



A new Combination in *Crotalaria multiflora* (Arn.) Benth. (Fabaceae)

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Abstract

Crotalaria kurisumalayana Sibichen & Nampy is reduced to a variety of *Crotalaria multiflora* (Arn.) Benth.

Key words: Fabaceae, Kerala, *Crotalaria multiflora*, *Crotalaria kurisumalayana*

Introduction

During the revisionary studies on the legume flora of Kerala state, India, it was noticed that the description of *Crotalaria kurisumalayana* Sibichen & Nampy is not significantly different from that of *Crotalaria multiflora* (Arn.) Benth., to which it is closely allied (Sibichen & Nampy 2007). *Crotalaria multiflora* was originally collected from Sri Lanka (*Walker s.n.*, Herb.Hook. 1867, K!, Lectotype designated by Ansari, 2008. **Figure 1**). Therefore we decided to evaluate the species status of *C. kurisumalayana*.

Recently Ansari (2008) revised the genus *Crotalaria* L. for India and did not include *C. kurisumalayana* but cited a specimen labeled as *Sibichen M. Thomas 671*(CAL), collected from Idukki district,(erroneously given as Madurai district) Munnar at ± 1800 msl on 26. Dec. 2001 under *C. multiflora*. However Sibichen & Nampy (2007) have given the same collection number to another specimen from a different locality {*Sibichen & Nampy 671*(SJC), Kattappana to Elappara wayside, ±780m. 26. Dec. 2001} and cited it as a paratype of their species *C. kurisumalayana*. They confirmed that both are similar specimens and included both under their *C. kurisumalayana* (Pers. comm. 2011). From this account it is evident that under the same collection number, they collected two specimens from two different localities on the same day and gave same collection number as they were identical in some characters. Sibichen & Nampy collected the holotype of *C. kurisumalayana* from Kottayam district, Vagamon hills, Kurisumala, at ± 900 msl, on 1. November 2002, (*Sibichen & Nampy 732*, CAL, CALI, SJC!) and described it as a new species. Under this they included their earlier collection (*Sibichen & Nampy 671* SJC), with similar characters as a paratype.

Sibichen & Nampy (2007) described *Crotalaria kurisumalayana* as follows: “*C. kurisumalayana* haec habitu *Crotalaria multiflora* valde affinis sed statura minore, habitu prostrato ramis serpentibus arcuatis, foliis rotundatis vel ovatis, racemis laxis et leguminibus sericeis ferrugineisque differt {“differs by smaller size, prostrate habit with trailing, arcuate branches; orbicular to obovate leaves; lax racemes and sericeous, ferruginous pods”.} Our study revealed that the above characters are highly overlapping and closer examination revealed that a varietal status can more appropriately be given to this ornamentally beautiful, endemic taxon by incorporating the variation noticed in very few character states (Table 1). We therefore reduced *C. kurisumalayana* to a variety of *C. multiflora*. The character states that are not consistent are not included in the key to the varieties.



FIGURE 1. Lectotype of *Crotalaria multiflora* (Arn.) Benth., Walker s.n., Herb.Hook. 1867, K “© The Board of Trustees of the Royal Botanic Gardens, Kew. Reproduced with the consent of the Royal Botanic Gardens, Kew”.

TABLE 1. Diagnostic Characters between *C. kurisumalayana* & *C. multiflora*.

Characters	<i>C. kurisumalayana</i>	<i>C. multiflora</i>
Habit	Procumbent under shrubs	Procumbent under shrubs
Leaves	Ovate—orbicular basally, obovate towards flowering branches	Ovate basally, elliptic towards flowering branches
Flowers	Laxly arranged towards the apex of rachis	Laxly arranged along the rachis
Standard petal	Without purple striations, 2–2.5 × 2 cm.	With purple striations, 1.6–2.4 × 1.0–1.6 cm.
Wing petals	1.8–2 × 1 cm.	1.5–2 × 1.0–1.2 cm.
Keel petals	1.5–1.7 × 0.8 cm, wooly along both the margins	1.5 × 0.6–1.2 cm, wooly along both the margins
Style	Pubescent along inner side	Pubescent along inner side
Stigma	Globose	Globose
Pods	Sericeous, trichomes white initially, turning to copper color	Sericeous, trichomes white initially, turning to copper color

Taxonomy and nomenclature

Crotalaria multiflora var. *kurisumalayana* (Sibichen & Nampy) Krishnaraj & Mohanan, *comb. et stat. nov.*

BASIONYM:—*Crotalaria kurisumalayana* Sibichen & Nampy (2007: 106).

Type:—INDIA. Kerala: Kottayam district, Vagamon hills, Kurisumala, ± 900 msl, 1. November 2002, *Sibichen & Nampy 732* (Holotype CAL; Isotypes CALI, SJC! **Figure 2.**).

Distribution, habitat and phenology:—*Crotalaria multiflora* var. *kurisumalayana* is endemic to Kerala part of Southern Western Ghats but not included in any recent floristic analysis related to endemism (Nayar *et al.* 2008; Sudhakar Reddy *et al.* 2007). This species grows in soil pockets in exposed rocks and also in sand wall cuttings in hilly areas. The major threat noticed was habitat loss by fragmentation of hilly areas in Idukki and Kottayam district of Kerala. Flowering and fruiting from September - May.

Specimens examined:—(For *C. multiflora* var. *multiflora*)—INDIA. Kerala: Idukki district, Vallakadavu, 850m, 12 November 1975, *K. Vivekanandan 46648* (MH); Idukki district, Way to Mangala Devi Temple, 1075m, 10 October 1976, *K. Vivekanandan 48652* (MH); Kottayam district, Peermedu, 1100m, 21 September 1964, *K. Vivekanandan 20315* (MH); Kottayam district, Kuttikkanum to Peermedu, 1100m, 21 January 1965, *K. Vivekanandan 22911* (MH); Palakkdu district, Below Ayyappan Kovil area, 900m, 26 October 1976, *E. Vajravelu 48689* (MH).

(For *C. multiflora* var. *kurisumalayana*)—INDIA. Kerala: Idukki district, Mangaladevi, 1250 m, 24 August 1985, *M. C. Lukose 1234* (RHK); Idukki district, Elaveezhaponchira 780m, 26 December 2002, *Sibichen M. Thomas 759* (CALI); Idukki district, Munnar, 1800m, 26 December 2001, *Sibichen M. Thomas 671* (CAL); Kottayam district, Vagamon hills, Kurisumala, 900m, 1 November 2002, *Sibichen & Nampy 732* (CALI); Kottayam, Panchalimedu, 26 January 2009, *M. V. Krishnaraj 61896* (TBGT).

Key to the varieties of *Crotalaria multiflora* (Arn.) Benth.

- 1a. Leaves ovate—orbicular basally, obovate towards flowering branches; standard petal without purple striations
 *C. multiflora* var. *kurisumalayana*
- 1b. Leaves, ovate basally, elliptic towards flowering branches; standard petal with purple striations
 *C. multiflora* var. *multiflora*

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Note: In the protologue of *Crotalaria kurisumalayana* (Candollea 62. 1: 106. 2007.), the acronym of the herbarium of Department of Botany, St. Joseph College, Devagiri, Kozhikkodu was given as SJC. Now it is acronymed as DEV.

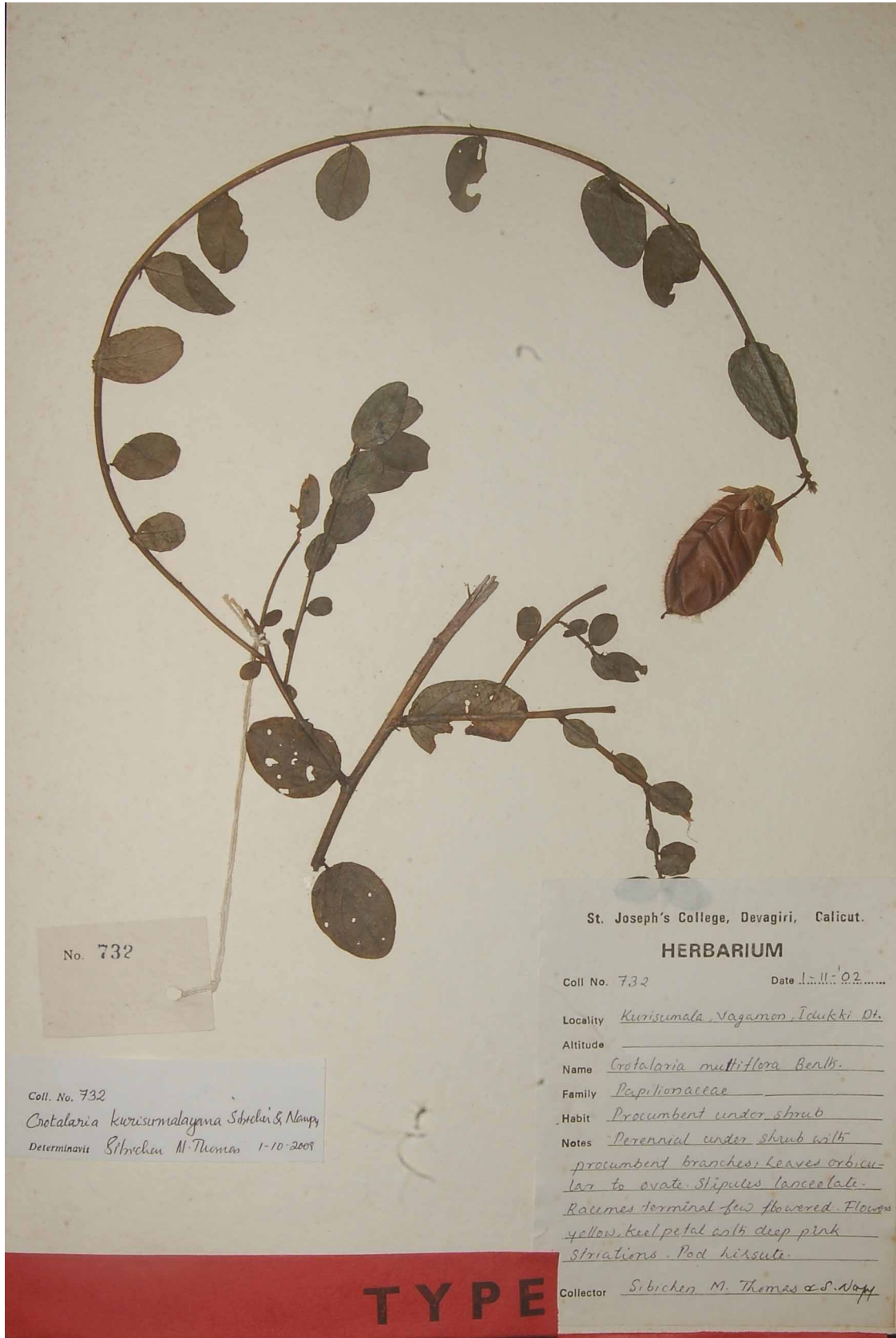


FIGURE 2. Isotype of *Crotalaria kurisumalayana* Sibichen & Nampy, Sibichen & Nampy 732 SJC.

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