

## NOMENCLATURE

# The Latin name for Assam tea revisited and the further nomenclatural significance of the three editions of Julius Bosse's *Vollständiges Handbuch der Blumengärtnerei* – and contemporary compendia

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**Abstract** Two early validly published names for Assam tea (*Camellia sinensis* var. *assamica* “(Choisy) Kitam.”) are identified: *Thea assamica* Royle ex Hook. 1847 and *T. assamica* Hort. Belg. ex Bosse 1854; an amended synonymy and a neotypification (with D.-W. Zhao) for the name of Assam tea, *C. sinensis* var. *assamica* (Hook.) Steenis, are provided. The three editions (1829–1861) of Bosse's *Vollständiges Handbuch der Blumengärtnerei* are also the neglected places of publication of some plant-names (or their basionyms) in current use; *Grevillea lawrenceana* Bosse (neotype designated here by P.M. Olde) is an earlier name for *G. curviloba* McGill. (Proteaceae); *Hedera algeriensis* (Araliaceae), the name used by Bosse for a now much-cultivated ivy, was first published by Morren in 1853; an early valid, available name for the florist's cineraria (*Senecio hybridus* Bosse) is *Cineraria ×kewensis* Rob. (Compositae), here neotypified (with D.J.N. Hind); the basionym for the well-known garden plant-name, “*Erysimum ×kewense*” (Cruciferae) is identified and neotypified (with D.J.N. Hind), the accepted binomial validated. The currently accepted name for commercial fustic, *Maclura tinctoria* (Moraceae), was first validly published in Loudon's *Hortus Britannicus* (1830).

**Keywords** *Anguloa*; *Aralia*; Assam tea; Bosse; *Camellia*; cineraria; *Clivia*; *Erysimum*; fustic; Gertrude Jekyll; *Grevillea*; *Hedera*; Kew; *Maclura*; *Passiflora*; *Pericallis*; *Salacia*

## ■ INTRODUCTION

When the British moved into Assam (Asom), north-eastern India, at the beginning of the 19th century, they found that the indigenous Singpho (Jingpo) people used the local form of tea (*Camellia sinensis* (L.) Kuntze, Theaceae) to prepare a drink, as had long been done in China (Robinson, 1841: 133–137; Griffith, 1847: 15).

In 1823, Robert Bruce (d. 1824), a merchant, arrived in Assam and, the next year, the local Singpho sent him “several hundred” plants and seeds, some of which Bruce planted, while others reached David Scott (1786–1831), the British governor-general's agent, but Scott's plants died. Scott established that tea was indigenous in “Assam”, growing in the hills and plains to the east of “Rungpore” (today's Sivasagar; the hills, around Dikhow River, are administratively now part of Nagaland), whence (“Dikko Mook”), in June 1825, Scott sent both leaves and seeds to Nathaniel Wallich (Nathan Wolff, 1786–1854) at the Calcutta (Kolkata) botanic garden (Anonymous, 1841).

The following year (Anonymous, 1835), Scott also encountered “wild tea” in Manipur, a state east of modern Assam and south of Nagaland, where he collected more leaves. Wallich duly named them “*Camellia scottiana*” but failed to publish that name in an acceptable way; the Scott material is

preserved in the East India Company Herbarium (K-W) at Royal Botanic Gardens, Kew, England (see below; attached to the herbarium sheet on which they are mounted is a letter showing that the leaves were initially sent to “Mr James Kyd of Calcutta”, a shipbuilder cousin, twice removed, of Robert Kyd, founder of the Calcutta garden). By the time of Wallich's own expedition to Assam in early 1836 (Griffith, 1847: 15), some 30,000 “small plants” had been taken from the wild for cultivation in the Company's plantations.

By then, John Forbes Royle (1798–1858), who had been superintendent of the East India Company's Botanic Garden at Saharunpur (in modern Uttar Pradesh), had returned to England, where he continued to work for the East India Company on economic botany and, from 1837 to 1856, was Professor of Materia Medica at King's College London. In 1838, “a jar of Indo-British Tea from Assam” presented by the East India Company was exhibited at a meeting of the Royal Asiatic Society in London of which Royle was secretary (Anonymous, 1839a). The next year, The Assam Tea Company was registered in London to buy up the East India Company's Assam plantations and ostensibly to promote the cultivation of Assam tea in Assam, but Chinese stock was also being established – all in an effort to reduce the British reliance on tea imports from China itself (Anonymous, 1839b).

## ■ NAMES FOR ASSAM TEA

In 1840, Royle could report that Assam tea was being successfully grown in “hot houses” at the famous nursery of Conrad Loddiges and Sons in Hackney, London, noting that it had leaves much larger than those of Chinese tea (Royle, 1840: 310–311), but he did not give it a Latin name. Loddiges’s 1842 catalogue of “Stove Plants” (see below) listed “*Thea assamica*” for sale (but with no description), the only known surviving copy being marked in ink “1 – 1”, i.e., for sale at a guinea a plant (well over £100 in 2021 money; cocoa plants were offered at two guineas).

On the Continent, a plant of “*Thea assamica*” (also a nomen nudum) was exhibited in March 1844 by the nurseryman “[Jean]. Van Geert, Père” at Ghent (Gand), Belgium (Anonymous, 1844: 71) as one of the “Plantes remarquables et nouvellement introduites”; the year of introduction was given as 1843, with a reference to a Loddiges catalogue, strongly suggesting that the London nursery was likely the source of the Continental material – and the name. Moreover, Heynhold (1846–1847: 726) used the binomial (also nomen nudum), attributing it to “Hort. Angl.” In a report on that Ghent flower show (Bernhardi, 1844: 131), the botanist and nurseryman, Philipp Franz von Siebold is said to have considered it to be a distinct species (though his sale catalogue [Siebold, 1844: 38] of the same year suggests otherwise, as “*T. assamica* HORT...” is there included in the synonymy of *Thea sinensis* var. *macrophylla* Nees).

Nonetheless, the name “*Thea assamica*” was soon in use in European horticulture (e.g., Rev. Hort., ser. 2, 4: 68 and 283. 1845, where it is listed, without description, as one of the novelties offered in the autumn 1845 catalogue of the Jacob-Makoy nursery in Liège, Belgium – this notice repeated in J. Hort. Prat. 3: 284. 1846) and was for sale under that name early next year at Cels’s nursery in Paris (as reported in Blumen-Zeitung 19: col. 131. 1846). The Jacob-Makoy nursery listed it in their 1848 and 1849 catalogues, and later it appeared in other Belgian nursery catalogues such as that of Linden in 1853. By then Loddiges’s could offer plants (as in their 1849 catalogue p. 21) at the reduced price of half a guinea.

The Latin name, “*Thea assamica*”, was therefore in wide currency in Europe from the early 1840s, when, in India, John White Masters (1791–1873), botanist and poet (commemorated in *Camellia mastersia* Griff., i.e., *C. kissii* Wall., as well as *Mastersia* Benth. [Leguminosae]), published an account of “*T. assamica*” with a full description including flowers and fruits (Masters, 1844). Although Masters described the plant (with what would be a validating description) under the name “*Thea Assamica* Masters”, this cannot be considered a valid publication of the name because, as was noted by Cohen Stuart (1919: 259 f.n.; Zhao & al., 2017), its author did not consider Assam tea to be specifically distinct from what is now *C. sinensis*.

**Valid publication of *Thea assamica*.** — In updating files for *Mabberley’s Plant-book* (Mabberley, 2017), it was noted

that Zhao & al. (2017) considered the correct rendering of the name for Assam tea to be *Camellia sinensis* var. *assamica* (Choisy) Kitam. (Theaceae). They argued that the basionym should be *Thea viridis* L. var. *assamica* Choisy 1855, and not “*Thea assamica*”, as thought by earlier authors, because that name “was never validly published”.

In fact, *Thea assamica* was validly published at least twice before 1855 (see literature in formal synonymy below), both without any reference to Masters’s paper (which, because of an erroneous *Index Kewensis* entry has been widely cited): firstly in 1847 with a brief diagnosis by William Jackson Hooker in his *Kew Gardens*, the first public guide to Kew, and, independently, in 1854, with a description in German of a cultivated plant in flower, in the second of the three editions of Julius Bosse’s *Vollständiges Handbuch der Blumengärtnerei*, a work examined by the author when helping fellow Nomenclature and Taxonomy Advisory Group (Royal Horticultural Society, U.K.) member, Jamie Compton, with regard to *Wisteria* names (Compton, 2016).

Hooker attributed the name to Royle, but the earliest link so far found in their correspondence is in a later letter, from Royle to Hooker dated 18 August 1848 (Directors’ Correspondence 54/437, Royal Botanic Gardens, Kew), Royle arguing that *Thea assamica* was indeed a distinct species. That year Jerome Fischer saw *Thea assamica* growing at Kew (as was reported in Berliner Allg. Gartenzeitung 16: 374. 1848), and it was seen there two years later by V. de Motschoulsky (as reported in Bull. Soc. Imp. Naturalistes Moscou 24: 668. 1851). By then the Oxford Botanic Garden was growing small plants of tea including “Assam tea” as listed in Charles Daubeny’s *Oxford Botanic Garden; or a popular guide to the Botanic Garden of Oxford* (p. 26, 1850).

*Gardeners’ chronicle* (1848: 402, 418) had already reported that, outside botanic gardens, Veitch nurseries (London) exhibited a plant of *Thea assamica* at the Royal Botanic Society’s show of 17 June 1848, receiving a bronze medal for a “plant not in bloom”, while *Journal of the Horticultural Society of London* (4: xlix. 1849) mentioned *T. assamica* as a novelty grown in the garden of the Horticultural Society of London and exhibited in March 1849; perhaps because of these latter two instances, the binomial has sometimes, e.g., by Unger (in Sitzungsber. Kaiserl. Akad. Wiss. Wien., Math.-Naturwiss. Cl. 24: 411. 1857, as ‘*asamica*’), been associated with John Lindley (1799–1865), who was editor of *Gardeners’ chronicle* and Assistant Secretary of the Society at the time. By 1850, the name was also being rendered as “*T. assamensis*” in England (as by W.H. Baxter in Loudon’s Hort. Brit., ed. 3: 648. 1850).

Bosse’s 1854 independent description (with apparently the first validation of the name on the Continent, perhaps because it had not previously flowered elsewhere in Europe), citing “Hort. Belg.”, was evidently drawn up from a flowering plant grown in Germany, reportedly from Belgian nursery stock (ultimately undoubtedly originating from England, probably from Loddiges). Bosse’s book (see below) is a careful compilation of all plants in cultivation in northern Europe, complete with descriptions. These were clearly very often made

from living plants, as there are details of their habit, flowering-times in Europe, colours and scents, all features not evident from herbarium specimens. No type specimens are known for the many new taxa Bosse described (nor vouchers for the application of older names to other living plants he treated).

***Thea viridis* var. *assamica* and *Camellia sinensis* var. *assamica*.** — John McNeill (E) kindly commented (pers. comm., 28 Jun 2020), “Choisy [1855] clearly equated his *Thea viridis* γ *assamica* with that known in gardens under the name of *Thea assamica*. The fact that he was almost certainly unaware that this name had been validly published [...] previously – from garden sources [as *Thea assamica* Royle ex Hook. 1847 or Hort. Belg. ex Bosse 1854] is no barrier to Choisy’s name being treated as a new combination [Art. 41.3].” This is apparently the earliest available epithet at varietal level for the name of Assam tea; if an even earlier one is ever identified it would be wiser to propose rejection of it in favour of the well-established var. *assamica*.

In making the new combination, *Camellia sinensis* var. *assamica*, Van Steenis in 1949 (see below; also Jacobs, 1972 for the importance of Van Steenis’s pocket Flora in general) cited “*Thea assamica* Mast.” as basionym; although Masters had not accepted that name, it had been attributed to Masters and with that attribution had been validated (Art. 38.11) by later authors, e.g., Hegi (Ill. Fl. Mitt.-Eur. 5(1): 495. 1925) and perhaps earlier ones. John McNeill concurs (pers. comm., 15 Jul 2020) and points out that Art. 41.4 applies here, so that the basionym of Van Steenis’s variety is the first validation of the Royle/Loddiges binomial, namely *T. assamica* Royle ex Hook. 1847.

**The name for Assam tea and its typification.** — According to Nicholas Hind (pers. comms., Sep 2020), there is no Royle specimen in Hooker’s herbarium (K), while Royle’s own herbarium (LIV) seems to have no germane material either (Donna Young [LIV], pers. comm., 19 Aug 2020). However, at Kew, from W.J. Hooker’s own herbarium, is a sheet annotated “Griffith”, in W.J. Hooker’s hand, and “*Thea assamica* Gr[iffith].” in J.D. Hooker’s. William Griffith (1810–1845) was an East India Company surgeon who collected in Assam, with Wallich, as a member of the Tea Committee expedition of 1835–1836 (Griffith, 1847: ii, 14). The sheet with Griffith’s specimen also bears a label attributed to Masters with a locality that has been interpreted as “Chundoo” (Zhao & al., 2017), though undoubtedly that is the “Cheriedoo” or “Chiridoo” tea estate (Bruce, 1839; or “Cheridoo” – Bruce, 1841: 138; Masters, 1844: 67), nowadays the estate of Cherideo Purbat Assam Tea in Charaideo District, Assam.

This sheet has been designated lectotype for “var. *assamica* Choisy” (Zhao & al., 2017). However, it appears to be a heterogenous collection, one of the two sprigs being William Griffith’s flowering specimen (likely an isolectotype of *C. theifera* Griff. – see below), that to the left possibly attributable to Masters. In the interests of continuity, it is, however, proposed to designate from this sheet the flowering sprig to the right as neotype of *T. assamica* Royle ex Hook., the left specimen now being given a different barcode (K000374229).

It is possible that the neotype was gathered “in a deep jungle to the south of the village [‘Kujoo Ghat’], and at a distance of about three miles from it [across the ‘Deboru’, i.e., Dibru River, likely, then, south of today’s Dibru-Saikhowa National Park]” on 16 January 1836, or nearby, a few days later (Griffith, 1847: 14–18).

The formal synonymy with corrected citations is therefore now as follows (an asterisk indicates a correction or addition to IPNI and other databases):

\****Camellia sinensis* (L.) Kuntze**, Um die Erde: 500. 1881 (‘*chinensis*’) ≡ *Thea sinensis* L., Sp. Pl. 1: 515. 1753 – Lectotype (designated by Bartholomew in Regnum Veg. 127: 93. 1993): [illustration] “*Tsja*” in Kämpfer, Amoen. Exot. Fasc.: 606 [t.]. 1712.

\****Camellia sinensis* var. *assamica* (Hook.) Steenis**, Fl. Scholen Indon.: 280. 1949 (as ‘(Mast.) [Steenis]’) [Kitam. in Acta Phytotax. Geobot. 14: 59. 1950, isonym (as ‘(Pierre) Kitam.’)] ≡ \**Thea assamica* Royle ex Hook., Kew Gardens: 28. 1847 ≡ \**T. viridis* var. *assamica* (Hook.) Choisy in Mém. Soc. Phys. Genève 14(1): 156. 1855 ≡ \**T. sinensis* var. *assamica* (Hook.) Pierre, Fl. Forest. Cochinch.: t. 114, fig. D<sup>1</sup>, D<sup>2</sup>. 1887 (‘*chinensis*’; as ‘(Choisy) Pierre’), nom. illeg., non Guilf. 1883, ≡ \**C. theifera* var. *assamica* (Hook.) Greshoff in Meded. Lands Plantentuin 10: 24. 1893 (as ‘(J.W.Mast.)’ Greshoff) ≡ \**C. thea* var. *assamica* (Hook.) Boerl., Cat. Pl. Phan.: 94. 1901 (as ‘(Pierre)’ Boerl.) ≡ \**C. assamica* (Hook.) C.D. Darl & Jan. Ammal, Chromos. Atlas Cult. Pl.: 119. 1945 [Hung T. Chang in Fl. Reipubl. Sin. 49(3): 133. 1998, isonym] – **Neotype (designated here by D.W. Zhao & D.J. Mabberley)**: India, Assam [Upper Assam, Jan–Feb 1836], *W. Griffith s.n.* (K barcode K000939670!; isoneotype?: Upper Assam [Jan–Feb 1836], *W. Griffith s.n.*, TCD barcode TCD0017977!).

= \**Camellia theifera* Griff. in Trans. Agric. Soc. India 5: t. C. 1838 ≡ \**Thea sinensis* var. *assamica* Guilf., Cat. Pl. Melbourne: 158, 189. 1883 (‘*chinensis*’), non Pierre 1887, – Lectotype (designated by Zhao & al. in Taxon 66: 1453. 2017): India, Assam, “Upper Assam”, [Jan–Feb 1836], *W. Griffith s.n.* (TCD barcode TCD0017977; isolectotype?: K barcode K000939670).

= \**Thea assamica* Hort. Belg. ex Bosse, Vollst. Handb. Bl.-Gärtn., ed. 2, 5: 404. 1854, nom. illeg., non Royle ex Hook. 1847, – Type: Germany, cultivated (not preserved?).

– “*Camellia scottiana* Wall.”, Numer. List: No. 3668. 1831 – Manipur (= India, Manipur), [1826], *D. Scott s.n.*, nom. nud. (cf. Thiselton Dyer in J. Bot. (London) 10: 219. 1872).

– “*Thea assamica* G.Lodd.”, Stove Plants Loddiges: 20. 1842 & 1844, nom. nud.; “Lodd. ex Jean van Geert sen.” in 76<sup>e</sup> Expos. Soc. Roy. Agric. Bot. Gand: 71, No. 5093. 1844, nom. nud.; “G.Lodd.”, Cat. Pl. 1849: 21. 1849, nom. nud.

– \*“(Thea assamica) J.W.Mast.” in J. Agric. Hort. Soc. India 3: 63. 1844 (Art. 36.1).

*Notes.* – The copies of Loddiges’s catalogues cited here are those in the firm’s master set now in the library of the



Society of Antiquaries, London, and the author is grateful to Becky Loughhead for examining them. It is possible that *Thea assamica* Royle ex Hook. could have been validated by Royle or others in an even earlier, as yet unrecognised, publication, as could *T. assamica* Hort. Belg. ex Bosse. The binomial has also been attributed to Griffith, as by J.D. Hooker on the type sheet (see Zhao & al., 2017: fig. 1) as it was by Romburgh (in Treub, Bot. Gart. Lands Plantentuin: 404. 1893) and Koorders & Valetton (Bijdr. Boomsort. Java 3: 209. 1896). *Thea sinensis* var. *assamica* was also in use in nurserymen's catalogues (e.g., Laurentius, Gewächshaus-Pflanzen 1863: 40. 1863; 1864: 56. 1864; 1865: 54. 1865, nom. nud., before Guilfoyle 1883).

As this currently recognised variety of *Camellia sinensis* is said to be allopatric with respect to the typical variety (Zhao & al., 2017: 1447), it would seem, at first sight, that subspecific rank for this geographical race might be more appropriate in any case, though, as the “typical” variety/subspecies comprises anciently cultivated plants, a cultivar group classification may be even more useful; for abandoning “the so-called varieties of botanists”, see Burkill (1935: 419).

## ■ JULIUS BOSSE'S VOLLSTÄNDIGES HANDBUCH DER BLUMENGÄRTNEREI

Julius Friedrich Wilhelm Bosse (1788–1864), the first to publish a description of Assam tea flowering in Europe, was the only son of court gardener Carl Ferdinand Bosse (1755–1793), succeeded by his brother, Julius's uncle (and stepfather), Christian Ludwig Bosse (1771–1832), in his role at the Schlossgarten Oldenburg (now in Lower Saxony), Germany (Pühl, 1988). Julius was trained as a horticultural apprentice in the Royal Botanic Garden in Berlin under Christoph Otto and attended botany classes given there by Carl Willdenow. After working in other German gardens, he returned to Oldenburg following the end of the French occupation in 1814 and took on his stepfather's position. The French had severely damaged the gardens, which Bosse restored in the English style, which persists today. Every year from 1825, rather like Friedrich Dietrich (1768–1850) under the auspices of Karl August Grand Duke of Sachsen-Weimar-Eisenach and Goethe (Mabberley, 2020), Bosse travelled widely in northern Europe, including Russia and Britain. He remained “Hofgärtner” in Oldenburg until 1856.

Bosse wrote a number of botanico-horticultural papers in German and British periodicals, but his masterwork was the very comprehensive *Vollständiges Handbuch der Blumengärtnererei*, perhaps inspired by the alphabetical order of Dietrich's *Vollständiges Lexicon der Gärtnerei und Botanik; oder Alphabetische Beschreibung vom Bau, Wartung und Nutzen aller in- und ausländischen, ökonomischen, officinellen und zur Zierde dienenden Gewächse* (1802–1810, 10 vols.; Nachträge, 10 vols., 1815–1821; neuer Nachtrag, 10 vols., 1825–1840; Mabberley, 2020). Bosse's book went through three editions: 1829 – three volumes; 1840–1854 – five volumes; 1859–1861 – three volumes. Popular, condensed, versions in a single

volume, *Der Blumenfreund*, were issued in 1831 and 1850. Besides providing ingeniously abbreviated descriptions made from living plants, with the entries in handy alphabetical order like Dietrich's, Bosse's book has, among many other things, helpful tips on the pronunciation of names commemorating people, in particular those named after British figures.

The COVID-19 lockdown in Australia provided the uninterrupted opportunity for the author to make an examination of all three editions of Bosse's book, which yielded further disregarded names (see Mabberley, 2020 for discussion of likely prejudiced and snobbish reasons behind a similar German case), which are being sent to IPNI/POWO. Five of these (see below) provide earlier uses for names (or basionyms) in current use, thereby making those names more secure (*Hedera algeriensis* even more so in being first published in *La Belgique horticole* before Bosse); none of the rest of Bosse's names upsets current nomenclature, though exposure of these names may help prevent the inadvertent coining of junior homonyms (cf. Mabberley, 1983).

The germane names, besides *Thea assamica* (see above), are as follows:

1. \**Anguloa virginalis* Linden ex Bosse, Vollst. Handb. Bl.-Gärtn., ed. 2, 5: 32. 1854 [Williams, Orch.-Grow. Man., ed. 2: 55. 1862, isonym] (Orchidaceae) – Type: Germany, cultivated (not preserved?).
2. \**Aralia parasitica* (D. Don) Buch.-Ham. ex Bosse, Vollst. Handb. Bl.-Gärtn., ed. 2, 5: 37. 1854 [Wen in Brittonia 45: 53. 1993, isonym] (Araliaceae) ≡ *Hedera parasitica* D. Don, Prodr. Fl. Nepal.: 188. 1825 – Holotype: Nepal. Kathmandu, near Narayanhiti, 7 Nov 1802, *F. Buchanan-Hamilton s.n.* (BM barcode BM001125060!).  
*Notes.* – A name now secured by 139 years. Mark Watson (E) kindly confirmed the typification and (pers. comm., 2 Feb 2021) pointed out that the “locality” was where Buchanan-Hamilton was “based in 1802/3. Plants were brought in from locations around the Kathmandu Valley and maybe beyond, and all labelled Narayanhiti”.
3. \**Grevillea lawrenceana* Bosse, Vollst. Handb. Bl.-Gärtn., ed. 2, 5: 202. 1854 (Proteaceae) – **Neotype (designated here by P.M. Olde):** Australia. Western Australia, 2 km N of Bullsbrook, 9 Sep 1986, *P.M. Olde 86/283* (NSW barcode NSW279546!).  
= *Grevillea vestita* var. *angustata* Meisn. in Lehmann, Pl. Preiss. 1: 549. 1845 ≡ *Grevillea curviloba* McGill., New Names Grevillea: 4. 1986 – Lectotype (designated by McGillivray & Makinson, Grevillea: 412. 1993): Australia. Western Australia, “Swan-River”, 1839, *J. Drummond s.n.* (G-DC barcode G00327728!; isolectotype: CGE barcode 13287!), **syn. nov.**  
– “*Manglesia lawrenceana* Low” in Gard. Chron. [1]: 394. 1841, nom. nud.; Heynh., Alph. Aufz. Gew.: 385. 1846, nom. nud.  
– “*Grevillea lawrenceana* P.N. Don” in Donn, Hortus. Cantabrig., ed. 13: 65. 1845, nom. nud.

– “*Grevillea lawrenceana* Hort. Angl. ex Heynh.,” Alph. Aufz. Gew.: 274. 1846, nom. nud.

*Notes* [with P.M. Olde]. – Bosse here refers to his previous volume (4, 1849: 330), where the name is a nomen nudum, but attributed to “Hort. Angl.” “*Manglesia lawrenceana*” was in cultivation in England, most probably raised from seeds sent to James Mangles from Australia by one of his collectors, James Drummond (Mabberley, 2019: 266, 318) in 1839. In an 1841 advertisement in *Gardeners’ chronicle* it was listed for sale at the Clapton Nursery by Hugh Low (1793–1863), who in 1831 had taken over this business, John Bain Mackay’s London nursery, famed for its new plants from what is now Western Australia. The plant-name commemorates the ambitious English plantswoman, Louisa Lawrence, née Senior (1803–1855), who had an extensive garden at Ealing Park, Middlesex, where her skilled gardeners, who were the first in Britain to flower the spectacular *Amherstia nobilis* Wall. (Leguminosae, Myanmar), grew many Australian novelties from the Clapton Nursery. Meisner transferred *Manglesia* to *Grevillea* in Lehmann (1845), and in Candolle (1856), added “*Manglesia lawrenceana* Hort.” to the synonymy of his *G. vestita* var. *angustata*, thus clearly establishing its identity. Apparently, Meisner did not recognise the significance of Bosse’s work based on living material or disregarded it (cf. Mabberley, 2020), so that McGillivray renamed, in effect unnecessarily, Bosse’s distinctive species – as *Grevillea curviloba*.

4. \**Hedera algeriensis* Rantonnet ex C.Morren in Belgique Hort. 3: 173. 1853 (Araliaceae) – Type: France. Var, Hyères, cultivated from Algerian material collected by *J. Auzende* (not preserved?).

*Notes*. – Morren described the introduction of this now commonly grown, large-leaved, European house-plant (though usually the variegated ‘Gloire de Marengo’ is seen) to France from Algeria by Joseph Auzende (1802–1876) of the Jardin Botanique de la Marine in Toulon. In 1832 and 1835, Auzende found it growing commonly around Algiers, but by 1840 it had become rare through clearing of vegetation there. It was propagated in Hyères on the French Riviera by Barthélemy Rantonnet (1797–1871), French nurseryman and plantsman, who coined its Latin name and offered it for sale. The validity of the publication of the binomial by Morren has been confirmed by Werner Greuter (pers. comm., 4 Mar 2020); Bosse, Vollst. Handb. Bl.-Gärtn., ed. 3, 2: 330. 1860, attributed it to “Hort.”

5. \**Imantophyllum ×cyrtanthiflorum* Van Houtte ex Bosse, Vollst. Handb. Bl.-Gärtn., ed. 3, 3: 830. 1861 (*Imantophyllum*) ≡ \**Clivia ×cyrtanthiflora* (Bosse) Voss (Amaryllidaceae) – Type: Germany, cultivated (not preserved?).

*Notes*. – This is the widely grown hybrid between *Clivia miniata* (Lindl.) Verschaff. and *C. nobilis* Lindl., raised by Charles Raes of Van Houtte’s nursery in Ghent (Gand). The name may of course have been validated earlier in a Van Houtte nursery catalogue.

6. \**Passiflora schlimiana* Linden ex Bosse, Vollst. Handb. Bl.-Gärtn., ed. 2, 5: 443. 1854 (*schlimmiana*) (Passifloraceae) – Type: Germany, cultivated (not preserved?).

*Note*. – It has not been possible to locate a copy of Linden’s 1854 nursery catalogue (cited by Bosse), where there could possibly be a validating description.

7. \**Senecio ×hybridus* Bosse, Vollst. Handb. Bl.-Gärtn., ed. 2, 3: 375. 1842 ≡ *Cineraria ×hybrida* Willd., Enum. Pl.: 893. 1809, non (L.) Bernh. 1800 (≡ *Petasites hybridus* (L.) G.Gaertn. & al.) ≡ *Pericallis ×hybrida* B.Nord. in Opera Bot. 44: 21. 1978 (Compositae) – Type: Germany [cultivated], Berlin, Schöneberg, Botanischer Garten (now Heinrich-von-Kleist-Park), in temperate glasshouse – not found.

*Notes* [with D.J.N. Hind]. – In making his explicit nomen novum, *Pericallis hybrida*, Nordenstam cited in synonymy *Senecio hybridus* Hort. ex Regel 1859, but considered that a nomen nudum and neglected the earlier *S. ×hybridus* Bosse, which hybrid has *P. cruenta* (L’Her.) Bolle and other species in its ancestry. Moreover, he seems to have disregarded the early names of the “Kew Cinerarias”, which were backcrosses between *P. ×hybrida* and *P. cruenta*. These were distributed by Suttons of Reading, England and became known as *Cineraria stellata*:

\**Cineraria ×stellata* Sutton & Sons ex Southron in Garden (London 1871–1927) 54: 304, t. 1192. 1898 – Type: one of the colour forms in Southron’s t. 1192 would be an appropriate lectotype.

*Note*. – This name is still widely used in the horticultural trade (as is ‘*Senecio stellata* [sic]’), but was in effect a renaming of:

\**Cineraria ×kewensis* Rob. in Garden (London 1871–1927) 51: 146. 1897 ≡ \**Senecio ×kewensis* (Rob.) W.Watson in Bull. Misc. Inform. Kew 1910: 327. 1910 – **Neotype (designated here by D.J.N. Hind and D.J. Mabberley):** United Kingdom [cultivated]. Surrey, Royal Botanic Gardens Kew, “[in black ink] Hort. Kew., April 1900”, “[small paper label, in pencil] *Senecio Kewensis* (*S. cruentus* (type) × Garden *Cineraria*)”, “[small capsule on sheet, in pencil] flowers purple!”, *s.coll.*, *s.n.* (K barcode K000843726!).

*Notes*. – William Robinson discussed plants growing at Kew in “No. 4 greenhouse”; although no herbarium specimen with that exact provenance is preserved at K, a contemporary Kew-grown specimen is chosen as neotype. This is the florist’s cineraria, an important pot-plant in temperate countries, so synantherologists may wish to conserve Nordenstam’s name as there may well be even earlier valid, available names in the literature. We are indebted to Nick Turland (B) for his view on Nordenstam’s binomial. The attribution of *S. ×kewensis* to William Watson as the likely author is that he is listed at the end of the volume, in “Appendix IV” (“List of Staffs of the Royal Botanic Gardens, Kew, and of Botanical Departments, Establishments and Officers at Home, and in India and the

Colonies, in Correspondence with Kew”) as “Curator of the Gardens - - William Watson A.L.S.” (p. 88).

It may seem odd that plants commemorating Royal Botanic Gardens, Kew (even some in Kew publications) did not appear in *Index Kewensis* and therefore databases ultimately based on it, but hybrids were deliberately omitted (see D. Prain’s “Monitum” of *Index Kewensis* Suppl. 4. 1913, “Nomina hybridarum arte operatorum negleximus”), which is why only very recently has the name for the garden freesia, *Freesia ×kewensis* J.Wright bis (Mabberley, 2017: 372; 2018), for example, been pinpointed and listed (see also Mabberley [1990] for many other examples of non-hybrid names coined even by Kew staff, yet not in *Index Kewensis*). Another such “Kew” example published in *The Garden* is:

\**Cheiranthus ×kewensis* Jekyll & E.T.Cook in Garden (London 1871–1927) 59: 178. 1901 (Cruciferae).

= \**Cheiranthus ×hybridus* Jekyll & E.T.Cook in Garden (London 1871–1927) 59: 178. 1901, non *Erysimum ×hybridum* Weber, Pl. Min. Cogn. Decuria: 6. 1784 [allegedly *E. cheiranthoides* L. × *C. cheiri* L.].

Note. – This is the familiar garden hybrid, *E. bicolor* (Hornem.) DC. (*C. mutabilis* L.Hér.) × *E. cheiri* (L.) Crantz, known as “*Erysimum ×kewense* Hort.”, which, like *Cineraria ×kewensis*, was a backcross, made in 1899 between *Cheiranthus ×hybridus* and *C. cheiri*, but the name in current use seems never to have been validly published. With the basionym here recognised for the first time, it is now possible to propose a new combination to rectify matters:

***Erysimum ×kewense* (Jekyll & E.T.Cook) Mabb., comb. nov.**

≡ *Cheiranthus ×kewensis* Jekyll & E.T.Cook in Garden (London 1871–1927) 59: 178. 1901 – **Neotype (designated here by D.J. Mabberley and D.J.N. Hind):** United Kingdom [cultivated]. Surrey, Royal Botanic Gardens Kew, “*Cheiranthus Kewensis* (*C. mutabilis* ♀ × *C. Cheiri*) Hort. Kew - 1899. Flowers yellow changing to rosy-mauve. March 1900”, *s.coll., s.n.* (K barcode K000374228!).

Notes. – Jekyll and Cook noted that “The original plant [...] is in the Cape House” at Kew, though no specimen so localised is preserved at K; moreover, they did not provide a figure. Therefore, a contemporary Kew-grown specimen is chosen as neotype. In 1901, the renowned horticulturist, Gertrude Jekyll (1843–1932), was one of the editors (the other being Ernest Thomas Cook, 1870–1915) of *The Garden* and these two *Cheiranthus* binomials seem to be the first recorded as being attributable to her.

## ■ CONTEMPORARY BOTANICAL AND HORTICULTURAL COMPENDIA

It is very regrettable that Bosse’s German compendia and other Central European publications, like those of Friedrich Dietrich (Mabberley, 2020), did not receive the international

botanical attention they warranted. A key figure in many of similar works in Britain, more thoroughly taken into *Index Kewensis* etc., was John Lindley, one of the most prolific botanical authors in the 19th century – and a man who had to address the debts run up by his father (Stearn, 1999). One way he did this was by writing successful, popular books on botany and horticulture, besides editing *Edwards’s botanical register* and then *Gardeners’ chronicle* (see Mabberley, 2015). He was a major contributor to popular publications such as the *Penny Cyclopaedia*, was the scientific author of Loudon’s monumental *Encyclopaedia of plants* (1829), and worked with Joseph Paxton on a number of projects, notably Paxton’s (1840) *Pocket botanical dictionary*.

Although in content rather similar to that covered in Loudon’s *Encyclopaedia* (editions up to 1855, this last with George Don), Paxton’s dictionary was skewed to the horticultural merits of plants and was therefore the natural successor to George Don’s incomplete attempt to cover all known plants, *A general system of gardening* (1831–1837), explicitly based on Philip Miller’s *Gardeners dictionary* (see below), and Don’s work in Loudon’s *Hortus Britannicus* (Loudon, 1830; later editions in 1832 and 1839, supplement by W.H. Baxter in 1850). It, like them, was therefore in competition with Robert Sweet’s *Hortus Britannicus* (three editions, 1826, 1830, 1839), itself a successor to Sweet’s own *Hortus suburbanus Londinensis* (1818).

All these books relied on William Townsend Aiton’s *Hortus Kewensis* (five volumes, 1810–1813), a revision by Jonas Dryander and Robert Brown of Aiton’s father’s *Hortus Kewensis* (three volumes, 1789, that largely by Daniel Solander) and ultimately, therefore, Miller’s *Gardeners dictionary* (editions from 1731), which was appearing in fresh editions until at least 1834, when Allan Cunningham was involved in updating it (Mabberley, 2019: 268).

**Paxton’s *Pocket botanical dictionary*.** — In the course of examining those works in connection with writing the first edition of *Mabberley’s Plant-book*, published in 1987, with a view to expunging as many as possible imprecise “Hort.” authorities after accepted binomials, it was found useful to list overlooked novelties, some being names in current use, found in Samuel Hereman’s edition (1868) of *Paxton’s botanical dictionary* as well as the 1849 supplement to the first edition (Mabberley, 1983). Until now, however, consideration has not been given to the first edition itself, in which Paxton was aided by Lindley in a book clearly heavily reliant on the 1839 editions of both Loudon’s *Hortus Britannicus* and Sweet’s *Hortus Britannicus*.

According to *Bent’s monthly literary advertiser* (7: 126, 131 et seqq. 1840), Paxton’s first edition, *The pocket botanical dictionary* (p. ix dated July 1840) was likely issued between 6 July and 6 August 1840, but it could have been delayed, though it was certainly published by 6 September, i.e., before the first volume of Heynhold’s *Nomenclator botanicus hortensis* (27 Sep–3 Oct 1840) and at least some of the first parts of the first volume of the second edition of Steudel’s *Nomenclator* (Aug–Nov 1840).

Examination of the minute print of Paxton’s book reveals a further handful of disregarded names, which are being sent



to IPNI/POWO. One of these and a second, first validated in Loudon's *Hortus Britannicus* (see below), provide earlier uses for currently accepted names, thereby making those names more secure, whilst none of the rest upsets current nomenclature – though their listing may again also help prevent the inadvertent coining of junior homonyms (cf. Mabberley, 1983).

The germane names are:

1. \**Maclura tinctoria* (L.) D. Don ex G. Don in Loudon, Hort. Brit.: 380. 1830 [Paxton, Pocket Bot. Dict.: 194. 1840 isonym; Steud., Nomencl. Bot., ed. 2, 2: 87. 1841, isonym] (Moraceae) ≡ *Morus tinctoria* L., Sp. Pl. 2: 986. 1753 – Lectotype (designated by Kaastra in Acta Bot. Neerl. 21: 661. 1972): [illustration] “*Morus fructu viridi, ligno sulphureo tinctorio*” in Sloane, Voy. Jamaica 2: t. 158, fig. 1. 1725.  
Note. – This is the name of commercial fustic.
2. \**Salacia pyriformis* (Sabine) Paxton, Pocket Bot. Dict.: 277. 1840 [Steud., Nomencl. Bot., ed. 2, 2: 492. 1841, isonym] (Celastraceae) ≡ \**Tonsellea pyriformis* Sabine in Trans. Hort. Soc. 5: 459. 1824 – Holotype: Sierra Leone, *G. Don s.n.* (BM barcode BM000838696!).

## ■ AUTHOR CONTRIBUTION

Except where indicated in Notes in the text, the paper is the work of the author.

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