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Taxonomical change in *Leucas ciliata* Benth. and *Leucas vestita* Benth. (Lamiaceae: Lamioideae)

Purayidathkandy Sunojkumar

Abstract

SUNOJKUMAR, P. (2008). Taxonomical change in *Leucas ciliata* Benth. and *Leucas vestita* Benth. (Lamiaceae: Lamioideae). *Candollea* 63: 81-83. In English, English and French abstracts.

The taxonomy of *Leucas ciliata* Benth. and *Leucas vestita* Benth. (Lamiaceae: Lamioideae) is revised. *Leucas vestita* is considered as a variety of *Leucas ciliata*. *Leucas vestita* var. *angustifolia* Hook. f., *Leucas vestita* var. *oblongifolia* Hook. f., and *Leucas vestita* var. *sericostoma* Hook. f. have been transferred as varieties of *Leucas ciliata*. *Leucas vestita* var. *devicolamensis* B. V. Shetty & Vivek. is considered as a synonym of *Leucas ciliata* var. *sericostoma*.

Key-words

LAMIACEAE – *Leucas* – Taxonomy

Résumé

SUNOJKUMAR, P. (2008). Changement taxonomique pour *Leucas ciliata* Benth. et *Leucas vestita* Benth. (Lamiaceae: Lamioideae). *Candollea* 63: 81-83. En anglais, résumés français et anglais.

La taxonomie de *Leucas ciliata* Benth. et de *Leucas vestita* Benth. (Lamiaceae: Lamioideae) est révisée. *Leucas vestita* est considérée comme une variété de *Leucas ciliata*. *Leucas vestita* var. *angustifolia* Hook. f., *Leucas vestita* var. *oblongifolia* Hook. f., and *Leucas vestita* var. *sericostoma* Hook. f. sont transférés comme variétés de *Leucas ciliata*. *Leucas vestita* var. *devicolamensis* B. V. Shetty & Vivek. est considéré comme un synonyme de *Leucas ciliata* var. *sericostoma*.

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Introduction

The taxonomy and identity of *Leucas ciliata* Benth. and *L. vestita* Benth. are in confusion. BENTHAM (1830) established *L. ciliata* and *L. vestita* as distinct species based mainly on vegetative characters and continued this treatment in his subsequent works BENTHAM (1834: 613-614; 1848). Later, HOOKER (1885) followed Bentham's treatment and added *L. vestita* var. *oblongifolia* Hook. f., *L. vestita* var. *angustifolia* Hook. f., and *L. vestita* var. *sericostoma* Hook. f. GAMBLE (1924) and MUKERJEE (1940) did not recognize any varieties of *L. vestita*, but keyed both species as distinct. SHETTY & VIVEKANANDAN (1968) recognized another variety namely *L. vestita* var. *devicolamensis* B. V. Shetty & Vivek. and followed Hooker's infraspecific classification.

These taxa were included in *Leucas* sect. *Astrodon* Benth. and show close resemblances with *L. sebalidiana* Sunojk. in the vegetative characters. The latter is distinct by the foliaceous bracteoles, large and bent calyx with straight teeth; mouth without cilia and larger corolla (SUNOJKUMAR, 2005). Whereas, no such differences, adequate for specific separation is observed either in the type or in the fresh specimens of *L. ciliata* and *L. vestita*.

BENTHAM (1834: 613-614; 1848), diagnosed *L. vestita* as “*Caulis robustior quam in L. ciliata. Folia crassa, supra pilis rufis rigidis hirta, subtus hirta vel pilis sericeis canescentia, apice obtuse, basi rotundata vel angustata. Verticillastri demum 15 lin. Diametro. Calyces dense villosi, dentibus vix lineam longis, fauce pilis densissimis clausa. Corollae tubus intus transversim annulatus, galea densissime rufo-hirta*”. MUKERJEE (1940) and SINGH (2001) mentioned only leaf character: glabrescent in *L. ciliata*, tawny villous in *L. vestita*.

It is very clear from the description and key characters used by taxonomists, who considered these taxa distinct, that they gave too much emphasis on leaf characters, especially on leaf shape and nature of bracteoles and indumentum. These characters are found to be overlapping in many specimens, with intermediates, even among individuals of a same population. The close kinship of these two species and the rationale for merging of *L. vestita* under *L. ciliata* had been amply documented by PAUL (1977). He recognized that the taxonomy of Indian *Leucas* R. Br. is insufficiently known and incorrectly determined and there is considerable variation in species groups.

Meanwhile many of the local flora published in India retained both species as distinct. Recently, SINGH (2001) compiled Indian *Leucas* for a revision and continued treating both as distinct entities. Admitting that he could not examine sufficient specimens, he considered Hooker's varieties but merged var. *oblongifolia* with the type variety. Thus, there is diversity of opinion among taxonomists as to their circumscription of

these two species. This is because these taxa are highly polymorphic, including widely different elements from different areas and the authenticity of relying on flimsy character for species delimitation seemed trivial.

It is against this backdrop, the present study was undertaken, after a careful examination of a number of live specimens from Indian region. Herbarium specimens deposited in India and type specimens were compared to reach a final conclusion.

The study considered that establishing species based on polymorphic vegetative character is not advisable in *Leucas*. Present study is in agreement with the treatment of PAUL (1977) considering *L. ciliata* and *L. vestita* as conspecific. However, the variation noticed on a wide range of plants collected from different localities, variable in their vegetative and reproductive characters is worth recognizing. Considering the variation exhibited by the taxa on a wide geographical area, the specimens, previously considered under the name *L. vestita* are treated as a distinct variety var. *vestita* under *L. ciliata*, together with other three varieties identified by Hooker.

However, the characters which were considered as a basis for var. *devicolamensis*, “presence of long, soft hairs and leaves ovate to broadly ovate with rounded cordate base”, are found to be based on overlapping characters and seen in different branches of same plants collected from its type locality. Due to these reasons, a number live plants and type specimen were examined, and later, it was decided to merge var. *devicolamensis* with var. *sericostoma*.

Key to the varieties of *Leucas ciliata*

1. Mouth cilia longer than teeth..... 4. *L. ciliata* var. *sericostoma*
- 1a. Mouth cilia shorter than teeth..... 2
2. Hairs on leaf and calyx silvery white, bracteole tip bent outward..... 3. *L. ciliata* var. *oblongifolia*
- 2a. Hairs on leaf golden yellowish, bracteole tip turned towards mouth 3
3. Leaf elliptic to oblong, marginal teeth 8-14, densely hispid..... 5. *L. ciliata* var. *vestita*
- 3a. Leaf lanceolate, marginal teeth 4-8, puberulus..... 4
4. Leaf margin serrate, marginal teeth 4-8, acute tip, calyx teeth two third the length of tube..... 1. *L. ciliata* var. *ciliata*
- 4a. Leaf margin crenate, teeth 3-4, obtuse, calyx teeth one third the length of tube..... 2. *L. ciliata* var. *angustifolia*

1. *Leucas ciliata* Benth in Wall., Pl. Asiat. Rar. 1: 61. 1830, var. *ciliata*

Typus: Indiae Orientali, Nepalia, *Heyne s.n.* (*Wallich Herb. n° 2046*) (holo-: K!; iso-: K!).

= *Leucas ciliata* var. *hirsuta* Benth., Labiat. Gen. Spec.: 614. 1834. **Typus:** India Orientali, Bangladesh, Sillet, *Heyne s.n.* (holo-: K!).

Distribution. – This variety is known to occur in Bangladesh, India, Indonesia, Nepal, Thailand, and West China.

2. *Leucas ciliata* var. *angustifolia* (Hook. f.) Sunojk., **comb. nova**

≡ *Leucas vestita* var. *angustifolia* Hook. f., Fl. Brit. India 4: 687. 1885.

Typus: Indiae, Kerala, Palghat, Silent Valley, Sisparah, *Wight s.n.* (holo-: K!).

Distribution. – This variety is endemic to the southern Western Ghats, known only from the type locality in Silent Valley National Park.

3. *Leucas ciliata* var. *oblongifolia* (Hook. f.) Sunojk., **comb. nova**

≡ *Leucas vestita* var. *oblongifolia* Hook. f., Fl. Brit. India 4: 687. 1885.

Typus: India, Tamil Nadu, Courtallum, 1835, *Wight 611* (holo-: K!).

Distribution. – This variety is found endemic to the southern Western Ghats, in Courtallum and Idukki areas.

4. *Leucas ciliata* var. *sericostoma* (Hook. f.) Sunojk., **comb. nova**

≡ *Leucas vestita* var. *sericostoma* Hook. f., Fl. Brit. India 4: 687. 1885.

Typus: India, Anamalay hills, *Beddome s.n.* (holo-: K!).

= *Leucas vestita* var. *devicolamensis* B. V. Shetty & Vivek. in Bull. Bot. Surv. India 10: 236. 1968. **Typus:** India, Kerala, Kottayam Dt, Devicolam, 11.VIII.1967, *Shetty & Vivekanandan 28372A* (holo-: CAL!; iso-: CAL, MH! (*n° 28372 B-S*), (*n° 26441 A-G*)).

Distribution. – This variety is endemic to the southern Western Ghats.

5. *Leucas ciliata* var. *vestita* (Hook. f.) Sunojk., **comb. nova**

≡ *Leucas vestita* Benth. in Wall., Pl. Asiat. Rar. 1: 61. 1830, var. *vestita*

Typus: Indiae orientalis provincial, Sillet, 1829, *Wallich, s.n.* (*Herb. Ind. n° 2046*) (holo-: K!).

Distribution. – This species is found in Bangladesh and India.

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