



## Additions to the flora of Sirumalai hills, Eastern Ghats, India

R. Vijaya Sankar<sup>1</sup>, R. Kottaimuthu<sup>2</sup> & K. Ravikumar<sup>3</sup>

<sup>1,3</sup> Foundation for Revitalisation of Local Health Traditions (FRLHT), Bangalore, Karnataka 560064, India

<sup>2</sup> Ashoka Trust for Research in Ecology and the Environment (ATREE), Bangalore, Karnataka 560024, India  
Email: <sup>3</sup> k.ravikumar@frlht.org (Corresponding author)

The Sirumalai hills, situated in the southern most part of the Eastern Ghats in Tamil Nadu are known for their rich biodiversity for their close location to the Kodaikanal hills of the Western Ghats. They lie in Dindigul district, between 10°00'-10°30'N & 77°33'-78°15'E and at altitudes ranging from 400 to 1650 m. The lower hill ranges consist of highly disturbed scrub forests while tropical dry deciduous forests occupy the major portion of middle hill ranges. Semi-evergreen forests occur in the higher elevations and along valleys. Woodland savannahs are found along slopes. Bestowed with several endemic and medicinal plants, these hill ranges are facing severe threats owing to the growing anthropogenic disturbances and increasing coffee estates, rubber plantations, orchards and cultivation of several vegetable crops.

In spite of their rich plant wealth, the Sirumalai hills, have not been completely studied floristically in the recent times except 'A Pocket Flora of the Sirumalai Hills, South India' (Pallithanam 2001). It enumerates 895 species belonging to 536 genera of higher plants (excluding exotics). However, this work was compiled by K.M. Matthew based on the collections made by J.M. Pallithanam during 1955-1960. Subsequent to this pioneering work, for nearly half-a-century, only a few collections (Karuppusamy et al. 2001; Kottaimuthu et al. 2008 a&b) have been made in the recent past in these hills.

Botanical surveys were conducted in 2007, to enrich the collection of medicinal plants for FRLH (Herbarium of FRLHT, Bangalore), as part of 'Center of Excellence' project. This has resulted in the collection of 224 plant species under 237 field numbers. During the period of 2005-2008, botanical surveys were also conducted by ATREE for project on 'Mapping and quantitative assessment of plant bio-resources' in this region that resulted in the collection of 150 more species. Of these, 85 taxa are not reported earlier from the region and therefore form additions to the flora of Sirumalai hills (Table 1). All the herbarium specimens are deposited at FRLH (acronym of FRLHT Herbarium, Bangalore).

These 85 plant species spread over to 50 families of flowering plants and majority of them are herbs (40 species) followed by 21 trees, 14 shrubs and 10 climbers. A few introduced species such as *Maesopsis eminii* Engl. (Rhamnaceae) - a fast growing timber tree commonly planted in the coffee estates, *Pimenta officinalis* Lindl. (Myrtaceae) - the 'all spice' plant in addition to a few cereals, pulses and other vegetable crops have also been collected.

These studies indicate that several floristically rich areas in the State still remain botanically under-explored. Similar exercises in under/un-explored biodiversity rich areas would not only update the flora of the region but also bring out new distributional records to light.

### References

- Karuppusamy, S., K.M. Rajasekaran & S. Karmegam (2001). Endemic flora of Sirumalai hills (Eastern Ghats), south India. *Journal of Economic and Taxonomic Botany* 25(2): 367-373.
- Kottaimuthu, R., R. Ganesan, K. Natarajan, J. Brabhu & M. Vimala (2008). Additions to the flora of Eastern Ghats, Tamil Nadu, India. *Ethnobotanical Leaflets* 12: 299-304.
- Kottaimuthu, R., R. Ganesan, V. Ganesan & V.M. Sundaram (2008). Enumeration of Orchids of Sirumalai hills (Eastern Ghats), Tamil Nadu, India. *Ethnobotanical Leaflets* 12: 506-512.
- Pallithanam, J.M. (2001). In: Matthew, K.M. *A pocket Flora of the Sirumalai Hills, South India*. The Rapinat Herbarium, St. Joseph's College, Tiruchirappalli, 360pp.

Date of online publication 26 July 2009  
ISSN 0974-7907 (online) | 0974-7893 (print)

Editor: J.L. Ellis

### Manuscript details:

Ms # o2069  
Received 26 September 2008  
Final received 01 January 2009  
Finally accepted 30 May 2009

**Citation:** Sankar, R.V., R. Kottaimuthu & K. Ravikumar (2009). Additions to the flora of Sirumalai Hills, Eastern Ghats, India. *Journal of Threatened Taxa* 1(7): 379-381.

**Copyright:** © R. Vijaya Sankar, R. Kottaimuthu & K. Ravikumar 2009. Creative Commons Attribution 3.0 Unported License. JoTT allows unrestricted use of this article in any medium for non-profit purposes, reproduction and distribution by providing adequate credit to the authors and the source of publication.

**Acknowledgement:** The authors are thankful to Shri D.K. Ved, Director and Dr. G.S. Goraya, Joint Director, FRLHT, Bangalore for facility and encouragement; Shri Nihar Ranjan, District Forest Officer, Dindigul division for permission to conduct botanical surveys; and the Ministry of Environment & Forests, Govt. of India for financial support under the 'Centre of Excellence' project. The second author is thankful to Dr. Ravi Chellam, Director and Dr. R. Ganesan, Scientist, ATREE, Bangalore for facility and encouragement and the Department of Biotechnology, Govt. of India for financial support.

OPEN ACCESS | FREE DOWNLOAD



Table 1. List of plant species added to the flora of Sirumalai hills

S.No	Botanical Name	Family	Habit	Collection No.	Phenology
1	<i>Adenia wightiana</i> (Wight & Arn.) Engl.	Passifloraceae	Climber	RKM 107508	Flowers
2	<i>Alternanthera paronychioides</i> A.St.Hil.	Amaranthaceae	Herb	KRK & RVS 106232	Flowers & Fruits
3	<i>Amaranthus hybridus</i> L.	Amaranthaceae	Herb	KRK & RVS 106315	Flowers & Fruits
4	<i>Andrographis ovata</i> (T.And. ex Bedd.) Benth. ex C.B. Clarke	Acanthaceae	Herb	RKM 107507	Flowers & Fruits
5	<i>Antidesma alexiteria</i> L.	Stylaginateae	Tree	RKM 107523	Flowers
6	<i>Asclepias curassavica</i> L.	Asclepiadaceae	Herb	KRK & RVS 106233	Flowers & Fruits
7	<i>Bergia ammannioides</i> Roxb. ex Roth	Elatinaceae	Herb	RKM 107533	Flowers
8	<i>Blumeopsis flava</i> (DC.) Gagnep.	Asteraceae	Herb	KRK & RVS 106281	Flowers & Fruits
9	<i>Capparis kollimalayana</i> Viswanathan	Capparaceae	Liana	KRK & RVS 106264	Fruits
10	<i>Capsicum annum</i> L.	Solanaceae	Herb	KRK & RVS 106305	Fruits
11	<i>Casearia zeylanica</i> Thwaites	Flacourtiaceae	Tree	RKM 107513	Fruits
12	<i>Catunaregam torulosa</i> (Dennst.) Tirveng.	Rubiaceae	Tree	KRK & RVS 106214	Flowers & Fruits
13	<i>Chamaecrista kleinii</i> (Wight & Arn.) K.M.Mathew	Caesalpinaceae	Herb	KRK & RVS 106260	Flowers & Fruits
14	<i>Chlorophytum laxum</i> R.Br.	Anthericaceae	Herb	KRK & RVS 106331	Flowers & Fruits
15	<i>Cissus pallida</i> Planch.	Vitaceae	Climber	RKM 106393	Flowers
16	<i>Citrus medica</i> L.	Rutaceae	Tree	KRK & RVS 106344	Fruits
17	<i>Cleome aspera</i> J.Koenig ex DC.	Cleomaceae	Herb	RKM 107520	Fruits
18	<i>Corchorus tridens</i> L.	Tiliaceae	Herb	RKM 107509	Flowers & Fruits
19	<i>Cordia obliqua</i> Willd. var. <i>tomentosa</i> (Wall.) Kazmi	Cordiaceae	Tree	KRK & RVS 106268	Fruits
20	<i>Cryptolepis buchananii</i> Roem. & Schult.	Asclepiadaceae	Climber	KRK & RVS 106335	Flowers & Fruits
21	<i>Cynoglossum zeylanicum</i> (Vahl ex Hornem.) Thunb. ex Lehm.	Boraginaceae	Herb	KRK & RVS 106329	Flowers & Fruits
22	<i>Daphniphyllum neilgherrense</i> (Wight) K.Rosenthal	Daphniphyllaceae	Tree	RKM 106388	Flowers
23	<i>Datura stramonium</i> L.	Solanaceae	Herb	KRK & RVS 106230	Flowers & Fruits
24	<i>Dendrobium heterocarpum</i> Wall. ex Lindl.	Orchidaceae	Epiphytic herb	KRK & RVS 106359	Flowers
25	<i>Desmodium biarticulatum</i> (L.) F.Muell.	Fabaceae	Herb	RKM 107530	Flowers & Fruits
26	<i>Diospyros ferrea</i> (Willd.) Bakh. var. <i>neilgherrensis</i> (Wight) Bakh.	Ebenaceae	Tree	KRK & RVS 106271	Fruits
27	<i>Diospyros ovalifolia</i> Wight	Ebenaceae	Tree	KRK & RVS 106270	Fruits
28	<i>Dyschoriste madurensis</i> (Burm.f.) Kuntze	Acanthaceae	Woody herb	RKM 107515	Fruits
29	<i>Euphorbia thymifolia</i> L.	Euphorbiaceae	Prostrate herb	KRK & RVS 106262	Flowers & Fruits
30	<i>Gisekia pharmaceoides</i> L.	Molluginaceae	Spreading herb	RKM 107512	Flowers & Fruits
31	<i>Glochidion tomentosum</i> Dalz.	Euphorbiaceae	Shrub	KRK & RVS 106353	Flowers & Fruits
32	<i>Grewia tenax</i> (Forssk.) Fiori	Tiliaceae	Shrub	RKM 106373	Flowers
33	<i>Heliotropium bracteatum</i> R.Br.	Boraginaceae	Herb	RKM 107516	Flowers & Fruits
34	<i>Heliotropium ovalifolium</i> Forssk.	Boraginaceae	Herb	RKM 106390	Flowers & Fruits
35	<i>Heliotropium scabrum</i> Retz.	Boraginaceae	Spreading herb	RKM 107517	Flowers & Fruits
36	<i>Hemidesmus indicus</i> (L.) R.Br. var. <i>pubescens</i> (Wight & Arn.) Hook.f.	Periplocaceae	Twiner	KRK & RVS 106288	Flowers
37	<i>Hydrocotyle javanica</i> Thunb.	Apiaceae	Herb	KRK & RVS 106278	Flowers
38	<i>Indigofera parviflora</i> Heyne ex Wight & Arn.	Fabaceae	Herb	RKM 107510	Flowers
39	<i>Isodon walkeri</i> (Arn.) H.Hara	Lamiaceae	Herb	RKM 106372	Flowers & Fruits
40	<i>Justicia gendarussa</i> Burm.f.	Acanthaceae	Shrub	RKM 106377	Flowers
41	<i>Leea indica</i> (Burm.f.) Merr.	Leeaceae	Shrub	RKM 107524	Flowers
42	<i>Lepidium ruderalis</i> L.	Brassicaceae	Herb	KRK & RVS 106330	Flowers & Fruits
43	<i>Limnophila chinensis</i> (Osbeck) Merr.	Scrophulariaceae	Herb	RKM 106383	Flowers & Fruits
44	<i>Lindernia ciliata</i> (Colsm.) Pennell	Scrophulariaceae	Herb	RKM 107537	Flowers & Fruits
45	<i>Lindernia oppositifolia</i> (Retz.) Mukerjee	Scrophulariaceae	Herb	RKM 107536	Flowers & Fruits
46	<i>Madhuca indica</i> J.F.Gmel.	Sapotaceae	Tree	RKM 106389	Fruits
47	<i>Manilkara roxburghiana</i> (Wight) Dubard	Sapotaceae	Small tree	RKM 107535	Fruits
48	<i>Mitracarpus villosus</i> (Sw.) DC.	Rubiaceae	Herb	KRK & RVS 106349	Flowers & Fruits
49	<i>Momordica charantia</i> L. var. <i>muricata</i> (Willd.) Chakrav.	Cucurbitaceae	Climber	KRK & RVS 106246	Flowers & Fruits
50	<i>Murdannia spirata</i> (L.) G.Bruckn.	Commelinaceae	Herb	RKM 107526	Flowers & Fruits
51	<i>Mussaenda hirsutissima</i> (Hook.f.) Hutchinson ex Gamble	Rubiaceae	Shrub	RKM 107532	Flowers & Fruits
52	<i>Oberonia brunoniana</i> Wight	Orchidaceae	Epiphytic herb	KRK & RVS 106360	Fruits
53	<i>Ocimum gratissimum</i> L.	Lamiaceae	Undershrub	KRK & RVS 106228	Flowers & Fruits
54	<i>Ola scandens</i> Roxb.	Olacaceae	Straggler	RKM 107519	Flowers
55	<i>Olea paniculata</i> R.Br.	Oleaceae	Tree	RKM 106376	Fruits
56	<i>Osyris wightiana</i> J.Graham	Santalaceae	Shrub	RKM 106374	Flowers
57	<i>Oxyceros rugulosus</i> (Thwaites) Tirveng. var. <i>speciosus</i> (Bedd.) Kumari	Rubiaceae	Straggler	RKM 106371	Flowers
58	<i>Pavetta indica</i> L. var. <i>montana</i> Thwaites ex Hook.f.	Rubiaceae	Shrub	KRK & RVS 106311	Flowers
59	<i>Peliosanthes tetra</i> Andr. subsp. <i>humilis</i> (Andr.) Jessop	Haemodoraceae	Herb	KRK & RVS 106324	Fruits
60	<i>Pentatropis capensis</i> (L.f.) Bullock	Asclepiadaceae	Twiner	RKM 107518	Flowers
61	<i>Phyllanthus indofischeri</i> Bennet	Euphorbiaceae	Tree	KRK & RVS 106300	Vegetative
62	<i>Phyllanthus kozhikodanus</i> Sivar. & Manilal	Euphorbiaceae	Herb	KRK & RVS 106294	Flowers & Fruits
63	<i>Phyllanthus polyphyllus</i> Willd.	Euphorbiaceae	Tree	RKM 107503	Flowers & Fruits
64	<i>Pittosporum tetraspermum</i> Wight & Arn.	Pittosporaceae	Tree	RKM 106382	Flowers
65	<i>Pleurostylia opposita</i> (Wall.) Alston	Celastraceae	Tree	RKM 106378	Flowers
66	<i>Polyalthia korintii</i> (Dunal) Thwaites	Annonaceae	Shrub	RKM 106369	Flowers
67	<i>Canthium dicoccum</i> (Gaertn.) Teijsm. & Binn. var. <i>umbellata</i> (Wight) Sant. & Merck.	Rubiaceae	Tree	RKM 106398	Fruits
68	<i>Schrebera swietenoides</i> Roxb.	Oleaceae	Tree	RKM 107514	Vegetative
69	<i>Scilla hyacinthina</i> (Roth) J.F.Macbr.	Liliaceae	Herb	RKM 107527	Flowers & Fruits
70	<i>Scolopia crenata</i> (Wight & Arn.) Clos	Flacourtiaceae	Tree	RKM 106387	Flowers
71	<i>Scoparia dulcis</i> L.	Scrophulariaceae	Herb	RKM 107529	Flowers & Fruits
72	<i>Scutellaria violacea</i> B.Heyne ex Benth.	Lamiaceae	Herb	KRK & RVS 106234	Flowers & Fruits
73	<i>Semecarpus anacardium</i> L.f.	Anacardiaceae	Tree	RKM 107522	Flowers (Male)
74	<i>Solanum virginianum</i> L.	Solanaceae	Undershrub	KRK & RVS 106229	Fruits

S.No	Botanical Name	Family	Habit	Collection No.	Phenology
75	<i>Stephania japonica</i> (Thunb.) Miers	Menispermaceae	Climber	KRK & RVS 106211	Flowers & Fruits
76	<i>Streblus taxoides</i> (B.Heyne ex Roth) Kurz	Moraceae	Shrub	RKM 106386	Flowers
77	<i>Strychnos lenticellata</i> Hill	Loganiaceae	Straggler	RKM 107506	Vegetative
78	<i>Stylosanthes fruticosa</i> (Retz.) Alston	Fabaceae	Herb	RKM 107534	Flowers
79	<i>Syzygium alternifolium</i> (Wight) Walp.	Myrtaceae	Tree	RKM 107521	Vegetative
80	<i>Terminalia alata</i> B.Heyne ex Roth	Combretaceae	Tree	RKM 106400	Flowers
81	<i>Tylophora tetrapetala</i> (Dennst.) Suresh	Asclepiadaceae	Twiner	RKM 107511	Flowers
82	<i>Viscum ramosissimum</i> Wall. ex Wight & Arn.	Viscaceae	Parasitic herb	KRK & RVS 106217	Flowers & Fruits
83	<i>Zehneria maysorensis</i> (Wight & Arn.) Arn.	Cucurbitaceae	Climber	KRK & RVS 106319	Flowers & Fruits
84	<i>Ziziphus glabrata</i> B.Heyne ex Roth	Rhamnaceae	Straggler	RKM 107505	Fruits
85	<i>Ziziphus nummularia</i> (Burm.f.) Wight & Arn.	Rhamnaceae	Shrub	RKM 107502	Flowers

RKM - R. Kottaimuthu; KRK - K. Ravikumar; RVS - R. Vijaya Sankar

