

## The nomenclature of *Uvaria velutina* Roxb. ex Blume (Annonaceae)

J.F. Veldkamp

National Center for Biodiversity – Naturalis,  
section National Herbarium of The Netherlands, Leiden University  
P.O. Box 9514, 2300 RA Leiden, The Netherlands  
veldkamp@nhn.leidenuniv.nl

ABSTRACT. The nomenclature of *Uvaria velutina* Roxb. ex Blume (Annonaceae) is clarified.

**Keywords.** Annonaceae, *Cananga*, *Miliusa*, nomenclature, SE Asia, *Trigynaea*, typification, *Uvaria*

### Introduction

When trying to solve the nomenclature of *Uvaria velutina* Roxb. ex Blume (Annonaceae), a seemingly simple problem turned out to be quite complicated and to involve four species of four different genera: *Cananga odorata* (Lam.) Hook.f. & Thoms., *Guatteria australis* A.St.-Hil., *Miliusa velutina* (DC.) Hook.f. & Thoms., and *Uvaria hirsuta* Jack.

### *Uvaria velutina* Roxb. ex Blume

Blume (1825) described a collection from Kuripan, W. Java, Indonesia, as *Uvaria velutina* ? Roxb. Very few names in the Bijdragen have a reference to an earlier publication or author and *Uvaria velutina* is one of the exceptions. From a survey of the first 20 pages it became clear that most of the taxa described there were indeed new and are to be attributed to Blume, but a few taxa had been published previously by e.g. Linnaeus (1753), Dunal (1817), and De Candolle (1817). It is occasionally cited as a synonym in later literature, e.g. as “*Uvaria velutina* Blume non Roxb.” (Hooker f. & Thomson 1855) or as “*Uvaria velutina* Roxb. ex Blume” (Meade & Parnell 2002). In a fairly recent checklist of the Asiatic-Australian species of Annonaceae Keßler et al. (1995: 87) cited *Uvaria velutina* thrice with the authorities as Blume (1825; “Roxb. ex Blume”), Dunal (1817), and Roxb., the last, however, without any further data.

Where had Blume found this name? The Annonaceae had been more or less simultaneously studied by Dunal and De Candolle in 1817. The monograph of the first appeared between August and November and the treatment by the latter in the first half of November. Their descriptions are often nearly the same and references are made by one to the other. In both publications the name *Uvaria velutina* is used, with *Uvaria villosa* Roxb. as synonym, a name found in Roxburgh (1814) for a plant accessed in Calcutta in 1796 from Bengal. Dunal (p. 91) noted for his specimen: “DC. v. s. h. Lamb.,” that is “De Candolle has seen a dried specimen in the Herbarium of Lambert” and at the end of the description “DC. Syst. univ. ined.,” apparently a provisional

title for what was shortly afterwards to be published as “Regni vegetabilis systema naturale”. There De Candolle referred to “Dunal, Monogr. p. 91”. These citations support the idea that Dunal has the priority, and as he apparently had not seen any specimen himself, his information of the species must have come from De Candolle who had. In 1824 De Candolle himself attributed the combination to Dunal, and cited his own work as a literature reference. I think the correct citation should be *Uvaria velutina* DC. in Dunal.

The provenance was given as India orientalis.

It is known that Lambert had received “several thousands of species” directly or indirectly from Roxburgh between 1796 and 1810. The specimen that De Candolle had seen must have been one of these and presumably would now be in G (Miller, 1970). However, it was not included in the IDC microfiche set of the specimens used for the Prodrum (1824; G-DC) and Dr. P.J.M. Maas (WAG) told me that he had never seen a Lambert Annonaceae in G, but had so in BM.

There is no *Uvaria velutina* in Roxburgh’s survey of the plants growing in the Calcutta Botanic Garden (1814: 43, 94), and the names listed in it are rarely provided with a diagnosis or a reference to one. *Uvaria villosa* Roxb. is mentioned but all that was said was that the plant had been obtained in 1796 from Bengal. A validating description was published posthumously in 1832. So this could not have been used by Blume to identify his specimen and as a source of the epithet.

It seems to me that *Uvaria velutina* Roxb. ex Blume is an etymological hybrid between *Uvaria velutina* (Dunal) and *Uvaria villosa* Roxb. and was not intended as a “new” species.

In his introduction Blume (1825) complained about the scarcity of scientific literature in faraway Buitenzorg (Bogor, Java). In view of the rarity of Dunal’s paper, it seems more likely that Blume had access to either De Candolle (1817) or (1824). However, in his lengthy paper of 1830 after his return to Europe he cited all three.

Apparently Blume soon realised this misapplication, for in 1830 (p. 31) he corrected the authorship to Dunal and cited “*U. villosa* Roxb. mss”. He stated that the name had been applied to a plant from Bengal, which clearly is a reference to Roxburgh (1814). He seems to have been the first after the latter to have given this provenance; the references he cited all stated “India orientalis”. Curiously, he retained the name for a fragmentary collection by Reinwardt consisting of a branch and some leaves, either from Java or the Moluccas (L *sh.* 898.63--533). By the way, from this it can be observed that Blume used the Rijnland inch (2.616 cm), although in 1809 that had officially been decreed to be 1 cm long.

Miquel (1858) regarded the Reinwardt specimen as belonging to *Cananga odorata* (Lam.) Hook.f. & Thoms., yet in 1865 described it as new, *Uvaria subcordata*. The first identification was supported by Boerlage in 1899 on the label of the isotype in BO (two leaves and a satchel with the rather typical shrivelled young branch tips). The name was cited but the sheet not labelled by Koorders & Valeton (1903) when they proposed the combination *Canangium odoratum* var. *velutinum* [Blume] Koord. & Valeton. (The square brackets here are used to indicate that there is something “wrong” with the basionym. This useful method of citation was deleted from the ICBN after 1972). It was confirmed again by Turner who saw the specimen in 2008 (pers. comm.), and also by Keßler on the holotype in L (det. slip, 2000).

Blume (1830: 22, t. 5) described and depicted his “own” *Uvaria velutina* from Kuripan as *Uvaria hirsuta*.

However, confusion still reigned, for unknown to him there was already a *Uvaria hirsuta* by Jack (1820) and another by Vellozo (1829).

Later authors have regarded Jack's and Blume's names as taxonomic synonyms, e.g. Wallich (1832) (followed by Steudel, 1841), Hooker f. & Thomson (1855; 1872), Miquel (1858), Sinclair (1955), and Backer & Bakhuizen f. (1964). Jack's name was neotypified by Meade & Parnell (2002), who did include "*Uvaria velutina* Roxb. ex Blume", but not Blume's use of *Uvaria hirsuta* for it. They thought that the Blume collection would be in BO, but his main set is in L with duplicates in many other institutes (see Van Steenis-Kruseman, 1950), and some have been distributed to BO.

*Guatteria velutina* A.DC. (1832) has been regarded as a new combination based on *Uvaria velutina* DC. by e.g. Hooker f. & Thomson (1855) and Keßler et al. (1995: 30). However, it is clear from his text that A. De Candolle intended this as a new species, as he gave no reference to an earlier publication on which this would be based, but included it in a paragraph entitled "Species Prodromo addendae" (Species that must be added to the Prodromus). He also gave the provenance as Burma, near the Atran River, not Bengal. No mention of the taxon was made under *Uvaria*.

Steudel (1841) proposed *Uvaria blumeana* as a new name for *Uvaria hirsuta* Blume (and of Jack, according to Wallich), and *Uvaria velutina* Blume (non "Dec.", i.e. DC.), as he erroneously thought that *Uvaria hirsuta* would be a later homonym of "Arrab.", i.e., Vellozo (1829). *Uvaria hirsuta* Jack and *Uvaria hirsuta* Vell. are earlier, valid and legitimate names though, so he created a superfluous one, applicable to the oldest combination by Jack, although he named it after Blume.

Vellozo's name is a synonym of *Guatteria australis* A.St.-Hil. (Maas, in litt.), and not of *Trigynaea oblongifolia* Schtdl., as was said by Meade & Parnell (2002).

Meade & Parnell (2002) also thought that the type of *Uvaria trichomalla* Blume would be a Blume collection in BO, but in fact it is Kuhl & Van Hasselt 1837 in L. This was seen and identified by Meade himself (det. slip 1/7/2000) as *U. hirsuta* Jack, but no L specimen is accounted for in the Meade & Parnell paper.

Many authors have included *Uvaria pilosa* Roxb. (1832), a name probably based on a plant cultivated in the Calcutta Botanic Garden as a "native of the Moluccas", where *Uvaria hirsuta* does not occur. This is another example of a mistaken origin by Roxburgh probably caused by his connections with Christopher Smith. The latter used to work as the Superintendent of the Botanic Gardens in the Moluccas in Ambon (1796–1802), and later (1805–1806) with the same rank in Penang, Malay Peninsula. From Penang he sent plants to Roxburgh, who then thought they had come from the Moluccas.

Kurz (1877) has reported *Uvaria hirsuta* from Pegu (Bago), S. Burma, which was copied by later authors, but not by Kress et al. (2003) who instead mentioned Mon and Taninthayi (Tenasserim). Ban (2000) reported it for S Vietnam [Quảng Bình (Vinh Linh), Quảng Trị (*Takhtajan 212*, LE), and Đà Nẵng (Tourane: *Poilane 8068*, HM, P)]. If this species really occurs in Burma and Vietnam, it would be expected to occur in Thailand and Cambodia as well. Meade (2000) did not report on what Kurz had seen, presumably now in CAL. The Vietnam specimens cited by Ban I have not found in his thesis, either.

However, Meade did not include *Uvaria hirsuta* and in Meade & Pennington (2002) stated: "failed to locate a single specimen or reference to a specimen of *Uvaria hirsuta* or its synonyms from north of the Thai-Malay border". This is confirmed by the experiences of Dr. P. Chalernglin (Bangkok), Mr. J.F. Maxwell (CMU), and Ms. P. Sidisunthorn (BKF).

From these data it would seem that these records are based on misidentifications.

In the Malaysian Peninsula the species is widespread but does not seem to reach the Thai / Malay border (Turner 1997), and furthermore occurs in Singapore, Sumatra (Aceh, West), Bangka, and W Java.

### *Uvaria hirsuta* Jack

*Uvaria hirsuta* Jack, Malayan Misc. 1 (1820) 46. – *Uvaria blumeana* Steud., Nomencl. 2 (1841) 737, nom. superfl. TYPE: Peninsular Malaysia, Penang, lost in the fire of the “Fame”, 1824, *Jack s.n.* NEOTYPE: Peninsular Malaysia, Penang, *Wallich Cat. 6458-B* (K, holo, IDC microfiche 7394), designated by Meade & Parnell (2002).

*Uvaria velutina* Roxb. ex Blume, Bijdr. 1 (1825) 13, non Dunal (1817). – *Uvaria hirsuta* Blume, Fl. Jav. Anon. (1830) 22, t. 5, non Jack (1820), nec Vell. (1829). TYPE: W. Java, Kuripan, *Herb. Blume s.n.* (L, sh. 898.63–384).

*Uvaria trichomalla* Blume, Fl. Java. Anon. (1830) 42, t. 18. TYPE: W Java, Tjikao, *Kuhl & Van Hasselt 1837* (L, holo).

*Gutteria pilosa* Roxb. ex G. Don, Gen. Hist. 1 (1831) 98. – *Uvaria pilosa* (Roxb. ex G. Don) Roxb., Fl. Ind. 2 (1832) 665. LECTOTYPE: “A native of the Moluccas”, quid non, *Roxburgh s.n. in Wallich Cat. 6458-A* (K, holo, IDC microfiche 7394), designated here.

= *Uvaria hirsuta* Jack

### *Uvaria subcordata* Miq.

*Uvaria ? subcordata* Miq., Ann. Mus. Bot. Lugd.-Bat. 2 (1865) 9. – *Canangium odoratum* var. *velutinum* [Blume] Koord. & Valeton, Meded. Lands Plantentuin 61 (1903) 282 [≡ Bijdr. Boomsoort. Java 9 (1903) 282; “*velutina*”]. TYPE: “Java, Moluccas”, *Reinwardt s.n.* (L, holo, sh. 898.63–533; BO, fragm., sh. 1455792). EPITYPE: Java, Pekalongan, Soebah, *Koorders 22570* (L, holo; iso BO), designated here.

= *Cananga odorata* (Lam.) Hook.f. & Thoms.

### *Uvaria velutina* DC.

*Uvaria velutina* DC. in Dunal, Monogr. (1817) 91; DC., Veg. Syst. 1 (1817) 484; Prodr. 1 (1824) 88. – *Gutteria villosa* G. Don, Gen. Hist. 1 (1831) 100, nom. superfl. – *Uvaria villosa* Roxb., Hort. Beng. (1814) 43, nom. nud.; Roxb., Fl. Ind. 2 (1832) 664, nom. superfl. – *Milium velutina* (DC.) Hook.f. & Thoms., Fl. Ind. 1 (1855) 151. TYPE: Cultivated in the Botanical Garden of Calcutta, India, *Roxburgh s.n. in Herb. Lambert* (? BM, ? G).



*Gutteria velutina* A.DC., Mém. Anon. (1832) 42. TYPE: Burma, Mon. near the Atran River, *Wallich Cat.* 6441-C (K, holo, IDC microfiche 7394).

= *Miliusa velutina* (DC.) Hook.f. & Thoms.

ACKNOWLEDGEMENTS. Ms. L.-L. Zhou (HK) kindly informed me about some specimens she had on loan from L. Dr. N.H. Nghia (Forest Science Institute of Vietnam, Hanoi) graciously translated the description by Ban (2000). Mr. A. Sumadijaya searched for specimens in BO. Dr. I.M. Turner (K) is thanked for pointing out the problem and checking out material in BO and K. Dr. P.J.M. Maas (WAG) kindly informed me about the possible location of Lambert collections of Annonaceae in BM, not G, De Candolle's role in the Dunal paper, and the present identity of *Uvaria hirsuta* Vell. Ms. P. Sidisunthorn (BKF) and Dr. P. Chalernglin (Thailand Institute of Scientific and Technological Research, Bangkok) advised on the (non-) occurrence of this species in Thailand. Dr. P.J.A. Keßler (L) assisted in a number of minor questions involving this paper.

### References

- Backer, C.A. & Bakhuizen f., R.C. (1964) *Flora of Java* 1: 103. Groningen: Noordhoff.
- Ban, N.T. (2000) *Flora of Vietnam*. 1. Annonaceae Juss.: 66. Ha Noi: Science & Technics Publishing House.
- Blume, C.L. (1825) *Bijdragen tot de flora van Nederlandsch Indië* 1: 13 Batavia: Lands Drukkerij.
- Blume, C.L. (1830) *Flora Javae*. Anonaceae: 22, 31, t. 5. Brussels: Frank.
- De Candolle, A.P. (1817) (1–15 Nov). *Regni vegetabilis systema naturale* 1: 484. Strasbourg, London: Treuttel & Würtz.
- De Candolle, A.P. (1824) *Prodromus systematis naturalis regni vegetabilis* 1: 88. Strasbourg, London: Treuttel & Würtz.
- Dunal, M.-F. (1817) (Aug–Nov). *Monographie de la famille des Anonacées*: 91–92. Paris, London, Strasbourg: Treuttel & Würtz & Montpellier: Renaud.
- Forman, L.L. (1997) Notes concerning the typification of names of William Roxburgh's species of Phanerogams. *Kew Bull.* 52: 513–534 (533).
- Hooker, J.D. & Thomson, T. (1855) *Flora Indica* 1. London: Pamplin.
- Hooker, J.D. & Thomson, T. (1872) *The Flora of British India* 1: 48. Brook nr. Ashford: Reeve & Co.
- Jack, W. (1820) Descriptions of Malayan plants. *Malayan Miscellanies* 1: 46; reprinted in Hook., *Bot. Misc.* 2: 87. 1831.
- Keßler, P.J.A., Jessup, L.W. & Kruijjer, J.D. (1995) *Provisional Checklist of the Asiatic-Australian Species of Annonaceae*: 30, 87. Serdang: The Herbarium, UPM & UNESCO-Botany Asia 2000.
- Koorders, S.H. & Valetton, T. (1903) Bijdrage no. 9 tot de kennis der boomsoorten van Java. *Meded. Lands Plantentuin* 61: 282.
- Kress, W.J., Defilipps, R., Farr, E. & Daw Yin Yin Kyi (2003) *A Checklist of the Trees, Shrubs, Herbs, and Climbers of Myanmar*. *Contrib. US Natl. Herb.* 45: 144.
- Kurz, S. 1877. *Forest Flora of Burma* 1: 28. Calcutta: Office of the Superintendent of Government Printing.

- Linnaeus, C. (1753) *Species Plantarum*. Stockholm: Salvius.
- Meade, C.V. (2000) A Systematic Revision of the *Uvaria* L. Group (Annonaceae) in Continental Asia. PhD Thesis, University of Dublin, Ireland. Ineffective publication, copy in TCD, L, etc.
- Meade, C.V. & Parnell, J.A.N. (2002) Neotypification of *Uvaria lirsuta* Jack (Annonaceae). *Taxon* 51: 767–768.
- Miller, H.P. (1970) The herbarium of Aylmer Bourke Lambert. *Taxon* 19: 538.
- Miquel, F.A.W. (1858) *Flora van Nederlandsch Indië* 1, 2: 24, 40. Leipzig: Fleischer.
- Miquel, F.A.W. (1865) Anonaceae archipelagi indici. *Annales musei botanici lugduno-batavi* 2: 9. <http://www.botanicus.org/item/31753002764857>.
- Roxburgh, W. (1814) *Hortus Bengalensis*: 43. Serampore: Mission Press.
- Roxburgh, W. (1832) (14 Jan) *Flora Indica* (Carey ed.) 2: 664. Calcutta & Parbury: Thacker & Co., London: Allen & Co.
- Sinclair, J. (1955) A revision of Malayan Annonaceae. *Gard. Bull. Singapore* 14: 203.
- Steudel, E.G. von (1841) *Nomenclator Botanicus* 2: 737. Stuttgart, Tübingen: Cotta.
- Turner, I.M. (1997) (“1995”). A catalogue of the vascular plants of Malaya. *Gard. Bull. Singapore* 47: 121.
- Van Steenis-Kruseman, M.J. (1950) Malaysian plant collectors and collections (“Cyclopaedia of collectors”). *Fl. Males. I*, 1: 64. Jakarta: Noordhoff-Kolff.
- Vellozo, J.M. de Conceição (1829) *Florae Fluminenseis*: 238, t. 124. Rio de Janeiro: Typographia Nacionalis.
- Wallich, N. (1832) *A Numerical List of Dried Specimens of Plants in the East India Company's Museum: Collected under the Superintendence of Dr. Wallich of the Company's*: # 6441, 6458. London: Wallich.