

A COMMENTARY ON THE *CINNAMOMUM* AND *CAMPHORA* (LAURACEAE) TYPES OF ATHANASE DE LUKMANOFF

PAUL ORMEROD¹

Abstract. Notes are supplied on the types of the species and varieties proposed in *Cinnamomum* and *Camphora* (Lauraceae) by Athanase de Lukmanoff. Four new combinations and one new name are proposed: viz. *Camphora blandfordii*, *C. camphorata*, *C. glaucescens*, *Cinnamomum cubittii*, and *Timonius pedunculatus*.

Keywords: *Cinnamomum*, *Camphora*, *Timonius*, types, lectotypes, Lukmanoff

In 1878, Athanase de Lukmanoff (1825–1890) published a small monograph of the genera *Cinnamomum* and *Camphora* using such characters as leaf shape and venation, fragrance of the dried material, and length of the inflorescence. These characters are helpful to some degree but must be supplemented with examination of the leaf surface and the type of pubescence present, floral structure, and fruit. Lukmanoff based his studies on dried material in the Paris herbarium, along with living specimens he encountered in various European gardens. He donated his personal herbarium to Paris on 4 April 1878.

Lukmanoff's monograph was overlooked until it was included in Supplement 6 of Index Kewensis, published in 1926. Here, two major errors occurred. First, Lukmanoff's monograph was credited to the year 1889. It would not be until Doweld (2017), who showed that February 1878 was the correct publication date. The second error occurred when all of Lukmanoff's varieties were treated as species, thus creating an unnecessary plethora of names.

Lukmanoff's taxa have, for the most part, been ignored in regional treatments (e.g., Borneo, Soh, 2011), or scarcely mentioned in regional synopses (e.g., India, Geethakumary et al., 2021; Sri Lanka, Kostermans, 1995). Part of the reason for this is that many of Lukmanoff's types have not been identified in the Paris herbarium, and, thus, authors have been reluctant to discuss obscure names.

This paper is an attempt to identify the types of Lukmanoff's taxa where possible. It is, however, evident that a number of these types are no longer present in Paris (Deroin, pers. comm.). Lukmanoff's ways of citing type data often also clouds the identity of the material he studied. For example, he often credits the distributing institution or person as the collector, rather than the actual collector. Sometimes it appears that he has just guessed the origin of a collection. Nevertheless, Lukmanoff did give measurements and illustrated the leaves of every taxon he described.

Cinnamomum Schaeff., Bot. Exped.: 74. 1760 *nom. cons.*
Type species: *Laurus cinnamomum* L. (= *Cinnamomum verum* J. Presl).

This genus is well-known as the source of the spice cinnamon. It consists of around 220 species (excluding *Camphora* and Neotropical taxa) distributed from India and Sri Lanka to Fiji, south to eastern Australia.

Cinnamomum africanum Lukman., Nomencl. Icon. Cannel.: 8. 1878.

TYPE: SAO TOME and PRINCIPE. Prince's Island [= Principe], 1861, *G. Mann 1132* (Lectotype, here designated: P [01752534], image seen; Isolectotype: K [002235073], image seen).

The original type citation only referred to Tropical Africa, ex Kew. The proposed lectotype has a West Tropical Africa label and was distributed from Kew. It has been identified as *C. zeylanicum* Blume (= *C. verum* J. Presl) in Paris.

Cinnamomum alatum Lukman., Nomencl. Icon. Cannel.: 16. 1878.

TYPE: JAPAN [as "China"]. Loo-Choo Islands [= Ryukyu Islands], U.S. North Pacific Exploring Expedition, 1853–1856, *C. Wright 253* (Lectotype, here designated: P [01978414], image seen; Isolectotypes: GH [02222270], US [61488], images seen).

The original type citation referred to China, Loo-Choo Islands, collected by Asa Gray. Gray did not travel to Japan, but in 1859 distributed specimens collected there by Wright. The winged leaf base depicted by Lukmanoff is, in my opinion, a misinterpretation and not a real character. In Paris, the specimen is found under the unpublished name *C. zollingeri* (Lukman.) Kosterm. (Basionym: *Camphora zollingeri* Lukman.). This is not to be confused with *Cinnamomum zollingeri* (Lukman.) A.W. Hill (Basionym: *Cinnamomum zeylanicum* Blume var. *zollingeri* Lukman.). In more recent literature (e.g., Li et al., 2007), the name *Cinnamomum japonicum* Siebold (*nom. illeg.* because it included the available name *Laurus pedunculata* Thunb., see Addendum under *Timonius*) has been used for *C. zollingeri* (Lukman.) Kosterm. On POWO, the next valid available name, *C. insularimontanum* Hayata, has been taken, but this is predated by *C. alatum* by 35 years. Thus, *Cinnamomum alatum* is the correct name in *Cinnamomum* for this taxon.

I wish to thank herbarium curators and staff at A, BM, BO, C, CAL, CGE, FI, GH, K, LY, M, MEL, P, PDA, and UPS for their help in searching for and arranging the scanning of specimens. Wise advice from Rubiaceae specialists Junhao Chen, Steve Darwin, Pui Khat Hoo, Charlotte Taylor, and Khoon Meng Wong was greatly appreciated.

¹P.O. Box 8210, Cairns 4870, Queensland, Australia; wsandave1@bigpond.com

Harvard Papers in Botany, Vol. 29, No. 1, 2024, pp. 121–139.

© President and Fellows of Harvard College, 2024

ISSN: 1938-2944, DOI: 10.3100/hpib.v29iss1.2024.n14, Published online: 30 June 2024

Cinnamomum albiflorum Nees, in Wallich, Pl. Asiat. Rar. 2: 75. 1831 *nom. illeg.* (cites the available name *Laurus soncaurium* Buch.-Ham. in synonymy).

This name, as applied by earlier authors, is now considered a synonym of *C. tamala* (Buch.-Ham.) T. Nees & C.H. Eberm. As noted above, *C. albiflorum* included *Laurus soncaurium* in its synonymy, so in reality the name is rather a homotypic synonym of *Cinnamomum bejolghota* (Buch.-Ham.) Sweet. Three varieties were proposed under *C. albiflorum* by Lukmanoff, and all are considered to be synonyms of *C. tamala*. However, *C. albiflorum* var. *zwartzii* is considered here to be a synonym of *C. burmannii* (Nees & T. Nees) Blume, a taxon that can have superficially similar leaf venation to *C. tamala*.

Lukmanoff cited a specimen (India, Saharanpour, *Hooker*) as representing typical *C. albiflorum*. This collection is extant in Paris (P 01748415, sub *C. soncaurium*). The label shows it was cultivated in Saharanpore (= Saharanpur), India, and was collected by T. Thomson. The sheet was distributed by J. D. Hooker and T. Thomson from Kew. The specimen is representative of *C. tamala*.

var. *lindleyi* Lukman., Nomencl. Icon. Cannel.: 10. 1878.

TYPE: INDIA. Cult., *J. D. Hooker s.n.* (Holotype: not found).

Homotypic synonym: *Cinnamomum lindleyi* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

The type locality is ambiguous, but the plant is likely one cultivated in Calcutta Botanic Gardens.

var. *veitchii* Lukman., Nomencl. Icon. Cannel.: 10. 1878.

TYPE: INDIA. Kumaon, Kupkot, 3000 ft [915 m], 1843, *R. Strachey & J. E. Winterbottom 1* (Lectotype, here designated: P [01748416], image seen).

Homotypic synonym: *Cinnamomum veitchii* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

The specimen chosen as the lectotype was originally identified as *C. albiflorum*, and Lukmanoff likely saw it under this name. Lukmanoff cites the locality as Himalaya, Kumaon, Kupkot, *Strachey*. Kostermans identified the specimen as *C. soncaurium* (Buch.-Ham.) T. Nees & C.H. Eberm., now considered a synonym of *C. bejolghota* (Buch.-Ham.) Sweet. However, the material is clearly not the latter species and is probably best included in *C. tamala*. *Cinnamomum stracheyi* Lukman. was also based on a *Strachey & Winterbottom* collection from the same region.

var. *zwartzii* Lukman., Nomencl. Icon. Cannel.: 10. 1878.

TYPE: WITHOUT ORIGIN [see notes]. Cultivated, *J. D. Hooker s.n.* (Lectotype, here designated: P [01748521], image seen; Isolectotype: L [1791581], image seen).

Homotypic synonym: *Cinnamomum zwartzii* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926

Lukmanoff cited the type data as “Indes. Cultive a Batavia, *Hooker*.” From this one would assume the origin is Batavia (now Jakarta) on Java in Indonesia, a place Joseph Hooker never visited. Nor can any material be found that was cultivated in Batavia and distributed by Hooker or Kew. The Kew label of the lectotype has no country of origin,

only “*Patria cult.*” (i.e., origin cultivated), with Hooker as the collector. The Paris label has “Indes Orientalis” (i.e., East Indies) on it. So it is possible to think the plant came from the East Indies (what is mostly now Indonesia). Added to this, the “*Patria*” on the Kew label does look a bit like Batavia. Kostermans added a note that the specimen likely came from a tree in the Calcutta Botanic Garden called *Laurus dulcis* Roxb. He identified the material as *Cinnamomum burmannii*. The duplicate in L is currently misidentified as *C. tamala*.

Cinnamomum alibertii Lukman., Nomencl. Icon. Cannel.: 19. 1878.

TYPE: BORNEO. *O. Beccari s.n.* (Holotype: not found). Neotype, here designated: Malaysia, Sarawak, Sumungian [=? Simanggang], October 1867, *O. Beccari 3935* (Holoneotype: FI [078195, right-hand plant], image seen).

Since the original material of this entity seems to be missing in Paris, a search for matching specimens was kindly undertaken by Anna Donatelli in FI. In FI, the only matching sheet appears to be composed of two seedlings (left-hand plants) and an older branchlet (right-hand specimen). This latter specimen agrees tolerably well with Lukmanoff’s protologue and is here selected as the neotype. Although the neotype is sterile, I would suggest it is representative of *C. iners* Reinw. ex Blume. The two left-hand plants are referred to under *C. beccarii* below.

Cinnamomum andersonii Lukman., Nomencl. Icon. Cannel.: 13. 1878.

TYPE: INDIA. *Cult. Hort. Bot. Calcuttensis, comm. T. Anderson 28* (Holotype: P [01752728], image seen).

The specimen appears to have a misplaced label by Lukmanoff that does not have the name, but “N 27 Espece.” Species 27 in Lukmanoff’s monograph is *C. brownei*, which is based on “Indes, *Hooker*.” I agree with Kostermans’ annotations on the sheet, that it is, rather the type of *C. andersonii*, and referable to *C. iners* Reinw. ex Blume.

In Paris, several collections of different species of *Cinnamomum* sent by Thomas Anderson from the Calcutta Botanic Garden bear the number 28. This number appears to have been added later and is not a collection or field number.

Cinnamomum angustifolium Lukman., Nomencl. Icon. Cannel.: 17. 1878 *nom. illeg.* (*non* Raf. 1838).

TYPE: INDIA. Khasia, *T. Anderson 28* (Lectotype, here designated: P [01991861], image seen).

Additional specimens examined: INDIA. Khasia Hills, *Native Collector s.n.* (L [0035793], P [01991859], images seen); Khasia, *sine coll. s.n.* (P [01991862], image seen); Khasia, *T. Anderson s.n.* (= *Herb. Pierre 5162*) (P [01991860], image seen).

The specimen chosen as the lectotype is the only one that Lukmanoff is likely to have seen of this distinctive narrow-leaved, glabrous-flowered species. The other three sheets cited above are from the herbaria of Drake and Pierre and were not available to Lukmanoff at the time. The sheets cited from Khasia Hills (L, P) are isotypes of *C. bishnupadae* M. Gangop., which is the correct name for this taxon.

All of the Paris specimens cited here were previously identified as *C. glabriflorum* Kosterm., an unpublished name. The earlier name, *C. angustifolium* Raf., is listed on POWO as a synonym of the Caribbean *Licaria parvifolia* (Lam.) Kosterm. This seems to be an error, since Rafinesque gave Borneo and Mindanao as the origin for his taxon.

Cinnamomum aromaticum Nees, in Wallich, Pl. Asiat. Rar. 2: 74. 1831.

Lukmanoff (1878) does not cite Nees as the author, but it is unlikely that he was proposing a new species.

var. *longifolium* Lukman., Nomencl. Icon. Cannel.: 11. 1878.

TYPE: CHINA. Cultivated in the gardens of Europe, *A. de Lukmanoff s.n.* (Holotype: P [00757082], image seen).

Homotypic synonym: *Cinnamomum longifolium* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

The type is annotated by Lukmanoff and only mentions that the plant was cultivated in the gardens of Europe. In the protologue, the botanical garden of St. Petersburg is also mentioned. This variety is considered a synonym of *C. aromaticum*.

Cinnamomum asagrayi Lukman., Nomencl. Icon. Cannel.: 9. 1878.

TYPE: CHINA. Hong Kong, U.S. North Pacific Exploring Expedition, 1853–1856, *C. Wright 401* (Lectotype, here designated: P [01748526], image seen; Isolectotype: GH [00871563], image seen).

The original type citation referred to Hong Kong, *Wright*. The specimen can be found in Paris under the name *C. burmannii*. There are at NY two possible isolectotypes (NY [47123117, NY 512012], images seen) of *C. asagrayi*, but they lack the number 401.

Cinnamomum assamicum Lukman., Nomencl. Icon. Cannel.: 11. 1878.

TYPE: INDIA. Assam, *Colonel F. Jenkins s.n.* (Lectotype, here designated: P [01978760], image seen; Isolectotypes: BO [0122536], BO [0122545], BO [0122546], BR [0000029323821], G [00693677], K [002133383], L [1795314], L [1795315], NY [4723258], P [01978800], images seen; S [S14-55988], not seen).

The specimens cited as type material above are all filed under the name *C. bejolghota*. The duplicate seen by Lukmanoff seems to be no longer present at Paris.

Cinnamomum aubletii Lukman., Nomencl. Icon. Cannel.: 17. 1878.

TYPE: MAURITIUS. Cult. at Le Reduit, *J.B.C.F. Aublet s.n.* (Lectotype, here designated: P [01748525], image seen).

Kostermans suspected the above cited specimen (under *C. burmannii* in P) might be the type, even though the leaves have a more oblique base than the leaf depicted by Lukmanoff. The original locality was given as “Indes,” but Aublet did not visit Asia. Aublet established a garden in 1764 at Le Reduit on Mauritius, which is where the specimen discussed was cultivated.

Cinnamomum bahianum Lukman., Nomencl. Icon. Cannel.: 6. 1878.

TYPE: BRAZIL. Bahia, *H. A. Weddell s.n.* (Holotype: not found); Neotype, here designated: Brazil, Bahia, *J. S. Blanchet s.n.* (Holoneotype: P [01978287], image seen).

No Weddell collection from Bahia can be located. There is one from Minas Gerais, but it is the type of *C. orbiculatum* Lukman. Therefore, another Bahia specimen collected by J. S. Blanchet has been chosen as the neotype. This has a leaf about the same size (15 × 6 cm) as indicated by Lukmanoff, but the shape does not agree (being more subacuminate in Lukmanoff’s drawing), although some of the narrower leaves (ca. 5 cm wide) do agree well with the drawing.

Cinnamomum baillonii Lukman., Nomencl. Icon. Cannel.: 10. 1878.

TYPE: CHINA. Cultivated in the Faculty of Medicine, Paris, *A. de Lukmanoff s.n.* (Holotype: P [01752702], image seen).

The type bears a label from Lukmanoff with the name and the place where it was cultivated. The specimen was identified as *C. iners* Reinw. ex Blume by Kostermans.

Cinnamomum bamoense Lukman., Nomencl. Icon. Cannel.: 14. 1889.

TYPE: INDIA? 1843, *W. Griffith s.n.* (Lectotype, here designated: P [01978807], image seen); possible Isolectotypes: BR [0000029323838, Assam, 1843], L [1795312, Khasya Hills], L [1795321, Khasya Hills], images seen).

The specimen chosen as the lectotype agrees with the description (leaves erect, 15 × 5 cm) and illustration (showing the missing leaf apex) in the protologue. Lukmanoff gave the origin as “Birman, *Griffith*,” with the specific epithet of *bamoensis*. From this one would assume that the plant is from Bhamo in Myanmar. The lectotype sheet only has “Inde” as the locality on it, but the Kew Distribution number 4244 was added later by Kostermans. Lukmanoff possibly guessed the origin was “Birman,” because there is another Griffith specimen (Kew Distr. 4244) [P 01978812] of *C. bejolghota* labelled as from “Birma,” that also has erect (but badly damaged) leaves. He likely gave the epithet after one of the places Griffith was known to have visited. No Griffith specimens of *Cinnamomum* are known to have come from Bhamo; all of his Myanmar *Cinnamomum* collections originate from the Mergui region. All of the cited material was identified as *C. bejolghota* (Buch.-Ham.) Sweet by Kostermans.

The entity, *C. bhamoense* M. Gangop., described in 2006 should, in my opinion, be treated as a homonym of *C. bamoense*, since both are named after the same place and are pronounced the same. The former is renamed *C. cubittii* in the addendum to this paper.

Cinnamomum barlowii Lukman., Nomencl. Icon. Cannel.: 16. 1878.

TYPE: CHINA. Cultivated in the Tsar’s Imperial Garden, St. Petersburg, *A. de Lukmanoff s.n.* (Holotype: P [00732271], image seen).

The type bears a label from Lukmanoff with the name and place where it was cultivated. The specimen has been identified as *C. verum*. Due to an error during databasing, the origin of the specimen is given as Mexico.

Cinnamomum beccarii Lukman., Nomencl. Icon. Cannel.: 19. 1878.

TYPE: BORNEO. *O. Beccari s.n.* (Holotype: not found); Neotype, here designated: Malaysia, Sarawak, Sumungian [=? Simanggang], October 1867, *O. Beccari 3935* (Holoneotype: FI [086066], two left-hand plants, image seen).

Lukmanoff described and depicted the leaves of this entity as alternate, ovate-lanceolate, boldly cross-reticulated, and about 12 × 4 cm. In FI, the only tolerably matching material is two seedlings on the left-hand side of a Beccari collection that was kindly located by Anna Donatelli. Although the material is sterile, I place it with *C. iners* Reinw. ex Blume, a species that often has some subalternate leaves. Most other species of *Cinnamomum* have strictly opposite leaves.

Cinnamomum blumei Lukman., Nomencl. Icon. Cannel.: 7. 1878.

TYPE: INDIA. *Peninsula India Orientalis*, [Courtallam, August 1835], *Herbarium R. Wight 2238* (Lectotype, here designated: P [01978293], image seen; Isolectotypes: E [01073384], E [01073385], images seen).

The specimen designated as the type has been identified as *C. malabathrum* (Burm.f.) J. Presl. The size of the leaf (22.0 × 9.5 cm), its venation, and its broken off apex agree with the description and figure in the protologue of *C. blumei*. Lukmanoff gives “Indes, Malabar, *Wight*” as the type data, but it is possible he misremembered the name “*C. malabathrum*” that was on the sheet as the locality Malabar (which is not on the sheet). The two isolectotypes in E are filed under *C. iners* Reinw. ex Blume (a taxon with quite similar leaves), which is a historical misnaming of this collection. One [E 01073384] has additional details of its origin and collection date, with an alternative Wight number (no. 718). The former details have been added to the type citation.

Cinnamomum borneense Lukman., Nomencl. Icon. Cannel.: 9. 1878 *nom. illeg.* (*non* Meissn. May 1864, *nec* Miq. Oct 1864).

TYPE: MALAYSIA. Sarawak [as Borneo]. Without locality [Kuching], *O. Beccari 270* (Lectotype, here designated: P [01978448], image seen; Isolectotypes: A [02537093], A [02537100], BM [015153036], FI [076893, 2 sheets], G [00412209], M [0147234], images seen).

Lukmanoff was aware this name was a homonym when he proposed it (“non DC”; i.e., Meissn. in DC). Kostermans identified the Paris specimen as *C. verum* J. Presl and wrote on the sheet that it is not from Borneo. However, the species is cultivated on Borneo, especially in the neighbourhood of Kuching (Sarawak, Malaysia), which Beccari visited in 1865 and 1866. Indeed, the duplicate in FI [076893] does have the locality “Kutcin” [= Kuching].

Cinnamomum brogniartii Lukman., Nomencl. Icon. Cannel.: 8. 1878.

TYPE: INDONESIA. Java, comm. 1862, *ex Herbario Lugduno-Batavo, sine coll. s.n.* (Lectotype, here designated: P [01978118], image seen).

The specimen matches Lukmanoff’s protologue in leaf shape, size (18.5 × 9.5 cm), and damage (one side mostly missing). The collection has been identified as *C. zeylanicum* Blume (= *C. verum* J. Presl).

Cinnamomum brownei Lukman., Nomencl. Icon. Cannel.: 10. 1878.

TYPE: INDIA. *J. D. Hooker s.n.* (Holotype: not found).

Cinnamomum bureauii Lukman., Nomencl. Icon. Cannel.: 14. 1878.

TYPE: BANGLADESH. Sylhet, *ex Herbarium A. L. Jussieu, N. Wallich 2574A* (Lectotype, here designated: P [01978750], image seen; Isolectotypes: BR [000005115204], E [00393165], E [00393166], FI [086046], GZU [000254048], GZU [000254049], L [0308457], L [0035711], P [00757068], images seen).

The specimen chosen as the lectotype matches the description and figure in the protologue quite well. The collection *Wallich 2574A* is a widely distributed number, also treated as the type of *Laurus obtusifolia* Roxb. It is difficult to be certain that Roxburgh based his taxon on Wallich material, since in the protologue the localities of Silhet and Chittagong [both now in Bangladesh] are mentioned. No collector is given. This name is a synonym of *Cinnamomum bejolghota* (Buch.-Ham.) Sweet.

Cinnamomum calleryi Lukman., Nomencl. Icon. Cannel.: 16. 1878.

TYPE: CHINA. Without locality, 1844, *J. M. M. Callery 144* (Lectotype, here designated: P [01978710], image seen).

The specimen was determined as *C. burmannii* (Nees & T. Nees) Blume by Kostermans. Its leaves match the dimensions and features as described and illustrated by Lukmanoff. Another Chinese taxon, *C. maximoviczii* Lukman., also has a Callery collection designated as the type, but that has not been located.

Cinnamomum carrierei Lukman., Nomencl. Icon. Cannel.: 14. 1878.

TYPE: INDIA. Khasia, 3–4000 ft [915–1220 m], *J. D. Hooker & T. Thomson s.n.* (Lectotype, here designated: P [01978595], image seen; Isolectotypes: BM [002134635], CAL [0000021499], CGE [00085188], G [00693834], K [002133687], K [002133689], L [1791575, upper plant], L [1792708], NY [354993], images seen).

Lukmanoff gave the type details as “Khasia, 3–4000 ft, *Hooker*.” In Paris, a sheet identified as *C. tamala* (Buch.-Ham.) T. Nees & C.H. Eberm. has these details but was actually collected by Hooker and Thomson. It agrees fairly well with the protologue, except the largest leaf is about 16 × 6 cm (vs. 16 × 5 cm) and is more elliptic in shape. The

Paris lectotype is a fruiting collection of the species. Some supposed duplicates, such as one in Kew [K002133689], are of sterile younger branchlets. This particular sheet also has specific field data [Churra, 15 June 1850, lower single leaf; and Churra, 17 June 1850, no. 874, main specimen].

Cinnamomum cassia T. Nees & C.H. Eberm. ex Blume, Bijdr. Fl. Ned. Ind. 11: 570. 1826 *nom. illeg.* (*non* [L.] J. Presl 1823–1824).

This name, as applied by Blume, is a synonym of *C. aromaticum*.

var. *medium* Lukman., Nomencl. Icon. Cannel.: 11. 1878. TYPE: CHINA. Cultivated in the Botanical Garden, Paris, *A. de Lukmanoff s.n.* (Holotype: P [00757083], image seen). Homotypic synonym: *Cinnamomum medium* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

The type has a label by Lukmanoff stating the plant was cultivated at the Museum (Botanical Garden Paris). In the protologue, it was only said to be cultivated in several European gardens. This entity is treated under *C. aromaticum* in Paris.

Cinnamomum decaisnei Lukman., Nomencl. Icon. Cannel.: 6. 1878.

TYPE: INDIA. Mountains bordering China, *W. Griffith s.n.* (Holotype: not found).

A collection matching the details provided by Lukmanoff has not been located. It is possible the type locality is in Bhutan, rather than India.

Cinnamomum decourtizii Lukman., Nomencl. Icon. Cannel.: 19. 1878.

TYPE: INDONESIA. Java, *J.B. Leschenault s.n.* (Lectotype, here designated: P [01978022], image seen; possible isolectotype: P [01978023], image seen).

The specimen chosen as the lectotype matches well with Lukmanoff's description and illustration. The sheet was determined as *C. burmannii* (Nees & T. Nees) Blume by Blume, and later by Kostermans.

Cinnamomum donii Lukman., Nomencl. Icon. Cannel.: 15. 1878.

TYPE: INDIA. *J.D. Hooker s.n.* (Holotype: not found).

The leaves of this taxon somewhat resemble those of *C. burmannii* (Nees & T. Nees) Blume, so this taxon may not be native to India and is perhaps a cultivated one.

Cinnamomum dulce Nees, in Wallich, Pl. Asiat. Rar. 2: 75. 1831 *nom. illeg.* (cites the available name *C. chinense* Blume in synonymy).

This name is treated as a synonym of *C. burmannii* (Nees & T. Nees) Blume.

var. *ammannii* Lukman., Nomencl. Icon. Cannel.: 7. 1878. TYPE: JAPAN. *P. Commerson s.n.* (Holotype: not found).

Homotypic synonym: *Cinnamomum ammannii* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 45. 1926.

Commerson did not collect in Japan, so the type is likely a collection cultivated on Mauritius that originated from Japan.

var. *sieboldii* Lukman., Nomencl. Icon. Cannel.: 7. 1878. TYPE: MAURITIUS. 1768, *P. Commerson s.n.* (Lectotype, here designated: P [02006675], image seen).

Homotypic synonym: *Cinnamomum sieboldii* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926 *nom. illeg.* (*non* Meissn. 1864).

The specimen chosen as the lectotype matches the leaf dimensions (10 × 4 cm) and drawing in the protologue. Kostermans identified it as *C. burmannii* (Nees & T. Nees) Blume.

var. *thunbergii* Lukman., Nomencl. Icon. Cannel.: 7. 1878. TYPE: JAPAN. *Herbarium A. T. Brogniart s.n.* (Holotype: not found).

Homotypic synonym: *Cinnamomum thunbergii* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

Cinnamomum gaudichaudii Lukman., Nomencl. Icon. Cannel.: 18. 1878.

TYPE: VIETNAM [as Cochinchina]: *C. Gaudichaud s.n.* (Holotype: not found).

This was possibly collected in the Tourane (= Da Nang) area, near Hue in central Vietnam.

Cinnamomum goeringii Lukman., Nomencl. Icon. Cannel.: 16. 1878.

TYPE: CHINA [see note]. Java (Indonesia), [*leg. H. Buerger*], *P. F. W. Goering s.n.* (Holotype: not found).

Goering did not collect in China or Japan. Instead, he came into the possession of specimens Buerger had collected in the Nagasaki region of Japan, so sometimes Japanese collections are wrongly accredited to Goering. Some of the material Goering had was later incorporated into the herbarium of Zollinger. In my opinion, *C. goeringii* resembles a large-leaved form of *C. alatum* Lukman., such as observed on the isolectotype of *Camphora zollingeri* Lukman. (P [01978396, left-hand plant]). The latter was based on *Zollinger 219*, but the collection was surely made by Buerger in Japan. The Nagasaki region is likely the true origin of *C. goeringii*; thus, I consider it as a synonym of *C. alatum*.

Cinnamomum guyanense Lukman., Nomencl. Icon. Cannel.: 10. 1878.

TYPE: FRENCH GUIANA. Without locality, 1842, *E. M. Melinon 226* (Lectotype, here designated: P [01978684], image seen; Isolectotypes: P [01978682], P [01978683], images seen).

The specimen chosen as the lectotype has a label by Lukmanoff identifying it as *C. guyanense*. It is filed under the name *C. verum* J. Presl in Paris.

Cinnamomum helferi Lukman., Nomencl. Icon. Cannel.: 15. 1878.

TYPE: MYANMAR. Tenasserim and INDIA. Andamans. Without locality, *J. W. Helfer (Kew Distr.) 4242* (Lectotype, here designated: U [0002656], image seen; Isolectotypes: K, not found, L [0035807], M [0293171], images seen).

Kostermans (1998) accepted this taxon as a distinct species, and he identified Helfer (Kew Distr.) 4242 as the type collection but did not designate a lectotype. This collection is no longer extant in Paris, so the duplicate in U is chosen as the lectotype. Another Helfer collection (Kew Distr. 4245), with the same locality data, was treated by Lukmanoff (1878) under *C. iners* Reinw. ex Blume. Kostermans (1998) found this was a misidentification and determined that material as *C. lucens* Miquel.

Cinnamomum heudelotii Lukman., Nomencl. Icon. Cannel.: 7. 1878.

TYPE: SENEGAL. Without locality, cult. in garden of *Richard Toll*, 1831, *J. Heudelot s.n.* (Lectotype, here designated: P [01752533], image seen).

The lectotype agrees with Lukmanoff's protologue and has been identified as *C. zeylanicum* Blume (= *C. verum* J. Presl).

Cinnamomum hookeri Lukman., Nomencl. Icon. Cannel.: 10. 1878.

TYPE: INDIA. Sikkim, 6000 ft [1830 m], *J. D. Hooker s.n.* (Holotype: not found). Neotype, here designated: India, Sikkim, 4000–6000 ft [1220–1830 m], *J. D. Hooker s.n.* (Holoneotype: P [01748411, left-hand plant], image seen; Isonotypes: BM [014605811], C [no barcode], CGE [00085190], CGE [00085197], CGE [00085198], L [1791575, lower plant], L [1791576], images seen).

The collection that Lukmanoff based this entity on seems to be no longer extant in Paris, so a neotype is chosen from a similar, but later acquired, specimen from Herbarium Cosson. This specimen agrees with Lukmanoff's protologue in having a narrowly oblong-lanceolate leaf that is 11 × 3 cm. However, other leaves are about 4 cm wide and more elliptic. Kostermans identified the plant as *C. soncaurium* (Buch.-Ham.) T. Nees & C.H. Eberm., now regarded as a synonym of *C. bejolghota*. The neotype comes from an area where Joseph Hooker collected material of *C. tamala* and what would be the type material of *C. impressinervium* Meissn. Thus, as here neotypified, *C. hookeri* could be determined as *C. tamala sensu lato*; however, there is a possibility it is a natural hybrid between *C. impressinervium* and *C. tamala*, due to the intermediate foliage features (some acuminate to subacuminate leaves with moderately impressed veins above).

Cinnamomum houletii Lukman., Nomencl. Icon. Cannel.: 9. 1878.

TYPE: JAPAN. Cultivated in the Botanic Garden, Paris, *A. de Lukmanoff s.n.* (Holotype: P [00757073], image seen).

The specimen has a Lukmanoff label with the name of the species. Kostermans identified it on the sheet as *C. burmannii*.

Cinnamomum jacquemontii Lukman., Nomencl. Icon. Cannel.: 13. 1878.

TYPE: INDIA. Bodwellgad [as Boiwellgad] Valley, *V. Jacquemont 522* (Lectotype, here designated: L [1792714], image seen).

No Jacquemont *Cinnamomum* specimens remain in Paris. However, a specimen collected from the type locality by Jacquemont was found in L under the name *C. soncaurium*. This has slightly smaller leaves than the lost Paris duplicate described by Lukmanoff, but clearly represents the same species; i.e., *C. tamala* (*C. soncaurium sensu* Kostermans).

Cinnamomum ligneum Lukman., Nomencl. Icon. Cannel.: 12. 1878.

TYPE: SRI LANKA [as Ceylan] and INDONESIA. Java, *Herbarium S. Vaillant s.n.* (Holotype: not found).

This taxon is possibly based on an unimaged Herbarium Vaillant collection in Paris [00499729] from Sri Lanka. Unfortunately, this collection cannot be located (Deroin, pers. comm.).

Cinnamomum lindenii Lukman., Nomencl. Icon. Cannel.: 14. 1878.

TYPE: [INDIA]. Himalaya, cult. in Gand [Belgium] by *Messrs. Linden s.n.* (Holotype: not found).

Cinnamomum linnei Lukman., Nomencl. Icon. Cannel.: 15. 1878.

TYPE: CHINA. Cult. Bot. Gard. Paris, *A. de Lukmanoff s.n.* (Holotype: P [00757074], image seen).

The specimen was annotated by Lukmanoff as *C. linnei*. Kostermans identified it on the sheet as *C. burmannii*.

Cinnamomum litseifolium Thwaites, Enum. Pl. Zeyl.: 253. 1861 as *litseaefolium*.

This species occurs in Sri Lanka and southern India. Lukmanoff cited the specimen he saw as "Ceylan, 5000 ft, *Thwaites*." This collection (*G. H. K. Thwaites CP 392* [P 00757033], image seen) is regarded as an isotype of the species.

var. *willdenowii* Lukman., Nomencl. Icon. Cannel.: 15. 1889.

TYPE: SRI LANKA [as Ceylon]. 5000 ft [1525 m], *G. H. K. Thwaites CP 392* (Lectotype, here designated: FI [086053, left-hand plant], image seen).

Holotype: *Cinnamomum willdenowii* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

This taxon was based on a broad-leaved specimen of *Thwaites CP 392*, but the relevant duplicate is no longer extant in Paris. Therefore, a duplicate in FI closely matching Lukmanoff's description (leaves 8 × 5 cm, apex missing) is chosen as the lectotype. The FI duplicate has slightly smaller leaves (7 × 4 cm) and a missing apex.

Cinnamomum lowii Lukman., Nomencl. Icon. Cannel.: 15. 1878.

TYPE: CHINA. Cult. Bot. Gard. Paris (Holotype: not found).

Cinnamomum lubbersii Lukman., Nomencl. Icon. Cannel.: 18. 1878.

TYPE: [INDIA]. Himalaya, cult. Bot. Gard. Brussels (Holotype: not found).

Cinnamomum lucienii Lukman., Nomencl. Icon. Cannel.: 18. 1878.

TYPE: CHINA/JAPAN. Cult. in Gand [Belgium], *Messrs. Linden s.n.* (Holotype: not found).

Cinnamomum luddemannii Lukman., Nomencl. Icon. Cannel.: 12. 1878.

TYPE: INDIA. Bengal, *Herbarium S. Vaillant s.n.* (Holotype: not found).

Cinnamomum lunatum Lukman., Nomencl. Icon. Cannel.: 11. 1878.

TYPE: CHINA. Cult. Bot. Gard. Brussels (Holotype: not found).

Cinnamomum maheanum Lukman., Nomencl. Icon. Cannel.: 8. 1878.

TYPE: SEYCHELLES. Mahe, *L. H. Boivin s.n.* (Lectotype, here designated: P [02006544], image seen; Isolectotypes: P [02006543], P [02006545], images seen).

The specimen chosen as the lectotype matches the species as named and described by Lukmanoff. It has been identified as *C. zeylanicum* Blume (= *C. verum* J. Presl).

var. *karrouwa* Lukman., Nomencl. Icon. Cannel.: 8. 1878.

TYPE: SRI LANKA. Cultivated from plants brought from the mountains of Cottalam [India, Andhra Pradesh], *J. B. Leschenault 192* (Lectotype, here designated: P [01978447], image seen; Isolectotypes: L [1791311], P [01978458], images seen).

Homotypic synonym: *Cinnamomum karrouwa* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

Lukmanoff gave the type locality as “Seychelles, *Leschenault*.” However, Leschenault did not collect in the Seychelles. In Paris, there are two sheets of *Cinnamomum* collected by Leschenault in Sri Lanka, both of which have the number 192, note the introduction of the plant from the mountains of Cottalam, and record the indigenous name as *karrouwa*. The lectotype matches Lukmanoff’s protologue and also explains the epithet *karrouwa* (the Tamil name for *C. verum*). The isolectotype at L has a mistaken annotation ascribing the Cottalam Mountains to the Philippines, presumably due to the similar Philippine locality name of Cotabato. Variety *karrouwa* is also a synonym of *C. verum*.

Cinnamomum malabratrum (Burm.f.) J. Presl, Prir. Rostlin 2: 46. 1823–1825.

Treated by Lukmanoff under the variant spelling of “*malabtricum*.” Two of the varieties proposed by Lukmanoff belong to *C. iners* Reinw. ex Blume, which has very similar leaves to *C. malabratrum*.

var. *rheedei* Lukman., Nomencl. Icon. Cannel.: 8. 1878.

TYPE: MALAYSIA. Penang [Island], *N. Wallich s.n.* (Lectotype, here designated: P [01752701], image seen).

Homotypic synonym: *Cinnamomum rheedei* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

Lukmanoff gave the type data as “Indes, *Wallich*,” thus one would assume the type is from India. The sheet chosen as the lectotype was distributed as “*Laurus malabathricus*” and has an oblong leaf (15 × 5cm) with a damaged, notched apex as described and depicted by Lukmanoff. The specimen was identified as *C. iners* Reinw. ex Blume by Kostermans, who added the Wallich Catalogue number, 2583A, to it.

var. *smithii* Lukman., Nomencl. Icon. Cannel.: 8. 1878.

TYPE: INDIA. Malabar, *Herbarium J. B. Leschenault s.n.* (Holotype: not found).

Homotypic synonym: *Cinnamomum smithii* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

var. *wrightii* Lukman., Nomencl. Icon. Cannel.: 8. 1878.

TYPE: INDONESIA. Java, (cult. near Batavia [= Jakarta], October 1845), *H. Zollinger 2990* (Lectotype, here designated: P [01978068], image seen; Isolectotypes: BM [014605815], FI [086064], G [00693882], NY [355016], P [01978074], images seen).

Homotypic synonym: *Cinnamomum wrightii* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

The lectotype matches Lukmanoff’s protologue in leaf shape and size (16 × 6 cm). The type citation is supplemented by label details on the Paris isolectotype, which originated from herbarium Drake (acquired by Paris in 1904). Both specimens were identified as *C. iners* Reinw. ex Blume by Kostermans.

Cinnamomum manillarum Lukman., Nomencl. Icon. Cannel.: 9. 1878.

TYPE: PHILIPPINES. Luzon, Manila, *J. Barthe s.n.* (Holotype: P [00732254], image seen).

Kostermans identified the above cited specimen as the type of this species. He refers it to the earlier *C. iners* Reinw. ex Blume.

Cinnamomum martiniquense Lukman., Nomencl. Icon. Cannel.: 13. 1878.

TYPE: MARTINIQUE. Cult. Bot. Gard. Paris, *A. de Lukmanoff s.n.* (Holotype: P [00729467], image seen).

The specimen has a Lukmanoff label and was later determined as *C. verum* J. Presl.

Cinnamomum maximoviczii Lukman., Nomencl. Icon. Cannel.: 19. 1878.

TYPE: CHINA. *J. M. M. Callery s.n.* (Holotype: not found).

So far, only one Chinese collection by *Callery* has been located, but it is properly the type of *C. calleryi*.

Cinnamomum morrenii Lukman., Nomencl. Icon. Cannel.: 17. 1878.

TYPE: WITHOUT ORIGIN. Cult. Bot. Gard. Paris (Holotype: not found).

Cinnamomum mutabile Blume ex Lukman., Nomencl. Icon. Cannel.: 12. 1878.

TYPE: INDONESIA. Java, ex *Herbario Lugduno-Batavo*, *C. L. Blume s.n.* (Holotype: P [01978026], image seen; Isotype: L [0035729], image seen).

The lectotype bears the name *C. mutabile* in Blume's handwriting and was determined by Kostermans on the sheet as the holotype. It is identified as *C. burmannii* (Nees & T. Nees) Blume.

Cinnamomum neesii Lukman., Nomencl. Icon. Cannel.: 13. 1878.

TYPE: INDIA. Sikkim, 1–4000 ft [1220 m], *J. D. Hooker s.n.* (Lectotype, here designated: P [01978809], image seen; Isolectotypes: BM [015153035], C [no barcode], FI [086047], CGE [00085158], CGE [00085192], CGE [00085201], CGE [00085202], G [00693674], G [00693688], K [00213361], K [00213362], K [00213364], K [00213365], K [00213366], K [00213367], K [00213368], L [1795328], L [1795329], NY [4723263], P [01978817], P [01978751], P [01988541], U [1400127], images seen).

A precise match to the specimen seen by Lukmanoff cannot be made, possibly because it is no longer extant in Paris. Therefore, another duplicate has been chosen as the lectotype. All three Paris sheets were identified as *C. bejolghota* (Buch.-Ham.) Sweet by Kostermans.

var. *khasianum* Lukman., Nomencl. Icon. Cannel.: 13. 1878.

TYPE: INDIA. Khasia, 1–2000 ft [305–610 m], *J. D. Hooker & T. Thomson s.n.* (Lectotype, here designated: P [01978805], image seen; Isolectotypes: G [00693878], L [1795325, right-hand leaf], images seen).

Homotypic synonym: *Cinnamomum khasianum* (Lukman.)

A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

The specimen chosen as the lectotype matches Lukmanoff's description and illustration in the protologue quite well. It was identified as *C. bejolghota* (Buch.-Ham.) Sweet by Kostermans.

Cinnamomum neumannii Lukman., Nomencl. Icon. Cannel.: 14. 1878.

TYPE: INDIA? *W. Griffith s.n.* (Holotype: not found).

A specimen collected by Griffith matching Lukmanoff's protologue in leaf shape (oblong-lanceolate) and size (9 × 3 cm) has not been located.

Cinnamomum nitidum W.J. Hook., Exot. Fl. 3, 26: t.176. 1827.

This name is regarded as a synonym of *C. burmannii* (Nees & T. Nees) Blume; however, it was misapplied to several taxa, including *C. iners* Reinw. ex Blume, *C. sulphuratum* Nees, and *C. verum* J. Presl.

var. *curtisii* Lukman., Nomencl. Icon. Cannel.: 19. 1878.

TYPE: INDIA. Malabar, *J. D. Hooker s.n.* (Holotype: not found).

Homotypic synonym: *Cinnamomum curtisii* (Lukman.)

A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

Lukmanoff cited the type details as "Indes, Malabar, *Hooker*." The only Paris collection with similar details is a specimen assigned to *C. sulphuratum* Nees. It is from Malabar and is a J. E. Stocks and J. S. Law specimen distributed under a J. D. Hooker and T. Thomson label. However, parameters of the leaves described by Lukmanoff do not match this collection.

Cinnamomum obtusifolium Nees, in Wallich, Pl. Asiat. Rar. 2: 73. 1831 *nom. illeg.* (cites the available name *Laurus bejolghota* Buch.-Ham. in synonymy).

This name is a synonym of *C. bejolghota* (Buch.-Ham.) Sweet.

var. *sikkimense* Lukman., Nomencl. Icon. Cannel.: 12. 1878.

TYPE: INDIA. Sikkim, *J. D. Hooker s.n.* (Holotype: not found). Neotype, here designated: India, Sikkim, *J. D. Hooker & T. Thomson s.n.* (Holoneotype: P [01978810], image seen; possible Isoneotype: S [S14-55991], not seen).

Homotypic synonym: *Cinnamomum sikkimense* (Lukman.)

A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

Lukmanoff cited a collection by Hooker from Sikkim as the type. He described it as having leaves 19 × 5 cm and depicted such a leaf showing the underside of it. A matching collection has not been found. The specimen chosen as the neotype is a similar specimen, but the most similar leaf is larger (to ca. 21.5 × 6.0 cm) with a slightly different shape and damaged apex. It is identified as *C. bejolghota* (Buch.-Ham.) Sweet.

var. *vanhouttei* Lukman., Nomencl. Icon. Cannel.: 12. 1878.

TYPE: INDES. *N. Wallich s.n.* (Holotype: not found).

Homotypic synonym: *Cinnamomum vanhouttei* (Lukman.)

A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

Cinnamomum odoratum Lukman., Nomencl. Icon. Cannel.: 10. 1878.

TYPE: INDIA. East Himalaya, [BHUTAN. Above Panukha], *W. Griffith (Kew Distr.) 4243* (Lectotype, here designated: P [01748400], image seen; Isolectotypes: K [02133672], M [0147247], U [1400131], images seen).

Lukmanoff cited only "Himalaya, *Griffith*" in the protologue. The specimen chosen as the lectotype matches the foliar dimensions (11.0 × 4.5 cm) and shape as detailed

by Lukmanoff. The specimen was originally identified as *C. albiflorum* Nees, then it was identified as *C. soncaurium* (Buch.-Ham.) T. Nees & C.H. Eberm. by Kostermans. It is probably best referred to *C. tamala*. The isolectotype in Kew has an original label recording the locality as above Panukka [= Panukha, the former capitol of Bhutan]; the Griffith number is 873. The former details are added to the type citation above.

Cinnamomum orbiculatum Lukman., Nomencl. Icon. Cannel.: 6. 1878 *nom. illeg. (non Saporta 1861)*.
TYPE: BRAZIL. Minas Gerais, 1844, *H. A. Weddell 1363* (Lectotype, here designated: P [01978692], image seen).
Homotypic synonym: *Cinnamomum weddellii* Doweld, Phytotaxa 326, 3: 193. 2017.

The specimen chosen as the lectotype matches Lukmanoff's description and illustration in the protologue. It is annotated as *C. zeylanicum* Blume by Lukmanoff, but he obviously changed his mind and described it as *C. orbiculatum*. It is filed under the name *C. verum* J. Presl in Paris.

Cinnamomum pauciflorum Nees, in Wallich, Pl. Asiat. Rar. 2: 75. 1831.

This name is regarded as a synonym of *C. tazia* (Buch.-Ham.) Kosterm. ex M. Gangop. All four varieties proposed by Lukmanoff are also regarded as synonyms of the latter.

var. ***fischeri*** Lukman., Nomencl. Icon. Cannel.: 16. 1878.
TYPE: INDIA. Khasia, 4000 ft [1220 m], *J. D. Hooker & T. Thomson s.n.* (Lectotype, here designated: P [01978513, right-hand plant], image seen; Isolectotypes: CGE [00085193, left hand plant], K [000778622], L [1791500], NY [354988, upper plant], images seen).
Homotypic synonym: *Cinnamomum fischeri* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

The specimen chosen as the lectotype matches Lukmanoff's description (leaves 6 × 4 cm) and figure; it is on the right-hand side of the cited sheet.

var. ***jacquii*** Lukman., Nomencl. Icon. Cannel.: 16. 1878.
TYPE: BANGLADESH. Sylhet, *N. Wallich Catal. No. 2579* (Lectotype, here designated: P [01978515], image seen; Isolectotypes: G [00693696], L [1791503, upper plant], images seen).
Heterotypic synonym: *Cinnamomum jacquii* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

The specimen chosen as the lectotype matches Lukmanoff's description (leaves 6.5 × 2.5 cm) and figure. This specimen is treated in Paris as an isotype of *Laurus pauciflora* Wall. (*nom. nud.*), but it is actually an isotype of *Cinnamomum pauciflorum* Nees, a synonym of *C. tazia* (Buch.-Ham.) Kosterm. ex M. Gangop.

var. ***paxtonii*** Lukman., Nomencl. Icon. Cannel.: 16. 1878.
TYPE: INDIA. Khasia, 4000 ft [1220 m], *J. D. Hooker & T. Thomson s.n.* (Lectotype, here designated: P [01978513, left-hand plant], image seen; Isolectotypes: CGE [00085193, right hand plant], G [00693826], NY [354988, lower plants], images seen).

Homotypic synonym: *Cinnamomum paxtonii* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

The specimen on the left-hand side of the sheet, chosen as the lectotype, matches Lukmanoff's description and illustration. On the right-hand side is a form with suborbicular leaves that is the lectotype of var. *fischeri*.

var. ***verschaffeltii*** Lukman., Nomencl. Icon. Cannel.: 16. 1878.

TYPE: INDIA. East Bengal, *W. Griffith (Kew Distr.) 4239* (Lectotype, here designated: P [01978508], image seen; Isolectotypes: FI [086049], K [002133707], K [002133708], P [01978507], U [1400130], images seen).

Homotypic synonym: *Cinnamomum verschaffeltii* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1889.

The lectotype designated above matches Lukmanoff's description (leaves 7 × 3 cm) and figure.

Cinnamomum poissonii Lukman., Nomencl. Icon. Cannel.: 13. 1878.

TYPE: INDIA. *V. Jacquemont s.n.* (Holotype: not found); Neotype, here designated: India, without locality, *V. Jacquemont 647* (Holoneotype: L [1791577], image seen).

As noted above under *C. jacquemontii*, no Jacquemont *Cinnamomum* specimens remain in Paris. The neotype has leaves about the same size as described by Lukmanoff (14 × 5 cm), but these are more subacuminate. The specimen has been identified as *C. tamala*, an identification here agreed with and thus making *C. poissonii* a synonym of the latter.

Cinnamomum reichenbachii Lukman., Nomencl. Icon. Cannel.: 19. 1878.

TYPE: SRI LANKA [as Ceylon]. 1854, *G. H. K. Thwaites CP 263* (Lectotype, here designated: P [01752097 left-hand plant], image seen; Isolectotypes: BM [000950929], BM [014605823], BR [000005115532], CGE [00085225], FI [086051], G [00693887], G [00693888], K [000778610], K [000778612], MPU [1294082], P [01752098], P [01752101], P [10752103], images seen).

The specimen on the left-hand side of the lectotype sheet is the one that best matches Lukmanoff's description and illustration. All of the above material is filed as *C. ovalifolium* Wight.

Cinnamomum reinwardtii Lukman., Nomencl. Icon. Cannel.: 19. 1878 *nom. illeg. (non Reinw. ex Nees 1836)*.

TYPE: CHINA. Cult. Bot. Gard. St. Petersburg, 1861, *sine coll. s.n.* (Lectotype, here designated: P [01978003], image seen; Isolectotype: FI [086048], image seen; possible Isolectotypes: L [1795720], P [01978001], P [01978002], images seen).

The above collection was donated to Paris by St. Petersburg in 1861. It was annotated with the name *C. reinwardtii* Nees by Meissner. It fits quite well with Lukmanoff's protologue, although there is no indication on the sheet that the plant came from China. Kostermans determined it as *C. burmannii*. The three sheets that are possible isolectotypes lack dates.

Cinnamomum riedelii Lukman., Nomencl. Icon. Cannel.: 6. 1878.

TYPE: BRAZIL. Without locality. *L. Riedel 489* (Lectotype, here designated: P [01978197], image seen; Isolectotype: MEL [0080263], image seen).

The sheet chosen as the lectotype matches Lukmanoff's protologue. It was donated by the Botanical Garden in St. Petersburg. No duplicate was found in LE (L. Averyanov, pers. comm.). Moraes (2012) reduced *C. riedelii* to *C. verum* J. Presl and listed a Riedel collection in NY ([459832], image seen) as an isotype of *C. riedelii*. Since the specimen lacks the number 489, it is not likely an isotype. Moraes (2012) said Riedel collected the number 489 in Rio de Janeiro. No locality was found on the specimens seen.

Cinnamomum rougieri Lukman., Nomencl. Icon. Cannel.: 7. 1878.

TYPE: CHINA ["Birman?"]. Cult. in the garden of *M. Rougier, A. de Lukmanoff s.n.* (Holotype: P [00729468], image seen).

The holotype is in Paris and was identified by Kostermans as *C. verum* J. Presl.

Cinnamomum rumphii Lukman., Nomencl. Icon. Cannel.: 12. 1878.

TYPE: INDONESIA. Java, *C. L. Blume s.n.* (Holotype: not found).

Lukmanoff quotes in brackets "*C. sintok* var. Blume" for an entity found in Java. A matching collection cannot be found in Paris or Leiden. While there is some similarity to *C. sintoc* Blume, there is also the possibility that an introduced plant cultivated on Java may also match with *C. rumphii*. For example, there exists in L [1795277] a Reinwardt collection of *C. burmannii* (Nees & T. Nees) Blume with the unpublished name, *C. sintok* var. *angustifolium*, on the label. This is not the same as *C. burmannii* var. *angustifolium* Meissn., a taxon with a different type.

Cinnamomum scabridum Blume ex Lukman., Nomencl. Icon. Cannel.: 14. 1878.

TYPE: SRI LANKA [as Ceylan]. Without locality, *J. B. Leschenault s.n.* (Lectotype, here designated: P [01748597], image seen; Isolectotype: L [0308880], image seen).

Lukmanoff cited "Ceylan, *Blume*" as the type. Blume did not collect on Sri Lanka but did have in his possession a number of Leschenault collections, some of which he sent to Paris. The lectotype in Paris was annotated by Blume as "*Cinnamomum nitidum* var. *scabridum*," and is a collection made by Leschenault. Kostermans determined it as *C. dubium* Nees.

Cinnamomum sericeum Lukman., Nomencl. Icon. Cannel.: 19. 1878 *nom. illeg.* (*non* [Blume] Siebold 1830).

TYPE: JAPAN. Cultivated at the Botanical Gardens, Paris, *A. de Lukmanoff s.n.* (Lectotype, here designated: P [01748603], image seen).

This taxon is regarded as a synonym of *C. daphnoides* Siebold & Zuccarini. The specimen chosen as the lectotype

has a label by Lukmanoff identifying it as *C. sericeum* with reference to the species and figure number in his monograph (No. 91, f. 143). Although Lukmanoff said it was cultivated in several gardens in Europe, the lectotype merely says "Cult. au Muse." The earlier *C. sericeum* (Blume) Siebold (based on *Laurus sericea* Blume) is now known as *Neolitsea sericea* (Blume) Koidz.

Cinnamomum spurium Blume ex Lukman., Nomencl. Icon. Cannel.: 14. 1878.

TYPE: INDONESIA. Java, *C. L. Blume s.n.* (Lectotype, here designated: P [01752079, left-hand plant], image seen).

Lukmanoff attributed this name to Blume. Blume did have this epithet in brackets with the name *C. sintoc* Blume (described in 1826) in Rumphia (1: 30. 1836). It is difficult to ascertain Blume's intention, whether this is a *nom. alt.* or meant to indicate a synonym. The lectotype (left-hand plant) in Paris is on a sheet filed under the Indian taxon *C. perrottetii* Meissn. (right-hand plant), and it bears the name *C. spurium* in Blume's hand. Kostermans identified the lectotype as an isotype of *C. sintoc*. To add to the confusion, it should be noted that *C. nitidum* W.J. Hook. var. *spurium* Blume (Tijdschr. Natuurl. Gesch. Physiol. 1: 64. 1834) is a different taxon (*C. iners* Reinw. ex Blume).

Cinnamomum stracheyi Lukman., Nomencl. Icon. Cannel.: 8. 1878.

TYPE: INDIA. Kumaon, 3000–4500 ft [915–1370 m], *R. Strachey & J. E. Winterbottom 1* (Lectotype, here designated: BR [0000029323487], image seen; Isolectotypes: BR [0000029324071], L [1792709], images seen).

Additional specimen examined: INDIA. Kumaon, *R. Strachey & J. E. Winterbottom s.n.* (BR [0000029324088], image seen).

The Strachey and Winterbottom collection studied by Lukmanoff is not present in Paris, so a lectotype is chosen from one of their specimens in BR. The lectotype is an excellent specimen in good condition with numerous flowers; it is misidentified as *C. impressinervium* Meissn. in BR. The BR isolectotype is correctly identified as *C. tamala*, but it only has undeveloped inflorescences. Another Strachey and Winterbottom collection citing the specific locality, Kupkot, is the type of *C. albiflorum* Nees var. *veitchii* Lukman.

Cinnamomum suaveolens Lukman., Nomencl. Icon. Cannel.: 9. 1878.

TYPE: CHINA. Cult. in Bot. Gard. Paris, *A. de Lukmanoff s.n.* (Holotype: P [00757075], image seen).

The type was identified by Kostermans as representing *C. burmannii*.

Cinnamomum sulphuratum Nees, in Wallich, Pl. Asiat. Rar. 2: 74. 1831.

This is an accepted species, endemic to India. The collection Lukmanoff saw (P [01978596], image seen) is extant in Paris; it was collected from the Nilgiri Hills.

var. *wagneri* Lukman., Nomencl. Icon. Cannel.: 17. 1878.
TYPE: INDIA. *J. D. Hooker s.n.* (Holotype: not found).
Neotype, here designated: India, Malabar, Concan and area, *J. E. Stocks & J. S. Law et al. s.n.* (Holoneotype: P [01978597], image seen).

Homotypic synonym: *Cinnamomum wagneri* (Lukman.)
A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

This variety is distinguished from the typical species by its narrowly oblong (vs. elliptic to ovate-elliptic) leaves, 8.5 × 2.0 cm. However, such variation is typical for this species (Kostermans, 1983). A sheet matching the details supplied by Lukmanoff (1878) in the protologue cannot be found in Paris, so a specimen with slightly broader leaves is chosen as the neotype. This collection was distributed as “*Cinnamomum zeylanicum?*”

Cinnamomum thomsonii Lukman., Nomencl. Icon. Cannel.: 9. 1878.

TYPE: NEPAL or INDIA. Sikkim, *J. D. Hooker & T. Thomson s.n.* (Lectotype, here designated: P [01752466], image seen).

Lukmanoff gave “Himalaya, *Hooker & Thomson*” as the type details. His figure shows the leaves to be narrowly oblong, and the measurements are 7 × 3 cm. The collection chosen as the lectotype has similar leaves (but slightly narrower, ca. 2.5 cm wide). One leaf has the broken off, bilobed tip like that depicted by Lukmanoff. On the label, conflicting localities are recorded, Nepal and Sikkim (in brackets below the former). I suspect Lukmanoff gave “Himalaya” as a way of resolving the two different localities recorded. The lectotype has been identified as *C. impressinervium* Meissn.

Cinnamomum thwaitesii Lukman., Nomencl. Icon. Cannel.: 14. 1878.

TYPE: SRI LANKA [as Ceylon]. Without locality, *G. H. K. Thwaites CP 2282* (Lectotype, here designated: P [01748592, left-hand plant], image seen; Isolectotypes: BM [014605825], BM [014605826], FI [086054], G [00693884], G [00693896], K [002133443], MEL [0080257], MPU [1294107], PDA [00000274], images seen; LE, not seen).

The lectotype agrees with Lukmanoff’s description and figure in the protologue. Kostermans questionably identified it as *C. dubium* Nees. The type number of *C. thwaitesii* is still frequently found under the name *C. zeylanicum*, and was distributed as that. Kostermans (1995) identified *Thwaites s.n.* (PDA) as the type of *C. thwaitesii*, but this cannot be accepted as an inadvertent typification, because Lukmanoff had stated that the type was in Paris, and a matching specimen is extant there, as noted above. *Thwaites s.n.* has not been found in PDA, but it could be the sheet from PDA listed here, which had the number CP 2282 added to it later. However, a packet covers the top right corner of this specimen, and this is usually where the original CP numbers were written on the sheet.

Cinnamomum tournefortii Lukman., Nomencl. Icon. Cannel.: 6. 1878.

TYPE: SRI LANKA [as Ceylan]: cultivated, *sine coll. s.n.*

(Lectotype, here designated: L [1791337, lower plant], image seen; Isolectotype: G [00693699], image seen).

Lukmanoff cited the type as “Ceylan, *Hooker*.” Joseph Hooker did not collect plants in Sri Lanka. The lectotype has an “Herb. Ind. Or.” label, and is a collection cultivated in Sri Lanka. There is no collector indicated. It was distributed from Kew by J. D. Hooker and T. Thomson. The specimen is referable to *C. verum* J. Presl. The upper half of the lectotype sheet in L bears an isotype of *C. zeylanicum* Blume var. *madrassicum* Lukman.

Cinnamomum verlotii Lukman., Nomencl. Icon. Cannel.: 19. 1878.

TYPE: JAPAN. Cult. Bot. Gard. Paris, *A. de Lukmanoff s.n.* (Holotype: P [00745542], image seen).

The holotype was annotated by Lukmanoff. This taxon was identified as a synonym of *Lindera aggregata* (Sims) Kosterm. by Kostermans on the type sheet.

Cinnamomum villosum Thwaites ex Lukman., Nomencl. Icon. Cannel.: 9. 1878 *nom. illeg. (non Wight 1839)*.

TYPE: SRI LANKA [as Ceylon]. Without locality, *G. H. K. Thwaites CP 37* (Lectotype, here designated: P [01748594], image seen; Isolectotypes: BM [014605824], BR [0000029323425], CGE [00085221], FI [086052], G [00693894], G [00693885], K [002133441, left-hand plant], PDA [00000275], images seen).

The specimen chosen as the lectotype is annotated *C. villosum* in Thwaites’s hand and is filed under the name *C. dubium* Nees. It matches Lukmanoff’s description and figure in the protologue.

Cinnamomum wallichii Lukman., Nomencl. Icon. Cannel.: 11. 1878.

TYPE: INDIA. *V. Jacquemont s.n.* (Holotype: not found).

Cinnamomum walteri Lukman., Nomencl. Icon. Cannel.: 18. 1878.

TYPE: CHINA. Cult. Bot. Gard. Brussels (Holotype: not found).

Cinnamomum williamsii Lukman., Nomencl. Icon. Cannel.: 18. 1878.

TYPE: INDIA. *J. D. Hooker s.n.* (Holotype: not found).

Cinnamomum zeylanicum Garcin. ex Blume, Bijdr. Fl. Ned. Ind. 11: 568. 1826.

This taxon is a synonym of *C. verum* J. Presl. Sometimes Breyne is cited as the author of *C. zeylanicum*, but all of the pertinent references are pre-Linnaean and, therefore, do not affect the ascription of the authorship to Blume.

Lukmanoff (1878) ascribed three categories (probably the equivalent of subspecies) to this species, to which he gave Latin names: *C. zeylanicum commune* Nees (with 13 varieties), *C. zeylanicum asperifolium* (8 varieties), and *C. zeylanicum chartaceum* (10 varieties). In total, this makes 31 varieties. These infrataxa are arranged alphabetically here and not placed in their original groups.

var. *antillarum* Lukman., Nomencl. Icon. Cannel.: 5. 1878. TYPE: MARTINIQUE. *F. Sieber 107* (Lectotype, here designated: P [01978675], image seen).

Homotypic synonym: *Cinnamomum antillarum* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 45. 1926.

This and var. *decandollei* are based on Sieber collections from Martinique. Neither of the Sieber collections in Paris from Martinique match Lukmanoff's concepts of these taxa, so it is assumed that the specimens he saw are no longer extant. The lectotype of var. *antillarum* is a later acquired duplicate from Herbarium Drake that agrees reasonably well with Lukmanoff's protologue, except the leaves have a slightly different shape and are a little smaller (ca. 12.5 × 7.0 cm vs. 14 × 8 cm).

var. *barthei* Lukman., Nomencl. Icon. Cannel.: 5. 1878. TYPE: RÉUNION. *J. Barthe s.n.* (Lectotype, here designated: P [02006724], image seen).

Homotypic synonym: *Cinnamomum barthei* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 45. 1926.

Lukmanoff cited the type as "Mauritius, *Barthe*," but in Paris the matching collection by Barthe comes from Réunion. This collection agrees in having an apically bilobed (damaged?) leaf that is 13.0 × 7.5 cm. There are no known Barthe collections from Mauritius, even though some appear to be labelled "Ile M.:" The "M" is actually an "R," as can be seen when the abbreviation is fully spelled out to Réunion, as is the case on a specimen of the fern *Elaphoglossum heterolepis* (Fee) T. Moore [P 00605374], image seen.

var. *bengalense* Lukman., Nomencl. Icon. Cannel.: 5. 1878. TYPE: INDIA. East Bengal, *W. Griffith (Kew Distr.) 4246/1* (Lectotype, here designated: P [01752730], image seen).

Homotypic synonym: *Cinnamomum bengalense* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 45. 1926.

The specimen seen matches with Lukmanoff's protologue. It was distributed as *C. zeylanicum*, but was identified as *C. iners* Blume by Kostermans. Kostermans (1998) later published *C. pachyphyllum* based on a Thai specimen, and recorded specimens from India, Myanmar, and Thailand. The possibility is strong that *C. bengalense* is an earlier name for *C. pachyphyllum* (if the latter is really different from *C. iners*). On POWO, *Camphora griffithii* Lukman. and its variety *lanceolata* Lukman. are listed among the synonyms of *Cinnamomum pachyphyllum*, but this is due to confusion with the similar type number of *Camphora griffithii* (*W. Griffith [Kew Distr.] 4246/2*). The latter is a synonym of the quite different *Camphora officinarum* Boerh. ex Fabr.

var. *biafranum* Lukman., Nomencl. Icon. Cannel.: 5. 1878. TYPE: EQUATORIAL GUINEA. Bioko [as Fernando-Po], cultivated, *C. Barter s.n.* (Lectotype, here designated: P [01752532], image seen; Isolectotype: K [002235072], image seen).

Homotypic synonym: *Cinnamomum biafranum* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

Lukmanoff gave the type data as "Ile Fernando-Po, Guinee. Herb. Kew."

var. *bonplandii* Lukman., Nomencl. Icon. Cannel.: 5. 1878. TYPE: INDONESIA. Java, *Herbarium A. T. Brogniart s.n.* (Holotype: not found).

Homotypic synonym: *Cinnamomum brogniartii* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

var. *boutonii* Lukman., Nomencl. Icon. Cannel.: 4. 1878. TYPE: MAURITIUS. 1830, *L. Bouton s.n.* (Lectotype, here designated: P [02006674], image seen).

Homotypic synonym: *Cinnamomum boutonii* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

The lectotype matches the details provided in Lukmanoff's protologue.

var. *capense* Lukman., Nomencl. Icon. Cannel.: 5. 1878. TYPE: SOUTH AFRICA. Cape of Good Hope, *P. Sonnerat s.n.* (Lectotype, here designated: P [01752515], image seen).

Homotypic synonym: *Cinnamomum capense* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

var. *cayennense* Lukman., Nomencl. Icon. Cannel.: 5. 1878. TYPE: FRENCH GUIANA. Cayenne, *J. Martin 40* (Lectotype, here designated: P [01978685], image seen).

Homotypic synonym: *Cinnamomum cayennense* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

The lectotype matches the protologue of Lukmanoff.

var. *commersonii* Lukman., Nomencl. Icon. Cannel.: 5. 1878.

TYPE: MAURITIUS. *P. Commerson s.n.* (Holotype: not found).

Homotypic synonym: *Cinnamomum commersonii* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

var. *cordifolium* Lukman., Nomencl. Icon. Cannel.: 4. 1878 *nom. illeg.* (*non* Hayne 1833).

TYPE: INDONESIA. Java, *P. Commerson s.n.* (Lectotype, here designated: P [01978123], image seen; Isolectotype: P [01978122], image seen).

Homotypic synonym: *Cinnamomum cordifolium* A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

Kostermans identified the specimen chosen as the lectotype as the type. This has a leaf (lower left, 9.0 × 6.5 cm) matching the one described and illustrated by Lukmanoff. The second sheet (isolectotype) has the name *C. zeylanicum* var. *cordifolium* written on it by Blume, but it has much broader (to ca. 10 cm) leaves.

var. *decandollei* Lukman., Nomencl. Icon. Cannel.: 5. 1878. TYPE: MARTINIQUE. *F. Sieber 107* (Lectotype, here designated: P [01978676], image seen; Isolectotypes: BM [014605813], L [1791382], L [1791383], M [0293169], MPU [1294102], images seen).

Homotypic synonym: *Cinnamomum decandollei* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

As above, under var. *antillarum*, the Sieber collections from Martinique that Lukmanoff saw seem to be no longer extant in Paris. The specimen chosen as the lectotype has smaller leaves (to 10 cm long vs. 13 cm), but some of the leaves are oblong like the one depicted by Lukmanoff.

var. *delessertii* Lukman., Nomencl. Icon. Cannel.: 5. 1878. TYPE: TRINIDAD AND TOBAGO. Trinidad, [*leg. F. Wrba*], *F. Sieber 122* (Lectotype, here designated: P [01978289], image seen; Isolectotypes: CGE [00085169], G [00693816], L [1791379], L [1791380], L [1791381, lower plant], MEL [0080108], MEL [0080243], P [01978201], P [01978657], images seen).

Homotypic synonym: *Cinnamomum delessertii* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

The lectotype comes from Herbarium Delessert and matches Lukmanoff's protologue.

var. *ellipticum* Lukman., Nomencl. Icon. Cannel.: 5. 1878. TYPE: SRI LANKA [as Ceylan]. *G. H. K. Thwaites CP 2284* (Neotype, here designated: P [01978436], image seen; Isoneotypes: BM [014605827], FI [086063], G [00693810], PDA [00000271], images seen).

Homotypic synonym: *Cinnamomum ellipticum* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926 *nom. illeg.* (*non* Knowlt. 1894, fossil).

The specimen Lukmanoff saw seems to be no longer extant, so the above collection, which also has elliptic leaves, is chosen as the neotype. Kostermans (1995) credited Alexander Moon as the collector of CP 2284 in PDA, but there is no collector's name on that sheet. Nor were any collectors' names given on the other duplicates seen.

var. *erectum* Lukman., Nomencl. Icon. Cannel.: 5. 1878. TYPE: SRI LANKA [as Ceylan]. Without locality, *C. P. Thunberg 54* (Holotype: P [01978434], image seen).

Homotypic synonym: *Cinnamomum erectum* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

The type was identified by Kostermans. The number 54 was added later and is not one used by Thunberg.

var. *humboldtii* Lukman., Nomencl. Icon. Cannel.: 6. 1878. TYPE: SRI LANKA [as Ceylan]. Without locality, *A. Moon s.n.* (Holotype: P [01978449], image seen; Isotype: G [00693820], image seen).

Homotypic synonym: *Cinnamomum humboldtii* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

Lukmanoff gave the type details as "Ceylan, Mt. Trito, *Hooker*." The mysterious Mt. Trito is from the label which reads "Regio trop.;" the "trop." does, indeed, look like Trito. The sheet is one of those distributed from Kew by J. D. Hooker and T. Thomson. Kostermans identified it as the holotype.

var. *leschenaultii* Lukman., Nomencl. Icon. Cannel.: 6. 1878.

TYPE: SRI LANKA. *J. B. Leschenault s.n.* (Lectotype, here designated: P [01978456], image seen); Isolectotype: FI [086055], image seen).

Homotypic synonym: *Cinnamomum leschenaultii* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

Lukmanoff gave the type as "Java, *Blume*." The collection chosen as the lectotype has a leaf matching the dimensions (13 × 7 cm) given in the protologue. The specimen is annotated by Blume with the name *C. zeylanicum*, but it comes from Sri Lanka and was collected by Leschenault (perhaps the reason this variety was named after him). I have accepted that the collection in FI is an isolectotype, since its leaves appear to have the same facies as the lectotype and also have the remnants of soft brown scale insects (*Coccus hesperidum* L.) on them.

var. *madrassicum* Lukman., Nomencl. Icon. Cannel.: 5. 1878.

TYPE: INDIA. Madras, *sine coll. s.n.* (Holotype: P [01978443], image seen; Isotypes: G [00693639], L [1791337, upper plant], images seen).

Homotypic synonym: *Cinnamomum madrassicum* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

The holotype was identified by Kostermans. Lukmanoff cited Hooker as the collector, but there is no collector on the label. The specimen was distributed by J. D. Hooker and T. Thomson.

var. *mauritanum* Lukman., Nomencl. Icon. Cannel.: 4. 1878.

TYPE: MAURITIUS. *Flora Mauritiana exsicc. II, F. Sieber 343* (Lectotype, here designated: P [02006725], image seen; Isolectotypes: E [00653432], G [00693699], GZU [000253980], L [1791436], MEL [0080271], images seen).

Homotypic synonym: *Cinnamomum mauritanum* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

The specimen chosen as the lectotype seems to fit best with Lukmanoff's protologue in leaf shape and size (8 × 4 cm). Another very similar collection (*Sieber 127*) was chosen as the lectotype of var. *sieberi*.

var. *meissneri* Lukman., Nomencl. Icon. Cannel.: 5. 1878.

TYPE: INDONESIA. Java, *ex Herbario Lugduno-Batavo s.n.* (Holotype: not found). Neotype, here designated: Indonesia, Java, *ex Herbario Lugduno-Batavo, C. L. Blume s.n.* (Holoneotype: A [02537096], image seen).

Homotypic synonym: *Cinnamomum meissneri* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

A matching collection has not been located in Paris, so a similar collection, described and depicted by Lukmanoff (leaves 11 × 6 cm) found at Harvard, has been chosen as the neotype.

var. *ovatum* Lukman., Nomencl. Icon. Cannel.: 4. 1878.

TYPE: INDIA [as Indes Orientalis]. *R. Wight s.n.* (Holotype: not found).

Homotypic synonym: *Cinnamomum ovatum* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

The specimen identified by Kostermans as the holotype (*R. Wight 2240* [P 01978450]) doesn't agree with Lukmanoff's protologue, in that the leaves are badly damaged, and, thus, none match the one depicted by him. A duplicate [P 01978466] has more oblong-elliptic leaves but does not match either. Another Wight collection (no. 2511 [P 00732270]) is also not a match. Thus, it seems the type is no longer extant in Paris, and a neotype may need to be chosen.

var. *pallasii* Lukman., Nomencl. Icon. Cannel.: 6. 1878.
TYPE: SRI LANKA [as Ceylan]. *G. H. K. Thwaites CP 2285* (Lectotype, here designated: P [01749472], image seen; Isolectotypes: BM [014605828], CGE [00085212], FI [086056], G [00693636], MEL [0080262], P [01978495], PDA [00000270], images seen).

Homotypic synonym: *Cinnamomum pallasii* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

The original specimen seen by Lukmanoff seems not to be extant in Paris; therefore, an almost matching, later acquired duplicate is chosen as the lectotype.

var. *pleei* Lukman., Nomencl. Icon. Cannel.: 5. 1878.
TYPE: MARTINIQUE. *A. Plee s.n.* (Lectotype, here designated: P [01978671], image seen); possible Isolectotypes: L [1791375], L [1791384], P [01978670], images seen).

Homotypic synonym: *Cinnamomum pleei* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

The sheet chosen as the lectotype has a leaf matching the dimensions (11 × 5 cm) noted by Lukmanoff, but it perhaps differs slightly in shape. It is possible the duplicate Lukmanoff saw is no longer extant in Paris.

var. *pourretii* Lukman., Nomencl. Icon. Cannel.: 5. 1878.
TYPE: MARTINIQUE. *P. A. Pourret s.n.* (Holotype: not found).

Homotypic synonym: *Cinnamomum pourretii* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

var. *regelii* Lukman., Nomencl. Icon. Cannel.: 5. 1878.
TYPE: SRI LANKA [as Ceylan]. *Herbarium A. T. Brogniart s.n.* (Holotype: not found).

Homotypic synonym: *Cinnamomum regelii* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

var. *roxburghii* Lukman., Nomencl. Icon. Cannel.: 6. 1878.
TYPE: SRI LANKA [as Ceylan]. *Herbarium A. T. Brogniart s.n.* (Holotype: not found).

Homotypic synonym: *Cinnamomum roxburghii* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

var. *sieberi* Lukman., Nomencl. Icon. Cannel.: 4. 1878.
TYPE: MAURITIUS. *Flora Mauritiana exsicc. II, F. Sieber 127* (Lectotype, here designated: P [02006723], image seen; Isolectotypes: B [10 0159025], BM [014605817], G [00693656], G [00693697], G [00693815], GZU [000253981], K [002235152], L [1791433], L [1791434],

L [1791435], MEL [0080245], MEL [0080273], P [02006671], images seen).

Homotypic synonym: *Cinnamomum sieberi* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

var. *vaiillantii* Lukman., Nomencl. Icon. Cannel.: 4. 1878.
TYPE: WITHOUT LOCALITY. *Herbarium S. Vaillant s.n.* (Lectotype, here designated: P [00659170], image seen).

Homotypic synonym: *Cinnamomum vaiillantii* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

The specimen chosen as the lectotype matches the description and illustration provided in the protologue. On one of the labels, an unknown hand (possibly Lukmanoff) has written “*vaiillantii*.” The collection is of unknown origin (Java was assumed by Lukmanoff), but either Sri Lanka or Java are possibilities. It was not collected by Sebastien Vaillant (1669–1722), a notable French botanist who did not leave Europe.

var. *variabile* Lukman., Nomencl. Icon. Cannel.: 4. 1878.
TYPE: INDONESIA. Java, *C. L. Blume s.n.* (Lectotype, here designated: P [01978268], image seen).

Homotypic synonym: *Cinnamomum variabile* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

The specimen chosen as the lectotype is from Java, was apparently collected by Blume, and has a pair of overlapping leaves of different sizes which gave rise to Lukmanoff's varietal epithet *variabile*. However, in Paris, a sheet has Lukmanoff's original label seemingly mistakenly attached to it. This sheet [P 00732270], image seen is a Robert Wight collection (no. 2511) from Peninsular India. It does not have the features described and depicted for var. *variabile* by Lukmanoff.

var. *wolkensteinii* Lukman., Nomencl. Icon. Cannel.: 6. 1878.

TYPE: INDONESIA. Java, [in the garden of Tjiringin, 19 May 1843], *H. Zollinger 1316* (Lectotype, here designated: P [01978269], image seen; Isolectotypes: FI [086058], G [00693698], P [01978124], U [1359921], images seen).

Homotypic synonym: *Cinnamomum wolkensteinii* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

The lectotype matches details supplied in the protologue. The duplicate Lukmanoff saw only had Zollinger's number on it; further details, such as locality and date, are taken from the Herbarium Drake specimen in Paris.

var. *zollingeri* Lukman., Nomencl. Icon. Cannel.: 4. 1878.
TYPE: INDONESIA. Java, cultivated, *H. Zollinger 580* (Lectotype, here designated: P [01978266], image seen; Isolectotypes: BR [0000029324552], FI [086057], G [00693638], G [00693640], K [000350931], L [1791414], MEL [0080248], P [01978126], P [01978274], images seen).

Homotypic synonym: *Cinnamomum zollingeri* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 46. 1926.

The lectotype matches Lukmanoff's protologue. On one duplicate [P 01978126], Zollinger noted that it flowers from June to July, and fruits from July to September. He recorded the indigenous name as *Kaju manis*.

Camphora Fabr., Enum.: 218. 1759.

Type species: *Laurus camphorifera* Kaempf. ex Fabr.

Lukmanoff (1878) accepted 27 species in this genus, of which 23 (plus 8 varieties) were newly proposed by him. The taxa are arranged here alphabetically, as above. Molecular studies [Yang et al., 2022, and references therein] show *Camphora* can now again be recognised as distinct from *Cinnamomum*. Currently, *Camphora* has about 16 species, most of which are in China.

Camphora baillonii Lukman., Nomencl. Icon. Cannel.: 24. 1878.

TYPE: JAPAN. *Cult. in the gardens of the Faculty of Medicine, Paris, A. de Lukmanoff s.n.* (Holotype: P [00757024], image seen).

The specimen has a label by Lukmanoff that identifies it as the type of *C. baillonii*. Kostermans identified the plant as *Cinnamomum porrectum* (= *Camphora parthenoxylon* [Jack] Meissn.).

Camphora blumei Lukman., Nomencl. Icon. Cannel.: 22. 1878.

TYPE: JAPAN. Cultivated in Java [Indonesia], *C. L. Blume s.n.* (Holotype: not found).

Camphora brogniartii Lukman., Nomencl. Icon. Cannel.: 23. 1878.

TYPE: CHINA/JAPAN. April 1872, *Cult. St. Cloud s.n.* (Lectotype, here designated: P [00757065], image seen).

The specimen chosen as the lectotype was questionably suspected to be the holotype of *C. brogniartii* by Kostermans. I believe his suspicions are correct, since there is a leaf the shape and size (14.0 × 5.5 cm) as indicated by Lukmanoff in the protologue. There is no locality on the specimen, and it is likely Lukmanoff just guessed China or Japan. Kostermans identified the plant as *Cinnamomum camphora* (i.e., *Camphora officinarum*).

Camphora camelliifolia Lukman., Nomencl. Icon. Cannel.: 22. 1878, as *camelliaefolia*.

TYPE: JAPAN. *Cult. in the gardens of the Faculty of Medicine, Paris, A. de Lukmanoff s.n.* (Holotype: P [00757064], image seen).

The specimen has a label identifying it as *Camphora camelliifolia* by Lukmanoff. Kostermans identified the specimen as *Cinnamomum camphora* (= *Camphora officinarum*).

Camphora decaisnei Lukman., Nomencl. Icon. Cannel.: 23. 1878.

TYPE: INDIA. *Cult. Bot. Gard. Calcutta, J. D. Hooker s.n.* (Holotype: not found).

Camphora decandollei Lukman., Nomencl. Icon. Cannel.: 23. 1878.

TYPE: CHINA. Hong Kong, 1855, *Abbot L. Furet 26* (Holotype: P [00757016], image seen).

The specimen was identified as the type by Kostermans, and identified as *Cinnamomum porrectum* (= *Camphora*

parthenoxylon). The collection number was added later; it is not one of Abbot Furet's.

Camphora griffithii Lukman., Nomencl. Icon. Cannel.: 22. 1878.

TYPE: INDIA. East Bengal, *W. Griffith (Kew Distr.) 4246/2* (Holotype: P [00757060], image seen).

The specimen was identified as the type by Kostermans and determined as *Cinnamomum camphora* (= *Camphora officinarum*) by him.

var. *lanceolata* Lukman., Nomencl. Icon. Cannel.: 22. 1878.

TYPE: RÉUNION. *J. Barthe s.n.* (Lectotype, here designated: P [02006550], image seen).

Homotypic synonym: *Camphora lanceolata* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 35. 1926.

Lukmanoff gave "Mauritius, *Barthe*" as the type data. The collection chosen as the lectotype comes from Réunion and seems to have slightly wider leaves (4.0 vs. 3.5 cm) with more veins branching off the midvein. As noted above under *Cinnamomum zeylanicum* var. *barthei*, there are no known Barthe collections from Mauritius.

Camphora himalayica Lukman., Nomencl. Icon. Cannel.: 23. 1878.

TYPE: INDIA. Himalaya, *W. Griffith s.n.* (Holotype: not found). Neotype, here designated: India, East Himalaya, *W. Griffith (Kew Distr.) 4247* (Holoneotype: CAL [0000033160], image seen; Isoleotypes: CAL [0000033159], S [S-G-1140, East Bengal], U [0002655], images seen).

A matching collection has not been located in Paris. The collection *Griffith (Kew Distr.) 4247* from East Himalaya matches Lukmanoff's protologue rather well in leaf shape and size (10 × 6 cm). The duplicate in Stockholm has "East Bengal" on the label, but has the correct Kew Distribution number of 4247. Kostermans' annotations on the latter indicate it is *Cinnamomum glaucescens* (Nees) Hand.-Mazz., a name here moved to *Camphora glaucescens* (Nees) Ormerod (see Addendum).

Griffith (Kew Distr.) 4247 is sometimes misidentified as an isosytype of *Cinnamomum glanduliferum* (Wall.) Meissn. var. *caniflorum* Meissn. However, it is *Griffith (Kew Distr.) 2476* from Bhutan that is an isosytype of the latter.

Camphora hookeri Lukman., Nomencl. Icon. Cannel.: 23. 1878.

TYPE: INDIA. *J. D. Hooker s.n.* (Holotype: not found).

Camphora humboldtii Lukman., Nomencl. Icon. Cannel.: 24. 1878.

TYPE: JAPAN AND ARCHIPELAGO. Without locality, *R. Oldham 704* (Lectotype, here designated: P [00757059], image seen; Isoleotypes: GH [02620352], K [002133041, lower specimen], L [0308679], images seen).

Lukmanoff gave the type data as "Japan et Archipel., *Oldham*." These details agree with a label on a sheet identified as the holotype by Kostermans, who determined it as *Cinnamomum camphora* (= *Camphora officinarum*). The isolectotype in L [0308679] agrees with the lectotype

in Paris in the handwritten label annotation and script style. This latter specimen was identified as an isosyntyple of *Cinnamomum camphora* var. *parvifolium* Miq. Another collection, numbered *Oldham 704* from Nagasaki, Japan, is the type of *Camphora thunbergii* Lukman.

var. *syringifolia* Lukman., Nomencl. Icon. Cannel.: 24. 1878 as *syringifolia*.

TYPE: WITHOUT ORIGIN. *Cult. Bot. Gard. Calcutta, comm. T. Anderson 28* (Lectotype, here designated: P [01748496], image seen).

Homotypic synonym: *Camphora syringifolia* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 35. 1926.

The specimen chosen as the lectotype is probably not the duplicate Lukmanoff saw, as it has slightly broader (4 vs. 3 cm) leaves of a more elliptic (vs. ovate) shape. The original duplicate is possibly no longer extant at Paris. I suspect it was not annotated "Japan," and that this was a guess on the origin by Lukmanoff. The specimen was identified as *Cinnamomum camphora* (= *Camphora officinarum*) by Kostermans. In Paris, Kostermans identified another sheet [P00757014], image seen as the type of var. *syringifolia*, but this has much larger (10 × 5 cm), elliptic to elliptic-obovate (vs. 6 × 3 cm, ovate) leaves and belongs to *Camphora parthenoxylon*.

Camphora jussieui Lukman., Nomencl. Icon. Cannel.: 23. 1878.

TYPE: INDIA. East Bengal, *W. Griffith (Kew Distr.) 4248* (Lectotype, here designated: P [01748896], image seen; Isolectotype: K [002133473], image seen).

Kostermans identified the specimen chosen as the lectotype as the probable type. I agree that this is the type, because the specimen matches the dimensions (13.0 × 4.5 cm) of the leaf and its shape as depicted in the protologue. Kostermans identified it as *Cinnamomum porrectum* (= *Camphora parthenoxylon*).

Camphora mauritiana Lukman., Nomencl. Icon. Cannel.: 22. 1878.

TYPE: MAURITIUS. *P. Commerson s.n.* (Lectotype, here designated: P [02006549], image seen).

The specimen chosen as the lectotype matches the leaf dimensions (9 × 3 cm) and shape described by Lukmanoff in the protologue. Kostermans identified the specimen as *Cinnamomum camphora* (= *Camphora officinarum*).

Camphora neesii Lukman., Nomencl. Icon. Cannel.: 22. 1878.

TYPE: JAPAN. Without locality [Simoda], U.S. North Pacific Exploring Expedition, 1853–1856, *C. Wright s.n.* (Lectotype, here designated: P [00757062, right-hand plant], image seen; Isolectotypes: GH [00415037, right-hand plant], NY [391948], US [61455], images seen).

The specimen chosen as the lectotype agrees with Lukmanoff's description and drawing in the protologue. There is no specific locality on the lectotype sheet in Paris, but the isolectotypes have the locality of Simoda (= Shimoda, on the Izu Peninsula, Honshu Island). Another

specimen (left-hand side) on the same sheet as the lectotype is the type of the variety *microphylla*. It has been identified as *Cinnamomum camphora* (= *Camphora officinarum*).

var. *microphylla* Lukman., Nomencl. Icon. Cannel.: 22. 1878.

TYPE: SOUTH KOREA. Tsu-sima Island, *C. Wilford s.n.* (Lectotype, here designated: P [00757061, left-hand plant], image seen; Isolectotypes: CGE [00085195], GH [00415036, left-hand plant], K [002133035], images seen).

Homotypic synonym: *Camphora microphylla* (Lukman.)

A.W. Hill, Index Kew., Suppl. 6: 35. 1926.

Kostermans identified the specimen chosen as the lectotype as the holotype of this taxon. He identified it as *Cinnamomum camphora* (= *Camphora officinarum*).

var. *pharbitifolia* Lukman., Nomencl. Icon. Cannel.: 22. 1878.

TYPE: JAPAN. 1862, *ex Herbario Lugduno-Batavo s.n.* (Lectotype, here designated: P [00757058], image seen).

Homotypic synonym: *Camphora pharbitifolia* (Lukman.)

A.W. Hill, Index Kew., Suppl. 6: 35. 1926.

The lectotype was identified as the probable holotype by Kostermans, a view here agreed with. Thus, the sheet in question is chosen as the lectotype, since it agrees with details supplied in the protologue by Lukmanoff.

Camphora officinarum Boerh. ex Fabr., Enum., ed. 2 [Fabr.]: 400. 1763 (Isonym: Nees, in Wallich, Pl. Asiat. Rar. 2: 72. 1831).

This is an accepted taxon also known as *Cinnamomum camphora* (L.) J. Presl. The specimen from the Botanical Garden in Paris that was used to describe and illustrate it for Lukmanoff's (1878) account is extant [P 01748566], image seen.

var. *hahnemannii* Lukman., Nomencl. Icon. Cannel.: 22. 1878.

TYPE: JAPAN. *Herbarium A. T. Brogniart s.n.* (Holotype: not found).

Homotypic synonym: *Camphora hahnemannii* (Lukman.)

A.W. Hill, Index Kew., Suppl. 6: 35. 1926.

var. *hippocratei* Lukman., Nomencl. Icon. Cannel.: 22. 1878.

TYPE: JAPAN. *Herbarium A. T. Brogniart s.n.* (Holotype: not found).

Homotypic synonym: *Camphora hippocratei* (Lukman.)

A.W. Hill, Index Kew., Suppl. 6: 35. 1926.

Camphora oldhamii Lukman., Nomencl. Icon. Cannel.: 23. 1878.

TYPE: TAIWAN [as Formosa]. Without locality, 1864, *R. Oldham 449* (Lectotype, here designated: P [00757057], image seen; Isolectotypes: GH [0260350], K [002133113], images seen).

Kostermans identified the specimen cited above as the probable holotype of *Camphora oldhamii*. I agree with his determination of the collection, since it matches

Lukmanoff's protologue in leaf size (8.0 × 3.5 cm) and shape. He determined it as *Cinnamomum camphora* (= *Camphora officinarum*). In Paris, the type number has been understandably misinterpreted as *Oldham 4425*, but it is 449. In L [0035737], image seen, an Oldham collection was identified as an isotype of *Camphora oldhamii*, but the specimen is from Nagasaki, Japan.

Camphora procera Lukman., Nomencl. Icon. Cannel.: 23. 1878.

TYPE: INDONESIA. Cultivated on Java, ex *Herbario Lugduno-Batavo s.n.* (Lectotype, here designated: P [01978111], image seen); Isolectotypes: G [00694109], L [0035742], L [0035743], U [0002648], images seen).

The specimen was annotated with the name *Camphora officinarum* var. *procera*, is from Java, and was distributed from Leiden. Its leaf measurements (10 × 6 cm) and shape (ovate) match those provided by Lukmanoff in the protologue, and, thus, it is chosen as the lectotype. The specimen is filed under the name *Cinnamomum camphora* (= *Camphora officinarum*) in Paris.

Camphora rougieri Lukman., Nomencl. Icon. Cannel.: 22. 1878.

TYPE: JAPAN. Without locality, cultivated in the garden of *M. Rougier, A. de Lukmanoff s.n.* (Holotype: P [00757063], image seen).

The holotype bears a label by Lukmanoff identifying it as *Camphora rougieri*. The locality "Japan" is not mentioned. Kostermans identified the specimen as *Cinnamomum camphora* (= *Camphora officinarum*).

var. ***glandulifera*** Lukman., Nomencl. Icon. Cannel.: 23. 1878.

TYPE: MAURITIUS. Cultivated, *P. Commerson 239* (Lectotype, here designated: P [02006561], image seen; Isolectotype: L [0423745], not seen). AUSTRALIA. New South Wales, Port Jackson, *sine coll. s.n.* (Syntype: P [00256011], image seen).

Homotypic synonym: *Camphora glandulifera* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 35. 1926 *nom. illeg.* (*non* [Wall.] Nees 1831).

The specimen chosen as the lectotype agrees with the protologue supplied by Lukmanoff. The other syntype from Australia is filed as a *Cinnamomum sp.*, but Lukmanoff was correct to treat it as the same as the Mauritian plant. Both are identified as *Camphora officinarum*.

Camphora sieboldii Lukman., Nomencl. Icon. Cannel.: 22. 1878.

TYPE: JAPAN. Without locality, *sine coll. s.n.* (Lectotype, here designated: P [01991854], image seen).

Kostermans identified the specimen chosen as the lectotype as the probable holotype of this entity; he determined it as *Cinnamomum camphora* (= *Camphora officinarum*). I agree with his determination of the material, since it matches Lukmanoff's protologue quite well (e.g., leaves 7 × 4 cm).

Camphora thomsonii Lukman., Nomencl. Icon. Cannel.: 24. 1878.

TYPE: INDIA. Cultivated in Saharunpur, *T. Thomson s.n.* (Lectotype, here designated: P [00757056], image seen; Isolectotype: K [002133412], image seen).

Kostermans identified the specimen chosen as the lectotype as the holotype of this taxon; he determined it as *Cinnamomum camphora* (= *Camphora officinarum*).

Camphora thouarsii Lukman., Nomencl. Icon. Cannel.: 24. 1878.

TYPE: JAPAN. *Herbarium A. A. Petit du Thouars s.n.* (Holotype: not found).

The type of this plant was possibly obtained on Mauritius, where Japanese material of *Camphora officinarum* was cultivated.

Camphora thunbergii Lukman., Nomencl. Icon. Cannel.: 22. 1878.

TYPE: JAPAN. Nagasaki, 1862, *R. Oldham 704* (Lectotype, here designated: K [002133041, upper plant], image seen; Isolectotypes: GH [02620351], L [1795679], LY [0746654], M [0293174], images seen).

A matching collection has not been found in Paris, so a sheet in Kew (the distributing institution) is chosen as the lectotype. *Camphora humboldtii* Lukman. in Paris has the same collector and number as the type, but with a handwritten label without the locality, Nagasaki, and year, 1862. Unnumbered Oldham collections in GH [02620349] and L [0035737], misidentified as an isotype of *Camphora oldhamii* from Nagasaki, Japan, have both younger and smaller leaves than that described by Lukmanoff (8 × 4 cm) for *Camphora thunbergii*. All material seen has been identified as *Cinnamomum camphora* (L.) J. Presl (= *Camphora officinarum*).

Camphora thwaitesii Lukman., Nomencl. Icon. Cannel.: 23. 1878.

TYPE: JAPAN. Cultivated in Java [Indonesia], *H. Zollinger s.n.* (Holotype: not found).

More than likely this collection was originally made by H. Buerger in Japan, and that material was then incorporated into the herbarium of Zollinger. Zollinger did not collect in Japan.

Camphora wrightii Lukman., Nomencl. Icon. Cannel.: 24. 1878.

TYPE: CHINA. Hong Kong, U.S. North Pacific Exploring Expedition, 1853–1856, *C. Wright 402* (Lectotype, here designated: P [00757015], image seen; Isolectotypes: GH [00871568], K [002133245], NY [354966], US [614444], images seen).

The lectotype was identified as the probable holotype of this taxon by Kostermans; he determined it as *Cinnamomum porrectum* (= *Camphora parthenoxylon*). In L [0035735], image seen, a sheet has been wrongly identified as an isotype of *Camphora wrightii*. A later hand crossed out "Japan" and wrote "Hong Kong." It is more likely this specimen of *Camphora officinarum* is an isotype of *C. neesii*.

var. *multinerva* Lukman., Nomencl. Icon. Cannel.: 24. 1878.

TYPE: JAPAN/CHINA. *Herbarium A. T. Brogniart s.n.* (Holotype: not found).

Homotypic synonym: *Camphora multinerva* (Lukman.) A.W. Hill, Index Kew., Suppl. 6: 35. 1926.

Camphora zollingeri Lukman., Nomencl. Icon. Cannel.: 24. 1878.

TYPE: JAPAN. "Cultivated in Java," [leg. H. Buerger], *H. Zollinger 219* (Lectotype, here designated: P [01978395], image seen; Isolectotypes: BM [015153037], G [00693858], G [00693860], P [01978396], U [1603970], images seen).

The lectotype was identified as the holotype by Kostermans; the specimen matches Lukmanoff's protologue.

Lukmanoff assumed the plant had been cultivated on Java (Indonesia), but more likely the specimen is one of those collected by H. Buerger in the Nagasaki region of Japan, and later incorporated into Zollinger's herbarium. The Paris isotype has a stem (left-hand plant) with much larger (ca. 12 × 5 cm) leaves. Also, on the Paris isotype, the Japanese vernacular name Kurotsusu is recorded, a name already recorded for this plant by Siebold (1830, as *Cinnamomum japonicum* Siebold). Kostermans annotated all the material in Paris of this species as *Cinnamomum zollingeri* (Lukman.) Kosterm., but that combination appears to be unpublished and is not available because of the earlier *C. zollingeri* (Lukman.) A.W. Hill (= *C. verum* J. Presl). As noted above, this taxon should be called *Cinnamomum alatum* Lukman.; it does not belong in *Camphora*.

ADDENDUM

The following observations came about as a result of the above research.

Camphora blandfordii (M. Gangop.) Ormerod, *comb. nov.*
Basionym: *Cinnamomum blandfordii* M. Gangop., Bull. Bot. Surv. India 48(1–4): 110. 2006.

TYPE: MYANMAR. Katha District, 180 m, 8 March 1917, H. R. Blandford 115 (Holotype: CAL [0000021481], image seen; Isotype: CAL [0000021482], image seen).

Distribution: India and Myanmar.

This species is related to *Camphora glandulifera* (Wall.) Nees and, therefore, requires transfer to *Camphora*.

Camphora camphorata (H. Lév.) Ormerod, *comb. nov.*
Basionym: *Machilus camphoratus* H. Lév., Repert. Spec. Nov. Regni Veg. 9: 460. 1911.

TYPE: CHINA. Guizhou [as Kouy-Tcheou]: Pingfa [as Pin-Fa], May 1903 and April 1908, *J. Cavalerie 1002* (Holotype: E [00386438], image seen; Isotypes: A [00415028], K [000778566, April 1908], K [000778567, May 1903], L [0035749], P [00757048], images seen).

Homotypic synonyms: *Alseodaphne camphorata* (H. Lév.) C.K. Allen, *J. Arnold Arbor.* 17: 326. 1936.

Alseodaphne caudata Lecomte, *Nouv. Arch. Mus. Hist. Nat. ser. 5*, 5: 97. 1913 *nom. illeg.*

Cinnamomum caudifer Kosterm., *Reinwardtia* 8: 35. 1970 as *caudiferum*.

Heterotypic synonyms: *Beilschmiedia foveolata* Merr., *J. Arnold Arbor.* 19: 30. 1938.

TYPE: VIETNAM [as Indo-China]. Tonkin, Sapa [as Chapa], 1700 m, August 1930, *P. A. Petelot 5380* (Syntypes: A [00041196], BO [1276866], BO [1278374], K [000350897, see note], NY [00354900], NY [00354901], P [00745506], US [00099403], images seen).

Litsea foveolata (Merr.) Kosterm., *Reinwardtia* 8: 98. 1970.

Cinnamomum foveolatum (Merr.) H.W. Li & J. Li, *Fl. China* 7: 170. 2008.

Camphora foveolata (Merr.) Y. Yang, Bing Liu & Zhi Yang, *Ecol. Evol.* 12(10): e9378: 8. 2022.

Distribution: China and Vietnam.

The earliest name for this taxon is *Machilus camphoratus*, the specific epithet of which is available in *Camphora*. Therefore, the required transfer is made here.

I have followed Yang et al. (2022) in treating *Machilus camphoratus* and *Alseodaphne caudata* as homotypic. Lévillé cited two specimens collected by Cavalerie in the protologue of *Machilus camphoratus*, but the original label on the holotype in E has both of the dates he cited. I assume from this that Cavalerie combined the material he collected at Pingfa in May 1903 and April 1908 into a single collection. Lecomte (in the protologue of *Alseodaphne caudata*) cited no collection date for the duplicate of *Cavalerie 1002* in Paris. It is my suspicion that a later hand (probably Kostermans) added the date of April 1908 to the specimen.

The Kew isotype of *Beilschmiedia foveolata* has the number *Petelot 3380* and collection date of 7 August 1939. These are transcription errors. The "7 August 1939" date is when Paris received the material from Petelot.

Camphora glaucescens (Nees) Ormerod, *comb. nov.*
Basionym: *Cecidodaphne glaucescens* Nees, in Wallich, *Pl. Asiat. Rar.* 2: 70. 1831.

TYPE: BANGLADESH. Sylhet, *F. de Silva in N. Wallich Catal.* 2560A (Syntypes: B [10-0277097], G [00694103, right-hand plant], GZU [000253894], K-W [001116446], K-W [001116447], NY [00354954], images seen; Sylhet, *F. Buchanan-Hamilton in N. Wallich Catal.* 2560B (Syntypes: GZU [000253895], K-W [001116448], images seen); Sylhet, *N. Wallich Catal.* 2560 (Syntypes: BM [000880629], G [00694103, two left-hand plants], GZU [000253893A], GZU [00253893B], PH [00030194], images seen); Sylhet, February 1815, *F. Buchanan-Hamilton 987* (Syntype: E [00393162], image seen). INDIA. Without locality, *N. Wallich s.n.* (possible Syntype: BR [0000029323326], image seen).

Homotypic synonyms: *Cinnamomum cecidodaphne* Meissn., *Prodr.* [A. P. de Candolle] 15(1): 25. 1864 *nom. illeg.*

Cinnamomum glaucescens (Nees) Hand.-Mazz., *Oesterr. Bot. Zeitschr.* 85: 214. 1936.

Distribution: India, Bangladesh, Bhutan, Myanmar, Laos, Thailand, Vietnam, and China.

Yang et al. (2022) argued that the monospecific genus *Cecidodaphne* was a synonym of *Cinnamomum*, because its only species had tripliveined leaves. This is, however, evidently untrue, as all material seen has pinnately veined leaves, and, therefore, *Cecidodaphne* is a synonym of *Camphora*.

Besides *Cinnamomum glanduliferum* (Wall.) Meissn. var. *caniflorum* Meissn., all of the other possible synonyms identified by Kostermans are currently recognised as valid taxa on POWO. These entities are *Cinnamomum balansae* Lecomte, *Cinnamomum illicioides* A. Chev., *Cinnamomum longipetiolatum* H.W. Li, and *Cinnamomum siamense* Craib. As noted above, *Camphora himalayica* Lukman. is also treated here as *Camphora glaucescens*.

Cinnamomum cubittii Ormerod, *nom. nov.*

Basionym: *Cinnamomum bhamoense* M. Gangop., Bull. Bot. Surv. India 48(1–4): 104. 2006 (*non Cinnamomum bhamoense* Lukman. 1878).

TYPE: MYANMAR. Bhamo, 1910, *G. E. S. Cubitt 531* (Holotype: CAL [0000025889], image seen).

Etymology: Named after G. E. S. Cubitt, who collected plants in Myanmar.

It is necessary to rename this taxon due to the earlier *Cinnamomum bhamoense* Lukman. Both entities are named after Bhamo in Myanmar, and their epithets are pronounced the same. A small irony, as explained above, is that Lukmanoff's taxon likely came from India and not Bhamo in Myanmar.

Timonius pedunculatus (Thunb.) Ormerod, *comb. nov.*

Basionym: *Laurus pedunculata* Thunb., Syst. Veg., ed. 14 (J. A. Murray): 383. May–June 1784; Fl. Jap. (Thunberg): 174. August 1784.

TYPE: NOT CITED. JAPAN [as Japonia], without specific locality, *C. P. Thunberg s.n.* (Lectotype, here designated:

UPS-Thunb 9384 [= V-084738], image seen).

Homotypic synonyms: *Cinnamomum pedunculatum* (Thunb.) J. Presl, Prir. Rostlin 2: 37. 1823–1824.

Cinnamomum japonicum Siebold, Verh. Batav. Genootsch. Kunst. 12: 23. 1830 *nom. illeg.*

Hedyotis pedunculata (Thunb.) Nakai, Bot. Mag. (Tokyo) 41: 518. 1927.

Distribution: Uncertain (see notes).

This species was mistakenly assigned to the genus *Laurus* (Lauraceae) by Thunberg, and then later its name was misapplied to a Japanese species of *Cinnamomum*, due to Philipp von Siebold (1830) identifying his own Japanese collections with it. The Japanese collections of Siebold are here considered to belong to *Cinnamomum alatum* Lukman. (Synonyms include: *Camphora zollingeri* Lukman., *Cinnamomum goeringii* Lukman., and *C. insularimontanum* Hayata).

Japanese botanist Takenoshin Nakai discovered that *Laurus pedunculata* belonged in Rubiaceae, and thus he transferred it to *Hedyotis* L. However, Thunberg's woody plant does not fit in that genus of mostly herbaceous plants. It does, however, fit in *Timonius* Rumph ex DC (Taylor, *pers. comm.*), a genus that is not found in temperate Japan, where Thunberg supposedly collected it. Thunberg also collected in Java (Indonesia) and Sri Lanka. *Timonius* is curiously rare and almost absent from Java, so this leaves Sri Lanka as a probable place of collection.

A single species of *Timonius* has been accepted as occurring in Sri Lanka. Online databases (e.g., POWO) call it *T. flavescens* (Jack) Baker, but specialists (Junhao Chen and Pui Kiat Hoo, *pers. comm.*) in southeast Asian *Timonius* point out that the Sri Lankan plants of *Timonius* have chartaceous leaves and eight-lobed fruits (vs. coriaceous leaves and four-lobed fruits in *T. flavescens*). The type of *Laurus pedunculata* bears pistillate (male) flowers and, in my view, agrees rather well with some of these Sri Lankan plants, but it is clear that critical revision of material from there is needed.

LITERATURE CITED

- DOWELD, A. B. 2017. New names in *Cinnamomoides*, *Cinnamomum* and *Neolitsea* (Lauraceae), and *Pterospermum* (Malvaceae), fossil and living. *Phytotaxa* 326(3): 189–201.
- KOSTERMANS, A. J. G. H. 1983. The South Indian species of *Cinnamomum* Schaeffer (Lauraceae). *Bull. Bot. Surv. India* 25(1–4): 90–133.
- . 1995. Lauraceae (pp. 105–172) in M. D. Dassanayake, F. R. Fosberg, and W. D. Clayton, editors, *A Revised Handbook to the Flora of Ceylon IX*. A. A. Balkema. Rotterdam/Brookfield.
- . 1998. The Burmese *Cinnamomum* (Lauraceae). *Reinwardtia* 11(3): 195–214.
- LUKMANOFF, A. DE. 1878. *Nomenclature et iconographie des Canneliers et Camphriers*. Typographie F. Debois et Cie, Paris.
- MORAES, P. L. R. DE. 2012. The Lauraceae collected in Brazil by Ludwig Riedel—I. *Harvard Papers Botany* 17(1): 185–216.
- SIEBOLD, P. F. B. VON. 1830. *Synopsis Plantarum Oeconomiarum Universi Regni Japonici*. Verh. Batav. Genootsch. Kunst. 12: 1–74.
- SOH, W. K. 2011. Taxonomic revision of *Cinnamomum* (Lauraceae) in Borneo. *Blumea* 56(3): 241–264.
- YANG, Z., B. LIU, Y. YANG, AND D. K. FERGUSON. 2022. Phylogeny and taxonomy of *Cinnamomum* (Lauraceae). *Ecology and Evolution*. 12(10): e9378.