

**STUDIES ON THE FLORA OF THE PAKASURA HILLS (HULICAL DRUG R.F.)
IN THE NILGIRI DISTRICT, MADRAS STATE.**

K. M. SEBASTINE

Systematic Botanist, Southern Circle, Coimbatore.

ABSTRACT

The Pakasura Hills remained botanically unexplored so far and four seasonal explorations were completed during 1957-58. The slopes of the mountain which reach an altitude of 2,097 M. show zonations in their vegetation represented by the Southern Tropical Thorn Type, Tropical Secondary Dry Deciduous Type, Nilgiri Sub-Tropical Evergreen Type and Wet Temperate Type of Forests. Some of the plants introduced on the Nilgiris have become naturalised and run wild adding new elements to its floristic composition. The collections from this area include species of plants which are not recorded by Fyson and Gamble for the Nilgiris though some of them are reported by the latter as occurring in the Western Ghats in a very general way.

Introduction

The present paper deals with the plants of Pakasura Hills (Hulical Drug Reserve Forest of the Nilgiri District) which has remained so far botanically unexplored. Botanical exploration was undertaken in this area along with the Kundah regions of the Nilgiris during the months of May, August and December, 1957 and March, 1958.

Climate and Soil

The Pakasura Hills, situated in the South Eastern end of the Nilgiri range of mountains lie between 76°48' and 76°52' E longitude and between 11°17' and 11°21' N latitude. The altitude ranges from 500-2097 M. Its annual rainfall is about 178 cms. The following table shows the monthly rainfall in cms. for the region recorded for three years (1955-1957).

TABLE

Rainfall in cms.

Year	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1955	12.1	0.4	5.23	12.73	10.83	2.4	4.48	2.7	29.95	25.86	15.1	15.78
1956	5.95	2.6	0.08	9.2	3.48	10.93	2.62	7.28	9.18	27.75	41.75	14.05
1957	—	8.68	7.75	7.15	40.18	11.25	6.6	8.9	6.7	51.65	45.25	6.77

The soil is very fertile peaty lateritic above 500 M. and lateritic below.

Vegetation

The slopes of the mountain show altitudinal zonation in their vegetation. Below 500 M. the forest is of the Southern Tropical Thorn Type (Jeyadev, 1957). Between 500 M. and 1167 M. the forest shows resemblance to the Tropical Secondary Dry Deciduous Type, characterised by large population of *Bambusa*, and between 1133 M. and 1833 M. occurs the Nilgiri Sub-Tropical Evergreen Type of forest as classified by Champion (Jeyadev, 1957). The temperature here ranges from 18-33°C to 23-89°C. Frost is practically absent except for local patches in the upper regions. This is one of the sub-

types of Southern Sub-Tropical Wet Hill Forest. The floristic composition of this Sub-Tropical Forest shows a mixture of species belonging to those of the Wet Tropical Evergreen Forest and the Temperate Forest. However, the former element usually predominates indicating that it is a transitional type of Forest. The forest at first sight looks like the tropical rain forest. The trees in this region are comparatively smaller with herbaceous epiphytes on them. A good undergrowth of *Strobilanthes* is often present. Some regions of this area are cleared for the cultivation of Coffee and Tea. From 1667 M. upwards there is a gradual transition from Sub-Tropical Evergreen Type till the Wet Temperate Forest is reached at the top. This forest type shows some of the characteristic trees of the Tropical Evergreen Forest like *Mesua ferrea*.

At about 1867 M. there is an extensive and continuous growth of *Hydnocarpus* which reaches a height of about 20 M. The undergrowth in this region is poor. *Piper schmidtii* grows abundantly. Plants like *Psychotria elongata*, *Gaultheria fragrantissima*, *Osbeckia truncata*, *Wendlandia notoniana*, *Rhododendron nilagiricum*, *Ilex wightiana*, *Turpinia nepalensis* and *Rhodomyrtus tomentosa* are very common here. In shady places by the side of streams, occur orchids like *Cheirostylis flabellata* and *Calanthe veratrifolia*. The insectivorous plants *Drosera burmanni* and *Drosera peltata* are very common at the top of the hill above 2000 M.

Though a zonal vegetation is found on the slopes it is observed that there is no such differentiation of the Tropical, Sub-Tropical and Temperate vegetation types. The Tropical and Temperate Types are definite but they seem to merge into one another in the intermediate

zone. It is noticed that some plants introduced in the Nilgiris have gradually got naturalised and run wild adding new elements to the floristic composition of this region.

In the present exploration 166 species are collected and identified from the Pakasura Hills, of which 34 species in the Angiospermae are not recorded by Fyson (1932), and 19 species not recorded for the Nilgiris by Gamble (1918) though some of them are reported by the latter in a very general way as occurring in the Western Ghats. The following is the list of plants collected and the arrangement is according to the classification of Bentham and Hooker. For each species, occurrence, locality, altitude, flowering or fruiting stage, date of collection and collection number are given in the enumeration. The asterisk marks in the list indicate that these species are not reported by Gamble for the Nilgiris.

Enumeration

PTERIDOPHYTES

PSILOTAECIAE

Psilotum nudum (Linn.) Griseb.—Epiphyte on *Hydnocarpus*, rare, 2033 M, in synangium, 27-8-1957, 3945.

LYCOPODIACEAE

Lycopodium cernuum Linn.—Common on the slopes, 2000 M, in cone, 11-5-1957, 3175.

Lycopodium setaceum Ham.—Common on the slopes, 2066 M, in cone, 7-12-1957, 4799.

GLEICHENIACEAE

Dicranopteris linearis (Burm.) Underwood.—Common on the slopes, 2000 M, in sorus, 11-5-1957, 3164.

POLYPODIACEAE

Adiantum cuneatum Lang. & Fisch.—Common on the slopes, 1730 M, in sorus, 18-8-1957, 4143.

Asplenium normale Don.—Rare on the slopes, 2067 M, in sorus, 28-3-1958, 5663.

Cheilanthes farinosa Kaulf.—Common in crevices of rocks on the southern slopes, 2000 M, in sorus, 29-8-1957, 3260, 5671.

Polystichopsis aristata.—(Forst.) Holtt. comb. nov.—Common, 2050 M, in sorus, 13-5-1957, 3216, 5659.

Niphobolus fissus Blume.—Common on rocks inside the Fort at the top, 2000 M, in sorus, 7-12-1957, 4807.

Pleopeltis linearis Thunb.—Common, 2066 M, in sorus, 18-8-1957, 3929, 4811.

ANGIOSPERMS

MENISPERMACEAE

Stephania japonica Miers.—Common on the slopes, 2000 M, in flower, 11-5-1957, 3108.

BERBERIDACEAE

Berberis tinctoria Lesch.—Common on the slopes, 2000 M, in flower, 10-5-1957, 3155.

PITTOSPORACEAE

Pittosporum floribundum Wight & Arn.—Common on the slopes, 2000 M, in flower, 10-5-1957, 3148.

Pittosporum tetraspermum Wight & Arn.—Common on the top of the hill at 2033 M, in flower, 28-3-1958, 5668.

POLYGALACEAE

Polygala arillata Ham.—Common on the slopes, 1730 M, in flower, 18-8-1957, 4138.

Polygala sibirica Linn.—Common on the slopes, 2067 M, in flower, 28-3-58, 5669.

CARYOPHYLLACEAE

Spergula arvensis Linn.—Common in Runymade, 1800 M, in flower, 12-5-1957, 3195.

GUTTIFERAE

Garcinia cambogia Desr.—Common on the slopes, 2000 M, in flower, 10-5-1957, 3151.

- **Mesua ferrea* Linn.—Common along the Kateri stream up to Runymade, 1800 M, in flower, 12-5-1957, 3180.
This plant is not recorded by Fyson.

TERNSTROEMIAEAE

- Eurya japonica* Thunb.—Common, 2000 M, in buds, 15-5-1957, 3255.
Gordonia obtusa Wall.—Common, 2000 M, in flower, 13-5-1957, 3159, 3210 & 3259.
Ternstroemia japonica Linn.—Common on the southern slope, 2000 M, in flower and fruit, 15-5-1957, 3663, 5666.

TILIACEAE

- Triumfetta pilosa* Roth—Common inside the fort at the top of the Hills, 2066 M, in flower, 7-12-1957, 4810.

GERANIACEAE

- Impatiens chinensis* Linn.—Common along the river bank upto Runymade, 1800 M, in flower, 12-5-1957, 3177.
Impatiens levingei Gamble—Common, 2066 M, in flower, 7-12-1957, 4796.

RUTACEAE

- Acronychia pedunculata* (Linn.) Miq.—Common along the foot path to the Fort, 2097 M, in flower, 13-5-1957, 3204, 3941.
Evodia lunur-ankenda (Gaertn.) Merr.—Common, 2033 M, in flower, 29-8-1957, 3936.

AQUIFOLIACEAE

- Ilex wightiana* Wall.—Common on the southern slope, 2000 M, in fruit, 15-5-1957, 3262, 5665.

CELASTRACEAE

- Euonymus angulatus* Wight—Common on the top of the hill, 2096 M, in flower, 28-8-1957, 4173.
This plant is not recorded by Fyson.
E. crenulatus Wall.—Common along the foot path leading to the Fort, 2090 M, in flower, 15-5-1957, 3205.

SAPINDACEAE

- **Allophylus serratus* Radlk.—Common on the slope of the hill, 1730 M, in bud, 18-8-1957, 4139.
This plant is not recorded by Fyson.
Dodonaea viscosa Linn.—Abundant on the top from 2066 M to 2097 M, in flower, 7-12-1957, 4802.

STAPHYLEACEAE (SAPINDACEAE B. H.)

- Turpintia cochinchinensis* (Lour.) Merr.—Common on the slopes, 2000 M, in flower, 10-5-1957, 3146.

SABIACEAE

- Meliosma microcarpa* (Wight & Arn.) Craib.—Common on the slopes, 2000 M, in flower, 11-5-1957, 3173.

LEGUMINOSAE (LOTOIDEAE)

- Atylosia trinervia* Gamble n.c.—Common on the slopes, 2000 M, in flower, 7-12-1957, 4805.
**Crotalaria lanata* Bedd.—Common in Runymade tea estate, 1800 M, in flower, 12-5-1957, 3196.
This plant is not recorded by Fyson.
C. striata DC.—Common in Runymade, 1800 M, in flower, 12-5-1957, 3189.
**Desmodium diffusum* DC.—Common on the slopes of the hill, 1730 M, in flower, 18-8-1957, 4165.
This plant is not recorded by Fyson.
D. rufescens DC.—Common on the slopes, 2066 M, in flower, 7-12-1957, 4797.
Sophora glauca Lesch.—Common in Runymade, 1800 M, in flower, 12-5-1957, 3192.
Tephrosia canarensis Drumm.—Common on the slopes of the hill, 1730 M, in flower, 18-8-1957, 4167.
This plant is not recorded by Fyson.
**T. vogelii* Hook.f.—Commonly occurs along the borders of tea estates, 2000 M, in flower, 11-5-1957, 3170.
Introduced plant. This plant is not recorded by Fyson.

LEGUMINOSAE (CAESALPINIOIDEAE)

- Cassia leschenaultiana* DC.—Common, 2033 M, in flower, 29-8-1957, 3942.

LEGUMINOSAE (MIMOSOIDEAE)

- **Albizzia marginata* Merr.—Common, cultivated in Nonsuch Estate on Pakasura Hills, 2000 M, in flower, 15-5-1957, 3197, 3251.
This plant is not recorded by Fyson.

ROSACEAE

- Photinia notoniana* Wight & Arn.—Common on the top of the hill at 2067 M, in flower, 28-8-1957, 4176.
Pyrus malus Linn.—Introduced, common in Runymade, 1800 M, in flower, 12-5-1957, 3200. Fruit edible.
Rosa leschenaultiana Wight & Arn.—Common on the top of the hill inside the Fort, 2097 M, in flower, 13-5-1957, 3207.

DROSERACEAE

- Drosera burmanni* Vahl—Common on the southern slopes, 2033 M, in flower, 29-8-1957, 3934.
D. peltata Smith—Common on the slopes, 2066 M, in flower, 28-8-1957, 4194.

MYRTACEAE

- Rhodomyrtus tomentosa* Wight—Common in the Hill, 2066 M, in flower, 7-12-1957, 4808.
Syzygium arnottianum Walp.—Common inside the Fort, 2097 M, in flower, 15-5-1957, 3208.
S. cumini (Linn.) Skeels.—Common on the slopes, 2000 M, in flower, 10-5-1957, 3152.

MELASTOMACEAE

- Osbeckia cupularis* Don—Common in the slopes of the hill, 1730 M, in flower, 18-8-1957, 4140.
O. truncata Don—Common on the slopes, 2066 M, in flower, 7-12-1957, 4804.
Tibouchina semidecandra Cogn.—Common on the slopes, 1730 M, in flower, 18-8-1957, 4171. Introduced plant.

UMBELLIFEREAE

- Bupleurum mucronatum* Wight & Arn.—Common on the slopes of hills, 2066 M, in flower, 28-8-1957, 4199.
Centella asiatica (Linn.) Urban—Common, 2066 M, in flower, 28-8-1957, 4187.

CAPRIFOLIACEAE

- Viburnum acuminatum* Wall.—Common on the slopes, 1730 M, in flower, 18-8-1957, 4142.
V. coriaceum Blume—Common on the slopes, 1730 M, in flower, 18-8-1957, 4169, 4789.

RUBIACEAE

- Anotis leschenaultiana* Benth. & Hook.f.—Common in the hill, 2066 M, in flower, 28-8-1957, 4190, 4791.
Chasalia curviflora Thw.—Common, 2000 M, in flower, 15-5-1957, 3254.
 This plant is not recorded by Fyson.
Ixora notoniana Wall.—Common on the slopes, 2000 M, in flower, 10-5-1957, 3154.
 **Lasianthus strigillosus* Hook. f.—Common on the slopes, 2033 M, in flower, 29-8-1957, 3938.
 This plant is not recorded by Fyson.
L. venulosus Wight—Common, 2,097 M, in flower, 13-5-1957, 3209, 3213, 3940.
Mussaenda hirsutissima Hutch.—Common on the slopes, 2000 M, in flower, 10-5-1957, 3144.
Oldenlandia herbacea (Linn.) Roxb.—Common, 2097 M, in flower, 28-8-1957, 4179.
Ophiorrhiza brunonis Wight & Arn.—Common, 2,097 M, in flower, 13-5-1957, 3215.
Plectronia neilgherrensis Bedd. var. *chartacea* Gamble—Common, 2097 M, in flower, 28-8-1957, 4174.
Psychotria elongata Hook.f.—Common on the southern slope, 2000 M, in flower, 29-3-1958, 5672.
Wendlandia notoniana Wall.—Common on the slopes, 2000 M, in flower, 10-5-1957, 3147.

VALERIANACEAE

- Valeriana arnottiana* Wight—Common, 2066 M, in flower, 28-8-1957, 4183.

COMPOSITAE

- Bidens pilosa* Linn.—Common on the slopes, 2033 M, in flower, 29-8-1957, 3939.
Cotula australis Hook. f.—Common on the slopes, 2000 M, in flower, 8-12-1957, 4823.
 **Emilia scabra* DC.—Common on the slopes, 2000 M, in flower, 7-12-1957, 4790.
 This plant is not recorded by Fyson.
Galinsoga parviflora Cav.—Common on the slopes, 2067 M, in flower, 28-8-1957, 4189.
Hypochaeris glabra Linn.—Common, 2000 M, in flower, 8-12-1957, 4820.

CAMPANULACEAE

- Wahlenbergia gracilis* Schrad.—Common inside the Fort, 2066 M, in flower, 7-12-1957, 4812.

VACCINIACEAE

- Vaccinium leschenaultii* Wight—Common on the slopes, 2000 M, in flower, 10-5-1957, 3150.

ERICACEAE

- Gaultheria fragrantissima* Wall.—Common on the slopes, 2067 M, in flower, 28-3-1958, 5667.
Rhododendron nilagiricum Zenk.—Common on the slopes, 2000 M, in flower, 11-5-1957, 3162.

SYMPLOCACEAE (STYRACEAE B. H.)

- Symplocos laurina* (Retz) Wall. ex Don—Common on the slopes, 2066 M, in flower, 28-8-1957, 4198, 3261, 3263.

OLEACEAE

- Jasminum bignoniaceum* Wall.—Common, 2066 M, in flower, 22-8-1957, 4197.
Ligustrum perrottetii A. DC.—Common in Runymade, 1800 M, in flower, 12-5-1957, 3201.
L. walkeri Decne.—Common in Runymade, 1800 M, in flower, 12-5-1957, 3190.

ASCLEPIADACEAE

- Brachylepis nervosa* Wight & Arn.—Common on the southern slope, 2090 M, in flower, 15-5-1957, 3264.
Ceropegia pusilla Wight & Arn.—Common, 2033 M, in flower, 29-8-1957, 3933.

SCROPHULARIACEAE

- Sopubia delphinifolia* Don—Common, 2066 M, in flower, 7-12-1957, 4803.

BIGNONIACEAE

**Pyrostegia venusta* (Ker.) Miers—Common on the slopes of the hill, 2067 M, in flower, 28-3-1958, 5670.

This plant is not recorded by Fyson.

ACANTHACEAE

**Justicia diffusa* Willd.—Common on the slopes, 2067 M, in flower, 28-3-1958, 5664, 4801.

This plant is not recorded by Fyson.

**Rostellularia procumbens* (Linn.) Nees—Common on the slopes, 2000 M, in flower, 10-5-1957, 3157.

This plant is not recorded by Fyson.

VERBENACEAE

Verbena venosa Gill. & Hook.—Common by the side of the Kateri stream, 1800 M, in flower, 12-5-1958, 3186.

LABIATAE

Anisochilus dysophylloides Benth.—Common, 2066 M, in flower, 17-12-1957, 4798.

PLANTAGINACEAE

Plantago asiatica Linn.—Common along the Kateri stream upto Runymade, 1800 M, in flower, 12-5-1957, 3183.

POLYGONACEAE

**Polygonum barbatum* Linn.—Common along the Kateri stream upto Runymade, 1800 M, in flower, 12-5-1957, 3181.

This plant is not recorded by Fyson.

P. hydropiper Linn.—Common in Runymade, 1800 M, in flower, 12-5-1957, 3198.

P. pedunculare Wall. var. *robustum* Hook. f.—Common in the Kateri stream, Runymade, 1800 M, in flower, 12-5-1957, 3193.

P. punctatum Buch.-Ham.—Common, 2066 M, in flower, 28-8-1957, 4193, 4170.

PIPERACEAE

Peperomia reflexa A. Dietr.—Common in the humus soil deposited on rocks, 2000 M, in flower, 11-5-1957, 3161, 4794.

Piper schmidtii Hook. f.—Common, 2050 M, in flower and fruit, 13-5-1957, 3214, 4792.

The berries are used as pepper by the hill tribes.

LAURACEAE

Litsea wightiana Hook. f.—Common in Runymade, 1800 M, in flower, 12-5-1957, 3202, 4175.

Phoebe paniculata Nees—Common along the Kateri stream upto Runymade, 1800 M, in flower, 12-5-1957, 3182.

LORANTHACEAE

Dendrophthoe neelgherrensis (Wight & Arn.) Van Tieghem.—Parasitic on *Rhododendron*, common, 2,097 M, in flower, 13-5-1957, 3206.

Helixanthera obtusata (Schult.) Danser—Parasitic on trees, common on the slopes, 2000 M, in flower, 10-5-1957, 3149.

SANTALACEAE

Osyris wightiana Wall. ex Wight—Common on the slopes, 2000 M, in flower, 10-5-1957, 3145, 3935, 4806.

EUPHORBIACEAE

Antidesma menasu Miq.—Common in Runymade, 1800 M, in flower, 12-5-1957, 3191.

Excoecaria crenulata Wight—Common by the side of the foot path leading to the Fort, 2097 M, in flower, 13-5-1957, 3203.

The latex from this plant causes swelling and irritation of the body when comes into contact.

Melanthesa turbinata (Koen. ex Roxb.) Oken.—Common on the slopes, 2000 M, in flower, 11-5-1957, 3169.

Ricinus communis Linn.—Rare in cleared portions on the slopes, 1730 M, in flower, 18-8-1957, 4141.

ULMACEAE (URTICACEAE B.H.)

Trema orientalis Blume—Common, 2097 M, in fruit, 28-8-1957, 3931.

URTICACEAE

Droguetia diffusa Wedd.—Common on the slopes of hill, 2000 M, in flower, 8-12-1957, 4824.

CONIFERAE

**Callitris rhomboidea* R. Br.—Common on the slopes, 2000 M, in cone, 10-5-1957, 3153.

This plant is not recorded by Fyson.

ORCHIDACEAE

Calanthe veratrifolia R. Br.—Common by the side of stream in dark shades, 2097 M, in flower, 15-5-1957, 3253.

Cheirostylis flabellata Wight—Common in the crevices of rocks, 2067 M, in flower, 28-3-1958, 5661.

Cirrhopetalum gamblei Hook. f.—Common, 2066 M, in flower, 7-12-1957, 4814.

Habenaria rariflora A. Rich.—Common, 2097 M, in flower, 28-8-1957, 4186.

ZINGIBERACEAE (SCITAMINEAE B.H.)

Hedychium flavescens Carey—Common, 2097 M, in flower, 28-8-1957, 3930.

CANNACEAE (SCITAMINEAE B.H.)

Canna orientalis Rosc.—Common on the river bank upto Runymade, 1800 M, in flower, 12-5-1957, 3178.

This plant is not recorded by Fyson.

HAEMODORACEAE

Ophiopogon intermedius Don—Common, 2097 M, in flower, 28-8-1957, 4181.

AMARYLLIDACEAE

Crinum defixum Ker.—Common on the slopes, 2000 M, in flower, 11-5-1957, 3176.

This plant is not recorded by Fyson.

LILIACEAE

Iphigenia indica Kunth.—Common, 2097 M, in flower, 28-8-1957, 4188.

Smilax aspera Linn.—Common, 2033 M, in flower, 28-8-1957, 4178.

COMMELINACEAE

Cyanotis villosa Schult. f.—Common on the slopes, 2067 M, in flower, 28-3-1958, 5662.

PALMACEAE

**Calamus latifolius* Roxb.—Rare on the slopes, 2000 M, in flower, 11-5-1957, 3167.

This plant is not recorded by Fyson.

ERIOCAULACEAE

Eriocaulon collinum Hook. f.—Common on the slopes, 1730 M, in flower, 18-8-1957, 4153.

CYPERACEAE

Bulbostylis capillaris Kunth var. *trifida* Clarke—Common, 2097 M, in flower, 28-8-1957, 4192, 4196.

Carex brunnea Thunb.—Common, 2067 M, in flower, 28-2-1958, 5660.

C. lindleyana Nees—Common, 2097 M, in flower, 28-8-1957, 4182.

Courtoisia cyperoides Nees—Common on the slopes, 1730 M, in flower, 18-8-1957, 3184, 4156.

This plant is not recorded by Fyson.

**Cyperus brevifolius* (Rottb.) Hassk.—Common on the slopes, 1730 M, in flower, 18-8-1957, 3187, 4121.

This plant is not recorded by Fyson.

C. digitatus Roxb.—Common on the slopes, 1730 M, in flower, 18-8-1957, 4164.

C. globosus Allion.—Common on the slopes, 1730 M, in flower, 18-8-1957, 4157.

C. rotundus Linn.—Common on the slopes, 1730 M, in flower, 18-8-1957, 4148.

This plant is not recorded by Fyson.

**C. triceps* (Rottb.) Endl.—Common on the slopes, 1730 M, in flower, 18-8-1957, 4149.

This plant is not recorded by Fyson.

Fimbristylis kingii Clarke—Common, 2097 M, in flower, 28-8-1957, 4185.

Mariscus panicus Vahl—Common, 1730 M, in flower, 18-8-1957, 4145.

This plant is not recorded by Fyson.

Scirpus mucronatus Linn.—Common on the slopes, 1730 M, in flower, 18-8-1957, 4155.

Scleria cochinchinensis Druce—Common, 1666 M, in flower, 18-8-1957, 3156, 4126.

GRAMINEAE

Amphilophis insculpta Stapf—Common, 2000 M, in flower, 8-12-1957, 4822.

Arundinella fuscata Nees—Common, 1730 M, in flower, 18-8-1957, 4125, 4821.

**A. holcooides* Trin.—Common, 2000 M, in flower, 18-12-1957, 4817.

This plant is not recorded by Fyson.

Bromus asper Murr.—Common on the slopes, 1730 M, in flower, 18-8-1957, 4136.

Chrysopogon orientalis A. Camus—Common on the slopes, 2000 M, in flower, 8-12-1957, 4819.

C. noduliberbis (Hochst) Henr.—Common on the slopes, 1730 M, in flower, 18-8-1957, 4135.

Cymbopogon flexuosus Wats.—Common, 2097 M, in flower, 28-8-1957, 4184, 4813.

This plant is not recorded by Fyson.

Cyrtococcum patens A. Camus—Common on the slopes, 2000 M, in flower, 10-5-1957, 3158.

Digitaria longiflora Pers.—Common, 2097 M, in flower, 28-8-1957, 4128, 4195.

This plant is not recorded by Fyson.

D. marginata Link.—Common on the slopes, 2097 M, in flower, 28-8-1957, 3932.

This plant is not recorded by Fyson.

D. wallichiana Stapf—Common, 2097 M, in flower, 28-8-1957, 4130, 4191.

Eragrostis megastachya (Koel.) Link.—Common on the slopes, 1730 M, in flower, 28-8-1957, 4131.

E. chariis (Schult.) Hitchc.—Common on the slopes, 1730 M, in flower, 18-8-1957, 4132, 4825.

This plant is not recorded by Fyson.

E. nigra Nees—Abundant by the side of streams in the Hills, 2097 M, in flower, 18-5-1957, 3257, 4124.

E. tenuifolia Hochst.—Common on the slopes, 1730 M, in flower, 18-8-1957, 4137.

E. unioides Nees—Common on the slopes, 1730 M, in flower, 18-8-1957, 4159, 4809.

Eulalia phaeothrix Kuntze—Common on the slopes, 1666 M, in flower, 28-8-1957, 4134.

Isachne kunthiana Wight & Arn.—Common, 2097 M, in flower, 28-8-1957, 4147, 4180.

**I. walkeri* Wight & Arn.—Common on the slopes, 2000 M, in flower, 7-12-1957, 4793.

This plant is not recorded by Fyson.

Ischaemum aristatum Linn.—Common on the slopes, 1730 M, in flower, 28-8-1957, 4152, 4818.

I. nilagiricum Hack.—Common in Runymade, 1800 M, in flower, 12-5-1957, 3194.

This plant is not recorded by Fyson.

Oplismenus compositus Beauv.—Common on the slopes, 1730 M, in flower, 18-8-1957, 4129.

Panicum oreades Domin.—Common on the slopes, 1730 M, in flower, 18-8-1958, 4127.

This plant is not recorded by Fyson.

P. repens Linn.—Common on the slopes, 1730 M, in flower, 18-8-1957, 4158, 4163.

Paspalum scrobiculatum Linn.—Common on the slopes, 1730 M, in flower, 18-8-1957, 4150.

This plant is not recorded by Fyson.

**Rhynchelytrum roseum* Stapf et Hubb.—Common on the slopes, 2000 M, in flower, 11-5-1957, 3171.

This plant is not recorded by Fyson. Introduced plant.

Saccolipsis indica Chase.—Common on the slope of the hill, 1730 M, in flower, 18-8-1957, 4154.

Setaria pallidifusca Stapf & Hubb.—Common on the slopes, 1730 M, in flower, 18-8-1957, 4151.

Themeda triandra Forsk.—Common, 1730 M, in flower, 18-8-1957, 4123.

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EXPLANATION OF TABLE

Data from the Agricultural Meteorologist, Agricultural College & Research Institute, Coimbatore.

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