

A CONTRIBUTION TO THE FLORA OF PURULIA DISTRICT, WEST BENGAL

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ABSTRACT

The present paper deals only with the angiosperm flora of the district of Purulia of West Bengal. The enumeration of species consists of 94 families, 287 genera and 405 species, of which dicotyledons contain 78 families, 235 genera and 324 species, and the rest are monocotyledons. Among dicotyledonous families, predominant are Papilionaceae, Rubiaceae and Euphorbiaceae and among monocotyledonous Graminae and Cyperaceae. The collection includes some plants which appear to be new to West Bengal flora.

INTRODUCTION

Purulia is the youngest and westernmost district of West Bengal. The district appears to be rich in vegetation and botanically interesting. Specimens were collected in the months of March, May, July-August and September from the forests and open lands of Matha, Baghmundi, Ajodhya, Jhalda, Kolma, Panchkot and their neighbouring areas. Collections were also made from Purulia proper. These places were also visited by S. N. Biswas, D. K. Banerji and U. Chatterji of Central National Herbarium.

PHYSICAL ASPECT

The district lies between $22^{\circ}43'N$ and $23^{\circ}42'N$ and $85^{\circ}49'E$ and $86^{\circ}54'E$. The 'tropic of cancer' passes through the north of this district. The district is bounded by Bankura on the east, Midnapur on the south-east, Burdwan on the north-east, Dhanbad at north, Hazaribagh at north-west, Ranchi at west, and Singhbhum at south-west and south (Map).

In general characteristics, this is an upland district with a gradual descent from Central India to the delta of lower Bengal. In great measure, it consists of metamorphic rocks, spurs projected from table-land on the west and swelling ridges of laterite. As the metamorphic rocks thin out, the laterite ridges thicken in the east. The dips between ridges are broader and level. The district is open and presents the appearance of a series of rolling downs, dotted here and there with isolated conical hills. In the adjoining areas of Jhalda and Kolma, there are series of isolated groups of hills and peaks. Some of them attain considerable elevation. South of these there is a regular range known as Baghmundi range which attains an elevation of 600-750 m. This forms the water-shed between Subarnarekha and Kasai and ends abruptly in Matha. This area is rich in vegetation. Panchkot is a ridge in the north-east, rising to its highest

point at its eastern extremity (480 m). It is covered with dense scrub jungle.

SOIL

Laterites spread over the district, though the eastern border is encroached by recent alluvium. At many places there are thick deposits of clay, which sometimes attain a thickness of 18 m on the northern base of Baghmundi plateau. The cultivated lands are characterised by hard ferruginous gravel with a thin over spread layer of vegetable mould where protected by jungles. Clay, loamy and sandy soil are also present.

CLIMATE

The district is much drier than others of West Bengal. From early March till the end of May or beginning of June, hot west winds prevail and the temperature in shade rises to $34^{\circ}C$ and sometimes several degrees higher; the night temperature falls considerably. The rains set in about the middle of June and last till the middle of September. The air is comparatively dry in the intervals between showers and the sultry damp and steamy atmosphere of a West Bengal district at the sametime is comparatively uncommon. With October cooler currents of air from the north and west set in and by the end of the month the cold weather is ordinarily well established.

RAINFALL

The precipitation from November to April is less than 8.89 cm. In May it goes down to 7.62 cm; in June it rises to 24.13 cm. In July and August 33.00 cm and this is the wettest time. In September it is 21.59 cm which suddenly falls to 6.35 cm in October. The total rainfall of a year varies from 124.33 to 139.57 cm.

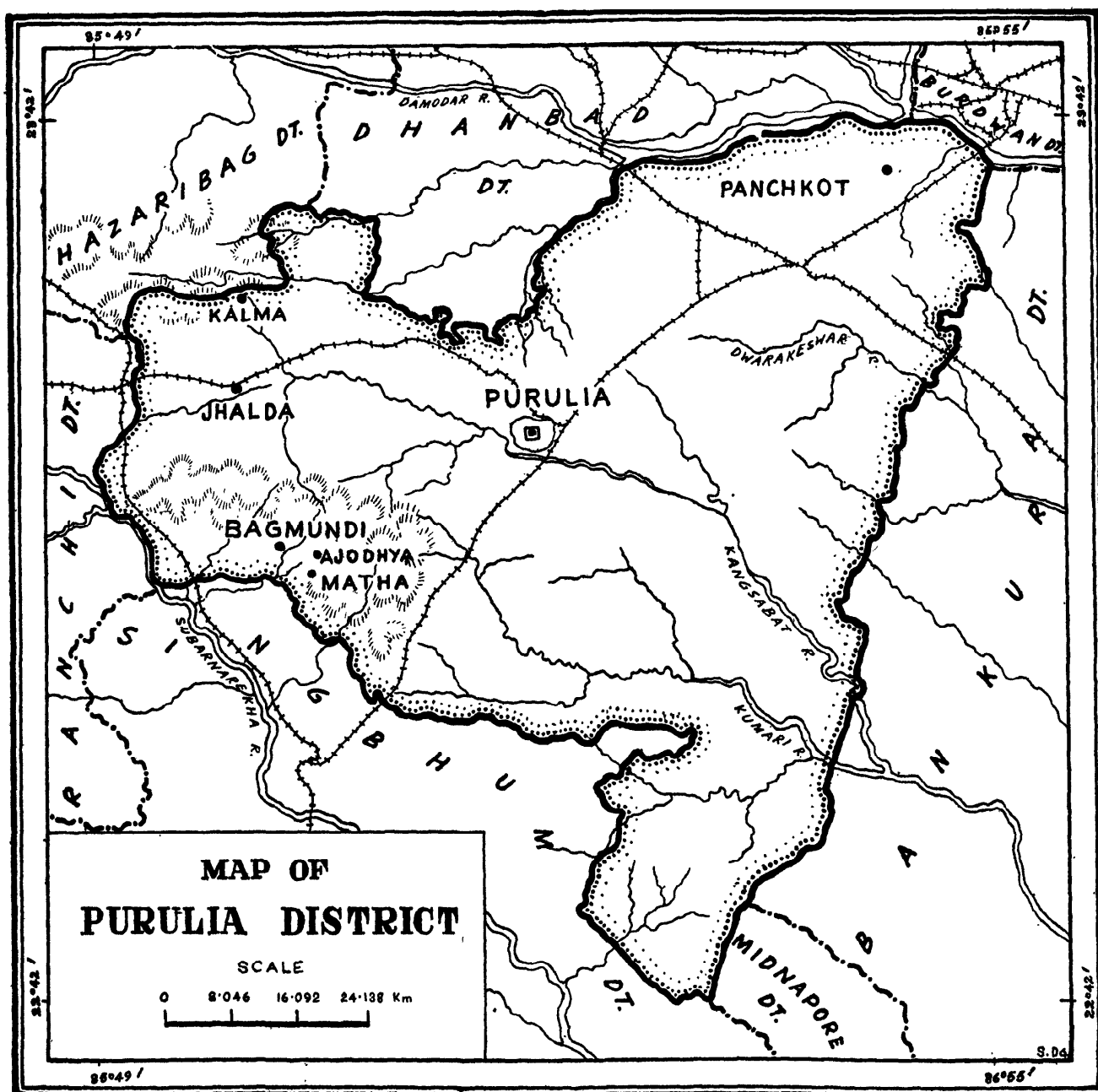
SOME ASPECTS OF VEGETATION

FORESTS: The forests in this district are of typical dry deciduous type. Biotic factors disturb forest life to a great extent at many places. There are

many reserved and protected forests in this district.

Some of the common tree species are *Dillenia pentagyna* Roxb., *Sterculia villosa* Roxb., *Garuga pinnata* Roxb., *Protium serratum* (Wall. ex Coleb.) Eng., *Schleichera oleosa* (Lour.) Oken., *Madhuca indica* Gmel., *Shorea robusta* Gaertn., *Tectona gran-*

dis Linn. f., *Terminalia arjuna* W. & A., *Adina cordifolia* Hook. f. Some of the shrubs are *Grewia flavescens* Juss., *Helicteres isora* Linn., *Zizyphus mauritiana* Lam., *Caesalpinia pulcherrima* (Linn.) Swartz, *Nyctanthes arbor-tristis* Linn., *Holarrhena antidysenterica* (Linn.) Wall., *Emblica officinalis*



Gaertn.

OPEN LAND: Open land herbaceous flora is characterised by *Polygala chinensis* Linn., *Oxalis corniculata* Linn., *Polycarpon prostratum* (Forsk.) Aschers. & Schweinf., *Crotalaria albida* Heyne, In-

digofera linifolia Retz., *Tridax procumbens* Linn., *Justicia diffusa* Willd., *Cyperus rotundus* L., *C. triceps* (Rottb.) Endl., *Fimbristylis dichotoma* (L.) Vahl, *Cynodon dactylon* (Linn.) Pers., *Eragrostis unioides* (Retz.) Nees.

ROADSIDES: Among the roadside species, some of the more prominent are: *Annona squamosa* Linn., *Miliusa velutina* Hook. f., *Lagerstroemia parviflora* Roxb., *Lantana camara* Linn., *Zizyphus oenophia* Mill., *Cayratia pedata* Juss., *Jatropha gossypifolia* Linn. etc.

AQUATIC AND MARSH PLANTS: In freshwater *Nymphaea nauchali* Burm. f., *Nymphoides cristatum* (Roxb.) O. Ktze; in marshes *Ludwigia adscendens* (L.) Hara, *L. octovalvis* subsp. *sessiliflora* (Mech.) Raven, *Polygonum barbatum* Linn., *P. glabrum* Willd. *Monochoria vaginalis* (Burm. f.) Presl ex Kunth, *Eriocaulon luzulifolium* Mart., *Cyanotis cristata* (Linn.) Schult. f., *Scirpus articulatus* L.

GRASS LANDS: Some notable grasses are *Apluda mutica* Hack., *Aristida setacea* Retz., *Chrysopogon lancearius* (Hook. f.) Haines, *Digitaria setigera* Roth., *Eragrostis brachyphylla* (Stapf) Bor, *Hackelochloa granularis* (Linn.) O. Ktze., *Heteropogon contortus* (Linn.) Beauv., *Pennisetum orientale* L.C. Rich., *Panicum psilopodium* Trin., *Setaria glauca* Beauv., *Sporobolus indicus* (Linn.) Br.

Total number of families, genera and species are shown in the Table I below:

TABLE I

	Total no. of families	Total no. of genera	Total no. of species
Dicotyledons	78	235	324
Monocotyledons	16	52	81
Total	94	287	405

Out of the plants listed the dominant families, dominant genera in the families and species strength in the genera are shown in the Table II below:

TABLE II

	Dominant families		Dominant genera		
	Name of families	Total no. of genera	Total no. of species	Name of genus	No. of species
Dicotyledons	Papilionaceae	15	30	Desmodium	6
	Rubiaceae	18	24	Gardenia	4
	Euphorbiaceae	14	21		
Monocotyledons	Graminae	24	29	Eragrostis	5
	Cyperaceae	5	17	Cyperus	9

DICOTYLEDONS

DILLENIACEAE

Dillenia pentagyna Roxb.

Saprambera, 600 m, Ajodhya hills, fruiting, common, (16.5.63), *Chatterji* 42.

ANNONACEAE

Annona squamosa Linn.

Matha, 150 m, roadside, fruiting, very common, (12.9.64), *Malick* 115.

Miliusa tomentosa (Roxb.) Sinclair

Karyae hills, fruiting, common, (25.7.63), *Banerji* 335.

M. velutina Hook. f. & Thoms.

Nanna forest, Kailapal, flowering, (20.5.63), *Chatterji* 151.

MENISPERMACEAE

Cissampelos pareira L.

Matha forest, roadside, fruiting, not common, (12.9.64), *Malick* 110.

Stephania hernandifolia (Willd.) Walp.

Matha, 150 m, roadside through the forest, flowering, (11.9.64), *Malick* 24.

Tinospora cordifolia (Willd.) Miers

Ajodhya hills, in the forest, flowering, (18.7.63), *Banerji* 217.

NYMPHAEACEAE

Nymphaea nauchali Burm. f.

Matha, roadside tank, flowering, common in fresh water tanks, (12.9.64), *Malick* 129.

PAPAVERACEAE

Argemone mexicana Linn.

Kalidungri forest, Jhalda, roadside, flowering, common, (11.3.64), *Biswas* 19.

CRUCIFERAE

Brassica juncea Coss.

Bidyajera, Ajodhya hills, roadside on the slope, flowering, not common, (17.5.63), *Chatterji* 103.

CAPPARIDACEAE

Capparis zeylanica Linn.

Badhgao forest, Kolma, flowering, not so common, (13.3.64), *Biswas* 49.

Cleome gynandra Linn.

Karyae hills, flowering, common, (25.7.63), *Banerji* 338.

C. monophylla Linn.

Ajodhya hills, 600 m, flowering, common, (20.7.63), *Banerji* 208.

C. viscosa Linn.

Matha, top of the hill, 240 m, flowering and fruiting, not common, (11.9.64), *Malick* 73.

VIOLACEAE

Ionidium suffruticosum Ging.

D.F.O's office compound, Purulia, flowering, common, (9.9.64), *Malick* 1.

BIXACEAE

Cochlospermum religiosum (Linn.) Alston

Panchkot hill (east), Panchkot, fruiting, common, (25.3.64), *Biswas* 167.

FLACOURTIACEAE

Flacourtia indica (Burm. f.) Merrill

Panchkot hills (north), Panchkot, flowering, common, (24.3.64), *Biswas* 155.

POLYGALACEAE

Polygala chinensis Linn.

Matha, foot hill, near the rice field, flowering, common, (11.9.64), *Malick* 21.

P. crotalarioides Buch.-Ham.

Nanna forest, Kailapal, flowering, (20.5.63), *Chatterji* 136.

P. erioptera DC.

Ajodhya hill, flowering, not common, (18.7.63), *Banerji* 210.

CARYOPHYLLACEAE

Polycarpaea corymbosa Lam.

Nanna forest, Kailapal, flowering, common in waste places, (20.5.63), *Chatterji* 156.

Polycarpon prostratum (Forsk.) Asch. & Schw.

Tarpinia forest, Ajodhya hills, fruiting, not common, (17.5.63), *Chatterji* 83.

PORTULACACEAE

Portulaca oleracea Linn.

Tarpinia forest, Ajodhya hills, in the moist waste place, flowering, common, (19.5.63), *Chatterji* 90.

ELATINACEAE

Bergia ammannioides Roxb.

Panchkot hill (west), Panchkot, on dried rice field, flowering, (24.3.64), *Biswas* 137.

DIPTEROCARPACEAE

Shorea robusta Gaertn.

Radhamadhabpur, Panchkot, flowering, very common, (13.3.64), *Biswas* 64.

MALVACEAE

Abelmoschus moschatus Medic.

Matha, side of the road through the forest, flowering, not common, (11.9.64), *Malick* 90.

Abutilon indicum (Linn.) Sweet

Khenna forest, Kailapal, near village, flowering, not so common, (21.5.63), *Chatterji* 173.

Sida cordifolia Linn.

Kodagara forest, Kolma, flowering, common in waste places, (12.3.64), *Biswas* 33.

S. orientalis Cav.

Tarpinia, 600 m, Ajodhya hill, flowering, common, (17.5.63), *Chatterji* 72.

S. veronicifolia Lam.

Kutidi forest, Jhalda, near a stream, flowering, common, (17.9.64), *Malick* 161.

STERCULIACEAE

Buettneria herbacea Roxb.

Nanna forest, Kailapal, flowering, common, (20.5.63), *Chatterji* 145.

Helicteres isora Linn.

Matha, on the slope of the hill, flowering, common, (11.9.64), *Malick* 11.

Melochia corchorifolia Linn.

Matha, foot hill forest, fruiting, common, (11.9.64), *Malick* 50.

Pterospermum acerifolium Willd.

Parabolia, Panchkot, flowering, not common, (23.3.64), *Biswas* 153.

Sterculia villosa Roxb.

Baragatha hill forest, Kolma, flowering, not common, (16.3.64), *Biswas* 101.

TILIACEAE

Corchorus olitorius Linn.

Matha, 150 m, near the cultivated field, flowering, (11.9.64), *Malick* 55.

Grewia asiatica Linn.

Bidyajera, Ajodhya hills, fruiting, not common, (22.7.63), *Banerji* 303.

G. flavescens Juss.

Matha, in the foot hill forest, flowering, not so common, (11.9.64), *Malick* 34.

G. hirsuta Vahl

Matha, on the hill slope, fruiting, common, (11.9.64), *Malick* 27.

G. laevigata Vahl

Kustere hill, Gar-panchkot fruiting, not so common, (18.6.63), *Banerji* 384.

G. sapida Roxb.

Kudna forest, Ajodhya, fruiting, not common, (27.7.63), *Banerji* 283.

Triumfetta rhomboidea Jack.

Kutidi forest, Jhalda, flowering, not common, (17.9.64), *Malick* 157.

ZYGOPHYLLACEAE

Tribulus terrestris Linn.

Gar-panchkot, fruiting, not common, (31.7.63), *Banerji* 372.

BALSAMINACEAE

Impatiens balsamina Linn.

Parbhatpur, Gar-panchkot, flowering, common, (29.7.63), *Banerji* 354.

OXALIDACEAE

Biophytum sensitivum (Linn.) DC.

Matha, on the hill slope in the moist shady place, fruiting, common, (11.9.64), *Malick* 15.

Oxalis corniculata Linn.

Sahebdi, Ajodhya, roadside, moist waste place, flowering, common, (21.7.63), *Banerji* 293.

RUTACEAE

Aegle marmelos Corr.

Bhuchandi forest, Matha, fruiting, common, (15.5.63), *Chatterji* 8.

Murraya paniculata (Linn.) Jack.

Tarpinia, Ajodhya hills, flowering, not common, (17.5.63), *Chatterji* 87.

OCHNACEAE

Ochna squarrosa Linn.

Chatni forest, Ajodhya, flowering, not common, (19.7.63), *Banerji* 245.

BURSERACEAE

Garuga pinnata Roxb.

Saprambera, 600 m, Ajodhya hills, fruiting, (10.5.63), *Chatterji* 38.

Protium serratum (Wall. ex Colebr.) Eng.

Jhalambeli, Kolma, flowering, common, (15.3.64), *Biswas* 88.

MELIACEAE

Azadirachta indica A. Juss.

Chatadungri, Baghmundi, flowering, common, (18.5.63), *Chatterji* 128.

Soyimida febrifuga A. Juss.

Near forest rest house, Kailapal, fruiting, very common, (20.5.63), *Chatterji* 160.

OLACACEAE

Olax scandens Roxb.

Jhalda, railwayside hill, fruiting, not common, (15.9.64), *Malick* 147.

CELASTRACEAE

Celastrus paniculata Willd.

Matha, foot hill forest, fruiting, common, (11.9.64), *Malick* 83.

Gymnosporia spinosa (Forsk.) Fiori

Chatadungri, Baghmundi, fruiting, not common, (18.5.63), *Chatterji* 118.

RHAMNACEAE

Ventilago madraspatana Gaertn.

Jhalambeli, Kolma, flowering, not common, (15.3.64), *Biswas* 83.

Zizyphus xylopyrus Willd.

Matha forest, on the slope, fruiting, common, (11.9.64), *Malick* 76.

Z. glabrata Heyne ex Roth

Hatinda 600 m, Ajodhya hills, fruiting, common, (20.5.63), *Chatterji* 141.

Z. mauritiana Lam.

Jhalambeli, Kolma, flowering, very common, (27.7.63), *Banerji* 351.

Z. oenoplia Mill.

Matha, in a roadside bush, flowering, not so common, (11.9.64), *Malick* 46.

Z. oxyphylla Edgew.

Hatinda forest, 600 m, Ajodhya, flowering, (17.5.63), *Chatterji* 66.

VITACEAE

Ampelocissus latifolia Planch.

Matha, flowering, common, (17.7.63), *Chatterji* 181.

A. tomentosa Planch.

Matha, on the hill slope forest, fruiting, not common, (11.9.64), *Malick* 103.

Cayratia pedata Juss.

Matha, hill slope forest, flowering, common, (12.9.64), *Malick* 114.

Leca edgeworthii Santapau

Matha, on the moist place on the slope, flowering, common, (11.9.64), *Malick* 84.

SAPINDACEAE

Cardiospermum halicacabum Linn.

Matha, fruiting, common, (17.7.63), *Banerji* 200.

Schleichera oleosa (Lour.) Oken.

Pakornala, Kolma, flowering, very common, (13.3.64), *Biswas* 25.

ANACARDIACEAE

Buchanania lanzan Spreng.

Panchkot hill (west), flowering, common, (25.3.64), *Biswas* 168.

Semecarpus anacardium Linn. f.

Matha, flowering, common, (12.9.64), *Malick* 123.

PAPILIONACEAE

Abrus precatorius Linn.

Matha, 150 m, in a bush near the rice field, flowering, not common, (11.9.64), *Malick* 39.

Alysicarpus bupleurifolius DC.

Kutidi forest, Jhalda, near a stream, fruiting, (17.9.64), *Malick* 162.

A. vaginalis DC.

Jhalda, railwayside hill slope, fruiting, common, (15.9.64), *Malick* 144.

Atylosia scarabaeoides (L.) Benth.

Matha, roadside waste place, flowering, common, (12.9.64), *Malick* 122.

Butea monosperma (Lamk.) Taub.

Jhalda, along the roadside, near the railway

station, flowering, very common, (11.3.64), *Biswas* 28.

Butea superba Roxb.

Baragatha hill, Kolma, flowering, (16.3.64), *Biswas* 102.

Crotalaria albida Heyne

Kolma, foot hill forest near cultivated field, flowering, (19.9.64), *Malick* 183.

C. calycina Schrank

Matha, waste place in the low lands, fruiting, common, (12.9.64), *Malick* 128.

C. prostrata Roxb.

Kolma forest, on the hill slope, flowering, common, (19.9.64), *Malick* 171.

Desmodium diffusum DC.

Matha, on the hill 200 m, flowering, common, (11.9.64), *Malick* 93.

D. gangeticum DC.

Matha, near the top of the hill, fruiting, common, (11.9.64), *Malick* 92.

D. motorium (Houtt.) Mett.

Jhalda, railwayside, fruiting, common, (15.9.64), *Malick* 138.

D. polycarpum (Poir.) DC.

Matha, on the slope of the hill, flowering, (11.9.64), *Malick* 23.

D. tiliaefolium G. Don

Kolma forest, on the hill slope, fruiting, common, (19.9.64), *Malick* 184.

D. triflorum DC.

Radhamadhabpur, Panchkot, flowering, common, (20.3.64), *Biswas* 123.

Dalbergia latifolia Roxb.

Ranga, 600 m, Ajodhya hills, flowering, common, (17.5.63), *Chatterji* 67.

D. sissoo Roxb.

Parabolia, Panchkot, flowering, common, (23.3.64), *Biswas* 152.

Indigofera hirsuta Linn.

Matha, on the hill slope, flowering, common, (11.9.64), *Malick* 43.

I. linifolia Retz.

Panchkot hill (east), flowering, common, (25.3.64), *Biswas* 161.

I. linnei Ali.

Jhalda, on the rock of the railwayside hill, flowering and fruiting, not common, (15.9.64), *Malick* 133.

I. tinctoria Linn.

Tarpinia, 600 m, Ajodhya hill, fruiting, (17.5.63), *Chatterji* 70.

Millettia auriculata Baker

Badhgao forest, Kolma, flowering, (13.3.64), *Biswas* 59.

Moghania chappar (Ham. ex Benth.) O. Ktze.

Ajodhya hill, 600 m, fruiting, common, (16.5.63), *Chatterji* 54.

M. stricta (Roxb.) O. Ktze.

Badhgao forest, Kolma, flowering, common, (13.3.64), *Biswas* 57.

Phaseolus calcaratus Roxb.

Jhalda, on the rock of the railwayside hill, fruiting, not common, (15.9.64), *Malick* 149.

Pongamia pinnata (L.) Pierre

Parabolia forest, Panchkot, flowering, common, (23.3.64), *Biswas* 149.

Tephrosia purpurea Pers.

Matha, on the hill slope, fruiting, common, (11.4.64), *Malick* 51.

Uria lagopoides DC.

Matha, on the hill slope, fruiting, common, (11.9.64), *Malick* 96.

U. picta Desv.

Matha, on the foot hill, fruiting, not common, (11.9.64), *Malick* 25.

Zornia diphylla Pers.

Matha, hill slope, fruiting, not common, (11.9.64), *Malick* 54.

CAESALPINIACEAE

Bauhinia purpurea Linn.

Jhalambeli forest, Kolma, not common, (15.3.64), *Biswas* 82.

B. vahli W. & A.

Khenna forest, Kailapal, flowering, very common, (21.5.63), *Chatterji* 171.

Caesalpinia pulcherrima (Linn.) Swartz

Kailapal forest, flowering, common, (10.5.63), *Chatterji* 162.

C. crista Linn.

Kustere hill, Gar-panchkot, flowering, (1.8.63), *Banerji* 388.

Cassia absus Linn.

Matha, on the foot hills, flowering, common, (11.9.64), *Malick* 52.

C. fistula Linn.

Kolma, foot hills, fruiting, not common, (19.9.64), *Malick* 169.

C. mimosoides Linn.

Matha, on the hill slope, fruiting, not common, (11.9.64), *Malick* 58.

C. occidentalis Linn.

Matha, foot hills, flowering, not common, (11.9.64), *Malick* 98.

C. sophora Linn.

Chatadungri, Baghmundi, flowering, (18.5.63), *Chatterji* 111.

Peltophorum pterocarpum (DC.) Baker ex K. Heyne
Kailapal forest rest house compound, cultivated,
(20.5.63), *Chatterji* 159.

Saraca indica Linn.

Chatadungri, Baghmundi, cultivated, flowering,
(18.5.63), *Chatterji* 114.

MIMOSACEAE

Acacia nilotica (L.) Del.

Kustere hill, Gar-panchkot, (1.8.63), *Banerji* 380.

A. catechu Willd.

Panchkot (east), fruiting, not common, (25.3.64),
Biswas 169.

A. torta Craib

Matha, flowering, (17.7.63), *Chatterji* 189.

Albizia lebbek Benth.

Parabolia, Panchkot, flowering, common, (23.3.64),
Biswas 151.

Mimosa pudica Linn.

Jhalda, near the rice field, side of a ditch, com-
mon, (15.9.64), *Malick* 145.

M. rubicaulis Lam.

Ajodhya hills, flowering, (18.7.63), *Banerji* 214.

COMBRETACEAE

Combretum roxburghii Spreng.

Badhgao forest, Kolma, flowering, common,
(13.3.64), *Biswas* 61.

Terminalia arjuna W. & A.

Saprambera, Ajodhya hills, flowering, very com-
mon, (20.7.63), *Banerji* 278.

T. belerica (Gaertn.) Roxb.

Panchkot hill (east), flowering, common, (25.3.64),
Biswas 162.

T. chebula Retz.

Kutidi, Jhalda, fruiting, common, (17.9.64),
Malick 165.

T. alata Heyne ex Roth

Chatni forest, Ajodhya, flowering, common,
(19.7.63), *Banerji* 231.

MYRTACEAE

Cleistocalyx operculatus (Roxb.) Merr. & Perry

Bidyajera, Ajodhya, fruiting, common, (22.7.63),
Banerji 301.

Psidium guajava Linn.

Near Kailapal forest rest house, flowering, com-
mon, (20.5.63), *Chatterji* 158.

Syzygium cumini (Linn.) Skeel.

Bidyajera, Ajodhya hill, flowering, common,
(17.5.63), *Chatterji* 106.

LECYTHIDACEAE

Careya arborea Roxb.

Ajodhya hill, flowering, common, (16.5.63),
Chatterji 59.

LYTHRACEAE

Ammannia baccifera Linn.

Matha, near the roadside ditch, flowering, com-
mon, (11.9.64), *Malick* 14.

Lagerstroemia parviflora Roxb.

Madhupur, Matha, roadside, fruiting, common,
(12.9.64), *Malick* 108.

Lawsonia inermis Linn.

Kodagara, Kolma, fruiting, not common,
(12.3.64), *Biswas* 36.

Woodfordia fruticosa (Linn.) Kurz

Badhgao forest, Kolma, flowering, common,
(13.3.64), *Biswas* 60.

ONAGRACEAE

Ludwigia adscendens (L.) Hara

Sahebbandh, Purulia, floating on water, flower-
ing, common, (10.3.64), *Biswas* 8.

L. octovalvis (Jacq.) Raven subsp. *sessiliflora*
(Mich.) Raven

Madhupur, Matha, in the rice field, flowering,
common, (12.9.64), *Malick* 121.

L. perennis L.

Matha, in the rice field, flowering, common,
(11.9.64), *Malick* 20.

SAMYDACEAE

Casearia elliptica Willd.

Baragatha hills, Kolma, flowering, common,
(16.3.64), *Biswas* 104.

PASSIFLORACEAE

Passiflora foetida Linn.

Jhalda, railwayside bush, flowering and fruiting,
common, (15.9.64), *Malick* 152.

CUCURBITACEAE

Cayaponia laciniosa (Linn.) C. Jeffrey

On the way to Baghmundi from Matha, flower-
ing, (18.7.63), *Banerji* 205.

Melothria madraspatana (Linn.) Cogn.

Jhalda, near a railwayside ditch, flowering, com-
mon, (15.9.64), *Malick* 150.

M. heterophylla Cogn.

Gar-panchkot, flowering, common, (31.7.63),
Banerji 371.

Momordica dioica Roxb. ex Willd.

Chatni forest, Ajodhya hills, flowering, not com-
mon, (19.7.63), *Banerji* 259.

Trichosanthes bracteata (Lam.) Voigt.

Gar-panchkot, flowering, not common, (30.7.63),
Banerji 368.

T. cucumerina Linn.

Kutidi, Jhalda, by the side of a stream, flower-
ing, not common, (17.9.64), *Malick* 167.

CACTACEAE

Opuntia elatior Mill.Panchkot hill (east), flowering, common, (25.3.64), *Biswas* 170.

MOLLUGINACEAE

Mollugo stricta Linn.Chatni forest, Ajodhya hills, flowering, (19.7.63), *Banerji* 263.

UMBELLIFERAE

Seseli diffusum (Roxb. ex Sm.) Sant. & WaghTolakashi danga, Panchkot, flowering, not common, (20.3.64), *Biswas* 122.

ARALIACEAE

Schefflera venulosa (W. & A.) Harms.Chatni forest, Ajodhya hill, flowering, not common, (19.7.63), *Banerji* 228.

ALANGIACEAE

Alangium salvifolium (Linn. f.) Wang.Badhgao forest, Kolma, flowering, not common, (13.3.64), *Biswas* 55.

RUBIACEAE

Adina cordifolia Hook. f.Ajodhya hill, fruiting, common, (17.5.63), *Chatterji* 63.**Anthocephalus cadamba** (Roxb.) Miq.Ajodhya hill, flowering, not common, (16.5.63), *Chatterji* 50.**Borreria hispida** (Linn.) Schum.Matha, hill slope, fruiting, common, (11.9.64), *Malick* 97.**B. stricta** Schum.Kolma forest, Kolma, fruiting, common, (19.9.64), *Malick* 170.**Canthium dicoccum** (Gaertn.) Merr.Parbhatpur, Panchkot, flowering, not common, (22.3.64), *Biswas* 146.**Coffea bengalensis** Roxb.Kudna forest, Ajodhya hills, flowering, not common, (21.7.63), *Banerji* 291.**Dentella repens** Forst.Nanna forest, Kailapal, in moist place, flowering, not common, (20.5.63), *Chatterji* 138.**Gardenia gummifera** Linn.Nanna forest, Kailapal, flowering, not common, (20.5.63), *Chatterji* 146.**G. latifolia** Ait.Matha, roadside, flowering, common, (11.9.64), *Malick* 101.**G. resinifera** RothKhenna forest, Kailapal, flowering, common, (21.5.63), *Chatterji* 174.**G. turgida** Roxb.Ajodhya hill, flowering, not common, (16.5.63), *Chatterji* 51.**Gonotheca ovalifolia** (Cav.) Sant. ex WaghMatha, roadside, flowering, not common, (11.9.64), *Malick* 13.**Hedyotis nitida** W. & A.Kudna, Ajodhya hill, side of a stream, flowering, common, (21.7.63), *Banerji* 289.**Ixora arborea** Roxb.Nanna forest, Kailapal, flowering, common, (20.5.63), *Chatterji* 154.**I. undulata** Roxb.Jhalda, railwayside hill, fruiting, common, (15.9.64), *Malick* 132.**Knoxia diandra** RothMatha, fruiting, not common, (11.9.64), *Malick* 71.**Meyna laxiflora** RobynsMatha, fruiting, common, (11.9.64), *Malick* 88.**Mitragyna parvifolia** Korth.Nanna forest, Kailapal, flowering, not common, (20.5.63), *Chatterji* 152.**Morinda citrifolia** Linn.Matha forest, fruiting, common, (11.9.64), *Malick* 106.**Oldenlandia affinis** DC.Matha, roadside, flowering, not common, (11.9.64), *Malick* 16.**Pavetta indica** Linn.Matha, hill slope, fruiting, not common, (11.9.64), *Malick* 85.**Randia spinosa** (Thunb.) BlumeAjodhya hill, flowering, very common, (16.5.63), *Chatterji* 55.**Wendlandia exserta** (Roxb.) DC.Pokarnala, Kolma, flowering, common, (13.3.64), *Biswas* 41.**W. tinctoria** DC.Saprambera, 600 m, Ajodhya hills, flowering, common, (16.5.63), *Chatterji* 35.

COMPOSITAE

Acanthospermum hispidum DC.Matha, 150 m, roadside, fruiting, not so common, (11.9.64), *Malick* 17.**Ageratum conyzoides** Linn.Saprambera, Ajodhya hills, flowering, very common, (16.5.63), *Chatterji* 33.**Bidens biternata** (Lour.) Merr. et Scherff.Purulia, flowering, common, (9.9.64), *Malick* 6.**Blumea lacera** DC.Panchkot hill, flowering, common, (21.3.64), *Biswas* 132.

Blumea fistulosa (Roxb.) Kurz

Purulia, near D.F.O.'s office, flowering, not common, (18.5.63), *Chatterji* 131.

Breca arvensis Less. var. **alpestris** (Noeg.) Kitamura
Panchkot, fruiting, not common, (21.3.64), *Biswas* 129.

Caesulia axillaris Roxb.

Tarpinia, Ajodhya hills, in marshy place, flowering, very common, (17.5.63), *Chatterji* 81.

Chrysanthelium indicum DC.

D. F. O. compound, Purulia, flowering, not common, (9.9.64), *Malick* 4.

Cyathocline purpurea (Don) O. Ktze.

Jhalda, rice field, fruiting, not so common, (11.3.64), *Biswas* 15.

Eclipta prostrata Linn.

Tarpinia, Ajodhya, in marshy place, flowering, common, (17.5.63), *Chatterji* 80.

Elephantopus scaber Linn.

Matha, roadside jungles, flowering, common, (11.9.64), *Malick* 89.

Emilia sonchifolia (Linn.) DC.

Kutidi forest, Jhalda, fruiting, not common, (17.9.64), *Malick* 159.

Grangea madraspatana (Linn.) Poir.

Nanna forest, Kailapal, on sandy soil, fruiting, common, (20.5.63), *Chatterji* 139.

Gnaphalium indicum Linn.

Parbhatpur, Panchkot, fruiting, very common, (22.3.64), *Biswas* 148.

Launea sarmentosa (Willd.) Alston

Panchkot hill (east), flowering, not common, (25.3.64), *Biswas* 164.

Tridax procumbens Linn.

Ajodhya hills, flowering, common, (15.5.63), *Chatterji* 15.

Vernonia cinerea (Linn.) Less.

Ajodhya hill, flowering, common, (16.5.63), *Chatterji* 53.

Vicoa indica (Willd.) DC.

Pokarnala, Kolma, flowering, very common, (13.3.64), *Biswas* 40.

MYRSINACEAE

Ardisia solanacea (Poir.) Roxb.

Bidyajera, Ajodhya hills, flowering, (17.5.63), *Chatterji* 95.

Embelia ribes Burm. f.

Matha, flowering, not common, (11.9.64), *Malick* 33.

E. tsjeriam-cottam A. DC.

Saprambera, Ajodhya hills, flowering, common, (16.5.63), *Chatterji* 45.

SAPOTACEAE

Madhuca indica Gmel.

Panchkot hills, flowering, very common, (25.3.64), *Biswas* 166.

EBENACEAE

Diospyros exculpta Buch.-Ham.

Ajodhya hills, fruiting, common, (17.5.63), *Chatterji* 62.

D. melanoxylon Roxb.

Saprambera, 600 m, Ajodhya, flowering, common, (16.5.63), *Chatterji* 24.

D. montana Roxb.

Kolma, flowering, not common, (24.7.63), *Banerji* 324.

SYMPLOCACEAE

Symplocos racemosa Roxb.

Badhgao, Kolma, fruiting, common, (13.3.64), *Biswas* 53.

OLEACEAE

Jasminum arborescens Roxb.

Matha, fruiting, common, (17.7.63), *Banerji* 197.

Linociera ramiflora (Roxb.) Wall. ex G. Don

Jhalambelidungri, Kolma, flowering, common, (15.3.64), *Biswas* 90.

Nyctanthes arbor-tristis Linn.

Matha, on the hill slope, flowering, very common, (11.9.64), *Malick* 86.

APOCYNACEAE

Carissa paucinervia A. DC.

Parbhatpur, Panchkot, flowering, common, (22.3.64), *Biswas* 143.

C. spinarum Linn.

Jhalambelidungri, Kolma, flowering, common, (15.3.64), *Biswas* 87.

Holarrhena antidysenterica (Linn.) Wall.

Jhalambelidungri, Kolma, flowering, common, (15.3.64), *Biswas* 84.

Ichnocarpus frutescens R. Br.

Matha, roadside, flowering, common, (11.9.64), *Malick* 49.

Tabernaemontana divaricata (Linn.) R. Br.

Nutundi, Gar-panchkot, flowering, common, (30.7.63), *Banerji* 369.

Thevetia peruviana (Pers.) K. Schum.

Kustere hill, Gar-panchkot, flowering, common, (1.8.63), *Banerji* 387.

ASCLEPIADACEAE

Calotropis gigantea (Linn.) R. Br.

Near D. F. O.'s office, Purulia, flowering, common, (18.5.64), *Chatterji* 133.

Ceropegia hirsuta W. & A.

Matha, hill slope, flowering, not common, (11.9.64), *Malick* 9.

Cryptolepis buchanani Roem. & Sch.

Matha, flowering, common, (15.5.63), *Chatterji* 1.

C. elegans Wall.

Parbhatpur, Panchkot, flowering, (22.3.64), *Biswas* 145 B.

Gymnema sylvestre (Retz.) Schult.

Parbhatpur, Panchkot, fruiting, (22.3.64), *Biswas* 145 A.

Hemidesmus indicus (Linn.) Schult.

Madhupur, Matha, flowering, common, (12.9.64), *Malick* 109.

Holostemma annulare (Roxb.) Schum.

Chatni, Ajodhya hills, flowering, (19.7.63), *Banerji* 237.

GENTIANACEAE

Canscora decussata R. & S.

Kolma, fruiting, common, (19.9.64), *Malick* 180.

C. diffusa R. Br.

Saprambera, Ajodhya, flowering, common, (16.5.63), *Chatterji* 29.

Exacum petiolare Griseb.

Kolma, fruiting, not common, (19.9.64), *Malick* 181.

Nymphoides cristatum (Roxb.) O. Ktze.

Kailapal, flowering, common in tank, (20.5.63), *Chatterji* 166.

BORAGINACEAE

Coldenia procumbens Linn.

Nanna forest, Kailapal, fruiting, (20.5.63), *Chatterji* 140.

Cordia dichotoma Forst.

Chatadungri, Baghmundi, flowering, (18.5.63), *Chatterji* 115.

Heliotropium indicum Linn.

Kutidi, Jhalda, near village, flowering, common, (17.9.64), *Malick* 158.

H. ovalifolium Forsk.

Panchkot hill (north), flowering, common, (24.3.64), *Biswas* 159.

CONVOLVULACEAE

Cuscuta reflexa Roxb.

Ajodhya, flowering, common epiphytes on vitex negundo, (17.5.63), *Chatterji* 68.

Erycibe wightiana Grah.

Matha, on the hill slope, fruiting, (11.9.64), *Malick* 95.

Evolvulus alsinoides Linn.

Matha, waste place, flowering, common, (12.9.64), *Malick* 124.

Ipomoea eriocarpa R. Br.

Jhalda, flowering, not common, (15.9.64), *Malick* 153.

I. pes-tigridis Linn.

Jhalda, fruiting, common, (15.9.64), *Malick* 153.

Merremia hederacea (Burm. f.) Hallier f.

Kustere hills, flowering, common, (1.8.63), *Banerji* 381.

M. tridentata (L.) Hallier f.

Matha, flowering, common in open places (12.9.64), *Malick* 124.

SOLANACEAE

Datura metel Linn.

Chatni, Ajodhya, flowering, common, (19.7.63), *Banerji* 227.

Physalis minima Linn.

Kolma, flowering, a common weed, (19.9.64), *Malick* 178.

Solanum surattense Burm. f.

Jhalda, roadside, flowering, very common, (15.9.64), *Malick* 135.

SCROPHULARIACEAE

Bacopa monnieri (Linn.) Pennell

Matha, in a marshy place by the side of rice field, flowering, common, (12.9.64), *Malick* 112.

Centranthera humifusa Wall.

Matha, near rice field, flowering, common, (12.9.64), *Malick* 126.

Lindernia parviflora (Roxb.) Haines

Tarpinia, Ajodhya, in marshy place, flowering, common, (17.5.63), *Chatterji* 92.

Scoparia dulcis Linn.

Ajodhya hill, flowering, very common, (16.5.63), *Chatterji* 49.

Striga euphrasioides (Vahl) Benth.

Matha, flowering, common, (11.9.64), *Malick* 12.

Sopubia delphinifolia (Roxb.) G. Don

Matha, near rice field, flowering, common, (11.9.64), *Malick* 31.

OROBANCHACEAE

Aegintia indica Linn.

Matha, on the slope, moist shady place, flowering, common, (11.9.64), *Malick* 10.

LENTIBULARIACEAE

Utricularia flexuosa Vahl

Sahebbandh, Purulia, floating on water, flowering, common, (10.3.64), *Biswas* 5.

BIGNONIACEAE

Oroxylum indicum (Linn.) Vent.

Panchkot, along a stream, fruiting, common, (25.3.64), *Biswas* 171.

PEDALIACEAE

Martynia annua Linn.

Madhupur, Matha, flowering, common, (12.9.64), *Malick* 107.

Sesamum indicum Linn.

Jhalda, fruiting, may be an escape from cultivation, (15.9.64), *Malick* 140.

ACANTHACEAE

Adhatoda vasica Nees

Panchkot near village, flowering, common, (24.3.64), *Biswas* 154.

Andrographis paniculata Wall. ex Nees

Kodagara, Kolma, flowering, common, (12.3.64), *Biswas* 32.

Barleria cristata Linn.

Matha, flowering, common, (11.9.64), *Malick* 37.

B. strigosa Willd.

Matha, flowering, common, (11.9.64), *Malick* 36.

Cardanthera difformis L. f. Druce

Panchkot (east), flowering, common, (25.3.64), *Biswas* 165.

Dicliptera roxburghiana Nees

Jhalda, Kalidungri, flowering, common, (11.3.64), *Biswas* 27.

Eranthemum nervosum (Vahl) R. Br.

Badhgao, Kolma, flowering, not common, (13.3.64), *Biswas* 48.

E. purpurascens Nees

Tarpinia, Ajodhya, fruiting, common, (17.5.63), *Chatterji* 75.

Hemigraphis latebrosa Nees

Kolma, flowering, common in rocky places, (14.3.64), *Biswas* 73.

H. polysperma (Roxb.) Anders.

Sahebbandh, Purulia, flowering, common, (10.3.64), *Biswas* 7.

Justicia betonica Linn.

Matha, on rock, flowering, common, (11.9.64), *Malick* 22.

J. diffusa Willd.

Matha, flowering, common, (11.9.64), *Malick* 57.

Lepidagathis incurva D. Don

Badhgao, Kolma, fruiting, common, (13.3.64), *Biswas* 58.

Nelsonia canescens (Lam.) Spreng.

Badhgao, Kolma, fruiting, common, (13.3.64), *Biswas* 63.

Petalidium barlerioides Nees

Jhalambelidungri, Kolma, fruiting, not common, (15.3.64), *Biswas* 93.

Ruellia tuberosa Linn.

Near Kailapal forest rest house, flowering, common, (20.5.63), *Chatterji* 157.

Rungia repens (Linn.) Nees

Kolma, fruiting, not so common, (12.3.64), *Biswas* 30.

VERBENACEAE

Clerodendron serratum (Linn.) Moon

Matha, fruiting, not common, (11.9.64), *Malick* 100.

C. viscosum Vent.

Ajodhya hills, flowering, common, (15.5.63), *Chatterji* 13.

Lantana camara Linn. var. **aculeata** (L.) Mold.

Jhalambelidungri, Kolma, flowering, common, (24.7.63), *Banerji* 327.

Lippia alba (Mill.) N.E. Br. ex Britton ex Wilson

Saprambera, flowering, common, (20.7.63), *Banerji* 277.

Vitex negundo Linn.

Baghmundi, flowering, common, (15.5.63), *Chatterji* 3.

V. trifolia Linn. f.

Jhalambelidungri, Kolma, flowering, not so common, (15.3.64), *Biswas* 35.

LABIATAE

Anisomeles indica O. Ktze.

Jhalda, flowering, common, (15.9.64), *Malick* 136.

Hyptis suaveolens (Linn.) Poit.

Matha, flowering, common, (11.9.64), *Malick* 53.

Leucas capitata Desf.

D.F.O.'s office compound, Purulia, flowering, common, (9.9.64), *Malick* 3.

L. mollissima Wall.

Kudna, Ajodhya, flowering, common, (21.7.63), *Banerji* 290.

Ocimum americanum Linn.

Baraurma, Matha, fruiting, common, (17.7.63), *Chatterji* 178.

O. basilicum Linn.

Matha, on the hill slope, flowering, common, (12.9.64), *Malick* 117.

O. sanctum Linn.

Baraurma, Matha, flowering, common, (17.7.63), *Banerji* 192.

Orthosiphon rubicundus Benth.

Ajodhya hills, flowering, common, (16.5.63), *Chatterji* 45.

NYCTAGINACEAE

Boerhavia diffusa Linn.

Ajodhya hills, on rocks, flowering, common, (16.5.63), *Chatterji* 48.

AMARANTHACEAE

Achyranthes aspera Linn.

Chatadungri, Baghmundi, fruiting, common, (18.5.63), *Chatterji* 109.

Aerva lanata (Linn.) Juss.

Baraurma, Matha, fruiting, not common, (17.7.63), *Banerji* 198.

Allmania nodiflora (L.) R. Br.

Chatni, Ajodhya hills, flowering, not common, (19.7.63), *Banerji* 258.

Alternanthera sessilis (L.) DC.

Baragatha, Kolma, flowering, very common, (16.3.64), *Biswas* 100.

Amaranthus spinosus Linn.

Near D.F.O.'s office, Purulia, flowering and fruiting, common, (18.5.63), *Chatterji* 132.

A. viridis Linn.

Ajodhya hills, fruiting, common, (16.5.63), *Chatterji* 6.

Celosia argentea Linn.

Matha, cultivated field, fruiting, common, (11.9.64), *Malick* 72.

Digera alternifolia (Linn.) Asch.

Jhalda, fruiting, not common, (15.9.64), *Malick* 146.

Gomphrena celosioides Mart.

D.F.O.'s office compound, Purulia, flowering, very common, (9.9.64), *Malick* 2.

POLYGONACEAE

Polygonum barbatum Linn.

Chatni, Ajodhya, marshy area, flowering, common, (19.7.63), *Banerji* 201.

P. glabrum Willd.

Jhalda, near rice field, flowering, common, (15.9.64), *Malick* 148.

P. hydropiper Linn.

Kutidi, Jhalda, near a stream, flowering, not common, (17.9.64), *Malick* 160.

P. plebejum R. Br.

Jhalda, foot hills, flowering, not common, (15.3.64), *Biswas* 12.

P. serrulatum Lagasc.

Baghmundi, flowering, not common, (17.5.63), *Chatterji* 76.

LAURACEAE

Cassytha filiformis Linn.

Parbhatpur, Gar-panchkot, flowering, (29.7.63), *Banerji* 356.

Litsaea glutinosa (Lour.) Rob.

Chatni, Ajodhya, flowering, common, (19.7.63), *Banerji* 242.

LORANTHACEAE

Macrosolen capitellatus (W. & A.) Danser

Chatni, Ajodhya, flowering, not common, (19.7.63), *Banerji* 248.

Scurrula philippensis (Cham. et Schl.) G. Don

Natundi, flowering, common, (30.7.63), *Banerji* 366.

Viscum articulatum Burm.

Matha, roadside, flowering, parasite on *Madhuca indica*, (11.9.64), *Malick* 102.

V. orientale Willd.

Matha, roadside, flowering, parasite on *Schleichera oleosa*, (11.9.64), *Malick* 75.

EUPHORBIACEAE

Antidesma diandrum Roth

Matha, fruiting, common, (11.9.64), *Malick* 70.

A. ghaesembila Gaertn.

Kailapal, flowering, common, (21.5.63), *Chatterji* 172.

Bridelia retusa (L.) Spreng.

Matha forest, fruiting, common, (12.9.64), *Malick* 118.

B. stipularis Bl.

Chatni, Ajodhya, flowering, not common, (19.7.63), *Chatterji* 247.

Cleistanthus collinus (Roxb.) Benth. ex Hook. f.

Matha, flowering, common, fruiting, very common, (12.9.64), *Malick* 131.

Croton bonplandianus Baill.

Jhalda, along roadside, flowering, common, (11.3.64), *Biswas* 16.

C. tiglium Linn.

Badhgao, Kolma, flowering, common, (13.3.64), *Biswas* 50.

Embblica officinalis Gaertn.

Badhgao, Kolma, flowering, not common, (13.3.64), *Biswas* 65.

Euphorbia hirta Linn.

Saprambera, Ajodhya hills, flowering, common, (16.5.63), *Chatterji* 27.

E. parviflora Linn.

Gar-panchkot, fruiting, common, (31.7.63), *Banerji* 373.

Glochidion hohenackeri Bedd.

Kailapal, flowering, common, (21.5.63), *Chatterji* 169.

Jatropha curcas Linn.

Matha, fruiting, not common, (11.9.64), *Malick* 66.

J. gossypifolia Linn.

Baragatha, flowering, common, (16.3.64), *Biswas* 109.

Mallotus philippensis (Lam.) Muell.-Arg.

Bidyajera, Ajodhya hills, fruiting, not common, (17.5.63), *Chatterji* 94.

Melanthesa retusa Kostel

Nanna forest, Kailapal, flowering, not common, (20.5.63), *Chatterji* 150.

M. rhamnoides (Retz.) Bl.

Chatni, Ajodhya, flowering, not common, (19.7.63), *Banerji* 229.

Phyllanthus reticulatus Poir.

Panchkot hill (west), flowering, not common, (21.3.64), *Biswas* 133.

Phyllanthus simplex Retz.

Baraürma, Matha, flowering, (17.7.63), *Chatterji* 182.

Ricinus communis Linn.

Chatni village, fruiting, not common, (19.7.63), *Banerji* 233.

Sebastiania chamaelia Muell.-Arg.

Matha, flowering, not common, (12.9.64), *Malick* 127.

Securinega virosa (Roxb. ex Willd.) Pax & Hoffm.

Ajodhya, fruiting, not common, (20.7.63), *Banerji* 306.

Tragia involucrata Linn.

Kolma, fruiting, not common, (19.9.64), *Malick* 185.

ULMACEAE

Trema orientalis Bl.

Ajodhya, flowering, common, (18.7.63), *Banerji* 212.

URTICACEAE

Streblus asper Lour.

Parbhatpur, flowering, (22.3.64), *Biswas* 141.

MORACEAE

Ficus bengalensis Linn.

Saprambera, flowering, common, (16.5.63), *Chatterji* 43.

F. cunia Buch.-Ham.

Saprambera, fruiting, not common, (16.5.63), *Chatterji* 36.

F. glomerata Roxb.

Chatni, Ajodhya, fruiting, common, (19.7.63), *Banerji* 243.

F. religiosa Linn.

Chatni, Ajodhya, flowering, common, (19.7.63), *Banerji* 241.

F. virens Ait.

Jhalda, Kalidungri, flowering, not common, (11.3.63), *Biswas* 22.

MONOCOTYLEDONS

ORCHIDACEAE

Eulophia explanata Lindl.

Nanna forest, Kailapal, flowering, not common, (20.5.63), *Chatterji* 144.

Habenaria commelinifolia Wall. ex Lindl.

Chatni, Ajodhya, flowering, (19.7.63), *Banerji* 264.

H. marginata Coleb.

Ajodhya hills, flowering, (18.7.63), *Banerji* 220.

H. plantaginea Lindl.

Matha, on the hill slope, flowering, not common, (11.9.64), *Malick* 32.

Pogonia carinata Lindl.

Kolma, fruiting, not common, (24.7.63), *Banerji* 317.

Vanda roxburghii Br.

Bhuchandi, Matha, flowering, (15.5.63), *Chatterji* 6.

ZINGIBERACEAE

Costus speciosus (Koenig) Smith

Matha foot hills, flowering, common, (11.9.64), *Malick* 91.

Curcuma aromatica Salisb.

Matha, on the hill slope, flowering, common, (11.9.64), *Malick* 99.

Globba bulbifera Roxb.

Chatni, Ajodhya, flowering, (19.7.63), *Banerji* 252

G. racemosa Sm.

Kolma forest, flowering, (19.9.64), *Malick* 177.

Zingiber capitatum Roxb.

Matha, foot hills, fruiting, (11.9.64), *Malick* 7.

HYPOXIDACEAE

Curculigo orchioides Gaertn.

Bidyajera, Ajodhya hills, flowering, (17.5.63), *Chatterji* 99.

C. recurvata Dryand.

Kolma forest, fruiting, (19.9.64), *Malick* 175.

AMARYLLIDACEAE

Pancratium triflorum Roxb.

Tarpinia, Baghmundi, flowering, (17.5.63), *Chatterji* 74.

TACCACEAE

Tacca pinnatifida Forst.

Matha, on the hill slope, fruiting, common, (11.9.64), *Malick* 48.

DIOSCOREACEAE

Dioscorea bulbifera Linn.

Saprambera, flowering, (16.5.63), *Chatterji* 19.

D. glabra Roxb.

Matha, roadside forest, flowering, (11.9.64), *Malick* 79.

D. pentaphylla Linn.

Matha, roadside forest, flowering, (11.9.64), *Malick* 79.

D. sativa Linn.

Matha, foot hill forest, flowering, (11.9.64), *Malick* 78.

D. tomentosa Heyne

Saprambera, flowering, (16.5.63), *Chatterji* 21.

LILIACEAE

Chlorophytum orchidastrum Lindl.

Ajodhya hills, flowering, (18.7.63), *Chatterji* 207.

C. tuberosum (Roxb.) Baker

Kolma, flowering, (24.7.63), *Banerji* 318.

Gloriosa superba Linn.

Matha, flowering, not common, (11.9.64), *Malick* 18.

SMILACACEAE

Smilax zeylanica Linn.

Matha, roadside forest, fruiting, common, (11.9.64), *Malick* 81.

PONTEDERIACEAE

Monochoria vaginalis (Burm. f.) Presl ex Kunth

Matha, in the rice field, flowering, not so common, (11.9.64), *Malick* 44.

•COMMELINACEAE

Aneilema scapiflorum Wight

Saprambera, flowering, (16.5.63), *Chatterji* 22.

Cyanotis cristata (Linn.) Schult. f.

Matha, near a ditch, flowering, (11.9.64), *Malick* 61.

C. tuberosa (Roxb.) Schult. f.

Gar-panchkot, flowering, (31.7.63), *Banerji* 374.

JUNCACEAE

Juncus prismatocarpus R. Br.

Ambera falls, Kolma, flowering, not common, (17.3.64), *Biswas* 112.

ARACEAE

Amorphophallus campanulatus Bl.

Ajodhya, flowering, common, (18.7.63), *Banerji* 389.

A. purpurascens Kurz

Nanna forest, Kailapal, flowering, (20.5.63), *Chatterji* 148.

Arisaema tortuosum Schot:

Chatni, Ajodhya, flowering, (19.7.63), *Banerji* 249.

POTAMOGETONACEAE

Potamogeton nodosus Poir.

Parbhatpur, flowering, (29.7.63), *Banerji* 358.

ERIOCAULACEAE

Eriocaulon luzulifolium Mart.

Jhalda, near rice field; flowering, common, (15.9.64), *Malick* 155.

E. quinquangulare Linn.

Jhalda, flowering, common, (11.3.64), *Biswas* 11.

CYPERACEAE

Bulbostylis barbata (Rottb.) Clarke

Matha, near rice field, fruiting, common, (11.9.64), *Malick* 35.

Cyperus cyperinus (Retz.) Valck.

Ajodhya hills, flowering, common, (16.5.63), *Chatterji* 57.

C. cyperoides (L.) O. Ktze.

Pathardi, Ajodhya hills, flowering, common, (18.7.63), *Banerji* 218.

C. difformis L.

Matha, side of the stream, flowering and fruiting, (12.9.64), *Malick* 120.

C. haspans L.

Matha, near rice field, fruiting, common, (11.9.64), *Malick* 42.

C. iria L.

Pathardi, flowering, (18.7.63), *Banerji* 225.

C. niveus Retz.

Matha, on the slope of the hills, fruiting, common, (11.9.64), *Malick* 30.

C. nutans Vahl

Chatni, Ajodhya, flowering, (19.7.63), *Banerji* 266.

C. rotundus L.

Kailapal, flowering, (21.5.63), *Chatterji* 126.

C. triceps (Rottb.) Endl.

Tarpinia, Baghmundi, flowering, (17.5.63), *Chatterji* 82.

Fimbristylis aestivalis (Retz.) Vahl

Saprambera, in a moist place, flowering, common, (16.5.63), *Chatterji* 30.

F. dichotoma (L.) Vahl

Jhalda, in the rice field, flowering, very common, (15.9.64), *Malick* 156.

F. diphylla (Retz.) Vahl

Chatadungri, Baghmundi, flowering, common, (18.5.63), *Chatterji* 121.

F. miliaceae (L.) Vahl

Matha, on the hill top, flowering, very common, (11.9.64), *Malick* 62.

Fuirena ciliaris (L.) Roxb.

Matha, in the rice field, flowering, common, (11.9.64), *Malick* 68.

Scirpus articulatus L.

Panchkot, flowering, common, (21.3.64), *Biswas* 139.

S. lateriflorus Gmel.

Kolma, flowering, common, (17.3.64), *Biswas* 113.

GRAMINAE

Alloteropsis cimicina (Linn.) Stapf

Baraurma, in waste place, flowering, (17.7.63), *Chatterji* 191.

Apluda mutica Linn.

Jhalda, on the hill, flowering, common, (15.9.64), *Malick* 143.

Aristida funiculata Trim. et Rupr.

Chatadungri, fruiting, common, (18.5.63), *Chatterji* 113.

A. setacea Retz.

Kutidi, Jhalda, near a stream, fruiting, very common, (17.9.64), *Malick* 168.

Arundinella brasiliensis Raddi

Matha, entirely covering a portion of the slope, flowering, very common, (11.9.64), *Malick* 64.

Bambusa tulda Roxb.

Chatni, Ajodhya hills, flowering, common, (19.7.63), *Banerji* 239.

Brachiaria ramosa (Linn.) Stapf

Chatni, Ajodhya hills, fruiting, common, (19.7.64), *Banerji* 260.

Chrysopogon lancearius (Hook.f.) Haines

Matha, foot hills, flowering, common, (11.9.64), *Malick* 65.

Coelachne simpliciuscula (Wight et Arn.) Munro ex Benth.

Tarpinia, Baghmundi, in marshes, flowering, (18.7.63), *Banerji* 223.

Dactyloctenium aegyptium (Linn.) Beauv.

Saprambera, flowering, common, (20.7.63), *Banerji* 274.

Dendrocalamus strictus Nees

Baragatha, Kolma, flowering, (16.3.64), *Biswas* 107.

Digitaria sanguinalis (Linn.) Scop.

Chatni, Ajodhya hills, flowering, (19.7.63), *Banerji* 287.

D. setigera Roth.

Saprambera, on the hill, flowering, (20.7.63), *Banerji* 272.

Eragrostis brachyphylla (Stapf) Bor

Matha, foot hills, flowering, common, (11.9.64), *Malick* 69.

E. coarctata Stapf.

Ajodhya hills, fruiting, common, (16.5.63), *Chatterji* 58.

E. pilosa (Linn.) Beauv.

Baraurma, Matha, flowering, (17.7.63), *Chatterji* 203.

E. tenella (Linn.) Beauv.

Jhaldia, flowering, common, (11.3.64), *Biswas* 18.

E. unioloides (Retz.) Nees

Matha, foot hills, flowering, common, (11.9.64), *Malick* 29.

Mackelochloa granularis (Linn.) O. Ktze.

Matha, foot hills, flowering, (11.9.64), *Malick* 40.

Heteropogon contortus (Linn.) Beauv.

Ajodhya hills, flowering, (16.5.63), *Chatterji* 56.

Iseilema laxum Hack.

Kolma, flowering, (27.7.63), *Banerji* 353.

Panicum psilopodium Trin.

Pathardi, Ajodhya, flowering, common, (18.7.63), *Banerji* 218.

Pennisetum orientale Rich.

Jhaldia, on the rock, flowering, common, (15.9.64), *Malick* 141.

Perotis indica (Linn.) O. Ktze.

Ajodhya hills, flowering, (18.7.63), *Banerji* 213.

Pogonatherum panicum (Lamk.) Hack.

Saprambera, on rocks, flowering, (16.5.63), *Chatterji* 31.

Polypogon monspeliensis (Linn.) Desf.

Bidyajera, Ajodhya hills, flowering, (17.5.63), *Chatterji* 97.

Sporobolus indicus (Linn.) R. Br.

Ajodhya hills, flowering, (16.5.63), *Chatterji* 60.

Thysanolaena maxima (Roxb.) O. Ktze.

Bidyajera, Ajodhya hills, flowering, common, (17.5.63), *Chatterji* 102.

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