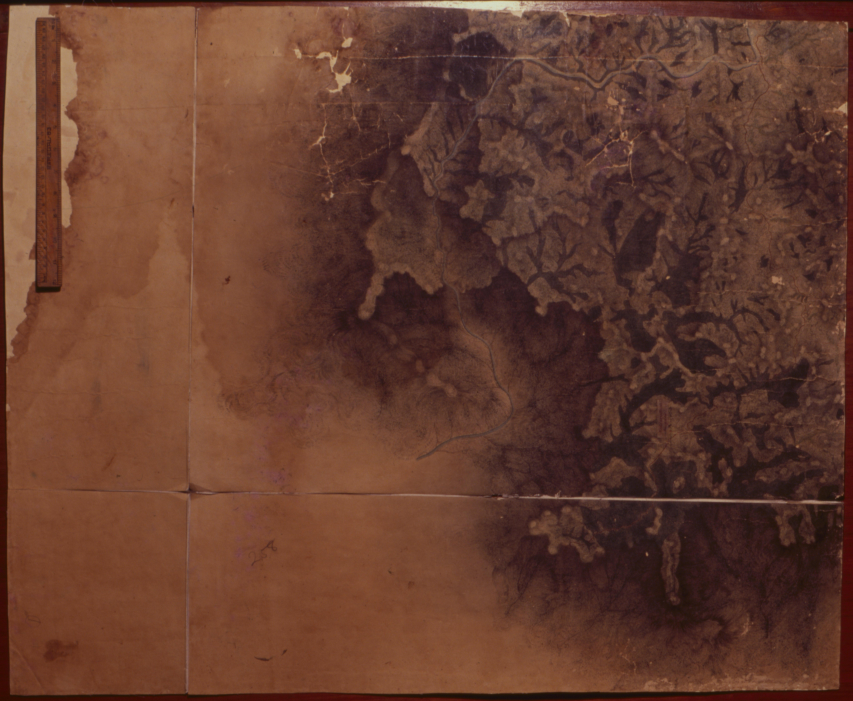
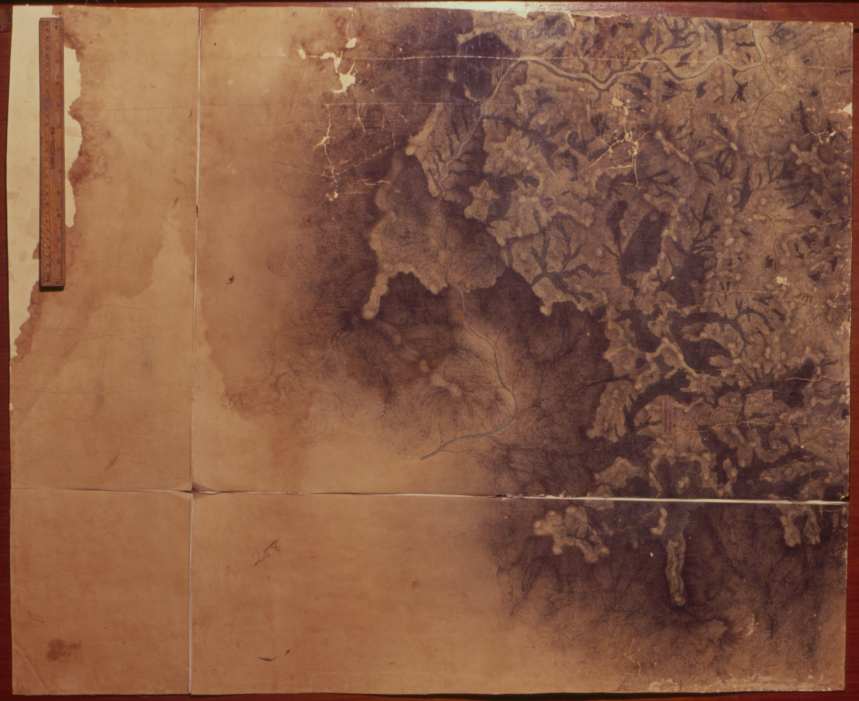
















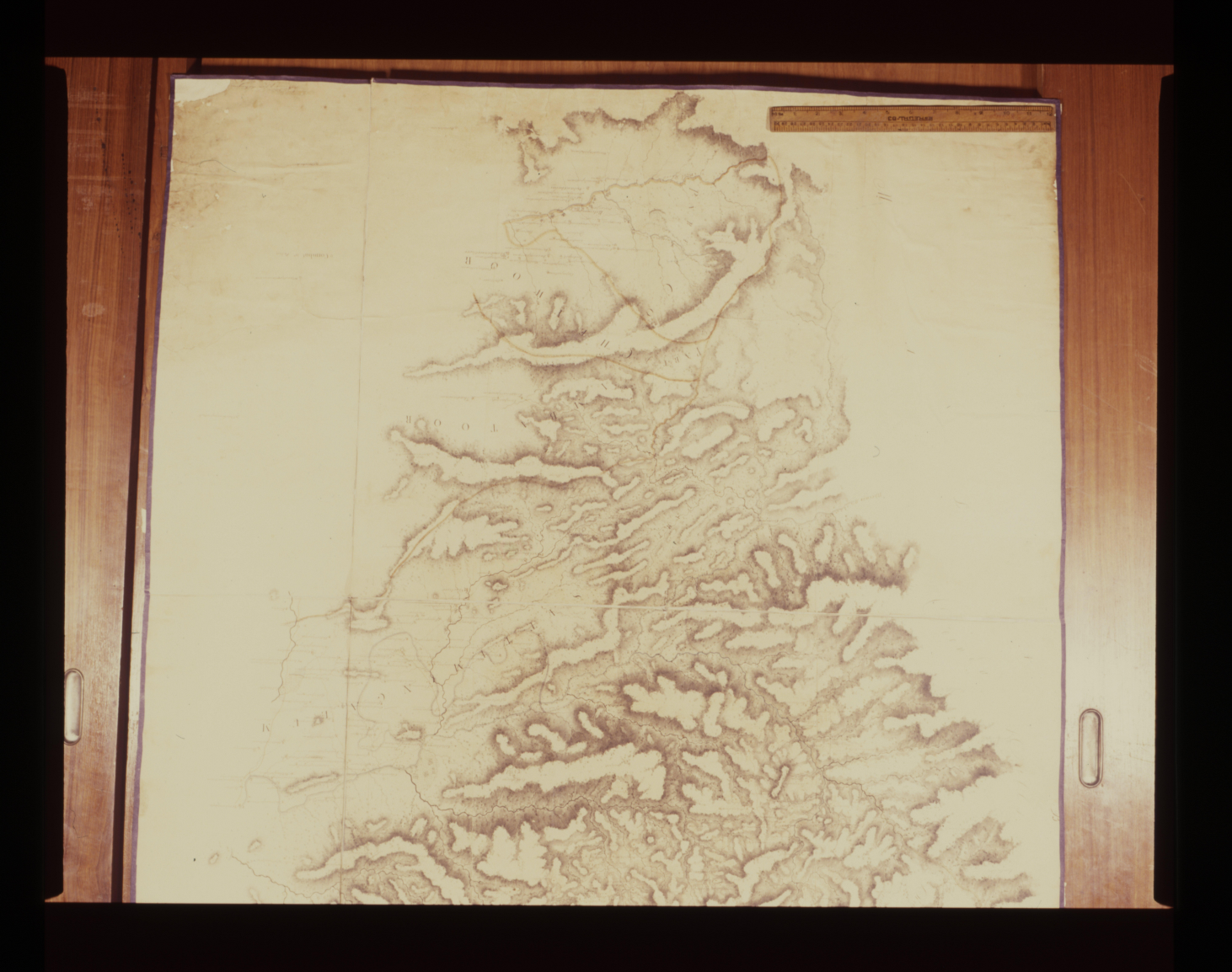












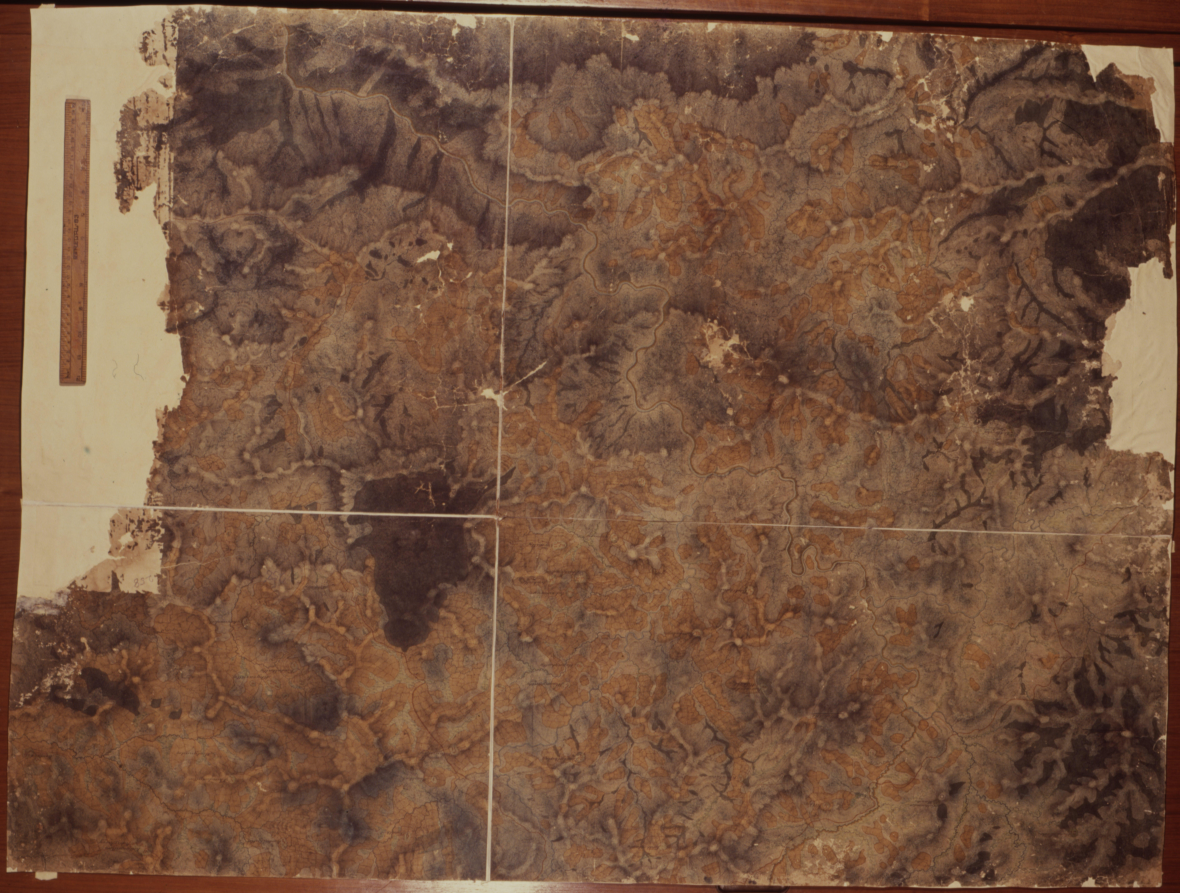


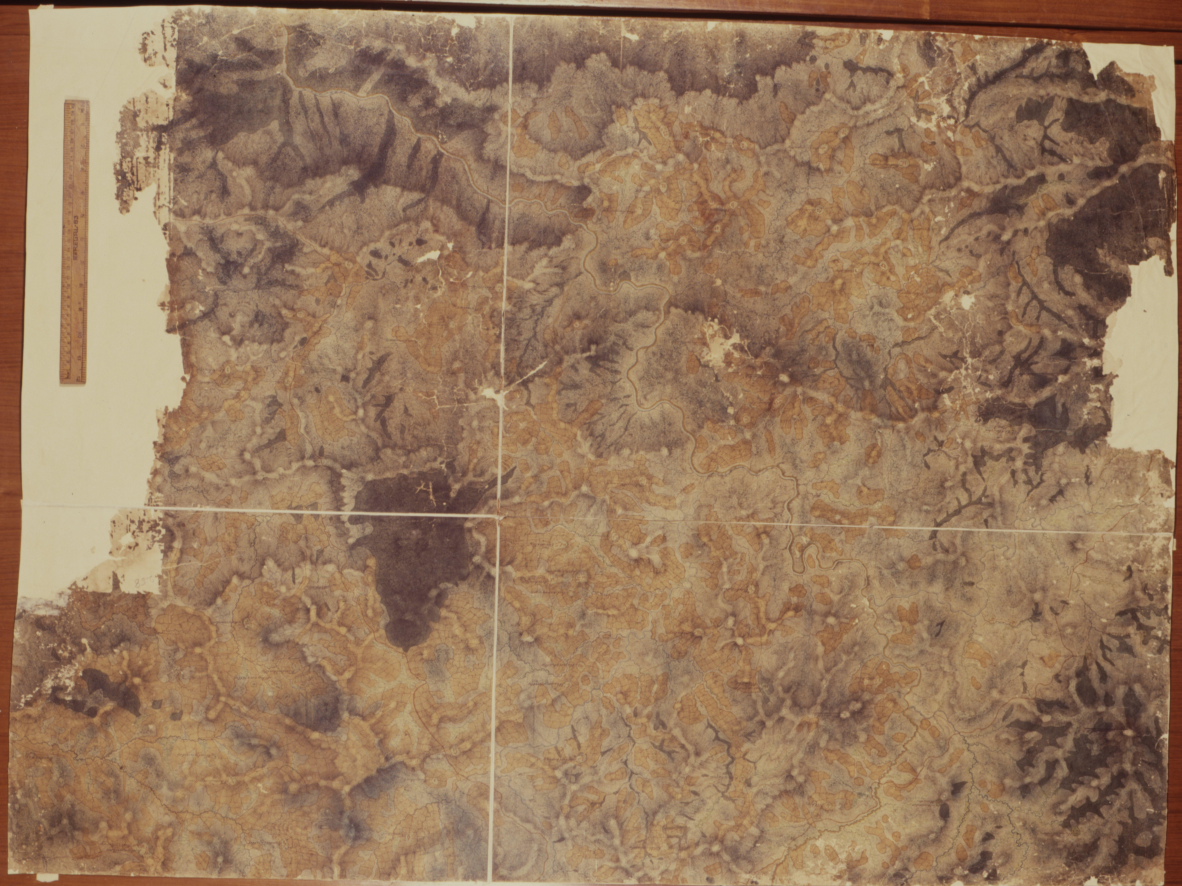








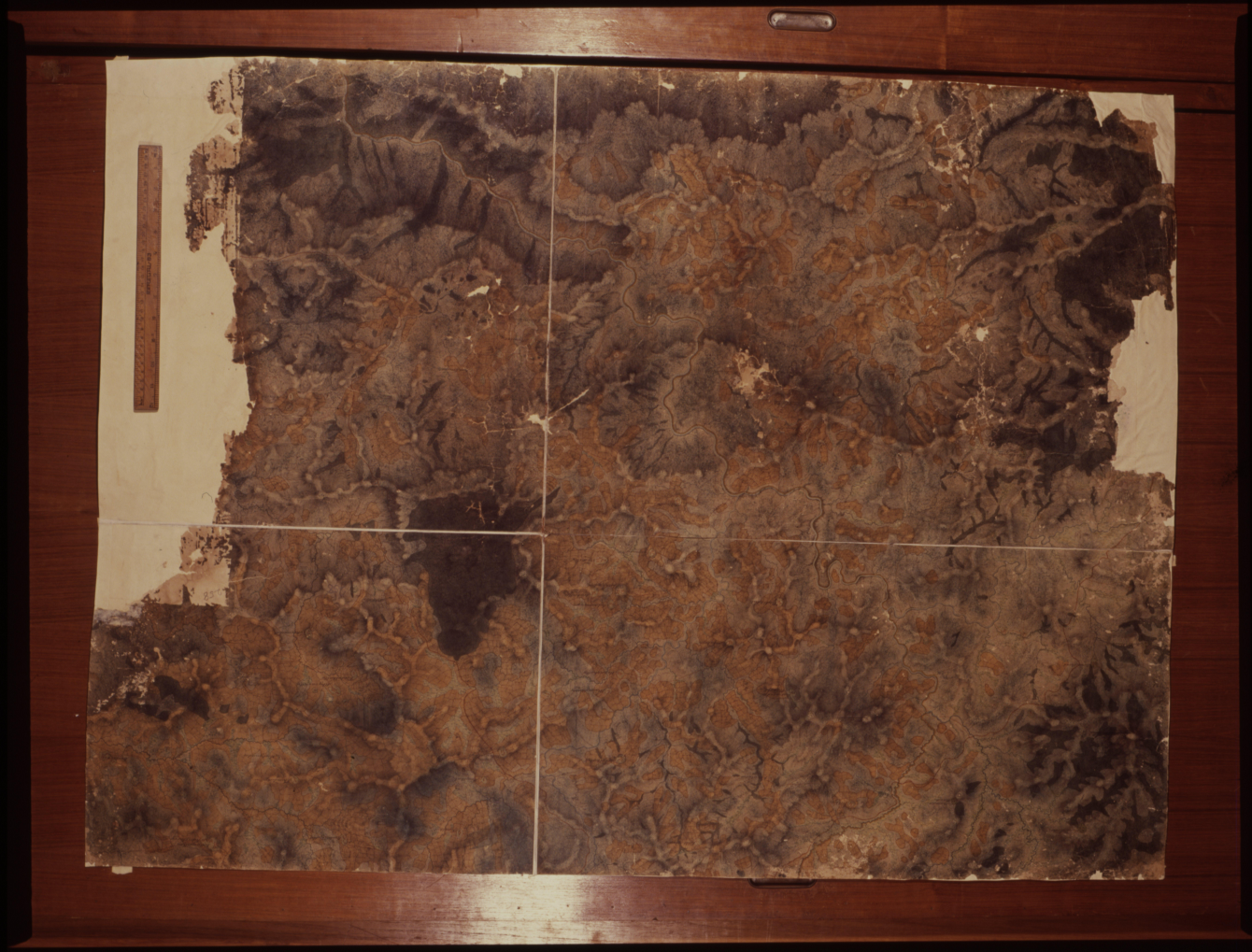


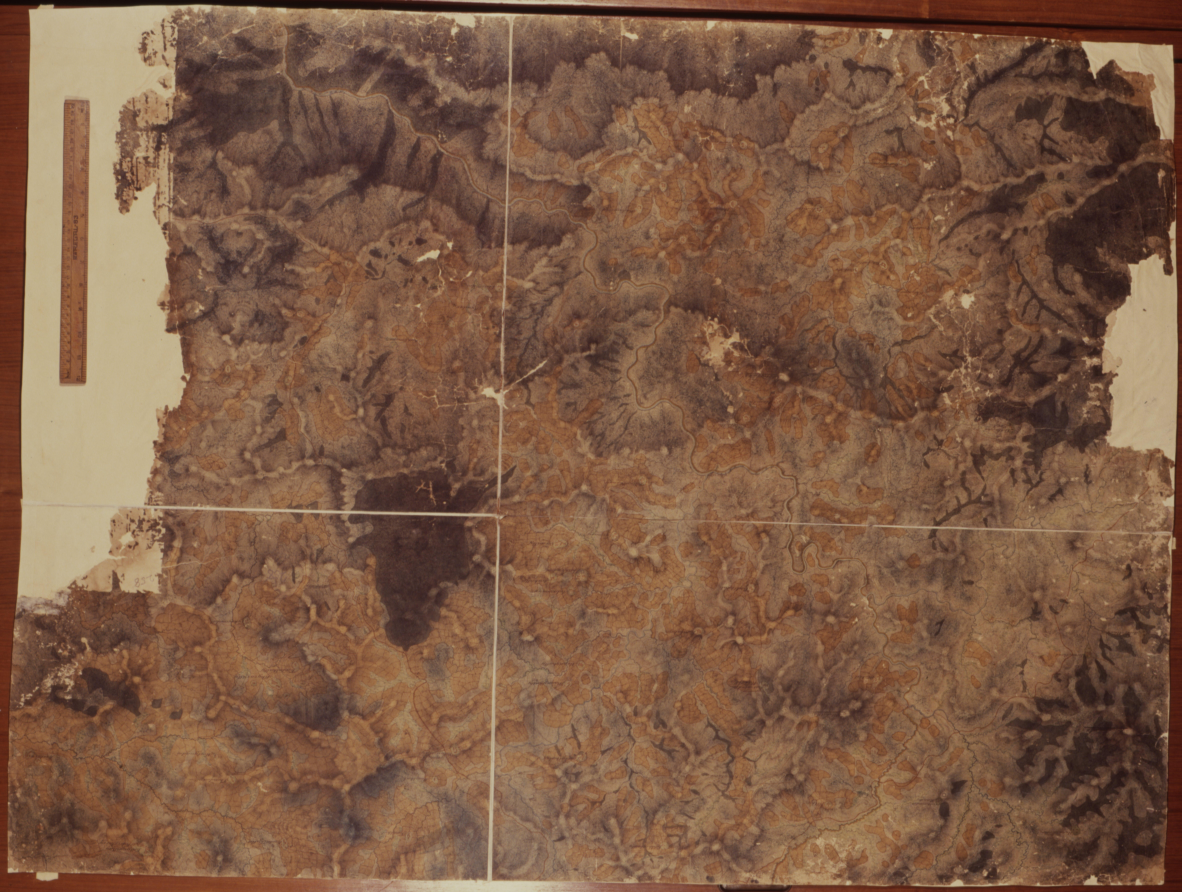






















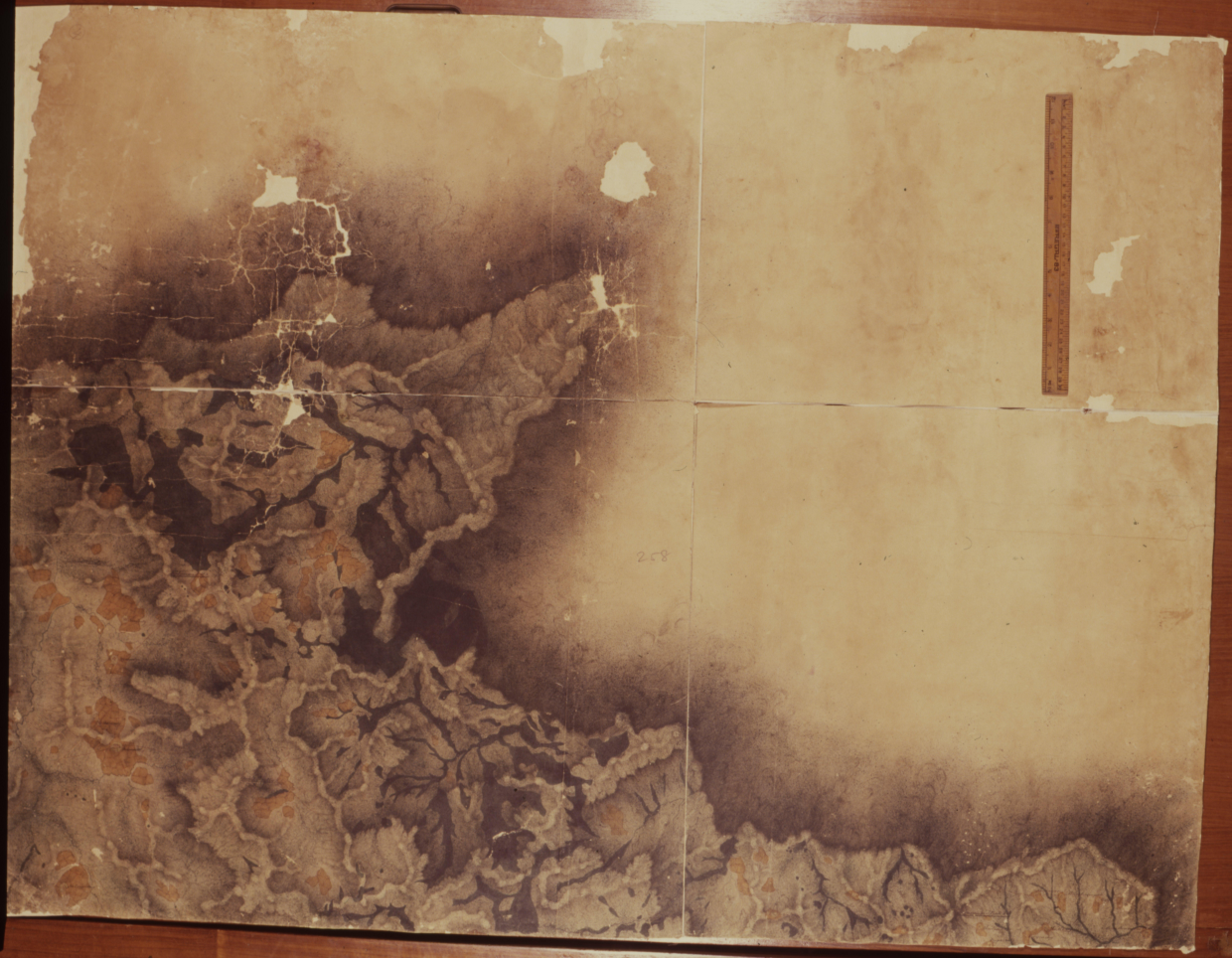


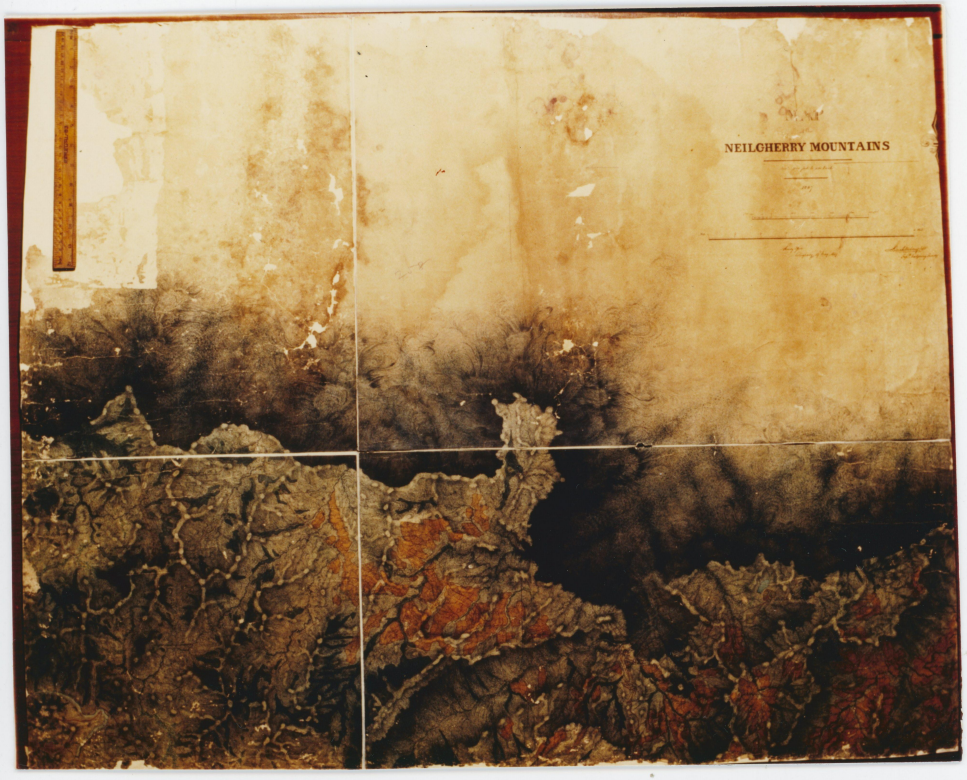


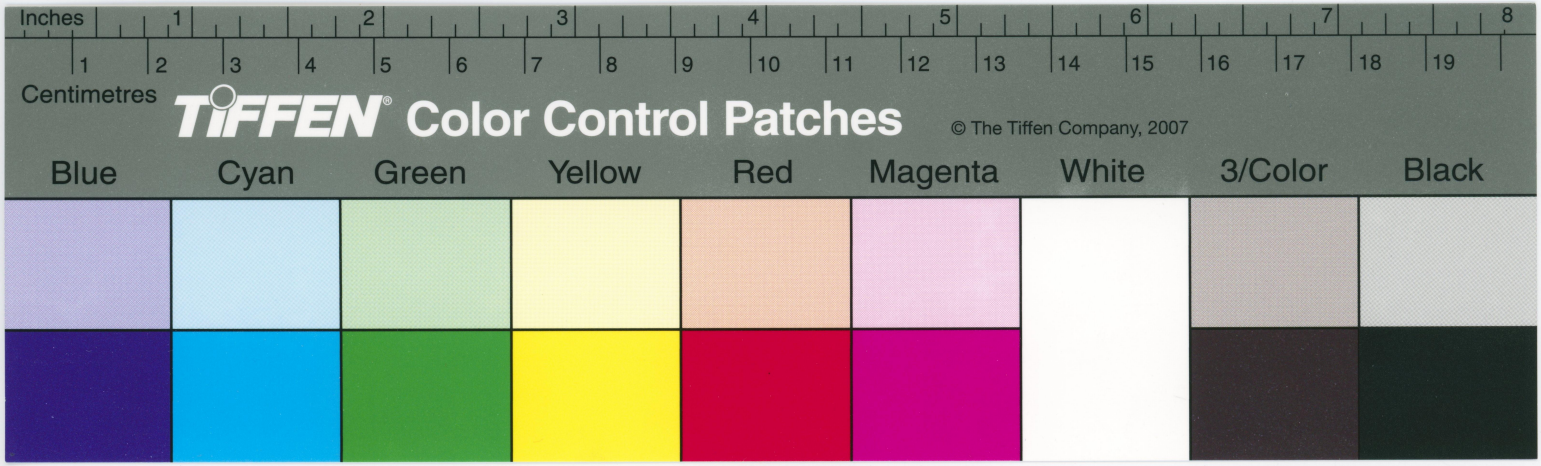

NEILCHERRY MOUNTAINS


NEILCHERRY MOUNTAINS

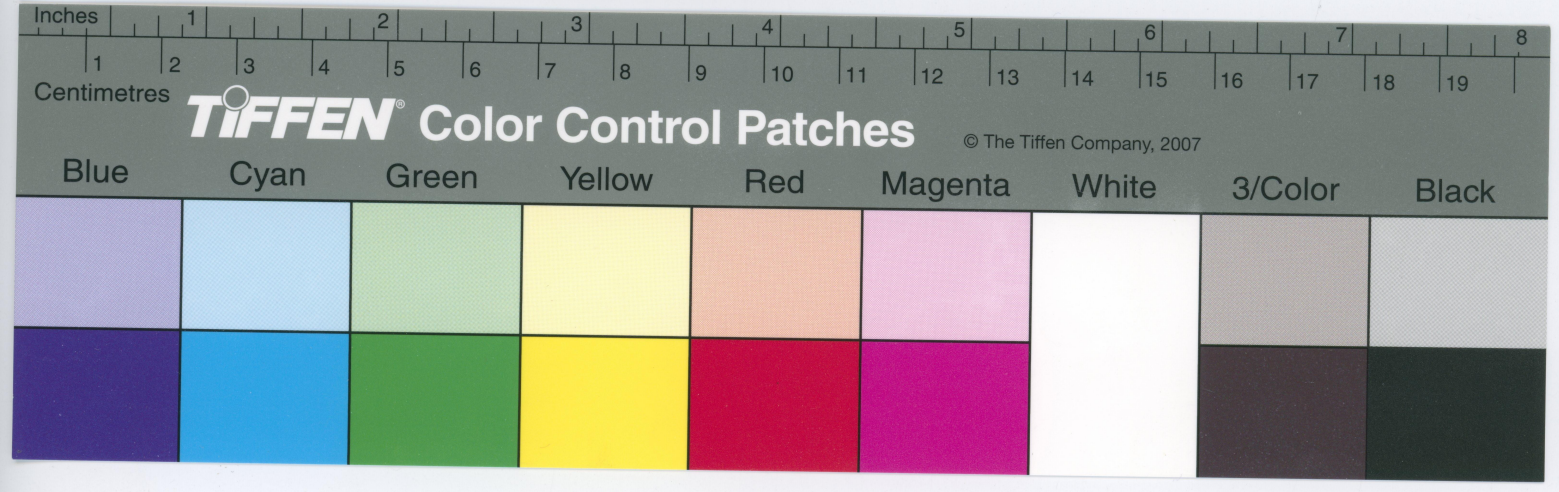

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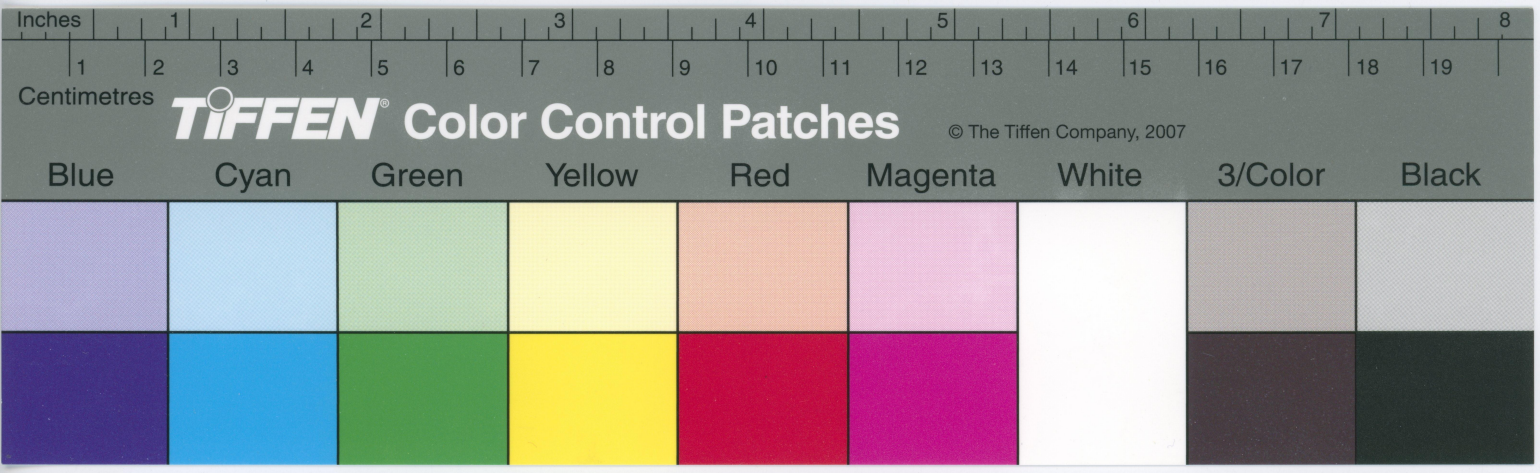

NEILCHERRY MOUNTAINS


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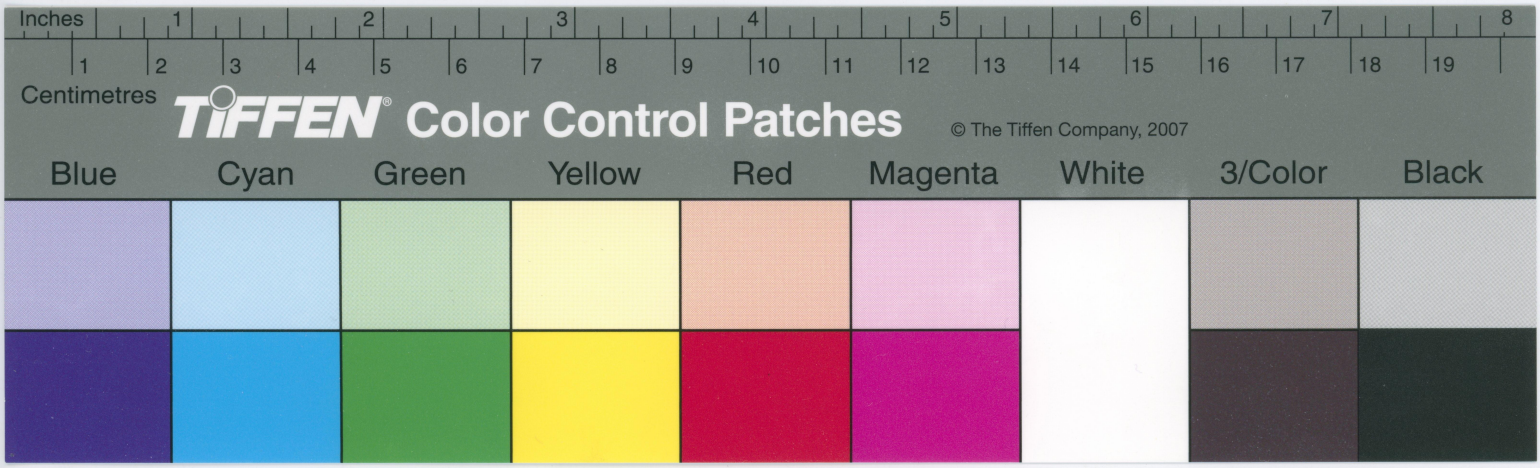



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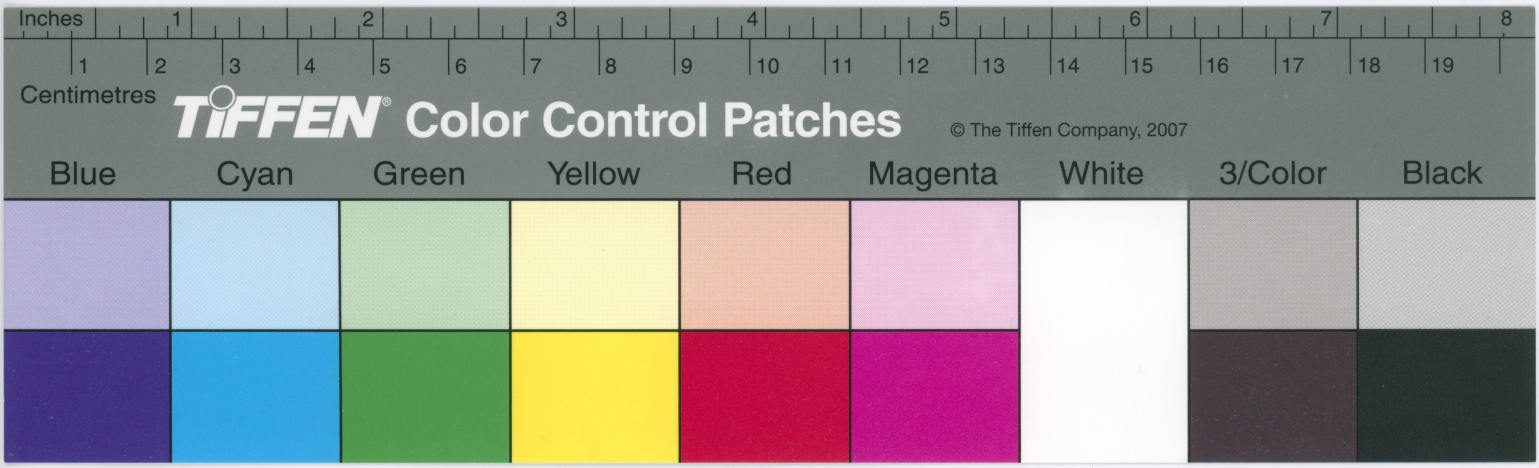



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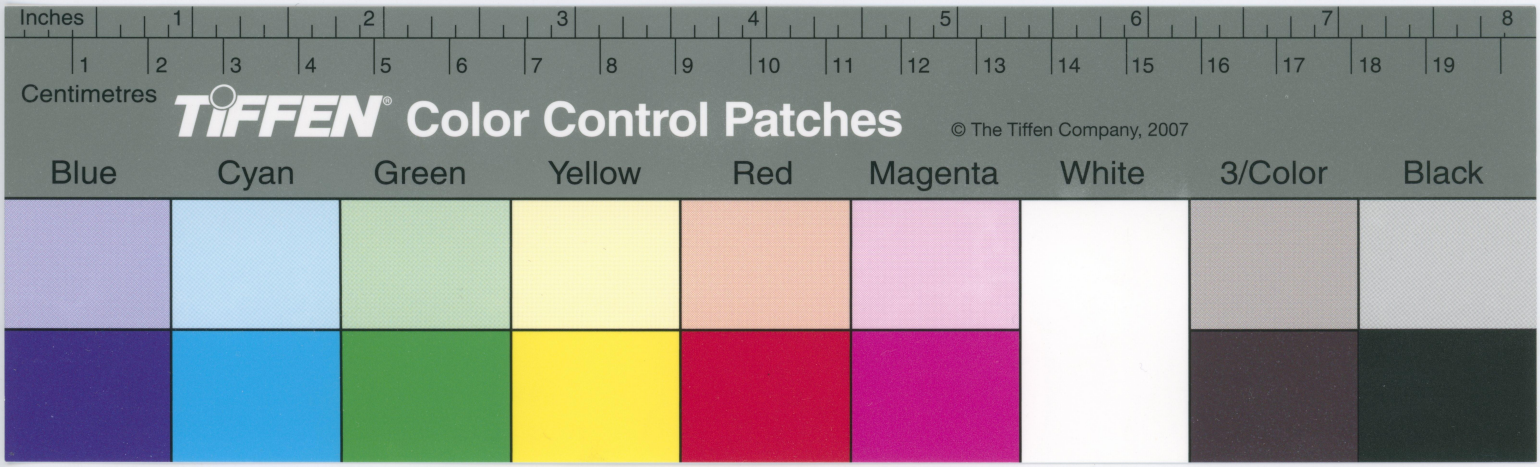



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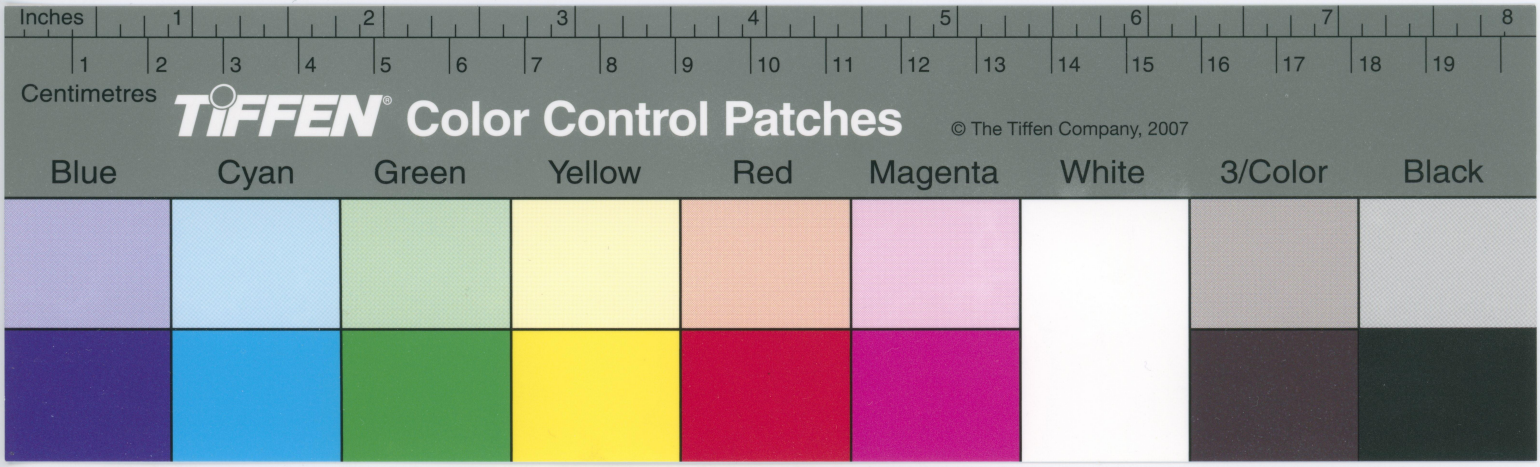



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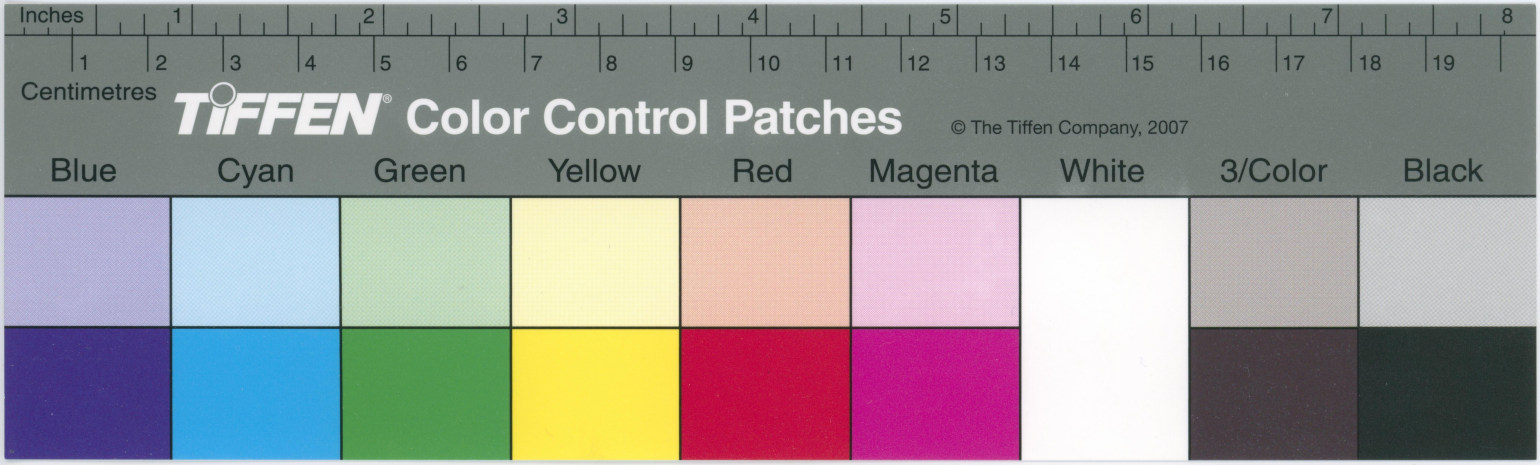



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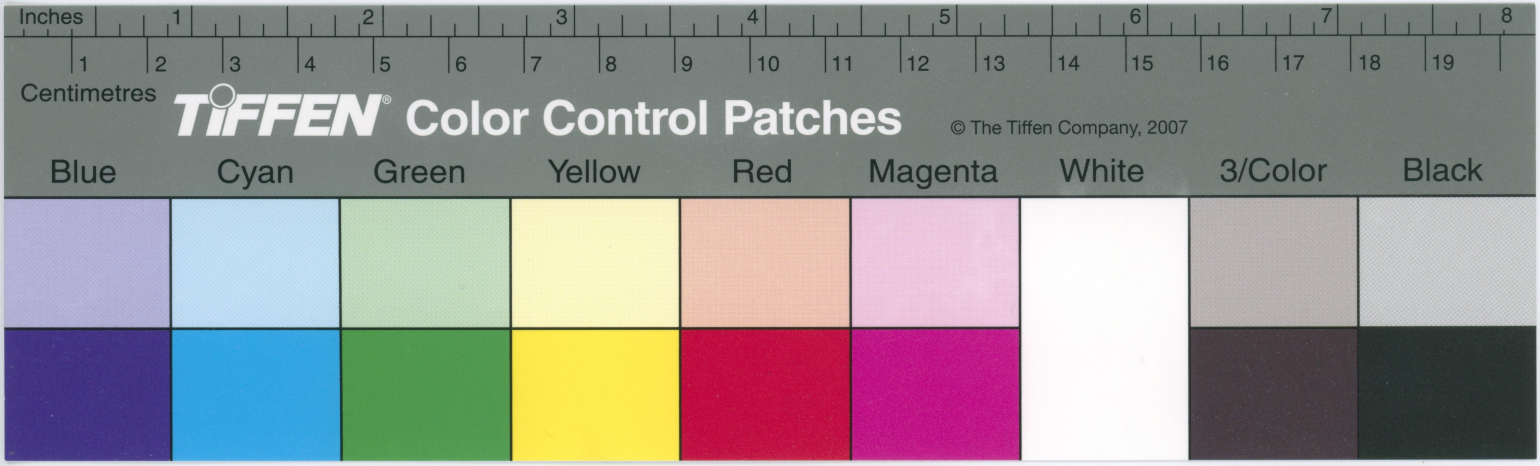



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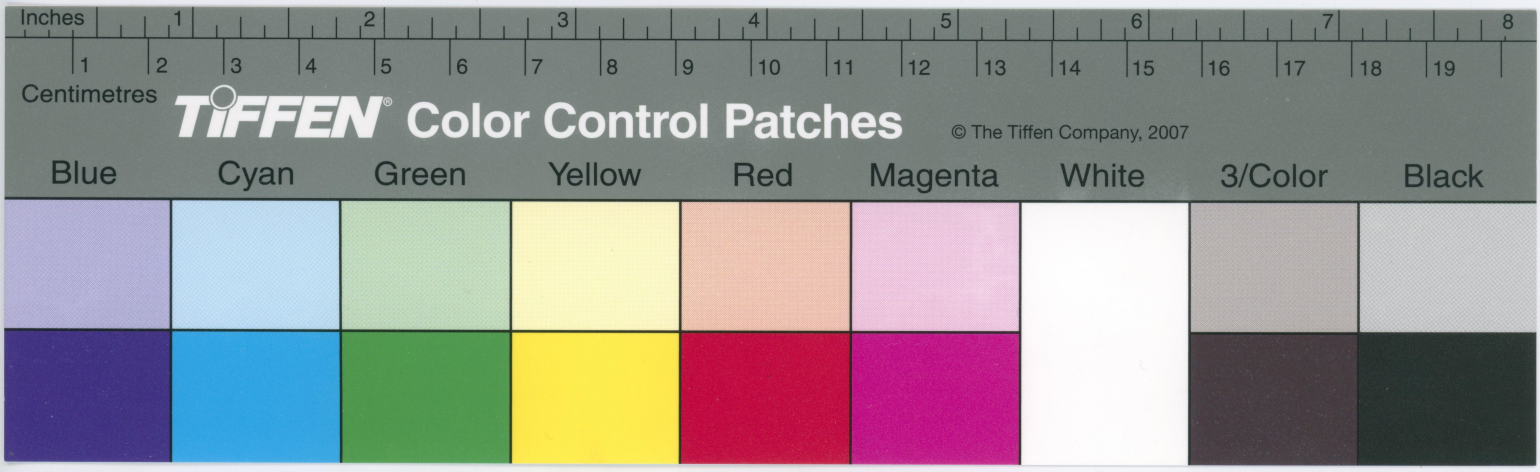



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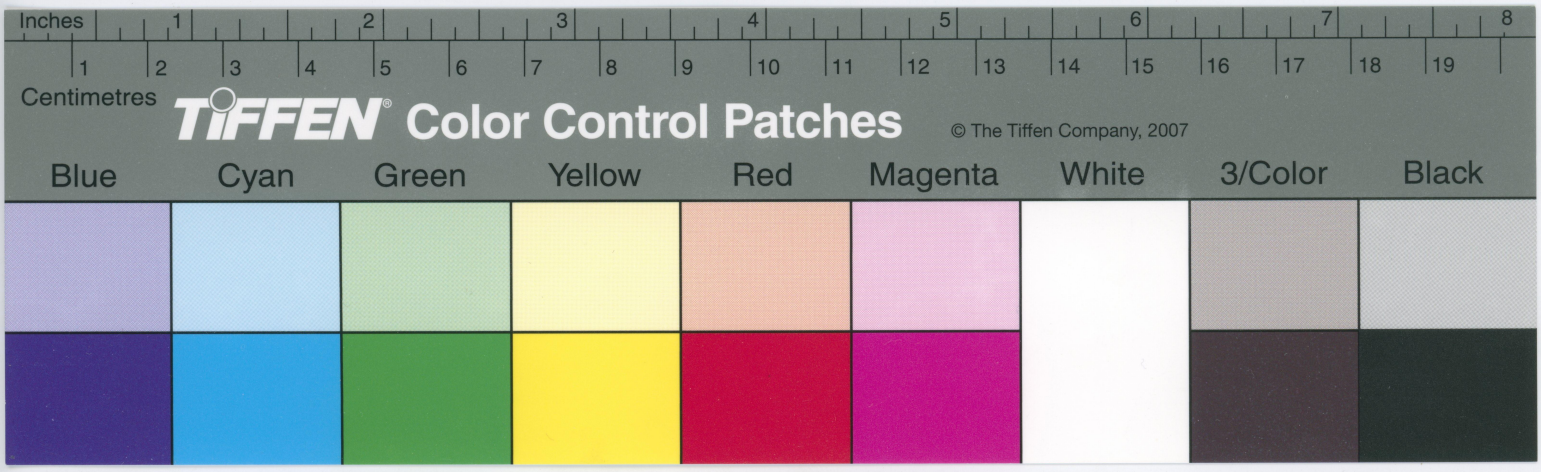



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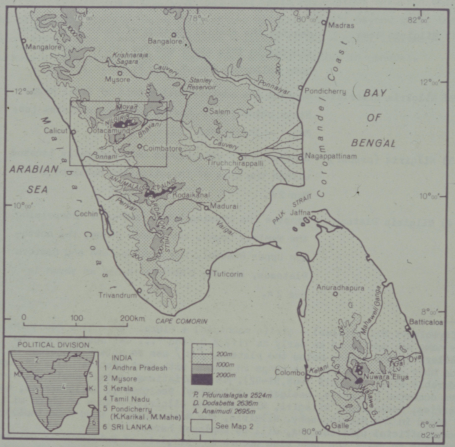

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To:
Dr. R. Prabhakar,
Centre for Ecological Sciences,
Indian Institute of Science,
Bangalore,
Karnataka 560012
INDIA
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if there are
any corrections to be
made. You can tell me.
Rohini.

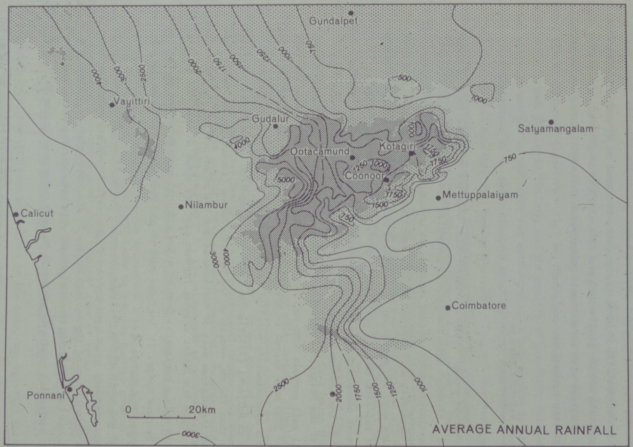
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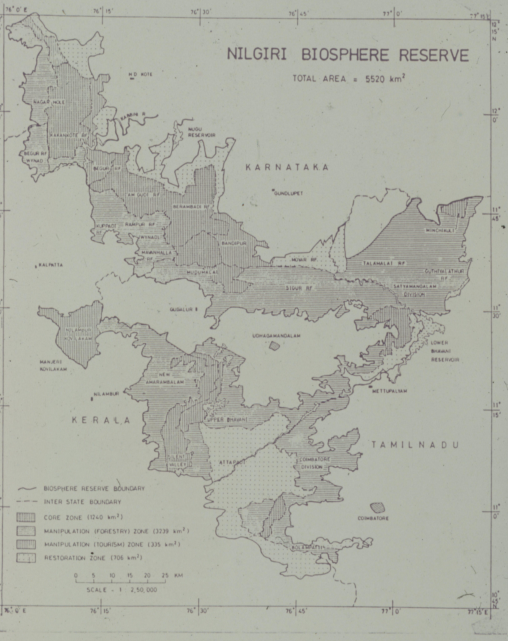




Map 1 Location of the Nilgiris Area (South India).
Based on BARTHOLOMEW "Indian Subcontinent" 1 : 4 Mio. (1973 ed.).



Map 8 Average annual rainfall distribution (1941 – 1970). Relief shading – here and in the following maps – corresponds to that in Map 6, if not otherwise stated.


NILGIRI BIOSPHERE RESERVE
TOTAL AREA = 5520 km²
KARNATAKA
KERALA
TAMILNADU
BIOSPHERE RESERVE BOUNDARY
INTER STATE BOUNDARY
CORE ZONE (1240 km²)
MANIPULATION (FORESTRY) ZONE (3239 km²)
MANIPULATION (TOURISM) ZONE (335 km²)
RESTORATION ZONE (706 km²)
0 5 10 15 20 25 KM
SCALE - 1 : 2,50,000
76° 0' E
76° 15'
76° 30'
76° 45'
77° 0'
77° 15' E
11° 45' N
11° 30'
11° 15'
11° 0'
10° 45'
10° 30' N
GUNDLUPET
KALPETTA
GUDALUR
MANJERI
NILAMBUR
COIMBATORE
METTUPALAYAM
MUDUMALAI
BANDIPUR
MUDUMALAI SANCTUARY
BANDIPUR SANCTUARY
SIGUR RF
NOKKU RF
TALAKKALAT RF
SATTYAMANGALAM DIVISION
LOWER BHAVANI RESERVOIR
LOWER BHAVANI
ATTAPADY
ATTAPADY DIVISION
SILENT VALLEY
NILGIRI WILDLIFE SANCTUARY
MUKURTHI NATIONAL PARK
KUNDAH HILLS
KUNDAH I
KUNDAH II
KUNDAH III
KUNDAH IV
KUNDAH V
PYKARA
PYKARA RESERVOIR
MOYAR
MOYAR RESERVOIR
SINGARA
SINGARA RESERVOIR
PORTIMUND
PORTIMUND RESERVOIR
KARAMVELLA
KARAMVELLA RESERVOIR
MUNDANTHURAI
MUNDANTHURAI RESERVOIR
KUNDAH HILLS
KUNDAH I
KUNDAH II
KUNDAH III
KUNDAH IV
KUNDAH V
PYKARA
PYKARA RESERVOIR
MOYAR
MOYAR RESERVOIR
SINGARA
SINGARA RESERVOIR
PORTIMUND
PORTIMUND RESERVOIR
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KARAMVELLA RESERVOIR
MUNDANTHURAI
MUNDANTHURAI RESERVOIR



NILGIRI BIOSPHERE RESERVE AREA

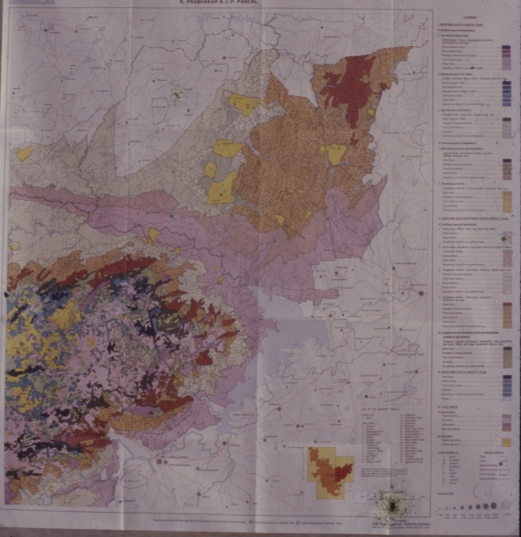
VEGETATION AND LAND USE

Eastern Sheet

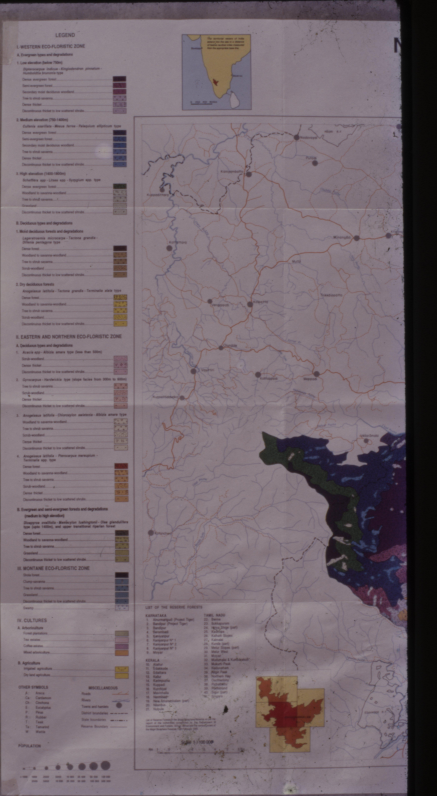
R. PRABHAKAR & J.-P. PASCAL

PUBLISHED BY THE CENTRE FOR ECOLOGICAL SCIENCES, INDIAN INSTITUTE OF SCIENCE, BANGALORE 560012 AND THE FRENCH INSTITUTE OF PONDICHERRY

This sheet has been drawn by M. Ramachandra, A.G. Manoj and G. Ramachandran


LEGEND
1. WESTERN GHATS EVERGREEN ZONE
2. Climatic Type Low Altitudes
Tropical Wet Evergreen Forest
Tropical Semi-Evergreen Forest
Tropical Moist Deciduous Forest
Tropical Dry Deciduous Forest
Tropical Thorn Forest
3. Medium Altitudes (700-1800m)
Tropical Wet Evergreen Forest
Tropical Semi-Evergreen Forest
Tropical Moist Deciduous Forest
Tropical Dry Deciduous Forest
4. High Altitudes (1800-2600m)
Montane Wet Temperate Forest (Shola Forest)
Montane Temperate Grassland
5. Human Impact on Vegetation
Tea Plantations
Coffee Plantations
Cardamom Plantations
Eucalyptus Plantations
Wattle Plantations
Pine Plantations
Teak Plantations
6. Dry Deciduous Forests
Tropical Dry Deciduous Forest - Cultivation
Tropical Dry Deciduous Forest - Degraded
Tropical Dry Deciduous Forest
7. EASTERN GHATS AND SOUTHERN PLATEAU ZONE
8. Vegetation and Land Use
Tropical Dry Deciduous Forest - Cultivation
Tropical Dry Deciduous Forest - Degraded
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Tropical Thorn Forest - Degraded - Cultivation




LEGEND
1. WESTERN ECO-FLORISTIC ZONE
A. Evergreen types and degradations
1. Low elevation (below 750m)
Dialium guineense - Anthonotha - Pycnanthus - phrodium - Cynometra alexandri type
Dense, evergreen forest
Semi-evergreen forest
Secondary moist deciduous woodland
Tree in shrub savanna
Dense thicket
Discontinuous thicket to low scattered shrubs
2. Medium elevation (750-1400m)
Dialium orientale - Manilkara - Pycnanthus - Piptadeniastrum type
Dense, evergreen forest
Semi-evergreen forest
Secondary moist deciduous woodland
Tree in shrub savanna
Dense thicket
Discontinuous thicket to low scattered shrubs
3. High elevation (1400-1850m)
Entandrophragma - Lovoa - Syzygium - Ficus type
Dense, evergreen forest
Secondary moist deciduous woodland
Tree in shrub savanna
Grassland
Discontinuous thicket to low scattered shrubs
B. Deciduous types and degradations
1. Moist deciduous forests and degradations
Lophira - Afzelia - Antrocaryon - Terminalia - grandifolia - Afzelia - pachyloba type
Dense forest
Woodland to savanna woodland
Tree to shrub savanna
Scrub woodland
Discontinuous thicket to low scattered shrubs
2. Dry deciduous forests
Anogeissus - Afzelia - Terminalia - grandifolia - Terminalia - avicennioides type
Dense forest
Woodland to savanna woodland
Tree to shrub savanna
Scrub woodland
Discontinuous thicket to low scattered shrubs
II. EASTERN AND NORTHERN ECO-FLORISTIC ZONE
A. Deciduous types and degradations
1. Acacia - Afzelia - Adansonia - Combretum - Terminalia - Anogeissus - Khaya - Daniellia - Isoberlinia - Parkia - Vitellaria - Pterocarpus - Lophira - Detarium - Burkea - Piliostigma - Bauhinia - Hymenocardia - Prosopis - Tamarindus - Ficus - Sterculia - Ceiba - Bombax - Borassus - Elaeis - Raphia - Hyphaene - Cola - Garcinia - Kola - Parinari - Lannea - Sclerocarya - Spondias - Mangifera - Dialium - Cynometra - Pycnanthus - Entandrophragma - Lovoa - Syzygium - Ficus - Manilkara - Piptadeniastrum - Albizia - Pentaclethra - Brachystegia - Julbernardia - Uapaca - Monotes - Daniellia - Afzelia - Isoberlinia - Khaya

LEGEND

I. WESTERN ECO-FLORISTIC ZONE

A. Evergreen types and degradations

1. Low elevation (below 700m)

Diospyrocetosa radiatae–Aningeretosa altissimae–Terminalietosa ivorensis type

- Dense evergreen forest
- Semi-evergreen forest
- Secondary moist deciduous woodland
- Tree to shrub savanna
- Dense thicket
- Discontinuous thicket to low scattered shrubs

2. Medium elevation (Up tohkm)

Cylicetosy vaccihibi–Mimusetosa–Nesogordonetosa papaverifolii type

- Dense evergreen forest
- Semi-evergreen forest
- Secondary moist deciduous woodland
- Tree to shrub savanna
- Dense thicket
- Discontinuous thicket to low scattered shrubs

3. High elevation(Up tohkm)

Scottelletosa spp–Lychnis spp–Syzygium spp. type

- Dense evergreen forest
- Woodland to savanna woodland
- Tree to shrub savanna
- Grassland
- Discontinuous thicket to low scattered shrubs

B. Deciduous types and degradations

1. Moist deciduous forests and degradations

Lophiretosata–Antiaretosa–Tectona grandis–Chlorophora excelsa type

- Dense forest
- Woodland to savanna woodland
- Tree to shrub savanna
- Scrub woodland
- Discontinuous thicket to low scattered shrubs

2. Dry deciduous forests

Anogeissus latifolia–Terminalia glaucescens–Tectona grandis type

- Dense forest
- Woodland to savanna woodland
- Tree to shrub savanna
- Scrub woodland
- Discontinuous thicket to low scattered shrubs

II. EASTERN AND NORTHERN ECO-FLORISTIC ZONE

A. Deciduous types and degradations

1. Humid and Midhumid zones (type (less than 1000m)

- Scrub woodland
- Grassland
- Discontinuous thicket to low scattered shrubs

2. Dry zones *Combretum–Terminalia–Isoberlinia–Afzelia–Daniellia type*

- Tree to shrub savanna
- Scrub woodland
- Dense thicket
- Discontinuous thicket to low scattered shrubs

3. Anogeissus latifolia–Chlorophora excelsa–Afzelia africana type

- Woodland to savanna woodland
- Tree to shrub savanna
- Scrub woodland
- Dense thicket
- Discontinuous thicket to low scattered shrubs

4. Anogeissus latifolia–Terminalia macroptera–Combretum spp. type

- Dense forest
- Woodland to savanna woodland
- Tree to shrub savanna
- Scrub woodland
- Dense thicket
- Discontinuous thicket to low scattered shrubs

B. Evergreen and semi-evergreen forests and degradations (medium to high elevation)

Anogeissus–Isoberlinia–Monotes–Uapaca–Hyparrhenia–Daniellia type (upto 1000m), and upper mountainous riparian forests

- Dense forest
- Woodland to savanna woodland
- Tree to shrub savanna
- Grassland
- Discontinuous thicket to low scattered shrubs

C. MONTANE ECO-FLORISTIC ZONE

- Dense forest
- Forest fringe
- Tree to shrub savanna
- Grassland
- Discontinuous thicket to low scattered shrubs
- Swamp

IV. CULTURES

A. Arboriculture

- Forest plantations
- Tree orchards
- Oil palm plantations
- Other orchards

B. Agriculture

- Irrigated agriculture
- Dry land agriculture

OTHER SYMBOLS

A	Accra	Town	
Ca	Cantonment	Capital	
Ko	Koforidua		
D	Dodowa	Transport routes	
K	Kpeyi	Motor roads	
Ke	Keta	Motor roads(feeder)	
Ku	Kumasi	Motor roads(tracks)	
Ta	Takoradi	Railway	
W	Winneba	Railway Stations	

MISCELLANEOUS

Power

Telephone

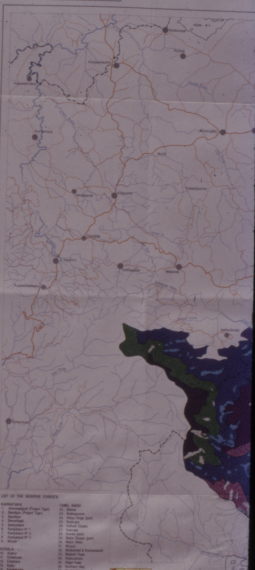
Water

Scale 1 : 1 500 000

POPULATION

1 - 5	5 - 10	10 - 20	20 - 50	50 - 100	100 - 200	200 - 500
500 - 1000	1000 - 2000	2000 - 5000	5000 - 10 000	10 000 - 20 000	20 000 - 50 000	50 000 - 100 000





LIST OF THE BOUNDING FORESTS

EASTERN AREA

1	Kwahu Range Forest Type
2	Bamboo (Pooge) Type
3	Atiwa
4	Kyebi
5	Kyebiyapan
6	Kyebiyapan II
7	Kyebiyapan III
8	Mangoase

ACCRA

A	Kwabi
B	Kwabibirim
C	Densuanta
D	Densu
E	Kyebiyapan
F	Densu Extension
G	Densuanta
H	Densuhigh
I	Densuhigh
J	Densuhigh
K	Tigare

TAKORADI

1	Bonsa
2	Bonsa Extension (part)
3	Tigare

KUMASI

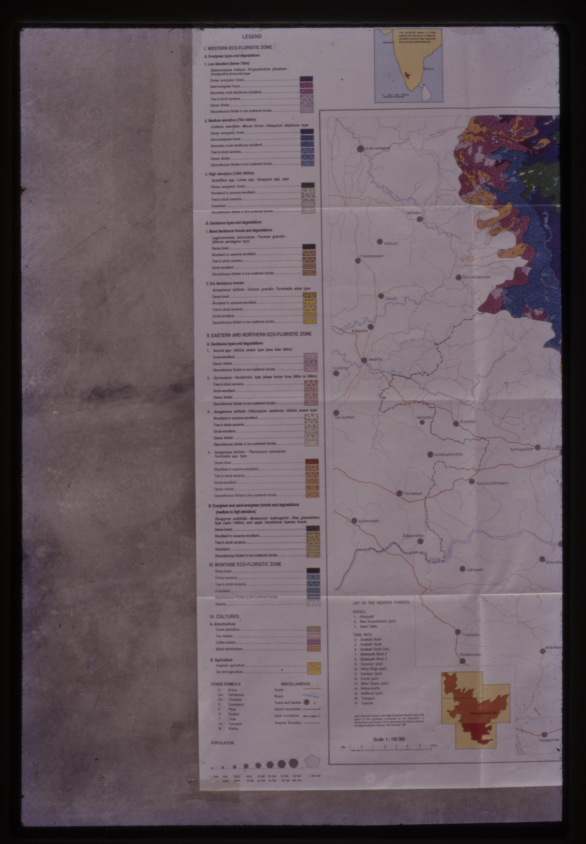
1	Subin
2	Subin Extension
3	Subin Extension (part)
4	Nsuta
5	Nsuta Extension
6	Nsuta Extension (part)
7	Bonsa
8	Bonsa Extension
9	Bonsa Extension (part)
10	Tigare

WESTERN AREA

1	Ankasa
2	Ankasa Extension
3	Nsuta
4	Nsuta Extension
5	Nsuta Extension (part)
6	Tigare



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LEGEND
I. WESTERN ECO-FLORISTIC ZONE
A. Evergreen types and degradations
1. Low elevation (below 750m)
Dipterocarpus zeylanicus - Dipterocarpus glandulosus - Shorea wightiana - Hopea parviflora - Calophyllum tomentosum type
Dense, evergreen forest
Semi-evergreen forest
Secondary multi storeyed woodland
Tree to shrub savanna
Grassland
Dense Thicket
Discontinuous Thicket to low scattered shrubs
2. Medium elevation (750-1500m)
Cullenia exarillata - Mesua ferrea - Palaquium ellipticum type
Dense, evergreen forest
Semi-evergreen forest
Secondary multi storeyed woodland
Tree to shrub savanna
Dense Thicket
Discontinuous Thicket to low scattered shrubs
3. High elevation (1500-2000m)
Eugenia spp. - Litsea spp. - Syzygium spp. type
Dense evergreen forest
Woodland to savanna woodland
Tree to shrub savanna
Grassland
Discontinuous Thicket to low scattered shrubs
B. Deciduous types and degradations
1. Moist deciduous forests and degradations
Lagerstroemia microcarpa - Terminalia glabrata - Chloroxylon swietenia type
Dense forest
Woodland to savanna woodland
Tree to shrub savanna
Scrub woodland
Discontinuous Thicket to low scattered shrubs
2. Dry deciduous forests
Anogeissus latifolia - Terminalia arjuna - Terminalia elliptica type
Dense forest
Woodland to savanna woodland
Tree to shrub savanna
Scrub woodland
Discontinuous Thicket to low scattered shrubs
II. EASTERN AND NORTHERN ECO-FLORISTIC ZONE
A. Deciduous types and degradations
1. Acacia spp.- Albizia amara type (Dew line 100m)
Dense forest
Scrub woodland
Discontinuous thicket to low scattered shrubs
2. Anogeissus - Hardwickia type (slope facing from 300m to 600m)
Tree to shrub savanna
Scrub woodland
Dense Thicket
Discontinuous thicket to low scattered shrubs
3. Anogeissus latifolia - Chloroxylon swietenia - Albizia amara type
Woodland to savanna woodland
Tree to shrub savanna
Scrub woodland
Dense Thicket
Discontinuous thicket to low scattered shrubs
4. Anogeissus latifolia - Pterocarpus marsupium - Terminalia spp. type
Dense forest
Woodland to savanna woodland
Tree to shrub savanna
Scrub woodland
Dense Thicket
Discontinuous thicket to low scattered shrubs
B. Evergreen and semi-evergreen forests and degradations (medium to high elevations)
Drypetes sepiaria - Memecylon heyneanum - Elaeocarpus tuberculatus - Ficus spp. and Syzygium cumini type
Dense Forest
Woodland to savanna woodland
Tree to shrub savanna
Grassland
Discontinuous Thicket to low scattered shrubs
III. MONTANE ECO-FLORISTIC ZONE
Shola forest
Closed savanna
Tree to shrub savanna
Grassland
Discontinuous Thicket to low scattered shrubs
Swamp
IV. CULTURES
A. Afforestation
Teak plantations
Tea estates
Coffee estates
Mixed afforestations
B. Agriculture
Irrigated agriculture
Dry land agriculture
OTHER SYMBOLS
A. Aliyar
Ba. Bandipur
Bh. Bhavani
D. Dhoothpet
Mu. Mudumalai
Pa. Papanasam
T. Teak
Tm. Tirumurti
W. Wyanad
MISCELLANEOUS
Roads
Rivers
Towns and Hamlets
District boundaries
State boundaries
Reserve Boundary
POPULATION
LIST OF THE RESERVE FORESTS
KERALA
1. Attappadi
2. Nilambur (part)
3. Silent Valley
TAMIL NADU
4. Anaikatti West
5. Anaikatti East
6. Anaikatti Shola Etts.
7. Sathyamangalam West I
8. Sathyamangalam West II
9. Sathyamangalam East
10. Kalrayan Hills
11. Pachaimalai (part)
12. Servarayan Hills
13. Mettupalayam
14. Kodaikanal (part)
15. Tadagam
16. Vadakkanal
Scale 1: 150 000

SPHERE RESERVE AREA

ETATION AND LAND USE

Eastern Sheet

R. PRABHAKAR & J.-P. PASCAL

PUBLISHED BY THE CENTRE FOR ECOLOGICAL SCIENCES,
INDIAN INSTITUTE OF SCIENCE, BANGALORE AND
THE FRENCH INSTITUTE OF PONDICHERRY

Digital mapping for this publication was supported by the Department of Science & Technology, Government of India.

This sheet has been drawn by M. Ravisankar, A.G. Pethus and A. Ramanoudjam
The administrative information has been compiled by K. Kothandaraman



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This Project is supported by the French Ministry of Foreign Affairs.

OSPHERE RESERVE AREA

EGETATION AND LAND USE

Eastern Sheet

R. PRABHAKAR & J.-P. PASCAL

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The administrative information has been compiled by K. Kotheeswaran.

LEGEND

I. WESTERN ECO-FLORISTIC ZONE

A. Evergreen type and degradations

1. Low elevation (below 1000 m)

2. Medium elevation (1000-1500 m)

3. High elevation (1500-1800m)

B. Deciduous type and degradations

1. Moist deciduous forests and degradations

2. Dry deciduous forests

II. EASTERN AND NORTHERN ECO-FLORISTIC ZONE

A. Deciduous type and degradations

1. Moist deciduous

2. Dry deciduous

3. Evergreen and semi-evergreen forests and degradations
(medium to high elevations)

B. SCATTERED ECO-FLORISTIC ZONE

III. CULTURES

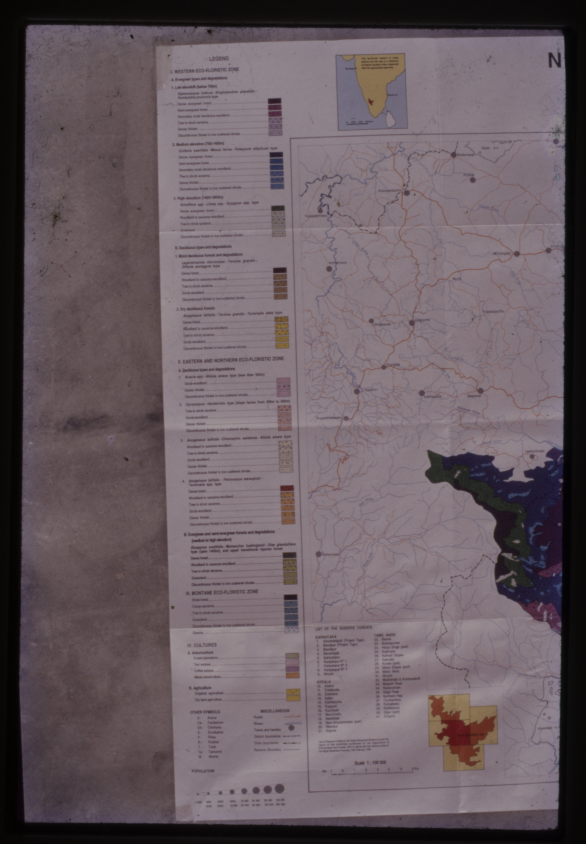
A. Agriculture

LIST OF THE RESERVE FORESTS

1. Mudumalai	21. Kundadevanapalli
2. Bandipur	22. Kundadevanapalli Hogalu
3. Nugu	23. Kundadevanapalli Kaval
4. Nilgiri North	24. Kundadevanapalli Kaval Hogalu
5. Nilgiri East	25. Kundadevanapalli Kaval Kaval
6. Nilgiri South	26. Kundadevanapalli Kaval Kaval Hogalu
7. Nilgiri West	27. Kundadevanapalli Kaval Kaval Kaval
8. Nilgiri Central	28. Kundadevanapalli Kaval Kaval Kaval Hogalu
9. Nilgiri Central Hogalu	29. Kundadevanapalli Kaval Kaval Kaval Kaval
10. Nilgiri Central Kaval	30. Kundadevanapalli Kaval Kaval Kaval Kaval Hogalu
11. Nilgiri Central Kaval Hogalu	31. Kundadevanapalli Kaval Kaval Kaval Kaval Kaval
12. Nilgiri Central Kaval Kaval	32. Kundadevanapalli Kaval Kaval Kaval Kaval Kaval Hogalu
13. Nilgiri Central Kaval Kaval Hogalu	33. Kundadevanapalli Kaval Kaval Kaval Kaval Kaval Kaval
14. Nilgiri Central Kaval Kaval Kaval	34. Kundadevanapalli Kaval Kaval Kaval Kaval Kaval Kaval Hogalu
15. Nilgiri Central Kaval Kaval Kaval Hogalu	35. Kundadevanapalli Kaval Kaval Kaval Kaval Kaval Kaval Kaval
16. Nilgiri Central Kaval Kaval Kaval Kaval	36. Kundadevanapalli Kaval Kaval Kaval Kaval Kaval Kaval Kaval Hogalu
17. Nilgiri Central Kaval Kaval Kaval Kaval Hogalu	37. Kundadevanapalli Kaval Kaval Kaval Kaval Kaval Kaval Kaval Kaval
18. Nilgiri Central Kaval Kaval Kaval Kaval Kaval	38. Kundadevanapalli Kaval Kaval Kaval Kaval Kaval Kaval Kaval Kaval Hogalu
19. Nilgiri Central Kaval Kaval Kaval Kaval Kaval Hogalu	39. Kundadevanapalli Kaval Kaval Kaval Kaval Kaval Kaval Kaval Kaval Kaval
20. Nilgiri Central Kaval Kaval Kaval Kaval Kaval Kaval	40. Kundadevanapalli Kaval Kaval Kaval Kaval Kaval Kaval Kaval Kaval Kaval Hogalu

Scale 1 : 400 000

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LEGEND
I. WESTERN ECO-FLORISTIC ZONE
A. Evergreen types and degradations
1. Low elevation (below 700m)
Diospyrosetum crassiflorae - Anogeissetum pilgrimii - Terminalia glaucescens type
Dense evergreen forest
Semi-evergreen forest
Secondary moist deciduous woodland
Trees in shrub savanna
Shrub thicket
Cleared land/bush fallow in low scattered shrubs
2. Medium elevation (700-1400m)
Cathetro scandilae - Manso lichae - Pelargonio elliptici type
Dense evergreen forest
Semi-evergreen forest
Secondary moist deciduous woodland
Trees in shrub savanna
Clump forest
Cleared land/bush fallow in low scattered shrubs
3. High elevation (1400-1900m)
Acrothrum spp - Lilaea spp - Syzygium spp. type
Dense evergreen forest
Woodland to savanna woodland
Trees in shrub savanna
Shrub woodland
Cleared land/bush fallow in low scattered shrubs
B. Deciduous types and degradations
1. Moist deciduous forests and degradations
Lophiocarpetum microcarpi - Terminalio glaucifo - Diflorae stereoglypti type
Dense forest
Woodland to savanna woodland
Trees in shrub savanna
Shrub woodland
Cleared land/bush fallow in low scattered shrubs
2. Dry deciduous forests
Anogeissus latifolia - Terminalia glaucifo - Terminalia avicennioides type
Dense forest
Woodland to savanna woodland
Trees in shrub savanna
Shrub woodland
Cleared land/bush fallow in low scattered shrubs
II. EASTERN AND NORTHERN ECO-FLORISTIC ZONE
A. Deciduous types and degradations
1. Acacia spp - Hilaria senarie type (less than 500m)
Scrub woodland
Trees thicket
Cleared land/bush fallow in low scattered shrubs
2. Combretum - Terminalia type (altitude ranges from 400m to 600m)
Tree in shrub savanna
Scrub woodland
Dense thicket
Cleared land/bush fallow in low scattered shrubs
3. Anogeissus latifolia - Chlorophytum arundinaceum - Hilaria senarie type
Woodland to savanna woodland
Tree in shrub savanna
Scrub woodland
Dense thicket
Cleared land/bush fallow in low scattered shrubs
4. Anogeissus latifolia - Pterocarpus mennyharus - Acanthosia spp. type
Dense forest
Woodland to savanna woodland
Tree in shrub savanna
Scrub woodland
Dense thicket
Cleared land/bush fallow in low scattered shrubs
B. Evergreen and semi-evergreen forests and degradations (medium to high elevation)
Diospyros mannifolia - Alchornea hydrogaster - Olea gloriosiflora - Ficus thonningii - Ficus exasperata - Cleistopholis patens - Uapaca togoensis - Tarrietia utilis - Lophira alata - Sterculia tragacantha type
Dense forest
Woodland to savanna woodland
Tree in shrub savanna
Grassland
Cleared land/bush fallow in low scattered shrubs
III. MONTANE ECO-FLORISTIC ZONE
Dense forest
Clump savanna
Trees in shrub savanna
Grassland
Cleared land/bush fallow in low scattered shrubs
Swamp
IV. CULTURES
A. Arboriculture
Tree plantations
Cocoa plantations
Coffee savanna
Mixed arboriculture
B. Agriculture
Irrigated agriculture
Dry season agriculture
OTHER SYMBOLS
A - Aneca
B - Bafoussam
Ba - Bamenda
E - Ebolowa
F - Foumban
Fu - Fundong
K - Kumba
L - Lomie
M - Mamfe
MISCELLANEOUS
Roads
Rivers
Towns and markets
Station Boundaries
Zone Boundaries
Reserve Boundary
POPULATION
1 dot = 500 persons
1000 - 2000
2001 - 5000
5001 - 10,000
10,001 - 20,000
20,001 - 50,000
50,001 - 100,000
100,001 - 200,000
200,001 - 500,000
500,001 - 1,000,000
THE NATIONAL BOUNDARIES SHOWN ON THIS MAP DO NOT IMPLY ANY OFFICIAL ENDORSEMENT OR ACCEPTANCE BY THE FEDERAL REPUBLIC OF CAMEROON
Scale 1:20,000,000
N
Mamfe
Kumba
Bamenda
Fundong
Nkambe
Wum
Ndu
Bafoussam
Foumban
Banyo
Tibati
Ngaoundere
Meiganga
Yoko
Mbalmayo
Ebolowa
Sangmelima
Akonolinga
Yaounde
Mbalmayo
Bertoua
Batouri
Abong-Mbang
Lomie
Kribi
Edea
Douala
Nkongsamba
Mbouda
Bafang
Dschang
Melong
Eseka
Bafia
Ntui
Mbam
Sanaga
Nyong
Kadey
Boumba
Ngoko
Lobeke
LIST OF THE RESERVE FORESTS
KUMBA/MAMFE
1. Korup
2. Bamboo Village
3. Banyang-Mbo
4. Bakossi
5. Kupe
6. Bakossi NP 1
7. Bakossi NP 2
8. Mwanenguba
9. Bangem
KRIBI/LOLODORF
10. Campo
11. Ma'an
12. Lolodorf
13. Mokoko River
14. Dipikar
15. Bipindi
16. Akom II
17. Nyong-et-Kellé
18. Mvila
19. Dja
20. Boumba-Bek
21. Nki
22. Lobeke
23. Mengame
24. Kienke
25. Ngoyla-Mintom
26. Mintom
27. Ngoyla
28. Nkam
29. Kimbi-Fungom
30. Santchou
31. Mbam Djerem
32. Mbam Minkom
33. Deng Deng
34. Ngog Mapubi
35. Messok
36. Dimako
37. Kongo-Boumba
38. Pangar Djombo
39. Bamenyam
40. Kilum
41. Mbam and Djerem (part)
42. Mbere
43. Faro
44. Bénoué
45. Bénoué-et-Kalfoudéré
46. Mayo Rey
47. Mayo Oulo
48. Tchabal Mbabo
49. Tchabal Gangdaba
50. Ngaoundaba
51. Ngaoundere
52. Mbere (part)
53. Vina du Nord
54. Djerem
55. Mbere (part)
56. Mbam and Djerem (part)
57. Mbam and Inoubou
58. Mbam Minkom
59. Mbam Djerem
60. Mbere
61. Djerem
Scale 1 : 100 000
0 1 2 3 4 5 km

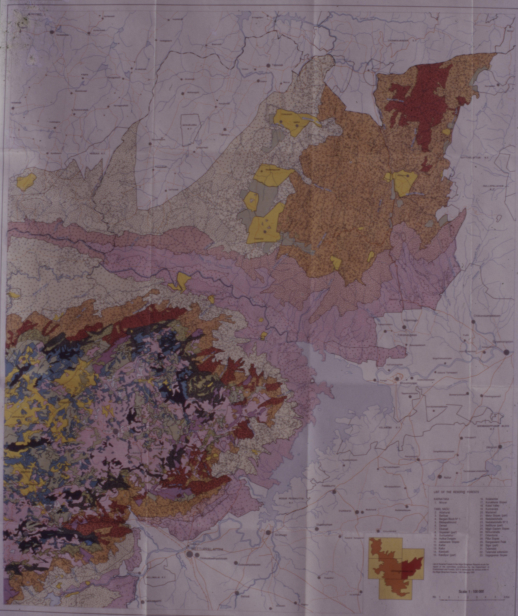


NILGIRI BIOSPHERE RESERVE AREA

VEGETATION AND LAND USE

Eastern Sheet

R. PRABHAKAR & J.-P. PASCAL



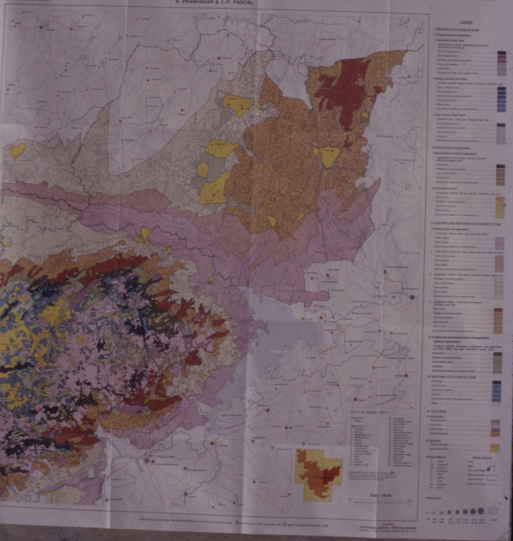
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NILGIRI BIOSPHERE RESERVE AREA

VEGETATION AND LAND USE

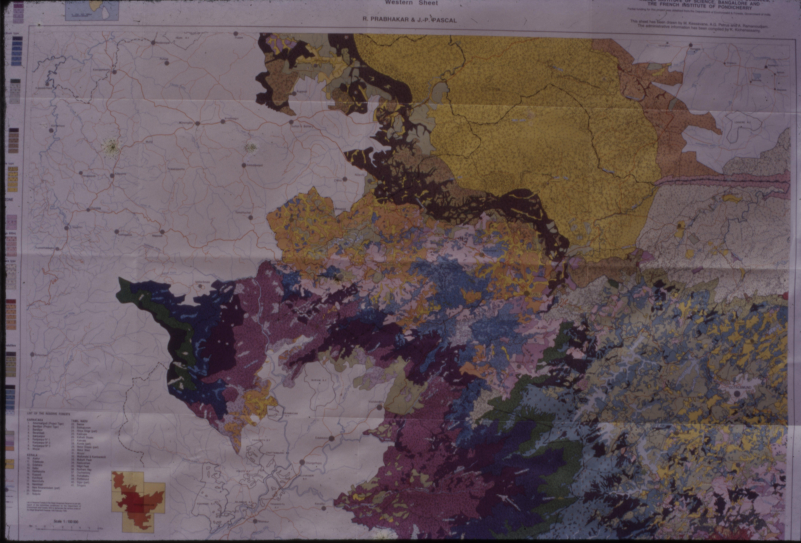
Eastern Sheet

K. PRABHAKAR & J.-P. PASCAL



Western Sheet

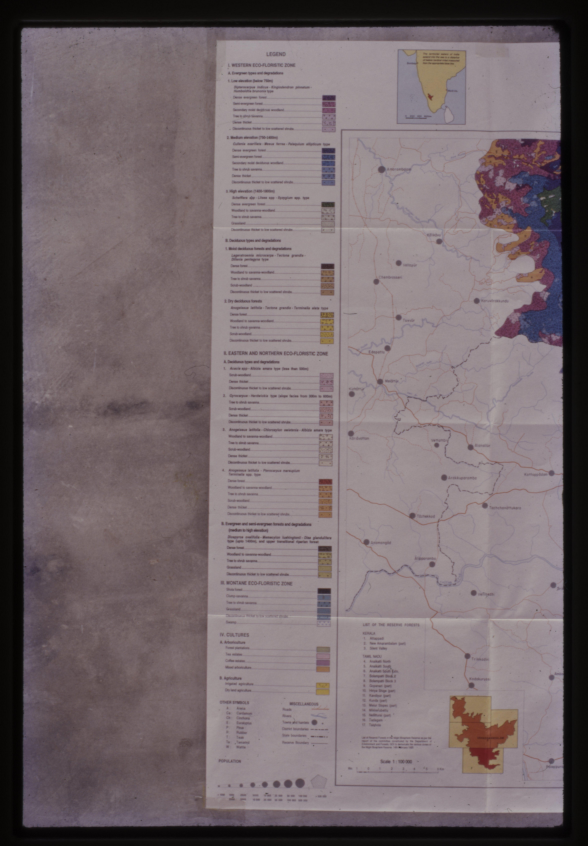
R. PRABHAKAR & J.-P. PASCAL



R. PRABHAKAR & J.-P. PASCAL

This sheet has been drawn by M. Kodeeswaran, A.G. Paiva and A. Rameshkumar.
The administrative information has been compiled by K. Balasubramanya.




LEGEND
I. WESTERN ECO-FLORISTIC ZONE
A. Evergreen types and degradations
1. Low elevation (below 700m)
Diospyrosspp. Indica - Drypetesroxburghii - Memecylon-Strychnus nuxvomica type
Dense evergreen forest
Semi evergreen forest
Secondary moist deciduous woodland
Tree & shrub savanna
Dense thicket
Discontinuous thicket in low scattered shrubs
2. Medium elevation (700-1400m)
Cullenia exarillata - Mesua ferrea - Palaquium ellipticum type
Dense evergreen forest
Semi evergreen forest
Secondary moist deciduous woodland
Tree & shrub savanna
Dense thicket
Discontinuous thicket in low scattered shrubs
3. High elevation (1400-2695m)
Actinodaphne spp. - Litsea spp. - Syzygium spp. type
Dense evergreen forest
Woodland to savanna woodland
Tree & shrub savanna
Scrub woodland
Discontinuous thicket in low scattered shrubs
B. Deciduous types and degradations
1. Moist deciduous forests
Lagerstroemia microcarpa - Terminalia glandulosa - Pterocarpus marsupium type
Moist deciduous forest
Woodland to savanna woodland
Tree & shrub savanna
Scrub woodland
Discontinuous thicket in low scattered shrubs
2. Dry deciduous forests
Anogeissus latifolia - Terminalia glandulosa - Terminalia alata type
Dense forest
Woodland to savanna woodland
Tree & shrub savanna
Scrub woodland
Discontinuous thicket in low scattered shrubs
II. EASTERN AND NORTHERN ECO-FLORISTIC ZONE
A. Deciduous types and degradations
1. Acacia spp - Albizia amara type (less than 900m)
Scrub woodland
Dense thicket
Discontinuous thicket in low scattered shrubs
2. Gyrocarpus - Terminalia spp. Lagerstroemia type (above 900m to 1800m)
Tree & shrub savanna
Scrub woodland
Dense thicket
Discontinuous thicket in low scattered shrubs
3. Anogeissus latifolia - Chloroxylon swietenia - Albizia amara type
Woodland to savanna woodland
Tree & shrub savanna
Scrub woodland
Dense thicket
Discontinuous thicket in low scattered shrubs
4. Anogeissus latifolia - Terminalia glandulosa - Pterocarpus marsupium type
Dense forest
Woodland to savanna woodland
Tree & shrub savanna
Scrub woodland
Dense thicket
Discontinuous thicket in low scattered shrubs
5. Evergreen and semi-evergreen forests and degradations (medium to high elevation)
Dimocarpus longifolia - Artocarpus hirsutus - Canarium strictum - Cullenia exarillata - Mesua ferrea - Palaquium ellipticum type (below 1400m) and upper hanneliaceae - Ilex - Litsea type
Dense forest
Woodland to savanna woodland
Tree & shrub savanna
Grassland
Discontinuous thicket in low scattered shrubs
III. MONTANE ECO-FLORISTIC ZONE
Shola forest
Grassy savanna
Tree & shrub savanna
Grassland
Discontinuous thicket in low scattered shrubs
Swamp
IV. CULTURES
A. Arboriculture
Forest plantations
Tea estates
Coffee savanna
Mixed arboriculture
B. Agriculture
Irrigated agriculture
Dry land agriculture
OTHER SYMBOLS
Ch. Church
Ch. (Catholic)
Ch. (Protestant)
Mosque
Temple
Fort
Tumulus
Monolith
MISCELLANEOUS
Roads
Rivers
Forest administrative boundaries
District boundaries
State boundaries
Reserve Boundary
POPULATION
1 dot = 100 persons
1 dot = 1000 persons
1 dot = 5000 persons
1 dot = 10,000 persons
1 dot = 25,000 persons
1 dot = 50,000 persons
1 dot = 100,000 persons
1 dot = 250,000 persons
This overprint shows all major forest areas of the state as a separate layer. Forest boundaries are shown in red.
Scale 1 : 1000 000
Kilometres
Coimbatore
Udhagamandalam
Mettupalayam
Gudalur
Pandalur
Nilambur
Kozhikode
Kalpetta
Sultan Bathery
Manantoddy
Kollegal
Talamalai
Satyamangalam
Bhavani
Erode
Gobichettipalayam
Tiruchirappalli
Karur
Dindigul
Kodaikanal
Periyakulam
Theni
Madurai
Virudhunagar
Tirunelveli
Kovilpatti
Srivaikuntam
Tuticorin
Nagercoil
LIST OF THE RESERVE FORESTS
KERALA
1. Attappadi
2. Nilambur (part)
3. Silent Valley
TAMIL NADU
4. Avalladi North
5. Avalladi South
6. Avalladi Valley (part)
7. Bhavanipatti Block II
8. Bhavanipatti Block III
9. Bhavanisagar (part)
10. Hasnur Range (part)
11. Kandiyur (part)
12. Kundah (part)
13. Mukkuruthi (part)
14. Mukkurthi
15. Nadhikadu (part)
16. Thengumarahada
17. Thengumi
Survey of Reserve Forests of Tamil Nadu & Kerala Scale 1:50,000
Survey of Reserve Forests of Tamil Nadu & Kerala Scale 1:250,000
Survey of Reserve Forests of Tamil Nadu & Kerala Scale 1:1000,000
Scale 1 : 1000 000
Kilometres





NILGIRI BIOSPHERE RESERVE AREA

VEGETATION AND LAND USE

Eastern Sheet

R. PRABHAKAR & J.-P. PASCAL

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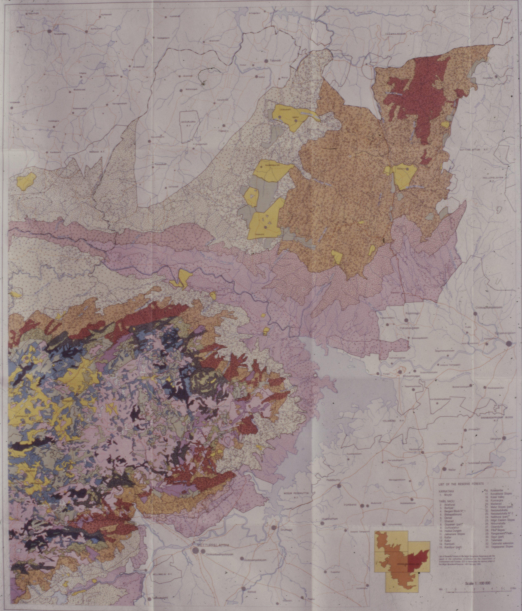
NILGIRI BIOSPHERE RESERVE AREA

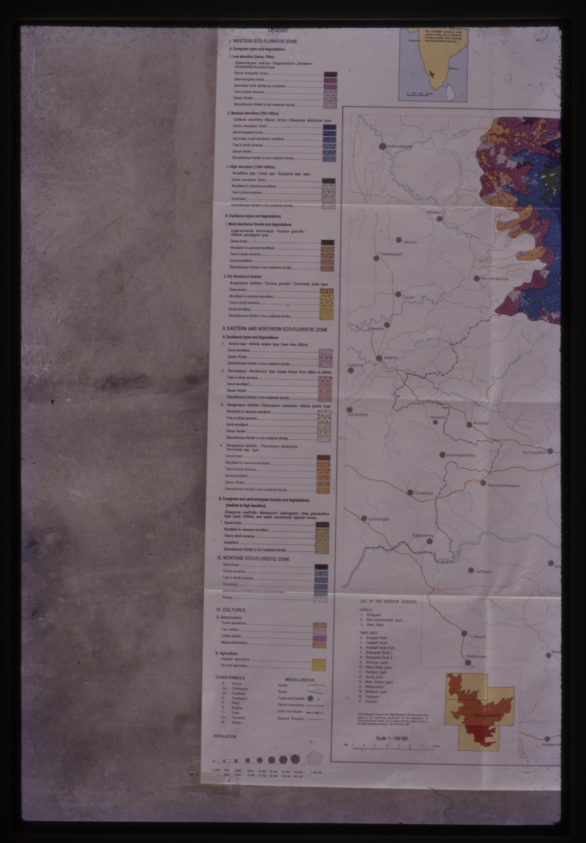
VEGETATION AND LAND USE

Eastern Sheet

R. PRABHAKAR & J.-P. PASCAL

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THE FRENCH IN




I. WESTERN ECO-FLORISTIC ZONE
A. Evergreen types and degradations
1. Low elevation (below 700m)
Cullenia exarillata - Mesua ferrea - Palaquium ellipticum type
Dense evergreen forest
Selectively logged forest
Secondary moist deciduous woodland
Tree in shrub savanna
Dense thicket
Discontinuous thicket in low scattered shrubs
2. Medium elevation (700-1400m)
Calophyllum tomentosum - Mesua ferrea - Palaquium ellipticum type
Dense evergreen forest
Selectively logged forest
Secondary moist deciduous woodland
Tree in shrub savanna
Dense thicket
Discontinuous thicket in low scattered shrubs
3. High elevation (1400-2000m)
Actinodaphne spp. - Litsea spp. - Syzygium spp. type
Dense evergreen forest
Woodland to savanna woodland
Tree in shrub savanna
Grassland
Discontinuous thicket in low scattered shrubs
B. Deciduous types and degradations
1. Moist deciduous forests and degradations
Chloroxylon swietenia - Manilkara hexandra - Diospyros ebenum - Vitex altissima - Pterocarpus santalinus type
Dense forest
Woodland to savanna woodland
Tree in shrub savanna
Scrub woodland
Discontinuous thicket in low scattered shrubs
2. Dry deciduous forests
Anogeissus latifolia - Terminalia arjuna - Terminalia elliptica type
Dense forest
Woodland to savanna woodland
Tree in shrub savanna
Scrub woodland
Discontinuous thicket in low scattered shrubs
II. EASTERN AND NORTHERN ECO-FLORISTIC ZONE
A. Deciduous types and degradations
1. Acacia spp.- Albizia odoratissima type (Dry Mixed Forest)
Scrub woodland
Grassland
Discontinuous thicket in low scattered shrubs
2. Grewia spp. - Dendrocalamus type (slope facies from 400m to 600m)
Tree in shrub savanna
Scrub woodland
Dense thicket
Discontinuous thicket in low scattered shrubs
3. Anogeissus latifolia - Chloroxylon swietenia - Albizia amara type
Woodland to savanna woodland
Tree in shrub savanna
Scrub woodland
Dense thicket
Discontinuous thicket in low scattered shrubs
4. Anogeissus latifolia - Pterocarpus marsupium - Terminalia spp. type
Dense forest
Woodland to savanna woodland
Tree in shrub savanna
Scrub woodland
Dense thicket
Discontinuous thicket in low scattered shrubs
B. Evergreen and semi-evergreen forests and degradations (medium to high elevation)
Calophyllum spp. - Palaquium spp. - Mesua spp. - Poeciloneuron spp. type (medium elevation) and upper montane/cloud regions (high elevation)
Dense forest
Woodland to savanna woodland
Tree in shrub savanna
Grassland
Discontinuous thicket in low scattered shrubs
III. MONTANE ECO-FLORISTIC ZONE
Shola forest
Scrub savanna
Tree in shrub savanna
Grassland
Discontinuous thicket in low scattered shrubs
IV. CULTURES
A. Arboriculture
Tea estates
Rubber estates
Coffee estates
Mixed arboriculture
B. Agriculture
Irrigated agriculture
Dry land agriculture
OTHER SYMBOLS
Fort
Cantonment
Ruins of Fort
Cantonment
Village
Town
Tea mill
Tramroad
Railway
MISCELLANEOUS
Roads
Rivers
Towns and hamlets
District boundaries
State boundaries
Reserve Boundary
POPULATION
LIST OF THE BOTANIC SURVEYS
KERALA
1. Kilimanoor
2. New Amarambalam (part)
3. Silent Valley
TAMIL NADU
4. Anaikatti South
5. Anaikatti North
6. Anaikatti South Extn.
7. Kalrayan Hills
8. Kalrayan Hills S.
9. Sriperumbudur (part)
10. Vilpur Village (part)
11. Vilpur Town (part)
12. Kanchipuram
13. Metur Dabbai (part)
14. Metur Colony
15. Tiruttani
16. Tiruttani
Scale 1: 100 000
Km 1 0 1 2 3 4 5 10km
Miles 1 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 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VEGETATION AND LAND USE

Southern Sheet

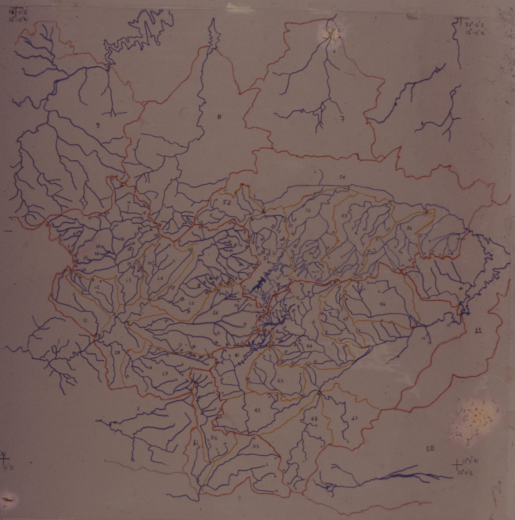
R. PRABHAKAR & A.P. PASCAL

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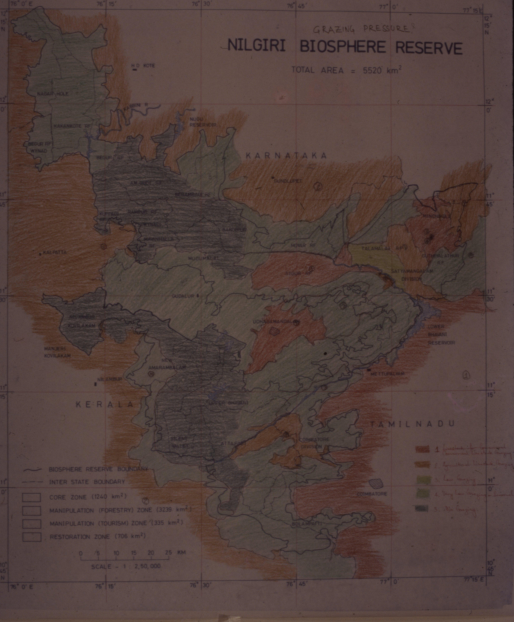

TOPOGRAPHY
NILGIRI BIOSPHERE RESERVE
TOTAL AREA = 5520 km²
KARNATAKA
KERALA
TAMILNADU
BIOSPHERE RESERVE BOUNDARY
INTER STATE BOUNDARY
CORE ZONE (1240 km²)
MANIPULATION (FORESTRY) ZONE (3239 km²)
MANIPULATION (TOURISM) ZONE (135 km²)
RESTORATION ZONE (706 km²)
SCALE :- 1: 1,00,000

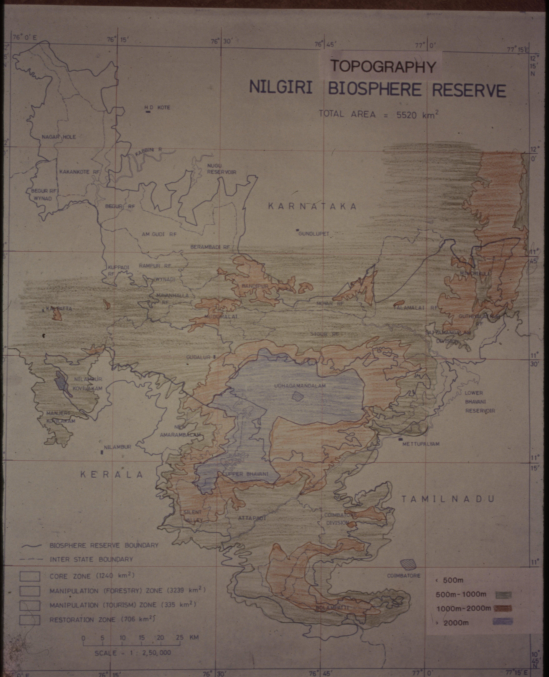



RIVER SYSTEMS
NILGIRI BIOSPHERE RESERVE
TOTAL AREA = 5520 km²
KABBINI
NUGU
GUNDAL
SUVARNAVATI
MOYAR
KARNATAKA
KERALA
TAMILNADU
BIOSPHERE RESERVE BOUNDARY
INTER STATE BOUNDARY
CORE ZONE (1240 km²)
MANIPULATION (FORESTRY) ZONE (1378 km²)
MANIPULATION (TOURISM) ZONE (335 km²)
RESTORATION ZONE (1706 km²)
SCALE - 1 : 2,50,000
DRAINAGE BASIN
AREA OF REGENERATION
AREA OF EROSION
AREA OF POLLUTION

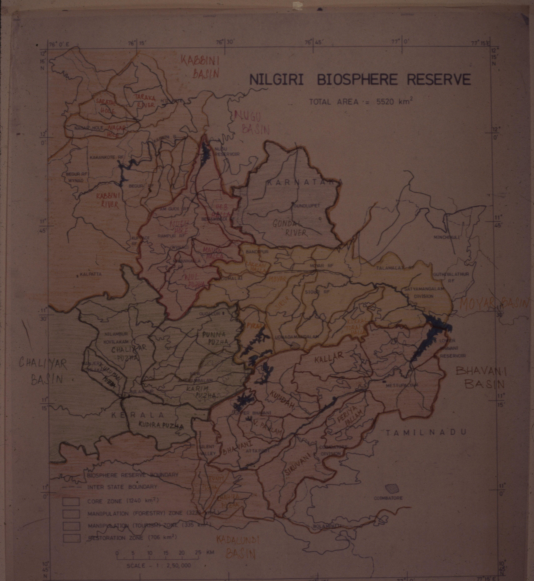

VEGETATION
NILGIRI BIOSPHERE RESERVE
TOTAL AREA = 5520 km²
KARNATAKA
KERALA
TAMILNADU
BIOSPHERE RESERVE BOUNDARY
INTER STATE BOUNDARY
CORE ZONE (1240 km²)
MANIPULATION (FORESTRY) ZONE (3239 km²)
MANIPULATION (TOURISM) ZONE (335 km²)
RESTORATION ZONE (706 km²)
0 5 10 15 20 25 KM
SCALE - 1 : 2,50,000
1. PRIMARY FORESTS
2. SECONDARY FORESTS
3. DEGRADED FORESTS
4. PERENNIAL CULTIVATION
5. TREE AND SHRUB SAVANNA
6. SEASONAL CULTIVATION
7. THORNY THICKET



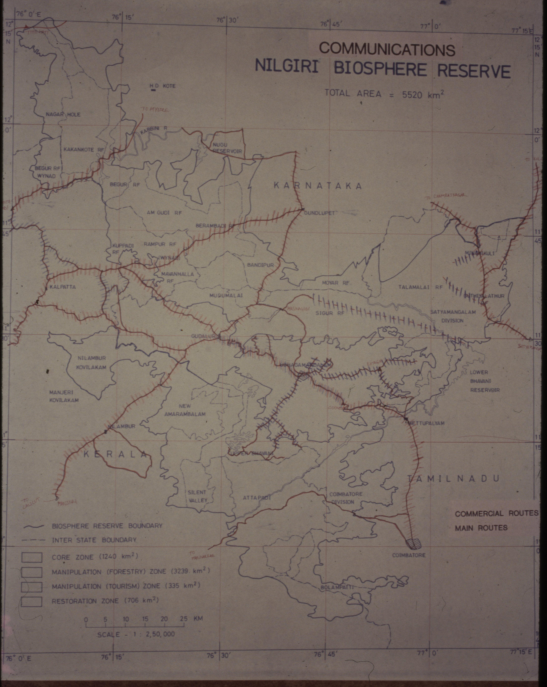

GRAZING PRESSURE
NILGIRI BIOSPHERE RESERVE
TOTAL AREA = 5520 km²
KARNATAKA
KERALA
TAMILNADU
BIOSPHERE RESERVE BOUNDARY
INTER STATE BOUNDARY
CORE ZONE (1240 km²)
MANIPULATION (FORESTRY) ZONE (3239 km²)
MANIPULATION (TOURISM) ZONE (1335 km²)
RESTORATION ZONE (706 km²)
SCALE - 1 : 2,50,000

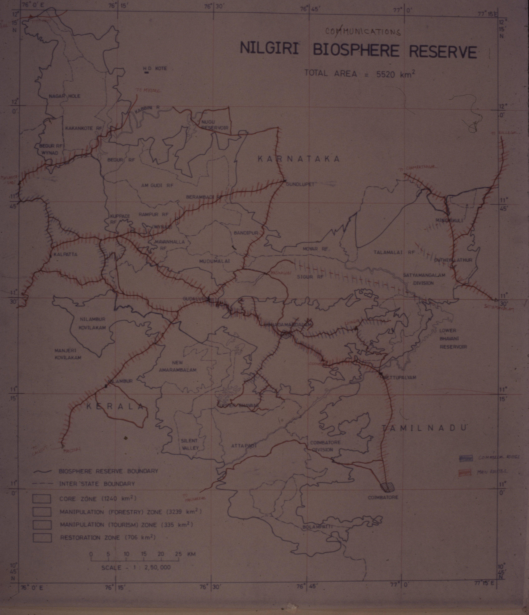

TOPOGRAPHY
NILGIRI BIOSPHERE RESERVE
TOTAL AREA = 5520 km²
KARNATAKA
KERALA
TAMILNADU
N.D. KOTE
NAGAR HOLE
KARAPUR RF
KAKKUR RF
BALLE RF
NUGU RESERVOIR
KUNDLUPET
BEGUR RF
MOYAR
SIGUR
GUDALUR
OOTACAMUND
KOTAGIRI
MUDUMALAI
MASINAGUDI
SIRUVANI
COIMBATORE
METTUPALAYAM
LOWER BHAVANI RESERVOIR
BIOSPHERE RESERVE BOUNDARY
INTER STATE BOUNDARY
CORE ZONE (1240 km²)
MANIPULATION (FORESTRY) ZONE (3239 km²)
MANIPULATION (TOURISM) ZONE (335 km²)
RESTORATION ZONE (706 km²)
0 5 10 15 20 25 KM
SCALE - 1 : 2,50,000
< 500m
500m-1000m
1000m-2000m
> 2000m
76° 0' E
76° 15'
76° 30'
76° 45'
77° 0'
77° 15' E
12° 15' N
12°
11° 45'
11° 30'
11° 15'
11°

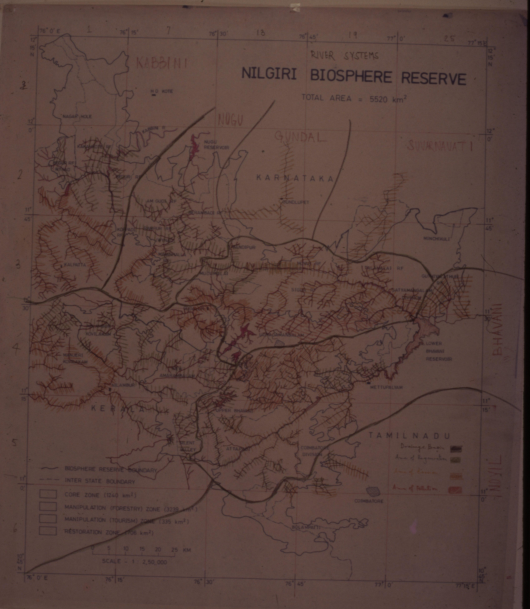

GRAZING PRESSURE
NILGIRI BIOSPHERE RESERVE
TOTAL AREA ≈ 5520 km²
76° 0' E
76° 15'
76° 30'
76° 45'
77° 0'
11° 45' N
11° 30'
11° 15'
11° 0'
10° 45'
KARNATAKA
KERALA
TAMILNADU
H.D. KOTE
NAGAR HOLE
BANDIPUR N.P.
MUDUMALAI W.S.
KUNDAPET
GUDALUR
KALPETTA
MANANTHAVADY
SULTHANBATHERY
MEPPADI
NILAMBUR
GUDALUR
OOTACAMUND
KOTAGIRI
MUDUMALAI
MOYAR - BHAVANI
SILENT VALLEY N.P.
MUKURTHI N.P.
COIMBATORE
ANAMALAI
PALNI
LOWER PALANI - KODAIKANAL
1. COMMERCIAL LIVESTOCK
2. AGRICULTURAL LIVESTOCK
3. LOW GRAZING
4. VERY LOW AND SEASONA
5. NO GRAZING
BIOSPHERE RESERVE BOUNDARY
INTER STATE BOUNDARY
CORE ZONE (1240 km²)
MANIPULATION (FORESTRY) ZONE (3230 km²)
MANIPULATION (TOURISM) ZONE (335 km²)
RESTORATION ZONE (706 km²)
0 5 10 15 20 25 KM
SCALE - 1 2,50,000


NILGIRI BIOSPHERE RESERVE
TOTAL AREA = 5520 km²
KABBINI BASIN
KABBINI RIVER
KARNATAKA
GUNDAL RIVER
BHAVANI BASIN
CHALIYAR BASIN
KERALA
KUNDA PUZHA
TAMILNADU
KODAIKANAL BASIN
BIOSPHERE RESERVE BOUNDARY
INTER STATE BOUNDARY
CORE ZONE (1240 km²)
MANIPULATION (FORESTRY) ZONE (3725 km²)
MANIPULATION TOURISM ZONE (555 km²)
DEFORESTED ZONE (1700 km²)
SCALE - 1 : 3,50,000




COMMUNICATIONS
NILGIRI BIOSPHERE RESERVE
TOTAL AREA = 5520 km²
KARNATAKA
KERALA
TAMILNADU
BIOSPHERE RESERVE BOUNDARY
INTER STATE BOUNDARY
CORE ZONE (1240 km²)
MANIPULATION (FORESTRY) ZONE (3239 km²)
MANIPULATION (TOURISM) ZONE (135 km²)
RESTORATION ZONE (706 km²)
COMMERCIAL ROUTES
MAIN ROUTES
0 5 10 15 20 25 KM
SCALE - 1 : 2,50,000


COMMUNICATIONS
NILGIRI BIOSPHERE RESERVE
TOTAL AREA = 5520 km²
KARNATAKA
KERALA
TAMILNADU
BIOSPHERE RESERVE BOUNDARY
INTER STATE BOUNDARY
CORE ZONE (1240 km²)
MANIPULATION (FORESTRY) ZONE (3239 km²)
MANIPULATION (TOURISM) ZONE (325 km²)
RESTORATION ZONE (1706 km²)
0 5 10 15 20 25 KM
SCALE - 1 : 2,50,000


RIVER SYSTEMS
NILGIRI BIOSPHERE RESERVE
TOTAL AREA = 5520 km²
KABBINI
NUGU
GUNDAL
SUVARNAVATI
KARNATAKA
BHAVANI
KERALA
TAMILNADU
BIOSPHERE RESERVE
INTER STATE BOARDARY
CORE ZONE (1240 km²)
MANIPULATION (FORESTRY) ZONE (2339 km²)
MANIPULATION (TOURISM) ZONE (1941 km²)
RESTORATION ZONE (1940 km²)
SCALE - 1 : 2,50,000


VEGETATION
NILGIRI BIOSPHERE RESERVE
TOTAL AREA = 5520 km²
KARNATAKA
KERALA
TAMILNADU
BIOSPHERE RESERVE BOUNDARY
INTER STATE BOUNDARY
CORE ZONE (1240 km²)
MANIPULATION (FORESTRY) ZONE (3239 km²)
MANIPULATION (TOURISM) ZONE (335 km²)
RESTORATION ZONE (706 km²)
0 5 10 15 20 25 KM
SCALE : 1 : 2,50,000
COIMBATORE
MYSORE
OOTACAMUND
MUDUMALAI WS
BANDIPUR NP
WAYANAD WS
NAGARHOLE NP
KAKANKOTE
MADUMALAI
SIGUR RF
MUKURTHI NP
SILENT VALLEY NP
PARAMBIKULAM WS
ANAMALAI WS
ANAMALAI TR
PALNI HILLS
KALPETTA
GUDALUR
GUDALUR FOREST DIVISION
NILAMBUR
NILAMBUR KOVILAKAM
NEW AMARAMBALAM
PALGHAT
PALGHAT KOVILAKAM
ATTAPPADI RF
SIRUVANI
SIRUVANI RESERVOIR
KODAIKANAL
KODAIKANAL WS
76° 0' E
76° 15'
76° 30'
76° 45'
77° 0'
77° 15' E
11° 30' N
11° 15'
11° 0'
10° 45'
10° 30'
10° 15'
10° N


ADIVASI MUNHETRA SANGAM
GUDALUR
Reg No 45 91
முச்சிக்குண்டு


POPULATION/SETTELMENTS
NILGIRI BIOSPHERE RESERVE
TOTAL AREA = 5520 km²
KARNATAKA
KERALA
TAMILNADU
BIOSPHERE RESERVE BOUNDARY
INTER STATE BOUNDARY
CORE ZONE (1240 km²)
MANIPULATION (FORESTRY) ZONE (1128 km²)
MANIPULATION (TOURISM) ZONE (335 km²)
RESTORATION ZONE (706 km²)
0 5 10 15 20 25 KM
SCALE - 1 : 2,50,000

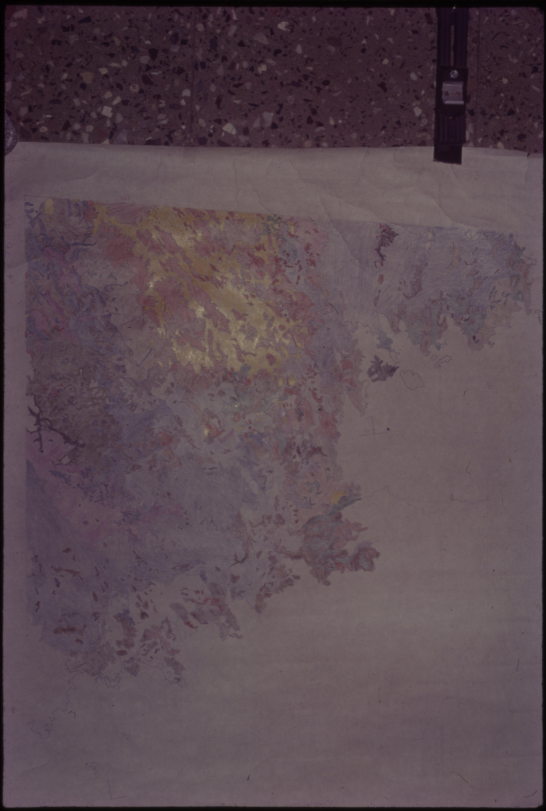

SETTLEMENTS
NILGIRI BIOSPHERE RESERVE
TOTAL AREA = 5520 km²
KARNATAKA
KERALA
TAMILNADU
BIOSPHERE RESERVE BOUNDARY
INTER STATE BOUNDARY
CORE ZONE (1240 km²)
MANIPULATION (FORESTRY) ZONE (3239 km²)
MANIPULATION (TOURISM) ZONE (335 km²)
RESTORATION ZONE (706 km²)
1. < 5 SETTLEMENTS/40 SQ.KM
2. 5-10 SETTLEMENTS/40 SQ.
3. 10-20 SETTLEMENTS/40 SQ.
4. 20-50 SETTLEMENTS/40 SQ.
5. >50 SETTLEMENTS/40 SQ.KM
SCALE - 1 : 2,50,000
76° 0' E
76° 15'
76° 30'
76° 45'
77° 0'
11° 45'
11° 30'
11° 15'
11° 0'
10° 45'

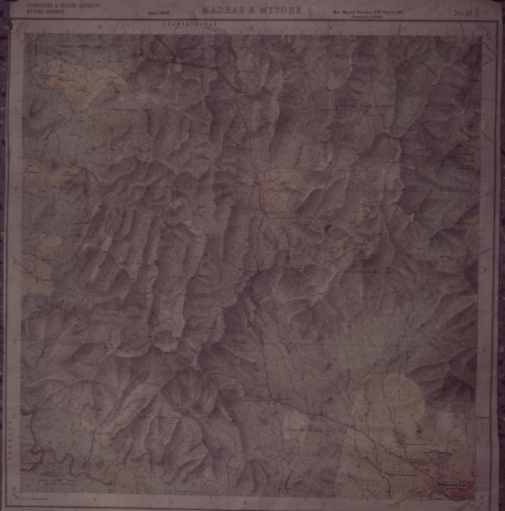

DRAINAGE BASIN
NILGIRI BIOSPHERE RESERVE
TOTAL AREA = 5520 km²
KABBINI BASIN
NUGU BASIN
GUNDAL BASIN
MOYAR B
BHAVANI B
KADALUNDI BASIN
KARNATAKA
KERALA
TAMILNADU
KABBINI RIVER
KALLAR
KUNDAH
KUDIRA PUZHA
BIOSPHERE RESERVE BOUNDARY
INTER STATE BOUNDARY
CORE ZONE (1240 km²)
MANIPULATION (FORESTRY) ZONE (3
MANIPULATION (TOURISM) ZONE (
RESTORATION ZONE (708 km²)
SCALE - 1 : 2,50,000

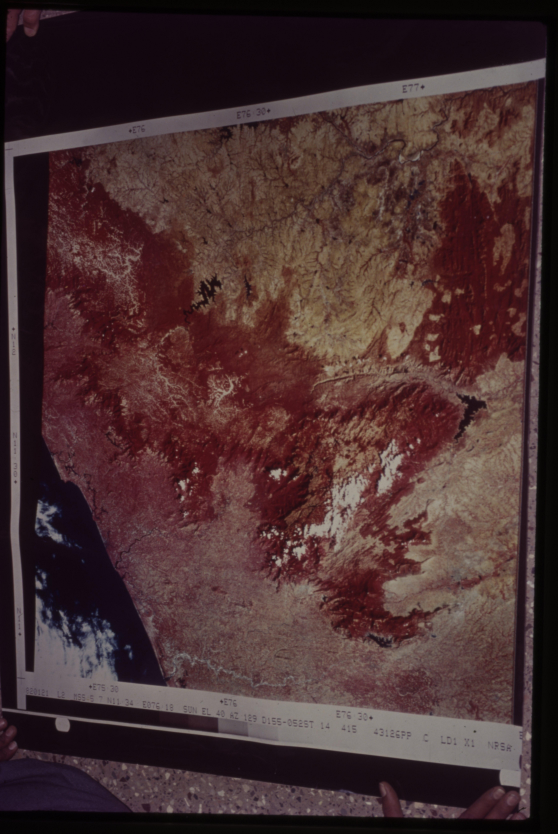






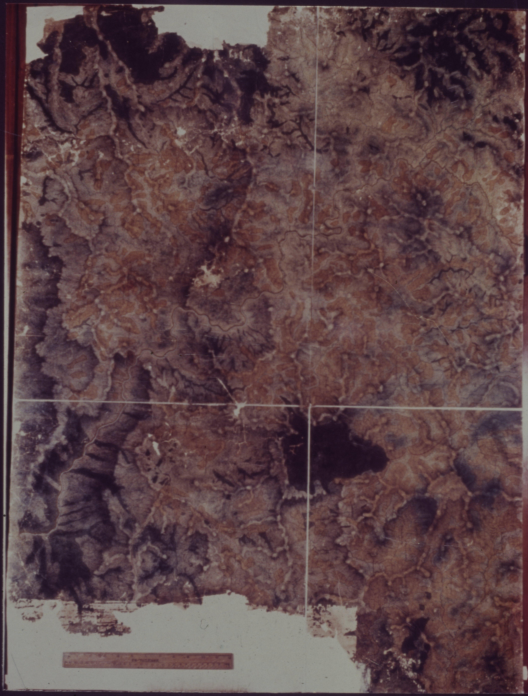



MADRAS & MYSORE
No. 58


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E76 30+
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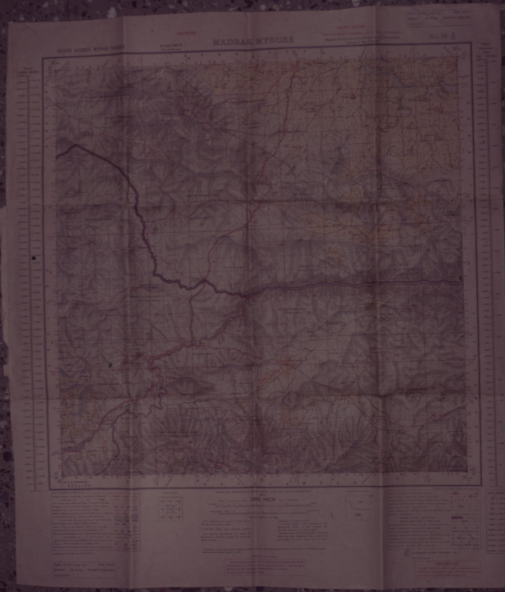
Map 2 The Nilgiris Area.
Topography, physiographic division (A), administrative organization and communications (B).
Based on 1 : 1 Mio. SURVEY OF INDIA World Map Series: Cape Comorin (1963).

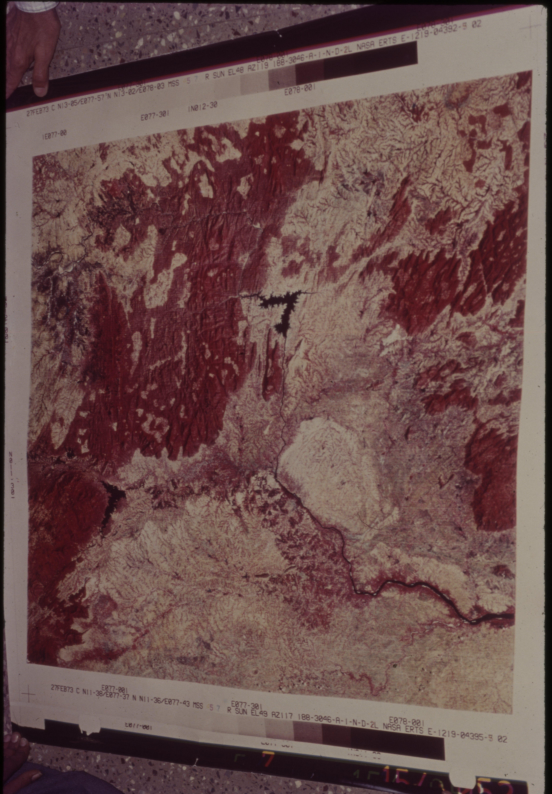













NEILGHERRY MOUNTAINS

CENTRE FOR ECOLOGICAL SCIENCES

कर्नाटक केरल तमिल नाडु

KARNATAKA, KERALA
TAMIL NADU

No. 58 A



CENTRE FOR ECOLOGICAL SCIENCES




155-052

OSPHERE RESERVE AREA

EGETATION AND LAND USE

Eastern Sheet

R. PRABHAKAR & J.-P. PASCAL

PUBLISHED BY THE CENTRE FOR ECOLOGICAL SCIENCES,
INDIAN INSTITUTE OF SCIENCE, BANGALORE
AND
THE FRENCH INSTITUTE OF PONDICHERY

Mapping during the first cropped rain-season from mid-October to mid-December 1993.

The sheet has been drawn by M. Ramaswamy, A.G. Patrice and A. Ramamoorthy.
The administrative information has been compiled by K. Kothandaraman.

LEGEND

I. WESTERN ECO-FLORISTIC ZONE

A. Evergreen type and degradations

1. Dense evergreen forest
Undisturbed forest with emergent trees, physiognomy dominated by evergreen species
Dense evergreen forest
Open evergreen forest
Secondary growth forest
Semi-evergreen forest with deciduous members
Tree or shrub savanna
Dense thicket
Discontinuous forest in scattered shrubs

2. Medium densities (10m-40m)
Uniform evergreen alluvial forest, Pentaclethra-Virola type
Dense evergreen forest
Open evergreen forest
Tree or shrub savanna
Dense thicket
Discontinuous forest in scattered shrubs

3. High elevation (10m-40m)
Stratified top - Ulex spp - Eucalyptus type type
Dense forest
Woodland to savanna ecotone
Tree or shrub savanna
Dense thicket
Discontinuous forest in scattered shrubs

B. Deciduous type and degradations

1. Moist deciduous forests and degradations
Moist deciduous forest - Tectona grandis - Lagerstroemia type
Dense forest
Woodland to savanna ecotone
Tree or shrub savanna
Dense thicket
Discontinuous forest in scattered shrubs

2. Dry deciduous forests
Straggling, xerotic - Tectona grandis - Terminalia alata type
Dense forest
Woodland to savanna ecotone
Tree or shrub savanna
Dense thicket
Discontinuous forest in scattered shrubs

II. EASTERN AND NORTHERN ECO-FLORISTIC ZONE

A. Deciduous type and degradations

Mixed type - Albizia amara - Acacia leucophloea - Anogeissus latifolia - Hardwickia binata - Azadirachta indica - Pterocarpus marsupium - Terminalia spp. - Lannea coromandelica
Dense forest
Woodland to savanna ecotone
Tree or shrub savanna
Dense thicket
Discontinuous forest in scattered shrubs

Anogeissus latifolia - Chloroxylon swietenia - Albizia amara type
Woodland to savanna ecotone
Tree or shrub savanna
Dense thicket
Discontinuous forest in scattered shrubs

Anogeissus latifolia - Pterocarpus marsupium - Terminalia spp. - Lannea
Woodland to savanna ecotone
Tree or shrub savanna
Dense thicket
Discontinuous forest in scattered shrubs

B. Evergreen and semi-evergreen forests and degradations
(Hollow in high elevation)
Mixed type - Mesua ferrea - Artocarpus hirsutus - Vitex glandulosa - Syzygium cumini - Diospyros spp. - Canarium strictum - Myristica spp. - Palaquium ellipticum
Dense forest
Woodland to savanna ecotone
Tree or shrub savanna
Grassland
Discontinuous forest in scattered shrubs

III. MONTANE ECO-FLORISTIC ZONE

Dense forest
Cryptic savanna
Tree or shrub savanna
Grassland
Discontinuous forest in scattered shrubs

IV. CULTURES

A. Arboriculture
Forest plantations
Tea estates
Coffee estates
Mixed cultivations

B. Agriculture
Dry cultivations
Irrigated agriculture

OTHER SYMBOLS

A	Anaikatti	1	Hill station
B	Bhavani	2	Town
C	Coimbatore	3	Village
E	Erode	4	Forest department station
K	Karur	5	Check barrier
P	Palani	6	Saw mill
T	Tirupur	7	Reserve Boundary
U	Udumalpet		

MISCELLANEOUS

Roads
Railway
Forest department
Check barriers
Reserve Boundary

POPULATION

1 dot = 100 | 500 | 1000 | 5000 | 10,000 | 50,000 | 100,000 | 500,000

LIST OF THE RESERVE FORESTS

1	Anaikatti	11	Kalampalayam
2	Bhavani	12	Kallar
3	Bhavanisagar	13	Kallimandayam
4	Bhavanisagar-II	14	Kalrayan
5	Bodamalai	15	Kanjampatti
6	Chinnar	16	Kanjikoil
7	Chinnar-II	17	Kannimar Chola
8	Chinnar-III	18	Kannimar Valley
9	Chinnar-IV	19	Kanthalloor
10	Chinnar-V	20	Kanthalloor-II
11	Chinnar-VI	21	Kanthalloor-III
12	Chinnar-VII	22	Kanthalloor-IV
13	Chinnar-VIII	23	Kanthalloor-V
14	Chinnar-IX	24	Kanthalloor-VI
15	Chinnar-X	25	Kanthalloor-VII
16	Chinnar-XI	26	Kanthalloor-VIII
17	Chinnar-XII	27	Kanthalloor-IX
18	Chinnar-XIII	28	Kanthalloor-X
19	Chinnar-XIV	29	Kanthalloor-XI
20	Chinnar-XV	30	Kanthalloor-XII
21	Chinnar-XVI	31	Kanthalloor-XIII
22	Chinnar-XVII	32	Kanthalloor-XIV
23	Chinnar-XVIII	33	Kanthalloor-XV
24	Chinnar-XIX	34	Kanthalloor-XVI
25	Chinnar-XX	35	Kanthalloor-XVII
26	Chinnar-XXI	36	Kanthalloor-XVIII
27	Chinnar-XXII	37	Kanthalloor-XIX
28	Chinnar-XXIII	38	Kanthalloor-XX
29	Chinnar-XXIV	39	Kanthalloor-XXI
30	Chinnar-XXV	40	Kanthalloor-XXII
31	Chinnar-XXVI	41	Kanthalloor-XXIII
32	Chinnar-XXVII	42	Kanthalloor-XXIV
33	Chinnar-XXVIII	43	Kanthalloor-XXV
34	Chinnar-XXIX	44	Kanthalloor-XXVI
35	Chinnar-XXX	45	Kanthalloor-XXVII
36	Chinnar-XXXI	46	Kanthalloor-XXVIII
37	Chinnar-XXXII	47	Kanthalloor-XXIX
38	Chinnar-XXXIII	48	Kanthalloor-XXX
39	Chinnar-XXXIV	49	Kanthalloor-XXXI
40	Chinnar-XXXV	50	Kanthalloor-XXXII
41	Chinnar-XXXVI	51	Kanthalloor-XXXIII
42	Chinnar-XXXVII	52	Kanthalloor-XXXIV
43	Chinnar-XXXVIII	53	Kanthalloor-XXXV
44	Chinnar-XXXIX	54	Kanthalloor-XXXVI
45	Chinnar-XL	55	Kanthalloor-XXXVII
46	Chinnar-XLI	56	Kanthalloor-XXXVIII
47	Chinnar-XLII	57	Kanthalloor-XXXIX
48	Chinnar-XLIII	58	Kanthalloor-XL
49	Chinnar-XLIV	59	Kanthalloor-XLI
50	Chinnar-XLV	60	Kanthalloor-XLII
51	Chinnar-XLVI	61	Kanthalloor-XLIII
52	Chinnar-XLVII	62	Kanthalloor-XLIV
53	Chinnar-XLVIII	63	Kanthalloor-XLV
54	Chinnar-XLIX	64	Kanthalloor-XLVI
55	Chinnar-L	65	Kanthalloor-XLVII
56	Chinnar-LI	66	Kanthalloor-XLVIII
57	Chinnar-LII	67	Kanthalloor-XLIX
58	Chinnar-LIII	68	Kanthalloor-L
59	Chinnar-LIV	69	Kanthalloor-LI
60	Chinnar-LV	70	Kanthalloor-LII
61	Chinnar-LVI	71	Kanthalloor-LIII
62	Chinnar-LVII	72	Kanthalloor-LIV
63	Chinnar-LVIII	73	Kanthalloor-LV
64	Chinnar-LIX	74	Kanthalloor-LVI
65	Chinnar-LX	75	Kanthalloor-LVII
66	Chinnar-LXI	76	Kanthalloor-LVIII
67	Chinnar-LXII	77	Kanthalloor-LIX
68	Chinnar-LXIII	78	Kanthalloor-LX
69	Chinnar-LXIV	79	Kanthalloor-LXI
70	Chinnar-LXV	80	Kanthalloor-LXII
71	Chinnar-LXVI	81	Kanthalloor-LXIII
72	Chinnar-LXVII	82	Kanthalloor-LXIV
73	Chinnar-LXVIII	83	Kanthalloor-LXV
74	Chinnar-LXIX	84	Kanthalloor-LXVI
75	Chinnar-LXX	85	Kanthalloor-LXVII
76	Chinnar-LXXI	86	Kanthalloor-LXVIII
77	Chinnar-LXXII	87	Kanthalloor-LXIX
78	Chinnar-LXXIII	88	Kanthalloor-LXX
79	Chinnar-LXXIV	89	Kanthalloor-LXXI
80	Chinnar-LXXV	90	Kanthalloor-LXXII
81	Chinnar-LXXVI	91	Kanthalloor-LXXIII
82	Chinnar-LXXVII	92	Kanthalloor-LXXIV
83	Chinnar-LXXVIII	93	Kanthalloor-LXXV
84	Chinnar-LXXIX	94	Kanthalloor-LXXVI
85	Chinnar-LXXX	95	Kanthalloor-LXXVII
86	Chinnar-LXXXI	96	Kanthalloor-LXXVIII
87	Chinnar-LXXXII	97	Kanthalloor-LXXIX
88	Chinnar-LXXXIII	98	Kanthalloor-LXXX
89	Chinnar-LXXXIV	99	Kanthalloor-LXXXI
90	Chinnar-LXXXV	100	Kanthalloor-LXXXII
91	Chinnar-LXXXVI	101	Kanthalloor-LXXXIII
92	Chinnar-LXXXVII	102	Kanthalloor-LXXXIV
93	Chinnar-LXXXVIII	103	Kanthalloor-LXXXV
94	Chinnar-LXXXIX	104	Kanthalloor-LXXXVI
95	Chinnar-XC	105	Kanthalloor-LXXXVII
96	Chinnar-XCI	106	Kanthalloor-LXXXVIII
97	Chinnar-XCII	107	Kanthalloor-LXXXIX
98	Chinnar-XCIII	108	Kanthalloor-XC
99	Chinnar-XCIV	109	Kanthalloor-XCI
100	Chinnar-XCV	110	Kanthalloor-XCII
101	Chinnar-XCVI	111	Kanthalloor-XCIII
102	Chinnar-XCVII	112	Kanthalloor-XCIV
103	Chinnar-XCVIII	113	Kanthalloor-XCV
104	Chinnar-XCIX	114	Kanthalloor-XCVI
105	Chinnar-C	115	Kanthalloor-XCVII
106	Chinnar-CI	116	Kanthalloor-XCVIII
107	Chinnar-CII	117	Kanthalloor-XCIX
108	Chinnar-CIII	118	Kanthalloor-C
109	Chinnar-CIV	119	Kanthalloor-CI
110	Chinnar-CV	120	Kanthalloor-CII
111	Chinnar-CVI	121	Kanthalloor-CIII
112	Chinnar-CVII	122	Kanthalloor-CIV
113	Chinnar-CVIII	123	Kanthalloor-CV
114	Chinnar-CIX	124	Kanthalloor-CVI
115	Chinnar-CX	125	Kanthalloor-CVII
116	Chinnar-CXI	126	Kanthalloor-CVIII
117	Chinnar-CXII	127	Kanthalloor-CIX
118	Chinnar-CXIII	128	Kanthalloor-CX
119	Chinnar-CXIV	129	Kanthalloor-CXI
120	Chinnar-CXV	130	Kanthalloor-CXII
121	Chinnar-CXVI	131	Kanthalloor-CXIII
122	Chinnar-CXVII	132	Kanthalloor-CXIV
123	Chinnar-CXVIII	133	Kanthalloor-CXV
124	Chinnar-CXIX	134	Kanthalloor-CXVI
125	Chinnar-CXX	135	Kanthalloor-CXVII
126	Chinnar-CXXI	136	Kanthalloor-CXVIII
127	Chinnar-CXXII	137	Kanthalloor-CXIX
128	Chinnar-CXXIII	138	Kanthalloor-CXX
129	Chinnar-CXXIV	139	Kanthalloor-CXXI
130	Chinnar-CXXV	140	Kanthalloor-CXXII
131	Chinnar-CXXVI	141	Kanthalloor-CXXIII
132	Chinnar-CXXVII	142	Kanthalloor-CXXIV
133	Chinnar-CXXVIII	143	Kanthalloor-CXXV
134	Chinnar-CXXIX	144	Kanthalloor-CXXVI
135	Chinnar-CXXX	145	Kanthalloor-CXXVII
136	Chinnar-CXXXI	146	Kanthalloor-CXXVIII
137	Chinnar-CXXXII	147	Kanthalloor-CXXIX
138	Chinnar-CXXXIII	148	Kanthalloor-CXXX
139	Chinnar-CXXXIV	149	Kanthalloor-CXXXI
140	Chinnar-CXXXV	150	Kanthalloor-CXXXII
141	Chinnar-CXXXVI	151	Kanthalloor-CXXXIII
142	Chinnar-CXXXVII	152	Kanthalloor-CXXXIV
143	Chinnar-CXXXVIII	153	Kanthalloor-CXXXV
144	Chinnar-CXXXIX	154	Kanthalloor-CXXXVI
145	Chinnar-CXL	155	Kanthalloor-CXXXVII
146	Chinnar-CXLI	156	Kanthalloor-CXXXVIII
147	Chinnar-CXLII	157	Kanthalloor-CXXXIX
148	Chinnar-CXLIII	158	Kanthalloor-CXL
149	Chinnar-CXLIV	159	Kanthalloor-CXLI
150	Chinnar-CXLV	160	Kanthalloor-CXLII
151	Chinnar-CXLVI	161	Kanthalloor-CXLIII
152	Chinnar-CXLVII	162	Kanthalloor-CXLIV
153	Chinnar-CXLVIII	163	Kanthalloor-CXLV
154	Chinnar-CXLIX	164	Kanthalloor-CXLVI
155	Chinnar-CL	165	Kanthalloor-CXLVII
156	Chinnar-CLI	166	Kanthalloor-CXLVIII
157	Chinnar-CLII	167	Kanthalloor-CXLIX
158	Chinnar-CLIII	168	Kanthalloor-CL
159	Chinnar-CLIV	169	Kanthalloor-CLI
160	Chinnar-CLV	170	Kanthalloor-CLII
161	Chinnar-CLVI	171	Kanthalloor-CLIII
162	Chinnar-CLVII	172	Kanthalloor-CLIV
163	Chinnar-CLVIII	173	Kanthalloor-CLV
164	Chinnar-CLIX	174	Kanthalloor-CLVI
165	Chinnar-CLX	175	Kanthalloor-CLVII
166	Chinnar-CLXI	176	Kanthalloor-CLVIII
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171	Chinnar-CLXVI	181	Kanthalloor-CLXIII
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174	Chinnar-CLXIX	184	Kanthalloor-CLXVI
175	Chinnar-CLXX	185	Kanthalloor-CLXVII
176	Chinnar-CLXXI	186	Kanthalloor-CLXVIII
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179	Chinnar-CLXXIV	189	Kanthalloor-CLXXI
180	Chinnar-CLXXV	190	Kanthalloor-CLXXII
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182	Chinnar-CLXXVII	192	Kanthalloor-CLXXIV
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184	Chinnar-CLXXIX	194	Kanthalloor-CLXXVI
185	Chinnar-CLXXX	195	Kanthalloor-CLXXVII
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196	Chinnar-CXCI	206	Kanthalloor-CLXXXVIII
197	Chinnar-CXCII	207	Kanthalloor-CLXXXIX
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199	Chinnar-CXCIV	209	Kanthalloor-CXCI
200	Chinnar-CXCV	210	Kanthalloor-CXCII
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203	Chinnar-CXCVIII	213	Kanthalloor-CXCV
204	Chinnar-CXCIX	214	Kanthalloor-CXCVI
205	Chinnar-CC	215	Kanthalloor-CXCVII
206	Chinnar-CCI	216	Kanthalloor-CXCVIII
207	Chinnar-CCII	217	Kanthalloor-CXCIX
208	Chinnar-CCIII	218	Kanthalloor-CC
209	Chinnar-CCIV	219	Kanthalloor-CCI
210	Chinnar-CCV	220	Kanthalloor-CCII
211	Chinnar-CCVI	221	Kanthalloor-CCIII
212	Chinnar-CCVII	222	Kanthalloor-CCIV
213	Chinnar-CCVIII	223	Kanthalloor-CCV
214	Chinnar-CCIX	224	Kanthalloor-CCVI
215	Chinnar-CCX	225	Kanthalloor-CCVII
216	Chinnar-CCXI	226	Kanthalloor-CCVIII
217	Chinnar-CCXII	227	Kanthalloor-CCIX
218	Chinnar-CCXIII	228	Kanthalloor-CCX
219	Chinnar-CCXIV	229	Kanthalloor-CCXI
220	Chinnar-CCXV	230	Kanthalloor-CCXII
221	Chinnar-CCXVI	231	Kanthalloor-CCXIII
222	Chinnar-CCXVII	232	Kanthalloor-CCXIV
223	Chinnar-CCXVIII	233	Kanthalloor-CCXV
224	Chinnar-CCXIX	234	Kanthalloor-CCXVI
225	Chinnar-CCXX	235	Kanthalloor-CCXVII
226	Chinnar-CCXXI	236	Kanthalloor-CCXVIII
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228	Chinnar-CCXXIII	238	Kanthalloor-CCXX
229	Chinnar-CCXXIV	239	Kanthalloor-CCXXI
230	Chinnar-CCXXV	240	Kanthalloor-CCXXII
231	Chinnar-CCXXVI	241	Kanthalloor-CCXXIII
232	Chinnar-CCXXVII	242	Kanthalloor-CCXXIV
233	Chinnar-CCXXVIII	243	Kanthalloor-CCXXV
234	Chinnar-CCXXIX	244	Kanthalloor-CCXXVI
235	Chinnar-CCXXX	245	Kanthalloor-CCXXVII
236	Chinnar-CCXXXI	246	Kanthalloor-CCXXVIII
237	Chinnar-CCXXXII	247	Kanthalloor-CCXXIX
238	Chinnar-CCXXXIII	248	Kanthalloor-CCXXX
239	Chinnar-CCXXXIV	249	Kanthalloor-CCXXXI
240	Chinnar-CCXXXV	250	Kanthalloor-CCXXXII
241	Chinnar-CCXXXVI	251	Kanthalloor-CCXXXIII
242	Chinnar-CCXXXVII	252	Kanthalloor-CCXXXIV
243	Chinnar-CCXXXVIII	253	Kanthalloor-CCXXXV
244	Chinnar-CCXXXIX	254	Kanthalloor-CCXXXVI
245	Chinnar-CCXL	255	Kanthalloor-CCXXXVII
246	Chinnar-CCXLI	256	Kanthalloor-CCXXXVIII
247	Chinnar-CCXLII	257	Kanthalloor-CCXXXIX
248	Chinnar-CCXLIII	258	Kanthalloor-CCXL
249	Chinnar-CCXLIV	259	Kanthalloor-CCXLI
250	Chinnar-CCXLV	260	Kanthalloor-CCXLII
251	Chinnar-CCXLVI	261	Kanthalloor-CCXLIII
252	Chinnar-CCXLVII	262	Kanthalloor-CCXLIV
253	Chinnar-CCXLVIII	263	Kanthalloor-CCXLV
254	Chinnar-CCXLIX	264	Kanthalloor-CCXLVI
255	Chinnar-CCL	265	Kanthalloor-CCXLVII
256	Chinnar-CCLI	266	Kanthalloor-CCXLVIII
257	Chinnar-CCLII	267	Kanthalloor-CCXLIX
258	Chinnar-CCLIII	268	Kanthalloor-CCL
259	Chinnar-CCLIV	269	Kanthalloor-CCLI
260	Chinnar-CCLV	270	Kanthalloor-CCLII
261	Chinnar-CCLVI	271	Kanthalloor-CCLIII
262	Chinnar-CCLVII	272	Kanthalloor-CCLIV
263	Chinnar-CCLVIII	273	Kanthalloor-CCLV
264	Chinnar-CCLIX	274	Kanthalloor-CCLVI
265	Chinnar-CCLX	275	Kanthalloor-CCLVII
266	Chinnar-CCLXI	276	Kanthalloor-CCLVIII
267	Chinnar-CCLXII	277	Kanthalloor-CCLIX
268	Chinnar-CCLXIII	278	Kanthalloor-CCLX
269	Chinnar-CCLXIV	279	Kanthalloor-CCLXI
270	Chinnar-CCLXV	280	Kanthalloor-CCLXII
271	Chinnar-CCLXVI	281	Kanthalloor-CCLXIII
272	Chinnar-CCLXVII	282	Kanthalloor-CCLXIV
273	Chinnar-CCLXVIII	283	Kanthalloor-CCLXV
274	Chinnar-CCLXIX	284	Kanthalloor-CCLXVI
275	Chinnar-CCLXX	285	Kanthalloor-CCLXVII
276	Chinnar-CCLXXI	286	Kanthalloor-CCLXVIII
277	Chinnar-CCLXXII	287	Kanthalloor-CCLXIX
278	Chinnar-CCLXXIII	288	Kanthalloor-CCLXX
279	Chinnar-CCLXXIV	289	Kanthalloor-CCLXXI
280	Chinnar-CCLXXV	290	Kanthalloor-CCLXXII
281	Chinnar-CCLXXVI	291	Kanthalloor-CCLXXIII
282	Chinnar-CCLXXVII	292	Kanthalloor-CCLXXIV
283	Chinnar-CCLXXVIII	293	Kanthalloor-CCLXXV
284	Chinnar-CCLXXIX	294	Kanthalloor-CCLXXVI
285	Chinnar-CCLXXX	295	Kanthalloor-CCLXXVII
286	Chinnar-CCLXXXI	296	Kanthalloor-CCLXXVIII
287	Chinnar-CCLXXXII	297	Kanthalloor-CCLXXIX
288	Chinnar-CCLXXXIII	298	Kanthalloor-CCLXXX
289	Chinnar-CCLXXXIV	299	Kanthalloor-CCLXXXI
290	Chinnar-CCLXXXV	300	Kanthalloor-CCLXXXII
291	Chinnar-CCLXXXVI	301	Kanthalloor-CCLXXXIII
292	Chinnar-CCLXXXVII	302	Kanthalloor-CCLXXXIV
293	Chinnar-CCLXXXVIII	303	Kanthalloor-CCLXXXV
294	Chinnar-CCLXXXIX	304	Kanthalloor-CCLXXXVI
295	Chinnar-CCXC	305	Kanthalloor-CCLXXXVII
296	Chinnar-CCXCI	306	Kanthalloor-CCLXXXVIII
297	Chinnar-CCXCII	307	Kanthalloor-CCLXXXIX
298	Chinnar-CCXCIII	308	Kanthalloor-CCXC
299	Chinnar-CCXCIV	309	Kanthalloor-CCXCI
300	Chinnar-CCXCV	310	Kanthalloor-CCXCII
301	Chinnar-CCXCVI	311	Kanthalloor-CCXCIII
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303	Chinnar-CCXCVIII	313	Kanthalloor-CCXCV
304	Chinnar-CCXCIX	314	Kanthalloor-CCXCVI
305	Chinnar-CCC	315	Kanthalloor-CCXCVII
306	Chinnar-CCCI	316	Kanthalloor-CCXCVIII
307	Chinnar-CCCII	317	Kanthalloor-CCXCIX
308	Chinnar-CCCIII	318	Kanthalloor-CCC
309	Chinnar-CCCIV	319	Kanthalloor-CCCI
310	Chinnar-CCCV	320	Kanthalloor-CCCII
311	Chinnar-CCCVI	321	Kanthalloor-CCCIII
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313	Chinnar-CCCVIII	323	Kanthalloor-CCCV
314	Chinnar-CCCIX	324	Kanthalloor-CCCVI
315	Chinnar-CCCX	325	Kanthalloor-CCCVII
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318	Chinnar-CCCXIII	328	Kanthalloor-CCCX
319	Chinnar-CCCXIV	329	Kanthalloor-CCCXI
320	Chinnar-CCCXV	330	Kanthalloor-CCCXII
321	Chinnar-CCCXVI	331	Kanthalloor-CCCXIII
322	Chinnar-CCCXVII	332	Kanthalloor-CCCXIV
323	Chinnar-CCCXVIII	333	Kanthalloor-CCCXV
324	Chinnar-CCCXIX	334	Kanthalloor-CCCXVI
325	Chinnar-CCCXX	335	Kanthalloor-CCCXVII
326	Chinnar-CCCXXI	336	Kanthalloor-CCCXVIII
327	Chinnar-CCCXXII	337	Kanthalloor-CCCXIX
328	Chinnar-CCCXXIII	338	Kanthalloor-CCCXX
329	Chinnar-CCCXXIV	339	Kanthalloor-CCCXXI
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331	Chinnar-CCCXXVI	341	Kanthalloor-CCCXXIII
332	Chinnar-CCCXXVII	342	Kanthalloor-CCCXXIV
333	Chinnar-CCCXXVIII	343	Kanthalloor-CCCXXV
334	Chinnar-CCCXXIX	344	Kanthalloor-CCCXXVI
335	Chinnar-CCCXXX	345	Kanthalloor-CCCXXVII
336	Chinnar-CCCXXXI	346	Kanthalloor-CCCXXVIII
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338	Chinnar-CCCXXXIII	348	Kanthalloor-CCCXXX
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340	Chinnar-CCCXXXV	350	Kanthalloor-CCCXXXII
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343	Chinnar-CCCXXXVIII	353	Kanthalloor-CCCXXXV
344	Chinnar-CCCXXXIX	354	Kanthalloor-CCCXXXVI
345	Chinnar-CCCXL	355	Kanthalloor-CCCXXXVII
346	Chinnar-CCCXLI	356	Kanthalloor-CCCXXXVIII
347	Chinnar-CCCXLII	357	Kanthalloor-CCCXXXIX
348	Chinnar-CCCXLIII	358	Kanthalloor-CCCXL
349	Chinnar-CCCXLIV	359	Kanthalloor-CCCXLI
350	Chinnar-CCCXLV	360	Kanthalloor-CCCXLII
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353	Chinnar-CCCXLVIII	363	Kanthalloor-CCCXLV
354	Chinnar-CCCXLIX	364	Kanthalloor-CCCXLVI
355	Chinnar-CCCL	365	Kanthalloor-CCCXLVII
356	Chinnar-CCCLI	366	Kanthalloor-CCCXLVIII
357	Chinnar-CCCLII	367	Kanthalloor-CCCXLIX
358	Chinnar-CCCLIII	368	Kanthalloor-CCCL
359	Chinnar-CCCLIV	369	Kanthalloor-CCCLI
360	Chinnar-CCCLV	370	Kanthalloor-CCCLII
361	Chinnar-CCCLVI	371	Kanthalloor-CCCLIII
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363	Chinnar-CCCLVIII	373	Kanthalloor-CCCLV
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365	Chinnar-CCCLX	375	Kanthalloor-CCCLVII
366	Chinnar-CCCLXI	376	Kanthalloor-CCCLVIII
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371	Chinnar-CCCLXVI	381	Kanthalloor-CCCLXIII
372	Chinnar-CCCLXVII	382	Kanthalloor-CCCLXIV
373	Chinnar-CCCLXVIII	383	Kanthalloor-CCCLXV
374	Chinnar-CCCLXIX	384	Kanthalloor-CCCLXVI
375	Chinnar-CCCLXX	385	Kanthalloor-CCCLXVII
376	Chinnar-CCCLXXI	386	Kanthalloor-CCCLXVIII
377	Chinnar-CCCLXXII	387	Kanthalloor-CCCLXIX
378	Chinnar-CCCLXXIII	388	Kanthalloor-CCCLXX
379	Chinnar-CCCLXXIV	389	Kanthalloor-CCCLXXI
380	Chinnar-CCCLXXV	390	Kanthalloor-CCCLXXII
381	Chinnar-CCCLXXVI	391	Kanthalloor-CCCLXXIII
382	Chinnar-CCCLXXVII	392	Kanthalloor-CCCLXXIV
383	Chinnar-CCCLXXVIII	393	Kanthalloor-CCCLXXV
384	Chinnar-CCCLXXIX	394	Kanthalloor-CCCLXXVI
385	Chinnar-CCCLXXX	395	Kanthalloor-CCCLXXVII
386	Chinnar-CCCLXXXI	396	Kanthalloor-CCCLXXVIII
387	Chinnar-CCCLXXXII	397	Kanthalloor-CCCLXXIX
388	Chinnar-CCCLXXXIII	398	Kanthalloor-CCCLXXX
389	Chinnar-CCCLXXXIV	399	Kanthalloor-CCCLXXXI
390	Chinnar-CCCLXXXV	400	Kanthalloor-CCCLXXXII
391	Chinnar-CCCLXXXVI	401	Kanthalloor-CCCLXXXIII
392	Chinnar-CCCLXXXVII	402	Kanthalloor-CCCLXXXIV
393	Chinnar-CCCLXXXVIII	403	Kanthalloor-CCCLXXXV
394	Chinnar-CCCLXXXIX	404	Kanthalloor-CCCLXXXVI
395	Chinnar-CCCX

NILGIRI BIOSPHERE RESERVE AREA

VEGETATION AND LAND USE

Western Sheet

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NILGIRI BIOSPHERE RESERVE AREA

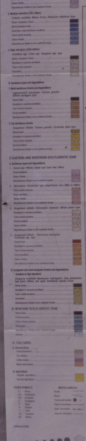
VEGETATION AND LAND USE

Southern Sheet

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NILGIRI BIOSPHERE RESERVE AREA

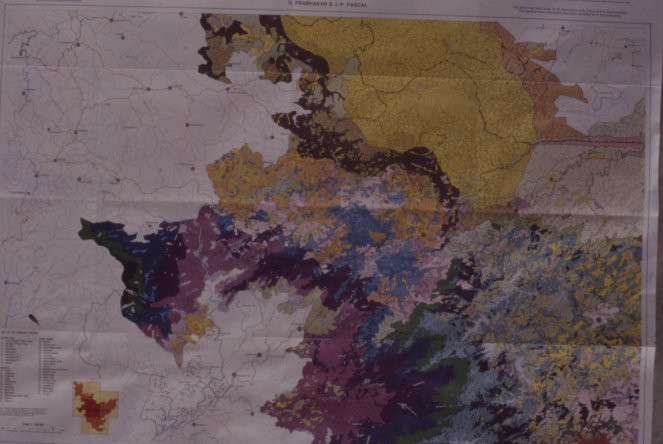
VEGETATION AND LAND USE

Western Sheet

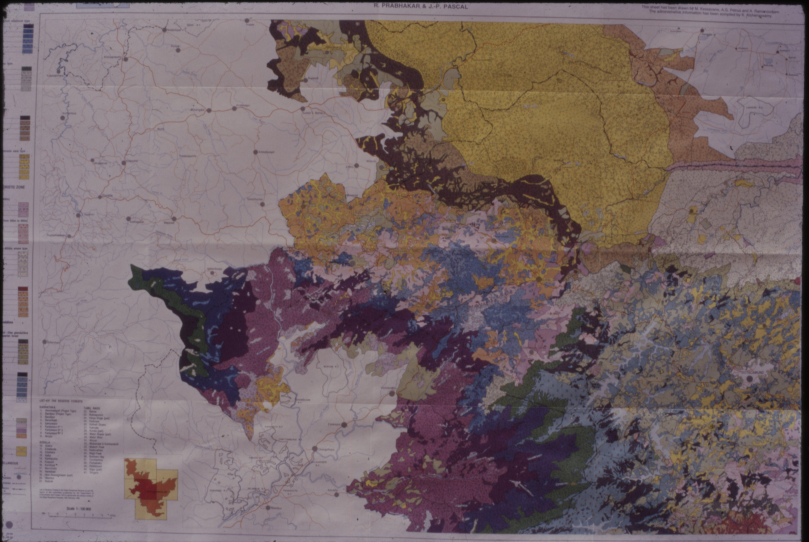
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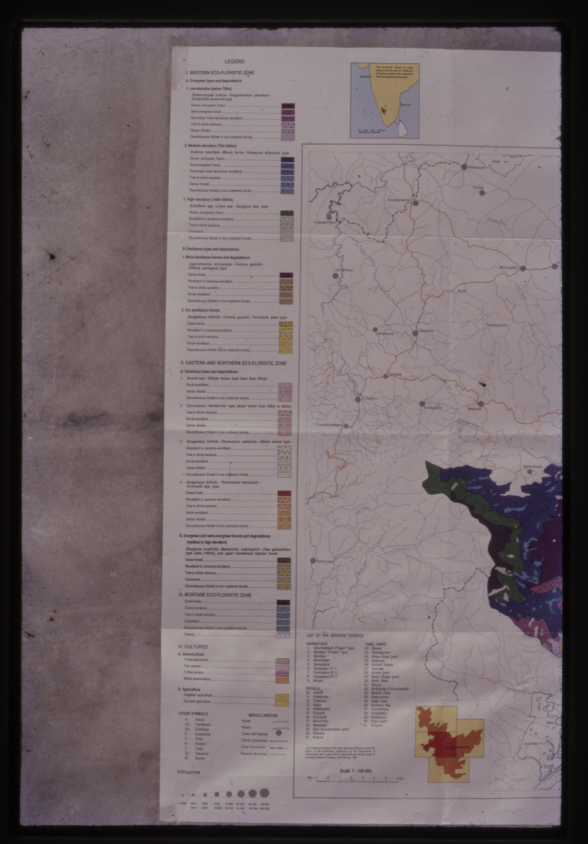
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M. PRABHAKAR & J.-P. PASCAL




LEGEND
I. WESTERN ECO-FLORISTIC ZONE
A. Ever-green types and degradations
1. Low elevation (below 700m)
Elaeocarpaceae trilocu- Drypetodendron glaucescens - Diospyros bipindensis type
Dense forest
Semi-evergreen forest
Secondary moist deciduous woodland
Tree & shrub savanna
Dense thicket
Discontinuous thicket in low scattered shrubs
2. Medium elevation (700-1600m)
Cathedra stolonifera - Mimusops bremei - Pellegriniod. villiaflorae type
Dense evergreen forest
Semi-evergreen forest
Secondary moist deciduous woodland
Tree & shrub savanna
Dense thicket
Discontinuous thicket in low scattered shrubs
3. High elevation (1400-1800m)
Brachythrix sepp - Lindaui sepp - Eryngium type type
Dense evergreen forest
Woodland to savanna woodland
Tree & shrub savanna
Grassland
Discontinuous thicket in low scattered shrubs
B. Deciduous types and degradations
1. Moist deciduous forests and degradations
Lagerstroemietea - schnizleinian - Trichoia grandis - Diflorata pentagyne type
Dense forest
Woodland to savanna woodland
Tree & shrub savanna
Scrub woodland
Discontinuous thicket in low scattered shrubs
2. Dry deciduous forests
Anogeissus leiocarpa - Trichoia grandis - Terminalia ivorensis type
Dense forest
Woodland to savanna woodland
Tree & shrub savanna
Scrub woodland
Discontinuous thicket in low scattered shrubs
II. EASTERN AND NORTHERN ECO-FLORISTIC ZONE
A. Deciduous types and degradations
1. Acacia ego - Albizia amara type (less than 500m)
Dense forest
Dense thicket
Discontinuous thicket in low scattered shrubs
2. Gymnosporia - Hombrichii type (ships below from 300m to 400m)
Tree & shrub savanna
Scrub woodland
Dense thicket
Discontinuous thicket in low scattered shrubs
3. Anogeissus leiocarpa - Chlorophora excelsa - Albizia zygia type
Woodland to savanna woodland
Tree & shrub savanna
Scrub woodland
Dense thicket
Discontinuous thicket in low scattered shrubs
4. Anogeissus leiocarpa - Pterocarpus mansuplum - Terminalia spp. type
Dense forest
Woodland to savanna woodland
Tree & shrub savanna
Scrub woodland
Dense thicket
Discontinuous thicket in low scattered shrubs
B. Evergreen and semi-evergreen forests and degradations (medium to high elevation)
Diospyros crassiflolia - Blomeyeria kaalmgrenii - Pine glaucescens type (below 1400m), and upper transitional riparian forest
Dense forest
Woodland to savanna woodland
Tree & shrub savanna
Grassland
Discontinuous thicket in low scattered shrubs
III. MONTANE ECO-FLORISTIC ZONE
Dense forest
Closed woodland
Tree & shrub savanna
Grassland
Discontinuous thicket in low scattered shrubs
Swamp
IV. CULTURES
A. Arboriculture
Forest plantation
Tree orchard
Coffee estate
Mixed arboriculture
B. Agriculture
Irrigated agriculture
Dry land agriculture
OTHER SYMBOLS
A - Kenya
Ca - Caribbean
Co - Colombia
Ec - Ecuador
F - Fiji
G - Guyana
H - Hawaii
M - Malaya
MISCELLANEOUS
Coast
Rivers
Towns and townships
District boundaries
Game boundaries
Research Structures
POPULATION
1 000 000 | 500 000 | 250 000 | 100 000 | 50 000 | 25 000 | 10 000
THE WESTERN ZONES OF LOWER GUINEA AND THE CAMEROON MOUNTAIN AS SEEN FROM SPACE
Scale 1 : 5 000 000
LIST OF THE MODERN FORESTS
KUMASI Dist.
1. Bonsakrupah (Ringer Type)
2. Bonsakrupah (Plain Type)
3. Bonsakrupah
4. Kumasi Forest
5. Kumasiview W. 2
6. Kumasiview W. 3
7. Kumasiview W. 4
8. Kumasiview W. 5
KUMASI Dist.
9. Kumasi
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16. Nyan Nkwanoasuman (part)
17. Nyan
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18. Damale
19. Damale (part)
20. Damale Range (part)
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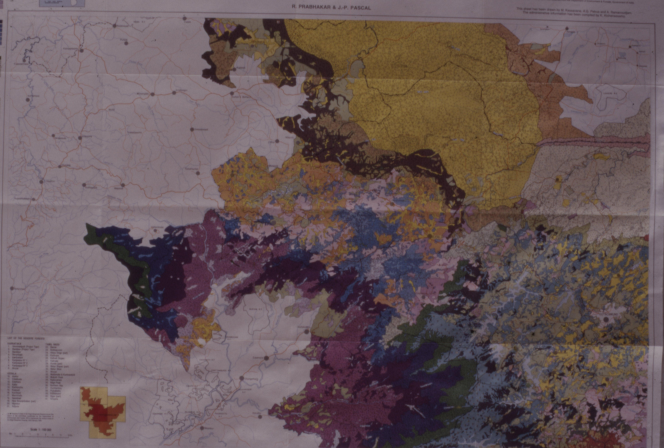
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VEGETATION AND LAND USE

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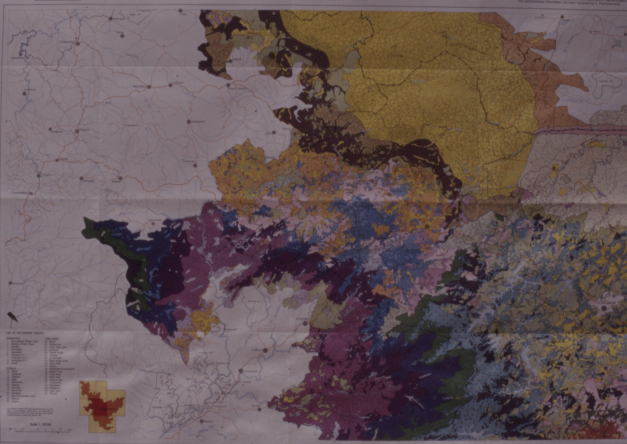
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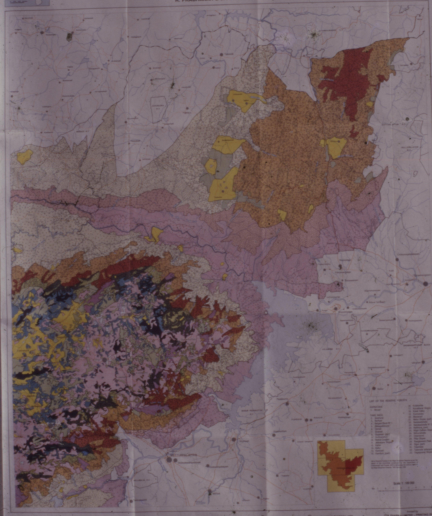
NILGIRI BIOSPHERE RESERVE AREA

VEGETATION AND LAND USE

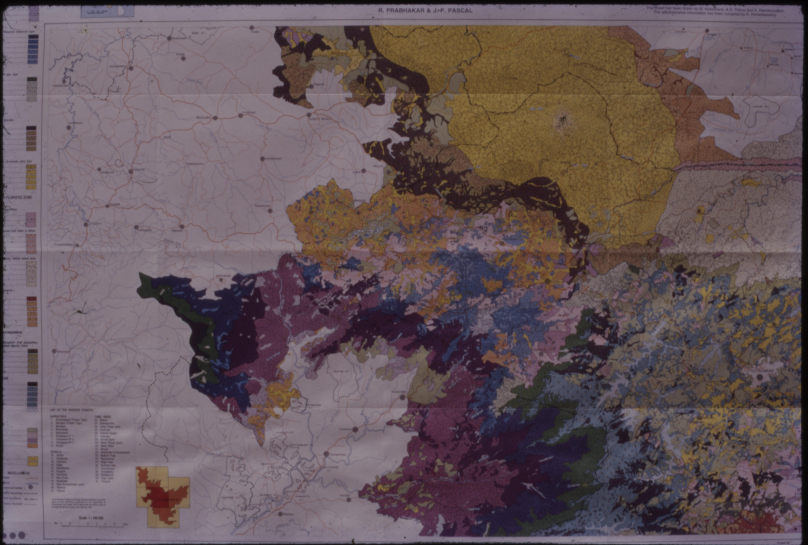
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