Revenue Department

Minutes of Consultations

26th Jan 1858

Back Nos 134

Cons No 83 Dt 20th Jan 1858

பாதுகாப்பு பிரிவு–1

செப்பனிடுபவர் பெயர்

செப்பனிடுவதற்காக எடுத்துக்
கொள்ளப்பட்ட நாள்

சரிபார்க்கும்
முதல் மு.நி.பா.எ.
கையொப்பம்

சரிபார்க்கும்
2–ம் மு.நி.பா.எ.
கையொப்பம்

ஆராய்ச்சி
உதவியாளர்
கையொப்பம்

(1)

Fort Saint George, Revenue Consultation of 26th January 1858.

No. 13. Read the following letter from H. CLEGHORN, Esq., M. D. Conservator of Forests; to the Secretary to Government; Revenue Department, Fort St. George; dated Madras 22d December 1857, No. 241.

SIR,

I have the pleasure to enclose copy of an interesting Report by Lieutenant Beddome, Assistant Conservator of Forests, as to the present state of the Pulney Hills in regard to Timber for public purposes.

2. It is with much regret that I notice that, much wasteful cutting of useful timber still prevails their. I understand from Mr. Parker, Collector of Madura, at present in Madras, that permission was given by him to cut firewood and posts for housebuilding, but it was never contemplated that Teak saplings should be taken for such purposes.

3. I would beg to recommend that instructions be sent to the Acting Collector, (to whom I have written,) to preserve the Teak and Blackwood saplings in particular with special vigilance. I am looking around for a qualified Overseer to supervise this range of Forest, which I propose to visit if possible, during my next tour.

(*Original.*)

4. At the same time, I transmit a list of the vegetable productions (*Flora Pulniensis*) of the Pulney Hills, which has been drawn up with great care by Mr. Beddome. I need hardly say, that such local Catalogues are of great use to all who pay any attention to the study of Botany; and (as illustrating the Geographical distribution of the plants of the Peninsula) they are specially commended by Dr. Royle in his "observations on Provincial Exhibitions." I beg to recommend that the M. S. S. be printed in the Madras Journal of Science, it will be my duty to see it correctly through the Press. I would further ask permission to strike off 100 extra copies for distribution.

No. 14. ORDER THEREON, No. 83; dated 20th January 1858.

As requested by Dr. Cleghorn, the Right Honorable the Governor in Council authorises the publishing in the Madras Journal of Science of the list of vegetable products of the Pulney Hills, which accompanies Lieutenant Beddome's interesting report, for which purpose the original will be at once returned to him, and that 100 additional copies be struck off for distribution, of which 5 copies will be forwarded to the Government office.

2. The Government regret to observe that the wholesale destruction of valuable Timber on the Pulney Hills appears to have been but little checked, either by the orders given by the Collector, or by those of Government, issued in May last, totally prohibiting the further destruction of the Forests for the formation of plantain gardens, and that Teak, and Blackwood Saplings, are felled indiscriminately with other less valuable woods for erecting sheds, and numerous purposes, for which the commoner sorts would answer almost equally well.

Extract Minutes Consultation, 5th May 1857.

3. The Board of Revenue will be directed to call the Collector's particular attention to this subject, and to desire him to report how far the orders of Government above mentioned have been carried out. He will be further instructed to prevent by all the means in his power, the felling of Teak, or Blackwood, whether Saplings or trees of larger growth, without which it is hopeless to attempt the restoration of the valuable Forests so ruthlessly destroyed in past years.

4. It would appear from Lieutenant Beddome's report that an idea exists among the people, including the talook authorities, than any trees not larger in girth than a man's arm may be felled for firewood, or for purposes of house building. This practice should be strictly confined to the less valuable kinds of wood, and the cutting of Teak and Blackwood totally prohibited. It is most improbable that any Tahsildar can honestly have believed that Teak Saplings might be felled, when the cutting of the larger trees is strictly prohibited.

(Signed) H. FORBES,
Acting Secretary to Government.

XI. *Extract from Report on the Vegetable Products of the Pulney Hills. By* Lieut. R. H. Beddome, *Assistant Conservator of Forests.*

(Communicated by the Madras Government.)

I have completed my tour in the Pulney range, and have thoroughly explored all the slopes and the forests on them. In many places, there has at one time been a considerable quantity of Teak, and Blackwood (*Dalbergia latifolia*, and *D. sissoides*,) also on the northern slopes, Cungilium (*Shorea xanthia*,) almost all the large trees of these timbers have been long since felled. Teak and Blackwood saplings are yearly springing up, these are felled, when their scantling is about that of a man's arm, and used as posts, &c., the natives prizing the Teak especially as they say, that the white ants will not touch it. Whilst I was at Pulney, I saw ten young Teak saplings, none of them perhaps thicker than my arm, brought in by the woodcutters, and sold to an overseer as posts for a shed that he was building near the public bungalow, saplings that would have yielded magnificent timber years hence. On the slopes near Pulney, and between that place and Verupatchy, I observed a great quantity of timber cut and being carted away, chiefly Vengay, (*Pterocarpus marsupium*,) and Veckalie (*Conocarpus latifolius*,) some logs of good size. On the lower slopes in this direction, there is a scattering of Teak. There is also Blackwood, of this tree I observed a great many saplings, about the foot of the ghat which ascends to Cowajee, and for some way up the rocky slopes, they are being felled, however, by the wood cutters. I saw one large tree of this timber being carted away from the jungles, though I did not succeed in finding any trees of size, standing.

Ascending to Poombary from Pulney there is a very extensive alpine basin with high hills all round, in this, and the ravines and valleys formed by the spurs to the West of it, below Ulleorankunnay, I found no Teak: the timber, particularly in the large basin, has been much destroyed.

Note.—Dr. Wight visited the Pulney Hills, his observations will be found in this Journal, Vol. V. p. 269, (1837.)

The timber here is chiefly the following:

Pterocarpus marsupium. (Vengay.)
Conocarpus latifolius. (Veeteelie.)
Grewia tiliæfolia (Tarradá.)
Emblica officinalis.
Eriedelia.
Terminallas, 2: scarce.
Acacia Sundra (Boga.)
Acacia odoratissima.
Dalbergia latifolia (Todakuttay) scarce and poor.

Of the two Acacias, I observed several trees that had been felled and were being cut into small logs.

On the slopes far down below Kookul in a northerly direction, the jungle has been much cut, there has at one time been a good quantity of Cungilium (*Shorea tumbuggaia*) in this locality, there are however, only a few poor trees now left standing. This timber is most greedily sought after by the Natives for house building. Further down on the spurs near the plains, and below a hill called the Koombootookee mallay, I found Teak.

I visited the Mungapatty valley, lying to the West of the Palney range, here the timber has been much destroyed, to make way for cultivation. There is no Teak here. Down the slopes to the S. W. towards the Aggamullay hills, I found that the jungle had been much cut, the spurs in some places are pretty thickly wooded, but there is nothing of any value now standing. The slopes about Wollangum have been considerably cleared for cultivation. On the lowermost spurs and small rocky hills between this village and that of Vellay covay (near Periakolum) I found here and there straggling Teak trees, and signs of a good deal having been cut.

A good quantity of Teak has formerly been cut, about the pass from Periakolum up to the Kodakarnal, none however now remains.

All this Western portion of the Pulnies up to the Permaulmallay and Cowanjee comprizes the higher range, and is generally called the Kunjanaddy Hills. Permaulmallay

The higher ranges are from six to seven thousand feet in height, the plateau at the top consists of undulating grassy Hills, similar to

the Neilgherries, the grass is short and every where dotted with beautiful Orchideous plants (amongst which *Platanthera Susannæ*, and *lutea* are very conspicuous,) *Ophelia, Exacum, Pedicularis, Gentiana* and many other plants peculiar to a high altitude. With the exception of the sholas, the higher ranges are free of any jungle or trees, save here and there a few scattered trees of "*Rhododendron arboreum.*"

There are a good many sholas up the higher range, chiefly situated, where there are springs or water-courses, some of these are very thick, and several of enormous extent, the three largest upon the higher range are. The Kookul shola (situated close to a village of that name) which extends over two hills, on the north Western face of the Pulnies. The Minmoordi cornal shola situated at Pattoor on the southern side, and a large shola situated between that and Kodacarnal. The timber in these sholas is extensively cut by the inhabitants of the Hills. The following are trees common in the sholas on the higher ranges.

Cyminosma pedunculata.
Millingtonia pungens.
Rhododendron arboreum.
Hedera obovata.
Hedera rostrata.
Hedera racemosa.
Moosa Indica.
Myrsine capitellata.
Olea robusta.
" Sp.
Cinnamomum iners. (much felled by the Natives.)
Magnolia.—? (a magnificent tree)
Michelia Pulniensis.
Syzygium. Sp.
Dodonæa Burmanniana.
Rottlera peltata.
" tinctoria.
Pittosporum floribundum.
Bentinckia condapana.
Symplocos, Sp.

Lauraceæ.	4 large trees.
Elæocarpus oblongus.	Enormous trees.
Monocera glandulifera.	
Monocera tuberculata.	
Kooragoo marum.	?
Kooravoc.	?
Velle Ore.	?
Noorle.	?
Wellatos.	? (ploughs always made of this.)
Gnidium eriocephala.	

There were other trees not in flower, with which I am quite unacquainted, amongst these I have little doubt, there are valuable timbers to be discovered. The Lime and the Orange are also found apparently indigenous.

The chief products of the higher ranges are Rice, Mustard, Garlic, Wheat, Barley, Vendiam (*Trigonella Fœnum Græcum.*)

Tennay (*Setaria Italica*) together with Lablab vulgaris, Limes, Oranges, Peaches and a few Plantains are also grown. A great number of low country Natives, have settled on the Pulney Hills. The Hill tribes are the Poliars and the Koonoovers, these latter tribes are most abundant on the lower Pulnies.

From Cowajee which is situated at the foot of the Permaulmallay, the highest peak of the Pulnies, I descended to the lower range of the Pulnies, or as they are often called the Tandigoody and Verupatchy Hill, they are I should judge about 4 to 5000 feet above the sea, or perhaps rather more. In the Arepatty valley below the Permaulmallay there is a good deal of scattered jungle, the timber has been largely felled; the timber most common there, is the *Terminalia chebula*, the Vengay, (*Pterocarpus marsupium*) and the Veckalie (*Conocarpus latifolius.*)

The vallies between Vilputty and Cowajee are more or less wooded, I here also found Cungilium (*Shorea robusta*) but no good trees of it left standing. The Warre bakee river runs through this valley and there is a fine fall. Near Pussinkud I saw a few large Teak trees, the only ones that have apparently escaped the general destruction. The slopes down to Tempollium are extensively wooded, and there is Teak and Cungilium, almost all destroyed, however,

the Cungilium is I know still cut, and I have no doubt the Teak saplings also when any are found worth cutting. On the slopes near Pullatoor, Sandal wood is also found in small quantities.

The lower Pulnies are much more wooded, than the higher range, they are almost every where covered with a rather stunted jungle of Trees. The following trees are most numerous.

Conocarpus latifolius (Veckalie.)	Erythrina Indica.
Terminalia chebula. Very abundant.	Sclerostylis atalantioides.
	Atalantia monophylla.
Bignonia xylocarpa.	Gmelina arborea.
Sterculia guttata.	Zizyphus xylopyrus.
Cathartocarpus fistula.	Grewia tiliæfolia.
Emblica officinalis.	Canthium umbellatum.

The trees are *generally rather* stunted, I observed a good quantity of the black dammer tree (*Canarium strictum*) towards Tyempollium. The hill people never extract the dammer, and are apparently ignorant of the uses of the tree.

The cultivation on these lower ranges is very considerable, compared to that of the higher ranges, about Pumukad and Tantigoody, all the vallies are under cultivation.

The chief products of the lower ranges are Turmeric, Plantains, Mustard, Castor Oil, Vendiam. (Trigonella Fœnum Græcum.)

Cumboo. (Penicillaria spicata.)
Ragee (Eleusine coracana.)
Varagoo (Panicum miliaceum.)
Tennay (Setaria Italica.)
Mangoes, Citrons, Limes, Oranges, Cardamoms.

The shola forests in the vicinity of Tandigoody and Perryoor are very extensive, and contain trees of enormous size. The black dammer and the wild nutmeg trees are abundant. These sholas, however, are daily disappearing before the Plantain groves. To prepare a Plantain grove, a large tract of shola is burnt down, this forms a fine soil for the Plantain, acres of fine shola are destroyed annually in this manner.

Near Tandigoody, Cardamoms are also cultivated to a great extent. To form a Cardamom grove the small trees and underwood are burned, but the larger trees are left standing.

The following plants yield valuable fibres for rope, &c., and are much used by the Natives in the lower ranges.

Kat murke nâr. (grows to a tree.).....Gnidia eriocephala.
Volca nâr.....Grewia Asiatica.
Surke nâr.....Grewia abutilifolia.

Artocarpus integrifolia is most abundant in all the sholas of the lower ranges, particularly at Perryoor and Pauchelloor.

The following timbers are much used by the Natives here.
Nawâr ..... (Eugenia jambolana.)
Maiglan..... (Vitex alata.)
Cottam pallam. (Terminalia catappa.)
Kammallâ.... (Gmelina arborea.)
Kaie.....? used for ploughs.
The timber of Gmelina is highly spoken of.

The mace round the wild nutmeg (Palmanee Kam) is used by Natives to color their teeth. A Beer is made from the raggee (*Eleusine*) the flowers of *Vitex negundo* are used as a hop to ferment it with. Into the toddy which they draw from the *Caryota urens*, (a tree very abundant here,) they fling in some of the bark of *Olea robusta* which immediately causes fermentation.

Girardinia Leschenaultiana, a plant yielding a valuable fibre is most abundant here, the natives however, are ignorant of its use.

The leaves of Dodonæa Burmanniana are bound on swellings produced by Sprains, &c., it is said with great effect, a decoction of the leaves is given internally in cases of leprosy.

Polygonum Sp.....
Acalypha Indica.....
Flowers of Kalanchoe grandiflora.
} used medicinally.

[illegible] about Pauchelloor and less destroyed, [illegible]. The black dammer tree is very [illegible] been a good quantity of Teak [illegible] and also on the

slopes below Pauchelloor, it is now almost entirely destroyed. There is Blackwood also, which is still at times cut and carted into Dindigul and Madura for sale. I did not myself observe any large trees of this timber standing, and as I was over a great portion of these jungles, there cannot be much left.

Flora of the Pulney Hills, as observed in September and October, 1857. *By* Lieut. R. H. Beddome.

Ranunculaceæ.

Clematis Gouriana,
" Wightiana,
" Munroii, sholas at Kodakarnal.
Anemone Wightiana,
Ranunculus reniformis,
" Wallichianus, common.
Naravelia Zeylanica,

Magnoliaceæ.

*Michelia Pulniensis, very common (Shemboo.)
Magnolia sp. a beautiful tree common in sholas.

Anonaceæ.

Guatteria cerasoides,

Schizandraceæ.

Hortonia sp. near Perryar.

Menispermaceæ.

Cocculus villosus, lower slopes.
" glaber,
" macrocarpus? (only in fruit.)
Clypea hernandifolia, very common.

Note.—Local Catalogues such as this "Flora Pulniensis" are of great use, illustrating the Geographical distribution of the plants of Southern India, and are specially commended by Dr. Royle in his observations on Provincial Exhibitions. —Ed. M. J.

* *M. Nilagirica* (Zenker) in Hooker and Thomson's Flora Indica.

Abelmoschus angulosus, *W. A.*	The involucel is spathiform, and splits into 4 leaves, I have however often observed it in 4 leaves from the commencement, and never assuming the form of a spathe, I believe it to be the same as Hibiscus tetraphyllus, (Roxb.) which is common in central India.
„ moschatus,	
Lagunea lobata,	
Abutilon polyandrum,	much valued as a fibre.
„ Asiaticum,	slopes.
„ Indicum,	do.
Sida humilis,	do.
„ acuta,	do.

BOMBACEÆ.

Sterculia guttata,	yields a fibre, which is hardly distinguishable from that of "S. villosa," the valuable Elephant rope of the Anamallays.
„ urens,	
Kydia calycina,	
Eriochlæna Hookeriana,	Lower ranges, very abundant.

TROPÆOLACEÆ.

Tropæolum sp.	very abundant. near Poombary, run wild?

TILIACEÆ.

Corchorus trilocularis,	
Triumfetta sp.	
Grewia abutilifolia,	(Surke nâr) used as a fibre.
„ villosa,	
„ tiliæfolia,	
„ salvifolia,	
„ Asiatica,	(Valee nâr) used as a fibre. At the Anamallays, valee nâr is applied to Sterculia villosa.

Grewia hirsuta,	
„ sp.	Leaves roundish, rhomboid, 3 nerved, cordate at base, unequally toothed, slightly scabrous, peduncles axillary, 1, 2 flowered longer than petioles, bracteoled at base, sepals twice as long as petals, recurved, petals sharply bidentate, stigma 2 lobed, style clavate at apex, longer than stamens, nuts 1-3 shining.

ELÆOCARPACEÆ.

Elæocarpus oblongus,	
Monocera tuberculata,	very large trees, in sholas.
„ glandulifera,	Do. glands not always present.

DIPTEROCARPEÆ.

Vatica sp.	(Cungilium) vallies amongst the hills and slopes. Wood much prized by the natives.

TERNSTROEMIACEÆ.

Cleyera gymnanthera,	sholas.
Cochlospermum gossypium,	

OLACACEÆ.

Gomphandra polymorpha,	near Poombary.
Stemonurus fœtidus,	do.

AURANTIACEÆ.

Atalantia monophylla,	
Limonia acidissima,	a very pretty wood.
„ alata,	in sholas.
Glycosmis pentaphylla,	
Feronia elephantum,	
Aegle marmelos,	
Citrus sp.	
?	A very prickly climber, with ternate leaves, the fruit is eaten.

HYPERICACEÆ.

Hypericum Hookerianum, very common, higher ranges.

BERBERIDACEÆ.

Berberis tinctoria,
" Leschenaultii, 5,000 to 8,000 ft.

CRUCIFERÆ.

Nasturtium Madagascariense,
Cardamine Borbonica,
Sinapis juncea,

CAPPARIDACEÆ.

Gynandropsis pentaphylla,
Cleome monophylla,
Polanisia icosandra,
Cadaba Indica,
Capparis horrida, } lower slopes.
" incanescens, }
" grandis,

RESEDACEÆ.

Reseda alba, common about Kodakarnal.

FLACOURTIACEÆ.

Flacourtia sapida, slopes towards Perupatchy.
Hydnocarpus inebrians,

VIOLACEÆ.

*Viola odorata, scentless. } very common on the higher
" Patrinii, } ranges.
Ionidium enneaspermum,

DROSERACEÆ.

Drosera peltata,
Parnassia Mysorensis, common in moist ground near Kodacarnal.

POLYGALACEÆ.

Polygala arillata, { very coammon shrub, 5,000 feet and upwards.
" Wallichiana, { abundant in the grass on the highest ranges.
" ciliata,
" rosmarinifolia,
" Wightiana ?
" nov. sp. ? a small shrub, slopes near Periyur.

* *Viola Wightiana*, (Wall.)

CARYOPHYLLACEÆ.

Stellaria media, } moist places on the highest ranges,
Cerastium Indicum, } very common.
Arenaria sp.
Mollugo ? sp.

MALVACEÆ.

Urena sinuata,
" lobata, used by the Natives as a fibre.
Pavonia Zeylanica, covered with clammy pubescence.
Lebretonia procumbens, lower slopes.
Hibiscus micranthus, do.
" hirtus, do. white variety.
" lampas, very abundant.
" Surattensis, lower slopes.
" aculeatus, (*Roxb.*) This is H. furcatus, (*W. and A.*) but very different from H. furcatus, (*Roxb.*) a plant common in Central India.
" canescens, slopes near Pulney.
" sp. (near Vellay covay) erect, shrubby, covered all over with shining hairs, leaves cordate, serrate, 3-5 lobed, petioles the length to twice the length of the leaves, involucel 4 to 7 leaved, generally 5, segments narrow, acuminate, calyx deeply 5 cleft, segments 3 nerved, acuminated, purple streaked. Flowers short peduncled, axillary, afterwards in terminal racemes, elongated. Seeds glabrous with a few tufts of hairs. Perhaps "H. lunarifolius" but the involucel is generally 5 leaved never 10, the calyx is like that of "canescens."
" eriocarpus, slopes towards Pulney.

Near Tandigoody, Cardamoms are also cultivated to a great extent. To form a Cardamom grove the small trees and underwood are burned, but the larger trees are left standing.

The following plants yield valuable fibres for rope, &c., and are much used by the Natives in the lower ranges.

Kat murke nâr. (grows to a tree.).....Gnidia eriocephala.
Volca nâr.....Grewia Asiatica.
Surke nâr.....Grewia abutilifolia.

Artocarpus integrifolia is most abundant in all the sholas of the lower ranges, particularly at Perryoor and Paucheloor.

The following timbers are much used by the Natives here.

Nawâr ..... (Eugenia jambolana.)
Maiglan..... (Vitex alata.)
Cottam pallam. (Terminalia catappa.)
Kammaliâ.... (Gmelina arborea.)
Kaie.....? used for ploughs.

The timber of Gmelina is highly spoken of.

The mace round the wild nutmeg (Palmanee Kam) is used by Natives to color their teeth. A Beer is made from the raggee (*Eleusine*) the flowers of *Vitex negundo* are used as a hop to ferment it with. Into the toddy which they draw from the *Caryota urens*, (a tree very abundant here,) they fling in some of the bark of *Olea robusta* which immediately causes fermentation.

Girardinia Leschenaultiana, a plant yielding a valuable fibre is most abundant here, the natives however, are ignorant of its use.

The leaves of Dodonæa Burmanniana are bound on swellings produced by Sprains, &c., it is said with great effect, a decoction of the leaves is given internally in cases of leprosy.

Polygonum Sp.....
Acalypha Indica.....
Flowers of Kalanchoe grandiflora. } used medicinally.

The sholas are very thick about Paucheloor and less destroyed, apparently than at Pandigoody. The black dammer tree is very abundant here. There has at one time been a good quantity of Teak on the slopes between Periyur and Verupatchy and also on the

slopes below Paucheloor, it is now almost entirely destroyed. There is Blackwood also, which is still at times cut and carted into Dindigul and Madura for sale. I did not myself observe any large trees of this timber standing, and as I was over a great portion of these jungles, there cannot be much left.

Flora of the Pulney Hills, as observed in September and October, 1857. *By* Lieut. R. H. Beddome.

Ranunculaceæ.

Clematis Gouriana,
" Wightiana,
" Munroii, sholas at Kodakarnal.
Anemone Wightiana,
Ranunculus reniformis,
" Wallichianus, common.
Naravelia Zeylanica,

Magnoliaceæ.

*Michelia Pulniensis, very common (Shemboo.)
Magnolia sp. a beautiful tree common in sholas.

Anonaceæ.

Guatteria cerasoides,

Schizandraceæ.

Hortonia sp. near Perryar.

Menispermaceæ.

Cocculus villosus, lower slopes.
" glaber,
" macrocarpus ? (only in fruit.)
Clypea hernandifolia, very common.

Note.—Local Catalogues such as this "Flora Pulniensis" are of great use, illustrating the Geographical distribution of the plants of Southern India, and are specially commended by Dr. Royle in his observations on Provincial Exhibitions. —Ed. M. J.

* *M. Nilagirica* (Zenker) in Hooker and Thomson's Flora Indica.

GUTTIFERÆ.

Garcinia sp. sholas.

MALPIGHIACEÆ.

Hiptage Madablota, near Tandigoody.

SAPINDACEÆ.

Cardiospermum canescens, lower slopes.
" halicacabum, " "
Sapindus emarginatus, " "
Dodonœa Burmanniana, { from the plains to the highest level, common also in the sholas.

MILLINGTONIACEÆ.

Millingtonia pungens, in sholas, common.

MELIACEÆ.

Melia azedarach, near Perryur.
Mallea Rothii,

CEDRELACEÆ.

Chloroxylon Swietenia, lower slopes.

AMPELIDACEÆ.

Vitis quadrangularis,
" setosa,
" tenuifolia,
" sp. { gland-tipped, deep purplish, serrated leaves.
" sp. Poombary valley.
" Rheedii,
" sp.

GERANIACEÆ.

Geranium affine, very abundant.

LINACEÆ.

Linum Mysorense, near Sharabaganoor, common.

BALSAMINACEÆ.

Impatiens Balsamina,
" arcuata,
" Leschenaultii, in drying, this species tinges the paper a bright pink color. (Common at Kodakarnal.)

Impatiens albida, common in hill streams 5,000, to 7,000 feet, grows to 16 or 18 feet high, flowers very large, of a delicate rose color. I never saw them white as described by Dr. Wight, nor does his plate give much idea of the plant, as it grows on these hills.

" campanulata, in sholas very common, 6,000 to 7,000 feet, flowers beautifully mottled with pink.

" dasysperma, capsule slightly pubescent! this species is readily known by the curved mucro at the conjunction of the 2 upper sepals.

" nov sp. sholas at Kodakarnal, 7,000 feet, glabrous, *leaves alternate*, lanceolate acute, petioled, bristly serrate, racemes as long or longer than leaves, 4 to 14 flowered pedicels, longer than petioles with a large cordate (convex on outside) bract at the base of each. 2 upper sepals winged at their conjunction. Spur long, incurved with gland-tipped point, flowers of a uniform crimson. A very beautiful sp: quite unlike any described or figured.
Impatiens Phœnicea.

" tomentosa, Kodakarnal about streams, the whole plant is sometimes quite glabrous, 7,000 feet.

" fasciculata, the commonest species on the hills.

" viscida, Kodakarnal in streams, 7,000 feet.

" nov. sp. (summit of Permaulmallay, in streams 8,000 feet.) Stems 4 angled, sulcated, slightly hairy, *leaves opposite*, serrate, long petioled above a few

hairs, below glaucous, peduncles, longer than the leaves, smooth *viscid*, bearing 7-9 flowering racemes at their apex, pedicels with a gland tipped filiform bract at their base, lateral sepals small, spur rather long, capsule gibbous, streaked with purple, flowers very small pink. A very small species, the whole plant not more than 4 inches high.
Impatiens Pulniensis.

OXALIDACEÆ.

Biophytum sensitivum,
Oxalis corniculata,

ZYGOPHYLLACEÆ.

Tribulus lanuginosus, Lower slopes.

RUTACEÆ.

Cyminosma pedunculata, sholas. (very common.)

ZANTHOXYLACEÆ.

Toddalia aculeata, slopes towards Verupatchy.

PITTOSPOREÆ.

Pittosporum floribundum, Poombary (common.)

CELASTRACEÆ.

Celastrus Heyneana, (Poombary valley.)
Euonymus angulatus, (sholas) a very elegant small tree.

RHAMNACEÆ.

Zizyphus glabrata, slopes.
" xylopyra, "
" Œnoplia, "

TEREBINTHACEÆ.

Semecarpus Anacardium,
Mangifera Indica, lower Pulney ranges.
Odina Wodier, do. do.

BURSERACEÆ.

Canarium strictum, { Abundant on the lower Pulnies, yields a black dammer, the natives however never extract it.
Garuga pinnata,
Protium Roxburghianum, leaves pinnate.
" ? Leaves ternate, much used for hedges.

MORINGACEÆ.

Hyperanthera Moringa, about villages.

LEGUMINOSÆ.

Sophora glauca,
Crotalaria rubiginosa,
" Wightiana, several forms of this, if they are all one species.
" sp. Stipules wanting, leaves very narrow, linear, with their upper surface as well as whole plant densely covered with blackish hairs, vexillum with a tuft of hairs, otherwise similar to "anthylloides." Common near Poombary. (a form of anthylloides.)
" anthylloides,
" Mysorensis,
" longipes? agrees well with the description of that plant, except that the legumes are pubescent, (a large shrub, common near Puttoor.)
" paniculata, slopes near Pulney.
" superfoliata, near Tandigoody.
" juncea,
" Leschenaultii, very common.
" sericea,
" montana, (*Roxb.*) (only differs from *sericea* in the stipules and bracts, but so far is constant.)

Crotalaria nov. sp. (6. Verrucosæ,) Herbaceous, erect, glabrous, leaves very narrow, linear, very obscurely nerved, tapering at the apex into a point. Stipules wanting, racemes terminal, many flowered, *bracts adnate to the rachis*, (as in the stipules of some Phaseoleæ,) ovate with a long acumination, calyx cleft to the middle, upper lip bifid, legume with a short thick stalk, oblong, broader upwards, glabrous, many seeded. Flowers yellow, a very distinct species, apparently new, a rare plant.

Crotalaria elegans.

" Wallichiana, very common.

" nov. Sp.? (6. Verrucosæ,) suffruticose, erect, leaves orbicular, smooth on the upper surface, *under surface and stems densely covered with white woolly hair*, stipules very large, lunate, transverse, racemes terminal, calyx (cleft to the middle, upper segment bifid,) pubescent, bracts ovate with a long acumination, *legumes glabrous*, many seeded, flowers yellow. 12 to 15 feet. Poombary ghât.

Crotalaria lanata.

" (7 Diffusæ,) A very pretty procumbent species, with hirsute legume, very common amongst the grass at Poombary and elsewhere, with very long terminal racemes of large brilliant yellow flowers, perhaps a form of "C. Evolvuloides."

" nov. sp. ? Herbaceous, erect, much branched, glabrous leaves lanceolate.

" Acuminated, attenuated at the base. *Stipules wanting* racemes terminal or

axillary, few flowered, bracts minute, calyx cleft to the middle, upper segment deeply bifid, legumes oblong, broader upwards, pubescent 12 seeded, flowers blue, (has much the appearance of *C. verrucosa* at a distance, but has no stipules, and the leaves differ much,) a rare plant, near Cowanjee.

Crotalaria coerulea,

This species is very common on the Anamallays.

" albida, common.

" viminea,

" globosa,

" umbellata, near (Shambaganoor.)

" Notonii, near Vilputty.

" clavata, Periyur slopes towards Canavaddy.

" Grahamiana, Poombary valley (very common.)

Trigonella Fœnum græcum, much cultivated.

Pycnospora nervosa, (not common.)

Indigofera viscosa,

" pulchella, a very common shrub.

" tenuifolia,

" trifoliata,

" parviflora,

" Wightii,

" sp.

Clitoria Ternatea, very common.

Dumasia congesta, } ? perhaps these 2 species might be

Shuteria vestita, } united.

" glabrata, lower Pulnies.

Notonia (Johnia) Wightii, " " very common.

Pseudarthria viscida,

Tephrosia tinctoria,

" purpurea.

Smithia sensitiva,
" racemosa? Poombary ghât.
Uraria hamosa, abundant lower ranges.
Desmodium triquetrum,
" latifolium,
" Gangeticum,
" Wightii?
" recurvatum,
" gyrans,
" polycarpum,
" rufescens, very common 4,000 to 7,000 feet.
" strangulatum, very common.
" triflorum,
" parvifolium,
Dicerma pulchellum,
Alysicarpus bupleurifolius,
" styracifolius,
Abrus precatorius,
Rhynchosia densiflora, lower slopes.
" (Phyllomatia), sp. { Calycine segments longer than the 1 seeded legume.
" suaveolens, at Punnikal.
Flemingia congesta,
" Grahamiana,
Phaseolus Pulniensis, a pretty sp. in the grass near Poombary and Kookul. Flowers lilac, large, fragrant.
" trinervius,
" sublobatus,
" sp. twining to a great extent, stipules adnate, stems strigose, leaves on long petioles, trifoliate, terminal one ovate oval, lateral ones obliquely ovate, very unequal sided, above harsh adpressed pubescence, below downy, peduncles longer than petioles, thickened, 3-4 flowered at apex, flowers from glandular knobs, legumes terete, covered with brown hairs. Flowers very large, lilac and fragrant, very common. Can this be P. caracalla? It is certainly wild.

" trilobus,
" sp. (Poombary valley) flowers white, legumes compressed.
Dolichos glutinosus, (Poombary valley.)
" Sinensis,
Lablab vulgaris,
Parochetus major, moist ground, higher ranges.
Canavalia gladiata,
" virosa,
" mollis,
Mucuna (Citta) atropurpurea, at Tandigoody.
" prurita,
Cantharospermum pauciflorum.
" albicans, (Poombary ghât.)
" ? sp. very long filiform racemes.
Dunbaria, sp. { Poombary ghât and Vellaycovay, This sp. I cannot identify with any of Dr. Wight's, the calyx is not herbaceous, nor are the bracts 3 toothed, the vexillum is as much reflexed as in "Kennedya."
Cylista scariosa,
Cyanospermum tomentosum, Poombary valley,
Erythrina Indica,
Butea parviflora,
" frondosa,
Pongamia glabra,
Dalbergia latifolia,
" sissoides,
" volubilis,
" paniculata,

Brachypterum scandens,
Pterocarpus marsupium,
Inga xylocarpa,
Dichrostachys cinerea,
Prosopis spicigera,
Acacia Sundra,
" latronum,
" amara,
" odoratissima,
" speciosa,
" Intsia,
" pennata,
Guilandina Bonduc,
Cæsalpinia mimosoides, Perryur (very common.)
" sepiaria,
Tamarindus Indica.
Cassia fistula,
" auriculata,
" occidentalis,
" Tora,
" absus,
" pumila,
" obtusa, lower slopes,
Bauhinia Malabarica,
" racemosa,
" variegata, (at Vellaycovay.)

ROSACEÆ.

Rubus lasiocarpus, from 3,000 feet.
" rugosus, from 5,000 feet.
" gowreephul,
Fragaria elatior,
" Indica,
Potentilla Leschenaultii,
Rosa involucrata,
Photinia Lindleyana,

SALICARIACEÆ.

Ammania sp.

Lagerstrœmia microcarpa,

COMBRETACEÆ.

Terminalia Catappa,
" Belerica,
" Chebula,
" tomentosa,
" paniculata,
Conocarpus latifolius,
Gyrocarpus Jacquini,

MEMECYLACEÆ.

Memecylon sp:

MELASTOMACEÆ.

Sonerila Rheedii ?
Osbeckia Wightii,
" Leschenaultii,
" hirsutissima,
" Zeylanica,

MYRTACEÆ.

Rhodomyrtus tomentosus, Very common, berries eaten.
Syzygium jambolanam,
" sp.
Eugenia sp.
Careya arborea,

ONAGRACEÆ.

Jussiæa repens,
Ludwigia parviflora,
Circœa sp. Common in grassy places near the large Kookul shola.

CUCURBITACEÆ.

Coccinea Indica,
Bryonia Garcini, Lower slopes.
" laciniosa,
" scabrella,
" ? Hookeriana,
Momordica charantia,
Trichosanthes ? Dicœcious ? Leaves 3-5 lobed, scabrous above, downy beneath, with hard tipped serratures, female flowers racemes with large glandular

laciniate bracts, sometimes solitary, or 2 together in the axils of the leaves with one lanceolate bract, stigma 3-4 cleft, 3 sterile filaments inserted low down in tube of corolla. Male flowers with a large and more laciniate calyx, filaments 3 (rarely 4) quite distinct, inserted on the gibbous upper part of the tube, anthers united, corolla very hairy on the inside, tendrils 2-3 cleft, flowers white. Berry globose. At Tandigoody and Perryor. (Natchantalle.)

PASSIFLORACEÆ.

Passiflora Leschenaultii,

PORTULACACEÆ.

Trianthema decandrum,

CRASSULACEÆ.

Kalanchoe grandiflora, Flowers used medicinally.

*UMBELLIFERÆ.

Hydrocotyle polycephala, Sholas (very common.)

Sanicula elata, "

Bupleurum ramosissimum, Abundant in the grass on the higher ranges.

Pastinaca sp. Do. do. do.

Pimpinella Candolleana, Do. do. do.

ARALIACEÆ.

Hedera rostrata, Sholas.

" racemosa, do.

" obovata, do. very common.

LORANTHACEÆ.

Viscum verruculosum,

" angulatum,

" grossum,

* *Heracleum pedatum*, (Wight) may be added, see Icon. t. 342.

Viscum moniliforme,	On "*Rhododendron arboreum*," very common, glabrous, leaves ovate, very obscurely nerved, thick, opposite,
Loranthus (Symphyanthus) sp: nov.?	racemes axillary or terminal, many flowered, pedicels short, one small bract embracing the calyx. Calyx entire or nearly so, corolla glabrous, ventricose at base, equally 4 cleft to below the middle, segments cuneate linear, berry oblong, flower deep dull orange color.
" loniceroïdes,	at Cowangee.
" buddleoïdes,	common on the lower ranges.
" sarcophyllus,	common.
" amplexifolius,	leaves with a transparent margin, at Kodakarnal.
" Candolleanus,	very common.
" cuneatus,	growing on *Euphorbia antiquorum*, near foot of hills.
" Euphorbiæ,	
" sp. nov.?	Lower slopes growing on "*Salvadora Indica*" rarely on "*Cordia polygama?*" Glabrous, branches very woody, leaves nearly opposite or approximated in threes, very long, linear, often much curved, of a thick texture, short petioled attenuated at base, obtuse or slightly acute, racemes axillary, or from the axils of fallen off leaves, many flowered, pedicelled, one bract embracing the ovary, calyx entire or nearly so, corolla curved, apex split into 5 segments, one third the length of the tube, segments, linear acute, ovary oblong crowned with calyx, flowers whitish with the segments green.

CAPRIFOLIACEÆ.

Viburnum acuminatum, common at Poombary.
" capitellatum, " "
Lonicera Leschenaultii, very abundant.

RUBIACEÆ.

Naucleæ parviflora,
Mussænda frondosa,
Gardenia lucida, (pissanee) in sholas.
Randia dumetorum,
" uliginosa,
Griffithia fragrans, slopes towards Verupatchy.
Wendlandia Notoniana, very common.
Hymenodyction excelsum,

Hedyotis stylosa,
" articularis,
" pruinosa,
" monosperma,
" affinis, } higher ranges only.
" Burmanniana, flowers very fetid.
" Heynii, } these 2 little plants are common in
" dichotoma, hilly places in Central India.
" aspera, lower slopes.
Lasianthus venulosa, sholas Kodakarnal, (berries blue.)
" sp. Kookul sholas, (flowers very fetid, berries black.)
Canthium umbellatum, grows to a good sized tree. (lower Pulnies.)
" parviflorum,
Psychotrium ambiguum, } sholas.
" sp.
Grumilea congesta ?
Bigelowia lasiocarpa,
" Roxburghiana,
Spermacoce hispida, very abundant.
Knoxia corymbosa, in the grass near Poombary.
" Wightiana,

GALIACEÆ.

Rubia cordifolia, very abundant.
Galium asperifolium,
" Requienianum,

VALERIANACEÆ.

Valeriana Leschenaultii, Poombary ghat.
" Hookeriana, Cowangee hill streams.

DIPSACEÆ.

Dipsacus Leschenaultii, common.

CAMPANULACEÆ.

Campanula Alphonsii, common.
" fulgens,
Wahlenbergia agrestis, very common.
" perotifolia,

LOBELIACEÆ.

Lobelia trichandra, a very common plant.
" trigona,

PYROLACEÆ.

Pyrola sp. Kodakarnal.

ERICACEÆ.

Gaultheria Leschenaultii, (Moorcherree) berries eaten.
Rhododendron arboreum, very abundant.

VACCINIACEÆ.

Vaccinium Neilgherrense, } common shrubs.
Leschenaultii, }
Poombary ghat, axillary spikes of green flowers.

ULMACEÆ.

Celtis orientalis, from the plains to the highest elevations.

STYRACEÆ.

Symplocos Gardneriana, sholas.
" pendula, Kodakarnal, banks of streams.

EBENACEÆ.

Maba Neilgherrensis,

AQUIFOLIACEÆ.

Monetia tetracantha,

APOCYNACEÆ.

Carissa Carandas,
Ophioxylon Neilgherrense, near Puttoor.
Vinca pusilla, fields.
Wrightia tinctoria,
Alstonia venenata,
Ichnocarpus frutescens,
Echites sp. slopes near Pulney.

LOGANIACEÆ.

Strychnos nux-vomica,
Gardnera Wallichiana, sholas.
Fagræa Coromandeliana,

ASCLEPIACEÆ.

Hemidesmus Indicus,
Holostemma Rheedianum,
Calotropis gigantea,
Sarcostigma brevispina,
" sp.
Dæmia extensa,
Cynanchum pauciflorum, Kookul.
Tylophora mollissima, common.
" tenuissima, sholas.
Hoya viridiflora,
" pauciflora, a rare and beautiful parasite.
Ceropegia intermedia,
" acuminata, slopes towards Verupatchy.
" tuberosa, lower slopes,
" juncea,
" elegans, Root fibrous, leaves remote, lanceolate, tapering to a long point, slightly hairy, covered with minute dots, racemes cyme like, axillary, 2—6 flowered, flowers very large, greenish, upper part of tube and segments speckled with purple, segments of calyx, very narrow and acute, nearly allied to *C. Decaisneana*, a bulbous plant.
" sp.

Caralluma? Stem filiform, with a few narrow linear leaves near the apex, hardly two lines broad, flowers bell shaped, drooping, purple. (Poombary valley.) I unfortunately lost the only specimen that I found of this surious little plant.
Boucerosia diffusa, on rocks.

OROBANCHACEÆ.

Æginetia pedunculata, flowers of a most lovely deep blue, parasitic on the roots of a grass.
Oligopholis tubulosa, Kodakarnal shola.
Campbellia sp. Tandigoody sholas.

GENTIANACEÆ.

Gentiana verticellata,
Ophelia elegans,
" Griesbachiana, glands on the petals very hairy. higher ranges, most abundant in the grass.
Halenia Perrottetii, borders of sholas common.
Exacum tetragonum,
" Perrottetii, abundant near Poombary, a very beatiful species.
" nov sp. herbaceous, erect, glabrous, leaves opposite, broadly ovate, stem clasping, 5—7 nerved, suddenly acuminated, 2 bracts about the centre of the peduncles, flowers very large of a deep blue. Poombary and Kodakarnal. (Introduced into gardens at the latter place.)
" pedunculare,
Canscora diffusa,

SOLANACEÆ.

Solanum sp. Shrubby, erect, leaves petioled, ovate lanceolate, acuminated at both ends,

	stems and every part but the flowers covered with longish weak hairs, flowers axillary 2-3 together, on peduncles a little longer than the petioles, berries small, 6 seeded, In sholas, grows to 12 feet high.
Solanum ferox,	higher ranges common.
" giganteum,	do. do. do.
" Indicum,	
" rubrum,	
" pubescens,	Lower slopes (flowers purplish.)
Datura fastuosa,	
Physalis minima,	The Brazil cherry (so called,) is wild all over the hills; it has I suppose been introduced.
" Peruviana?	

OLEACEÆ.

Olea robusta,	Bits of the bark are thrown into the toddy extracted from *Caryota urens*, to cause fermentation.

CORDIACEÆ.

	Lower slopes.
Cordia myxa,	" " near Chattrapatty.
" polygama?	

*CONVOLVULACEÆ.

Evolvulus alsinoides,	a rare plant, slopes near Cowangee.
Porana racemosa,	common on the higher ranges, 6 to 7,000 feet.
Convolvulus rufescens,	valleys and slopes.
Calonyction speciosum,	common at Puttoor and Poombary; flowers very large, (the calyx and the leaves are much like those of I. pilosa,) 6 to 7,000 feet.
Ipomea Wightii,	
(I have since found this sp. on the plains at Anamallay.)	

* Of these only 3, viz. *Ipomea Wightii, I. nov. sp?*, and *Convolvulus rufescens* inhabit the higher elevations.

Ipomea pilosa,	an enormous climber. Upon the slopes of the hills and in valleys:
" hispida,	
" dentata,	
" striata,	
" staphylina,	
" pes tigridis,	
" pileata,	
" tuberculata,	
" obscura,	
" nov. sp: ?	
	Procumbent, stems, leaves and calyx strigose, leaves alternate, distant, narrow, cordate. flowers axillary, solitary, short peduncled, calyx with the 3 outer sepals, ovate, the 2 inner linear, and longer than the outer ones, 2 bracts below the calyx, capsule——, flowers lilac, rather large; in the grass near Puttoor, 6,000 feet.
Hewittia bicolor,	Slopes.
Pharbitis nil,	Lower Pulnies.
Eivea cuneata,	do. do.
" bona nox,	Slopes.
Argyreia aggregata,	"
" pomacea,	"
" hirsuta?	"
Aniseia uniflora,	Alpine vallies 3,000 feet.

PLUMBAGINACEÆ.

Plumbago Zeylanica,	

PRIMULACEÆ.

Lysimachia Leschenaultii,	(very common.)
Anagallis latifolia,	(fields.)
Micropyxis tenella,	(Kodakornal.)

MYRSINACEÆ.

Mæsa Indica,	very common in Sholas.
Embelia Tsjeriam-cotta,	at Vilputty and Perryur.
Myrsine capitellata,	in sholas, common.

Ardisia humilis,	sholas.
" paucifloræ ?	sholas at Kookul.
	JASMINACEÆ.
Jasminum revolutum,	higher ranges, all common.
" brevilobum,	
" rigidum,	
" sp.	lower slopes.
	SALVADORACEÆ.
Salvadora Indica,	lower slopes.
	EHRETIACEÆ.
Ehretia aspera,	Pautcheloor slopes.
" sp.	" "
Heliotropium Rottleri,	lower slopes.
	BORAGINACEÆ.
Trichodesma Zeylanica,	lower slopes.
Cynoglossum furcatum,	higher ranges.
	LAMIACEÆ.
Ocimum sp.	
Orthosiphon sp.	
Plectranthus Wightii,	common.
" sp.	(obovate bracts.)
" sp.	
Coleus barbatus,	very common.
" spicatus,	at Perryur.
Anisochilus albidus,	
" purpureus,	
" sp.	on rocks, with silvery leaves.
" sp.	a large shrub, with cordate serrat leaves, very common.
Pogostemon rotundatum,	
" sp.	
" sp.	
Dysophylla auricularis,	higher ranges, common.
Micromeria biflora,	sholas, common.
Melissa umbrosa,	at Poombary.
Prunella vulgaris,	

Scutellaria violacea,	very common.
" sp.	
Leucas ternifolia,	Common in the grass on the higher ranges.
" biflora,	
" cephalotes,	
" sp.	
	Lanceolate serrate leaves, dense capitate or axillary heads of flowers, whole plant densely covered with deflexed brown hairs.
Leonotis nepetæfolia,	
Teucrium tomentosum,	
	VERBENACEÆ.
Stachytarpheta sp.	Slopes near Pulney, most abundant, flowers blue,
" sp.	common near Perryur, a handsome plant with lilac flowers, not unlike *S. mutabilis*.
Bouchea ?	Lower slopes,
Lantana Indica,	Very common,
Vitex negundo,	Perryur, flowers used to ferment a beer that the natives make from the Ragee.
" alata,	
Premna Wightiana,	Slopes near Verupatchy.
" cordifolia,	
" tomentosa,	
Tectona grandis,	Lower slopes.
Gmelina arborea,	Wood much valued by the natives, Peryur.
Clerodendron infortunatum,	Sholas.
" serratum,	a very common plant.
Callicarpa Wallichiana,	Sholas.
	PEDALIACEÆ.
Pedalium murex,	Lower slopes.
	GESNERACEÆ.
Klugia sp.	(Lower lip of corol 3 lobed.)

Æschynanthus Ceylanica, A beautiful and rare parasite, the leaves are those of a Hoya.

Didymocarpus tomentosus, Very common, 500 feet up to 6000.

BIGNONIACEÆ.

Stereospermum sp. There is a tree of this sp. in the Madras Horticultural Garden, it does not appear to be described.

Bignonia xylocarpa.

ACANTHACEÆ.

Thunbergia fragrans, Very common.
Dyschoriste littoralis, (Lower slopes.)
Dipteracanthus patulus, " "
Phlebophyllum Kunthianum, } Very common in the grass on the higher ranges.
Stenosiphonium Russellianum, near Kodakarnal.
Strobilanthes micranthus, Poombary in hedges.
Asystasia Coromandeliana, } with bright yellow flowers.
" sp. apparently the same as the above.
Barleria buxifolia, Lower slopes.
" cuspidata, " "
" sp. " "
" prionitis, " "
" sp. a very large shrub 15 to 20 feet high, with ovate lanceolate, acuminate leaves, perfectly covered with very large blue flowers; a very handsome sp. Poombary ghât, sholas near Vilputty.

Blephards Madraspatensis.
Crossandra infundibuliformis, very common.
Endopogon ?? This like "Endopogon strobilanthes" has the corolla of Endopogon but has 4 stamens; shrubby, leaves

opposite, ovate, serrate, generally very unequal in size, long petioled, minutely dotted and covered with a harsh pubescence, flowers from axillary peduncled capitate heads, surrounded by broad hairy bracts, flowers pale blue. Kookul, common in hedges close to the village.

Hemigraphis latebrosa,
Rostellularia procumbens, borders of sholas.
" sp.
Eranthemum montanum,
Adhatoda Vasica,
" betonica,
Rhinacanthus communis,
Rungia pectinata,
" ? a shrub in Kodakarnal shola.
Rhaphidospora glaber, lower slopes.
Andrographis Wightiana, in sholas.
" Neesiana, do.
" paniculata,
" viscosula, in sholas.
Leptacanthus ? in sholas below Kookul ghât.

SCROPHULARIACEÆ.

Verbascum ? } a pretty yellow flowered annual, common in the grass on the higher ranges.
Limnophila sp.
Torenia Asiatica, moist places, very common.
Vandellia crustacea,
Bonnaya sp.
Buddlea discolor, field near Vilputty.
Striga densiflora,
" ? orobanchioides, ? yellow flowers.
Gerardia delphinifolia, very common.
Pedicularis Zeylanica, most abundant on the higher ranges.

UTRICULARIACEÆ.

Utricularia Wallichiana,
" humilis,
" racemosa,

NYCTAGINACEÆ.

Boerhaavia procumbens,
" humilis,
Pisonia aculeata, lower slopes.

AMARANTACEÆ.

Achyranthes aspera,
" sp.
Euxolus caudatus, lower slopes near Pulney.
Psilotrichum nudum, " " "
Ærua floribunda,
Amaranthus frumentaceus, (A flour is made from the seed.
Celosia pulchella,
" argentea,

CHENOPODIACEÆ.

Chenopodium ambrosioides, An abundant weed about Perryur.

POLYGONACEÆ.

Polygonum Nepalense, Kookul in fields.
" Chinense, Very common, used medicinally.
Rumex Nepalense, Kookul.

BEGONIACEÆ.

Begonia dipetala, Abundant.

LAURACEÆ.

Cinnamomum ineis, Sholas very common.
Alseodaphne semicarpifolia, Sholas.
Cylicodaphne Wightiana,
Tetranthera tomentosa,
and 3 other trees of this order.

MYRISTICACEÆ.

Myristica sp. (Palmanee kam.)
" tomentosa? the mace round the nut is used by the natives to color their teeth.

ELEAGNACEÆ.

Elæagnus latifolius, very common, the berries are eaten.

THYMELACEÆ.

Gnidia eriocephala, grows to a tree in the Kookul shola, used by the natives as a fibre, and called Kàt murke nàr.

SANTALACEÆ.

Thesium Wightianum, near Kodakarnal.
Osyris Wightiana, the bark is eaten like suparee with chunam, it turns the saliva red, a common shrub.
Santalum album, near Pullatoor.

ARISTOLOCHIACEÆ.

Aristolochia Indica,
" acuminata,

EUPHORBIACEÆ.

Euphorbia Rothiana,
" trigona,
" antiquorum,
" tirucalli,
" Nivulia, } lower slopes.
Dalechampia velutina,
Tragia involucrata, common near Perryur.
" sp.
Acalypha Indica, densely covered with reddish hairs, (at Poombary common.)
" ?
Macaranga Indica, a shrub, slopes towards Verupatchy.
Claoxylon sp. Arboreous, diœcious, leaves opposite, oblong, lanceolate, attenuated at both ends, serrate towards apex, glabrous—below covered with resinous dots, spikes axillary, male flowers glomerate, (not amentaceous), spikes about the length of leaves—styles 3, capsule tricoccous muricated.

Givotia Rottleriformis, very common.
Ricinus communis,
Rottlera peltata, a coramon tree.
" tinctoria,
Baliospermum polyandrum,
Briedelia spicosa ? lower slopes.
" sp. do.
Cluytia collina,
Phyllanthus, 2 species,
Melanthesa turbinata,
Emblica officinalis. very common.

Glochidion ? { Perryur—a large shrub, opposite, lanceolate, shining, serrate leaves, dense amentaceous axillary spikes.

Sarcococca trinervia, very common on the higher ranges.

Reidia floribunda. { common about Tandigoody, a showy plant.

Macrosa Rheedii ? { leaves and stems covered with a few silvery hairs, especially below, margins ciliated.

" sp. { shrubby, erect, stems angled, glabrous, leaves nearly sessile, oval, whitish below, margins revolute—female pedicels half the length of the leaves.

URTICACEÆ.

Urtica vesicaria sholas at Tandigoody.
Laportea terminalis, a severely stinging plant.
Girardinia Leschenaultiana, stings severely. Flowers used medicinally, very common.
Elatostema cuspidata, abundant.
Pilea trinervia,
" sp.
Splitgerbera ? with very large caducous stipules.
Pouzolzia, 3 species,

CANNABINACEÆ.

Cannabis sativa,

MORACEÆ.

Dorstenia Indica, at Tandigoody.
Covellia ? (Ficus), an enormous climber.
Ficus, 8 or 9 sp. all trees.

ARTOCARPACEÆ.

Artocarpus integrifolia, abundant in sholas on the lower ranges.
Conocephalus niveus, common, lower range.
Trophis aspera, lower slopes, common.

ANTIDESMEACEÆ.

Antidesma paniculata,

PIPERACEÆ.

Peperomia Wightiana, very common.
" Dindigulensis,
" reflexa,
Piper attenuatum,
" Wightii,

CHLORANTHACEÆ.

Sarcandra chloranthoides,

DIOSCOREACEÆ.

Dioscorea tomentosa,
" pentaphylla, roots eaten.
" sp.

SMILACEÆ.

Smilax Zeylanica, sholas near Cowangee.
" maculata, very common, a polymorphous species.

CYCADACEÆ.

Cycas circinalis,

ORCHIDACEÆ.

Liparis olivacea, on rocks.
" atropurpurea,
Oberonia Arnottiana,
" verticillata,
" sp. a minute sp. Permaulmallay (on trees) 8000 feet.

Microstylis Rheedii,	
,, versicolor,	
Dendrobium filiforme,	on trees in sholas on the Permaul mallay.
Cœlogyne corrugata,	on rocks near Vilputty. (A most beautiful plant.)
Pholidota imbricata,	
Ania latifolia,	
Eulophia ramentacea,	rare, slopes between Kodakarnal and Velaycovay.
Vanda Roxburghii,	lower slopes.
Saccolabium guttatum,	
,, Wightianum,	at Poombary.
Erides Lindleyana,	on rocks near Tandigoody.
Sarcanthus filiformis,	
Cymbidium aloifolium,	
Polystachya luteola,	
Calanthe Perrottetii,	very common in sholas. (A most beautiful species.)
Satyrium sp.	very abundant all over the higher ranges, flowers a lively pink.
Platanthera Susannæ,	at Kookul and Shambaganoor, very common in the grass.
,, lutea,	similar places to the last.
,, iantha,	Kookul ghât, a rare plant rather.
,, affinis,	near Kookul.
Peristylus exilis,	
Habenaria peristyloides,	
,, elliptica,	
,, plantaginea,	
,, longicalcarata,	the commonest Orchid on the hills
,, montana,	common.
,, Lindleyana,	
Ate virens,	
Josephia latifolia,	
Spiranthes Australis,	apparently more than one species, in grass near Kodakarnal.

(22

	XYRIDACEÆ.
Xyris Indica,	
	COMMELYNACEÆ.
Commelyna polyspatha,	
,, Bengalensis,	
Dictyospermum protensum, in sholas,	
Aneilema paniculata,	
Cyanotis cristata,	
,, pilosa,	
	JUNCACEÆ.
Juncus sp.	
,, sp.	
	MELANTHACEÆ.
Disporum sp.	
Gloriosa superba,	
	LILIACEÆ.
Lilium Wallichianum,	very abundant higher ranges.
Sanseviera Zeylanica,	lower slopes.
Anthericum tuberosum,	
Asparagus racemosus,	
Phalangium sp.	
Ophiopogon Indicus,	
Peliosanthes sp.	
	PONTEDERACEÆ.
Pontederia vaginalis,	
	ZINGIBERACEÆ.
Zingiber sqñarrosum,	
Curcuma montana,	
Elettaria Cardamomum,	much cultivated.
Hedychium coronarium,	banks of streams abundant.
,, ,,	variety with straw colored flowers.
Costus speciosus,	
	MARANTACEÆ.
Canna sp.	Sholas at Tandigoody.
	AMARYLLIDACEÆ.
Crinum sp.	

HYPOXIDACEÆ.

Curculigo orchioïdes,
" sp.

ARACEÆ.

Arum sp. Poombary well,
" sp. Sholas near Kodakarnal.

PANDANACEÆ.

Pandanus odoratissimus,

PALMACEÆ.

Areca, (Kát pán.)
Caryota urens, Lower ranges, a fibre is made from the peduncle.
Borassus flabelliformis, about villages, lower ranges.
Bentinckia condapana, Sholas.
Phœnix sp.
Cocos nucifera, rare about villages.

EQUISETACEÆ.

Equisetum sp. Poombary valley.

GRAMINACEÆ AND CYPERACEÆ.

Are both abundantly represented on these hills.

BRYACEÆ.

This order is abundant.

LYCOPODIACEÆ.

Five or six species,

OPHIOGLOSSACEÆ.

Several species,

POLYPODIACEÆ.

Between 40 and 50 sp. all I believe Neilgherry forms.
I have not attempted to name the Compositæ, in the above catalogue, there are many of the larger Neilgherry forms.

The above is not supposed to include nearly all the flora of the sholas (or moist woods) of the higher ranges, especially the trees, few of which were in flower at the period of my visit to these mountains.

85

No 241.

Madras.
Office of Conservator of Forests
22nd December 1857.

From,
H. Cleghorn Esqr. M. D.
Conservator of Forests.

To,
The Secretary to Government
Revenue Department
Fort St. George.

Sir,

I have the pleasure to enclose Copy of an interesting Report by Lieutenant Baddeley, Assistant Conservator of Forests, as to the present state of the Dubrey Hills in regard to Timber for Public purposes.

2. It is with much regret that I notice that much wasteful cutting of useful timber still prevails there. I understand from Mr Parker, Collector of Madura, at present in Madras, that permission was given by him to cut jeerwood and posts for house building, but it was never contemplated that Teak saplings should be taken for such purposes.

3. I would beg to recommend that instructions be sent to the Acting Collector (to whom I have written) to preserve the Teak saplings in particular with special vigilance. I am looking around for a qualified Overseer to supervise this range

of Forest, which I propose to visit if possible during my next tour.

At the same time, I transmit a List (Original) of the vegetable productions (Flora Pulneiensis) of the Pulney Hills, which has been drawn up with great care by Mr. Beddome. I need hardly say, that such Local Catalogues are of great use to all who pay any attention to the study of Botany; and (as illustrating the Geographical distribution of the plants of the Peninsula) they are specially commended by Dr. Royle in his "Observations on Provincial Exhibitions". I beg to recommend that the M. J. S. be printed in the Madras Journal of Science. - it will be my duty to see it correctly through the Press. - I would further ask permission to strike off 100 extra Copies for distribution.

I have the honor to be,
Sir,
Your Most Obedient Servant.

H. Cleghorn
Conservator of Forests.

(25) No 83

Extract from the Minutes of Consultation
Under date the 26th January 1858.

Read the following letter
from the Conservator of Forests

(Here enter 22d December 1857 A-24)

As requested by
the Chairman the Board
Give an Extract from the
proceedings in the Standing
Journal relative
to the Sale of Vegetable
Products of the Colony
Bills. & that accompanying
Mr Beddome's letter
Export. for which purpose
the original Bills be
once returned. & filed
and that Mr. Conservator
Copies be made out
for distribution. of
Such & copies be
to be forwarded to the

A1

No 6

hm

Rec. 1858 Collection
No Rec 26 January
No 1013

From The Secretary to Government
To The Conservator of Forests
Fort St George

Dated 22d

Rec 24th Decr 1857
No Rs 83 20th January 858
Enclosed Petitioner

Enclosed Copy of Report
by Mr Beddome Conservator of
Forests, on the several Bills
the Railway Bills now are to
Tender for Public Inspection &
Commencement of Public Auction the
Sale to the Co. Collector of Salem
to Receive the Tenders & to
Recommend one of the highest
Tenderers of the Bills, which the
Commissioners of Public Works may
Recommend for Acceptance of Government
Bill 100 Cutch to be taken off for the
Tenderer —

Copy: 116 5

No 13.

Engr. Office.

I beg to report that the whole case of destruction of valuable Timber on the Public Hills appears to have been but little checked either by the Police given by the Collr. or by those of Engr. Officers employed in that duty. The existing Regulations are numerous, & which are to be found in the Collection of the Orders & Regulations of the Fort William Jardine, & the Teak and Blackwood Saplings are felled indiscriminately with this less valuable wood. For instance

Engr. 5 Aug. 57.

1.

I beg to report that the whole case of destruction of valuable Timber on the Public Hills appears to have been but little checked either by the Police given by the Collr. or by those of Engr. officers employed in that duty. The existing Regulations are numerous, & which are to be found in the Collection of the Orders & Regulations of the Fort William Jardine, & the Teak and Blackwood Saplings are felled indiscriminately with this less valuable wood. For instance

South answers [illegible]
Equally [illegible]

[illegible] the Bt of this
[illegible] be directed to
call the Collr's particular
attention to this subject
and to direct him to
work [illegible] the rules
of Engr. above [illegible]
have been carried out
[illegible] will be found
in Rules & Orders
[illegible] Teak & Blackwood
[illegible] Saplings or
[illegible] Saplings grow.
[illegible] which is
[illegible] & attempt
[illegible] destruction of the
valuable forests
[illegible] & destroy
in short years.

It will appear
from Lt Bedford's

Draft

(27)

Rev.e 1858 Depth. R
Do to Cons.: 26th Jany:

No 83.

Extract Mins of Cons:
Of 20th January 1858.

Authorizing the publication in the Madras Journal of Science, of the list of vegetable productions the Pulney Hills.

Copy in a L to Govt
of 1st June 1858, No 24.

No 13 & 14.