

A CONTRIBUTION TO THE FLORA AND VEGETATION OF KAWANT RANGE, GUJARAT STATE, INDIA

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ABSTRACT

The present paper is a result of the exploration of entire Kawant range of the Chhotaudepur forest division, Gujarat State, during 1967-1969. The floristic area of the dry deciduous type with *Tectona grandis* as the dominant species. In all 552 plants have been listed. Of these 844 belong to 176 dicotyledons and 168 to the monocotyledons. The dicotyledons are distributed within 42 families and 295 genera. The monocotyledons are distributed in 20 families and 68 genera. 33 plants not reported in Santapau's 'The flora of Saurashtra-Gujarat' (1907) have been incorporated in this paper.

INTRODUCTION

The flora of Gujarat, especially that of the hilly forest regions, demands thorough exploration. Some notable contributions have been made in this direction. But, still there is a great scope for further exploration. The authors, in this paper have presented data collected during 1967-69 covering all the seasons on the plants occurring in the Kawant range forests of the Chhotaudepur division. As far as the authors are aware, there has not been any systematic work on the flora and vegetation of this area published so far.

LOCATION

The area under investigation lies between 21°55'-21°15'N latitude and 73°45'-74°08'E longitude. It is bounded by river Narmada on the south, Narsadi range on the west, Madhya Pradesh on the east and Chhotaudepur and Jetpur ranges on the north. Physiographically the area is hilly, cut up by valleys. The common trend of the hills is east to west. The northern part of the area is having low hills and flats but southwards the land becomes very rugged. Due to hilly topography, the area is thinly populated and the villages are scattered. The population is mostly tribal.

CLIMATE

The region has a strongly periodic climate. November, December and January are cold and temperature often touches 10°C in January, which is the coldest month. The summer begins from late February and lasts till June. The highest temperature often reaching 45°C is recorded in the month

of May. The rainy season commences from about the middle of June and continues till September with occasional showers from October to January. The average annual rainfall is 600 mm.

GEOLOGY

The area is covered by rocks of Deccan trap lava, overlying pre-cambrian metamorphics. There are inliers of Cretaceous marine transgression known as Bagh beds. Prominent amongst them are the ones near Mohanfort and Handodanger, consisting of sandstones and shales. The Handodanger and Amhadanger outcrops are having rich fluoric mineralization.

VEGETATION

The area from the point of view of vegetation can be conveniently divided into three distinct parts. The northern part of the area (north of river Heran) is more or less plain with few scattered hillocks. The biotic factors are also quite evident in this area. The vegetation is of dry deciduous forest type mainly consisting of *Tectona grandis*, *Holopterna antidysecteria*, *Wrightia tinctoria*, *Morinda tomentosa*, *Madhuca longistylis* var. *latifolia*, *Lagerstroemia macrocarpa*, *Balan monophana*, *Helicteres isora*, *Kigambela reticulata*, *Securinega vertica* and many others occupy the middle storey. In addition to this permanent aspect of the vegetation, a temporary herb-layer mainly consisting of *Impatiens balsamina*, *Curculigo orchoides*, *Leva edgeworthii*, *Polygala chinensis*, *Curcuma madora*, *Clematis gynandra*, *Tweedia leonipetaloides* and *Cassia pavonis* is noted during mou-

soon and the post-monsoon periods. In open grassy places, *Ophioglossum fibrosum*, *Cyperus leucocephalus* and *C. inreps* are usually met with. The common climbers noted are *Marsdenia tomentosa*, *Ampelocissus latifolia*, *Cryptolepis buchanani* and *Solenia heterophylla*.

The central part (south of river Heran upto Raisigpura) is plain and under cultivation, except for a few hillocks. These hillocks are either brought under the plough during monsoon or are left barren. These barren hills support some short grasses mixed with typical monocotyledons like *Iphigenia indica*, *Caruliga archoides*, *Urogenia indica* and *Chlorophytum tuberosum*. The river Kari traverses this area. The vegetation along the banks consists of stunted trees of *Ailanthus excelsa*, *Butea monosperma* and *Tecoma grandis* on the elevated banks and *Argemone mexicana*, *Solanum oxycarpon*, *Xanthium strumarium*, *Sphaeranthus indicus*, *Phyla nodiflora*, *Bacopa monnieri* and many others on the lower banks near water. At few places, pure stands of *Pilex arguando* were noted on the banks.

The Southern part is all hilly and is by far the richest as far as the vegetation is concerned. Here the forests are of the dry deciduous types with a patch of mixed deciduous type near Banganga. The forests have *Tecoma grandis*, *Terminalia tomentosa*, *Amegema latifolia*, *Antiocephalus indicus*, *Adina cordifolia*, *Lagerstrœmia microcarpa*, *Millettia tomentosa*, *Acacia chundra* and *Dalbergia latifolia*. *Bacassus flabellifer* and *Malthous longifolia* var. *latifolia* are planted on a large scale near habitations. The middle layer is dominated by *Holarrhena antidysenterica*, *Wrightia tinctoria*, *Butea monosperma*, *Morinda tomentosa* and *Buchanania lanzan*. The undergrowth consists of *Cordia alliodora* on the slopes, *Helicteres nora*, *Grewia bilobifolia*, *Leuca macrophylla*, *L. edgeworthii*, *Impatiens balsamina*, *Tacca leontopetaloides*, *Bahuspermum mexicanum* and *Hibiscus lobatus*. The common climbers are *Tinospora cordifolia*, *Cambretium ovalifolium*, *Dioscorea bulbifera*, *D. pentaphylla* and *Cayratia auriculata*.

The common agricultural weeds in the area are *Ferontia cinerea*, *Ageratum conyzoides*, *Ocimum americanum*, *Cyperus rotundus* and many others. All the plants collected on various excursions have been properly preserved and deposited at the Herbarium, Department of Botany, The M. S. University of Baroda, Baroda, Gujarat State, India.

ENUMERATION

ANNONACEAE

- Annona squamosa* Linn.
Moti Sadri, in flowers, 31-7-69, DNT 202.
Millettia tomentosa (Roxb.) Siebold
Mohanfort, in flowers, 20-4-70, DNT 915.
Polyalthia longifolia (Sonnert.) Thw.
Rangpur, 20-4-70.

MENISPERMACEAE

- Cissampelos pareira* Linn. var. *hirsuta* (Buck. ex DC.) Forman.
Ambadanger, 20-7-69, DNT 147.
Cocculus hirsutus (Linn.) Diels.
Ambadanger, in flowers, 18-12-67, B 5129.
Tinospora cordifolia Miers
Ambadanger, 18-12-67.

PAPAVERACEAE

- Argemone mexicana* Linn.
Kadipani, in flowers, 5-4-69, P & T 648.

BRASSICACEAE (CRUCIFERAE)

- Brassica juncea* (Linn.) Czern. & Coss.
Moti Chhikki, in flowers, 8-5-68, P & T 819.
Raphanus sativus Linn.
Kawadi, 25-10-69.
Rorippa indica (L.) Hiern
Hambheshwar, in fruits, 18-10-69.

CAPPARIDACEAE (CAPPARACEAE)

- Capparis decidua* (Forsk.) Edgew.
Rangpur, in flower, 20-10-69.
C. grandis Linn.
Mohanfort, in flower, 20-4-70, DNT 734.

CLIFOMACEAE

- Cleome gynandra* Linn.
Rangpur, in flowers & fruits, 20-10-69, DNT 635.
C. monophylla Linn.
Kadipani, in flowers & fruits, 16-10-69, DNT 486.
C. simplicifolia Hook. f. & Thoms.
Amrapura, in flowers & fruits, 7-5-68, P & T 159.
C. viscosa Linn.
Rangpur, in flowers & fruits, 20-10-69, DNT 634.

VIOLACEAE

- Hybanthus sultrificosus* (Linn.) Baill. ex Lanessy.
Lini forest, in flowers, 15-10-69, DNT 324.

COCHLOSPERMACEAE

- Cochlospermum religiosum* (Linn.) Alst.
Ambadanger, in fruits, 5-4-69.

POLYGALACEAE

- Polygala chinensis* Linn.
Lumi forest, in flowers, 15-10-69, DNT 361.
P. erioptera DC.
Ambadunger, in flowers, 18-12-67, B 5127.
ORYZOPHYLLACEAE

- Polycarpaea corymbosa* (Linn.) Link.
Lumi forest, in flowers & fruits, 13-10-69, DNT 324.

PORTULACACEAE

- Portulaca oleracea* Linn.
Hampshwar, in fruits, 29-7-69, DNT 129.

TAMARICACEAE

- Tamarix ericoides* Rardl.
Kawant, in flowers, 15-10-69, DNT 411.

ELATINACEAE

- Bergia odorata* Edgew.
Rangpur, in fruits, 20-4-59, DNT 924.

MALVACEAE

- Abelmoschus manihot* (Linn.) Medic.
Kadipant, in fruits, 26-7-69.
A. esculentus (Linn.) Moench.
Kawant, in fruits.
Abutilon indicum Sweet.
Kawant, in fruits, 13-10-69.
Gossypium herbaceum Linn.
Ambadunger, in fruits, 18-12-67, B 5145.
Hibiscus cannabinus Linn.
Amirpura, in flowers, 19-10-69, DNT 395.
H. lobatus (Murr.) O. Kuntze
Kadipant, in fruits, 16-10-69, DNT 494.
H. ovalifolius (Forsk.) Vahl
Ambadunger, in flowers, 6-4-69, P & T 394.
H. rosa-sinensis Linn.
Kawant, in flowers, 13-10-69.
H. subdariffa Linn.
Ambadunger, in fruits, 18-12-67, B 5117.
H. vitifolius Linn.
Chhiki, in fruits, 17-12-67, B 5017.
Kydia calycina Roxb.
Ambadunger, in flowers, 17-10-69, DNT 549.
Sida alba Linn.
Kawant, in fruits, 15-10-69, DNT 407.
S. cordata (Burm. f.) Borsk.
Lumi forest, in fruits, 15-10-69, DNT 350.
S. rhombifolia Linn. *sep. rhombifolia*
Ambadunger, in fruits, 18-12-67, B 5122.
Urena lobata Linn.
Kawant, in fruits, 15-10-69.

BOMBACACEAE

- Bombax ceiba* Linn.
Hampshwar, 18-10-69.

STERCULIACEAE

- Eriolaena hookeriana* W. & Arn.
Hampshwar, in fruits, 18-10-69, DNT 366.
Helicteres isora Linn.
Ambamahadi, in flowers, 28-7-69, DNT 109.
Melochia corchorifolia Linn.
Lumi forest, in flowers, 15-10-69, DNT 371.
Sterculia urens Roxb.
Raisingpura, in flowers, 18-12-67.
Waltheria indica Linn.
Lumi forest, in flowers, 15-10-69, DNT 323.

TILIACEAE

- Corchorus aestuans* Linn.
Ambadunger, in fruits, 29-7-69, DNT 75.
C. olitorius Linn.
Ambadunger, in fruits, 18-12-67, B 5121.
C. trilobularis Linn.
Kawant, in fruits, 15-10-69, DNT 384.
Grewia damini Gaertn.
Vaghbari, in flowers, 5-4-69, P & T 554.
G. hirsuta Vahl
Hampshwar, in flowers, 5-4-69.
G. tiliacifolia Vahl
Rangpur, in fruits, 21-10-69.
Triumfetta pentandra A. Rich.
Ambadunger, in fruits, 18-12-67, B 5117 A.
T. rhomboidea Jacq.
Hampshwar, in flowers, 9-9-68, P & T 251.
T. rotundifolia Lam.
Kawant, in flowers, 7-9-68, P & T 160.

ZYGOPIHYLLACEAE

- Tribulus terrestris* Linn.
Rangpur, in fruits, 20-10-69.

OXALIDACEAE

- Biophytum sensitivum* (Linn.) DC.
Fanaal temple, in flowers, 21-10-69, DNT 682.
Oxalis corniculata Linn.
Kawant, in flowers, 21-10-69.

BALSAMINACEAE

- Impatiens balsamina* Linn.
Ambadunger, in flowers, 29-7-69, DNT 135.

RUTACEAE

- Aegle marmelos* (Linn.) Corr.
Hampshwar, 18-10-69.

**Citrus grandis* Osbeck.

Rangpur, in fruits, 21-10-69, DNT 686.

C. limon (Linn.) Burm. f.

Khastra, in flowers, 17-4-69, DNT 881.

Limonia acidissima Linn.

Rangpur, 21-10-69.

Murraya koenigii (Linn.) Spreng.

Rangpur, 21-10-69.

SIMARUBACEAE

Ailanthus excelsa Roxb.

Kadipani, in flowers, 18-12-67.

BALANITACEAE

Balanites aegyptiaca (Linn.) Del.

Ambalunger, 18-10-69.

BURSERACEAE

Boswellia serrata Roxb.

Ambalunger, in fruits, 17-4-70.

Garuga pinnata Roxb.

Ambalunger, in fruits, 17-4-70, DNT 847.

MELIACEAE

Azadirachta indica A. Juss.

Kepinbari, in flowers, 5-4-69, P & T 545.

Melia azadirach Linn.

Ambalunger, in flowers, 17-4-70.

Celastraceae

**Cassine glauca* (Roth.) O. Ktze.

Ambalunger, in flowers, 17-10-69, DNT 828.

Celastrus paniculatus Willd.

Fansi temple, in fruits, 21-10-69, DNT 661.

Maytenus emarginata (Wills.) Ding Hou

Kawant, in flowers, 17-10-69.

RIAMNACEAE

**Ventilago denticolata* Willd.

Ambalunger, in flowers, 17-10-69, DNT 558.

Zizyphus glabrata Heyne ex Roth

Ambalunger, 17-10-69.

Z. mauritiana Lamk.

Khastra, in fruits, 16-10-69, DNT 504.

Z. oenoplia Mill.

Fansi temple, in flowers, 21-10-69, DNT 654.

Z. xylopyra (Retz.) Willd.

Hampshwar, in fruits, 18-10-69, DNT 380.

VITACEAE

Ampelocissus latifolia (Roxb.) Planch.

Hampshwar, in fruits, 29-7-69, B 6313.

Cavratia arviculata (DC.) Gamble

Kadipani, in flowers, 16-10-69, DNT 465.

C. trifolia (Linn.) Daniell

Hampshwar, in fruits, 16-7-69, DNT 23.

Cissus repanda Vahl

Ambalunger, in flowers, 5-4-69.

URSEACEAE

**Leea edgeworthii* Santapau

Ambalunger, in flowers, 28-7-69, DNT 108.

L. macrophylla Roxb.

Ambalunger, in flowers, 8-9-68, P & T 171.

SAPINDACEAE

Cardiospermum halicacabum Linn.

Ambalunger, in flowers, 18-12-67, B 5711.

Sapindus emarginatus Vahl

Ambalunger, in flowers, 18-12-67.

Schleichera oliva (Lour.) Oken

Kepinbari, in fruits, 6-4-69, P & T 553.

ANACARDIACEAE

**Anacardium occidentale* Linn.

Rangpur, in flowers, 20-4-70, DNT 922.

**Buchanania lanzan* Spreng

Hampshwar, in fruits, 18-4-70, DNT 890.

Lamnia coromandelica (Houtt.) Merr.

Kepinbari, in fruits, 5-4-70, DNT 558.

Mangifera indica Linn.

Moti Chivki, in fruits, 5-4-70.

MORINGACEAE

Moringa oleifera Lamk.

Hampshwar, in flowers, 18-10-67.

TARACEAE (PAPILIONACEAE)

Abrus precatorius Linn.

Rangpur, in flowers, 31-7-69, B 6422.

Aeschynomene indica Linn.

Lani forest, in fruits & flowers, 15-10-69, DNT 367.

Alysicarpus longifolius Wight & Arn.

Rangpur, in fruits, 20-10-69, DNT 640.

A. monilifer (Linn.) DC.

Rangpur, in fruits, 20-10-69.

A. tetragonolobus Edgew.

Banganga, in fruits, 17-12-67, B 5081.

A. vaginalis (Linn.) DC.

Hampshwar, in fruits, 9-9-68, P & T 267.

Arachis hypogaea Linn.

Rangpur, in flowers, 31-7-69, B 6421.

Atylosia scarabaeoides Benth.

Lani forest, in fruits, 15-10-69, DNT 358.

**A. sericea* Benth.

Ambalunger, 5-4-69.

Butea monosperma (Lamk.) Taub.

Ambalunger, in flowers, 6-4-69.

- Cajanus cajan* (Linn.) Hutch
Ambadunger, in fruits & flowers, 6-2-69, P & T 617.
- Canavalia gladiata* (Jacq.) DC.
Rabangpura, in flowers, 10-9-68, P & T 277.
- Cicer arietinum* Linn.
Ambadunger, in fruits, 18-12-67.
- Citroia biflora* Dulz.
Ambadunger, in fruits, 8-9-68, P & T 201.
- C. ternata* Linn.
Ambadunger, in fruits, 18-12-67.
- Crotalaria hirsuta* Willd.
Moi Chhikki, in flowers, 8-9-68, P & T 170.
- C. juncea* Linn.
Kadipani, in flowers, 8-4-69, P & T 633.
- C. medicaginea* Lamk.
Moi Chhikki, in flowers, 8-9-68, P & T 233.
- C. mysorensis* Roth
Banganga, in fruits, 17-12-67, B 3079.
- C. pusilla* Heyne ex Roth
Kawant, in flowers, 7-9-68, P & T 163.
- C. retusa* Linn.
Hampbeshwar, in flowers, 9-9-68, P & T 260.
- Cyanopsis tetragynoloba* (Linn.) Taub.
Rangpur, in flowers, 20-10-69, DNT 637.
- Dalbergia lanceolaria* Linn. f.
Ambadunger, in fruits, 27-7-69, B 6063.
- D. latifolia* Roxb.
Ambadunger, in flowers, 17-10-69, DNT 531.
- D. sissoo* Roxb.
Rangpur, in fruits, 20-4-70, DNT 923.
- Diosodium dichotomum* (Willd.) DC.
Kadipani, in flowers & fruits, 16-10-69, DNT 491.
- D. gangeticum* (Linn.) DC.
Banganga, in fruits, 17-12-67, B 3074.
- D. laxiflorum* DC.
Ambadunger, in flowers & fruits, 8-9-68, P & T 180.
- D. neo-mexicanum* A. Gray
Banganga, in fruits, 9-9-68, P & T 244.
- D. triflorum* DC.
Luni forest, in fruits, 15-10-69, DNT 532.
- D. velutisum* (Willd.) DC.
Kadipani, in flowers, 16-10-69, DNT 489.
- Dufourea biflora* Linn.
Kawant, 15-10-69.
- D. falcatus* Linn.
Kawant, 15-10-69.
- Glycine wightii* (R. Geah. ex Wt. & Arn.) Verl.
Ambadunger, in fruits, 8-9-68.
- Goniogyna hirta* (Willd.) Ali
Kadipani, in flowers & fruits, 16-10-69, DNT 473.
- Indigofera astragalina* DC.
Banganga, in fruits, 17-12-67, B 3062.
- I. cordifolia* Heyne ex Roth
Kadipani, in flowers, 26-7-69, DNT 47.
- I. glandulosa* Roxb. ex Willd.
Ambadunger, in flowers, 8-9-68, P & T 176.
- I. linifolia* (Linn. f.) Retz.
Ajatapara, in fruits, 7-9-68, P & T 143.
- I. linnaei* Ali
Rangpur, in fruits, 31-7-69, B 6120.
- I. tinctoria* Linn.
Ambadunger, in fruits, 6-4-69, P & T 598.
- I. trita* Linn. f.
Chhikki, in fruits, 18-8-70, DNT 1065.
- Labiab niger* Medic.
Kawant, 15-10-69.
- Medicago sativa* Linn.
Rangpur, 20-10-69.
- Milletia auriculata* Baker
Ambadunger, in fruits, 16-10-69.
- Mucuna pruriens* Hook. f.
Rabangpura, in flowers, 10-9-68, P & T 278.
- Phaseolus aconitifolius* Jacq.
Kawant, in fruits, 15-10-69, DNT 386.
- P. aureus* Roxb.
Panval, 15-10-69.
- P. mungo* Linn.
Chhikki, 16-10-69.
- P. radiatus* Roxb.
Kadipani, in fruits, 16-10-69, DNT 437.
- P. trilobus* Ait.
Ajatapara, in flowers, 7-9-68, P & T 141.
- P. vulgaris* Linn.
Chhikki, in fruits, 16-10-69.
- Pisum sativum* Linn.
Chhikki, 16-10-69.
- Pongamia pinnata* (Linn.) Pierre.
Malasabari, in fruits, 28-7-69, DNT 102.
- Pterocarpus marsupium* Roxb. var. *acuminatus* Prain
Ambadunger, 8-9-68.
- Rhynchosia capitata* DC.
Kawant, in flowers, 7-9-68, P & T 138.
- R. minima* (Linn.) DC.
Kadipani, in fruits, 16-10-69, DNT 480.
- R. minima* (Linn.) DC. var. *laxiflora* Baker
Chhikki, in fruits, 15-10-69.
- Sesbania bispinosa* (Jack.) W. F. Wight
Luni forest, in fruits, 15-10-69, DNT 336.
- S. sesban* Merr. var. *picta* (Prain) Santapau
Kadipani, 16-10-69.

- Tephrosia hamiltonii* J. R. Drumr.
Kadipani, in fruits, 16-10-69, DNT 488.
- T. hirta* Ham.
Raisingpara, in flowers, 28-7-69, DNT 89.
- T. scuticosa* (Dale.) Sant. & Maheshwari
Saidivanan, in flowers, 30-8-70, DNT 1119.
- Teramnus lobilobus* (Linn. f.) Spreng.
Fansi temple, in fruits, 21-10-69, DNT 671.
- Trigonella foenum-graecum* Linn.
Kawant, 15-10-69.
- Vigna unguiculata* (Linn.) Walp.
Kawant, 15-10-69.
- Zornia gibbosa* Span.
Kawant, in fruits, 15-10-69, DNT 405.

CAESALPINIACEAE

- Bauhinia purpurea* Linn.
Rangpur, in flowers, 20-10-69, DNT 620.
- B. racemosa* Lamk.
Fansi temple, in fruits, 21-10-69, DNT 666.
- Caesalpinia crista* Linn.
Rangpur, in fruits, 20-10-69.
- Cassia abusa* Linn.
Ambadunger, in flowers & fruits, 8-9-68, P & T 309.
- C. auriculata* Linn.
Rangpur, in flowers, 20-10-69.
- C. fistula* Linn.
Kapatihari, in flowers, 5-4-69, P & T 555.
- C. occidentalis* Linn.
Rangpur, in flowers & fruits, 20-10-69, DNT 628.
- C. pumila* Lamk.
Kadipani, in fruits, 16-10-69, DNT 445.
- C. tora* Linn.
Kawant, in flowers & fruits, 15-10-69, DNT 359.
- Delonix elata* (Linn.) Gamble
Fansi temple, in flowers, 21-10-69, DNT 679.
- Parkinsonia aculeata* Linn.
Chhikil, in flowers & fruits, 17-4-70, DNT 853.
- Peltophorum pterocarpum* (DC.) Backer
Kawant, in flowers, 15-10-69.
- Tamarindus indica* Linn.
Rangpur, in flowers, 20-10-69.

MIMOSACEAE

- Acacia chundra* (Roxb.) Willd.
Ambadunger, in fruits, 28-7-69, DNT 113.
- A. leucophloea* (Roxb.) Willd.
Hampsheswar, in flowers, 18-10-69, DNT 353.
- A. nilotica* (Linn.) Del. sp. *indica* Brenan
Kawant, in flowers, 15-10-69.

- A. pennata* Willd.
Hampsheswar, in fruits, 18-10-69, DNT 551.
- Albizia lebbekii* (Linn.) Benth.
Ambadunger, in fruits, 17-10-69, DNT 369.
- **A. procera* (Roxb.) Benth.
Fansi temple, in fruits, 21-10-69, DNT 678.
- Dichrostachys cinerea* (Linn.) Wt. & Arn.
Raisingpara, in flowers, 28-7-69, B 6279.
- Mimosa hamata* Willd.
Hampsheswar, in flowers, 9-9-68, P & T 272.
- Pithecolobium dulce* (Roxb.) Benth.
Kawant, 15-10-69.
- Prosopis cineraria* (Linn.) Drac.
Ambadunger, in flowers, 17-10-69.

COMBRETACEAE

- Anogeissus latifolia* Wall. ex Boddome
Fansi temple, in fruits, 20-10-69, DNT 560.
- Combretum ovalifolium* Roxb.
Kapatihari, in fruits, 5-4-69, P & T 572.
- Terminalia arjuna* (Roxb. ex DC.) Wt. & Arn.
Hampsheswar, in flowers, 18-4-70.
- T. bellirica* (Gaertn.) Roxb.
Fansi temple, in fruits, 21-10-69, DNT 685.
- T. crenulata* Roxb.
Hampsheswar, in flowers, 28-4-70, DNT 888.

MYRTACEAE

- Eucalyptus globulus* Labill.
Kawant, 15-10-69.
- Syzygium cumini* (Linn.) Skeels
Rangpur, 20-10-69.
- **S. beyecanum* Wall. ex Gamble
Mogra, in flowers, 19-4-70, DNT 501.

LYTHRACEAE

- Ammannia baccifera* Linn.
Banganga, in fruits, 15-12-67, B 3094.
- A. multiflora* Roxb.
Rangpur, in flowers, 20-10-69.
- Lagerstroemia microcarpa* Wight
Mohanfort, in flowers, 20-4-70, DNT 933.
- Lawsonia inermis* Linn.
Rangpur, in flowers, 20-10-69, DNT 647.
- Rotala serpyllifolia* (Roth.) Bremek.
Hampsheswar, in fruits, 17-12-67, B 5045.
- Woodfordia fruticosa* (Linn.) Kerz.
Ambadunger, in flowers, 17-4-70, DNT 850.

PUNICACEAE

- Punica granatum* Linn.
Hampsheswar, in flowers, 18-4-70, DNT 884.

ONAGRACEAE

- **Ludwigia octovalvis* (Jacq.) Raven. *ssp. sessiliflora* (Muhl.) Raven
Kawant, in flowers, 15-10-69.
- L. perennis* Linn.
Luni forest, in flowers, 15-10-69, DNT 374.

CARICACEAE

- Carica papaya* Linn.
Kawant, in fruits, 15-10-69.

CUCURBITACEAE

- Citrullus lanatus* (Thunb.) Mansf.
Kara river, in flowers, 30-4-70, DNT 920.
- Coccinia grandis* (Linn.) Vogt
Kawant, in fruits, 30-8-69.
- Cucurbitis cerasuroides* (Steud.) C. B. Clarke
Meri Chikil, in flowers, 8-9-68, P & T 121.
- Cucumis callosus* (Roxb.) Cogn.
Raisingpura, in fruits, 30-8-70.
- C. melo* Linn.
Kara river, in flowers, 20-4-70, DNT 919.

- **C. sativus* Linn.
Jaana, in flowers, 28-7-69, DNT 119.
- Cucurbita maxima* Duch.
Raisingpura, in fruits, 30-8-70.
- Lagenaria siceraria* (Mol.) Standl.
Saidvasan, in fruits, 30-8-70.
- Luffa acutangula* (Linn.) Roxb.
Khasia, in flowers & fruits, 16-10-69, DNT 395.
- L. cylindrica* (Linn.) Roem.
Kawant, in fruits, 30-8-70.
- Momordica balsamina* Linn.
Kawant, in flowers, 27-7-70.

- M. charantia* Linn.
Hampleshwar, in fruits, 30-8-70.
- M. dioica* Roxb.
Tana, temple, in flowers, 21-10-69, DNT 970.
- Mukia maderaspatana* (Linn.) Roem.
Ambadanger, in flowers, 27-7-69, DNT 68.
- **Solenia heterophylla* Lour.
Raipur, in flowers, 31-7-69, B 6420.
- Trichosanthes cucumerina* Linn.
Kawant, in flowers, 30-8-70.

CACTACEAE

- Opuntia stator* Mill.
Parvad, in flowers, 15-10-69.

MOLLUGINACEAE

- Glossa lotoides* Linn.
Narmada river, in flowers, 18-4-70, DNT 869.
- G. oppositifolius* (L.) DC.
Narmada river, in flowers, 28-7-69.

- Mullugo pentaphylla* Linn.
Raipur, in fruits, 20-10-69, DNT 696.

ALICEACEAE

- Trianthema portulacastrum* Linn.
Raipur, in flowers, 21-10-69.

APIACEAE (UMBELLIFERAE)

- Centella asiatica* (Linn.) Urban
Raipur, 21-10-69.
- Coriandrum sativum* Linn.
Magra, in flowers, 19-4-70, DNT 974.
- **Foeniculum vulgare* Gaertn.
Raipur, 21-10-69.
- **Pimpinella hircanica* Wall.
Ambadanger, in fruits, 17-10-69, DNT 322.
- **Trachyspermum stictocarpum* (DC.) Wall.
Ambadanger, in fruits, 17-10-69.

ALANGIACEAE

- Alaogium salvifolium* (Linn. f.) Wang
Ambadanger, in flowers, 17-4-70, DNT 871.

RUBIACEAE

- Adina cordifolia* Hook. f.
Ambadanger, in flowers, 27-7-69, DNT 63.
- **Anthocephalus indiens* A. Rich.
Kantipani, in fruits, 16-10-69, DNT 432.
- Borreria articulata* (Linn. f.) F. N. Will.
Ambadanger, in fruits, 8-9-68, P & T 166.
- B. stricta* (Linn. f.) K. Schum.
Banganga, in flowers, 28-7-69, DNT 65.
- Gardenia turgida* Roxb. *var. montana* Hook. f.
Ambadanger, in flowers, 5-4-69, P & T 385.
- **Hamiltonia suaveolens* Roxb.
Mahulabari, in flowers, 28-7-69, DNT 103.
- Hymenodictyon excelsum* Wall.
Ambadanger, in fruits, 28-7-69, DNT 111.
- Mitragyna parviflora* (Roxb.) Korth.
Raipur, in fruits, 21-10-69.
- Moriada tomentosa* Heyne ex Roxb.
Ambadanger, in flowers, 27-7-69, DNT 64.
- Oldenlandia corymbosa* Linn.
Banganga, in fruits, 17-12-67, B 3040.
- O. pumila* (Linn. f.) DC.
Amitpura, in fruits, 19-10-69, DNT 606.
- Xeromphis spinosa* (Thunb.) Keay
Ambadanger, 28-7-69.
- X. vilginosa* (Retz.) Mahesh.
Ambadanger, 28-7-69.

ASTERACEAE (COMPOSITAE)

- Acanthospermum hispidum* DC.
Ambadanger, in fruits, 17-10-69, DNT 345.

- Ageratum conyzoides* Linn.
Ambadanger, in flowers & fruits, 8-8-68, P & T 206.
- Amberboa ramosa* (Roxb.) Jalt
Banganga, in flowers, 17-12-67, B 5082.
- Bidens biternata* (Lour.) Merr. & Sherif.
Ambadanger, in fruits, 8-8-68, P & T 202.
- Blairiella acutella* (Linn.) Phillips
Lami forest, in fruits, 15-10-69, DNT 227.
- **Blumea ciliaris* DC.
Ambadanger, in flowers, 16-10-69.
- B. membranacea* (Wall.) DC.
Ambadanger, in fruits, 6-4-69, P & T 615.
- B. solidaginoides* (Poir.) DC.
Chikli, in flowers, 16-10-67.
- **Cassia axillaris* Roxb.
Kadipani, in flowers, 8-4-69, P & T 521.
- **Centratherum phyllotarum* (DC.) Benth.
Ambadanger, in flowers & fruits, 17-10-69, DNT 223.
- Cyatocline purpurea* (Don) O. Kuntze
Kadipani, in flowers, 16-10-69, DNT 411.
- Echinops echinatus* Roxb.
Amirpura, in fruits & flowers, 15-10-69, DNT 600.
- Eclipta prostrata* (Linn.) Linn.
Ajarpura, in fruits, 7-4-68, P & T 146.
- Emilia sonchifolia* (Lindl.) DC.
Ambadanger, in fruits, 8-9-68, P & T 209.
- Glossocardia bosvalleae* (Linn.) J. DC.
Ajarpura, in fruits, 1-9-68, P & T 136.
- Gnaphalium indicum* Linn.
Narmada river, in flowers, 18-4-70, DNT 852.
- Grangea maderaspatana* Poit.
Narmada river, in fruits, 18-4-70, DNT 867.
- Lugosa mollis* Cav.
Raagpur, in flowers & fruits, 20-10-69, DNT 522.
- Launaea fallax* (Jack. & Spach) Kuntze
Ambadanger, in fruits, 6-4-69, P & T 591.
- Pulicaria angustifolia* DC.
Kharta, in flowers, 16-10-69, DNT 301.
- Schrocoarpus africanus* Jacq.
Ambadanger, in flowers & fruits, 8-8-68, P & T 205.
- Sphaeranthus indicus* Linn.
Ambadanger, in flowers, 15-10-69.
- Spilanthes paniculata* Wall.
Raagpur, in fruits, 20-10-69, DNT 522.
- Tridax procumbens* Linn.
Chikli, in flowers, 17-12-67, B 3001.

- Veronica cinerea* (Linn.) Less.
Amirpura, in fruits, 17-10-69, DNT 508.
- Vicia indica* (Willd.) DC.
Banganga, in flowers, 9-9-68, P & T 215.
- Xanthium strumarium* Linn.
Kawari, in fruits, 15-10-69.
- POLYTRICHALES
- Plumbago zeylanica* Linn.
Ambadanger, in flowers, 15-10-69.
- PENICILLACEAE
- Anagallis arvensis* Linn.
Raagpur, in flowers, 20-10-69.
- SAPOTACEAE
- Madhuca longifolia* (Koen.) MaxBridg var. *latifolia* (Roxb.) Chevalier.
Kapijbari, in flowers, 5-4-69, P & T 559.
- Mauilaka ochras* (Mill.) Fockeng
Raagpur, in fruits, 21-10-69.
- M. hexandra* (Roxb.) Dubard
Ambadanger, in fruits, 5-4-69.
- Mimusops elongi* Linn.
Harpeshwar, in flowers, 18-4-70, DNT 851.
- LAFNACEAE
- Diospyros melanoxylon* Roxb.
Harpeshwar, in flowers, 18-4-70, DNT 885.
- GIRACEAE
- Schrebera swietenoides* Roxb.
Harpeshwar, in fruits, 18-4-70.
- SALVAFRACEAE
- Salvadora perica* Linn.
Kawari, in flowers, 15-10-69.
- APOCYNACEAE
- Carissa congesta* Wt.
Fanal temple, in flowers, 18-10-69.
- Catharanthus pusillus* (Merr.) G. Don
Kadipani, in fruits, 16-10-69, DNT 479.
- C. roseus* (Linn.) G. Don
Raagpur, in flowers, 21-10-70.
- Holarrhena antidysenterica* (Linn.) Wall.
Kawari, in fruits, 15-10-69, DNT 379.
- Nerium indicum* Mill.
Raagpur, in flowers, 21-10-70.
- Thevetia peruviana* (Pers.) Merr.
Fanal temple, in flowers, 21-10-69, DNT 675.
- Wrightia tinctoria* R. Br.
Kapijbari, in flowers, 15-4-69, P & T 557.
- W. tomentosa* Roem. & Schult.
Harpeshwar, in fruits, 18-10-69, DNT 388.

ASCLEPIADACEAE

- Calotropis gigantea* (Linn.) R. Br.
Kawant, in flowers, 15-10-69.
- C. procera* (Ait.) R. Br.
Raigpet, in flowers, 15-10-69.
- Cryptolepis buchmanii* Roem. & Schult.
Banganga, in fruits, 17-12-67, B 5059.
- Dregea volubilis* (Linn. f.) Benth. ex Flk. L.
Fani temple, in flowers, 21-10-69, DNT 650.
- Hemidesmus indicus* (Linn.) R. Br.
Ambadanger, in flowers, 17-10-69, DNT 551.
- Marsdenia tenacissima* (Roxb.) Moon
Fani temple, in fruits, 21-10-69, DNT 681.
- Pergandria dactyna* (Forsk.) Chiov.
Raigpet, in flowers, 10-9-68, P & T 282.
- Sarcostemma seramense* (Linn.) Bennet
Dhola dunger, in flowers, 30-7-69, DNT 192.
- Tylophora fasciculata* Ham.
Dhola dunger, in flowers, 30-7-69, DNT 174.
- T. rotundifolia* Ham.
Ambadanger, in flowers, 27-7-69, B 6177.

NYCTANTHACEAE

- Nyctanthes arborescens* Linn.
Kawant, in fruits, 15-10-69, DNT 418.

GENTIANACEAE

- Cuscuta diffusa* R. Br.
Ambadanger, in flowers, 18-12-67, B 5126.
- Eulcostema hystrofolium* (Willd.) Verh.
Banganga, in fruits, 17-12-67, B 6075.
- Hopsea dichotoma* Willd.
Fani temple, in flowers, 21-10-69, DNT 676.

BORAGINACEAE

- Heliotropium maritimum* Retz.
Hampshwar, in flowers, 9-9-68, P & T 270.
- H. sopinum* Linn.
Kawant, in flowers, 21-4-70.
- Trichodesma sedgwickianum* Bancroft
Kadipani, in flowers, 26-7-69, B 6251.
- T. zeylanicum* (Burm. f.) R. Br.
Ambadanger, in fruits, 18-12-69, B 5112.

LIBRETIACEAE

- Cordia dichotoma* Forst. f.
Kadipani, in flowers, 24-69, P & T 659.

CONVOLVULACEAE

- Angitia sericea* Dalz.
Ambadanger, in flowers, 8-9-68, P & T 166.
- Convolvulus microphyllus* Sieb. ex Spreng.
Hampshwar, in flowers, 27-8-70, DNT 1052.
- Cressa cretica* Linn.
Kawant, 21-4-70.

- Evolvulus alsinoides* (Linn.) Linn.
Luni forest, in fruits, 15-10-69, DNT 373.
- Ipomoea aquatica* Forsk.
Hampshwar, in flowers, 27-8-70.
- I. urachnosperma* Wclw.
Chhikh, in flowers, 17-12-67, B 5019.
- I. criocarpa* R. Br.
Ambadanger, in flowers, 16-10-69.
- I. fistulosa* Mart.
Khasra, in flowers, 16-10-69, DNT 205.
- **I. hederifolia* Linn.
Ambadanger, in flowers, 18-12-67, B 5132.
- I. nil* (Linn.) Roth
Fani temple, in flowers, 21-10-69, DNT 651.
- I. obscura* (Linn. f.) Ker-Gawl.
Fani temple, in flowers, 21-10-69, DNT 663.
- I. pes-tigris* Linn.
Luni forest, in fruits, 15-10-69, DNT 365.
- I. separia* Roxb.
Kawant, in flowers, 3-9-68, P & T 76.
- I. sinensis* (Desr.) Choisy
Raigpet, in flowers, 20-10-69, DNT 632.
- I. simida* Stapf.
Luni forest, in flowers, 15-10-69, DNT 344.
- I. quamoclit* Linn.
Hampshwar, in flowers, 27-8-70.
- Morrenia aegyptia* (Linn.) Ait.
Khasra, in flowers, 16-10-69, DNT 206.
- M. gangetica* (Linn.) Culodanis
Ambadanger, in flowers, 15-10-69, DNT 599.
- M. tridentata* (Linn.) Hall. f.
Luni forest, in flowers & fruits, 15-10-69, DNT 379.
- Rivea hypocrateriformis* Choisy
Moi Chhikh, in flowers, 8-8-68, P & T 230.

CUSCUTACEAE

- Cuscuta reflexa* Roxb.
Kadipani, in flowers, 8-4-69, P & T 665.

SOLANACEAE

- Capsicum annuum* Linn.
Fani temple, in flowers & fruits, 21-10-69, DNT 664.
- Datura metel* Linn.
Hampshwar, in flowers & fruits, 18-10-69, DNT 371.
- Lycopersicon lycopersicum* (L.) Karst.
Luni forest, in fruits, 15-10-69, DNT 337.
- Nicotiana tabacum* Linn.
Ambadanger, in flowers, 18-12-67, B 5114.
- Physalis minima* Linn.
Ambadanger, in fruits, 18-12-67, B 5133.

- Solanum incanum* Linn.
Ambadur, in fruits, 18-10-67, B 5136.
- S. indicum* Linn.
Kadipani, in fruits, 16-4-69, DNT 437.
- S. noclougense* Linn.
Fana temple, in fruits, 21-10-69, DNT 563.
- S. nigrum* Linn.
Ambadur, in fruits, 17-10-69, DNT 543.
- S. surattense* Burm. f.
Ambadur, in fruits, 8-4-69, P & T 595.
- Withania somnifera* (L.) Dunal.
Kawant, in flowers, 15-10-69.

SCROPHULARIACEAE

- Baroa monnieri* (L.) Pennell
Kadipani, in flowers, 8-4-69, P & T 635.
- Buchnera hispida* Bouché-Blan.
Kadipani, in flowers, 16-10-69, DNT 446.
- **Kirkia incana* (Wall.) Pennell
Hampsheswar, in flowers, 18-10-69, DNT 586.
- **Lindensia ciliata* (Lobson) Pennell
Amirpura, in fruits, 19-10-69, DNT 608.
- L. crustacea* (Linn.) F. Muell.
Amirpura, in fruits, 19-10-69, DNT 609.
- **L. oppositifolia* (Retz.) Mukerjee
Amirpura, in fruits, 19-10-69, DNT 613.
- L. parviflora* (Roxb.) Haines
Kawant, in fruits, 15-10-69.
- Lindenbergia muraria* (Roxb.) P. Bruell
Hampsheswar, in flowers, 18-10-69, DNT 575.
- Sopahia delphinifolia* (Roxb.) G. Don
Fana temple, in flowers, 21-10-69, DNT 655.
- Stemodia viscosa* Roxb.
Rangpur, in flowers, 21-10-69.
- Striga angustifolia* (Don.) Saldanha
Kawant, in fruits, 15-10-69, DNT 388.
- Verbascum chinense* (Linn.) Santapau
Hampsheswar, in flowers, 17-12-67, B 5039.

GESNERIACEAE

- **Didymocarpus pygmaeus* Clarke
Ambadur, in flowers, 8-9-68, P & T 314.

BIGNONIACEAE

- Oroxylum indicum* Vent.
Rangpur, in fruits, 21-10-69, DNT 657.

PEDALIACEAE

- Sesamum indicum* Linn.
Kadipani, in flowers, 16-10-69, DNT 458.

MARIYNAEAE

- Martynia annua* Linn.
Kejambari, in flowers, 16-10-69, DNT 468.

- Adhatoda vasica* Nees
Hampsheswar, in flowers.
- Andrographis echinoides* (Lam.) Nees
Chakkil, in fruits, 17-12-67, B 5006.
- Barleria cristata* Linn.
Ambadur.
- B. pruriensis* Santapau
Kawant, in flowers, 15-10-69, DNT 393.
- B. prionitis* Linn.
Hampsheswar, in flowers, 18-10-69, DNT 565.
- Blepharis maderaspatensis* (Linn.) Heyne ex Roxb.
Ambadur, in flowers, 17-10-69, DNT 554.
- B. repens* (Vahl) Roth
Ambadur, in flowers, 17-10-69.
- Carvia callous* (Nees) Benth.
Ambadur, in flowers, 8-9-68, P & T 117.
- Dicliptera verticillata* (Pank.) Christen.
Bangar, in flowers, 17-10-67, B 5070.
- Dipteracanthus prostratus* (Poir.) Nees
Kawant, in flowers, 15-10-69, DNT 423.
- Eranthemum roseum* (Vahl) R. Br.
Ambadur, in flowers, 18-12-67, B 5107.
- Haplanthus verticillatus* (Roxb.) Nees
Ambadur, in flowers, 18-12-67.
- Hemigraphis lutebrosa* (Hayne ex Retz.) Nees var.
heyneana Benth.
Ambadur, in fruits, 6-1-69, P & T 450.
- Hygrophila auriculata* (Schum.) Hilleb.
Rangpur, in flowers, 20-10-69.
- Justicia diffusa* Willd.
Rangpur, in fruits, 21-7-69, B 6451.
- J. simplex* H. Don
Hampsheswar, in fruits, 17-12-67, B 5060.
- Lepidagathis cristata* Willd.
Bangar, in fruits, 17-12-67, B 5092.
- L. cuspidata* (Wall.) Nees
Ambadur, in flowers, 18-12-67, B 5110.
- L. trinervis* Nees
Luni forest, in flowers, 15-10-69.
- Neuracanthus sphaerostachyus* (Nees) Dalz.
Luni forest, in flowers, 15-10-69, DNT 1364.
- Peristrophe bicaryfolata* (Retz.) Nees
Chakkil, in fruits, 17-12-67, B 5022.
- Rungia pectinata* (Linn.) Nees
Luni forest, in flowers, 15-10-69, DNT 375.
- R. repens* (Linn.) Nees
Rangpur, in flowers, 20-10-69, DNT 656.

VERBENACEAE

- Chromolaena multiflorum* (Burtt. f.) G. Ktze.
Ambadnager, in flowers, 18-12-67, B 3141.
- Lantana camara* Linn. var. *aculeata* (L.) Moldenke
Ambadnager, in fruits, 7-4-69, P & T-617.
- Phyla nodiflora* (Linn.) Greene
Kawant, in flowers, 16-4-70, DNT 842.
- Tectona grandis* Linn.
Fanal temple, in fruits, 21-10-69, DNT 680.
- Vitex negundo* Linn.
Chhikhli, in flowers, 17-12-67, B 3018.

LAMIACEAE (LABIATAE)

- Anisochilus carnosus* Wall.
Kadipani, in fruits, 16-10-69, DNT 439.
- Anomeles indica* (Linn.) G. Karstze
Kawant, in flowers, 15-10-69, DNT 420.
- Basidium polystachyon* (Linn.) Moench.
Roudi, in flowers, 25-10-70, DNT 1395.
- Lavandula bipinnata* (Roth) G. Karstze
Kadipani, in flowers, 16-10-69, DNT 462.
- Leucas aspera* Willd.
Maludabari, in flowers, 28-7-69, DNT 106.
- L. sibirica* R. Br.
Ambadnager, in flowers, 17-10-69.
- L. cephalotes* Spreng.
Kawant, in flowers, 15-10-69, DNT 380.
- L. stricta* Benth.
Khara, in flowers, 16-10-69, DNT 318.
- L. urticacifolia* R. Br.
Ambadnager, in flowers, 17-10-69, DNT 542.
- Nepeta hindostana* (Heyne ex Roth) Hainet
Hampsheswar, in flowers, 18-10-69, DNT 579.
- Ocimum americanum* Linn.
Ambadnager, in fruits, 18-12-67, B 5129.
- O. basilicum* Linn.
Kawant, in flowers, 15-10-69.
- O. sanctum* Linn.
Kadipani, in flowers, 16-10-69, DNT 492.

NYCTAGINACEAE

- Beechavia diffusa* Linn.
Fanal temple, in flowers, 21-10-69, DNT 685.

AMARANTHACEAE

- Achyranthes aspera* Linn. var. *porphyrostachya*
Hook. f.
Luni forest, in fruits, 17-10-69, DNT 336.
- Aerva lanata* (Linn.) Juss.
Hampsheswar, in flowers, 17-12-67, B 5047.

- A. sanguinolenta* (Linn.) Horne
Hampsheswar, in flowers, 18-10-69, DNT 584.
- Alternanthera sessilis* (Linn.) R. Br.
Aairpara, in flowers, 19-10-69, DNT 589.
- Amaranthus gracilis* Desf.
Rangpur, in flowers, 20-10-69, DNT 607.
- **A. hybridus* Linn. var. *cruentus* Thell. var. *paniculatus* Thell.
Rangpur, in flowers, 20-10-69, DNT 621.
- A. spinosus* Linn.
Ambadnager, in fruits, 27-1-69, DNT 53.
- A. tricolor* Linn.
Aairpara, in flowers, 19-10-69, DNT 591.
- Celosia argentea* Linn.
Khara, in flowers, 15-10-69, DNT 519.
- Digera muricata* (Linn.) Mart.
Hampsheswar, in flowers & fruits, 18-10-69, DNT 573.
- Gomphrena celosinoides* Mart.
Hampsheswar, in flowers, 18-10-69.
- Nothoscorva brachiata* (Linn.) Wight
Aairpara, in flowers, 19-10-69, DNT 595.
- Populus lappacea* (Linn.) Juss.
Ranganga, in flowers & fruits, 17-12-69, B 5089.

CHENOPODIACEAE

- Chenopodium album* Linn.
Kara river, in fruits, 30-4-70, DNT 9:8.

BASELLACEAE

- Basella alba* Linn.
Fanal temple, in fruits, 21-10-69, DNT 636.

POLYGONACEAE

- **Polygonum barbatum* Linn. var. *gracile* Seward
Hampsheswar, in fruits, 18-10-69, DNT 589.
- **P. glabrum* Willd.
Hampsheswar, in fruits, 17-12-67, B 5032.
- P. plebeium* R. Br.
Hampsheswar, in flowers, 18-10-69.

LORANTHACEAE

- Dendrophthoe falcata* (Linn. f.) Erting
Vaghbari, in flowers, 5-4-69, P & T 578.
- Viscum articulatum* Burtt. f.
Ambadnager, in fruits, 17-10-69, DNT 533.

SANTALACEAE

- Santalum album* Linn.
Bunjur, 16-12-67.

EUPHORBACEAE

- Acalypha ciliata* Forsk.
Kadipani, in fruits, 16-10-69, DNT 433.

- Acalypha indica* Linn.
Ambadanger, in fruits, 27-59.
- A. malabarica* Muell.
Ambadanger, in flowers & fruits, 27-59. DNT 60.
- Baliospermum montanum* (Willd.) Muell.
Mogra, in flowers & fruits, 194-79. DNT 109.
- Bridelia squamosa* (Moell.-Arg.) Greut.
Ambadanger, in fruits, 17-10-69. DNT 326.
- Chrozophora rotleri* (Geis.) Juss.
Kawant, in flowers, 18-10-69.
- Emblica officinalis* Gaertn.
Fanoi temple, in fruits, 21-10-69. DNT 673.
- Euphorbia fusiformis* Benth. Hbn.
Dhuladanger, 20-7-69. DNT 187.
- E. hirta* Linn.
Khaeta, in flowers, 16-10-69. DNT 516.
- E. hypericifolia* Linn.
Hampsheswar, in flowers & fruits, 18-10-69. DNT 376.
- E. acrifolia* Linn.
Ambadanger, 18-10-69.
- E. orbiculata* H. B. K.
Rangour, in fruits, 31-7-69. B 5444.
- E. prunifolia* Jacq.
Kadiyani, in fruits, 16-10-69. DNT 449.
- E. tirucalli* Linn.
Kawant, in fruits, 15-10-69.
- Jatropha curcas* Linn.
Ambadanger, in flowers, 18-10-69. B 5148.
- J. gossypifolia* Linn.
Kawant, in flowers, 18-10-69.
- Kleganella reticulata* Pur.
Kawant, in fruits, 15-10-69. DNT 412.
- Mallotus philippensis* Muell.
Ambadanger, in flowers, 17-10-69. DNT 357.
- Phyllanthus asperulatus* Hutch.
Hampsheswar, in fruits & flowers, 18-10-69. DNT 574.
- ° maderaspatensis* Linn.
Rangour, in fruits, 20-10-69. DNT 639.
- P. urinaria* Linn.
Ambadanger, in flowers, 18-10-69. B 5110.
- Ricinus communis* Linn.
Ambadanger, in fruits, 6-4-69. P & T 614.
- Securinea virosa* (Roxb. ex Willd.) Pax & Hoffm.
Kadiyani, in fruits, 16-10-69. DNT 438.
- ULMACRAE
- Trema orientalis* (Linn.) Blume
Ambadanger, in flowers, 17-10-69. DNT 555.

- URTICACEAE
- Laportea interrupta* (Linn.) Cheec.
Ambadanger, in flowers, 8-9-68. P & T 212.

MORACEAE

- *Ficus asperima* Roxb.
Rangour, in syconia, 20-10-69.
- F. benghalensis* Linn.
Hampsheswar, in syconia, 17-10-69.
- *F. hispida* Linn.
Chhiki, in syconia, 18-12-67.
- F. racemosa* Linn.
Mahudaban, in syconia, 16-10-69.
- F. religiosa* Linn.
Ambadanger, in syconia, 17-10-69.
- *Strehlus asper* Lour.
Ambadanger, in syconia, 18-12-67.

HYDROCHARITACEAE

- Hydrilla verticillata* (Linn. f.) Royle
Hampsheswar, 9-9-68.
- Vallisneria spiralis* Linn.
Hampsheswar, 9-9-68.

ORCHIDACEAE

- *Acridis crispum* Lindl.
Luni forest, in flowers, 20-7-69. DNT 190.
- *Vanda tessellata* Hook. f.
Luni forest, in fruits & flowers, 20-7-69. DNT 189.

ZINGIBERACEAE

- Curcuma inodora* Blatter
Ambadanger, in flowers, 27-7-69. DNT 72.
- *Costus speciosus* (Koenig) Smith
Ambadanger, in flowers, 8-9-68. P & T 213.

MUSACEAE

- Musa paradisiaca* Linn. var. *esipientum* Kuntze
Kawant, in fruits, 15-10-69.

HYPOCIDACEAE

- Curculigo orbiculata* Gaertn.
Rishinapura, in flowers, 10-9-68. P & T 284.

AMARYLLIDACEAE

- *Crinum latifolia* Linn.
Hampsheswar, in flowers, 27-7-69.

TACCACEAE

- *Tacca leontopetaloides* (Linn.) O. Kuntze
Luni forest, in flowers, 25-7-69.

AGAVACEAE

- Agave* sp.
Ambadanger, 27-7-69.

DIOSCOREACEAE

- **Dioscorea tetraphylla* Vahl.
Ambaladungar, in fruits, 27-7-69, DNT 76.
D. bulbifera Linn.
Hampsheshwar, in fruits, 9-9-68, P & T 237.
D. hispida Dennst.
Lani forest, in flowers, 15-7-69, B 6201.
D. pentaphylla Linn.
Ambaladungar, in flowers, 27-7-69, DNT 131.

LILIACEAE

- Aloe barbadensis* Mill.
Kawant, in flowers, 15-10-69.
Asparagus racemosus Willd. var. *javanica* Baker.
Ambaladungar, in flowers, 8-9-68, P & T 179.
Aphodelus tenuifolius Cav.
Rangpur, in fruits, 20-4-70, DNT 925.
Chlorophytum tuberosum Baker.
Jhanta, in flowers, 28-7-69, B 6318.
Gloriosa superba Linn.
Raisingpura, in flowers, 10-9-68, P & T 283.
Iphigenia indica A. Gray.
Dhobaladungar, in flowers, 30-7-69, DNT 191.
Urginea indica Kunth.
Lani forest, in flowers & fruits, 21-4-70, DNT 941.

COMBELLINACEAE

- Commelina benghalensis* Linn.
Banganga, in flowers, 28-7-69, DNT 96.
C. diffusa Burm. f.
Kadipani, in flowers, 16-10-69, DNT 478.
C. undulata R. Br.
Kachioni, in flowers, 16-10-69, DNT 472.
Cyanotis cristata (Linn.) Schult.
Kadipani, in fruits, 16-10-69, DNT 470.
C. fasciculata (Linn.) Schult.
Ajampura, in flowers, 7-9-68, P & T 649.
Murdannia nudiflora (Linn.) Brenan.
Lani forest, in fruits, 15-10-69, DNT 357.
M. spirata (Linn.) Bruck.
Kara river, in fruits, 19-10-69, DNT 596.

PALMACEAE

- Borassus flabellifer* Linn.
Kadipani, in flowers, 8-4-69, P & T 666.
Phoenix sylvestris (Linn.) Roxb.
Chhikli, in fruits, 8-4-69.

PANDANACEAE

- Pandanus tectorius* Soland. ex Parkinson.
Hampsheshwar, 16-11-67.

TYPHACEAE

- Typha angustata* Bory & Chauh.
Kawant, in fruits, 15-10-69.

ARACEAE

- **Arisaema* sp.
Ambaladungar, 29-7-69, DNT 133.

LISMNACEAE

- Spirodela polyrhiza* (Linn.) Schlecht.
Rangpur, 11-7-69.

POTAMOGETONACEAE

- **Potamogeton crispus* Linn.
Hampsheshwar, in fruits, 16-10-67.

EUDICHAUACEAE

- **Eriocaulon cuspidatum* Dalz.
Lani forest, in flowers, 15-10-69, DNT 313.

CYPERACEAE

- Bulbostylis barbata* (Rottb.) Cl.
Rangpur, in flowers, 21-7-69, B 6447.
**Cyperus compressus* Linn.
Amirpura, in fruits, 19-10-69, DNT 603.
**C. cyperoides* (Linn.) O. Kuntze.
Lani forest, in fruits, 15-7-70, DNT 1223.
C. difformis Linn.
Fasal temple, in flowers, 21-10-69, DNT 951.
C. eleusinoides Kunth.
Kopinibari, in flowers, 8-4-69, P & T 642.
**C. esculentus* Retz.
Dhobaladungar, in flowers, 30-7-69, DNT 100.
C. globosus All.
Hampsheshwar, in fruits, 19-7-68.
C. iria Linn.
Kadipani, in fruits, 16-10-69, DNT 496.
**C. leucocephalus* Retz.
Raisingpura, in flowers, 28-7-69, DNT 80.
C. michelianus (Linn.) Link. sp. *pygmaeus* (Rottb.)
Asch. et. Grueb.
Banganga, in fruits, 28-7-69, DNT 99.
C. pomilus Linn.
Hampsheshwar, in fruits, 18-4-70, DNT 886.
C. rotundus Linn.
Moti Chhikli, in flowers, 8-9-68, P & T 232.
C. triepus (Rottb.) Endl.
Lani forest, in flowers, 15-10-69, DNT 316.
C. squarrosus Linn.
Kawant, in flowers, 7-9-68, P & T 153.
Eriophorum comosum Wall.
Hampsheshwar, in fruits, 9-9-68, P & T 266.
Fimbristylis his-umbellata (Forsk.) Buh.
Kadipani, in fruits, 8-4-69, P & T 661.
F. cymosa R. Br.
Bunjer, in fruits, 29-8-70.

- **Fimbristylis falcata* (Vahl) Kuntz
Bunjer, in fruits, 29-7-59.
- F. ferruginea* (Linn.) Vahl
Ajampur, in fruits, 7-9-68, P & T 137.
- **F. littoralis* Gaud.
Bangour, in fruits, 31-7-65.
- **F. ovata* (Burm. f.) Kern
Kawant, in fruits, 7-9-68, P & T 155.
- F. quinqueangularis* Kuntz
Hampsheswar, in fruits, 28-7-69.
- F. tenera* Roem. & Schult.
Kepitabari, in flowers, 8-4-69, P & T 644.
- Scirpus squarrosus* Linn.
Ajampur, in fruits, 19-10-69, DNT 607.
- S. sopinus* L. var. *lateriflorus* (Gmel.) Koyama
Hampsheswar, in fruits, 28-7-69.
- POACEAE (GRAMINEAE)
- Acrachne racemosa* (Heyne) Okei
Mahadabari, in flowers, 28-7-69, DNT 103.
- Aplada mutica* Linn.
Ambadanger, in fruits, 17-10-69, DNT 547.
- Aristida adscensionis* Linn.
Kawant, in fruits, 13-10-69, DNT 395.
- **Brachyria distachya* (Linn.) Stapf
Hampsheswar, in fruits, 25-8-70, DNT 1025.
- B. ramosa* (Linn.) Stapf
Hampsheswar, in fruits, 29-7-69, DNT 43.
- Coenchrus biflorus* Roxb.
Ambadanger, in fruits, 16-10-69.
- C. pennisetiformis* Hochst.
Luni forest, in fruits, 15-10-69, DNT 339.
- **Cymbopogon jwaracenta* (Forss.) Schult.
Raisingpura, in flowers, 10-9-68, P & T 281B.
- C. martinii* (Roxb.) Wats.
Kadipani, in fruits, 16-10-69, DNT 442.
- Dactyloctenium aegyptium* (L.) Beauv.
Rangpur, in fruits, 31-7-69, B 6452.
- Dendrocalamus strictus* Nees
Fana! temple, in flowers, 21-10-69, DNT 674.
- Desmostachya bipinnata* (Linn.) Nees
Luni forest, in fruits, 15-10-69, DNT 315.
- Dichanthium annulatum* (Forsk.) Stapf
Kadipani, in fruits, 26-7-69, DNT 35.
- **Digitaria longiflora* (Retz.) Pers.
Kara river, in fruits, 7-5-68.
- Dinebra retroflexa* (Vahl) Panz.
Raisingpura, in flowers, 9-9-68, P & T 281A.
- Echinochloa colonum* (Linn.) Link
Kadipani, in fruits, 16-10-69, DNT 451.

- Eragrostiella brachyphylla* (Stapf) Bor
Dholadanger, in fruits, 20-7-69, DNT 265.
- Eragrostis tenella* (Linn.) P. Beauv.
Kadipani, in fruits, 16-10-69.
- E. unioloides* (Retz.) Nees
Ajampur, in fruits, 19-10-69.
- E. viscosa* (Retz.) Trin
Mahadabari, in fruits, 28-7-69, DNT 104.
- Hackelochloa granulata* (Linn.) O. Kuntze
Hampsheswar, in fruits, 9-9-68, P & T 174.
- Heteropogon contortus* (Linn.) P. Beauv.
Hampsheswar, in fruits, 9-9-68, P & T 264.
- Isilema prostratum* (Linn.) Anders.
Ambadanger, in fruits, 17-10-69.
- Melanocenchris jacquemontii* Jaub. et Spach
Ajampur, in fruits, 7-9-68, P & T 139.
- **Oryza glaberrima* Steud.
Raisingpura, in fruits, 10-9-68, P & T 279.
- O. sativa* Linn.
Chhiki, in fruits, 17-4-70, DNT 856.
- Panicum antidotale* Retz.
Hampsheswar, in fruits, 9-9-68, P & T 263.
- P. trypheron* Schult.
Ambadanger, in fruits, 8-9-68, P & T 285.
- Paspalidium flavidum* (Retz.) A. Camus.
Ambadanger, in fruits, 17-10-69, DNT 536.
- **Pennisetum indicum* (Linn.) O. Kuntze
Luni forest, in fruits, 15-10-69, DNT 359.
- Rotboellia exaltata* Linn. f.
Ambadanger, in fruits, 17-10-69, DNT 540.
- Saccharum spontaneum* Linn.
Luni forest, in fruits, 15-10-69, DNT 343.
- Setaria glauca* (Linn.) P. Beauv.
Ambadanger, in fruits, 17-10-69, DNT 541.
- **S. italica* (Linn.) P. Beauv.
Raisingpura, in fruits, 9-9-68, P & T 285.
- S. pallide-fusca* (Schumacher) Stapf
Kawant, in fruits, 7-9-68, P & T 134.
- S. verticillata* (Linn.) P. Beauv.
Ambadanger, in fruits, 19-10-69, DNT 555.
- Sorghum halepense* (Linn.) Pers.
Fana! temple, in fruits, 21-10-69, DNT 689.
- **S. vulgare* Pers.
Mori Chhiki, in fruits, 8-9-68.
- Spodiopogon rhizophorus* (Steud.) Pilger
Ambadanger, in fruits, 17-10-69, DNT 519.
- Sporobolus diander* (Retz.) P. Beauv.
Rangpur, in fruits, 20-10-69, DNT 619.
- S. marginatus* Hochst.
Ambadanger, in flowers, 29-7-69, DNT 155.

- Thamnia quadrivalvis* (Lam.) O. Kuntze
Luni forest, in fruits, 15-10-69, DNT 368.
- Tripogon jacquemontii* Stapf
Dhuladanger, in fruits, 20-7-69, DNT 178.
- Trifolium vestivum* Linn.
Kawant, in flowers, 16-12-67.
- Zea mays* Linn.
Hampheshwar, in fruits, 9-9-68.

PTERIDOPHYTES

- Actinopteris australis* (L. f.) Link.
Hampheshwar, 9-9-68.
- Adiantum lunulatum* Burm.
Kadipani, 15-10-69, DNT 436.
- Marsilea quadrifolia* Linn.
Amirpura, 19-10-69, DNT 611.
- Ophioglossum throssum* Schum.
Luni forest, 25-7-69.
- Selaginella* sp.
Hampheshwar, 9-9-68, DNT 441.

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*Plants marked with asterisk are not reported by Sasthani & Jainshankar in the Check-list of Saurashtra plants.