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Source: Willdenowia, 49(2) : 151-154

Published By: Botanic Garden and Botanical Museum Berlin (BGBM)

URL: https://doi.org/10.3372/wi.49.49203

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Willdenowia
Annals of the Botanic Garden and Botanical Museum Berlin

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Warszewiczia and sixteen other names in the *Rubiaceae* authored by J. C. Klotzsch: when and where were they published?

Version of record first published online on 24 June 2019 ahead of inclusion in August 2019 issue.

Abstract: There is confusion over the place and date of publication of a paper by J. C. Klotzsch in which 17 nomenclatural novelties in the *Rubiaceae* were proposed including five new generic names. The paper was presented to the Königlich Preussische Akademie der Wissenschaften zu Berlin in August 1853 and appeared in the Akademie's journal. At least three German periodicals published in 1853 reported on Klotzsch's paper in association with the *Bericht über die zur Bekanntmachung geeigneten Verhandlungen der Königlich Preussischen Akademie der Wissenschaften zu Berlin*, indicating that the journal was published on a monthly basis and that the August issue was available on 19 September 1853 at the latest. Citation of an issue of the journal *Flora* from 7 December 1853 as the place of publication of these Klotzsch names should therefore be corrected. Five lectotypes, two neotypes and one second-step neotype are designated here.

Key words: *Dirichletia*, Johann Friedrich Klotzsch, *Mussaenda*, nomenclature, *Pogonopus*, *Rubiaceae*, *Tricalysia*, typification, *Warszewiczia*, *Wittmackanthus*

Article history: Received 28 January 2019; peer-review completed 9 April 2019; received in revised form 16 May 2019; accepted for publication 17 May 2019.

Citation: Turner I. M. 2019: *Warszewiczia* and sixteen other names in the *Rubiaceae* authored by J. C. Klotzsch: when and where were they published? – Willdenowia 49: 151–154. doi: https://doi.org/10.3372/wi.49.49203

Introduction

On 15 August 1853, Johann Friedrich Klotzsch (1805–1860), curator of what was then the Königliches Herbarium in Berlin, gave a lecture to the Königlich Preussische Akademie der Wissenschaften zu Berlin (KPAWB) entitled "einige neue Gattungen der Rubiaceen" (Klotzsch 1853). A report of this lecture appeared in the Akademie's journal *Bericht über die zur Bekanntmachung geeigneten Verhandlungen der Königlich Preussischen Akademie der Wissenschaften zu Berlin* [hereafter *Bericht*]. The report included the publication of five new genera of *Rubiaceae*: *Dirichletia*, *Pallasia*, *Pogonopus*, *Rosea* and *Warszewiczia*. Various new species and new combinations at species rank were also included. The major online sources of nomenclatural data (the International Plant Names Index [IPNI 2012+], World Checklist of Selected Plant Families [WCSP 2010+], Index Nominum Genericorum [Farr & Zijlstra 1996+], Names in Current Use [NCU-3e 1997+] and Tropicos [Tropicos 1995+]) cite one of two places of publication for these names, the *Bericht* or a report on Klotzsch's paper that was published in the journal *Flora* in an issue dated 7 December 1853 (Anonymous 1853a). Presumably, the compilers of indexes that cited *Flora* as the source of the names were under the impression that the *Bericht* of KPAWB was published annually, with the 1853 volume not being published until 1854, as it contains reports of meetings up to 22 December 1853. However, the *Bericht* for 1853 is clearly laid out in monthly parts with each

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month having a title page with the journal title followed by "im Monat Januar 1853" etc. Indeed, an original statute of the Akademie was that monthly reports of its transactions should be produced, generally at the end of each month (S. Fölske, pers. comm.). The report of Klotzsch's paper in *Flora* actually cites the page numbers from the *Bericht*, making it seem highly likely that the issue for August 1853 was published before December 1853. Further searching has revealed earlier reports of Klotzsch's paper. Issue 20 of volume 1 of *Bonplandia*, dated 1 October 1853, has, under the "Zeitung" section on p. 203, a strapline of "Berlin 19. Sept." and refers to Klotzsch's paper (Anonymous 1853b). Similarly, the *Literarisches Centralblatt für Deutschland* No. 44 of 29 October 1853, pp. 724–725 under "Vermischtes" (Anonymous 1853c), refers to the "Monatsbericht der Kgl. Preuss. Akademie der Wissenschaften zu Berlin. August 1853" giving a listing of the lectures reported for that month.

The circumstantial evidence therefore overwhelmingly supports a first publication of Klotzsch's paper in the August issue of the *Bericht* that was available in September 1853. Below I provide a full citation of the names published by Klotzsch in the paper and cite the types where possible. The names are arranged under currently accepted genera and species, with the accepted name and new typifications shown in **boldface**. As the *Rubiaceae* were one of the families where the material in the general collection was destroyed in the 1943 bombing of the Berlin Herbarium (Hiepko 1987), the specimens that Klotzsch worked on are lost.

Nomenclature

Dirichletia Klotzsch in Ber. Bekanntm. Verh. Königl. Preuss. Akad. Wiss. Berlin 1853: 494. 1853 ≡ *Carphalea* sect. *Dirichletia* (Klotzsch) Verdc. in Kew Bull. 28: 424. 1973. – Lectotype (designated by Puff in Bull. Jard. Bot. Natl. Belg. 58: 296. 1988): *Dirichletia pubescens* Klotzsch.

Dirichletia pubescens Klotzsch in Ber. Bekanntm. Verh. Königl. Preuss. Akad. Wiss. Berlin 1853: 495. 1853. – **Lectotype (designated here):** Mozambique, Tette, *W. K. H. Peters s.n.* (K K000414220).

= *Dirichletia glabra* Klotzsch in Ber. Bekanntm. Verh. Königl. Preuss. Akad. Wiss. Berlin 1853: 495. 1853. – **Neotype (designated here):** [icon] "*Dirichletia glabra* Klotzsch" in Peters, Naturw. Reise Mossambique 6(1): t. 47. 1861.

As the Berlin material was destroyed, a duplicate in the Kew Herbarium is here designated as lectotype of *Dirichletia pubescens*.

As no duplicate material of the Peters collection that Klotzsch cited for *Dirichletia glabra* has been traced, the plate from the account of the *Contortae* by Klotzsch (Klotzsch 1861) in the botany volume of Peters's work on his travels in Mozambique is here designated as the neotype. It seems a reasonable assumption that the illustration was based on the herbarium material seen by Klotzsch when preparing the original description. Verdcourt (1974) appears to have been the first to synonymize *D. glabra* under *D. pubescens*.

Mussaenda cordifolia Wall. ex G. Don, Gen. Hist. 3: 491. 1834. – Lectotype (designated by Chantaranothai in Thai Forest Bull., Bot. 43: 54. 2015): Malaysia, Penang, 1822, *N. Wallich s.n.* [EIC 6260] (K-W K001123460).

= *Mussaenda setulosa* Klotzsch in Ber. Bekanntm. Verh. Königl. Preuss. Akad. Wiss. Berlin 1853: 499. 1853. – **Lectotype (designated here):** India, Hortus Botanicus Calcuttensis [introduced from Penang in 1823], August 1827, *N. Wallich s.n.* [EIC 6251C] (K-W K001123439).

Presumably, Klotzsch based his description of *Mussaenda setulosa* on a specimen sent to Berlin as part of Wallich's distribution of material from the East India Company Herbarium. As this specimen is now destroyed, a lectotype is here chosen under the same catalogue number in K-W.

Mussaenda frondosa L., Sp. Pl.: 177. 1753. – Lectotype (designated by Jayaweera in J. Arnold Arbor. 44: 239, fig. 4. 1963): Herb. Hermann 3: 44, No. 84, upper specimen (BM BM000621963).

= *Mussaenda zollingeriana* Klotzsch in Ber. Bekanntm. Verh. Königl. Preuss. Akad. Wiss. Berlin 1853: 500. 1853. – **Lectotype (designated here):** Indonesia, Java, *H. Zollinger 220* (P P02273430; isolectotype: G G00436404).

Again, Klotzsch surely described *Mussaenda zollingeriana* from a specimen in B that was destroyed in 1943. A lectotype is selected here under the same Zollinger number from P.

Pallasia Klotzsch in Ber. Bekanntm. Verh. Königl. Preuss. Akad. Wiss. Berlin 1853: 498. 1853, nom. illeg. [non *Pallassia* Houtt. 1775, nec *Pallasia* Scop. 1777, nec *Pallasia* L. f. 1782, nec *Pallasia* L'Hér. ex Aiton 1789] ≡ ***Wittmackanthus*** Kuntze, Revis. Gen. Pl. 1: 302. 1891. – Type: *Pallasia stanleyana* (R. H. Schomb.) Klotzsch.

Calycophyllum stanleyanum R. H. Schomb. in London J. Bot. 3: 622, t. XXIII–XXIV. 1844 ≡ *Pallasia stanleyana* (R. H. Schomb.) Klotzsch in Ber. Bekanntm. Verh. Königl. Preuss. Akad. Wiss. Berlin 1853: 498. 1853 ≡ ***Wittmackanthus stanleyanus*** (R. H. Schomb.) Kuntze, Revis. Gen. Pl. 1: 302. 1891. – Lectotype (designated by Dwyer in Ann. Missouri Bot. Gard. 67: 515. 1980): British Guiana [Guyana], Roraima, 1843, *R. H. Schomburgk 365/411B* (K K000173584).

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Steyermark & Kirkbride (1975) referred to the Schomburgk collection as "K, photo of type collection of *Calycophyllum stanleyanum*; NY, isotype". I imagine that they saw a photograph of the K specimen in NY, but this is unclear in the publication and is ineffective as a lectotypification.

Pogonopus Klotzsch in Ber. Bekanntm. Verh. Königl. Preuss. Akad. Wiss. Berlin 1853: 500. 1853. – Type: *Pogonopus ottonis* Klotzsch.

Macrocnemum speciosum Jacq., Pl. Hort. Schoenbr. 1: 19, t. 43. 1797 ≡ ***Pogonopus speciosus*** (Jacq.) K. Schum. in Martius & Eichler, Fl. Bras. 6(6): 265 [as "*Pogonopodos speciosi*"], 457. 1889. – **Lectotype (designated here):** [icon] "*Macrocnemum speciosum*" in Jacquin, Pl. Hort. Schoenbr. 1: t. 43. 1797.

= *Pogonopus ottonis* Klotzsch in Ber. Bekanntm. Verh. Königl. Preuss. Akad. Wiss. Berlin 1853: 501. 1853. – **Neotype** (first step designated by Steyermark, Fl. Venezuela 9(1): 240. 1974; **second step designated here**): Venezuela, Colonia Tovar, *J. W. K. Moritz 840* (BM BM012557051).

The specimen of *Pogonopus ottonis* seen by Klotzsch in Berlin (*E. Otto 901*) is presumed destroyed, and I have failed to trace any duplicate material. Steyermark (1974) made the following specimen citation under *P. speciosus*: "Colonia Tovar, *Moritz 840* (foto del tipo de *Pogonopus ottonis*)". He was presumably referring to a photograph in F of the B specimen, but as this is not explicitly stated, it can be taken as a first-step neotypification. As there is an extant duplicate of the Moritz collection in BM, I here make the second-step neotypification.

Tricalysia A. Rich. ex DC., Prodr. 4: 445. 1830. – Type: *Tricalysia angolensis* A. Rich. ex DC.

= *Rosea* Klotzsch in Ber. Bekanntm. Verh. Königl. Preuss. Akad. Wiss. Berlin 1853: 501. 1853, nom. illeg. [non *Rosea* Fabr. 1759, nec *Rosea* Mart. 1826] ≡ *Neorosea* N. Hallé, Fl. Gabon 17: 268. 1970 ≡ *Tricalysia* sect. *Rosea* Robbrecht in Bull. Jard. Bot. Natl. Belg. 57: 180. 1987. – Lectotype (designated by Hallé, Fl. Gabon 17: 269. 1970): *Rosea jasminiflora* Klotzsch.

Rosea jasminiflora Klotzsch in Ber. Bekanntm. Verh. Königl. Preuss. Akad. Wiss. Berlin 1853: 502. 1853 ≡ ***Tricalysia jasminiflora*** (Klotzsch) Benth. & Hook. f. ex Hiern in Oliver & al., Fl. Trop. Afr. 3: 124. 1877. – Neotype (designated by Robbrecht in Bull. Jard. Bot. Natl. Belg. 48: 7. 1978): Mozambique, Moramballa, December 1858, *J. Kirk s.n.* (K K000347002).

?= *Rosea crassifolia* Klotzsch in Ber. Bekanntm. Verh. Königl. Preuss. Akad. Wiss. Berlin 1853: 502. 1853. – **Neotype (designated here):** [icon] "*Rosea crassifolia* Klotzsch" in Peters, Naturw. Reise Mossambique 6(1): t. 46. 1861.

Robbrecht designated a neotype for *Rosea jasminiflora* as no duplicate material of the specimen cited by Klotzsch could be traced.

As no duplicate material of the Peters collection that Klotzsch cited for *Rosea crassifolia* has been traced, the plate from the account of the *Contortae* by Klotzsch (Klotzsch 1861) in the botany volume of Peters's work on his travels in Mozambique is here designated as the neotype. It seems a reasonable assumption that the illustration was based on the herbarium material seen by Klotzsch when preparing the original description. *Rosea crassifolia* was suggested to be a synonym of *Tricalysia jasminiflora* by Robbrecht (1987) and Bridson (2003).

Warszewiczia Klotzsch in Ber. Bekanntm. Verh. Königl. Preuss. Akad. Wiss. Berlin 1853: 496. 1853. – Lectotype (designated by Pfeiffer, Nomencl. Bot. 2: 1607. 1874): *Warszewiczia coccinea* (Vahl) Klotzsch.

Macrocnemum coccineum Vahl, Symb. Bot. 2: 38, t. 29. 1791 ≡ ***Warszewiczia coccinea*** (Vahl) Klotzsch in Ber. Bekanntm. Verh. Königl. Preuss. Akad. Wiss. Berlin 1853: 497. 1853. – **Lectotype (designated here):** Insula Trinitatis, *J. von Rohr s.n.* (BM BM012557046).

= *Warszewiczia poeppigiana* Klotzsch in Ber. Bekanntm. Verh. Königl. Preuss. Akad. Wiss. Berlin 1853: 497. 1853. – Original material: Amazon River, *Poeppig* (B [destroyed]).

= *Warszewiczia pulcherrima* Klotzsch in Ber. Bekanntm. Verh. Königl. Preuss. Akad. Wiss. Berlin 1853: 497. 1853. – Original material: Veragua, *Warszewicz* (B [destroyed]).

= *Warszewiczia schomburgkiana* Klotzsch in Ber. Bekanntm. Verh. Königl. Preuss. Akad. Wiss. Berlin 1853: 497. 1853. – Original material: British Guiana, *M. R. Schomburgk* (B [destroyed]).

There are five sheets labelled *Macrocnemum coccineum* in the Copenhagen herbarium. However, only two of these are from the herbarium of Martin Vahl. The other three are from Schumacher's herbarium. The Herb. Vahl specimens consist of an inflorescence on one sheet and the base of an inflorescence and a subtending leaf on another. A handwritten asterisk on a paper slip at the cut end of the inflorescence matches one written on the sheet at the top cut end of the other specimen, strongly suggesting that these are contiguous parts of the same gathering, though there is no other annotation to confirm that the two sheets should be treated as a single specimen. While the inflorescence sheet is only annotated on the back with Vahl's species name, the inflorescence-base sheet also states "Dr Ryan est Insula Trinit. no. 5". In the protologue, Vahl stated "In Insula Trinitatis legit Dn. von Rohr". Vahl evidently received specimens from the West Indies from both Julius von Rohr and his friend John Ryan, though there is no mention of Ryan in part 2 of *Symbolae botanicae* (Vahl 1791). Ryan's name does appear in part 3 (Vahl 1794). It

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seems likely therefore that the Ryan specimens in Herb. Vahl do not represent original material of *M. coccineum*, but are specimens acquired later from Ryan. The specimens from Schumacher's herbarium also refer to Ryan or Rohr and Ryan, and probably come from the material Schumacher received from Ryan. The material collected by Rohr in Trindad and sent to Vahl is presumably either now lost or was given by Vahl to others. There is a specimen in BM that is annotated on the reverse "Insula trinitatis. Jul. von Rohr". This was presumably part of the herbarium of Joseph Banks. Banks may have received the specimen directly from Rohr, or via Ryan. As the specimen is a good one and its provenance can be established, I here designate it as lectotype of *M. coccineum*.

There are several Poeppig collections of *Warszewiczia coccinea* in W, and one in BM, but none of these seems to fit the few details given by *Klotzsch* in the protologue of *W. poeppigiana*.

I have not traced duplicate type material of *Warszewiczia pulcherrima* or *W. schomburgkiana*.

Acknowledgements

I am grateful to Stephan Fölske, Uta Mende and Wolf-Hagen Krauth from the Berlin-Brandenburgische Akademie der Wissenschaften for information on the Prussian Academy and its publication. Kaj Vollesen, Ib Friis, Olof Ryding and Hanne Espersen very kindly assisted with various matters relating to Martin Vahl and his collections. Christian Bräuchler (W), Uwe Braun (HAL) and Ranee Prakash (BM) helped in the search for relevant material in their respective herbaria. I also thank H. Walter Lack (B) and an anonymous reviewer for their comments on the manuscript.

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Willdenowia
Open-access online edition bioone.org/journals/willdenowia
Online ISSN 1868-6397 · Print ISSN 0511-9618 · Impact factor 1.500
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