

NOTES ON THE NAMES OF THE TETRASTIGMA (VITACEAE) HOSTS OF RAFFLESIA (RAFFLESiaceae)

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ABSTRACT

VELDKAMP, J.F. 2009. Notes on the names of the *Tetrastigma* (Vitaceae) hosts of *Rafflesia* (Rafflesiaceae). *Reinwardtia* 13(1): 75–78. — Older epithets for *Tetrastigma rafflesiae* Miq. (1863; Vitaceae), also known as *T. lanceolarium* auct. non Planch. and *T. leucostaphyllum* auct. non Alston ex Mabb. (Vitaceae), are provided by *Cissus coriacea* DC. (1824) and *Cissus verrucosa* Steud. (1840), whereby the correct name for this host of *Rafflesia* spp. must be *Tetrastigma coriaceum* (DC.) Gagnep. The name *Tetrastigma pisicarpum* (Miq., 1863) Planch., host of at least *Rafflesia patma*, likewise must be replaced by *Tetrastigma scariosum* (Blume, 1825) Planch.

Key words: Malesia, *Rafflesia*, *Rafflesiaceae*, *Tetrastigma*, *Vitaceae*.

ABSTRAK

VELDKAMP, J.F. 2009. Catatan pada nama *Tetrastigma* (Vitaceae) tumbuhan inang *Rafflesia* (Rafflesiaceae). *Reinwardtia* 13(1): 75–78. — Nama lama *Tetrastigma rafflesiae* Miq (1863; Vitaceae), yang juga diketahui sebagai *T. lanceolarium* auct. non Planch. dan *T. leucostaphyllum* auct. non Alston ex Mabb. (Vitaceae), digantikan oleh *Cissus coriacea* DC (1824) dan *Cissus verrucosa* Steud. (1840), sedangkan nama yang benar untuk tumbuhan inang *Rafflesia* spp. ini seharusnya *Tetrastigma coriaceum* (DC) Gagnep. Nama *Tetrastigma pisicarpum* (Miq. 1863) Planch., tumbuhan inang terakhir dari *Rafflesia patma*, sebaliknya seharusnya diganti oleh *Tetrastigma scariosum* (Blume, 1825) Planch.

Kata kunci: Malesia, *Rafflesia*, *Rafflesiaceae*, *Tetrastigma*, *Vitaceae*.

INTRODUCTION

Veldkamp (2008) has argued that the correct name for the host of *Rafflesia* spp. (Rafflesiaceae) would be *Tetrastigma rafflesiae* Miq. (1863; Vitaceae) as all previous ones were either illegitimate, unidentifiable, or inapplicable.

Now it turns out that there are older, valid, and legitimate names available. The earliest one is *Cissus coriacea* DC. (1824: 632) collected probably by either Riedlé (fide Planchon, 1877:425) or Leschenault (fide Gagnepain, 1910 :320) in Timor and more fully described by Decaisne (1834). As far as known there is only a single species of *Tetrastigma* present in Timor which in the herbaria has been identified as *T. lanceolarium* auct. non Planch. (e.g. by Backer & Bakhuizen f., 1965) or *T. leucostaphyllum* auct. non (Dennst.) Alston ex Mabb., and therefore the correct name must be *T. coriaceum* (DC.) Gagnep.

Another earlier name is *Cissus verrucosa* Steud. (1840), a new name based exclusively on *Cissus tuberculata* Blume (1825a), because of the earlier combination by Jacquin (1797).

TETRASTIGMA CORIACEUM (DC.) Gagnep

Not. Syst. (Paris) 1 (1910) 320. — *Cissus coriacea* DC., Prodr. 1 (mid Jan 1824) 632; Decne, Nouv. Ann. Mus. Hist. Nat. Paris III, 3 (1834) 445. ≡ Herb. Timor. (1835) 117. (reprint); Planch. in A. DC., Monogr. Phan. 5 (1887) 424, in syn. (“Bl. Bijdr. I”, error for DC.). — *Vitis coriacea* (DC.) Miq., Ann. Mus. Lugd.-Bat. 1 (1863) 78. — Type: Timor, ? *Leschenault vel Riedlé s.n.* (P, holo; G, IDC microfiche, no collector).

Cissus tuberculata Blume, Bijdr. 4 (1825–a) 189, non Jacq. (1797). — *Cissus verrucosa* Steud., Nomencl. Bot. ed. 2, 1 (1840) 373. — Lectotype: *Blume s.n.* [“*G. Parang*”, which is in the Province “*Tjanjor*” (Cianjur) that Blume mentioned] (L, holo, sh. 897,348–8), designated by Veldkamp (2008).

VITIS VERRUCOSA [Zoll.] Backer

In the course of this study we became aware of an apparently related species that also bears the epithet “*verrucosa*”, but then in *Cayratia* Juss. and *Vitis* L.

Backer (1911, exact date unknown) differentiated between two species, *Vitis lanceolaria* [(Roxb.)

Roxb. ex] Wall. and *V. verrucosa* [Zoll.] Backer. Under the first he cited *Cissus tuberculata* Blume, and for the second he said that it was “possibly a form of *V. lanceolaria*”. He had found the combination *Cissus verrucosa* on the label of *Zollinger 2868* in BO. No author of the combination is given on it (see also the transcript by Gagnepain, 1911, of the text on the duplicate in P, mentioned below), but it is not unlikely that Moritzi or Zollinger had identified the material with *C. tuberculata* sensu Blume and had applied Steudel’s correction of 1840. None of these names were later mentioned by Moritzi (1846) or Zollinger (1854–1855).

Backer thus inadvertently described a new species but his combination is a later homonym of *V. verrucosa* Raf. (1830). New combinations based on illegitimate names have no author in parentheses (Art. 49.1). In former times such a reference was placed between square brackets, but this useful indication for some reason was deleted after 1972 (Rec. 46.3 of that Code).

Koorders (1912) also had seen the Zollinger specimen in Bogor and made the combination *Cayratia verrucosa* [Zoll.] Koord. He also noted “*Vitis verrucosa* (Zoll.) Backer msc. in Herb. Bogor.” and apparently did not know that Backer had already published this less than a year before.

This is a nomenclatural oddity: two combinations with the same epithet in two different genera, independently published within a year by two different authors, based on the same specimen in one herbarium. According to Art. 33.3 Koorders’s combination is not for a new species, but a new combination without Backer as the author in parentheses as the name was illegitimate (Art. 49.1).

Apparently Backer and Koorders thought that Zollinger might have published the combination somewhere. Buitenzorg / Bogor then and now has a magnificent library and collection, but it lacks many old publications and journals. Backer somewhere said that he couldn’t do the nomenclature of the species accepted by him and therefore used the names most generally in use. See Van Steenis (1968).

What they did not know, was that Turczaninow (1863) had described a *Cissus zollingeri* based on a duplicate of *Zollinger 2868* (cited as “2686”) now probably in KW. A request for confirmation to that institute remained unanswered.

It would seem that Koorders soon became aware of this, because he corrected his combination to *Cayratia zollingeri* (Turcz.) Koord. ex Koord.–Schum. (1912), a combination also made by Galet (1967). We have seen only a few pages of the latter publication, but as it is a thesis from a French University, we very much suspect that it was invalidly

published under Art. 30.5. It may be noted that IPNI at the day of writing (July 2009) accepted 9 combinations made by him. If valid, this one is a later isonym which has no nomenclatural status (Art. 6, Note 2).

Probably slightly earlier than Backer (and Koorders) Gagnepain (2 Mar 1911: 377) used the duplicate of *Zollinger 2868* in P and described *Tetrastigma micranthum*. He published a full citation of the original text on the label in which the name *Cissus verrucosa* is mentioned with a question mark and without authorship.

Because the combinations are homotypic [Art. 9.2, Note 2 (c)] “*zollingeri*” is the epithet to be used, thus making *Cayratia verrucosa* Koorders, *Tetrastigma micranthum* Gagnep., and *Vitis verrucosa* Backer superfluous.

These names apparently have dropped from literature. They are not accounted for in Heyne (1917, and later editions of 1927, 1950, 1987) nor in Backer & Bakhuizen f. (1968: 679, 759).

Turczaninow’s publication bears the censor’s date of 11 September 1863. The next issue is dated 12 December. It may be assumed that the actual publication was soon after the 11th, and therefore is slightly earlier than a publication by Miquel on 24 September 1863. Here Miquel described *Vitis piscicarpa*, now known as *Tetrastigma piscicarpum* (Miq.) Planch. *Zollinger 2868* in BO has been identified as this by Latiff. Jackes (1989) cited material from “Indonesia” (*Zollinger s.n.*, in K, most likely from Java — Planchon cited *Zollinger 495* — *De Vogel 5039* (not 5059) in K, from Halmahera) and Australia (Cape York). In L Latiff has identified material as such from the Malay Peninsula (Johor, Kedah, Kelantan, Langkawi, Selangor), E. Java and Nusa Kambangan, the Philippines (Luzon, Mindoro, Palawan, Poillillo), the Lesser Sunda Isles (Flores, Lombok), Moluccas (Ceram, Tanimbar), and New Guinea (Aru Isl., Central Prov.), and, in correspondence, added *T. godefroyanum* Planch. from Thailand and Indochina, and *T. micranthum* Gagnep. from Java. From this rather disjoint distribution it would seem that the species has some preference for a distinct dry season.

Surprisingly, among the Java material in L there is also a sheet from Nusa Kambangan, Java, labelled *Cissus scariosa* Blume and *Vitis coriacea* Miq. var. β : *Blume 1644*, annotated “*in cujus radicibus Rafflesia invenit*”, that is echoed in Blume (1825a) “*In radicibus hujus plantae supra terram expansis mirabilis Rafflesia patma crescit*”, and by Miquel (1863): “*ubi Rafflesiam Patma nutrit*”. This host was identified as *Vitis coriacea* by Miquel and as *T. piscicarpum* by Latiff. It is interesting to note that Junghuhn (1853) also stated that *Rafflesia*

patma grew on *Cissus scariosa*. His notes make interesting reading, e.g. that in May 1847 the *Rafflesia* flowers were so abundant that he couldn't do a step without crushing several specimens. He didn't find any flowers or fruits on the host and was told by the locals that the flowers of the parasite would begin their development only after the host has lost its fruits. From this he concluded that they flowered and fruited at different periods, which is strange, as he also said that he found the flower buds in all stages of development (except that none were open yet), while it is known that flower buds usually are present all year round. Flowering at least in 1850 in transplants in Bogor was in March and again in October (Teijsmann in De Vriese, 1853). I would not be surprised, if the host was so affected that it didn't flower at all anymore, while, also, the interest of any collector would be more focussed on this spectacular flower of 35–50 cm diameter than on the liana that nourished it.

Thus the Blume collection is the type of the earliest name for this assembly of synonyms, and the combination in *Tetrastigma* by Planchon (1887) is the correct name for *Tetrastigma piscicarpum*.

TETRASTIGMA SCARIOSU (Blume) Planch.

In A. DC., Monogr. Phan. 5 (1887) 441. — *Cissus scariosa* Blume, Batav. Cour. 23 Mar 1825b: 12 [3] (n.v., fide Mabberley, 1980); Bijdr. 4 (20 Sep 1825a) 191. — Type: *Herb. Blume 1644* (L, holo, sh. no. 897.347–133), Java, Nusa Kambangan, Citandoi, November 1824 (see Blume, 1825–b).

Cissus zollingeri Turcz., Bull. Soc. Imp. Naturalistes Moscou 36, 2 (soon after 11 Sep 1863) 591 (*Zollinger* “2686”), see note. — *Tetrastigma micranthum* Gagnep., Notul. Syst. (Paris) 1 (2 Mar 1911) 377, nom. superfl. — *Vitis verrucosa* [Zoll.] Backer, Schoolfl. Java 1 (1911) 253, nom. superfl., non Raf. (1830). — *Cayratia verrucosa* [Backer] Koord., Exk. Fl. Java 2 (Mar/Apr 1912) 565, nom. superfl. — *Cayratia zollingeri* (Turcz.) Koord. ex Koord.–Schum., Syst. Verz. 1, Fam. 170 (Jun 1912) 8; Galet, Recherch. Meth. Identif. & Classif. Vitac. 2 (1967) 329 (329: “syn. nov.”, in the K copy changed manually to “comb. nov.”), 371 (reference is made to *C. zollingeri* “par erreur” Molon, “l.c.”: 70, which we could not trace), if valid, an isonym. — Type: *Zollinger 2868* (“2686”; probably in KW, holo; BO, P), E Java, Banyuwangi, Litjin, 6 May 1845.

Vitis piscicarpa Miq., Ann. Mus. Lugd.–Bat. 1 (24 Sep 1863) 79. — *Tetrastigma piscicarpum* (Miq.) Planch. in A. DC., Phan. 5 (1887) 441. 1887. — Type: *Zippelius s.n.* (L, holo, sh. no. 897.348–96 & 904.272–25), New Guinea.

Tetrastigma godefroyanum Planch. in A. DC., Monogr. Phan. 5 (1887) 436. — Lectotype: *Pierre 4433* (P, holo), S. Vietnam (“Cochinchine”), Dong Nai Prov., Dinh mountains, suggested by Planchon, designated here.

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