

A STUDY OF THE VEGETATION OF LOHARGAL AND ITS NEIGHBOURHOOD

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ABSTRACT

The paper gives an account of the vegetation of Lohargal and its neighbourhood in Rajasthan. The various species met with the enumerated. *Abutilon hirtum* G. Don, *Trigonella polycerata* Linn., *Ludwigia prostrata* Roxb., *Galium asperifolium* Wall., *Oldenlandia herbacea* Linn., *Richardia braziliensis* Gomez., *Fergusonia tetracarpa* Baill., *Carthamus oxyacantha* Bieb., *Conyza ambigua* DC., *Eupatorium conyzoides* Vahl, *Grangea maderaspatana* Poir., *Pulicaria foliolosa* DC., *Synedrella nodiflora* Gaertn., *Limnophila heterophylla* Benth., *Verbascum thapsus* Linn., *Veronica agrestis* Linn., *Verbena bipinnatifida* Nutt., *Leucas nutans* Spreng., and *Villebrunea frutescens* Blume appear to have not been previously recorded from Rajasthan.

The Aravalli ranges in early geological times extended from the Deccan to nearly the northern extremity of the country. Today this ancient mountain chain is represented by a few weatherworn and disconnected hills subjected to a high degree of erosion. Nevertheless, they form a conspicuous feature of Rajasthan. The necessity for an intensive floristic study of the various parts of this ancient mountain chain was stressed in an earlier communication (Nair & Kanodia, 1959). The present study deals with the vegetation of Lohargal and its surrounding places covering an area of 64 square miles.

The earliest attempt to study the vegetation of the region was that of Ratnam (1951) who described the rainy season flora. But his valuable collections were either damaged or destroyed. While on the staff of the Department of Botany, Birla College, Pilani, the senior author undertook a study of the vegetation of the area. In order to get a preliminary understanding of the seasonal flora, visits were made immediately after the rainy season (September), in winter (December) and towards the close of spring (March), in 1960. The herbarium sheets are deposited in the herbarium of Botanical Survey of India, Northern Circle, Dehra Dun.

TOPOGRAPHY AND PHYSICAL FEATURES

Lohargal is situated in Jaipur division of the north-eastern part of Rajasthan. The place is approachable by jeepable roads from two stations on the Western Railway, Nawalgarh and Sikar which are about 19 and 22 miles respectively from Lohargal. The area consists of a series of hills, belonging to the Aravalli system, the highest of which is a little more than 300 metres. They represent an ancient crystalline complex with several minerals the most significant of them being copper, mica, quartz, and iron. As in several hills of Rajasthan the chief physiographic factor is the gully erosion. The flow of rain water makes small channels in which the rocky substratum is exposed. Due to erosion the surface of the hills remain rocky and bouldery with deposits of

sand in crevices and depressions. Such depressions and crevices often support herbaceous plants.

There are few rain-fed streams the banks of which form a sort of ravines. There are several temporary ponds in the plains surrounding the hills. They contain water from July to December. At the foot of the hills as well as in the plains are present a large number of sand dunes of three categories such as rippled dunes, dunes made of loose sand but without ripples (these are at the foot of the hills) and stabilized dunes.

CLIMATE

No data directly connected with Lohargal is available. What is given here is based on the meteorological observations made at Sikar. The climate like other parts of north-eastern Rajasthan is generally of the semi-arid type. The highest temperature recorded during the period 1955-1960 is 42°C. in May and the lowest 4°C. in January. Table I gives the mean monthly maximum and minimum temperature.

The rainfall fluctuates widely from year to year being as low as three-fourths or as high as one and a half times the mean figure. Table I gives the annual rainfall as well as the mean monthly rainfall. It is significant that there is rain in every month.

SOIL

The soil in sandy areas is brownish or yellow in colour with very little admixture of clay and humus. Near villages the soil is very rich. In the hills the soil supporting plant growth consists of small pieces of gravel and rock. According to Ratnam (1951) the soil is on the alkaline side.

BIOTIC FACTORS

The biotic factors disturbing the vegetation are the same as in other hilly parts of Rajasthan, namely the grazing and browsing by sheep, cattle, hares and other mammals, the felling of trees and bushes and removal

of ground vegetation by man. These factors exercise a devastating effect on the vegetation. Near human habitation a large number of plants are cultivated.

VEGETATION

In loose sandy soil the pioneers are *Aerva pseudomentosa*, *A. javanica*, *Boerhaavia diffusa*, *Indigofera* sp., etc. *Leptadenia pyrotechnica* and *Calligonum polygonoides* were sometimes found on the sand dunes. The herbaceous pioneers include the rainy season plants such as *Gisekia pharnaceoides*, *Mollugo cerviana*, *Tribulus terrestris*, *Cenchrus* sp. etc.

The stabilized dunes support a shrubby vegetation comprising *Capparis decidua*, *Balanites aegyptiaca*, *Securinega leucopyrus*, *Lycium europaeum*, *Zizyphus* sp., *Clerodendrum phlomidis* etc. Under the shade

afforded by these plants grow herbaceous plants such as species of *Commelina*, *Sida veronicaefolia*, *Vernonia cinerea*, *Aristolochia bracteata*, *Pupalia lappacea*, *Nothosaerua brachiata* etc. and bryophytes such as *Riccia* and mosses during the rainy season. The common climbers among the bushes are *Ipomoea pilosa*, *Merua arenaria*, *Pergularia daemia*, *Momordica balsamina* and *Coccinia cordifolia*.

The chief constituents of the vegetation in the stable plain ground are *Prosopis spicigera*, *Capparis decidua*, *Balanites aegyptiaca*, *Acacia* sp. etc. After rainy season (September) the ground flora is rich in herbaceous vegetation. This includes *Boerhaavia diffusa*, *Tribulus terrestris*, *Borreria hispida*, *Corchorus* sp., *Achyranthes aspera*, *Indigofera linifolia*, *Alysicarpus homus*, species of *Polygala* and grasses such as species of *Cenchrus*, *Perotis*, *Dactyloctenium*, *Panicum* etc. With the onset

TABLE I

Month		J	F	M	A	M	J	J	A	S	O	N	D	
Mean monthly temperature in °C.	Maximum	20.6	24.5	30.8	36.4	40.9	39.2	34.6	31.2	33.3	32.1	28.9	26.6	Mean yearly maximum temp. 31.5 °C
	Minimum	5.1	7.2	13.4	17.8	22.9	25.1	25.8	24.6	23.2	21.4	12.1	5.4	Mean yearly minimum temp. of 7 °C
Mean yearly temp. 24.3 °C														
Mean monthly rainfall in mm.		5	7.2	2.1	1.2	0.9	40.1	38.2	180.4	84.6	34.6	20.9	0.4	Annual rainfall 42.6 mm.

of winter all of them excepting a few hardy ones like *Indigofera tinctoria*, *Sida grewoides*, *Fagonia cretica* etc. die off and the ground gives a barren appearance. In March some of the spring and early summer plants could be noticed. *Tecomella undulata*, *Capparis decidua* etc. flower at this time and give a magnificent appearance to the area.

Around temporary ponds grow, luxuriantly, *Anogeissus sericea*, *Balanites aegyptiaca* and *Salvadora* sp. During rainy season *Ammannia baccifera*, *Eclipta prostrata*, *Bacopa monnieri*, *Alternanthera sessilis* etc. are seen on the water margin. When the ponds dry up *Glinus lotoides* and *Polygonum plebejum* make their appearance and cover the floor of the ponds.

In contrast to the vegetation of the plains that in the hills is strikingly different. It is both dense and abundant in the number of species and is like any other hilly region of Rajasthan as for example Jaipur (see also Ratnam, 1951). The richness of the flora can be attributed to the rainfall. According to Ratnam the vegetation is tending towards a climax of deciduous type but is disturbed climax at present.

In the valleys grow species of *Phoenix*. Plants characteristic of moist climate like the jack tree are cultivated at places.

The vegetation shows a distinct elevational zonation. At the foot of the hills the characteristic plants are *Adhatoda vasica* and *Tephrosia purpurea*. *Adhatoda* drops out at the middle while *Tephrosia* continues up to the top. In the middle *Zizyphus* sp., *Rhus mysorensis*, *Balanites aegyptiaca* etc. become dominant. In the deeper slopes are found clumps of *Euphorbia nivulia*. At the top species of *Bauhinia*, *Boswellia serrata*, *Holoptelia integrifolia* etc. are characteristic.

LIST OF PLANTS

Plants mentioned by Ratnam (1951) are indicated by an asterisk and new records for Rajasthan by one dagger.

ANNONACEAE

- *1. *ANNONA SQUAMOSA* Linn. Cultivated.

MENISPERMACEAE

2. *TINOSPORA CORDIFOLIA* Miers. Flowers not seen.

PAPAVERACEAE

- *3. ARGEMONE MEXICANA Linn. Flowers from December to March. *N. C. Nair* 2121, 2189.

- *4. FUMARIA PARVIFLORA Lamk.

In moist places. Flowers during February and March. Ratnam (1951) reports this plant to be present in October which is an unusual time. *N. C. Nair* 1037, 1048.

CRUCIFERAE

- *5. FARSETIA JACQUEMONTII Hk. f. & T. Rare. Flowers September to December. *N. C. Nair* 1007, 2004.

6. CORONOPUS DIDYMUS (Linn.) Sm. (*Senebiera pinnatifida* DC.). Flowers during the cold season. *N. C. Nair* 1047.

The following species are cultivated:

7. BRASSICA OLERACEA var. CAPITATA Linn.

8. B. OLERACEA var. BOTRYTIS Linn.

9. B. CAMPESTRIS Linn.

10. B. JUNCEA Hk. f. & T.

One plant of this species was found in crevice of a rock as an escape. *N. C. Nair* 1028.

11. B. RAPA Linn.

12. RAPHANUS SATIVUS Linn.

13. IBERIS UMBELLATA Linn. In gardens during cold months.

14. CAPPARIS DECIDUA (Forsk.) Pax. Common in the plains. *N. C. Nair* 2190.

- *15. CLEOME VISCOSA Linn.

Frequent on borders of cultivated fields. Flowers during the rainy season. *N. C. Nair* 946, 2148.

- *16. C. GYNANDRA L. [*Gynandropis gynandra* (L.) Briq.; *G. pentaphylla* DC.]
Flowering time: September. *N. C. Nair* 2338.

17. MERUA ARENARIA Hk. f. & T. A climber among bushes. Flowers February, March. *N. C. Nair* 2110.

POLYGALACEAE

18. POLYGALA ABYSSINICA Fresen.

Wings petaloid, nerved; capsule emarginate, narrowly

winged; seeds hairy. Flowering time: February-March. *N. C. Nair* 997, 1003, 2055.

19. P. ERIOPTERA DC.

Wings obtuse with a green midrib; capsule not margined; seeds strophiolate. Flowering time: September-December. *N. C. Nair* 1050, 1089.

- †20. P. PERSICARIAEFOLIA DC.

Wings obtuse, reddish, petaloid; capsule margined; seeds strophiolate. *N. C. Nair* 2006.

CARYOPHYLLACEAE

- *21. POLYCARPAEA CORYMBOSA Lamk.

Common in the plains. Flowering time: rainy season. *N. C. Nair* 1069.

22. SPERGULA PENTANDRA Linn. Flowering time: December-March. *N. C. Nair* 1044, 2033.

- *23. SAPONARIA VACCARIA Linn. In gardens.

PORTULACACEAE

- *24. PORTULACA QUADRIFIDA Linn. *N. C. Nair* 2067.

- *25. P. OLERACEA Linn.

MALVACEAE

- †26. ABUTILON HIRTUM G. Don

A highly tomentose shrub, 1-1½ m. high. Flowering time: rainy season. *N. C. Nair* 1056, 1059, 2061.

27. A. BIDENTATUM Hochst. ex Rich.

Rare. Flowering time: rainy season. *N. C. Nair* 2059, 2076.

- *28. A. INDICUM G. Don, *N. C. Nair* 1002.

29. ABELMOSCHUS ESCULENTUS (Linn.) Moench. Cultivated.

- *30. HIBISCUS CANNABINUS Linn.

- *30. H. MICRANTHUS Linn.

32. H. ROSA-SINENSIS Linn. In the gardens.

- *33. PAVONIA ZEYLANICA Cav.

34. SIDA VERONICAEFOLIA Lamk.

As an undergrowth among bushes. Flowering time: rainy season. *N. C. Nair* 951.

35. *SIDA GREWIOIDES* G. P. & R.
A perennial undershrub. Frequent. Flowering time:
September-December. *N. C. Nair* 952.

*36. *S. CORDIFOLIA* Linn.

*37. *S. RHOMBIFOLIA* Mast.

*38. *S. ACUTA* Burm. f. (*S. carpinifolia* L. f.)

39. *SALMALIA MALABARICA* (DC.) Schott & Endl.
(*Bombax malabaricum* DC.) Cultivated.

STERCULIACEAE

40. *MELOCHIA CORCHORIFOLIA* Linn.
An erect herb with pinkish yellow flowers and globose
fruits; seeds angular. Rare. Flowering time: August-
December. *N. C. Nair* 1088.

41. *HELICTERES ISORA* L.
A shrub; young parts clothed with stellate hairs.
Only one plant was seen on the bank of a stream.
Flowering time: September. *N. C. Nair* 2098.

*42. *MELHANIA TOMENTOSA* Stocks.

TILIACEAE

43. *CORCHORUS TRIDENS* Linn. Flowering time: rainy
season. *N. C. Nair* 2038.

*44. *C. AESTUANS* Linn. non Forsk. (*C. acutangulus*
Lamk.)

45. *GREWIA FLAVESCENS* Juss.
Very rare. Flowering time: rainy season. *N. C. Nair*
2009.

*46. *G. TENAX* (Forsk.) Fiori. (*G. populifolia* Vahl)

47. *TRIUMFETTA RHOMBOIDEA* Jacq. Common in culti-
vated places. *N. C. Nair* 1006, 1067.

ZYGOPHYLLACEAE

48. *FAGONIA CRETICA* Linn. Flowers profuse in cold
season. *N. C. Nair* 2134.

49. *TRIBULUS TERRESTRIS* Linn. Common rainy
season weed of the plains. *N. C. Nair* 1012.

GERANIACEAE

50. *AVERRHOA CARAMBOLA* Linn. Cultivated.

*51. *OXALIS CORNICULATA* Linn.

*52. *O. ACETOSELLA* Linn.

53. *IMPATIENS* sp. *N. C. Nair* 2091.

RUTACEAE

54. *AEGLE MARMELOS* Correa.

55. *FERONA LIMONIA* (Linn.) Swingle, and various
varieties of

56. *CITRUS MEDICA* Linn. are cultivated.

SIMAROUBACEAE

57. *BALANITES AEGYPTIACA* (Linn.) Delile. Common.
N. C. Nair 2095.

58. *AILANTHUS EXCELSA* Roxb. Planted.

BURSERACEAE

59. *BOSWELLIA SERRATA* Roxb. A rare tree on the top
of the hills. *N. C. Nair* 2118.

MELIACEAE

60. *MELIA AZEDARACH* Linn. and

61. *AZADIRACHTA INDICA* Juss. are planted.

CELASTRACEAE

62. *GYMNOSPORIA SPINOSA* (Forsk.) Fiori. (*G. mon-
tana* Benth.) A common bush. *N. C. Nair* 943.

RHAMNACEAE

*63. *ZIZYPHUS MAURITIANA* Lamk. (*Z. jujuba* Lamk.
non Mill.)

64. *Z. NUMMULARIA* (Burm. f.) Wt. & Arn.
A common shrub in the plains. *N. C. Nair* 2187.

SAPINDACEAE

*65. *CARDIOSPERMUM HALICACABUM* Linn. Flowering
time: rainy season. *N. C. Nair* 2202.

66. *DODONAEA VISCOSA* Linn. Cultivated as a hedge
plant.

ANACARDIACEAE

67. *RHUS MYSORENSIS* Heyne.
Common on the stony slopes of the hills. Fruits edible. *N. C. Nair* 2108.

*68. *MANGIFERA INDICA* Linn.

LEGUMINOSAE

PAPILIONOIDEAE

*69. *ABRUS PRECATORIUS* Linn.

70. *ALYSICARPUS HOMOSUS* Edgew.
A low herb. Flowering time: rainy season. *N. C. Nair* 2047.

71. *CROTALARIA JUNCIA* Linn.
Near borders of fields; escape. *N. C. Nair* 1029, 1035.

72. *C. BURHIA* Ham.
Common in the plains. A good sand binder. *N. C. Nair* 925, 2150.

73. *C. MEDICAGINEA* Lamk. Common during the rainy season. *N. C. Nair* 2037.

74. *CYAMOPSIS TETRAGONOLOBA* (Linn.) Taub. (*C. psoraloides* DC.) Escape. *N. C. Nair* 2025.

75. *DESMODIUM GANGETICUM* (Linn.) DC. Flowering time: September. *N. C. Nair* 2097.

76. *D. ROTUNDIFOLIUM* Baker. Flowering time: September. *N. C. Nair* 1098.

77. *DALBERGIA SISSOO* Roxb. Planted.

78. *DOLICHOS LAB-LAB* Linn. Cultivated. *N. C. Nair* 2068.

79. *ERYTHRINA VARIEGATA* Linn. var. *ORIENTALIS* (Linn.) Merr. Cultivated.

*80. *INDIGOFERA GLABRA* Linn. (*I. pentaphylla* Murr.)

*81. *I. TRIGONELLOIDES* J. & S.

82. *I. LINIFOLIA* Retz. Flowering time: September. *N. C. Nair* 2056

83. *I. HOCHSTETTERI* Baker. Flowering time: September. *N. C. Nair* 2053.

84. *I. ANGULOSA* Edgew. Flowering time: September. *N. C. Nair* 2039.

85. *I. ASTRAGALINA* DC. Flowering time: September. *N. C. Nair* 2011.

86. *I. TINCTORIA* Linn. Flowering time: September. *N. C. Nair* 2012.

87. *I. LINNAEI* Ali. (*I. enneaphylla* Linn.) Flowering time: September. *N. C. Nair* 2357.

88. *MELILOTUS INDICA* (Linn.) All. Flowering time: September. *N. C. Nair* 2070, 2128.

89. *PHASEOLUS ACONITIFOLIUS* Jacq.
Flowering time: September. *N. C. Nair* 2057.

90. *P. MUNGO* Linn. var. *RADIATUS* Linn. and

91. *PISUM SATIVUM* Linn. are cultivated.

*92. *RHYNCHOSIA MINIMA* DC. Climber among the bushes. *N. C. Nair* 2358.

*93. *R. ARENARIA* Blatt. & Hallb.

94. *TEPHROSIA HAMILTONII* J. R. Drummond.
Stem erect branches zig-zag, angled, hairy; racemes extra axillary, flowers rose-coloured or scarlet, more than 8 mm. long, style not bearded. Flowering time: September. *N. C. Nair* 1060, 2060.

*95. *T. STRIGOSA* (Dalz.) Sant. & Maheshwari (*T. tenuis* Wall.)

*96. *T. PURPUREA* Pers.
A common shrub. Flowers bluish purple, less than 8 mm. long. Flowering time: September onwards. *N. C. Nair* 924, 2143.

†97. *TRIGONELLA POLYMERATA* Linn. In cultivated places. *N. C. Nair* 2126.

*98. *VIGNA* sp.

CAESALPINIOIDEAE

*99. *BAUHINIA* sp.

*100. *CASSIA KLEINII* Wt. & Arn.

101. *C. OBTUSA* Roxb. (*C. obovata* Collad.)
A low shrub. Rachis without glands. Pod flat; recurved with a ridge opposite each seed. Flowering time: December-March. *N. C. Nair* 944, 2146.

102. *C. OCCIDENTALIS* Linn. Rachis with a large gland at the base.

103. *C. MIMOSOIDES* Linn.

A prostrate herb. Flowers rainy season. *N. C. Nair* 1092, 2051, 2085.

*104. *CASSIA AURICULATA* Linn.

Leaf with glands in the middle of each pair of leaflets. Flowering time: September, March. *N. C. Nair* 1032.

*105. *CAESALPINIA CRISTA* Linn. (*C. bonducella* Flem.)

*106. Ratnam mentions *Caesalpinia grandiflora*. This appears to be a mistake. Probably the reference is to *C. grandis* in Wall. Cat. in which case it refers to *Mesoneurum cucullatum* Wt. & Arn. However, no plant was seen in the present study.

107. *DELONIX REGIA* Raf. (*Poinciana regia* Boj.) and

108. *TAMARINDUS INDICA* Linn. are cultivated.

MIMOSOIDEAE

109. *ACACIA SENEGAL* Willd.

Spines hooked, 3 at each node, flowers in pedunculate spikes yellow. *N. C. Nair* 2362.

110. *A. LEUCOPHLOEA* Willd.

Spines straight, 2 at each node. Heads in terminal panicles. Flowers white. Pod with grey tomentum. *N. C. Nair* 2365.

*111. *A. ARABICA* Willd.

Spines 2 at each node, straight, white. Flowers in globose head, yellow. Pod moniliform. *N. C. Nair* 2372.

112. *A. FARNESIANA* Willd.

Spines two at each node, straight. Flowers in globose head, fragrant. Pod fleshy. *N. C. Nair* 2372.

*113. Ratnam mentions *Acacia rubicaulis*. Probably he means *Mimosa rubicaulis* Lam.

114. *ALBIZIA LEBBECK* Benth. and

115. *PROSOPIS JILIFLORA* DC. are planted.

116. *P. SPICIGERA* Linn.

Common in the plains. Flowering time: March.

117. *MIMOSA HAMATA* Willd.

Flowering time: September onwards. *N. C. Nair* 2041.

ROSACEAE

118. *ROSA* sp. Cultivated.

COMBRETACEAE

119. *ANOGEISSUS SERICEA* Brand.

A large tree often found near temporary ponds. Flowering time: February & March. *N. C. Nair* 1025.

120. *QUISQUALIS INDICA* Linn.

*121. *TERMINALIA ARJUNA* Wt. & Arn. and

*122. *T. CHEBULA* are cultivated.

MYRTACEAE

123. *PSIDIUM GUAJAVA* Linn. and

124. *SYZYGium CUMINI* (Linn.). Skeels are cultivated.

LYTHRACEAE

125. *AMMANNIA BACCIFERA* Linn.

Common near water margins. Flowering period: September-December. *N. C. Nair* 2094.

126. *LAWSONIA INERMIS* Linn. and

127. *PUNICA GRANATUM* Linn. are cultivated.

ONAGRACEAE

†128. *LUDWIGIA PROSTRATA* Roxb.

A herb near water margin and semi-aquatic conditions. Flowers yellow. Flowering time: September-December. *N. C. Nair* 962.

CUCURBITACEAE

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*129. *COCCINIA CORDIFOLIA* (Linn.) Cogn., (*C. indica* Wt. & Arn). Flowering time: September. *N. C. Nair* 2127.

*130. *CITRULLUS VULGARIS* Schrad.*131. *CUCUMIS MELO* Linn.*132. *CUCURBITA MAXIMA* Duch.*133. *LUFFA ACUTANGULA* Roxb. and

134. *MOMORDICA CHARNTIA* Linn. are cultivated.

135. *CUCUMIS CALLOSUS* (Rottl.) Cogn., (*C. trigonus* Roxb.)

Flowering time: September. *N. C. Nair* 2020, 2027.

136. *MOMORDICA BALSAMINA* Linn.

Common climber in the bushes and fences. Bracts variegated. Flowers yellow. Fruit red. Flowering time: rainy season. *N. C. Nair* 1080, 1087.

147. *MOMORDICA DIOICA* Roxb.
Dioecious climbing herbs. Flowers solitary, yellowish.
Flowering time: September-December. *N. C. Nair* 1064.

138. *MELOTHRIA MADERASPATANA* Cogn.
Climber in the bushes. Flowering time: September.
N. C. Nair 1004.

FICOIDEAE

139. *GISEKIA PHARNACEOIDES* Linn.

140. *GLINUS LOTOIDES* Linn., (*Mollugo hirta* Thunb.)
In dried temporary ponds and ditches. Flowering
time: February & March. *N. C. Nair* 947, 2145.

141. *MOLLUGO CERVIANA* Ser.
In open sandy areas. Flowering season: September-
December. *N. C. Nair* 1052.

142. *M. NUDICAULIS* Lam. In sandy areas. Flowering
time: September. *N. C. Nair* 937.

*143. *TRIANTHEMA TRIQUETRA* Willd. ex Rottl.

CACTACEAE

144. *OPUNTIA DILLENII* Haw. (?) Flowers not seen.

UMBELLIFERAE

145. *FOENICULUM VULGARE* Mill.

146. *CORIANDRUM SATIVUM* Linn.

147. *TRACHYSpermum AMMI* (Linn.) Sprague, (*Carum
copticum* Benth.) and

148. *DAUCUS CAROTA* Linn. are cultivated.

RUBIACEAE

*149. *BORRERIA HISPIDA* (Linn.) K. Schum. (*Spermacoce
hispida* Linn.)

†150. *GALIAM ASPERIFOLIUM* Wall.
A prostrate herb in moist ground and slopes of hills.
Very rare. *N. C. Nair* 2147.

151. *STEPHEGYNE PARVIFOLIA* Korth., [*Mitragyna
parvifolia* (Roxb.) Korth.]

Only two plants were found in the compound of a
temple. Probably cultivated. *N. C. Nair* 2095.

152. *OLDENLANDIA ASPERA* DC. Rare. Flowering time:
September. *N. C. Nair* 938, 1051.

†153. *O. HERBACEA* (Linn.) Roxb. Very rare. Flowering
time: September. *N. C. Nair* 2044.

†154. *RICHARDIA BRAZILIENSIS* Gomez., (*Richardsonia
brasiliensis* Hayne.)

A low herb with bluish flowers. Only one plant was
collected. *N. C. Nair* 965.

†155. *FERGUSONIA TETRACARPA* Baill. Only one plant
was seen in September. *N. C. Nair* 966.

COMPOSITAE

156. *ARTEMISIA PARVIFLORA* Roxb.
Only a few plants in rocky places. Flowering time:
December. *N. C. Nair* 1070.

157. *A. SCOPARIA* Waldst.
Flowering time: December. Common in the plains.
N. C. Nair 927, 2040.

158. *BIDENS BITERNATA* (Lour) Merr. & Sherff. (*B.
pilosa* auct non Linn.) *B. wallichii* DC. An erect
herb in the crevices of rocks. *N. C. Nair* 2112.

159. *BLAINVILLEA ACMELLA* (Linn.) Philipson. *B.
latifolia* (Linn.) DC. ; *B. rhomboidea* Cass.

Common herb on the slopes. Leaves very variable.
Flowers during the rainy season. *N. C. Nair* 2030.

160. *BLUMEA OBLIQUA* (Linn.) Druce, (*B. amplexens
DC.*)

A slightly aromatic herb. Heads few, solitary, peduncul-
ed at the ends of branches, involucre bracts end in a
bristle, pappus pinkish, flowers during the cold season.
N. C. Nair 2152.

161. *B. LACERA* DC.

Strongly scented herbs. Heads many woolly, in pani-
cles. Corolla yellow. *N. C. Nair* 955.

162. *B. LACINIATA* DC.

A villous shrub. Leaves spatulate or pinnatifid.
Heads in corymbs. Corolla yellowish. Achene ribbed.
Flowers from March onwards. *N. C. Nair* 1013, 2014,
2023.

†163. *CARTHAMUS OXYACANTHA* Bieb.

A spiny bush with yellow heads. Rare. Flowering
time: March. *N. C. Nair* 2106.

†164. *CONYZA AMBIGUA* DC.

A hispidly villous herb with yellowish white flowers.
Leaves linear remotely serrate. Heads many in racemose
panicles. Flowering time: September, December &
March. *N. C. Nair* 2058, 2078, 2089, 2101.

165. *ECHINOPS ECHINATUS* Roxb.
A branched annual with pinnatifid and spinous leaves. Heads spinous, flowers purplish white. *N. C. Nair* 1062.
166. *ECLIPTA PROSTRATA* Linn. (*Eclipta alba* Hassk.)
A prostrate annual with small white heads. Flowers in rainy season. *N. C. Nair* 1073.
- *167. *ELEPHANTOPUS* sp.
168. *ERIGERON LINIFOLIUS* Willd. An erect herb. Flowers: September onwards. *N. C. Nair* 2122, 2093.
- †169. *EUPATORIUM CONYZOIDES* Vahl
Only three plants were seen. Flowering time: September. *N. C. Nair* 957, 970.
170. *GNAPHALIUM INDICUM* Linn.
A soft white woolly annual. Leaves linear or spatulate. Heads in leafy spikes, yellowish brown. Flowering time: March. *N. C. Nair* 1071, 2133, 2153.
- †171. *G. HYPOLEUCUM* DC.
A stout herb, leaves linear, semiamplexicaul, acuminate. Heads in corymbs, pale yellow. Flowering time: March. *N. C. Nair* 2077.
- †172. *G. LUTEOALBUM* Linn. An annual softly woolly weed. Heads in corymbs, golden yellow. *N. C. Nair* 2139.
- †173. *GRANGEA MADERASPATANA* Poir.
A prostrate herb in sandy localities. Leaves pinnatifid. Heads yellow. Pappus tubular with a fimbriate mouth. Flowering time: March. *N. C. Nair* 2115.
- *174. *HELIANTHUS* sp.
175. *LAGASCEA MOLLIS* Cav.
A grey pubescent herb with ovate acuminate leaves and white flowers in a solitary, head-like terminal leafy inflorescence. Pappus a fimbriate cup. Flowering time: September. This is an introduced American weed running wild in many parts of India. *N. C. Nair* 2001.
176. *LAUNAEA CHONDRILLOIDES* Hk. f.
A small perennial undershrub with rosulate radical leaves and sessile auricled cauline leaves. Flowering branches dichotomously branched, heads cylindrical. Achenes not winged. Flowering time: March. *N. C. Nair* 1038, 2063.
177. *PULICARIA ANGUSTIFOLIA* DC.
A slender branching annual less than 30 cm. high. Heads yellow; outer involucral bracts sub-foliaceous; ray flowers ligulate. Achenes sparsely hairy. Flowering time: September, March. *N. C. Nair* 996, 2015.
- †178. *P. FOLIOLOSA* DC.
An annual pubescent herb. Heads yellow; ray flowers tubular. Rare. Flowering time: March. *N. C. Nair* 2113.
179. *SONCHUS OLERACEUS* Linn.
An erect annual. Leaves with acute spreading auricles, pinnatifid. Bracts glabrous. Achenes ribbed and transversely muricated. Flowering time: March. *N. C. Nair* 949.
180. *S. ARVENSIS* Linn.
Perennial herb. Leaves with obtuse, appressed auricles. Achenes oblong, narrow, ribbed and transversely rugose. Flowering time: March. *N. C. Nair* 1045, 2043.
- *181. *SPHAERANTHUS INDICUS* Linn.
- †182. *SYNEDRELLA NODIFLORA* Gaertn.
It is an introduced Mexican weed. Branches dichotomous, erect. Leaves ovate lanceolate, serrate, 3-nerved. Achenes of ray florets dorsally compressed, wings lacerate; of disc florets muricated. Pappus of 2 slender awns. Flowering time: September. Only one plant was found in an agricultural field. *N. C. Nair* 956.
- *183. *TRIDAX PROCUMBENS* Linn. Common. *N. C. Nair* 1079, 1084, 2049.
184. *VERNONIA CINEREA* Less. Flowering time: September, March. *N. C. Nair* 926, 2072.
185. *V. CINERASCENS* Schult. Achenes five angled. *N. C. Nair* 2092.
186. *VOLUTARELLA RAMOSA* (Roxb.) Santapau. (*V. divaricata* Benth.)
A dichotomously branched prostrate herb characteristic of sandy places. Involucre of bracts with long spreading spinescent awn. Flowering time: September-March. *N. C. Nair* 988.
187. *VICOA INDICA* (Willd.) DC. (*Inula indica* Willd.)
An erect herb with sessile, lanceolate or oblong lanceolate leaves auricled at the base. Heads yellow. Flowering time: September. Rare. *N. C. Nair* 998.
188. *XANTHIUM STRUMARIUM* Linn. Flowering time: September. Rare. *N. C. Nair* 953.
189. *XIMENESIA ENCELIOIDES* Bth. & Hk.
A common herb of sandy areas; gregarious; heads bright yellow. Plant poisonous to sheep. Flowering time: September & March. *N. C. Nair* 942, 2005, 2029.

PLUMBAGINACEAE

- *190. *PLUMBAGO ZEYLANICA* L. Flowering time: March. *N. C. Nair* 2117.

*191. *PLUMBAGO INDICA* Linn.

†192. *VOGELIA INDICA* Gibs.

An erect undershrub. Leaves orbicular to elliptic, coriaceous, thick with undulate margin. Flowers in paniculate spikes; calyx glandular, 5-ribbed, tubular; corolla tubular. Flowering time: September. *N. C. Nair* 2109.

OLEACEAE

193. *JASMINUM MULTIFLORUM* (Burm. f.) Andr. (*J. pubescens* Willd.) and

194. *NYCTANTHES ARBORTRISTIS* Linn. are cultivated.

SALVADORACEAE

195. *SALVADORA PERSICA* Linn.

Common tree in the plains and foot of the hills. Flowers pedicellate. Flowering time: March. *N. C. Nair* 2099, 2133.

APOCYNACEAE

*196. *CARISSA CARANDAS* Linn.

197. *LOCHNERA ROSEA* Reichb.

*198. *NERIUM INDICUM* Mill.

*199. *THEVETIA PERUVIANA* (Pers.) K. Schum. and

*200. *TABERNAEMONTANA* sp. are cultivated.

ASCLEPIADACEAE

*201. *CALOTROPIS PROCERA* R. Br.

202. *LEPTADENIA PYROTECHNICA* (Forsk.) Decne.

Common shrub in sandy areas. Fruit used as vegetable. Flowering time: September, March. *N. C. Nair* 1022.

203. *PERGULARIA DAEMIA* (Forsk.) Chiov. (*Daemia extensa* R. Br.)

Common climber. Fruit with spine like emergences. *N. C. Nair* 1019, 1062.

*204. *SARCOSTEMMA ACIDUM* (Roxb.) Voigt., (*S. brevistigma* Wt. & Arn.)

GENTIANACEAE

205. *ENICOSTEMMA VERTICILLATUM* (Linn.) Engl. (*E. littorale* Blume.)

In the hills. An erect herb with a rootstock, leaves linear or linear oblong. Flowers yellow in dense clusters

on the stem. Flowering time: September. *N. C. Nair* 2019.

BORAGINACEAE

*206. *CORDIA* sp.

207. *EHRETIA ASPERA* Roxb.

Flowers in terminal corymbose cymes. Flowering time: March. *N. C. Nair* 2121.

208. *HELIOTROPIMUM SUPINUM* Linn. *N. C. Nair* 1011.

209. *H. TUBERCULOSUM* Boiss. (*H. undulatum* Woodr.)

*210. *TRICHODESMA INDICUM* R. Br.

An erect, grey, villous, hispid, annual herb reaching up to 50 cm. high with blue or white flowers. On stony dry hill slopes. Flowering time: September, March. *N. C. Nair* 933, 1090, 2007, 2016.

Ratnam mentions *Trichodesma rosea*. (?) But this appears to be a mistake.

CONVOLVULACEAE

211. *CONVOLVULUS ARVENSIS* Linn. Twining herb with pink flowers. *N. C. Nair* 2073.

212. *C. PLURICAULIS* Choisy.

A diffuse hairy herb. Branches sub-erect, densely silky, flowers solitary or in groups of three, white or with a slight rosy tinge. Flowering time: September, March. *N. C. Nair* 999, 2008.

*213. *CUSCUTA HYALINA* Roth.

214. *EVOLVULUS ALSINOIDES* Linn.

A diffuse herb. Branches many, villous. Flowers blue, corolla rotate. Flowering time: September, March. *N. C. Nair* 987, 1072, 1075, 2143.

215. *IPOMOEA PESTIGRIDIS* Linn.

A twining pubescent herb. Flowers white. Fruit enclosed in densely hairy calyx. Flowering time: rainy season. *N. C. Nair* 2031.

216. *I. PILOSA* Sweet.

A hairy climber. Upper surface of leaf brown and silky, lower surface white. Flowering time: rainy season. *N. C. Nair* 985.

SOLANACEAE

217. *DATURA INOXIA* Mill.

Pubescent shrubs. Corolla ten toothed. Fruit with long weak spines. *N. C. Nair* 1024.

*218. *DATURA METEL* Linn. var. *ALBA* Clarke.

219. *LYCIUM EUROPAEUM* Linn.
A tall thorny shrub with white flowers. Flowering time: March. *N. C. Nair* 1026, 1034.

*220. *PHYSALIS PERUVIANA* Linn.
Cultivated, but found as an escape, near villages. Flowering time: March. *N. C. Nair* 1031, 1036.

*221. *P. MINIMA* Linn. Flowering time: September. *N. C. Nair* 959.

*222. *SOLANUM NIGRUM* Linn.
Flowers white or sometimes bluish. Flowering time: March. *N. C. Nair* 1099, 2034.

223. *S. SEAFORTHIANUM* Dunal. A climber Flowers blue. *N. C. Nair* 2380.

*224. *S. XANTHOCARPUM* S. & W.

*225. *S. ALBICAULE* Kotsch.

226. *WITHANIA SOMNIFERA* Dun.
Common in waste places. Flowering time: September onwards. *N. C. Nair* 1017, 1057, 2087.

*227. *NICOTIANA TABACUM* Linn. and
228. *LYCOPERSICUM ESSULENTUM* Mill. are cultivated.

SCROPHULARIACEAE

229. *ANTICHARIS LINEARIS* Hochst.
A small herb. Flowers purple. Flowering period: December-March. The leaves turn black on drying. Locally reputed to be good for fever. *N. C. Nair*. 1055, 2083.

230. *BACOPIA MONNIERI* (Linn.) Pennell. Succulent herb near water margin. Flowers almost throughout the year.

†231. *BUCHNERA HISPIDA* Buch.-Ham.
Hairy herb with sessile leaves. Corolla light purple. Flowering time: September. *N. C. Nair* 1068.

232. *LINDENBERGIA INDICA* (Linn.) O. Ktze.
An erect or prostrate herb common in gravelly ground. Flowering time: March. *N. C. Nair* 1000.

†233. *LIMNOPHILA HETEROPHYLLA* Benth.
Only three plants near water margin were observed. Flowering time: rainy season. *N. C. Nair* 2024.

234. *SCOPARIA DULCIS* Linn. Herb with white flowers. Rare. Flowering time: September. *N. C. Nair* 976.

*235. *STRIGA EUPHRASIOIDES* Benth.

†236. *VERBASCUM THAPSUS* Linn. A tall herb with cylindrical spikes. Rare. *N. C. Nair* 2124.

*237. *V. CHINENSE* Santapau [*V. coromandelianum* (Vahl) O. Ktze.]. A herb in moist places. Flowers yellow. *N. C. Nair* 2124.

†238. *VERONICA AGRESTIS* Linn.
A weak herb, flowers pinkish to purple. Common in grassy areas. Flowering time: March. *N. C. Nair* 1046, 1085.

BIGNONIACEAE

239. *MILLINGTONIA HORTENSIS* Linn. and
240. *TECOMA STANS* (Linn.) H. B. K. are cultivated.

241. *TECOMELLA UNDULATA* (Smith) Seem. Tree. Common in the plains.

PEDALIACEAE

*242. *PEDALIUM MUREX* Linn.

243. *SESAMUM INDICUM* Linn.
Wild plants reaching a height of 3-3½ m. Seeds flat, compressed, reticulate. Flowering time: September. *N. C. Nair* 939, 994, 1033, 1039.

ACANTHACEAE

*244. *ACANTHUS* sp.

*245. *ADHATODA VASICA* Nees.

*246. *BARLERIA ACANTHOIDES* Vahl

247. *B. CRISTATA* var. *DICHOTOMA* Prain. A shrub with white flowers. Corolla 4-6 cm. long. Rare. Flowering time: September. *N. C. Nair* 977.

248. *B. PRIONITIS* Linn. Spiny shrub with yellow flowers. *N. C. Nair* 964, 1065, 1083.

249. *BLEPHARIS MADERASPATENSIS* (Linn.) Heyne ex Roth., *B. BOERHAAVIAEFOLIA* Pers. *N. C. Nair* 1066, 2102, 2138.

*250. *B. MOLLUGINIFOLIA* Pers.

*251. *BOUCHEA MARRUBIFOLIA* Schau.

252. *ELYTRARIA ACAULIS* (Linn. f.) Lindau. Acaulescent herb with radical leaves. Flowering time: March. *N. C. Nair* 2065, 2075.

*253. *JUSTICIA PROCUMBENS* Linn. *N. C. Nair* 2082.

*254. *J. SIMPLEX* D. DON, *N. C. Nair* 1005.

*255. *PERISTROPHE BICALYCVLATA* Nees.

*256. *RUELLIA PROSTRATA* Lamk. *N. C. Nair* 986.

VERBENACEAE

257. *CLERODENDRUM INERME* Gaertn. *N. C. Nair* 1030.

258. *C. PHLOMIDIS* Linn. f. Strongly smelling shrub with white flowers. *N. C. Nair* 1021.

259. *LANTANA INDICA* Roxb. *N. C. Nair* 2090, 2103, 2137.

260. *PHYLA NODIFLORA* (Linn.) Greene. Near water margin. Flowering time: September. *N. C. Nair* 2107.

†261. *VERBENA BIPINNATIFIDA* Nutt.

A weak herb with dissected leaves and white flowers. Only one plant was seen in September. *N. C. Nair* 1016.

262. *ANISOMELES INDICA* var. *MOLLISSIMA* Benth. Villous herbs. *N. C. Nair* 1078, 2080.

*263. *LEUCAS ASPERA* Spreng.

264. *L. CEPHALOTES* Spreng.

An annual pubescent herb. Mouth of calyx oblique and villous within, teeth short. Flowers July to September and February, March. *N. C. Nair* 2066.

265. *L. LAVANDULAEFOLIA* Rees. (*L. linifolia* Spreng.) Leaves linear. Mouth of calyx very oblique and smooth, teeth short. *N. C. Nair* 2048.

266. *L. NUTANS* Spreng. Small herbs with calyx teeth long and slender. *N. C. Nair* 975, 1001, 2064.

267. *L. SUFFRUTICOSA* Benth.

A yellowish woolly herb with white flowers. Only one plant was seen. This is an unusual locality for the species. *N. C. Nair* 2115.

268. *L. URTICAEFOLIA* R. Br. *N. C. Nair* 2084, 2028.

*269. *LEONURUS* sp.

*270. *OCIMUM BASILICUM* Linn. *N. C. Nair* 935.

*271. *O. SANCTUM* Linn.

272. *PLECTRANTHUS RUGOSUS* WALL. *N. C. Nair* 1063, 2081.

NYCTAGINACEAE

273. *BOERHAAVIA REPANDA* Willd.

*274. *B. DIFFUSA* Linn. *N. C. Nair* 984, 2135.

275. *B. VERTICILLATA* Poir.

Climbing shrub with white flowers. Fruit with a crown of large glands. *N. C. Nair* 945, 2100, 2120.

*276. *MIRABILIS JALAPA* Linn.

AMARANTHACEAE

*277. *ACHYRANTHES ASPERA* Linn. *N. C. Nair* 1091.

*278. *AMARANTHUS SPINOSUS* Linn. *N. C. Nair* 992, 1077.

279. *A. GRACILIS* Desf. (*A. viridis* Hook. f. non Linn.) *N. C. Nair* 991, 1074.

280. *A. GANGETICUS* Linn.

Erect herb up to 1 m. high. Spikes brownish. Used as vegetable. *N. C. Nair* 934, 972, 2045.

281. *A. POLYGAMUS* Linn. A prostrate herb with narrow leaves. Rare. *N. C. Nair* 941.

*282. *AERVA JAVANICA* (Burm. f.) Spreng. (*A. tomentosa* Forsk.) Common in the plains. *N. C. Nair* 2018.

283. *A. LANATA* Juss. A rainy season weed. *N. C. Nair* 990, 2141.

284. *A. PSEUDO-TOMENTOSA* Blatt. & Hallb.

Common in the plains. Spikes shorter than that of *A. javanica*. *N. C. Nair* 1010, 1040, 1058, 2017, 2022.

285. *ALTERNANTHERA TRIANDRA* Lamk. (*A. sessilis* R. Br.)

Common near water margin. *N. C. Nair* 961, 989, 1076.

286. *CELOSIA ARGENTEA* Linn. *N. C. Nair* 931.

*287. *DIGERA ALTERNIFOLIA* (Linn.) Asch. ap. Schwfth. [*D. muricata* (Linn.) Mart. *D. arvensis* Forsk.] *N. C. Nair* 1093, 1094.

288. NOTHOSAERVA BRACHIATA Wight.

A small shade loving herb with opposite leaves turning red when old. Flowers perfect, stamens two. *N. C. Nair* 930.

289. PUPALIA LAPPACEA Moq. Flowering time: rainy season. *N. C. Nair* 928, 993, 1053.

CHENOPODIACEAE

290. CHENOPODIUM ALBUM Linn. *N. C. Nair* 1042.

291. BETA VULGARIS Linn. Cultivated.

POLYGONACEAE

292. POLYGONUM PLEBEJUM R. Br.

In moist places and dried temporary ponds. Flowering time: March. *N. C. Nair* 1095.

293. RUMEX DENTATUS Linn. Flowering time: March. *N. C. Nair* 2069.

294. CALLIGONUM POLYGONOIDES Linn. In sandy places. Flowers not seen.

ARISTOLOCHIACEAE

295. ARISTOLOCHIA BRACTEATA Retz. Flowering time: rainy season. *N. C. Nair* 1971, 2104.

EUPHORBIACEAE

*296. ACALYPHA CILIATA Forsk.

*297. A. INDICA Linn.

298. CHROZOPHORA PLICATA Juss. (*C. parviflora* Klotzsch.) A brownish erect herb. *N. C. Nair* 2036, 2079.299. CROTON BONPLANDIANUM Baill. A weed in borders of fields as well as waste places. *N. C. Nair* 923, 2046.

*300. EMBLICA OFFICINALIS Gaertn.

*301. EUPHORBIA HIRTA Linn. *N. C. Nair* 1014.302. E. MICROPHYLLA Heyne. Flowers alround the year. *N. C. Nair* 1008, 1054.

303. E. NIVULIA Buch.-Ham.

Branches cylindric. Flowering specimens were not observed.

Ratnam mentions *E. neriifolia* Linn. But no specimen of this species was observed in the present study. Since he does not mention *E. nivulia* it appears that he has mistaken *E. nivulia* for *E. neriifolia*.

304. E. GENICULATA Ort. Small herb. Older leaves become reddish. *N. C. Nair* 978, 2000.305. E. DRACUNCULOIDES Lamk. *N. C. Nair* 2013.306. MICROCOCA MERCURIALIS Benth. Flowering time: rainy season. *N. C. Nair* 983.*307. PHYLLANTHUS FRATERNUS Webst. (*P. niruri* Hook. f. non Linn.)

308. P. URINARIA Linn.

Common during rainy season. *N. C. Nair* 971.

*309. RICINUS COMMUNIS Linn. Cultivated; runs wild. *N. C. Nair* 2071.310. SECURINEGA LEUCOPYRUS (Willd.) Muell.-Arg. A common shrub. Branches end in thorns. *N. C. Nair* 2381.

URTICACEAE

*311. HOLOPTELEA INTEGRIFOLIA Planch.

†312. POUZOLZIA ZEYLANICA (Linn.) Benn. (*P. indica* Gaud.) A low herb. Flowers rainy season. *N. C. Nair* 969, 973, 2144.*313. ARTOCARPUS HETEROPHYLLUS Lamk. [*A. integrifolia* Hook. f. non Linn. *A. integra* (Thunb.) Merr.]

*314. FICUS RELIGIOSA Linn.

*315. F. BENGHALENSIS Linn.

*316. F. MYSORENSIS Heyne.

317. F. GLOMERATA Roxb. and

*318. MORUS ALBA Linn. are cultivated.

*319. URTICA sp.

†320. VILLEBRUNEA FRUTESCENS Blume. Large shrub. Flowers rainy season. *N. C. Nair* 2114.

HYDROCHARITACEAE

*321. HYDRILLA VERTICILLATA Presl.

LEMNACEAE

322. *LEMNA TRISULCA* Linn.

SCITAMINEAE

- *323. *MUSA SAPIENTUM* Linn. and
324. *ZINGIBER OFFICINALE* Rosc. are cultivated.

LILIACEAE

- *325. *ASPARAGUS PLUMOSUS* Baker.
*326. *ALOE BARBADENSIS* Mill.

COMMELINACEAE

- *327. *COMMELINA BENGHALENSIS* Linn. *N. C. Nair* 979.
328. *C. OBLIQUA* Buch.-Ham. *N. C. Nair* 967.
*329. *C. FORSKALII* Vahl
330. *CYANOTIS CRISTATA* Schultes. f. *N. C. Nair* 963.
331. *C. AXILLARIS* R. & S. *N. C. Nair* 958.
332. *MURDANNIA SPIRATUM* (Linn.) Brueckner *N. C. Nair* 960, 980, 981, 982.

PALMAE

- *333. *PHOENIX SYLVESTRIS* Roxb.

NAIADACEAE

334. *POTAMOGETON CRISPUS* Linn. *N. C. Nair* 2111.
335. *P. INDICUS* Roxb. *N. C. Nair* 2116.

CYPERACEAE

336. *SCIRPUS MARITIMUS* Linn. *N. C. Nair* 2125.
337. *CYPERUS STOLONIFERUS* Retz. *N. C. Nair* 1043.

GRAMINEAE

338. *ARISTIDA HYSTRIX* Linn. f.
339. *CENCHRUS CILIARIS* Linn. *N. C. Nair* 922, 932, 940, 2140, 2149.
340. *DACTYLOSTENIUM AEGYPTIUM* (Linn.) Beauv. *N. C. Nair* 995, 1081, 2003, 2086.
341. *D. SINDICUM* Boiss. *N. C. Nair* 1049, 1082, 2074.
342. *ERAGROSTIS CILIARIS* Link. *N. C. Nair* 2002, 2021.
343. *SACCHARUM BENGALENSE* Retz. [*Erianthus munja* (Roxb.) Jeswiet] *N. C. Nair* 1020.
344. *PANICUM ANTIDOTALE* Retz. *N. C. Nair* 2032, 2042, 2052.
345. *PENNISETUM TYPHOIDES* (Burm. f.) Stapf & C. E. Hubb. *N. C. Nair* 1015.
346. *PEROTIS INDICA* (Linn.) O. Ktze. *N. C. Nair* 2033.
347. *SORGHUM HALEPENSE* (Linn.) Pers. *N. C. Nair* 954.

POLYPODIACEAE

- ..
*348. *ACTINIOPTERIS AUSTRALIS* Link.
*349. *ADIANTUM* sp.

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