEA (1956): UKWF (1974)

Cissampelos probably *C. pareira* L. var *orbiculata* (DC.) Miq.
Upland evergreen forest (1) Twiner
Verdcourt (sight record)

Stephania abyssinica (Dillon & A. Rich.) Walp.
Upland evergreen forest (1)
Evergreen bushland (3) Twiner
1730m Herlocker, Masheti & Gagah 354; 1800-2100m H & J 6923

28 PIPERACEAE

UKWF (1974)

Peperomia abyssinica Miq.
Upland evergreen forest (1) Epiphyte
2100m Synnott 1812

Peperomia tetraphylla (Forst.) Hook. & Arn.
(P. reflexa (L.f.) A. Dietr.)
Upland evergreen forest (1)
Evergreen bushland (3) Epiphyte
1800m Bally 5631; 1740m H & J 7059; 1800m Synnott 1726;
2100m Synnott 1813

Piper capense L.
Upland evergreen forest (1) Herb
2000m Bally 5604; 2130m T. Adamson in EA 11646; Oteke 98,
Field 242; Herlocker 69; 1980-2300m H & J 7095

36 CAPPARACEAE

KTS (1961) : FTEA (1964) Capparidaceae :UKWF (1974)

Boscia coriacea Pax
Deciduous shrubland Shrub
750m T. Adamson 36; 1500m Field 106 ; 600m Herlocker 78

Cadaba farinosa Forsk.
Deciduous woodland (9) Shrub
1600m Synnott 1714

Cadaba gillettii R. A. Grah.
Deciduous shrubland Shrub
840m Bally 5658

Cadaba glandulosa Forsk.
Deciduous shrubland — Shrub
Herlocker 142

Cadaba heterotricha Hook.
Deciduous bushland — Shrub or small tree
Herlocker 467

Capparis cartilaginea Decne.
Evergreen to semi-deciduous bushland (6) — Scrambling shrub
Field 201; Herlocker 201; 1050m Synnott 1742

Capparis fascicularis DC. var. *fascicularis*
Deciduous shrubland — Scrambling shrub
910m J. Adamson 95 (=Bally 3940)

Capparis sepiaria L. var. *rivae* (Pax) De Wolf
Evergreen bushland (3) — Scrambling shrub
1800m Bally 5529; Herlocker 553

Capparis tomentosa Lam.
Deciduous woodland (9) (10) — Scrambling shrub
1370m Herlocker 91, 148, 168; 1460m H & J 6926

Cleome brachycarpa DC.
Annual grassland with dwarf shrubs — Herb
Acacia & Commiphora (65)
Lewis 69, 262; Field 132; Herlocker 453; 800m H & J 7008

Cleome tenella L.f.
Annual grassland — Herb
Field 207; Lewis 103

Cleome usambarica Pax
Deciduous woodland (10) — Herb
1360m H & J 7130

Maerua angolensis DC.
Semi-deciduous bushland (5) — Small tree
1460m Herlocker 94

Maerua crassifolia Forsk.
Deciduous shrubland — Small tree
Field 115 ; Herlocker 55, 56, 74 ; Oteke 47

Maerua denhardtiorum Gilg
Bushland — Shrub
Herlocker 468

Maerua oblongifolia (Forsk.) A. Rich.
Deciduous woodland (10) — Shrub
700-900m Bally 5494 ; 760m Verdcourt 2231

39 CRUCIFERAE (BRASSICACEAE)

UKWF (1974) : FTEA (?1981) ined.

Brassica integrifolia (West) O. E. Schultz
Deciduous woodland (9) — Herb
1370m Field 165

Cardamine africana L.
Upland evergreen forest (1) — Herb
Oteke 103 ; 1710m Tweedie 4271 ; 1680m Herlocker,
Masheti & Gagah 351 ; 1980m Herlocker & Kreulen 390 ;
1800-2100m H & J 6908

Crambe hispanica L.
Composite canyon vegetation (6) — Herb
2130m Herlocker & Kreulen 434

Diceratella incana Balf. (D. sinuata (Franch.) Oliv.)
Deciduous woodland (9) — Herb
1370m Field 275

Erucastrum arabicum Fisch. & Mey.
Evergreen & semi-deciduous bushland (3) (5)
Deciduous woodland (9) — Herb
Field 164, 165 ; 1680m Herlocker & Gagah 250 ;
1430m Herlocker 282 ; 1700m H & J 6878

Farsetia stenoptera Hochst.
Wooded dwarf shrubland (44) — Woody herb
1160m Field 263 ; 1250m H & J 7192

Farsetia undulicarpa Jonsell
Dry bushland — Tall woody herb
Lewis 102

42 POLYGALACEAE

UKWF (1974)

Polygala erioptera DC.
Wooded dwarf shrubland (44) — Herb
1250m H & J 7191

Polygala kilimandjarica Chod.
Wooded dwarf shrubland (44) — Herb
800m Verdcourt 2227; 1250m H & J 7193

Polygala sphenoptera Fres. sens. lat.
Upland evergreen forest (1) Evergreen bushland (3) — Herb
N. Kulal 2130m J. Adamson (=Bally 3916); 1730m Bally 5497; T. Adamson 41; 1700m Field 39; 1700m Herlocker 273; 1980m Herlocker & Kreulen 398; 1700m Lewis 58, 237; 1700m H & J 6831

45 CRASSULACEAE

UKWF (1974)

Aeonium leucoblepharum Webb
Composite bushland (15) — Succulent shrub
2130m Herlocker & Gagah 427

Cotyledon barbeyi Schweinf.
Semi-deciduous bushland (5) — Succulent shrub
Tweedie 4239; 1520m Herlocker 18; 1700m H & J 6896

Crassula alba Forsk.
Evergreen & semi-deciduous bushland (3) (5) — Succulent herb
Tweedie 4286; 1700m Lewis 236; H & J 6989

Crassula alsinides (Hook. f.) Engl.
Grassland in upland evergreen forest (1) — Succulent herb
2130m H & J 7202

Crassula schimperi Fisch. & Mey.
(*C. pentandra* (Edgew.) Schoenl.)
Semi-deciduous bushland (5) Composite canyon vegetation (6) Succulent herb
1700m H & J 6882; Bally 5642; 2130m Herlocker & Kreulen 422

Crassula volkensii Engl.
Composite canyon vegetation (6) Succulent herb
1890m Tweedie 4287

Kalanchoe citrina Schweinf.
Semi-deciduous bushland (5) Succulent herb
Field 197

Kalanchoe sp. nov.?
Semi-deciduous bushland (5) Succulent herb
1700m H & J 6883

Sedum meyeri-johannis Engl.
Upland evergreen forest (1) Succulent herb
Verdcourt 2245; Oteke 88; 2130m Herlocker & Kreulen 416

53 CARYOPHYLLACEAE

FTEA (1956); UKWF (1974)

Cerastium indicum Wight & Arn.
Upland evergreen forest (1) Herb
Oteke 80

Drymaria cordata (L.) Roem. & Schultes
Upland evergreen forest (1) Herb
Verdcourt (sight record)

Silene burchellii DC.
Upland evergreen forest (1)
Glade in composite canyon vegetation (6) Herb
2130m Herlocker & Gagah 426; 2050m H & J 7102

Silene macrosolen A. Rich.
Semi-deciduous bushland (5) Herb
Field 241; 1640m H & J 7076

Stellaria mannii Hook.f.
Upland evergreen forest (1) — Herb
2250m Verdcourt 2239

Stellaria sennii Chiov.
Upland evergreen forest (1) — Herb
1980-2300m H & J 7088

Stellaria media (L.) Vill.
Upland evergreen forest (1) — Herb
2130m Herlocker 418

54 AIZOACEAE (including *MOLLUGINACEAE*)

FTEA (1961) : UKWF (1974)

Delosperma abyssinicum (Regel) Schwantes
Semi-deciduous bushland (5) — Succulent dwarf shrub
2100m Bally 5643; 1640m H & J 7072

Gisekia pharnaceoides L. var. *pseudopaniculata* C. Jeffrey
Annual grassland bushed dwarf shrub short (67) — Herb
Lewis 97; Field 125, 180

Mollugo cerviana (L.) Seringe var. *spathulifolia* Fenzl
Annual grassland (?65) — Herb
Lewis 109

Zaleya pentandra (L.) Jeffrey
Deciduous woodland (9) — Herb
1370m Lewis 100, 216; Field 185

56 PORTULACACEAE

UKWF (1974)

Portulaca oleracea L.
Semi-deciduous bushland (5) — Succulent herb
Lewis 195

Portulaca quadrifida L.
Semi-deciduous bushland (5) — Succulent herb
1700m H & J 6881; 1520m Field 66

Talinum portulacifolium (Forsk.) Schweinf.
Deciduous woodland (9) — Succulent herb
1460m H & J 6954

57 POLYGONACEAE

FTEA (1957): UKWF (1974)

Oxygonum sinuatum (Meisn.) Dammer
Evergreen & semi-deciduous bushland (3) (5) — Herb
1700m Herlocker, Masheti & Gagah 315; 1670m H & J 6880

Rumex abyssinicus Jacq.
Composite canyon vegetation (6) — Herb
2130m Herlocker 414

Rumex usambarensis (Dammer) Dammer
Evergreen bushland (3)
Composite canyon vegetation (6) — Bushy herb
2130m Herlocker & Kreulen 423; Herlocker 10

61 CHENOPODIACEAE

FTEA (1954) : UKWF (1974)

Chenopodium fasciculosum Aellen
Upland evergreen forest (1) — Herb
1980m Bally 5606; Oteke 112

Chenopodium murale L.
Evergreen bushland (3) — Herb
1700m Herlocker 271

Chenopodium opulifolium Koch & Ziz.
Evergreen bushland (3) Deciduous woodland (9) (10) — Herb
1760m Bally 5542; 1700m Herlocker 283; 1460m H & J 6934
1600m H & J 6979; 1360m H & J 7135

Chenopodium schraderanum Schult.
Evergreen bushland (3) Semi-deciduous bushland (5) Herb
1700m Herlocker 270 : 1700m Lewis 49 : 1600m H & J 6978

63 AMARANTHACEAE

UKWF (1974) : FTEA (?1981) ined.

Achyranthes aspera L. var. *sicula* L.
Upland evergreen forest (1) Herb
1930m Bally 5588 : Herlocker 93

Aerva javanica (Burm.f.) Schultes (*A. persica* (Burm.f.) Merrill)
Annual grassland with shrublets and *Acacia* (67) Bushy herb
Lewis 94

Aerva lanata (L.) Schultes
Evergreen & semi-deciduous bushland (3) (5)
Deciduous woodland (9) Composite bushland (15) Bushy herb
1700m Herlocker 276; 1900m Kuchar 9095; 1700m H & J 6894;
1460m H & J 6927; 1550m H & J 7030; White 12615

Amaranthus graecizans L.
Evergreen bushland (3) Herb
1680m Herlocker 253

Digera muricata (L.) Mart. ssp. *trinervis* Townsend
Annual grassland with shrublets and *Acacia* (67) Herb
Lamprey & Field 21; Field 220, 231; Lewis 101

Pupalia grandiflora A. Peter
(P. lappacea var. grandiflora (Peter) Suesseng.)
Evergreen bushland (3) Herb
1910-1980m Bally 5587; 1950m Tweedie 4273

Pupalia lappacea (L.) A. Juss var. *Velutina* (Moq.) Hook.f
Upland evergreen forest (1) Evergreen bushland (3)
Composite bushland (15) Herb
1700m Herlocker 277; 1900m Kuchar 9078; 1900m Synnott 1802

Sericocomopsis hildebrandtii Schinz
Semi-deciduous bushland (5) Deciduous woodland (9)
Deciduous shrubland (30) Bushy herb
1520m Field 65; 1460m Herlocker 2; Lewis 99; 1700m H & J
6885; 1700m H & J 6940a; White 12613

Sericocomopsis pallida (S. Moore) Schinz
Wooded dwarf shrubland (44) Bushy herb
1250m H & J 7182

64 BASELLACEAE

FTEA (1968): UKWF (1974)

Basella alba L.
Composite canyon vegetation (6) Climber
N. Kulal 2130m J. Adamson 85 (=Bally 3930); 1550m H & J 7026

66 ZYGOPHYLLACEAE

UKWF (1974)

Tribulus terrestris L.
Deciduous woodland (9) (10) Deciduous shrubland (30) Herb
Field 227; 1370m Lewis 44; 910m Lewis 254; 1300m H & J 7159

Tribulus zeyheri Sond. (Perhaps the correct name is *T. cistoides* L.)
Annual grasslands with shrublets, *Acacia*, *Commiphora*
and *Jatropha* (65) Herb
800m H & J 7009

67 GERANIACEAE

FTEA (1971) : UKWF (1974)

Geranium arabicum Forsk.
Upland evergreen forest (1) Herb
Oteke 95, 1980-2300m H & J 7090

Geranium ocellatum Cambess.
Upland evergreen forest (1) Herb
1730m Herlocker, Masheti & Gagah 339

Pelargonium alchemilloides (L.)
Ait. ssp. *multibracteatum* (A. Rich.) Kokwaro
Evergreen & semi-deciduous bushland (3) (5) Herb
Field 200; 1680m Herlocker 267; 1700m Herlocker, Masheti &
Gagah 307; 1700m Lewis 231; 1700m H & J 6901; 1950m H & J 7040

Pelargonium glechomoides A. Rich
Evergreen bushland (3) Herb
2050m H & J 7111

69 OXALIDACEAE

FTEA (1974) : UKWF (1974)

Oxalis corniculata L.
Evergreen bushland (3) Herb
1700m Herlocker & Gagah 323 ; 1600m H & J 6963

71 BALSAMINACEAE

UKWF (1974) : Grey-Wilson, *Impatiens* of Africa (1980)

Impatiens meruensis Gilg ssp. *septentrionalis* Grey-Wilson
Upland evergreen forest (1) Herb
Martin 218 ; 1950m Bally 5612 ; 2290m Verdcourt 2246 ;
2130m Herlocker 437 ; 1800-2100m H & J 6918

Impatiens sp.
Upland evergreen forest (1) Herb
1700m Herlocker 521

76 OLINIACEAE

KTS (1961) : FTEA (1975)

Olinia rochetiana A. Juss. s. lat. (*O. usambarensis* Gilg)
Upland evergreen forest (1) Tree
Verdcourt (sight record)

83 NYCTAGINACEAE

UKWF (1974)

Boerhavia coccinea Mill.
Deciduous shrubland (29) Herb
Field 217 ; 730m Lewis 273

Commicarpus pedunculosus (A. Rich.) Cuf.
Deciduous woodland (9) Herb
Field 142; 1370m Lewis (no number)

88 PITTOSPORACEAE

KTS (1961) : FTEA (1966)

Pittosporum viridiflorum Sims
Upland evergreen forest (1) Evergreen bushland (3) Tree
White 12576, 12579

93 FLACOURTACEAE

KTS (1961) : FTEA (1975)

Casearia battiscombei R. E. Fries
Upland evergreen forest (1) Tree
N. Kulal 2130m J. Adamson 93 (=Bally 3938); 2000m Verdcourt 2258; 1830m Herlocker 65; 2000m H & J 7200; White 12596; Synnott 1701, 1919

Dovyalis abyssinica (A. Rich.) Warb.
Upland evergreen forest (1) Evergreen bushland (3) Shrub
1930-2040m Bally 5584; Herlocker 32, 135; 1120m Herlocker, Gagah & Masheti 349; 2100m H & J 7198; White 12553

Scolopia theifolia Gilg
Upland evergreen forest (1) Shrub
Herlocker 132; 1770m Herlocker, Masheti & Gagah 445; White 12589

101 PASSIFLORACEAE

UKWF (1974) : FTEA (1975)

Adenia venenata Forsk.
Deciduous woodland (9) Climber
1460m H & J 6961; Synnott 1870

Adenia sp. possibly *A. bequaertii* Robyns & Lawalree Climber
Synnott 1840

103 CUCURBITACEAE

FTEA (1967) : UKWF (1974) All our species are tendril climbers

Citrullus lanatus (Thunb.) Mansf.
Evergreen bushland (3)
1700m Herlocker & Gagah 332

Coccinia grandis (L.) Voigt
Deciduous woodland (10) Wooded dwarf shrubland (44)
1300m H & J 7158a; 1250m H & J 7190

Coccinia megarrhiza C. Jeffrey
Evergreen bushland (3)
1700m Field 147

Coccinia sp. C of FTEA
Wooded dwarf shrubland (44)
1250m H & J 7177

Cucumella robbecchii Chiov.
Wooded dwarf shrubland (44)
800m Verdcourt 2230

Cucumis dipsaceus Spach
Evergreen bushland (3)
1700m Herlocker & Gagah 329; 1600m H & J 6964

Cucumis ficifolius A. Rich.
Evergreen bushland (3)
Oteke 83

Cucumis prophetarum L. ssp. *dissectus* (Naud.) C. Jeffrey
Deciduous woodland (10) Wooded dwarf shrubland (44)
1370m Herlocker 11; 1300m H & J 7158; Synnott 1717

Kedrostis gijef (J. F. Gmel.) C. Jeffrey
Deciduous shrubland (29)
Field 123, 222

Lagenaria sphaerica (Sond.) Naud.
Composite canyon vegetation (6)
1160m Field 261

Momordica boivinii Baill.
Deciduous woodland (10)
Herlocker 555

Momordica cymbalaria Hook.f.
Deciduous woodland (10)
Field 202 ; 1220m Lewis 3

Momordica sessilifolia Cogn.
Deciduous shrubland (29)
1060m Field 99

Peponium vogelii (Hook.f.) Engl.
Upland evergreen forest (1) Composite bushland (15)
1950m Verdcourt 2259 ; Oteke 104 ; 1900m Kuchar 9074

Zehneria scabra (L.f.) Sond. sensu lato
Upland evergreen forest (1) Composite bushland (15)
Bally 5623 ; Oteke 85 ; Tweedie 4279 ;
1900m Kuchar 9079 ; 1800-2100m H & J 6916

114 OCHNACEAE

KTS (1961)

Ochna holstii Engl.
Upland evergreen forest (1) Tree
Tweedie 4277

Ochna insculpta Sleumer
Upland evergreen forest (1) Shrub
Oteke 132 ; 2100m Herlocker 83, 424, 425 ; 1800m Synnott 1710

Ochna ovata F. Hoffm.
Deciduous woodland (10) Shrub
1360m H & J 7140

Ochna sp. cf. *O. insculpta* Sleumer
Evergreen bushland (3) Shrub
1960m Bally 5586 ; 1600m H & J 6969

118 MYRTACEAE

KTS (1961)

Syzygium guineense (Willd.) DC. ssp. *guineense*
Semi-deciduous bushland (5) Tree
Field 264

121 COMBRETACEAE

KTS (1961) : FTEA (1973) : UKWF (1974)

Combretum aculeatum Vent.
Composite canyon vegetation (6) Wooded dwarf shrubland (44) Shrub sometimes
800m Bally 5661 ; Herlocker 118 ; 1250m H & J 7176 ; Climbing
950m Synnott 1762

Combretum molle G. Don
Composite canyon vegetation (6) Small tree
Field 265 ; 1000m Synnott 1751

Terminalia brownii Fres.
Composite canyon vegetation (6) Tree
1000m Synnott 1759

122 RHIZOPHORACEAE

FTEA (1956) : KTS (1961)

Cassipourea malosana (Baker) Alston (*C. congoensis* DC. s. lat.)
Upland evergreen forest (1) Evergreen bushland (3) Tree
Oteke 56 ; Herlocker 129 ; 1740m H & J 7066 ; 2100m H & J 7199 ;
2000m H & J 7204 ; 1800m Synnott 1709 ; White 12578

128 TILIACEAE

KTS (1961) : UKWF (1974)

Corchorus trilocularis L.
Deciduous shrubland (32) Herb
1220m Lewis 5

A *Grewia* species with white, pink or lilac flowers

Grewia nematopus K. Schum.
Composite canyon vegetation (6)
1000m Synnott 1747 Shrub

Grewia (similis) K. Schum.
Evergreen & semi-deciduous bushland (3) (5) Shrub
Field 158; 1680m Herlocker 191; 1550-1700m H & J 7021;
White 12569

Grewia tembensis Fres.
Deciduous woodland (9) (10) Shrub
1370m Herlocker & Gagah 199; 1360m H & J 7134

Grewia tenax (Forsk.) Fiori or related species
Deciduous woodland (10) Wooded dwarf shrubland (44) Shrub
1050m Herlocker 50; White 12608

B *Grewia* species with yellow or brown flowers

Grewia bicolor Juss.
Deciduous woodland (10) Wooded dwarf shrubland (44) Shrub
Annual grassland with dwarf shrubs, *Acacia* and *Commiphora* (65)
1070m Field 95, 159; 1370m Herlocker & Gagah 196;
1360m H & J 7134; 1250m H & J 7189

Grewia fallax K. Schum.
Composite canyon vegetation (6) Shrub
950m Synnott 1770

Grewia mollis Juss.
Composite canyon vegetation (6) Shrub
1000m Synnott 1748

Grewia penicillata Chiov.
Deciduous woodland (9) Shrub
1490m Herlocker 201

Grewia trichocarpa A. Rich.
Evergreen & semi-deciduous bushland (3) (5) Shrub
Herlocker 4; 1700m Herlocker, Masheti & Gagah 341

Grewia villosa wilid.
Deciduous woodland (9) Shrub
Herlocker 557; 1370m Herlocker & Gagah 195

Triumfetta flavescens A. Rich.
Deciduous bushland (19) Woody herb
Field 277

130 STERCULIACEAE

KTS (1961) : UKWF (1974)

Dombeya goetzenii K. Schum.
Upland evergreen forest (1) Composite canyon vegetation (6) Tree
2130m T. Adamson 23; 2130m Herlocker 411

Hermannia kirkii Mast.
Annual grassland with dwarf shrubs,*Acacia & Commiphora* Herb
1070m Field 96, 182; 1070m Lewis 261

Melhania ovata (Cav.) Spreng.
Deciduous woodland (9) (10) Bushy herb
1370m Lewis 206, 210; 1360m H & J 7136

Melhania velutina Forsk.
Semi-deciduous bushland (5) Bushy herb
1640m H & J 7080

Sterculia africana (Lour.) Fiori
Deciduous woodland (9) Tree
H & J (photo)

Sterculia stenocarpa H. Winkl.
Deciduous woodland (10) Wooded dwarf shrubland (44) Tree
1160m Herlocker 14; 1370m Herlocker 144

132 MALVACEAE

KTS (1961) : UKWF (1974)

Abutilon grandiflorum G. Don
Wooded upland perennial grassland (52) Tall herb
1700m Herlocker 178

Abutilon mauritianum (Jacq.) Medic.
Evergreen bushland (3) Deciduous woodland (9) Tall herb
1700m Field 76; 1370m Lewis 208; Bally 5539

HIBISCUS SECTION *BOMBYCELLA*

Hibiscus argutus Bak. (*H. crassinervius* A. Rich. s. lat., *H. sp. aff. aponeurus* Sprague & Hutch.)
Evergreen & semi-deciduous bushland (3) (5) Bushy herb
J. Adamson 57 (=Bally 3905); Cameron in EA 14328;
1700m Field 79 & H & J 6872; 950m Synnott 1771

Hibiscus fuscus Garcke
Evergreen bushland (3) Bushy herb
2130m J. Adamson 63 (=Bally 3911); Herlocker 130

Hibiscus meyeri Harv. (*H. pycnostemon* Hoch. *H. pospischilii* Cuf. *H. micra thus* L.f. race 2 sensu Agnew UKWF p. 196)
Deciduous shrubland (?30) Bushy herb
1350m Bally 5646

Hibiscus micra thus L.f. (*H. micra thus* L.f. race 1 sensu Agnew UKWF p. 196)
Woodland (10) Bushy herb
Herlocker 45

HIBISCUS Other Sections

Hibiscus calyphyllus Cav. sens. lat.
Evergreen bushland (3) Bushy herb
1740m H & J 7067

Hibiscus vitifolius L.
Evergreen bushland (3) Bushy herb
1930m Bally 5881; Oteke 106; 1600m H & J 6966

Malva verticillata L.
Upland evergreen forest (1) Evergreen bushland (3) Herb
1930m Bally 5555; Oteke 82/B; Tweedie 4275; 1600m H & J 7049

Pavonia arabica Boiss.
Wooded dwarf shrubland (44) Annual grassland with *Acacia, Commiphora, Jatropha* and shrublets (65) Herb
910m Lewis 83-A

IPAL Technical Report Number D - 3

ANNOTATED CHECK-LIST OF THE PLANTS OF MOUNT KULAL, KENYA

By

F. N. Hepper

The Herbarium, Royal Botanic Gardens, Kew, England

P. M. L. Jaeger

Department of Plant Biology, University of Birmingham, England.

J. B. Gillett,

The East African Herbarium, Nairobi, Kenya.

M. G. Gilbert,

The East African Herbarium.

February 1981

UNEP - MAB Integrated Project in Arid Lands.

Pavonia patens (Andr.) Chiov. s. lat. (*P. glechomifolia* (A. Rich.) Garcke, *P. ukambanica*
Evergreen bushland (3) Composite canyon vegetation (6)
Deciduous woodland (10) Wooded dwarf shrubland (44)
Annual grassland with shrublets *Acacia*, etc. (65) Herb
Bally 5650; Field 145; 1740m H & J 7146; 1250m H & J 7180;
910m Lewis 86; 950m Synnott 1769; White 12572

Pavonia urens Cav. var. *Urens*
Evergreen bushland (3) Tall herb
1940m Bally 5548; Oteke 82a

Pavonia urens Cav. var. *hirsuta* (Ulbr.) Brenan
Upland evergreen forest (1) Tall herb
1980-2300m H & J 7099

Pavonia urens Cav. var. *tomentosa* (Ulbr.) Brenan
Evergreen bushland (1) Tall herb
Oteke 82

Sida cuneifolia Roxb.
Glades in upland evergreen forest (1) Evergreen bushland (3) Dwarf shrub
1930m Bally 5580; 1730m Herlocker, Gagah & Masheti 355;
Herlocker 66; 1800-2100m H & J 6913

Sida ovata Forsk.
Deciduous woodland (9) Herb
1370m Lewis 18, 209

133 MALPIGHIACEAE

KTS (1961) : FTEA (1968)

Caucanthus albidus (Niedenzu) Niedenzu.
Annual grassland with shrublets, *Acacia* etc. Shrub or scrambler
1070m Field 100, 107; Herlocker 57

135D LINACEAE

FTEA (1966) : UKWF (1974)

Linum volkensii Engl — Herb
Evergreen bushland (3)
Verdcourt 2256A Oteke 152;1890m Tweedie 4283, 4302B;
1700m Herlocker, Masheti & Gagah 311, 444;1700m H & J 6827

136 EUPHORBIACEAE

KTS (1961) : UKWF (1974) FTEA ined. incomplete

Acalypha fruticosa Forsk. var. *eglandulosa* A. R.- Smith — Bushy herb
Composite canyon vegetation (6) Deciduous woodland (10)
1360m H & J 7137;1000m Synnott 1757

Acalypha psilostachya A. Rich. — Herb
Upland evergreen forest (1)
1800-2100m H & J 6920

Acalypha racemosa Baill. *(A. paniculata Miq.)* — Herb
Upland evergreen forest (1)
1900m Kuchar 9097;1800-2100m H & J 6906

Acalypha volkensii Pax — Herb
Grassland in upland evergreen forest (1)
2050m H & J 7113

Bridelia micrantha Baill. — Tree
Composite canyon vegetation (6)
1000m Synnott 1756

Bridelia taitensis Vatke & Pax — Shrub
Composite canyon vegetation (6)
1000m Synnott 1749

Clutia abyssinica Jaub. & Spach — Shrubby herb
Evergreen bushland (3)
Verdcourt (sight record)

Croton dichogamus Pax
Bushland (15) — Shrub
Synnott (sight record)

Croton somalensis Vatke & Pax
Bushland (15) — Shrub
Bally 5648

Drypetes gerrardii Hutch. var. *gerrardii*
Upland evergreen forest (1) — Tree
Synnott (sight record) Verdcourt (sight record)

Erythrococca bongensis Pax
Upland evergreen forest (1) Evergreen bushland (3) — Shrub
Bally 5556; 2000m Tweedie 4270; 1730m Herlocker 352;
1740m H & J 7063; White 12597; 12626; Synnott 1705

EUPHORBIA section *DICANTHIUM*

Euphorbia candelabrum Kotschy (*E. ingens* Boiss.)
Evergreen bushland (3) Composite canyon vegetation (6) — Stem-succulent tree
1520-1740m H & J 7068

Euphorbia kibwezensis N. E. Br.
Deciduous woodland (9) — Stem-succulent tree
H & J (photo)

Euphorbia samburuensis Bally & Carter ined.
Annual grassland with shrublets, *Acacia*, *Commiphora*, etc. (65) — Stem succulent dwarf shrub
700m Synnott 1825

Euphorbia stapfii Berger s. lat.
Semi-deciduous bushland (5) Deciduous woodland (9) (10) — Stem succulent shrub
1700m H & J 6873

Euphorbia uhligiana Pax
Wooded dwarf shrubland (44) — Succulent dwarf shrub
1100m H & J 6996

EUPHORBIA Other Sections

Euphorbia cuneata Vahl ssp. *lamproderma* Carter
Deciduous shrubland (29) — Spiny shrub
Verdcourt 2229;610m Herlocker 54, 103

Euphorbia engleri Pax
Upland evergreen forest (1) — Shrub
N. Kulal 2150m J. Adamson 90 (=Bally 3935);
2280m Verdcourt 2252

Euphorbia gossypina Pax
Dwarf shrubland (32) — Succulent scrambling shrub
915-1520m Tweedie 4237, 4238, 4304

Euphorbia inaequilatera Sond.
Evergreen & semi-deciduous bushland (3) (5) — Herb
1800m Bally 5525;1700m Herlocker 299;1640m H & J 7077

Euphorbia nubica N. E. Brown (?= *E. schimperi* Presl)
Semi-deciduous bushland (5) Wooded dwarf shrubland (44) — Succulent climber
1700m H & J 6874;1100m H & J 6998;1250m H & J 7183

Euphorbia scheffleri Pax
Deciduous shrubland (32) — Herb
1340m Herlocker 111

Euphorbia schimperana Scheele
Glade in upland evergreen forest (1) — Herb
1980m Herlocker & Kreulen 440

Jatropha parvifolia Chiov.
Annual grassland with shrublets, *Acacia*, *Commiphora*,
etc. (65) — Dwarf shrub
1060m Field 98;900m Herlocker 104;900m H & J 7000

Jatropha fissispina Pax.
Deciduous shrubland (30) — Dwarf shrub
850m Synnott 1773

Monadenium ellenbeckii N. E. Brown
Deciduous woodland (9) — Stem succulent dwarf shrub
1460m H & J 6944

Phyllanthus fischeri Pax
Evergreen bushland (3) Herb
1900m H & J 7037

Phyllanthus maderaspatensis L.
Semi-deciduous bushland (5) Deciduous woodland (10)
Wooded dwarf shrubland (44) Herb
1590m Herlocker 262; 1360m H & J 7138; 1250m H & J 7184

Phyllanthus ovalifolius Forsk.
Evergreen bushland (3) Herb
Oteke 137

Securinega virosa (Willd.) Pax & K. Hoffm.
Evergreen bushland (3) Deciduous woodland (9)
Dwarf shrubland (35) Shrub
Herlocker 549; 1520m Herlocker & Gagah 204; 1460m H & J 6933;
1600m H & J 6990; White 12574

Tragia brevipes Pax
Upland evergreen forest (1) Twining herb
1950m Bally 5566

Tragia insuavis Prain
Evergreen bushland (3) Twining herb
1700m Herlocker, Masheti & Gagah 333

Tragiella natalensis (Sond.) Pax & K. Hoffm.
Upland evergreen fores (1) Evergreen bushland (3) Twining herb
1900m Kuchar 9093; 1740m H & J 7058

143 ROSACEAE

FREA (1960) : KTS (1961) : UKWF (1974)

Drunus africana (Hook.f.) Kalkm. Hook.f.)
Upland evergreen forest (1) Tree
1980m Field 91; 1980m Herlocker 126, 441; White 126 35

Rubus apetalus Poir.
Upland evergreen forest (1) — Scrambling shrub
1800-2100m H & J 6922

146 - 148 LEGUMINOSAE (FABACEAE)

146 Sub family CAESALPINIOIDEAE

KTS (1961) : FTEA (1967) : UKWF (1974)

Bauhinia tomentosa L.
Semi-deciduous bushland (5) — Shrub
Synnott (doubtful sight record)

Cassia hildebrandtii Vatke
Grassland in upland evergreen forest (1) — Herb
2130m T. Adamson K3; N. Kulal 1980m H. van Swinderen M.130;
2050m H & J 7104

Cassia mimosoides L.
Evergreen bushland (3) — Herb
Oteke 138; 1670m Herlocker 251; 1700m Lewis 60

Cassia sp. near *mimosoides* L. Not incl. in FTEA key
Grassland in upland evergreen forest (1) — Herb
2050m H & J 7103

Delonix elata (L.) Gamble
Deciduous shrubland (29) Wooded dwarf shrubland (44)
Short grassland (65) — Tree
900m Herlocker 48; 800m H & J 7012

Pterolobium stellatum (Forsk.) Brenan
Composite canyon vegetation (6) — Liane
Oteke 59

147 Sub family MIMOSOIDEAE

FTEA (1959) : KTS (1961) : J. H. Ross 'A conspectus of the African Acacia species' Mem. Bot. Survey S. Africa 44 (1979)

Acacia species with spicate inflorescences

Acacis mellifera Benth.
Composite bushland (19) Deciduous shrubland (29) (30) (32) Annual grassland with shrublets, *Acacia*, *Commiphora*, etc. (65) (67) — Shrub
750m Bally 5663

Acacia senegal (L.) Willd.
Semi-deciduous bushland (5) — Shrub or small tree
1700m Herlocker & Gagah 198

Acacia species with globose inflorescences

Acacia brevispica Harms
Evergreen & semi-deciduous bushland (3) (5) Composite canyon vegetation (6) Deciduous woodland (9) — Scrambling shrub
Herlocker 143; 1600m H & J 6992; 950m Synnott 1764

Acacia drepanolobium Sjoestedt
Deciduous woodland (9) — Shrub or small tree
1340m Herlocker 169

Acacia etbaica Schweinf. ssp. *platycarpa* Brenan
Deciduous woodland (10) — Small tree
1300m H & J 7165; White 12612; 1350m Bally 5647; 1460m H & J 6936

Acacia nilotica (L.) Del. subsp. *subalata* (Vatke) Brenan
Deciduous woodland (10) Wooded dwarf shrubland (44) — Shrub
Verdcourt 2233; Herlocker 6, 13, 97, 466

Acacia reficiens Wawra subsp. *misera* (Vatke) Brenan
Deciduous bushland (19) Deciduous shrubland (29) (30) Annual grassland with dwarf shrubs and *Acacia* (67) — Shrub
670m Herlocker 119

Acacia tortilis (Forsk.) Hayne var. *spirocarpa* (A. Rich.) Brenan
Deciduous woodland (13) Wooded dwarf shrubland (44) Annual grassland (67) — Tree
Field 215, 245

148 Sub family PAPILIONOIDEAE (FABOIDEAE)

KTS (1961) : FTEA (1971) : UKWF (1974)

A LEAVES 1 - FOLIOLATE OR DIGITATELY 3 - 4 - FOLIOLATE

Alysicarpus rugosus (Willd.) DC. ssp. *perennirufus* J. Leon — Herb
Evergreen bushland (3)
1700m H & J 6835

Argyrolobium fischeri Taub./(A. leucophyllum Bak.) — Herb
Evergreen & semi-deciduous bushland (3) (5)
1800m Bally 5514; 1400m Verdcourt 2256; 1700m Field 38,
1600m H & J 6859; 1900m H & J 7034, 7041

Crotalaria balbi Chiov. — Herb
Evergreen bushland (3)
1860m Bally 5562

Crotalaria deserticola Bak.f. ? — Herb
Wooded dwarf shrubland (44)
Cameron in EA 14314

Crotalaria emarginella Vatke — Herb
Wooded dwarf shrubland (44)
1160m Field 136

Crotalaria fascicularis Polhill — Herb
Evergreen bushland (3)
Oteke 63; Tweedie 4290; Herlocker 121; 1600m H & J 6971;
1550-1700m H & J 7019

Crotalaria laburnifolia L. — Tall shrubby herb
Semi-deciduous bushland (5) Composite bushland (15)
1580m Field 44; 1580m Herlocker 177, 657; 1550m H & J 7122;
White 12611

Crotalaria lachnocarpoides Engl. — Shrubby herb
Grassland in upland evergreen forest (1)
Evergreen bushland (3)
1800m Bally 5515; 1900m Kuchar 9091; 2050m H & J 7110;
2100m Synnott 1783

Crotalaria uguenensis Taub.
Semi-deciduous bushland (5) Deciduous woodland (9) Herb
Field 269; 1370m Lewis 43; 1600m H & J 6860; 1550m H & J 7127

Crotalaria verdcourtii Polhill
Semi-deciduous bushland (5) Herb
1600m H & J 6845

Crotalaria spp.
Evergreen bushland (3) Herb
1680m Lewis 222, 230; White 12551

Lotononis laxa Eckl. & Zeyh
Semi-deciduous bushland (5) Herb
1740m H & J 7148

Trifolium semipilosum Fres. var *semipilosum*
Upland evergreen forest (1) Evergreen bushland (3) Herb
1920m Bally 5540; Oteke 51; Herlocker 681; 1980m Herlocker & Kreulen 399; 1600m H & J 6980

Trifolium semipilosum Fres. var. *glabrescens* Gillett
Evergreen bushland (3) Herb
1600m Kuchar 9112

Trifolium sp.
Evergreen bushland (3) Herb
1700m Lewis 241

Zornia setosa Bak. f. ssp. *obovata* (Bak. f.) J. Leon
Evergreen bushland (3) Herb
1700m H & J 6828

B LEAVES PINNATELY 3 - FOLIOLATE (SEE ALSO *Indigofera*

Desmodium repandum (Vahl) DC.
Upland evergreen forest (1) Herb
1950m Bally 5621; Oteke 78; Field 239; 1700m Herlocker 522; 1980m Herlocker & Kreulen 443; 1980-2300m H & J 7091

Erythrina burttii Bak. f.
Semi-deciduous bushland (5) Deciduous woodland (9) Tree
1220m Bally 5490; 1300m Lamprey & Field in ALPK 1

Mucuna gigantea (Willd.) DC. ssp. *quadrialata* (Bak.) Verdc.
Composite bushland (15) Climber
900m Synnott 1823

Neonotonia wightii (Wight & Arn.) Lackey var. *longicauda* (Schweinf.) Lackey *(Glycine wightii* (Wight & Arn.) Verdc. var. *longicauda* (Schweinf.) Verdc.)
Semi-deciduous bushland (5) Herb or twiner
1600m H & J 6852

Neonotonia wightii (Wight & Arn.) Lackey var. *petitiana* (A. Rich.) Lackey (*Glycine wightii* (Wight & Arn.) Verdc. var *petitiana* (A. Rich.) Verdc.)
Evergreen bushland (3) Herb or twiner
2100m J. Adamson 678

Rhynchosia minima (L.) DC. var. *prostrata* (Harv.) Meikle
Semi-deciduous bushland (5) Herb
Oteke 151 : 1600m H & J 6856

Rhynchosia minima (L.) DC. var. ?
Semi-deciduous bushland (5) Herb
1640m H & J 7078

Rhynchosia sublobata (Schumach.) Meikle
Shrubland Herb or twiner
Field 256

Rhynchosia usambarensis Taub. var. *usambarensis*
Evergreen bushland (3) Herb or twiner
Cameron in EA 14332

Vatovaea pseudolablab (Harms) Gillett
Wooded dwarf shrubland (44) Annual grassland with dwarf shrubs, *Acacia, Commiphora,* etc. (65) Twiner
1070m Field 97, 272; Herlocker 565; 1250m H & J 7178

Vigna friesiorum Harms
Evergreen bushland (3) Herb
1700m Herlocker, Masheti & Gagah 310; 1700m H & J 6829

Vigna frutescens A. Rich.
Wooded dwarf shrubland (44) Herb
1250m H & J 7188

Vigna membranacea A. Rich.
Evergreen bushland (3) Herb
Field 287; 1600m H & J 6975? intermediate between ssp. *membranacea* and ssp. *hapalantha* (Harms) Verdc.
1550-1700m H & J 7016

Vigna vexillata (L.) A. Rich
Evergreen bushland (3) Herb
Field 291; 1700m H & J 6822; Synnott 1923

C LEAVES PINNATE

Astragalus atropilosus (Hochst.) Bunge subsp. *burkeanus* (Harv.) Gillett var. *burkeanus*
Evergreen bushland (3) Deciduous woodland (9) Herb
Bally 5630; 1700m Lewis 259; 1460m H & J 6931

Cadia purpurea (Picc.) Ait.
Upland evergreen forest (1) Evergreen & semi-deciduous bushland (3) (5) Shrub
1760m Bally 5626; 1520m Verdcourt 2268; Field 139; Herlocker 7 1600m H & J 6982; 1750m Synnott 1745 1819; Base of Elgijada (Elkajata) gorge 900m J. Adamson 112 (=Bally 3957) and Synnott (sight-record)

Indigofera ambelacensis Schweinf.
Deciduous woodland Herb
Oteke 153

Indigofera arrecta A. Rich.
Evergreen bushland (3) Herb
1900m Bally 5565

Indigofera brevicalyx Bak. f.
Semi-deciduous bushland (5) Herb
Field 273; 1640m H & J 7079

Indigofera coerulea Roxb. var *occidentalis* Gillett & Ali
Composite canyon vegetation (6) Deciduous woodland (10) Herb
Herlocker 465, 626; 950m Synnott 1767; 1300m H & J 7153

Indigofera hochstetteri Bak.
Deciduous woodland Herb
Field 184; Herlocker 602

Indigofera schimperi Jaub. & Spach
Semi-deciduous bushland (5) Deciduous woodland (9) (10) Herb
Field 274; 1600m H & J 6854; 1460m H & J 6935; 1360m H & J 7128

Indigofera spicata Forsk.
Evergreen bushland (3) Herb
Oteke 72, 99

Indigofera spinosa Forsk.
Deciduous woodland (13) Deciduous shrubland (29)
Dwarf shrubland (36) Annual grassland (59) (65) Dwarf shrub
Herlocker 52; 760m Lewis 80

Indigofera trita L.f. var *scabra* (Roth) Ali
Evergreen bushland (3) Herb
Oteke 124; 1600m H & J 6965

Indigofera trita L.f. var *subulata* (Poir.) Ali
Wooded dwarf shrubland (44) Herb
1250m H & J 7185

Indigofera volkensii Taub.
Deciduous woodland (9) (10) Herb
Bally 5498 ; Herlocker 535 ; 1370m Lewis 45, 219 ;
1360m H & J 7129 ; 1300m H & J 7169

Indigofera sp. cf. *malindiensis* Gillett
Semi-deciduous bushland (5) Herb
1740m H & J 7150

Ormocarpum trichocarpum (Taub.) Harms
Evergreen & semi-deciduous bushland (3) (5) Shrub
1520m Field 71 ; 1700m Field 138 ; 1670m Herlocker 9,
1600m H & J 6861 ; Synnott 1928

Tephrosia emeroides A. Rich.
Semi-deciduous bushland (5) Tall herb
1600m H& J 6847

Tephrosia interrupta Engl.
Grassland in upland evergreen forest (1) Tall shrubby herb
N. Kulal 2130m J. Adamson 69 (=Bally 3917); 2000m Bally 5609 ;
Oteke 64; 2050m H & J 7112

Tephrosia nubica (Boiss.) Bak.
Annual grassland, bushed dwarf shrub short (65) Herb
850m Bally 5654; Herlocker 154

Tephrosia polyphylla (Chiov.) Gillett
Deciduous woodland (10) Herb
Herlocker 632

151 HAMAMELIDACEAE

KTS (1961) : FTEA (1971)

Trichocladus ellipticus Sond. ssp. *malosanus* (Bak.) Verdc.
Upland evergreen forest (1) Shrub
Verdcourt (sight record)

165 ULMACEAE

KTS (1961) : FTEA (1966)

Celtis africana Burm. f.
Upland evergreen forest (1) Tree
White 12599; Synnott 1817

Chaetacme aristata Planch.
Evergreen bushland (3) Tree
Verdcourt (sight record)

Trema orientalis (L.) Blume (*T. guineensis* (Schum. & Thonn.) Ficalho
Beside watercourse at base of Elgijada (Elkajata) Gorge Shrub
900m J. Adamson 111 (=Bally 3956)

167 MORACEAE

KTS (1961) : Aweke, Figs of Ethiopia in Med. Landb. Wag. 79:1-115 (1979)

Ficus sur Forsk. (*F. capensis* Thunb.)
Upland evergreen forest (1) Tree
1670m Herlocker, Masheti & Gagah 345

Ficus glumosa Del.
Deciduous woodland (9) Tree
1460m H & J 6948

Ficus salicifolia Vahl
Composite canyon vegetation (6) Shrub or small tree
1000m Synnott 1752

Ficus thonningii Blume
Upland evergreen forest (1) Semi-deciduous bushland (5) Tree
1700m Herlocker 230, White 12587

169 URTICACEAE

UKWF (1974)

Australina acuminata Wedd.
Evergreen bushland (3) Herb
1550m H & J 7028

Droguetia debilis Rendle
Upland evergreen forest (1) Shrub
2000m Bally 5597; 2350m Verdcourt 2257; 1980-2300m H & J 7087

Forsskaolea viridis Desf.
Deciduous woodland (10) Herb
1280m H & J 7171

Girardinia diversifolia (Link) Friis et al (= *G. condensata* (Steud.) Wedd.)
Upland evergreen forest (1) Herb
1900m Bally 5554; 1550-1700m H & J 7029

Pouzolzia parasitica (Forsk.) Schweinf.
Evergreen bushland (3) Herb
1600m H & J 6986

171 AQUIFOLIACEAE

KTS (1961) : FTEA (1968)

Ilex mitis (L.) Radlk.
Upland evergreen forest (1) Tree
White 12628; 2100m Synnott 1790

173 CELASTRACEAE

KTS (1961) : FTEA ined., incomplete

Catha edulis (Vahl) Endl.
Upland evergreen forest (1) Shrub
Synnott (sight record)

Maytenus buchananii (Loes.) Wilczek
Upland evergreen forest (1) Shrub
2130m Tweedie 4241

Maytenus heterophylla (Eckl. & Zeyh.) N. Robson
Evergreen bushland (3) Shrub
N. Kulal 2130m J. Adamson 70 (=Bally 3918); 1930-2000m Bally 5585; 1830-2130m T. Adamson K14; Herlocker 39

Maytenus senegalensis (Lam.) Exell
Semi-deciduous bushland (5) Shrub
1830m T. Adamson in EA 11647; 1600m H & J 6855

Maytenus undata (Thunb.) Blakelock
Upland evergreen forest (1) Shrub
Oteke 57; 1830m Herlocker 452-A; 2000m Synnott 1788; 1800m Synnott 1808

Maytenus sp. with spines
Evergreen bushland (3) Shrub
White 12555

Maytenus sp. Glaucous
Upland evergreen forest (1) Shrub
White 12584

Mystroxylon aethiopicum (Thunb.) Loes. *(Cassine aethiopica* Thunb.)
Upland evergreen forest (1) Evergreen bushland (3) Shrub or small tree
1800m Bally 5511; Tweedie 4284; 2100m H & J 7197

179 ICACINACEAE

KTS (1961) : FTEA (1968)

Apodytes dimidiata Arn. var. *acutifolia* (A. Rich.) Boutique
Upland evergreen forest (1) Evergreen bushland (3) Tree
Tweedie 4297, Herlocker 36,133; 1680m, Herlocker 79, 192, 221;1900m Kuchar 9085; 1740m H & J 7060. White 12558, 12595 1800m Synnott 1729

180 SALVADORACEAE

KTS (1961) : FTEA (1968)

Salvadora persica L. var. *persica*
Annual grassland, bushed dwarf shrub short (63) (65) (67) Shrub or small tree
700m Bally 5664

Salvadora persica L. var. *angustifolia* Verdc.
1890m Bally 5639 Shrub or small tree
(an unusually high altitude for this species)

182 OLACACEAE

KTS (1961) : FTEA (1968)

Ximenia americana L.
Bushland composite unit (15) Shrub
Herlocker 548, 551

185 LORANTHACEAE

UKWF (1974)

Helixanthera kirkii (Oliv.) Danser *(Loranthus kirkii* Oliv.)
Composite canyon vegetation (6)
1000m Synnott 1760

Odontella ugogensis (Engl.) Balle *(Loranthus ugogensis* Engl.)
Synnott 1768

Plicosepalus curviflorus (Benth.) van Tiegh. *(Loranthus curviflorus* Benth.)
Annual grassland, bushed dwarf shrub short (65) parasitic on *Acacia*
Oteke 49; 800m H & J 7013

185/A VISCACEAE

UKWF (1974) (included in *Loranthaceae*)

Viscum decurrens Bak. & Sprague (not otherwise recorded from Kenya, confirmation required)
Upland evergreen forest (1)
1890m Tweedie 4288

Viscum ?nervosum A. Rich.
Evergreen bushland (3)
1800m Synnott 1807

Viscum tuberculatum A. Rich.
Evergreen & semi-deciduous bushland (3) (5)
parasitic on *Rhus* & *Olea africana*
1700m H & J 6890: 1740m H & J 7145: 1800m Synnott 1739

186 SANTALACEAE

KTS (1961) : UKWF (1974)

Osyridicarpos schimperanus (A. Rich.) A. DC.
Evergreen bushland (3) Shrub
1950m Bally 5595?; Tweedie 4282; 1740m H & J 7062

Osyris abyssinica A. Rich. *(O. compressa* auct. non (Berg.) A. DC.)
(O. lanceolata Hochst. & Steud. is perhaps the correct name)
Evergreen & semi-deciduous bushland (3) (5)
Wooded upland perennial grassland (52) Shrub
1800m Bally 5509; Oteke 128; 1520m Herlocker 136, 203;
1600m H & J 6991; 1800m Synnott 1738

Thesium radicans A. Rich.
Grassland in upland evergreen forest (1) Herb
Synnott 1814

190 RHAMNACEAE

KTS (1961): FTEA (1972) : UKWF (1974)

Helinus integrifolius (Lam.) Kuntze
Composite canyon vegetation (6) — Climber
1000m Synnott 1758

Helinus mystacinus (Ait.) E. Mey.
Upland evergreen forest (1) — Climber
1800m Synnott 1794

Rhamnus prinoides L'Hérit
Upland evergreen forest (1) Evergreen bushland (3)
Composite canyon vegetation (6) — Shrub or small tree
1950m Bally 5563; 2130m T. Adamson 1; Herlocker 127,
2130m Herlocker & Kreulen 420; 2050m H & J 7117; White 12619

Rhamnus staddo A. Rich.
Upland evergreen forest (1) Evergreen bushland (3) — Shrub or small tree
1700m H & J 6867; White 12590; 2100m Synnott 1782, 1796

Scutia myrtina (Burm. f.) Kurz
Evergreen & semi-deciduous bushland (3) (5) — Shrub or liane
N. Kulal 2130m J. Adamson 82 (=Bally 3927); 1920m Bally 5575
Herlocker 84; 1600m H & J 6967; White 12561; 1800m Synnott 1792

Ziziphus mauritiana Lam.
Annual grassland, bushed dwarf shrub short (63) (65) — Shrub or small tree
760m Field 244; Herlocker 152

Ziziphus mucronata Willd.
Composite canyon vegetation (6) — Shrub or small tree
950m Synnott 1761

193 VITACEAE (Ampelidaceae, Vitidaceae)

UKWF (1974)

Cissus rotundifolia (Forsk.) Vahl
Deciduous woodland (9) — Liane
1370m H & J 6947

Cyphostemma bambuseti (Gilg & Brandt) Wild & Drummond
Upland evergreen forest (1) evergreen bushland (3) — Tendril climber
Oteke 135; Herlocker 30; White 12573

Cyphostemma maranguensis (Gilg) Desc.
Upland evergreen forest (1) Evergreen bushland (3) — Tendril climber
1800m Synnott 1731

Cyphostemma sp. near *nierense* (T.C.E. Fries) Descoings
Evergreen bushland (3) — Tendril climber
Herlocker 16; 1600m H & J 6981; 1740m H & J 7061

Cyphostemma sp.
Upland evergreen forest (1) — Tendril climber
1800-2100m H & J 6924

Rhoicissus revoilii Planch.
Composite canyon vegetation (6) — Liane
Herlocker 149

Rhoicissus tridentata (L.f.) Wild & Drummond *(R. erythrodes* (Fres.) Planch.)
Bushland — Liane
Verdcourt (sight record)

194 RUTACEAE

KTS (1961) : FTEA (?1981) ined.

Calodendron capense (L.f.) Thunb.
Upland evergreen forest (1) — Tree
Synnott (sight record)

Clausena anisata (Willd.) Benth.
Upland evergreen forest (1) — Shrub or small tree
2200m Verdcourt 2234; 1980m Field 92; Herlocker 70; White 12629

Teclea nobilis Del.
Upland evergreen forest (1) — Shrub or small tree
Bally 5617; 2130m Herlocker 62; 1980-2300m H & J 7083; White 12634

Teclea simplicifolia (Engl.) Engl.
Upland evergreen forest (1) — Shrub or small tree
1800-1980m Bally 5581; Oteke 62; 1760m Herlocker 35, 131

Toddalia asiatica (L.) Lam.
Upland evergreen forest (1) Shrub or liane
Verdcourt (sight record)

195 SIMAROUBACEAE
KTS (1961)

Brucea antidysenterica Miller
Upland evergreen forest (1) Shrub
1950m Bally 5605; 2130m T. Adamson K17; 2290m Verdcourt 2235;
1750m Herlocker 137, 353; White 12580; 1900m Synnott 1803

Brucea sp. (cf. *B. tenuifolia* Engl.)
Upland evergreen forest (1) Shrub
1980m Verdcourt 2260

195/A BALANITACEAE

KTS (1961) included in *Simaroubaceae*

Balanites aegyptiaca (L.) Del.
Deciduous woodland (10) Small tree
1360m H & J 7139

196 BURSERACEAE

KTS (1961)

Boswellia neglecta S. Moore *(B. hildebrandtii* Engl.)
Deciduous shrubland (29) (32)
Annual grassland with dwarf shrubs, *Acacis* & *Commiphora* (65) Shrub
780m Bally 5660; 910m Herlocker 15; 800m H & J 7011

A *COMMIPHORA* Species with Spines

Commiphora africana (A. Rich.) Engl.
Deciduous bushland Shrub or small tree
1200m Herlocker 96, 1170m Herlocker 101

Commiphora candidula Sprague (perhaps a form of the next species)
Annual grassland — Shrub
C. 650m? Herlocker 5/A

Commiphora flaviflora Engl.
Deciduous bushland — Shrub
840m Herlocker 105

Commiphora madagascariensis Jacq.
Deciduous woodland (9) — Shrub or small tree
1170m Herlocker 100, 187

Commiphora samharensis Engl. *(C. campestris* sensu KTS in part, non Engl.)
Deciduous shrubland (29) (32) — Shrub
1260m Herlocker 112

Commiphora schimperi (Berg) Engl.
Deciduous shrubland, grassland with shrubs — Shrub or small tree
840m Herlocker 106; Arabel 1500m Gagah in Herlocker 205

B *COMMIPHORA* SPECIES WITHOUT SPINES

Commiphora boiviniana Engl.
Deciduous shrubland (30) — Shrub
Field 216; 850m Synnott 1755

Commiphora ? paolii Chiov.
Deciduous shrubland (29) — Shrub
810m Herlocker 108, 572

197 MELIACEAE

KTS (1961)

Lepidotrichilia volkensii (Guerke) Leroy *(Trichilia volkensii* Guerke)
Upland evergreen forest (1) — Shrub or small tree
1940m Bally 5619; 1980-2300m H & J 7082; White 12591, Synnott 1779

Turraea mombassana C.DC. ssp. *mombassana*
Upland evergreen forest (1) Evergreen & semi-deciduous bushland (3) (5) — Shrub
Oteke 107; Tweedie 4240; 1770m Field 78; Field 140, 161;
1670m Herlocker 248; 1700m Herlocker, Masheti & Gagah 334;
1600m Kuchar 9111; 1700m H & J 6826; White 12557; 1800m Synnott 1730

Turraea mombassana C.DC. ssp. *cunneata* (Guerke) F. White & B. T. Styles
Evergreen & semi-deciduous bushland (3) (5) Shrub
Oteke 161

198 SAPINDACEAE

KTS (1961) : UKWF (1974)

Allophylus abyssinicus (Hochst.) Radlk.
Upland evergreen forest (1) Tree
Oteke 96; 1950m Herlocker 409; 2100m T. Adamson 9

Allophylus rubifolius (A. Rich.) Engl.
Evergreen & semi-deciduous bushland (3) (5) Shrub
1700m Herlocker, Masheti & Gagah 338; 1800m Synnott 1797

Allophylus spp.
Upland evergreen forest (1) evergreen bushland (3)
Tweedie 4291; Field 177; White 12630; 2000m Synnott 1775
(= *A.* ? *macrobotrys* Gilg)

Cardiospermum corindum L.
Deciduous bushland (19) Climber
Synnott 1746

Dodonaea viscosa Jacq.
Evergreen bushland (3) semi-deciduous bushland (5) Shrub
Herlocker 'B'

Pappea capensis Eckl. & Zeyh.
Evergreen bushland (3) wooded perennial grassland (52) Tree
1520m Herlocker 211; White 12564

205 ANACARDIACEAE

KTS (1961) : FTEA (?1981) ined.

Lannea schweinfurthii (Engl.) Engl. ssp. *stuhlmannii* (Engl.) Kokwaro
Deciduous woodland (9) Tree
1450m H & J 6952

Lannea triphylla (A. Rich.) Engl.
Deciduous woodland (10) — Shrub
1420m Herlocker 550 ; White 12607

Ozoroa insignis Del. ssp. *reticulata* (Bak. f.) J. B. Gillett
(Heeria reticulata (Bak. f.) Engl.)
Semi-deciduous bushland (5) — Tree
1680m Herlocker 115

Pistacia aethiopica Kokwaro (*P. lentiscus* L. var. *emarginata* Engl.)
Evergreen bushland (3) — Tree
1800m Bally 5510 ; 1600m H & J 6972 ; White 12575 ; Synnott 1702

Rhus natalensis Krauss
Evergreen & semi-deciduous bushland (3) (5) — Shrub
1930m Bally 5567 ; Herlocker 20 ; 1600m H & J 6984

Rhus vulgaris Meikle
Evergreen & semi-deciduous bushland (3) (5),
Composite bushland (15) — Shrub
1800m Bally 5523; 1750m Field 63; 1710m Herlocker 80;
1900m Kuchar 9101: 1600m H & J 6968: White 12563

212 ARALIACEAE

KTS (1961) : FTEA (1961)

Cussonia holstii Engl.
Upland evergreen forest (1) — Tree
Bally 5629: 2050m H & J 7116

Cussonia spicata Thunb.
Upland evergreen forest (1) or evergreen bushland (3) — Tree
Verdcourt (sight record)

213 UMBELLIFERAE (APIACEAE)

KTS (1961) : UKWF (1974)

Diplolophium africanum Turcz.
Evergreen bushland (3) — Bushy herb
N. Kulal 2130m J. Adamson 62 (=Bally 3910);
1900m Bally 5558; 1830m Field 251

Heteromorpha trifoliata (Wendl.) Eckl. & Zeyh.
Upland evergreen forest (1) Evergreen bushland (3) Softly woody shrub
N. Kulal 2130m J. Adamson 61 (=Bally 3909); 1830m Bally 5520;
2300-2400m Verdcourt 2248; 1830m T. Adamson K6A; Oteke 126;
1770m Field 88; 1700m Herlocker 342; 1900m Kuchar 9103

Peucedanum winkleri Wolff
Grassland in upland evergreen forest (1)
Composite canyon vegetation (6) Herb
2130m Herlocker 415

Sanicula elata Don
Upland evergreen forest (1) Herb
Bally 5620; Oteke 90; 1980m Herlocker & Kreulen 392;
1800-2100m H & J 6917

Steganotenia araliacea Hochst.
Deciduous shrubland (32) Shrub or small tree
Herlocker 145

Torilis arvensis (Huds.) Link
Grassland in upland evergreen forest (1) Herb
2000m Bally 5608; 1980m Field 89;1730m Herlocker, Masheti & Gagah 337

DICOTYLEDONS : GAMOPETALAE (families 214 - 264)

221 EBENACEAE

Diospyros abyssinica (Hiern) F. White
Upland evergreen forest (1) Tree
White 12593

Diospyros scabra (Chiov) Cufod. D . sp nov. i of KTS)
Annual grassland, bushed dwarf shrub short (67) Tree
700m Herlocker 459

Euclea divinorum Hiern
Evergreen & semi-deciduous bushland (3) (5) Shrub
1700m Herlocker 87

Euclea schimperi (A.DC.) Dandy
Evergreen & semi-deciduous bushland (3) (5) — Shrub
1800m Bally 5513; 1600m H & J 6858, 6985; White 12559

223 MYRSINACEAE

KTS (1961) : FTEA (?1981) ined.

Maesa lanceolata Forsk.
Evergreen bushland (3) — Shrub or small tree
Verdcourt (sight record)

Myrsine africana L.
Evergreen bushland (3) Composite bushland (15) — Shrub
1800m Bally 5532; 1800-2100m T. Adamson K21; Oteke 66, Tweedie 4289?; 1830m Field 50; Herlocker 81; 1900m Kuchar 9090, 1550-1700m H & J 7018; White 12556

Rapanea melanophloeos (L.) Mez
Upland evergreen forest (1) — Tree
White 12636; Synnott 1809

228 LOGANIACEAE

FTEA (1960): KTS (1961) : Leeuwenberg, A. J. M. *Loganiaceae* of Africa in Med. Landb. Wag. 69 (1) (1969) & 75 (8) (1975)

Nuxia congesta Fres.
Upland evergreen forest (1) — Tree
1930m Bally 5583; 1520m Verdcourt 2236; 2290m Verdcourt 2250; 2130m Herlocker 419; 2000m H & J 7203; Synnott 1706; 2100m J. Adamson 71 & 684

Strychnos henningsii Gilg
Upland evergreen forest (1) — Tree
1800m T. Adamson 4

Strychnos mitis S. Moore
Upland evergreen forest (1) — Tree
White 12586

Strychnos usambarensis Gilg
Upland evergreen forest (1) — Shrub, liane or tree
J. Lundguist

229 OLEACEAE

FTEA (1952) : KTS (1961) : UKWF (1974)

Jasminum abyssinicum DC.
Upland evergreen forest (1) — Liane
2100m J. Adamson 674 & T. Adamson 22

Jasminum eminii Gilg
Upland evergreen forest (1)
Evergreen & semi-deciduous bushland (3) (5) — Liane
Field 170; 1700m Herlocker 275; 1670m Herlocker & Gagah 219;
1600m H & J 6973; White 12588; 1800m Synnott 1740; 1900m Synnott 1795

Jasminum floribundum Fres.
Evergreen bushland (3) — Liane
1500m Bally 5493; Oteke 129; 1700m Herlocker 296;
1700m H & J 6840; White 12566, 12616

Olea europaea L. ssp. *africana* (Mill.) P. S. Green
(*O. africana* Mill., *O. chrysophylla* Lam.)
Upland evergreen forest (1) Evergreen bushland (3) — Shrub or tree
1800m Bally 5530; 2300m Verdcourt 2247; Tweedie 4244;
1730m Herlocker 335

Olea hochstetteri Bak.
Upland evergreen forest (1) — Tree
N. Kulal 2130m J. Adamson 83; 1800m Bally 5624;
1830m Herlocker 34, 128; 1900m Kuchar 9098; 2130m H & J 7269

Schrebera alata (Hochst.) Welw.
Upland evergreen forest (1)
Evergreen & semi-deciduous bushland (3) (5) — Tree
1800m Bally 5521; 1980m T. Adamson K12A; Field 178;
1670m Herlocker 124, 222; 1550-1700m H & J 7022

230 APOCYNACEAE

KTS (1961)

Adenium obesum (Forsk.) Roem. & Schult.
Deciduous shrubland (32)
Annual grassland, bushed dwarf shrub short (65) — Shrub
880m Herlocker 151; Oteke 48; 800m H & J 7015

Carissa edulis Vahl
Evergreen & semi-deciduous bushland (3) (5)
Wooded upland perennial grassland (52) Shrub or liane
1800m Bally 5508; Oteke 119; 1700m Field 101; 1700m Herlocker 86;
N. Kulal 1520m Herlocker 209

231 ASCLEPIADACEAE

UKWF (1974)

Caralluma acutangula (Decne) N.E.Br. (*C. russeliana* (Brongn.) Cuf., *C. retrospiciens* N.E.Br.)
Annual grassland with dwarf shrubs, *Acacia* & *Commiphora* (65) Stem succulent
800m H & J 7014

Echidnopsis dammanniana Spreng.
Semi-deciduous bushland (5) Deciduous woodland (10) Stem succulent
1700m H & J 6904; 1550m H & J 7143; Synnott 1816

Gomphocarpus fruticosus (L.) Ait.f.
Evergreen & semi-deciduous bushland (3) (5) Shrub
Bally 5492; 1520m Field 74; 1680m Herlocker 116; 1700m H & J 6818; 1800m Synnott 1727

Pergularia daemia (Forsk.) Chiov.
Wooded dwarf shrubland (44) Twiner
1250m H & J 7186; Synnott 1716

Raphionacme sp.
Deciduous woodland (9) Twiner
1370m Herlocker 176; 1200m Field in Herlocker 245

Sarcostemma viminale (L.) R.Br. s.lat.
Annual grassland, bushed dwarf shrub short (65) Succulent twiner
900m Tweedie 4305; 800m H & J 7007

Tylophora sp? or *Gongronema* sp.?
Upland evergreen forest (1) Evergreen bushland (3) Twiner
1680m Herlocker 344; 1600m H & J 6988

232 RUBIACEAE

KTS (1961) : UKWF (1974) : FTEA Part 1 (1976) Part 2 ined. incomplete

A HERBACEOUS GENERA

Conostomium kenyense Bremek.
Wooded dwarf shrubland (44) — Herb
1250m H & J 7173

Otomeria oculata S. Moore
Composite canyon vegetation (6) — Herb
950m Synnott 1766

Pentanisia ouranogyne S. Moore
Evergreen bushland (3) Deciduous woodland (9) (10) — Herb
Bally 5499 ; Field 137 ; 1340m Herlocker & Gagah 200 ; 1220m Lewis 6 ; 1370m Lewis 42 204 ; 1700m H & J 6825, 6831

Pentas lanceolata (Forsk.) Deflers
Upland evergreen forest (1) Evergreen bushland (3)
Semi-deciduous bushland (5) — Herb
N. Kulal 2130m J. Adamson 59 ; 1760m Bally 5503 ; 1400m Verdcourt 2262 ; Oteke 61 ; 1900-2100m Tweedie 4246, 4299 ; Herlocker 123 ; 1900m Kuchar 9082 ; 1700m H & J 6864 ; White 12621

Rubia cordifolia L.
Evergreen bushland (3) — Scrambler
1730m Bally 5506 ; White '12554

B WOODY GENERA

Aulacocalyx diervilleoides (K. Schum.) Petit
(Heinsenia diervilleoides K. Schum.)
Upland evergreen forest (1) — Tree
2000m Synnott 1789

Canthium schimperanum A. Rich.
Upland evergreen forest (1)
Evergreen and semi-deciduous bushland (3) (5) — Shrub or tree
2100m H & J 7194; White 12577, 12585 ; 1800m Synnott 1703, 1741

Canthium sp. nov.
Deciduous woodland (9) Shrub
1460m H & J 6950

Meyna tetraphylla (Hiern) Robyns ssp. *tetraphylla*
Composite canyon vegetation (6) Shrub
1000m Synnott 1754

Oxyanthus speciousus DC. ssp. *stenocarpus* (K. Schum.) Bridson
Upland evergreen forest (1) Shrub or tree
2000m Synnott 1776

Pavetta abyssinica Fres.
Upland evergreen forest (1) Shrub
Tweedie 4292; Herlocker 67, 68, 82, 138; 1980m Herlocker & Kreulen 387; White 12618

Pavetta gardenifolia A. Rich.
Upland evergreen forest (1)
Evergreen & semi-deciduous bushland (3((5) Shrub
Field 176; Herlocker 8; Kuchar 9110; 1750m Synnott 1821

Pavetta sp.
Deciduous woodland (10) Shrub
White 12610

Psychotria kirkii Hiern var. *kirkii*
Upland evergreen forest (1)
Evergreen & semi-deciduous bushland (3) (5)
Field 179; Herlocker 26; White 12581

Psychotria kirkii Hiern var. *nairobensis* (Bremek.) Verdc.
Upland evergreen forest (1) Evergreen bushland (3)
Composite bushland (15)
Tweedie 4242; 1900m Kuchar 9102; 1700m H & J 6863; White 12568, 1750-1800m Synnott 1708, 1793, 1822, 1929

Psychotria orophila Petit *(Grumilea ellioltii* K. Schum. & K. Krause)
Upland evergreen forest (1) Shrub
1980m Herlocker 438; White 12617; 2000m Synnott 1810; T. Adamson K10B

Rytigynia neglecta (Hiern) Robyns
Upland evergreen forest (1) Shrub
Herlocker 'A'; 1980m Herlocker 408; White 12583, 12594

Rytigynia sp. nov.?
Upland evergreen forest (1) Shrub
Herlocker 122; 1800-2100m H & J 6911; 1800m Synnott 1707

Tarenna graveolens (S. Moore) Brem.
Upland evergreen forest (1) Semi-deciduous bushland (5) Shrub
Field 166; 1700m Herlocker 227; White 12592; 1800m Synnott 1806

Vangueria apiculata K. Schum.
Evergreen bushland (3) Shrub
Oteke 130; 1600m H & J 6962

Vangueria linearisepala K. Schum.
Evergreen & semi-deciduous bushland (3) (5) Shrub
Field 168; Herlocker 92, 147; 1680m Herlocker & Gagah 225; White 12550

233 COMPOSITAE (ASTERACEAE)

KTS (1961) : UKWF (1974)

A TRIBE *VERNONIEAE*

Bothriocline tomentosa (S. Moore) Wild & Pope
(Erlangea tomentosa S. Moore)
Upland evergreen forest (1) Composite canyon vegetation (6) Tall herb
2100m Herlocker 412

Gutenbergia cordifolia Oliv. *(Erlangea cordifolia* (Oliv.) S. Moore)
Deciduous woodland (9) Herb
H & J 6930

Vernonia aurantiaca (O. Hoffm.) N.E. Br.
Semi-deciduous bushland (5) Subscandent shrub
Bally 5491; Herlocker 113; 1620m H & J 7054

Vernonia brachycalyx O. Hoffm.
Evergreen bushland (3) Scandent shrub
Oteke 127; Tweedie 4245; Field 161; 1700m Herlocker 274; 1600m
H & J 6977 ;White 12565; 1800m Synnott 1728

Vernonia cinerascens Sch. Bip.
Wooded dwarf shrubland (44) Small shrub
Field 112; 880m Lewis 87; 1100m H & J 6997

Vernonia lasiopus O. Hoffm.
Composite canyon vegetation (6) — Tall herb
880m Field 259; Herlocker 63

Vernonia galamensis (Cass.) Less. var. nov. C — Annual tall herb
Evergreen bushland (3)
Bally 5544; Herlocker 29; Field 188; 1600m H & J 6983;
White 12600; Oteke 84

Vernonia karaguensis Oliv.
Oteke 110 — Tall herb

Vernonia syringifolia O. Hoffm.
Evergreen bushland (3) — Scandent shrub
2050m H & J 7118

Vernonia sp. near to *V. wollastonii* S. Moore
Semi-deciduous bushland (5) — Scandent shrub
1700m H & J 6897

Vernonia sp. C. of UKWF (probably a new sub species of *V. aschersonii* Sch. Bip.)
Evergreen bushland (3) Deciduous woodland (10) — Herb
1700m Gagah in Herlocker 324

B TRIBE *ASTEREAE*

Conyza hochstetteri Sch. Bip.
Evergreen bushland (3) — Herb
1740m H & J 7147

Conyza pyrrhopappa Sch. Bip.
Evergreen bushland (3) Composite Bushland (1 5) — Shrubby herb
Bally 5576; Herlocker 88; 1900m Kuchar 9088; 1900m H & J 7035a

Conyza steudelii Sch. Bip.
Semi-deciduous bushland (5) — Tall herb
Oteke 86

Conyza stricta Willd.
Evergreen & semi-deciduous bushland (3) (5) — Annual herb
1900m H & J 7033; 1620m H & J 7055

Dichrocephala chrysanthemifolia DC.
Evergreen bushland (3) — Annual herb
1920m Bally 5598; 1900m H & J 7035

Felicia abyssinica A. Rich.
Semi-deciduous bushland (5) — Herb
1520m Herlocker 206

Psiadia incana Oliv. & Hiern
Acacia drepanolobium Duosperma Bushland (9) — Dwarf shrub
C 1000m? Herlocker 186

Psiadia punctulata (DC.) Vatke *(P. arabica* Jaub. & Spach)
Evergreen & semi-deciduous bushland (3) (5) — Shrub
Field 141; 1700m Herlocker 277; 1600m H & J 6857

C TRIBE *INULEAE*

Blepharispermum lanceolatum Chiov.
Composite canyon vegetation (6) — Shrub
950m Synnott 1765

Blepharispermum pubescens S. Moore
Deciduous bushland (19) — Shrub
900m Verdcourt 2267

Helichrysum gerberifolium Sch. Bip.
Evergreen bushland (3) — Perennial herb
Oteke 117

Helichrysum glumaceum DC.
Evergreen & semi-deciduous bushland (3) (5) — Slightly woody
Deciduous woodland (10) — straggling herb
1670m Herlocker 263; Herlocker 691; 1700m Lewis 242; 1300m H & J 7157

Helichrysum rhodolepis Baker
Evergreen bushland (3) — Perennial herb
1700m Herlocker 327

Helichrysum schimperi (Sch. Bip.) Moeser
Grassland in upland evergreen forest (1)
Semi-deciduous bushland (5) — Trailing soft shrub
Bally 5634; Herlocker 134; 1600m H & J 6850; 2050m H & J 7105

D TRIBE *HELIANTHEAE*

Aspilia mossambicensis (Oliv.) Wild
Evergreen bushland (3) Deciduous woodland (9) Tall bushy herb
1700 Field 77, Field 134, Herlocker 41, 89, 1700m Herlocker & Gagah 331; 1370m Lewis 212; 1700m H & J 6819; 1460m H & J 6943; White 12552

Bidens biternata (Lour.) Merr.
Glades in upland evergreen forest (1) Herb
1840m Bally 5573

Bidens incumbens Sherff
Composite canyon vegetation (6) Bushy herb
Herlocker 113; 2130m Herlocker & Gagah 428

Bidens nobiloides Sherff
Evergreen bushland (3)
N. Kulal 2130m J. Adamson 66 (=Bally 3914); 2000m Bally 5616

Bidens pilosa L.
Evergreen bushland (3) Herb
1700m Herlocker 316

Bidens sp. nov.
Deciduous woodland (9)
Herlocker 661; 1460m H & J 6945

Spilanthes mauritiana (A. Rich.) DC.
Upland evergreen forest (1) Evergreen bushland (3) Herb
Bally 5546; Field 187; 1550m H & J 7027

E TRIBE *SENECIONEAE*

Cineraria grandiflora Vatke
Upland evergreen forest (1) Composite canyon vegetation (6) Annual Herb
Bally 5611; 2130m Herlocker 417

Crassocephalum bojeri (DC.) Robyns
Evergreen bushland (3) Subsucculent climber
Bally 5531; 1700m Herlocker & Gagah 340

Crassocephalum mannii (Hook.f.) Milne-Redh.
Evergreen bushland (3) — Subsucculent shrub
Bally 5636 ; 1700m Herlocker 79

Crassocephalum montuosum (S. Moore) Milne-Redh.
Upland evergreen forest (1) — Herb
1950m Bally 5618 ; Field 237 ; 1980-2300m H & J 7084

Kleinia kleinioides (Sch. Bip.) M.R.F. Taylor
Semi-deciduous bushland (5) Deciduous woodland (9)
Wooded dwarf shrubland (44) — Stem succulent shrub
1430m Herlocker 27; 1460m H & J 6946; 1100m H & J 6994

Kleinia sp. A. of UKWF
Stem succulent shrub
Karingi Oteke 160

Notonia coccinea Oliv. & Hiern
Semi-deciduous bushland — Succulent herb
Narangani Oteke 67, 68 ; 1700m H & J 6875

Senecio lyratipartitus A. Rich.
Evergreen bushland (3) Composite bushland (15) — Climber
Tweedie 4247; Oteke 125; Field 171; 1700m Herlocker & Gagah 325;
1900m Kuchar 9104; 1700m H & J 6861; White 12560

Senecio petitianus A. Rich
Upland evergreen forest (1) Evergreen bushland (3) — Semi succulent climber
Oteke 108; 1760m Field 94; Synnott 1805

F TRIBE *CALENDULEAE*

Osteospermum vaillantii (Decne.) Norl.
Upland evergreen forest (1) semi-deciduous bushland (5)
Composite canyon vegetation — Herb
N. Kulal 2100m J. Adamson 84 (=Bally 3929) ; 2200-2400m Verdcourt
2249; 2130m Herlocker 421 ; 1700m H & J 6900

G TRIBE *CYNAREAE*

Volutaria lippii (L.) Maire
Deciduous woodland (9) — Herb
1370m Lewis 23

H TRIBE *LACTUCEAE*

Crepis rueppellii Sch. Bip.
Evergreen bushland (3) Composite bushland (15) Herb
1800m Bally 5527; Oteke 75; 1980m Field 57; 1980m Herlocker & Kreulen 393; 1800m H & J 6925

Lactuca capensis Thunb.
Evergreen bushland (3) Herb
1900m Bally 5593; Oteke 113; Herlocker 692

Launaea cornuta (Oliv. & Hiern) Jeffrey
Wooded dwarf shrubland (44) Herb
1250m H & J 7172

Launaea intybacea (Jacq.) P. Beauv.
Semi-deciduous bushland (5) Herb
1700m H & J 6903; 1550m H & J 7126

Reichardia tingitana (L.) Roth
Evergreen bushland (3) Herb
1700m Herlocker, Masheti & Gagah 308

Sonchus bipontini Aschers.
Grassland in upland evergreen forest (1)
Evergreen bushland (3) Herb
Tweedie 4296 ; 1700m H & J 6844; 2050m H & J 7114

240 PRIMULACEAE

FTEA (1958) : UKWF (1974)

Anagallis arvensis L.
Upland evergreen forest (1) Evergreen bushland (3) Herb
1980m Field 90 ; Field 195 ; 1700m Herlocker, Masheti & Gagah 309

241 PLUMBAGINACEAE

UKWF (1974) : FTEA (1976)

Ceratostigma abyssinica (Hochst.) Aschers. & Schweinf.
Evergreen & semi-deciduous bushland (3) (5) Herb
1830m Tweedie 4301; Field 199; Herlocker 17; 1700m Lewis 234; 1640m H & J 7074

Plumbago zeylanica L.
Semi-deciduous bushland (5) — Herb
1620m H & J 7053

243 CAMPANULACEAE

UKWF (1974) : FTEA (1976)

Wahlenbergia abyssinica (A. Rich.) Thulin ssp. *abyssinica*
(Lightfotia abyssinica A. Rich)
Evergreen bushland (3) Semi-deciduous bushland (5) — Herb
1700m H & J 6902; Herlocker 278

Wahlenbergia hirsuta (Edgw.) Tuyn
(Lightfotia hirsuta (Edgw.) E. Wimm.)
Evergreen bushland (3) — Herb
1890m Tweedie 4302

Wahlenbergia virgata Engl.
Evergreen bushland (3) — Herb
1700m Lewis 244; Bally 5610

244 LOBELIACEAE

UKWF (1974)

Cyphia glandulifera Hochst.
Evergreen bushland (3) — Geophytic herb
Field 215

249 BORAGINACEAE

KTS (1961) : UKWF (1974)

Cordia africana Lam. *(C. abyssinica* R.Br.)
Upland evergreen forest (1) — Tree
Synnott (sight record)

Cordia crenata Del.
Composite canyon vegetation (6) — Shrub or small tree
1000m Synnott 1753

Cordia ovalis DC.
Semi-deciduous bushland (5) Shrub or small tree
Synnott 1743?, 1839, 1932

Cordia sinensis Lam. (*C. gharaf* (Forsk.) Asch., *C. rothii* Roem & Schultes)
Deciduous shrubland (29) Shrub or small tree
White 12604

Cordia sp. aff. *C. crenata* Del.
(dry gulley thicket near Balessa Kulal camp) Shrub or small tree
680m Synnott 1732

Cynoglossum amplifolium Hochst.
Evergreen bushland (3) Herb
1930m Bally 5549

Cynoglossum coeruleum DC.
Evergreen bushland (3) Herb
Field 196 ; 1730m Herlocker 336; 1980m Herlocker 397; 1700m H & J 6865

Cystistemon hispidus (Bak. & Wright) Miller & Riedl
(Vaupelia hispida (Bak. & Wright) Brand)
Annual grassland Herb
Lewis 30

Ehretia cymosa Thonn. var. *sylvatica* (Guerke) Brenan
Upland evergreen forest (1)
Evergreen semi-deciduous bushland (3) (5) Shrub or small tree
2000m T. Adamson K6B; Verdcourt 2254; Oteke 53; 1920m Field 93;
1700m Herlocker 224; 1800m Synnott 1791

Heliotropium somalense Turrill
Deciduous woodland (9) Deciduous shrubland (32) Herb
1220m Lewis 2; 1370m Lewis 20

Heliotropium sp. near *steudneri* Vatke
Semi-deciduous bushland (5) Deciduous woodland (10)
Wooded, upland perennial grassland (52) Herb
1525m Field 64; Herlocker 22; 1525m Herlocker & Gagah 207;
1360m H & J 7132

250 SOLANACEAE

KTS (1961) : UKWF (1974)

Datura stramonium L.
Upland evergreen forest (1) Annual herb
1950m Bally 5603 ; Herlocker 463

Lycium shawii Roem. & Schult. (*L. europaeum* L. sens. lat.)
Deciduous bushland (19) Shrub
1370m Bally 5652 ; Field 128

Physalis peruviana L.
Evergreen bushland (3) Herb
Herlocker 28; 1700m Herlocker, Masheti & Gagah 313; 1900m H & J 7042

Solanum coagulans Forsk. (*S. dubium* Fres.)
Deciduous woodland (9) Wooded dwarf shrubland (44) Woody herb
720m Bally 5485; Field 143; Herlocker 642; 1370m Lewis 39;
850m Lewis 84; 1250m H & J 7206

Solanum hastifolium Dunal
Deciduous woodland (10) Wooded dwarf shrubland (44) Shrub
1300m H & J 7162; 1250m H & J 7179

Solanum incanum L.
Evergreen & semi-deciduous bushland (3) (5) Softly woody shrub
Bally 5552; Oteke 60 (ssp.3) ; Field 146; Herlocker 90;
1700m Herlocker 523 ; 1700m H & J 7205

Solanum indicum L. (incl. *S. renschii* Vatke)
Evergreen bushland (3) Tall woody herb
1930m Bally 5551, 5561 ; 1600m H & J 6974 ; 2100m H & J 7196 var.

Solanum indicum L. ssp. *grandifrons* Bitter
Upland evergreen forest (1) Evergreen bushland (3) Tall woody herb
Herlocker 40 ; 1700m Lewis 63 ; 1800-2100m H & J 6921; White 12623

Solanum indicum L., ssp. *rothii* (C. H. Wright) Bitter
Evergreen bushland (3) Tall woody herb
Oteke 55

Solanum nigrum L. agg.
Upland evergreen forest (1)
Evergreen & semi-deciduous bushland (3((5) Herb
Oteke 87; Herlocker 314, 685; 1980m Herlocker & Kreulen 389;
Herlocker Masheti & Gagah 314; 1700m Lewis 63, 260; 1740m H & J 7052

Solanum terminale Forsk.
Deciduous woodland (9) Climber
2300m Tweedie 4280; 1460m H & J 6932

Withania somnifera (L.) Dunal
Evergreen bushland (3) Softly woody shrub
1830m Bally 5553; Tweedie 4307; 1140m H & J 7064

251 CONVOLVULACEAE

KTS (1961) : FTEA (1963) : UKWF (1974)

Cladostigma hildebrandtioides Hall.f.
Deciduous shrubland (29) Shrub
Herlocker 53

Convolvulus rhyniospermus Choisy
Deciduous shrubland (30) Annual herb
760m Lewis 251

Convolvulvus sagittatus Thunb. var. *villosus* Hall.f.
Evergreen bushland (3) Perennial herb
1920m Bally 5592

Convolvulus sagittatus Thunb. var. *ulosepalus* (Hall.f.) Verdc.
Evergreen bushland (3) Perennial herb
Kuchar 9113

Convolvulus siculus L. ssp. *agrestis* (Schweinf.) Verdc.
Grassland in upland evergreen forest (1) Annual herb
2050m Tweedie 4295; Oteke 93

Cuscuta kilimanjari Oliv.
Upland evergreen forest (1) Parasitic twiner
1900m Bally 5541; 1800m Verdcourt 2264; Oteke 54

Dichondra repens J. R. & G. Forst.
Semi-deciduous bushland (5) — Herb
1740m H & J 7149

Hildebrandtia obcordata S. Moore complex (FTEA: 21)
Annual grassland, bushed dwarf shrub short (15) — Dwarf shrub
910m Verdcourt 2232

Hildebrandtia sepalosa Rendle
Deciduous shrubland (29) — Dwarf shrub
Field 278

Ipomoea cicatricosa Baker
Deciduous shrubland (29) — Shrub
1500m Tweedie 4303 ; 900m Field 109; Herlocker 49

Ipomoea cordofana Choisy
Deciduous shrubland (30) — Perennial herb
760m Lewis 253

Ipomoea elythrocephala Hall.f.
Upland evergreen forest (1) Evergreen bushland (3) — Perennial twiner
2130m Herlocker & Kreulen 435; 1600m H & J 6970

Ipomoea kituiensis Vatke
Semi-deciduous bushland (5) — Shrub or liane
1700m H & J 6892

Ipomoea spathulata Hall.f.
Deciduous woodland (10) — Shrub or liane
1520m Field 42 ; Herlocker 19

Ipomoea wightii (Wall.) Choisy
Upland evergreen forest (1) — Perennial twiner
2000m Bally 5545 ; White 12571

Ipomoea wightii (Wall.) Choisy var. *kilimandschari* (Dammer) Verdc.
Evergreen bushland (3) — Perennial twiner
1750m H & J 7144

252 SCROPHULARIACEAE

KTS (1961) : UKWF (1974)

Alectra parasitica A. Rich.
Deciduous woodland (9) (10) Herb
1370m Herlocker 451-A; 1300m H & J 7156

Aptosimum pumilum Benth.
Deciduous shrubland (29) Annual grassland with dwarf shrubs
Acacia and Commiphora (65) Herb
850m Lewis 88

Cycnium tenuisectum (Standl.) O. J. Hansen
(Rhamphicarpa tenuisecta Standl.)
Evergreen bushland (3) Herb
N. Kulal 2130m J. Adamson 56 (=Bally 3904); 1800m Bally 5524;
Oteke 116 ; 1900m H & J 7038

Halleria lucida L.
Evergreen bushland (3) Shrub
Verdcourt (sight record)

Kickxia elatine (L.) Dam.
Semi-deciduous bushland (5) Deciduous woodland (9) Herb
1700m H & J 6898; 1460m H & J 6960; 1700m Lewis 246

Lindenbergia indica (L.) Kuntze
Deciduous woodland (9) Herb
Field 250; 1460m H & J 6959

Pseudosopubia hildebrandtii (Vatke) Engl.
Deciduous woodland (9) Herb
1460m H & J 6958

Verbascum brevipedicellatum (Engl.) Huber-Morath *(Celsia floccosa* of UKWF)
Evergreen bushland (3) Composite bushland (15) Herb
Oteke 134; 1900m Kuchar 9070; 1800m H & J 7195

Veronica anagallis-aquatica L.
Upland evergreen forest (1) Herb
Oteke 76; 2100m Tweedie 4298; Field 260; 1800-2100m H & J 6912

253 OROBANCHACEAE

FTEA (1957) : UKWF (1974)

Cistanche tubulosa (Schenk) Hook.f. Herb
Deciduous woodland (9)
Field 224; 1700m H & J 6940 (parasitising *Sericocomopsis hildebrandtii*), Synnott 1735

256 GESNERIACEAE

UKWF (1974)

Streptocarpus glandulosissimus Engl. Herb
Upland evergreen forest (1)
2300m Verdcourt 2251

258 PEDALIACEAE

FTEA (1953) : KTS (1961) : UKWF (1974)

Pterodiscus ruspolii Engl. Herb
Deciduous woodland (10)
1220m Lewis 1 ; Field 203

Sesamothamnus busseanus Engl. Shrub
Wooded dwarf shrubland (44)
1250m H & J 7187

Sesamonthamnus rivae Engl. Shrub
Deciduous shrubland (29) Annual grassland with dwarf shrubs,*Acacia & Commiphora*
850m Bally 5656

259 ACANTHACEAE

KTS (1961) : UKWF (1974)

A Fertile Stamens 4

Acanthus eminens C.B.Cl.
Upland evergreen forest margins (1) Tall woody herb
Synnott (1979)

Acanthus pubescens (Oliv.) Engl. (*A. arboreus* sensu KTS non Forsk.)
Upland evergreen forest (1) Softly woody shrub
2167m Field 102

Asystasia gangetica (L.) T. Anders
Deciduous woodland (9) Herb
1500m Lewis 213

Asystasia guttata (Forsk.) Brummitt (*A. somalensis* Franch.) Lebrun & Touss.
Deciduous woodland (10) Woody herb
1300m H & J 7164; 1200m T. Adamson 2

Blepharis maderaspatensis (L.) Roth ssp. Napper
Semi-deciduous bushland (5) Herb
1700m H & J 6877

Crossandra nilotica Oliv. ssp. *massaica* (Mildbr.) Napper
Evergreen & semi-deciduous bushland (3) (5) Herb
Field 258; 1870m Herlocker 247, 312; 1670m Lewis 229

Duosperma eremophilum (Milne-Redh.) Brummitt (*Disperma eremophilum* Milne-Redh.)
Deciduous woodland (9) (10) (13) Deciduous shrubland (29) (30)
Dwarf shrubland (34) (35) (36) (44) Annual grassland (59) (67)
Dwarf shrub

Duosperma sp.
Deciduous woodland (10) Dwarf shrub
760m Verdcourt 2228; Herlocker 552

Dyschoriste radicans Nees (= *D. clinopodioides* Mildbr.)
Upland evergreen forest (1) Evergreen & semi-deciduous bushland (3) (5) Herb
N. Kulal 2130m J. Adamson 58 (=Bally 3906); 1800m Bally 5519
Oteke 92; 1700m Herlocker 297; 1980m Herlocker & Kreulen 400; 1740m H & J 7051

Mimulopsis alpina Chiov.
Upland evergreen forest (1) — Tall herb
2280m Verdcourt 2237

Phaulopsis imbricata (Forsk.) Sweet
Upland evergreen forest (1) — Tall herb
1930m Bally 5589; Field 190; 1800-2100m H & J 6910

B Fertile Stamens 2, Usually with 2 more greatly reduced

Barleria: A with spines on calyx, bracts and/or nodes

Barleria acanthoides Vahl
Wooded dwarf shrubland (44) — Dwarf shrub
1100m H & J 6999a

Barleria eranthemoides C.B.Cl.
Deciduous woodland (9) — Softly woody shrub
1460m H & J 6949

Barleria proxima Lindau
Annual grassland with dwarf shrubs, *Acacia* and *Commiphora* (65) — Softly woody dwarf shrub
1200m Field 111; Herlocker 109

Barleria: B without spines

Barleria argentea Balf. f.
Deciduous woodland (9) — Herb
1200m Field 110; Herlocker 150; 1460m H & J 6955

Barleria cf. *grantii* C.B.Cl.
Evergreen bushland (3) — Herb
1740m H & J 7056

Barleria micrantha C.B.Cl.
Evergreen bushland (3) — Herb
White 12567

Barleria ventricosa Nees sens. lat.
Evergreen bushland (3) Composite canyon vegetation (6) — Herb
Field 172; Bally 5594; Oteke 67

Barleria sp.
Annual grassland with dwarf shrubs (*Duosperma* etc.) (59)
760m Herlocker 363

C FERTILE STAMENS 2

Dicliptera laxata C.B.Cl.
Upland evergreen forest (1) Herb
2300m Verdcourt 2241; Oteke 131; 1980m Field 240; Herlocker 64; 1980-2300m H & J 7081

Dicliptera sp.
Evergreen bushland (3) Herb
1920m Bally 5569; Herlocker 31

Ecbolium anisacanthus C.B.Cl.
Deciduous shrubland (30) Softly woody dwarf shrub
850m Bally 5657

Hypoestes forskalii (Vahl) Roem. & Schult. (*H. verticillaris* (L.f.)R.Br sens. lat
Semi-deciduous bushland (5) Deciduous woodland (10) Herb
1830m Bally 5579; Herlocker 24; 1550m H & J 7124

Hypoestes triflora (Forsk.) Roem. & Schult.
Upland evergreen forest (1) Annual herb
1980m Herlocker 386; 1980-2300m H & J 7081a

Isoglossa lactea Lindau
Evergreen bushland (3) Herb
1550-1700m H & J 7020

Isoglossa oerstediana Lindau
Evergreen bushland (3) Herb
Field 189

Isoglossa sp. aff. *oerstediana* Lindau
Upland evergreen forest (1) Herb
2500m Verdcourt 2238

JUSTICIA Section *ROSTELLULARIA*

Justicia caerulea Forsk.
Deciduous woodland (9) (10) Softly woody dwarf shrub
Field 133; 1370m Lewis 203; 1300m H & J 7167

Justicia flava (Vahl) Vahl — Softy woody dwarf shrub
Upland evergreen forest (1) Deciduous woodland (9)(10)
Field 191, 192 ; 1980m Herlocker 388 ; 1460m H & J 6928 ; 1300m H & J 7163

JUSTICIA SECTION *CALOPHANOIDES*

Justicia diclipteroides Lindau — Herb
Evergreen & semi-deciduous bushland (3) (5)
1670m Herlocker 220, 264 ; 1700m Herlocker 306

Justicia odora (Forsk.) Vahl *(J. fischeri* Lindau) — Dwarf shrub
Dwarf shrubland (34) Annual grassland with dwarf shrubs, *Acacia* and *Commiphora* (65)
910m Field 108, 135 ; Herlocker 47, 60, 369 ; 610m Lewis 85, 86

Justicia pinguior C.B.Cl. — Perennial herb
Evergreen bushland (3)
Field 114

Justicia sect. *Calophanoides* sp. — Softly woody dwarf shrub
Short grassland
660m Bally 5665

JUSTICIA SECTION *ANSELLIA*

Justicia exigua S. Moore — Herb
Semi-deciduous bushland (5)
Herlocker 614, 662

Justicia matammensis Oliv. — Annual herb
Semi-deciduous bushland (5)
1520m Field 68

Justicia uncinulata Oliv.? — Perennial herb
Semi-deciduous bushland (5)
Field 183; 1700m H & J 6876

Justicia sect. *Ansellia* sp. — Herb
1670m Lewis 228

Monechma debile (Forsk.) Nees
Evergreen & semi-deciduous bushland (3) (5)
Deciduous woodland (9) (10) Herb
Field 67; 1700m Herlocker & Gagah 326; 1370m Lewis 207;
1740m H & J 7065; 1300m H & J 7160

Ruttya fruticosa Lindau
Upland evergreen forest (1) Evergreen bushland (3) Shrub
Field 233; 1700m Herlocker & Gagah 343; 1600m H & J 6989;
Synnott 1750

262 SELAGINACEAE

UKWF (1974) p. 547 as part of *Scrophulariaceae* Roesler in
Mitt. Bot. Staats Sam. Muench. 15:150 (1979)

Hebenstretia angolensis Rolfe (*H. dentata* L. sens. lat.)
Grassland in upland evergreen forest (1)
Composite bushland (15) Stiff herb
Herlocker 125; 1980m Herlocker & Kreulen 594; 2050m H & J 7106

263 VERBENACEAE

KTS (1961) : UKWF (1974)

Chascanum marrubiifolium Walp.
Deciduous bushland (19) Herb
Field 119, 130; Herlocker 619; Lewis 81

Clerodendrum myricoides R. Br. s. lat.
Semi-deciduous bushland (5)
Wooded upland perennial grassland (52) Shrub
Bally 5607; Oteke 50; Herlocker 23; 1670m Herlocker 136;
1520m Herlocker & Gagah 210 1600m H & J 6848

Clerodendrum quadrangulatum Thomas
Evergreen bushland (3) Shrub
1600m H & J 6987

Lantana rhodesiensis Moldenke
Semi-deciduous bushland (5) Softly woody shrub
1450m Herlocker 268

B TRIBE *STACHYDEAE* Stamens Arcuate; Upper Lip of Corolla Large

Leonotis mollissima Guerke
Upland evergreen forest (1) Stiff tall herb
White 12625

Leonotis nepetifolia (L.) R.Br.
Upland evergreen forest (1) Evergreen bushland (3) Stiff tall herb
Tweedie 4276; Herlocker 37; 1730m Herlocker, Masheti & Gagah 350;
1980-2300m H & J 7089

Leucas glabrata (Vahl) R.Br.
Semi-deciduous bushland (5) Herb
1700m H & J 6891

Leucas tomentosa Guerke (=*L. pododiskos* Bullock)
Deciduous woodland (9) Tall herb
Field 163; 1370m Herlocker 266, 643; 1370m Lewis 217;
1460m H & J 6929; White 12609

Leucas urticifolia R.Br. var. *annulata* Sebald
Evergreen bushland (3) Herb
1700m Herlocker & Gagah 252

Leucas sp.
Evergreen bushland (3) Herb
1700m Lewis 232

Stachys sp. near *pseudonigricans* Guerke
Evergreen bushland (3) Herb
1700m H & J 6820, 6821; 2100m Verdcourt s.n.; 1700m Herlocker 269

C TRIBE *SATUREINAE* Stamens Arcuate; Corolla Lips Small

Satureia abyssinica (Benth.) Briq.
Grassland in upland evergreen forest (1) Evergreen bushland (3)
Composite bushland (15) Herb
1800m Bally 5504; Oteke 115; 1900m Kuchar 9087; 1700m H & J
6839; 2050m H & J 7115

Satureia biflora (D.Don) Briq.
Upland evergreen forest (1) Evergreen bushland (3)
Composite bushland (15) Herb
Oteke 74; Tweedie 4285; 1980m Herlocker & Kreulen 401; 1730m
Herlocker, Masheti & Gagah 347; 1900m Kuchar 9066; 2050m H & J 7107

Lantana trifolia L.
Evergreen bushland (3) — Softly woody shrub
Oteke 111; 1700m H & J 6866

Lantana viburnoides (Forsk.) Vahl
Evergreen & semi-deciduous bushland (3) (5)
Wooded dwarf shrubland (44) — Shrub
1700m Herlocker & Gagah 330; 910m Lewis 85; White 12570

Lippia carviodora Meikle
Deciduous shrubland (29) — Herb
900m Verdcourt 2263; 1230m van Swinderen 87; Field 271; Herlocker 58, 59

Lippia somalensis Vatke
Semi-deciduous bushland (5)
Wooded upland perennial grassland (52) — Shrub
2100m Bally 5627; Field 167; 1520m Herlocker 202; 1600m H & J 6853

Lippia ukambensis Vatke
Evergreen & semi-deciduous bushland (3) (5) — Shrub
Herlocker 21; 1700m Lewis 233

Priva curtisiae Kobuski
Deciduous woodland (10) — Herb
Lewis (no number); 1300m H & J 7168

Svensonia laeta (Walp.) Moldenke
Wooded dwarf shrubland (44) — Herb
1250m H & J 7174

264 LABIATAE (LAMIACEAE)

KTS (1961) : UKWF (1974)

A TRIBE *AJUGOIDEAE* Stamens Arcuate; Upper Lip of Corolla Short

Tinnea aethiopica Hook. f.
Evergreen & semi-deciduous bushland (3) (5) — Shrub
Field 160; Herlocker 25; 1700m Herlocker & Gagah 328; 1700m Lewis 235; 1700m H & J 6871; 1750m Synnott 1820

Satureia pseudosimensis Brenan
Evergreen bushland (3) — Herb
1730m Herlocker, Masheti & Gagah 348

D TRIBE *OCIMOIDEAE*: Stamens Declinate

Aeolanthus repens Oliv.
Evergreen bushland (3) — Succulent herb
1900m H & J 7039

Becium capitatum Bak.
Evergreen bushland (3) — Herb
N. Kulal 2130m J. Adamson 67 (=Bally 3909); Bally 5640, Oteke 158; Field 162; 1700m H & J 6823

Becium obovatum (E. Mey.) N.E.Br.
Deciduous woodland (10) — Herb
1300m H & J 7161

Hoslundia opposita Vahl
Deciduous woodland (9) — Shrub
Herlocker 545

Ocimum basilicum L.
Deciduous woodland (9) — Annual herb
1370m Lewis 47

Ocimum lamiifolium Benth.
Evergreen bushland (3) — Robust herb
1700m Herlocker 246

Ocimum suave Willd.
Evergreen bushland (3) — Shrub
1820m Bally 5574; 1700m Herlocker, Gagah & Masheti 346; 1700m H & J 6824

Orthosiphon suffrutescens (Thonning) J.K. Morton
Semi-deciduous bushland (5) — Herb
1610m Herlocker 265; 1550m H & J 7125

Plectranthus cylindraceus Benth.
Semi-deciduous bushland (5) — Succulent scrambling shrub
Field 198; 1700m H & J 6895

Plectranthus grandicalyx E.A. Bruce
Upland evergreen forest (1) Bushy herb
2100m Herlocker & Kreulen 413; 2250m Verdcourt 2253;
J. Adamson s.n.

Plectranthus igniarius Schweinf.
Semi-deciduous bushland (5) Deciduous shrubland (32)
Dwarf shrubland (35) Succulent shrub
1590m Field 45; Herlocker 1; 1600m H & J 6851; Oteke 159

Plectranthus sp. aff. *P. igniarius* Schweinf.
Semi-deciduous bushland (5) Succulent shrub
Herlocker 46; Hemming 3110; Verdcourt 2269

Plectranthus lanuginosus Benth.
Evergreen bushland (3) Subsucculent herb
1750m H & J 7032

Plectranthus sylvestris Guerke
Upland evergreen forest (1) Herb
2000m Bally 5596; 2300m Verdcourt 2240; Oteke 79; Field 234,
1980m Herlocker & Kreulen 439; 1800-2100m H & J 6915

Plectranthus sp. cf. *P. zatarhendi* (Benth.) E.A. Bruce
Semi-deciduous bushland (5) Herb
1740m H & J 7050

MONOCOTYLEDONS (families 265 - end)

280 COMMELINACEAE

UKWF (1974)

Aneilema pedunculosum C.B.Cl.
Upland evergreen forest (1) Herb
N. Kulal 2130m J. Adamson 91 (=Bally 3936); 2280m Verdcourt 2255;
Oteke 81; 2130m Tweedie 4293; 1800-2100m H & J 6919

Aneilema sp.
Evergreen bushland (3) Herb
1700m Lewis 243

Commelina africana L. (yellow flowers)
Upland evergreen forest (1) Herb
2130m H & J 7098

Commelina africana L. (orange flowers)
Evergreen bushland (3) Herb
1700m Lewis (no number); 1700m Herlocker 280; 1700m H & J 6869

Commelina africana L. var. *boehmiana* (K. Schum.) Brenan
Deciduous woodland (10) Herb
Oteke 102; 1300m H & J 7154

Commelina albescens Hassk.
Deciduous woodland (10) Herb
1300m H & J 7155

Commelina benghalensis L.
Evergreen & semi-deciduous bushland (3) (5) Herb
1700m H & J 7071; 1550m H & J 7123; 1950m Bally 5590;
1700m Herlocker 279

Commelina latifolia A. Rich.
Evergreen bushland (3) Herb
1930m Bally 5591; Oteke 91; 1700m H & J 6868

Cyanotis barbata D. Don
Grassland in evergreen forest (1) Herb
Oteke 89

Cyanotis bulbifera Hutch.
Upland evergreen forest (1) Herb
2130m H & J 7097

Murdannia simplex (Vahl) Brenan
Deciduous woodland (10) Herb
1280m H & J 7170

293 LILIACEAE

UKWF (1974)

Albuca wakefieldii Bak.
Grassland in upland evergreen forest (1) Bulbous geophytic
Deciduous woodland (10) Herb
2130m Herlocker & Kreulen 433; 1360m H & J 7141

Aloe secundiflora Engl.
Semi-deciduous bushland (5) Deciduous woodland (10)
1600m H & J 6846; 1360m H & J 7142

Aloe turkanensis Christian
Deciduous bushland (19)
Synnott 1849

Aloe sp. near *A. ciliaris* Haw.
? Kulal Martin s.n.

Aloe sp.
Semi-deciduous bushland (5)
800-870m Bally 5662; Herlocker 228

Aloe sp. nov. 1 (with a stem, lax inflorescence)
Upland evergreen forest (1) Semi-deciduous bushland (5)
1800-1890m Bally 5578; 1740m H & J 7151

Aloe sp. nov. 2 (rosette leaves, congested inflorescence)
Semi-deciduous bushland (5)
1680-1800m Bally 5633, 5638; 1600m H & J 7152

Anthericum zavattari Cuf.
Deciduous woodland (9) Geophytic herb
Field 276

Anthericum sp. near *gregorianum* Rendle
Semi-deciduous bushland (5) Geophytic herb
1700m H & J 6899

Asparagus aethiopicus L. (part of *A. falcatus* L. complex)
Evergreen bushland (3) Climber
1800m Bally 5517a; 1670m Herlocker 189; Synnott 1818

Asparagus africanus Lam.
Evergreen bushland (3) Climber
1550-1700m H & J 7017

Asparagus buchananii Baker
Wooded dwarf shrubland (44) Climber
1250m H & J 7175

Asparagus racemosus Willd.
Evergreen bushland (3) Climber
1800m Bally 5516

Asparagus aff. setaceus (Kunth) Jessop
Evergreen bushland (3) Climber
1670m Herlocker 193

Bulbine abyssinica A. Rich.
Evergreen bushland (3) Wooded upland perennial grassland (52) Geophyte
1700m Herlocker 362; 1520m Herlocker & Gagah 213; 1700m H & J 6833

Chlorophytum sp. near *gallabatense* Bak.
Deciduous woodland (9) Geophytic herb
1500m Herlocker 194

Chlorophytum sp.
Deciduous woodland (9) Geophytic herb
1370m Lewis 34

Trachyandra saltii (Bak.) Oberm.
Semi-deciduous bushland (5) Deciduous woodland (9) Herb
Field 73; 1370m Lewis 41

306 AMARYLLIDACEAE

UKWF (1974)

Ammocharis tinneana (Kotschy & Peyr.) Milne-Redh. & Schweickerdt
Deciduous woodland (9) Bulbous geophyte
1220m Bally 5495; 1370m Field 41

Crinum macowanii Bak. *(C. kirkii* sensu UKWF in part)
Evergreen bushland (3) Semi-deciduous bushland (3) Bulbous geophyte
1670-1730m Bally 5625; 1680m Herlocker 188

Scadoxus multiflorus (Martyn) Raf.(*Haemanthus multiflorus* Martyn)
Evergreen bushland (3) Bulbous geophyte
Bally 5518; 1740m H & J 7057

307 IRIDACEAE

UKWF (1974)

Gladiolus sp.
Composite canyon vegetation (6) Geophytic herb
Narangani Oteke 70; Gatab 1700m Synnott 1930

313 AGAVACEAE

KTS (1961) : UKWF (1974)

Dracaena afro-montana Mildbr.
Upland evergreen forest (1) Shrub or tree
1950m Bally 5615; Oteke 97; Synnott 1783B

Dracaena ellenbeckiana Engl.
Composite bushland (15) Shrub or small tree
Synnott 1931

Sansevieria
One or most likely more than one species almost certainly occur on Kulal but seem never to have been collected.

314 PALMAE (ARECACEAE)

KTS (1961)

Phoenix reclinata Jacq.
Composite canyon vegetation (6) at high altitudes Shrub or small tree
Verdcourt (sight record); Synnott (1979)

318 HYPOXIDACEAE

UKWF (1974)

Hypoxis obtusa Burch.
Grassland in upland evergreen forest (1)
Evergreen bushland (3) Composite bushland (15) Geophytic herb
2000m Field 51; 1730m Lewis 68; 1900m H & J 7036; 2050m H & J 7108

326 ORCHIDACEAE

FTEA part 1 (tribe *Orchideae)* 1968 : UKWF (1974) : FTEA part 2 ined. incomplete (none of the species listed below, which are all epiphytes are described in FTEA (1968);

Aerangis brachycarpa (A. Rich.) Dur. & Schinz
(incl. *A. flabellifolia* Reichb. f.)
Upland evergreen forest (1)
Synnott 1871, 1982, 1920

Aerangis confusa J. Stewart (incl. *A. brachycarpa* of UKWF)
Upland evergreen forest (1)
Bally 5622

Aerangis coriacea Summerh.
Upland evergreen forest (1)
1800m H & J 7047, 7048; 2000m Synnott 1781

Aerangis thomsonii (Rchb. f.) Schltr.
Upland evergreen forest (1)
Tweedie (sight record)

Angraecum erectum Summerhayes
Upland evergreen forest (1)
1760m Bally 5632; Tweedie (sight record); Field 260, 266

Polystacha cultriformis (Thou.) Spreng.
Upland evergreen forest (1)
2130m Herlocker & Kreulen 432 ; 1980-2300m H & J 7093; Synnott 1725, 1780

Polystachya sp. nov. near *P. confusa* Rolfe
Upland evergreen forest (1)
1980-2300m H & J 7086; 1700m Mrs. Lewis in EA 16141

Rangaeris amaniensis (Kraenzl.) Summerh.
Upland evergreen forest (1)
Bally 5528; Synnott 1873, 1921

331 CYPERACEAE

D. M. Napper in Journ. E. African Nat. Hist. Soc. 24 (106), 1-18 (1963),(109): 23-46 (1964), 25 (110): 1-27 (1965) 26 (113): 1-17 (1966), 28 (124): 1-24 (1971) (all species listed here are herbs)

Bulbostylis boecklerana (Schweinf.) Beetle
Evergreen bushland (3)
Oteke 148; 1700m H & J 6834

Cyperus alternifolius L.
Composite bushland (15)
1160m Field 262

Cyperus blysmoides Hochst.
Evergreen bushland (3)
Lewis 90

Cyperus giolii Chiov.
Deciduous woodland (10)
Herlocker 569

Cyperus kilimandscharicus Kuek.
Evergreen bushland (3) Deciduous woodland (9)
1670m Herlocker 293; 1400m Herlocker 518; Herlocker 695

Cyperus merkeri C.B.Cl.
Evergreen bushland (3)
1700m Lewis 200

Cyperus obtusiflorus Vahl
Evergreen bushland (3)
Field 144, 154; 1670m Herlocker 237; 1700m Herlocker, Masheti & Gagah 358; Herlocker 683; 1730m Lewis 67; 1700m H & J 6838

332 GRAMINEAE (POACEAE)

Bogdan, revised list Kenya grasses (1958) : FTEA part 1 (1970), part 2 (1974), part 3 (1981) ined. (all species listed below are herbs)

A TRIBE *ANDROPOGONEAE*

Andropogon distachyos L.
Upland evergreen forest (1) Composite bushland (15)
1980m Herlocker 406

Andropogon schirensis A. Rich.
Deciduous woodland (9)
Field 157

Bothriochloa insculpta (A. Rich.) A. Camus
(Dichanthium insculptum (A. Rich.) W.D. Clayton)
Evergreen & semi-deciduous bushland (3) (5)
1770m Bally 555; 1680m T. Adamson 11; Oteke 147; 1520m Field 82; 1670m Herlocker & Gagah 243; 1700m H & J 6843

Chrysopogon plumulosus Hochst.
Deciduous woodland (9) Wooded dwarf shrubland (44)
Field 155; 910m Lewis 79; 1370m Lewis 221; 1460m H & J 6939

Cymbopogon caesius (Hook. & Arn.) Stapf *(C. excavatus* (Hochst.) Burtt Davy)
Evergreen bushland (3)
1760m Bally 5501; 1370m Verdcourt 2261; 1670m T. Adamson 10

Exotheca abyssinica (A. Rich.) Anderss.
Composite bushland (15)
1980m Herlocker 405

Heteropogon contortus (L.) Roem. & Schult.
Evergreen bushland (3)
Field 174; 1670m Herlocker & Gagah 291

Hyparrhenia filipendula (Steud.) Stapf
Wide range med. alt.
Oteke 143

Cyperus pseudoleptoclados Kuek.
Upland evergreen forest (1)
1920m Bally 5571

Cyperus teneriffae Poir.
Evergreen bushland (3), wooded dwarf shrubland (44)
1700m Herlocker, Gagah & Masheti 359; 1700m Lewis 57; 850m Lewis 72

Kyllinga alba Nees (incl. var. *alata* (Nees) C.B.Cl.)
Deciduous woodland (9)
1370m Lewis 32, 201

Kyllinga odorata Nees var major (C.B.Cl:) Chiov.
Upland evergreen forest (1), Composite bushland (15)
2130m Herlocker & Gagah 429; Herlocker & Kreulen 396; 1980-2300m. H & J 7092

Mariscus amauropus (Steud.) Cuf. (incl. *M. leptophyllus* (Boeck.) C.B.Cl.)
Semi-deciduous bushland (5) Deciduous woodland (9)
1370m Lewis 22; 1700m H & J 6879

Mariscus macropus (Boeck.) C.B.Cl.
Deciduous woodland (9)
Herlocker 180-B; 1370m Lewis 33

Mariscus sp. (=Magogo 1461)
Field 208

Pycreus elegantulus (Steud) C.B.Cl.
Upaldn Evergreen Forest (1)
1800-2100m H & J 6914

Schoenoxiphium lehmannii (Nees) Steud.
Upland evergreen forest (1)
Oteke 140; 1980m Herlocker & Kreulen 395; 2070m Herlocker & Gagah 410;
1800-2100m H & J 6907

Hyparrhenia gazensis (Rendle) Stapf
Evergreen bushland (3)
1700m Lewis 93

Hyparrhenia hirta (L.) Stapf
Evergreen bushland (3)
1700m Bally 5538a; Herlocker 693

Hyparrhenia papillipes (A. Rich.) Stapf
Evergreen bushland (3) Composite bushland (15)
1740-1920m Bally 5538, 5577; Oteke 141; Field 235;
1670m Herlocker & Gagah 241; 1920m Herlocker & Kreulen 407;
1700m Lewis 197, 239

Ischaemum afrum (J.F. Gmel.) Dandy
Perennial grassland (low alt.)
Herlocker 596, 677

Sehima nervosum (Rottl.) Stapf
Evergreen & semi-deciduous bushland (3) (5)
1520m Field 86; 1500m Herlocker 284; Herlocker 636, 651, 696

Sorghum arundinaceum (Desv.) Stapf
Deciduous shrubland (30)
850m Lewis 255

Themeda triandra Forsk.
Evergreen & composite bushland (3) (15) Wooded upland perennial grassland (52)
1830m Bally 5534 (var. *hispida* Stapf); 1830m T. Adamson 5; Oteke 142;
1980m Field 56; Field 152; 1670m Herlocker & Gagah 231; 1980m Herlocker & Kreulen 402; 1700m Lewis 94; 1700m H & J 6836

B TRIBE *PANICEAE*

Brachiaria deflexa (Schumach.) C.E. Hubbard
Evergreen bushland (3)
1670m Herlocker 249, 581

Brachiaria leersioides (Hochst.) Stapf
Evergreen bushland (3)
Field 204, 285; Herlocker 606; Lewis 108

Brachiaria semiundulata (A. Rich.) Stapf
Deciduous bushland (15)
Field 193

Brachiaria serrata (Spreng.) Stapf. (incl. var.*gossypina* (A.Rich.) Stapf)
Evergreen bushland (3) Deciduous woodland (9)
1670m Herlocker & Gagah 256, 294; 1370m Lewis 37

Cenchrus ciliaris L.
Evergreen bushland (3) Deciduous woodland (9)
Field 156; 1700m Herlocker 254; 1370m Herlocker 520;
1370m Lewis 35; 1460m H & J 6953

Digitaria abyssinica (A.Rich.) Stapf
Evergreen bushland (3) Deciduous woodland (9)
1670m Herlocker 235; 1400m Herlocker 519

Digitaria diagonalis (Nees) Stapf
Deciduous bushland
Oteke 136

Digitaria macroblephara (Hack.) Stapf
Semi-deciduous bushland (5) Deciduous woodland (9)
1520m Field 83, 148; Herlocker 658; 1370m Lewis 220

Digitaria rivae (Chiov.) Stapf
Evergreen bushland (3) Deciduous woodland (9)
Field 286; Herlocker, Masheti & Gagah 363; 1700m Lewis 65, 257;
1460m H & J 6941

Digitaria velutina (Forsk.) P. Beauv.
Evergreen & semi-deciduous bushland (3) (5)
1700m Field 286; Lewis 65, 275; 1700m Herlocker, Masheti & Gagah 363

Oplismenus hirtellus (L.) P. Beauv.
Upland evergreen forest (1)
1980m Field 238; 1980m Herlocker & Gagah 449; H & J 7181a

Panicum coloratum L.
Deciduous bushland (19)
Herlocker 567, 607, 654, 682

Panicum deustum Thunb.
Evergreen & semi-deciduous bushland (3) (5)
1700m H & J 6893; 1520-1740m H & J 7069

Panicum maximum Jacq.
Evergreen bushland (3)
Herlocker 655; 1670m Herlocker & Gagah 234; 1700m Lewis 51

Pennisetum mezianum Leeke
Evergreen & semi-deciduous bushland (3) (5) Deciduous woodland (9)
1520m Field 87; 1670m Herlocker & Gagah 288; Lewis 28; White 12614

Pennisetum stramineum Peter
Evergreen & semi-deciduous bushland (3) (5)
1700m Field 81; Herlocker 653; 1670m Herlocker & Gagah 242;
1700m H & J 6884

Pennisetum trachyphyllum Pilger
Evergreen bushland (3)
1700m Lewis 92

Setaria incrassata (Hochst.) Hack. *S. phleoides* Stapf)
Evergreen bushland (3) Composite bushland (15)
1700m Field 79; 1980m Herlocker & Kreulen 403

Setaria plicatilis (Hochst.) Engl.
Upland evergreen forest (1) Evergreen bushland (3)
1930m Bally 5572; Oteke 133; 1550m H & J 7031

Setaria sphacelata (Schumach.) M. B. Moss *(S. trinervia* Stapf)
Evergreen bushland (3) Deciduous bushland (19)
Herlocker 684; 1700m Lewis 199; Bally 5536; Oteke 149

Setaria verticillata (L.) P. Beauv.
Evergreen bushland (3) Deciduous woodland (9)
Bally 5628; 1670m Herlocker 236; 1700m Herlocker 361; 1370m Lewis 25

Urochloa panicoides P. Beauv.
Evergreen & semi-deciduous bushland (3) (5)
1650m Herlocker 285

C OTHER TRIBES

Aristida adoensis A. Rich.
Evergreen bushland (3)
1700m Field 80; 1700m Herlocker 99, 240, 259; 1980m Herlocker 404

Aristida adscensionis L.
Wooded dwarf shrubland (44) Annual grassland (59) (65) (67)
Herlocker 44, 578, 608, 634

Aristida mutablis Trin. & Rupr.
Annual grassland (59) (65) (67)
Field 206; Herlocker 575; Lewis 104

Chloris pycnothrix Trin.
Semi-deciduous bushland (5)
Oteke 156

Cynodon dactylon (L.) Pers.
Evergreen bushland (3)
1670m Herlocker 244

Cypholepis yemenica (Schweinf.) Chiov.
Deciduous woodland (9)
1400m Herlocker 257, 512, 646, 666; 1460m H & J 6938

Dactyloctenium aegyptium (L.) Willd.
Semi-deciduous bushland (5) Wooded dwarf shrubland (44)
1640m Herlocker 260, 1250m H & J 7181

Drake-Brockmania somalensis Stapf
Deciduous shrubland (30)
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Enneapogon desvauxii P. Beauv.
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Enneapogon schimperanus (A. Rich.) Renv.
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=*Cyphdepis gemenica*

Eragrostis braunii Schweinf.
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Eragrostis cilianensis (All.) F.T. Hubb.
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Eragrostis minor Host
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Eragrostis papposa (Roem. & Schult.) Steud.
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Eragrostis tenuifolia (A. Rich.) Steud.
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