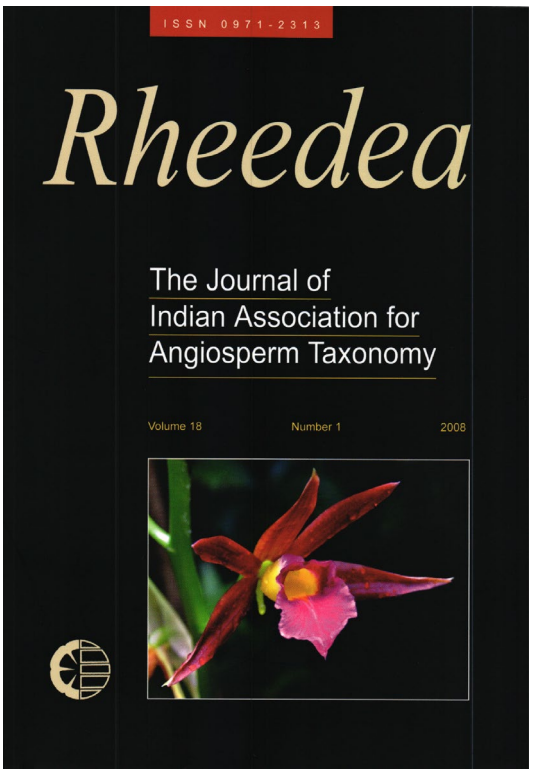
RHEEDEA
Journal of the Indian Association for Angiosperm Taxonomy

Vol. 18(1): 33–36 (2008)
ISSN: 0971-2313 (Print edition)
ISSN: 2582-2438 (Online edition)

On the Identity of *Leucas marrubioides* var. *pulneyensis* Hook.f. (Lamioideae: Lamiaceae)

Sunojkumar P. & Philip Mathew



How to cite:

Sunojkumar P. & P. Mathew 2008. On the Identity of *Leucas marrubioides* var. *pulneyensis* Hook. f. (Lamioideae: Lamiaceae). *Rheedea* 18(1): 33-36.

https://dx.doi.org/10.22244/rheedea.2008.18.01.04

Received: 03.12.2007 *Revised and accepted*: 18.03.2008

Published in print: 31.08.2008 *Published Online*: 31.08.2008

Published by Indian Association for Angiosperm Taxonomy
This volume of Rheedea is published with partial financial assistance from Department of Science and Technology, Government of India, New Delhi

Rheedea
Vol. 18(1)
33-36
2008

On the Identity of *Leucas marrubioides* var. *pulneyensis* Hook. f. (Lamioideae: Lamiaceae)

P. Sunojkumar and Philip Mathew

Department of Botany, University of Calicut, 673 635, Kerala, India.
E-mail: drsunoj@gmail.com

Abstract

J. D. Hooker established the taxon *Leucas marrubioides* var. *pulneyensis*. This name was considered as a synonym of *Leucas angularis* Wallich ex Benth. by Gamble, Mukerjee and Singh. A study of the types of Leucas marrubioides Desf., *Leucas marrubioides* var. *pulneyensis* Hook. f. and *Leucas angularis* Wallich ex Benth., collection of fresh specimens and consultation of different herbaria helped us to reinstate the taxon *Leucas marrubioides* var. *pulneyensis*.

Keywords: *Leucas marrubioides* var. *pulneyensis,* Types, Reinstatement

Introduction

J. D Hooker (1885) established *Leucas marrubioides* var. *pulneyensis* based on Wight's specimen from Pulney mountains. Fyson (1915) provided a description for this taxon based on Bourne's and his own collections. Gamble (1924) considered this taxon as a synonym of *Leucas angularis* Wallich ex Benth. and this treatment was followed by subsequent workers (Mukerjee, 1940; Singh, 1998). Singh (2001) further opined "the specimen identified as var. *pulneyensis* Hook. f. comes more or less close to *L. angularis* Wallich ex Benth. and no character stands good to recognize it as a variety under latter. Hence it is suggested to merge *L. marrubioides* var. *pulneyensis* Hook. f. under *L. angularis* Wallich ex Benth." However, Singh (2001) did not give details about the type of var. *pulneyensis* he examined.

As part of the revision of *Leucas*, we studied a number of live specimens from southern India and examined many dried specimens housed in different herbaria (CAL, CALI, CGE, FRI, K, MH, P, SKU). We could clearly distinguish two forms within *L. marrubiodes* (see Table 1). A critical study of the type of *L. marrubioides* obtained from P and that of *L. marrubioides* var. *pulneyensis* obtained from CAL enabled us to recognize them as two distinct taxa. The type of *L. angularis* examined at CGE revealed that this was much different from *L. marrubioides*. The reason which prompted Gamble (1924) to consider *L. marrubioides* var. *pulneyensis* as a synonym of *L. angularis* is not clear. The holotype of *L. marrubioides* claimed by Singh (2001) as present at Kew (Ceylon, Herb. Lindl. K), in our opinion does not represent the actual holotype which we examined at P (Herb. Museum Paris barcode no. P00223542, collected by Desfontaine from Ceylon). We, therefore, confirm the status of var. *pulneyensis* as a distinct variety. It is reinstated here. A detailed description and illustration based on live specimens are given.

Leucas marrubioides var. **pulneyensis** Hook. f., Fl. Brit. India 4: 684. 1885; Fyson, Fl. Nilgiri & Pulney Hill Tops 1: 331. 1915. **Fig. 1**

Type: INDIA, Tamil Nadu, Pulney mountains, *1866-67, Wight 2151* (CAL !).

Straggling annual or *short lived perennial herb*; branches spreading, 30-155 cm long, basal stem 3.5 mm thick, tender stem acutely quadrangular, not grooved, tomentose, hairs ±0.3 mm long, retrorse; internodes 5-9 cm long. *Leaves* opposite, decussate, petiolate; petiole up to 2.5 cm long in vegetative axis, short up to 0.5 cm long in flowering axis, tomentose; lamina not so thick, 2.5-4.5 x 2-3 cm, ovate to sub-orbicular, tip acute, base rounded to cordate, margin serrate to crenate with 8-9 teeth, reticulate, side veins 3-5, lower side silky dense tomentose in between the veins and appearing white hoary in dried specimens, upper rather rugose due to impressed veins and lax tomentose hairs. *Inflorescence* in several lax axillary

verticels. *Flowers* a few, up to 5-12 in each cluster; bracteoles not many; 5-10 mm long, 0.2-0.4 mm broad at base, as long as calyx or smaller, straight, filiform, dense soft silky villous outside and margins; pedicels short, up to 0.5 mm long; calyx tubular, 5-6.5 mm long at anthesis, slightly enlarged in fruit, straight, campanulate, prominently ribbed outside, silky villous, glabrous within, mouth straight, teeth 10, unequal, 2-3 mm long, filiform, hairs silky villous; corolla white, ±17 mm long, tube 8 mm long, included in the calyx tube, inside middle annulate with a ring of hairs; lower lip 8.5-9 mm long, middle lobe 7-7.5 mm broad, free end emarginate, lateral lobes 2 mm broad at free end, slightly revolute, upper lip 4 mm long, concave, hardly bearded with white soft hairs outside; stamens fully included in the upper lip of corolla, lower pair longer, filaments hairy in the middle; anthers 0.8 mm long, 0.5 mm broad; disc cup shaped with abaxial lobe slightly longer than the other lobes; ovary locules 0.2 mm high, above moderately rounded; style 11.5 mm long, upper side slightly bent, stigma bilobed, lower lobe 0.75 mm long, upper lobe 0.12 mm. *Nutlets* 1.8 x 1 mm, dark brown, not smooth, oblong, obtusely triangular in cross section, top rounded.

Flowering & Fruiting: August–January

Habitat: Grasslands and along roadsides, margins and openings of semi-evergreen forests in the Western and Eastern Ghats, up to 1000 m.

Distribution: India (Peninsula), Sri Lanka and Malaysia.

Specimens Examined: INDIA, *s.coll.*, Wall. Cat. Herb. No. *2524E* (K). **Karnataka,** Chikmagalore district, Kalledevarapura, 30 November 1978, *S.R. Ramesh & K.R. Keshavamurthy KFD4965* (CAL); Aldur road, 26 December 1978, *K.R. Krishnamurthy KPP5089* (CAL); Kemmangundi, 1 December 1983, *K. Shanthi 1173* (CALI); *Ibid.*, 13 December 2002, *Sunojkumar CU88107* (CALI); Mysore district, Hannagerigudda near Tirthumala, 28 September 1962, *R.S. Raghavan 82734* (CAL); Kanagalyudda near Tirthahalli, 19 August 1963, *R.S. Raghavan 90029* (CAL); Bandipur, 24 August 1964, *B.D. Naithani s.n* (MH); Shimoga district, Agumbae, 2 December 1983, *C.C. Leena s.n* (CALI). **Kerala,** Idukki district, Kumili, December 1910, *A. Meebold 12998* (CAL); Thekkady, 27 January 1965, *K. Vivekanandan 23009* (MH); *Ibid.*, 29 September 1972, *B.D. Sharma 42362* (MH); *Ibid.*, 8 October 1976, *K. Vivekanandan 48611* (MH); Ramakkalmedu, 16 November 2001, *P. Sunojkumar CU49678* (CALI); Kannur district, Tholpetty RF, 21 November 1977, *V.S. Ramachandran 52277* (CAL, MH); Hill dale, 17 November 1978, *V.S. Ramachandran 58774* (CAL, MH); Begur RF, 3 March 1979, *V.S. Ramachandran 62015* (CAL, MH); Palakkad district, Siruvani, 22 November 1990, *L. Sailaja 3650* (CALI); Wyanad district, Kuppadi, Sulthan

Table 1. Distinguishing characters of *L. angularis*, *L. marrubioides* var. *marrubioides* and *L. marrubioides* var. *pulneyensis*.

Characters	*L. angularis*	*L. marrubioides* var. *marrubioides*	*L. marrubioides* var. *pulneyensis*
Stem	hollow, obtuse quadrangular.	solid, obtuse quadrangular.	solid, acute quadrangular.
Leaf	membranous, triangular ovate to sub-cordate.	thick, ovate, not cordate.	not thick, ovate attaining rounded to cordate form.
Leaf -lower surface (in dried specimens)	puberulous.	dense pubescent hairs imparting velvety appearance.	incanus (hoary) due to abundant growth of white curly hairs, rugose.
Flowers	A few to many, 4-15, in lax cluster.	many, in compact cluster.	not many, 5-12, in lax cluster.
Calyx	thin, obconical, pubescent.	thick, tubular, hispid.	thick, campanulate, silky villous.
Teeth	4-6 mm, straight.	1-2 mm, straight.	up to 4 mm, flexuous.
Bracteoles	3-5 mm, up to half of calyx, hispid.	minute, hispid,	as long as calyx, silky villous.

Bathery, 6 February 1964, *J.E. Ellis 185521* (MH); *Ibid.*, 5 June 1985, *R.T. Balakrishnan 42012* (CAL); 12 August 1964, *J.E. Ellis 19946* (MH). **Tamil Nadu,** Coimbatore district, Aiyinigiri Betta, Gedderal, 15 March 1931, *K.C. Jacob 347* (MH); Thekkumalai, 25 October 1956, Forest College campus, 12 December 1982, *S.K. Nair 35821* (CALI); SBI campus, 5 January 1987, *N. Bhanu 4022* (CALI); Nilgiris district, Ootacamand, September 1883, *J.S. Gamble 12702*

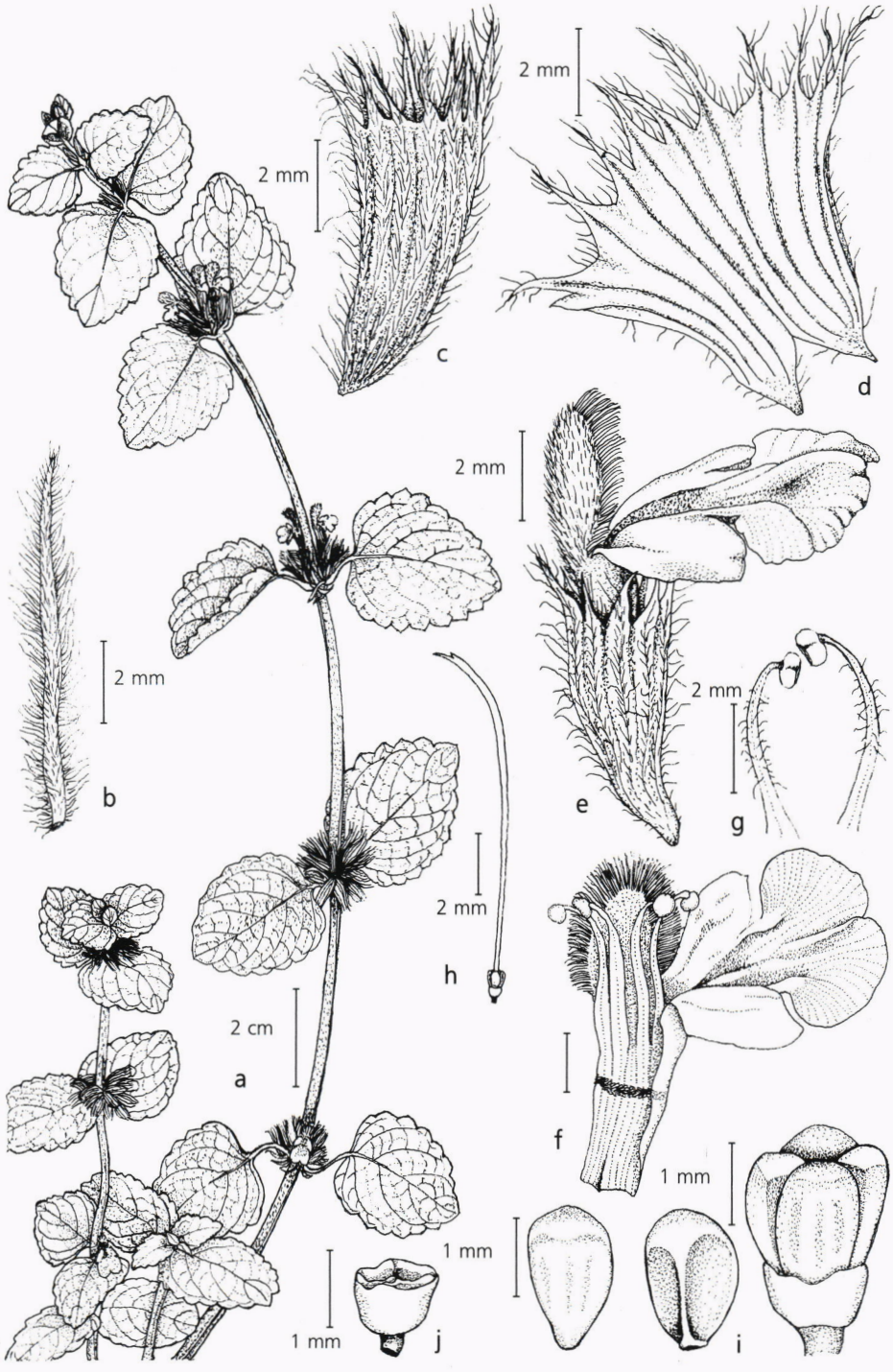


Figure 1. *Leucas marrubioides* var. *pulneyensis* Hook. f. - a. Habit; b. Bracteole; c. Calyx; d. Calyx split open; e. Flower; f. Corolla split open; g. Stamens; h. Pistil; i. Nutlets; j. Basal disc.

(CAL); Coonoor Ooty old road, 1883, *J.S. Gamble s.n.*(MH); Gudalur, Nov. 1884, *J.S. Gamble 15569* (MH); Coonoor, Oct. 1889, *J.S. Gamble 21431* (MH); Mountains of Nilgiri reserve forests, *Hohenacker 1216* (CGE, P); Near Benne rest house, 16 July 1950, *K. Subramanyan 10388* (CAL, MH); Road to Kodanad, Kotagiri, 1 January 1957, *K. Subramanyan 1933* (MH); Near Woodbriar estate – Gudalur, 18 November 1958, *K.M. Sebastine 7398* (CAL); Way to Dodabetta from Kargudi, 23 June 1970, *B.V. Shetty 34376* (MH); Shola near Kodanad estate, 21 July 1970, *E. Vajravelu 35002* (MH); Shola near view point, Kodanad, 12 November 1970, *E. Vajravelu 36850* (MH); Doddai Kombai, 4 January 1971, *B.V. Shetty 37008* (MH); Curzon valley, 24 January 1972, *E. Vajravelu 39618* (MH); Forest near Mulli, 1 August 1975, *E. Vajravelu 46398* (MH); Kodanad view point, 26 December 2002, *P. Sunojkumar CU88114* (CALI); Salem district, Sangasimalai forest, 17 September 1965, *K.N. Subramanian 1978* (FRC).

Note: Leucas marrubioides var. *marrubioides* is commonly found in Sri Lanka, and in the hills of Southern Western Ghats in India.

Specimens Examined : INDIA, **Tamil Nadu**, Coimbatore district, Thekkumalai, 25 September 1956, *K.M. Sebastine 843* (CAL); Kollegal, 7 July 1930, *V. Narayanaswamy 3694* (CAL); Namakkal district, Kollimalai Solakkadu, 26 December 2000, *P. Sunojkumar CU49645* (MH); Nilgiri district, Forest near Mulli, 1 August 1975, *E. Vajravelu 46398* (MH); Salem district, Shevaroys–Yercaud ladies seat, 7 November 1978, *N. Venugopal RHT19083* (CAL); Yercaud ghat road, 24 December 2000, *P. Sunojkumar CU49641* (MH).

SRI LANKA, March 1836, *C.B. Clarke 61656, 61657* (MH); Central Province, 2 March 1975, *L.H. Cramer 4425* (MH); Eliya district, Nuwara, 20 June 1974, *Pondiwala 4237* (MH); Patna, 1897, *H.H.W. Pearson 758* (CGE).

Acknowledgements

We are grateful to Dr Alan Paton and Dr Gemma Bramley of Royal Botanic Gardens, Kew, U. K. for their hospitality during the first author's visit to Kew Herbarium; to Dr M. Sivadasan, Professor and Dr A. K. Pradeep, Curator, Department of Botany, University of Calicut for various helps; and to Dr Oskar Sebald, Staatliches Museum fur Naturkunde, Stuttgart, Germany for suggestions. Directors and Curators of BM, CAL, CALI, CGE, FRI, K, KFRI, MH, P, SKU, TBGT are specially thanked for giving permission to study the herbarium specimens or providing them on loan. The first author is grateful to the International Association for Plant Taxonomy, Vienna for the Research grant award 2003.

Literature Cited

Fyson, P.F. 1915. *The Flora of Nilgiris and Pulney hill tops* **1**. Government Press, Madras.

Gamble, J.S. 1924. *Flora of the Presidency of Madras.* **2**: 1151-1152. Adlard & Sons Ltd., London.

Mukerjee, S.K. 1940. A Revision of the Labiatae of Indian Empire. *Rec. Bot. Surv. India* **14**: 1-228.

Hooker, J.D. 1885. *The Flora of British India* **4**: 686-687. L.Reeve & Co., London.

Singh, V. 1998. Critical Taxonomic Notes on *Leucas* R. Br. *J. Econ. Taxon. Bot.* **22**: 387-390.

Singh, V. 2001. *Monograph on Indian Leucas R Br. (Dronapushpi) Lamiaceae. J. Econ. Taxon. Bot. Addtl. Ser.* 20, Scientific publishers, Jodhpur, India.

Received : 3.12.2007
Revised and accepted : 18.3.2008