

UNLISTED TECHNICAL PLANT NAMES IN THE PUBLISHED WORKS OF L. OKEN (1841) AND J. S. PRESL (1846)

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RECENTLY Doctor I. M. Johnston called my attention to a few unlisted boraginaceous binomials published by J. S. Presl¹ in 1846. A casual examination of some of the entries in Presl's Czech text indicated that there were other scattered but as yet unlisted new binomials in both volumes. What intrigued me most, however, were still other unlisted binomials credited by Presl to Oken. The latter was known to me only as a zoologist and as the editor of *Isis*, not as an author of systematic botanical texts. In the second edition of Pritzel's *Thesaurus* (1872-77) there is no entry under Oken, but in the first edition of that standard work (1857) is this item: "**Oken, Lorenz.** Allgemeine Naturgeschichte für alle Stände. Band 2 und 3 oder Botanik, Band 1 und 2. Stuttgart, Hoffmann. 1839-1841. 8.-I: 1839. iv, 386 p.-II: 1841. 2135, xxx, 44 p. (2½ *th.*) Atlas in 4: 8 tab. col. cum explicatione."

This proved to be the work that I sought, for in it Oken did publish for the first time many new binomials. All of these have apparently been overlooked by all subsequent botanists other than J. S. Presl, who, a few years later properly credited certain of them to Oken. The "Zweyter Band" of the entire work is also indicated as "Botanik, erste Band" but this being an explanatory botanical text is not pertinent to the subject of this paper. The three parts which form the third volume of the entire work are also indicated as "Botanik, Zweyten Bandes," with the "erste," "zweyten," and "dritte" parts (Abtheilungen), but the pagination is continuous. Here is a botanical work with over 2100 pages, the above parts published in 1841, devoted to a selected descriptive world flora, many of the really significant genera being included, as well as several thousand species; and each admitted genus and species is accompanied by a German description. In addition eight of the 164 colored plates in the atlas (Abbildungen) published in 1843 appertain to plants, while all of the plant names are included in the Universal Register, 1-468. 1842. Band I (1839) covers mineralogy and geology, and in Band IV-VII (1833-1838) the animal kingdom is considered. In all, there are thirteen volumes of text and one of plates.

Considering that in this long overlooked work there is so much that is

¹ Presl, J. S. Wseobecny Rostlinopis, cili: popsani rostlin we wselikem ohledu uzitecnych a skodliwych. 1: i-xxxii. 1-1006; 2: 1007-2072 [1-2]. 1846. An approximate English translation of this Czech title is: Universal Botany, or Descriptions of Plants from all Parts of the World, Especially of Useful and Harmful Species.

strictly botanical, including certain new binomials, it impresses one as rather strange that Pritzel, or Jessen who edited the second edition of the *Thesaurus*, should have eliminated the title entirely. In the second edition, however, a very considerable number of titles that had appeared in the first edition, were eliminated, a procedure that B. Daydon Jackson later justifiably criticized. It was perhaps this elimination of the Oken title that caused this extensive work to be overlooked by most subsequent botanical bibliographers.

The unlisted Oken and Presl binomials are considered below. In preparing the list I have checked only those entries that appear in the parts devoted to a consideration of the vascular cryptogams and the spermatophytes. I naturally did not check all of the entries, but rather only those which impressed me as representing probable or possible new names; hence, it is possible that a few may have been overlooked. In no case did Oken indicate that a name accepted by him was a new one, nor did he cite authorities for any of the binomials. His usual procedure was to give, at the end of the individual descriptions, one or more references to the works of earlier authors who had considered the species, particularly those who had published illustrations; but here he normally did not cite either the binomial or the pre-Linnaean descriptive phrases used by this or that author, referring merely to the author, title, and page or illustration.

The generic and specific entries are not always easy to detect, for there is no typographical differentiation as between the scientific names and the descriptive text, except that the binomials are in Roman and the descriptions are in Gothic type. In most cases a single generic name appears, such as *Arundo*, *Carex*, *Thapsia*, etc. However, in many cases he included, following his accepted generic name, one or more synonyms, such as "*Dipteryx*, *Baryosma*," "*Stilago*, *Antidesma*," "*Peumus*, *Ruizia*, *Boldua*" and even in a few cases such a formula as "*Cupania*, *Trigonia*, *Molinaea*, *Gelonium*, *Vouarana*, *Stadmannia*," this last one to take only three selected species that he considered under the first name, *Cupania*. It was his rule to indicate the accepted binomial under the first generic name given, when two or more of the latter appeared.

He adopted the same general procedure in his binomials, such as the entry under "*Smegmaria*, *Quillaja*" which is "*S. emarginata* [Willd.], *saponaria*"; here the "*saponaria*" is understood to be a part of the binomial *Quillaja saponaria* [Molina], not a new name under *Smegmaria*. Under *Menispermum* one notes "*M. cocculus* [Linn.], *suberosum*" [= *Anamirtus cocculus* (Linn.) Wight and Arn.], the "*suberosum*" in this case being almost certainly derived from *Cocculus suberosus* DC. = *Anamirta cocculus* (Linn.) Wight and Arn. If one wishes to quibble one might argue that the change in the case ending of "*suberosus*" to "*suberosum*" might indicate a binomial under *Menispermum*; I do not so interpret such few cases.

I have not listed such binomials as *Lonchocarpus scandens*, *Parkia biglobosa*, *Rhizobolus glaber*, as having been published by Oken in 1841, for

the reason that all three occur in *Index Kewensis*, there credited to Steudel or to Bentham, all published by the latter authors in 1841; and yet Oken published the same three transfers in the same year. To prove priority at this late date would be a difficult matter. Neither have I listed minor variants such as *Aylantus glandulosus* for *Ailanthus glandulosus* Desf., the three binomials under *Cinara*, as these were originally published and are correctly listed under *Cynara*, nor *Guevina avellana* (= *Gevuina avellana*), and such variant or erroneous spellings of generic names as *Thyja*, *Limodurum* and *Sarcochilos*; nor have I considered such minor variants as *polianthum* for *polyanthum* (under *Melastoma*), *silvestre* for *sylvestre* (under *Zingiber*), etc., worthy of note.

The new but unlisted J. S. Presl binomials of 1846, mentioned above, total only fourteen, unless there be some that I have overlooked. As with the Oken work, I did not check all of the entries, but rather only those where the accepted binomial was not followed by an authority, and those where Oken was cited as the author of a name. In a certain number of cases it is apparent that new combinations were proposed, but where some other author had earlier published the same combination, these were ignored by me. Presl, like Oken, never indicated his new names as such, but he normally did cite the authorities for both the accepted binomials and the cited synonyms; this rendered the actual checking of his work a simple matter as compared with that of Oken. The Presl work is wholly in the Czech language, and as to the included genera and species it rather closely follows the earlier German work of Oken. Both works appertain to the flora of the entire world.

It has recently been proposed² that certain botanical works, long overlooked or ignored by modern botanists, be excluded from consideration by the addition to the International Code of Nomenclature of a new rule by which certain works published since 1753, but which up to 1951 have not been used for purposes of determining priority, are to be regarded as nomenclaturally inadmissible.

One wonders if those who proposed the new rule considered how very few changes in nomenclature actually result from the discovery of unlisted binomials, whether these be few or many, and no matter how early they were published. I have been personally responsible for calling attention to several thousand of these more or less fugitive names in the past few years. For somewhat in excess of 3180 unlisted binomials, if merely the present provisions of the International Code of Botanical Nomenclature be invoked, I noted but twelve cases where currently accepted binomials must be replaced by earlier names, a matter of less than 0.4 per cent.

Studies completed and published during the past few years on unlisted and incorrectly listed new generic and specific names, mostly published more than a century ago, include those on the works of Bartram (1791),

² Baehni, C., Holttum, R. E., et al. "Nomenclaturally Extinct" Works. Fl. Mal. Bull. 5: 135-136. 1949.

Eaton (1817–1840), Chapman (1860–1897), Wood (1844–1881), Muhlenberg (1793–1818), and Rafinesque (1802–1840).³

The count for Bartram is about 118, Eaton, about 150, Chapman, about 36, Wood, about 92, and Muhlenberg, about 424, a total of 820 names mostly published more than a century ago, yet in only two cases did the discovery of these old names in any manner affect modern nomenclature under the rules at present in force. In the case of Rafinesque the total is very much greater, approximately 3300 unlisted new generic names and binomials, all published before 1840. Eliminating the acceptance of any of the approximately 80 Rafinesque generic names, which definitely do have priority, I could find only ten cases⁴ in the 2360 binomials involved where changes in currently accepted binomials were indicated. It is admitted that one could, under the present code, by accepting those Rafinesque generic names which do have priority, change the names of about 2,000 species of plants. But the remedy here is to include all or most of these now offending earlier Rafinesque generic names in the list of *nomina generica rejicienda*, and at the same time adding the equivalent generic names of later authors to the list of *nomina generica conservanda*. In view of the very small percentage of indicated changes, provided advantage be taken of the provisions of the code as it now stands, with, of course, the indicated additions to the list of conserved generic names, one wonders if there is any justification for encumbering the Code with a new rule, now or at any time in the future. As a matter of fact, the proposed new rule does not affect the 3300 unlisted names, mostly published more than a century ago, above referred to.

If the proposed new rule be adopted perhaps these Oken-Presl works indicate how close a decision, as to acceptance or rejection of a certain work, will be on occasion. I have found references to Oken's new binomials of 1841 only in J. S. Presl's work of 1846, but this apparently saves Oken's *Allgemeine Naturgeschichte* (1841) from becoming "nomenclaturally extinct"; but since no botanist or bibliographer has apparently ever considered any of the new binomials proposed by J. S. Presl in 1846

³ Merrill, E. D. In Defence of the Validity of William Bartram's Binomials. *Bartonia* 23: 10–35. 1945.

——— & Reeder, J. R. New Plant Names Published by Amos Eaton Between the Years 1817 and 1840. *Bartonia* 24: 26–79. 1946 [1947].

——— Unlisted Binomials in Chapman's Flora of the Southern United States. *Castanea* 13: 61–70. 1948.

——— Unlisted New Names in Alphonso Wood's Botanical Publications. *Rhodora* 50: 101–130. 1948.

——— & Hu, Shiu-Ying. Work and Publications of Henry Muhlenberg, with Special Attention to Unrecorded or Incorrectly Recorded Binomials. *Bartonia* 25: 1–66. *pl. 1*. 1949.

——— Index Rafinesquianus. The Plant Names Published by C. S. Rafinesque with Reductions, and a Consideration of His Methods, Objectives, and Accomplishments. i–ix. 1–296. 1949. Arnold Arboretum, Jamaica Plain, Mass.

⁴ Merrill, E. D. Nomenclatural Notes in Rafinesque's Published Papers. *Jour. Arnold Arb.* 29: 202–214. 1948.

in his *Wseobecny Rostlinopis*, this work that actually "saves" the earlier Oken one, might be interpreted to be "nomenclaturally extinct!"

The total number of new, but as yet unlisted binomials in Oken's work of 1841, is 124 to which should be added the fourteen new ones detected in J. S. Presl's work of 1846; and yet there is only one case where a modern binomial is replaced by an earlier name; see under *Pittosporum filarium*, p. 283 below.

There are, however, 23 cases where the authorities for binomials should be changed, whether these be accepted ones, or synonyms. The list follows:

- Balsamea myrrha* (Nees) Oken, 1841; (Nees) Baill., 1874.
Bryophyllum pinnatum (Lam.) Oken, 1841; (Lam.) Kurz, 1876; (Lam.) Aschers. & Schweinf., 1887.
Canarium mauritianum (DC.) Oken, 1841; (DC.) Blume, 1854.
Cordia alliodora (Ruiz & Pavon) Oken, 1841; (Ruiz & Pavon) DC., 1845.
Cynanchum acidum (Roxb.) Oken, 1841; (Roxb.) Voigt, 1845.
Ghinia curassavica (Linn.) Oken, 1841; (Linn.) Millsp., 1906.
Halorhagis erecta (Murr.) Oken, 1841; (Murr.) Schindl., 1905.
Heliosciadium ammi (Jacq.) Oken, 1841; (Jacq.) Britton, 1918.
Homalium guianense (Aubl.) Oken, 1841; (Aubl.) Warb., 1895.
Hybanthus calceolaria (Linn.) Oken, 1841; (Linn.) Schulze, 1934.
Hybanthus ippecacuahana (Linn.) Oken, 1841; (Linn.) Baill., 1884.
Jatropha elliptica (Pohl) Oken, 1841; (Pohl) Muell.-Arg., 1874; (Pohl) Pax & Hoffm., 1910.
Kniphofia uvaria (Linn.) Oken, 1841; (Linn.) Hook., 1856; (Linn.) Durand & Schinz, 1895.
Melanthesia turbinata (Koenig) Oken, 1841; (Koenig) Wight, 1845.
Negretia pruriens (Linn.) Oken, 1841; (Linn.) Blanco, 1845.
Phyllanthus brasiliensis (Aubl.) Oken, 1841; (Aubl.) Muell.-Arg., 1866.
Schleichera oleosa (Lour.) Oken, 1841; (Lour.) Merr., 1917.
Stellera hirsuta (Linn.) Oken, 1841; (Linn.) O. Kuntze, 1891.
Stellera thymelaea (Linn.) Oken, 1841; (Linn.) O. Kuntze, 1891.
Stellera tinctoria (Pourr.) Oken, 1841; (Pourr.) O. Kuntze, 1891.
Stillingia aucuparia (Jacq.) Oken, 1841; (Jacq.) Muell.-Arg., 1866.
Stillingia indica (Willd.) Oken, 1841; (Willd.) Muell.-Arg., 1866.
Symplocos theaeformis (Linn. f.) Oken, 1841; (Linn. f.) Gürke, 1890.
Tetragastris balsamifera (Sw.) Oken, 1841; (Sw.) O. Kuntze, 1891.

In view of the proposal to eliminate certain types of botanical publications by establishing a "nomenclaturally extinct" category. I have thought it worth while to devote a few days to the preparation of this text to demonstrate how very little the location of now over 3300 unlisted binomials, on my own part, mostly published more than a century ago, affects modern nomenclature; in these 3300 cases only 13 changes are involved, on the basis of the priority rule still less than 0.4 per cent. This very small percentage certainly does not give much weight to the idea of legislating in favor of the "nomenclaturally extinct" category. It is evident from what has already been accomplished that continued work in this apparently unpopular field of unearthing unlisted names will for

the most part merely add to the burden of synonymy; the effect on nomenclature will be negligible.

In the following consideration of these fugitive names of 1841 and 1846, the asterisk (*) indicates that the name is not included in our standard indices, *Index Kewensis* and its ten supplements for the Spermatophyta, and Christensen's *Index Filicum* and supplements for the Pteridophytes. The dagger (†) indicates that the name is included in *Index Kewensis* (sometimes twice or even thrice) but that the actual Oken publication antedates the already listed ones.

PTERIDOPHYTA

Ellobocarpus **thalictroides* Oken, Allg. Naturgesch. 3(1): 322. 1841
= *Ceratopteris thalictroides* (Linn.) Brongn.

The generic entry is "*Ellobocarpus*, *Ceratopteris*," and the only reference under *E. thalictroides* is to *Millefolium aquaticum* Rumph. Herb. Amb. 6: 176. pl. 74. fig. 1. 1750 which is *Ceratopteris thalictroides* (Linn.) Brongn.

Helminthostachys **ceylanica* Oken, Allg. Naturgesch. 3(1): 319. 1841
= *H. zeylanica* (Linn.) Hook.

The reference is to Rumph. Herb. Amb. 6: 153. pl. 68. fig. 3. 1750 (*Ophioglossum laciniatum* Rumph.) which is *Helminthostachys zeylanica* (Linn.) Hook.

SPERMATOPHYTA

Abutilon **commune* Oken, Allg. Naturgesch. 3(2): 1213. 1841 = *A. theophrasti* Medic., 1787 (*A. avicennae* Gaertn., 1791).

The entry is "*A. commune*, *avicennae*" with a reference to Schkuhr's illustration, and at the end the binomial *Sida abutilon* [Linn.].

Acia **parillo* Oken, Allg. Naturgesch. 3(3): 2043. 1841 = *Moquilia guianensis* Aubl.

The citation at the end of the description is to *Moquilia guianensis* Aubl. Hist. Pl. Guian. Franç. 521, pl. 208. 1775.

Aegopricon **brasiliensis* Oken, Allg. Naturgesch. 3(3): 1587. 1841 = *Maprounea brasiliensis* A. St. Hil.

The generic entry is "*Aegopicon*, *Maprounea*" and the specific one "*Ae. brasiliensis*." At the end of the description is the entry "*A. St. Hilaire*, Plant. us. t. 65"; this is *Maprounea brasiliensis* A. St. Hil.

Alchornea **mappa* Oken, Allg. Naturgesch. 3(3): 1579. 1841 = *Macaranga mappa* (Linn.) Muell.-Arg.

This was based wholly on *Folium mappae* Rumph. Herb. Amb. 3: 172. pl. 361. 1743. See Merrill, Interpret. Herb. Amb. 319. 1917 for synonymy and clarification of its status. Pax and Hoffman and others have confused this Moluccan species with the very different Philippine *Macaranga grandifolia* (Blanco) Merr.; the Pax and Hoffman figure (Pflanzenreich 63(IV.

147. VII): 336. *fig. 54A*. 1914) is of the Philippine species, not of the Moluccan one.

Amaryllis **virginiensis* Oken, *Allg. Naturgesch.* 3(1): 544. 1841 = *Zephyranthes atamasco* (Linn.) Herb. (*Z. rosea* Lindl.).

The entry is "*A. virginiensis, atamasco.*" The references are to "Catesby, *Carolina App.* t. 12" and to "Schkuhr t. 90."

Ambelania **edulis* J. S. Presl, *Wseob. Rostlin.* 2: 1065. 1846 = *Willughbeia edulis* Roxb.

Presl erred in transferring Roxburgh's Indian species to the strictly American genus *Ambelania* Aublet. *Willughbeia* Roxb. is an officially conserved generic name.

Anacardium **sylvestre* Oken, *Allg. Naturgesch.* 3(3): 1782. 1841 = *Semecarpus cassuvium* Roxb. (1814, 1832).

The entry is "*A. sylvestre, cassuvium,*" the first reference being to Rumph. *Herb. Amb.* 1: 179. *pl. 70*. 1741 (*Cassuvium sylvestre*) which is the type of *Semecarpus cassuvium* Roxb. *Hort. Beng.* 32. 1814, later described, *Fl. Ind.* ed. 2, 2: 85. 1832. The citation "*Cassuvium sylvestre; Lamarck I. 208*" is somewhat confused as in his *Tabl. Encycl.*, plate 208, Lamarck says merely *Anacardium*, and in the text, *Encycl.* 1: 140. 1783 *Cassuvium sylvestre* appears only as the Rumphian synonym under *Anacardium longifolium* Lam. var. β . This variety, a Philippine form, is a *Semecarpus* but is not the same as the Moluccan species.

Aphyteia **africana* Oken, *Allg. Naturgesch.* 3(2): 801. 1841 = *Hydnora africana* Thunb.

The references are to Linnaeus, Thunberg, Gaertner, Lamarck, and Nees, the generic entry being "*Aphyteia, Hydnora.*"

Aquilaria **moluccensis* Oken, *Allg. Naturgesch.* 3(3): 1513. 1841 = *Aquilaria malaccensis* Lam.

The entry is "*A. moluccensis, secundaria*" and the only reference is "Rumph II. I. 10. *Garo, Agallochum secundarium,*" i.e., Rumph. *Herb. Amb.* 2: 34. *pl. 10*. 1741. The form Rumphius so extensively discussed was not from the Moluccas and is *Aquilaria malaccensis* Lam. (*Aquilaria secundaria* Meisn.) which extends from Siam and the Malay Peninsula to Sumatra, Borneo and the Philippines.

Aquilica **spinosa* Oken, *Allg. Naturgesch.* 3(3): 1863. 1841 = *Leea aculeata* Blume.

The generic entry is "*Aquilicia, Leea,*" and the references are to Rumphius *Herb. Amb.* 4: *pl. 44*. 1747, from which Oken's ample description was taken, *Burm. f. Fl. Ind.* *pl. 24. fig. 5*. 1768, and Cavanilles *Diss. pl. 218*. 1789. I interpret this spiny species by the first synonym cited, that of Rumphius, as the other references do not belong here. The Burman species is spineless and is *Leea indica* (Burm. f.) Merr. (*L. sambucina* Willd.) and the Cavanilles description and illustration belong with the latter.

Arum **phalliferum* Oken, Allg. Naturgesch. 3(1): 595. 1841 = *Amorphophallus campanulatus* Blume.

The entry is "*A. phalliferum* s. *rumphii*" and the only reference is to *Tacca phallifera* Rumph. Herb. Amb. 5: 326. *pl.* 113. 1747 [as to fig. 2, only], the rest is *Tacca leontopetaloides* (Linn.) O. Kuntze.

Arum **rumphii* Oken, l.c., *nom. alt. praec.* = *Amorphallus campanulatus* Blume.

Arundo **aspera* Oken, Allg. Naturgesch. 3(1): 422. 1841 = *Gigantochloa aspera* (Schultes) Kurz.

**cratium* Oken, l.c. = *Schizostachyum brachycladum* Kurz.

**fera* Oken, op. cit. 423 = *Bambusa vulgaris* Schrad.

**maxima* Oken, op. cit. 422 = *Bambusa excelsa* Miq. = ? *Gigantochloa*.

**spiculorum* Oken, l.c. = *Bambusa longinodis* Miq. = *Schizostachyum* sp.

**spinosa* Oken, op. cit. 423 = *Bambusa spinosa* Roxb.

These six names under *Arundo* were all based wholly on data included by Rumphius, Herb. Amb. 4 (1743), and the indicated reductions follow my treatment, Interpret. Rumph. Herb. Amb. 96-103. 1917. Under each, Oken gives a citation to the Rumphian entity. While Oken treats these strictly as binomials I merely call attention to the fact that he nowhere defines *Arundo* merely adding these six descriptions after his treatment of *Bambusa verticillata* Willd. Rumphius used the group designation *Arundarbor* for all of them.

Ascium **guianense* Oken, Allg. Naturgesch. 3(2): 1429. 1841 = *Norantea guianensis* Aublet.

The generic entry is "*Ascium*, *Norantea*" and the specific one is "*A. guianense*" with a reference to Aublet, *pl.* 220; the latter is *Norantea guianensis* Aubl.

Balsamea **gileadensis* Oken, Allg. Naturgesch. 3(3): 1758. 1841 = *Balsamodendron gileadense* Kunth = *Commiphora opobalsamum* (Linn.) Engl. var. *gileadensis* (Linn.) Engl.

The generic entry is "*Balsamea*, *Balsamodendron*" and the specific one is "*B. gileadensis*, *opobalsamum*" with references to treatment of the species by about ten earlier authors.

Balsamea †*myrrha* Oken, op. cit. 1760; Baill. Hist. Pl. 5: 294. 1874 = *Commiphora myrrha* (Nees) Engl.

The entry under *Balsamea* is merely "*B. myrrha*" with references to "Ehrenberg in Düsseldorf off. Pfl. XVII. I. 15, Wagner II. T. 240, a. b." These represent *Balsamodendron myrrha* Nees = *Commiphora myrrha* Engl.

Barringtonia **littorea* Oken, Allg. Naturgesch. 3(3): 1925. 1841 = *B. asiatica* (Linn.) Kurz.

The entry is "*B. littorea*, *speciosa*" with references to Clusius, Rum-

phius, and other early authors, and, at the very end, the binomial, *Mammea asiatica* [Linn.].

Barringtonia **rosaria* Oken, op. cit. 1926 = *B. racemosa* (Linn.) Blume.

The specific entry is "*B. rosaria, racemosa*," with references to Rheede and Rumphius.

Bignonia **hortensis* Oken, Allg. Naturgesch. 3(2): 1009. 1841 = *Millingtonia hortensis* Linn. f.

The entry is "*B. hortensis, suberosa*" and at the end a reference to Roxburgh, Pl. Coromandel 3: 11. *pl.* 214. 1819 (*Bignonia suberosa* Roxb., *Millingtonia hortensis* Linn. f.).

Brosimum **atile* Oken, Allg. Naturgesch. 3(3): 1571. 1841, sphalm. = *Brosimum* †*utile* (H.B.K.) Oken ex J. S. Presl, Wseob. Rostlin. 2: 1379. 1846; Karst. Pharm. Med. Bot. 498. 1880-83; Pittier, Contr. U. S. Nat. Herb. 20: 102. 1918.

The basis of this thrice transferred specific name was *Galactodendrum utile* H.B.K.

Bryophyllum †*pinnatum* (Lam.) Oken, Allg. Naturgesch. 3(3): 1966. 1841; Kurz, Jour. As. Soc. Bengal 40(2): 309. 1876; Aschers. & Schweinf. Mém. Inst. Egypt 2: 79. 1887.

The basis of this thrice transferred specific name was *Cotyledon pinnatum* Lam.

Bubroma **ulmifolia* Oken, Allg. Naturgesch. 3(2): 1204. 1841 = *Guazuma ulmifolia* (Linn.) Lam.

The generic entry is "*Bubroma, Guazuma*," the references under the single species being to the illustrations of Plumier, Trew, Lamarck, and Tussac.

Cactus **hernandezii* Oken, Allg. Naturgesch. 3(3): 1911. 1841 = *Opuntia hernandezii* DC., pro parte = *Nopalea cochinellifera* (Linn.) Salm-Dyck.

The first reference is to "Hernandez, Mexico, p. 78. fig. ad p. 489, fig. 1 *Nopal sylvestre*," and this is *Nopalea cochinellifera* fide Britton & Rose, Cactaceae 4: 263. These authors say, op. cit. 1: 181. 1919, that *Opuntia hernandezii* DC. is a complex as originally described, DC. Prodr. 3: 474. 1828, Mém. Hist. Nat. Paris. 17: 69. *pl.* 16. 1828. The only other Oken reference is to "Thierry, Voyage, Guax. II. p. 277. fig."

Calamus **draconis* Oken, Allg. Naturgesch. 3(1): 648. 1841 = *Dae-monorops draco* (Willd.) Bl.

The basis of Oken's ample description is "Rumph. V I. 58. F. 1" which is *Palmijancus draco* Rumph. = *Calamus draco* Willd.

Canarium †*mauritanum* Oken, Allg. Naturgesch. 3(3): 1767. 1841, "mauritana"; Blume, Mus. Bot. Ludg.-Bat. 1: 217. 1854 = *Canarium paniculatum* (Lam.) Benth.

At the end of the description is the binomial *Bursera paniculata* Lam., which is the basis of *Canarium paniculatum* (Lam.) Benth. Oken undoubtedly took his specific name from *Colophonia mauritiana* DC. although he did not cite it; J. S. Presl added the De Candolle synonym in his Wseob. Rostlin. 1: 344. 1846, this being three years earlier than Blume's transfer of the specific name.

Canthium *amarum Oken, Allg. Naturgesch. 3(2): 853. 1841 = *Canthium rheedii* DC.

The entry is "C. amarum, rheedii" and the basis of both names is *Tsjerou-Kara* Rheede, Hort. Malabar. 5: 75. pl. 37. 1685. De Candolle's name is much earlier than that of Oken.

Cardamomum *verum Oken, Allg. Naturgesch. 3(1): 508. 1841 = *Elettaria cardamomum* (Linn.) Maton.

The generic entry is "Cardamomum, Elettaria," and the species entry is "C. verum, E. cardamomum." References are given to the works of various earlier authors.

Careya *venenata Oken, Allg. Naturgesch. 3(3): 1928. 1841 = *Careya arborea* Roxb.

The entry is "C. venenata, arborea," with references to Rheede, Hort. Malabar. 3: pl. 36. 1682 and to Roxburgh, Pl. Coromandel 3: 14. pl. 218. 1819, i.e. *Careya arborea* Roxb.

Cassia *rumphiana J. S. Presl, Wseob. Rostlin. 1: 457. 1846, *nom. in syn.* = *Cassia alata* Linn.

This was inadvertently published as a binomial by Presl. Its basis was clearly *Cassia alata* Linn. var. *rumphiana* DC. Prodr. 2: 492. 1825.

Casuarina *littorea Oken, Allg. Naturgesch. 3(1): 354. 1841 = *C. equisetifolia* Forst.

The entry is "C. littorea, muricata," and the reference is to *Casuarina littorea* Rumph. Herb. Amb. 3: 86. pl. 57. 1743, which is the origin of Oken's new specific name. *Casuarina muricata* Roxb. is a synonym of the same species.

Cedrela *tuna Oken, Allg. Naturgesch. 3(2): 1301. 1841, *sphalm.* = *Cedrela toona* Roxb.

Cinnamomum *culilaban J. S. Presl, Wseob. Rostlin. 2: 1302. 1846 = *Laurus culilaban* Linn. (1771) = *Cinnamomum culilawan* Blume (1825).

Laurus culitlawan Linn. in Stickman, Herb. Amb. 9. 1754 is actually the oldest form as to the specific name; see Merrill, Interpret. Rumph. Herb. Amb. 232. 1917.

Cinnamomum *massoy Oken, Allg. Naturgesch. 3(3): 1529. 1841.

The basis of this name was *Cortex ononius s. massoy* Rumph. Herb. Amb. 2: 62. 1741 of New Guinea. *Massoia aromatica* Becc. in d'Albertis

New Guinea 2: 398. 1880, may or may not prove to be the same species; it was scarcely described but specimens of "massoy" in the Beccari New Guinea collections that I have seem to belong to *Cryptocarya*.

Copaifera **galedupa* Oken, Allg. Naturgesch. 3(3): 1714. 1841 = *Sindora galedupa* Prain, Jour. As. Soc. Beng. 66(2): 483. 1897.

Both Oken's and Prain's binomials were based on *Caju galedupa* Rumph. Herb. Amb. 2: 59. *pl.* 13. 1741; see Merrill, Interpret. Rumph. Herb. Amb. 254. 1917, and De Wit, Bull. Jard. Bot. Buitenzorg III. 18: 36-46. *fig.* 6-7. 1949. This adds a new synonym to De Wit's detailed consideration of this Celebes-Moluccan species.

Cordia †*alliodora* Oken, Allg. Naturgesch. 3(2): 1098. 1841; DC. Prodr. 9: 472. 1845.

The entry is "*C. alliodora, cerdana*" and the sole reference is to Ruiz & Pavon, Fl. Peruv. Pl. 184, i.e. *Cerdana alliodora* Ruiz & Pavon (*Cordia cerdana* R. & S.). Chamisso, Linnaea 8: 121. 1833, did not effect the transfer of the specific name to *Cordia*, so the proper entry is *Cordia alliodora* (Ruiz & Pavon) Oken.

***Corema** J. S. Presl in Berchtold, Priroz. Rostlin. 3: 9, 88. 1830-35 (non D. Don, 1826-27) = *Sarothamnus* Wimm. (1832).

Corema **scoparium* J. S. Presl, in Berchtold, op. cit. 88, Wseob. Rostlin. 1: 353. 1846 = *Spartium scoparium* Linn. = *Genista scoparia* Linn. = *Cytisus scoparius* Link = *Sarothamnus scoparius* Koch.

Presl in 1846 cited the place of publication as "Presl Rostl. 3. ob. 6," i.e., the Berchtold-Presl *O Prirozenosti Rostlin aneb Rostlinar*, but as I could locate only volume one of this work in American libraries, Mr. H. S. Marshall of Kew kindly sent me a transcript of the Presl entry of *Corema*. It is clear that *Corema* was there published as a new genus, although not so indicated, probably in ignorance of the fact that D. Don had used the same name a few years earlier for a genus of the Empetraceae.

Crantzia **aculeata* Oken, Allg. Naturgesch. 3(2): 1285. 1841 = *Toddalia asiatica* (Linn.) Lam. (*T. aculeata* Pers.).

The generic entry is "*Crantzia, Toddalia*" and the references are to Rheede, Burman, and Lamarck; at the very end is the binomial *Paullinia asiatica* [Linn.].

Cucullaria **guianensis* Oken, Allg. Naturgesch. 3(2): 1296. 1841 = *Vochy guianensis* Aubl. = *Vochysia* [*Vochisia*] **guianensis* (Aubl.) Lam. Tabl. Encycl. 1: 35. 1791, Ill. *pl.* 11. 1791.

The generic entry is "*Cucullaria, Vochysia*," and at the end of the species description is the reference "Aublet t. 6 *Vochy*," i.e., *Vochy guianensis* Aubl. Nat. Hist. Guian. Franç. 1: 18. *pl.* 6. 1775 = *Vochysia guianensis* Lam. *Vochy* Aubl. (1775) is the oldest generic name, but the currently used *Vochysia* Juss. (1789) is the conserved one.

Cupania **sapida* Oken, Allg. Naturgesch. 3(2): 1337. 1841 = *Blighia sapida* Koenig.

The generic entry is "Cupania, Trigonina, Molinaea, Gelonium, Vouarana, Stadmannia." The reference under *C. sapida* is first to Koenig's original description of *Blighia*, and second to Tussac's description of *Akeesia* (1808) = *Blighia* Koenig (1806).

Cynanchum †*acidum* [Roxb.] Oken, Allg. Naturgesch. 3(2): 1032. 1841 prob. = *Sarcostemma acidum* (Roxb.) Voigt (1845); K. Schum. (1895).

The entry is "C. acidum, viminale," and at the end of the description is the generic name *Sarcostemma*. It is suspected that the specific name was derived from *Asclepias acida* Roxb. Fl. Ind. ed. 2, 2: 30. 1832, who cites *Cynanchum viminale* Willd. as a synonym; but the latter is the African *Sarcostemma viminale* (Linn.) R. Br.

Diospyros **mediterranea* Oken, Allg. Naturges. 3(2): 935. 1841 = *Diospyros lotus* Linn.

The specific entry is "D. mediterranea, lotus." The description and the references appertain to *Diospyros lotus* Linn.

Dryobalanops **robusta* Oken, Allg. Naturgesch. 3(2): 1422. 1841 = *Shorea robusta* Gaertn. f.

Oken's only reference is to Roxburgh, Pl. Coromandel 3: *pl.* 212. 1819 which is Gaertner's species.

Elaeocarpus **malabaricus* Oken, Allg. Naturgesch. 3(2): 1194. 1841 = *Elaeocarpus oblongus* Gaertn.

The specific entry is "E. malabaricus, perim-cara" (i.e. *Elaeocarpus perim-kara* DC.), and *Perim-kara* Rheede, Hort. Malabar. 4: *pl.* 24. 1682 (text p. 51, *perin-kara*) which is the basis of De Candolle's binomial.

Elaeococca **montana* Oken, Allg. Naturgesch. 3(3): 1599. 1841 = *Aleurites montana* (Lour.) E. H. Wils.

The only reference is "Loureiro II. S. 720. Vernicia." This is *Vernicia montana* Lour. Fl. Cochinch. 720. 1790. = *Aleurites montana* (Lour.) E. H. Wils.

Euterpe brasiliiana Oken, Allg. Naturgesch. 3(1): 674. 1841 = *E. oleracea* Mart.

The entry is "E. brasiliiana, oleracea Mart.," and the only reference is to Martius's illustrations.

Falcaria **agrestis* Oken, Allg. Naturgesch. 3(3): 1832. 1841 = *Falcaria vulgaris* Bernh.

The entry is "F. agrestis, rivini" with references to Rivinius and Jacquin, and at the end the binomial, *Sium falcaria* [Linn.].

Ferula **ammonifera* Oken, Allg. Naturgesch. 3(3): 1822. 1841 = *Dorema ammoniacum* D. Don.

This is the fourth numbered species of *Ferula*, the third placed under "b) Ferulago" and the fourth under "c) Dorema." Undoubtedly *Dorema ammoniacum* D. Don (1833) was the source of Oken's binomial, yet he cited no name bringing synonym.

Ficus ***banyana** Oken, Allg. Naturgesch. 3(3): 1561. 1841 = *Ficus benghalensis* Linn.

The entry is "F. banyana, bengalensis" and the references are to Rheede, Commelin and Roxburgh.

Ficus ***conciliorum** Oken, Allg. Naturgesch. 3(3): 1561. 1841 = *Ficus rumphii* Blume.

The entry is "F. conciliorum, rumphii" and the descriptive data were taken from *Arbor conciliorum* Rumph. Herb. Amb. 3: 162. *pl.* 91, 92. 1741, cited by Oken.

Ficus ***latifolia** Oken, Allg. Naturgesch. 3(3): 1563. 1841 = *Ficus altissima* Blume.

The entry is "F. latifolia, racemosa" and the reference is to Rumph. Herb. Amb. 3: 127. *pl.* 84. 1743, with the addition at the end "F. latifolia," i.e. *Varinga latifolia* Rumph.

Ficus ***parvifolia** Oken, Allg. Naturgesch. 3(3): 1562. 1841 = *Ficus benjamina* Linn.

The entry is "F. parvifolia, benjamina" and the references are to Rheede, Rumphius, and Plukenet. *Ficus parvifolia* Miq. Ann. Mus. Bot. Lugd.-Bat. 3: 286. 1867, is a different species.

Gale ***commune** J. S. Presl, Wseob. Rostlin. 2: 1416. 1846 = *Myrica gale* Linn.

The basis of Presl's new name in *Gale* was *Myrica gale* Linn.

Genipa ***eriophila** Oken, Allg. Naturgesch. 3(2): 886. 1841 = *Duroia eriophila* Linn. f. (*Genipa merianae* Rich.).

The entry is "G. eriophila, merianae" and the references are to Merian and Willdenow; at the end is the generic name *Duroia*. See Bremekamp in Pulle, Fl. Surinam 4: 181. 1834 for the synonymy of this species. *Duroia* is a conserved generic name.

Geoffroya [*Geoffraea*] ***horsfieldii** Oken, Allg. Naturgesch. 3(3): 1684. 1841 = *Euchresta horsfieldii* (Leschen.) Benn.

The citation is "Leschenault in Ann. Mus. XVI. t. 24 Andira," i.e. *Andira horsfieldii* Leschen., type from Java = *Euchresta horsfieldii* (Leschen.) Benn.

Gerascanthus ***lanceolatus** J. S. Presl, Wseob. Rostlin. 2: 1103. 1846 = *Cordia gerascanthus* Jacq.

This was published as a new name for *Cordia gerascanthus* Jacq. to avoid the use of a tautonym.

Ghinia †*curassavica* Oken, Allg. Naturgesch. 3(2): 1104. 1841; Millsp. Publ. Field Colomb. Mus. Bot. 2: 174. 1906.

The references are to Plukenet and Hermann, and at the end is the binomial *Tamonea verbenacea* Sw. = *T. spinosa* Sw. = *T. curassavica* Pers. (*Verbena curassavica* Linn.).

Gomphia **americana* Oken, Allg. Naturgesch. 3(2): 1287. 1841 = *G. jabotapita* Sw. = *Ouratea jabotapita* (Sw.) Engl.

The entry is "*G. americana, jabotapita*" and the references are to Marcgravius, Piso, Plumier, and Lamarck.

Gomutus **vulgaris* Oken, Allg. Naturgesch. 3(1): 675. 1841 = *Arenga pinnata* (Wurmb) Merr. (*A. saccharifera* Labill.).

The generic entry is "*Gomutus, Saguerus, Areng.*" The specific entry is "*G. vulgaris, saccharifer.*" The references are to Rumphius, Loureiro and La Billardiére, all representing *Arenga pinnata* (Wurmb) Merr.

Guilandina **vulgaris* Oken, Allg. Naturgesch. 3(3): 1725. 1841 = *Caesalpinia crista* Linn.

The citation is "*Lobus echinodes. Clusius, Exot. t. 71, Guénic.*" *Gomutus vulgaris* Oken was proposed as a new binomial to cover both *G. bonduc* Linn. and *G. bonducella* Linn. both of which he also described.

Halorhagis †*erecta* (Murr.) Oken, Allg. Naturgesch. 3(3): 1871. 1841; Schindl. Pflanzenr. 23(IV. 225): 49. 1905.

The generic entry is "*Haloragis, Cercodia,*" and the specific one is "*H. erecta, cercodia*" with references to Jacquin and Murray, the basis of Oken's new name being *Cercodia erecta* Murr. (1780).

Heliosciadium †*ammi* Oken, Allg. Naturgesch. 3(3): 1831. 1841; Britton, Fl. Bermud. 279. 1918 = *Apium leptophyllum* (Pers.) F. Muell. (*Apium ammi* Urban, *Cyclospermum leptophyllum* Sprague).

The entry is "*H. ammi, lateriflorum*" with references to Jacquin and Plenck, with the binomial *Sison ammi* at the end, i.e. *Sison ammi* sensu Jacq. Hort. Vindob. 3: 95. pl. 200. 1776, non Linn.; see Sprague, Jour. Bot. 61: 129-133. 1923. *Sison ammi* Linn. is *Carum copticum* (Linn.) Benth. & Hook. f.

Herpetica **rumphiana* J. S. Presl, Wseob. Rostlin. 1: 457. 1846 = *Cassia alata* Linn.

The basis of this was "*Cassia Rumphiana Decand. [recte C. alata Linn. var. Rumphiana DC. Prodr. 2: 492. 1825], Senna alata Roxb. Herpetica Rumph. [Herb. Amb.] 7 t. 18.*" All of these are synonyms of *Cassia alata* Linn. Incidentally the entry *Herpetica alata* Cook & Collins, Contr. U. S. Nat. Herb. 8: 159. 1903, in Ind. Kew. Suppl. 3. should be cancelled, as no new combination was actually there published, Rafinesque having effected the transfer in 1838; J. S. Presl also published it in 1846.

Hibiscus **litoreus* J. S. Presl, Wseob. Rostlin. 1: 140. 1846 = *Thespesia populnea* (Linn.) Soland. (*T. macrophylla* Blume).

The basis of this new name was *Hibiscus macrophyllus* Oken (1841), non Roxb. (1814, 1819). It was based wholly on *Novella litorea* Rumph. Herb. Amb. 2: 224. *pl.* 74. 1741.

Hibiscus **macrophyllus* Oken, Allg. Naturgesch. 3(2): 1223. 1841 =

Thespesia populnea (Linn.) Soland. (*Thespesia macrophylla* Blume).

Oken's binomial was based wholly on *Novella litorea* Rumph., Herb. Amb. 2: 224. *pl.* 74. 1741. It has nothing to do with the earlier *Hibiscus macrophyllus* Roxb.

Hiptage **racemosa* Oken, Allg. Naturgesch. 3(2): 1328. 1841 = *H. benghalensis* (Linn.) Kurz (*H. madablota* Gaertn.).

The entry is "*H. racemosa, madablota*" with references to Sonnerat, Gaertner, Cavanilles, and Roxburgh. Oken probably derived his specific name from *Gaertnera racemosa* Roxb., which, however, was not cited by him.

Holigarna **caustica* [Dennst.] Oken, Allg. Naturgesch. 3(3): 1776.

1841; Roxb. ex Greshoff, Meded. Lands Plant. 29: 42. 1900, *nomen nudum* (*Holigarna longifolia* Buch.-Ham. ex Roxb. Hort. Beng. 22. 1814, *nomen nudum*, Pl. Coromand. 3: 89. *pl.* 82. 1819).

The entry is "*H. caustica, longifolia*" and the only reference is to *Katou-tsjeroc* Rheede, Hort. Malabar. 4: 19. *pl.* 9. (*Cattu-tskeru*). 1683. I have not been able to locate any other place of publication of *Holigarna caustica* "Roxb." than Greshoff's *nomen nudum* of 1900. *Holigarna longifolia* Buch.-Ham. ex Roxb. (1814) is a *nomen nudum*; no description was published until 1819. In the meantime *Hadestiphylum causticum* Dennst. Schlüs. Hort. Malabar. 30. 1818, based entirely on the Rheede reference, had been published; this is the oldest validly published name for the species; it was doubtless the source of Oken's specific name *caustica*. *Holigarna* Buch.-Ham. is an officially conserved generic name.

Homalium †*guianense* (Aubl.) Oken, Allg. Naturgesch. 3(2): 810. 1841; Warb. in Engl. & Prantl, Nat. Pflanzenfam. 3(6a): 36. 1895.

The entry is "*H. guianense, racoubea*" with references to Aublet and to Lamarck, the second specific name being *Homalium racoubea* Sw. Prodr. Veg. Ind. Occ. 86. 1788 which was based on *Racoubea guianensis* Aubl. Hist. Pl. Guian. 1: 590. *pl.* 236. 1775. Oken's correct transfer of Aublet's specific name antedates that of Warburg by fifty-four years.

Hybanthus †*calceolaria* [Linn.] Oken, Allg. Naturgesch. 3(2): 1376. 1841; G. K. Schulze, Notizbl. Bot. Gart. Berlin 12: 114. 1934.

The entry is merely "*H. calceolaria*" with references to illustrations of Aublet, Vandelli, and Humboldt, but with no citation of the name-bringing synonym, *Viola calceolaria* Linn. Sp. Pl. ed. 2, 1327. 1763. Oken's publication of the binomial antedates that of G. K. Schulze by 93 years.

Hybanthus †*ipecacuanha* Oken, Allg. Naturgesch. 3(2): 1375. 1841; Baill., Bot. Médic. 2: 841. 1884 = *praec.*

The entry is merely "*H. ipecacuanha*" with references to the illustrations of Aublet (*Viola itoubou* Aubl.), A. St. Hilaire, and the "Düsseld. Suppl. V. t. 21." G. K. Schulze in 1934 reduced *Viola ipecacuanha* Linn. (1771) to the earlier *Viola calceolaria* Linn. (1763) = *Hybanthus calceolaria* (Linn.) Oken (1841); G. K. Schulze (1934).

Hydnocarpus **pentandra* Oken, Allg. Naturgesch. 3(2): 1381. 1841 = *Hydnocarpus laurifolius* (Dennst.) Sleumer, Bot. Jahrb. 69: 65. 1938.

The entry is merely "*H. pentandra*" with references to *Marotti*, Rheede, Hort. Malabar. 1: 65. *pl.* 36. 1678 and to *Pangium* Rumph. Herb. Amb. 2: 182. *pl.* 59. 1741. The latter is *Pangium edule* Reinw. The former, from which Oken's description was taken, is *Chilmoria pentandra* Ham. = *Hydnocarpus laurifolius* (Dennst.) Sleumer (*H. wightiana* Blume, 1846; *Munnicksia laurifolia* Dennst., 1818).

Hyperanthera **pterygosperma* Oken, Allg. Naturgesch. 3(3): 1727. 1841 = *Moringa oleifera* (Linn.) Lam.

The generic entry is "*Hyperanthera*, *Moringa*" and the specific one merely "*H. pterygosperma*" with references to the illustrations of Rheede, Rumphius, Blackwell, Jacquin, Lamarck, Plenck, and Tussac.

Illecebrum **verticillare* Oken, Allg. Naturgesch. 3(3): 1456. 1841 = *I. verticillatum* Linn.

This variant spelling was probably due to a *lapsus calami* on Oken's part when he prepared his copy.

Inga **pacai* Oken, Allg. Naturgesch. 3(3): 1701. 1841 = *Inga feuillei* DC. Prodr. 2: 433. 1825.

The entry is "*I. pacai*, *feuillei*," the sole reference being to *Inga siliquis longissimis*, *vulgo Pacai* Feuillée Jour. Obs. 3. t. 19 (Hist. Pl. Med. *pl.* 19. 1725). This is *Inga feuillei* DC.

Ipomoea **loureiri* J. S. Presl, Wseob. Rostlin. 2: 1093. 1846 = *Ipomoea digitata* Linn.

The basis of this was *Ipomoea* "*tuberosa* Lour. *except. syn. Pluk.*" The plant that Loureiro described is the same as the earlier *Ipomoea digitata* Linn.

Isnardia **diffusa* Oken, Allg. Naturgesch. 3(3): 1874. 1841 = *Ludwigia prostrata* Roxb.

The generic entry is "*Isnardia*, *Ludwigia*" and the specific one "*I. diffusa*" with a reference to *Carambu* Rheede Hort. Malabar. 2: 95. *pl.* 49. 1679. It is suspected that Oken took the specific name from *Ludwigia diffusa* Ham. (1825) which is a synonym of *L. prostrata* Roxb. (1820).

Janipha **aipi* J. S. Presl, Wseob. Rostlin. 2: 1342. 1846 = *Manihot aipi* Pohl = *Manihot dulcis* (J. F. Gmel.) Pax var. *aipi* (Pohl) Pax.

Jatropha **elliptica* (Pohl) Oken, Allg. Naturgesch. 3(3): 1595. 1841; Muell.-Arg. in Mart. Fl. Bras. 11(2): 489. 1874; Pax, Pflanzenr. 42(IV. 147.): 62. 1910.

The entry is "*J. elliptica, officinalis*" the Oken specific name going back to *Adenoropium ellipticum* Pohl (1827) through *Jatropha officinalis* Mart.

Johannia **excelsa* Oken, Allg. Naturgesch. 3(2): 739. 1841 = *Chaquiraga excelsa* D. Don.

The generic entry is "*Johannia, Chaquiraga*" and the specific one merely "*J. excelsa*" with a reference to "Don, Phil. Mag. 1832. p. 394. *F. lotowia*" [*Flotovia* Spreng.]. The specific name was undoubtedly taken from *Flotovia excelsa* DC.

Kniphofia †*uvaria* (Linn.) Oken, Allg. Naturgesch. 3(1): 566. 1841; Hook. Bot. Mag. 80: pl. 4816. 1854; Th. Dur. & Schinz Consp. Fl. Afr. 5: 294. 1893 [1895].

The basis of the three independent transfers is *Aloe uvaria* Linn., but Oken was the first author to place it in the genus where it belongs.

Lampsana **edulis* Oken, Allg. Naturgesch. 3(2): 721. 1841 = *Rhagadiolus edulis* Gaertn. = *R. stellatus* (Linn.) Gaertn. var. *edulis* (Willd.) DC.

The generic entry is "*Lampsana*" and the specific one is "*L. edulis*," and at the end is a reference to "Schkuhr T. 225. *Rhagadiolus*," i.e. *Rhagadiolus edulis* Gaertn.

Lampsana **verrucosa* Oken, Allg. Naturgesch. 3(2): 722. 1841 = *Zacyntha verrucosa* Gaertn.

The specific entry is "*L. verrucosa*" and at the end is the reference "Schkuhr T. 225. *Zacyntha*," i.e. *Zacintha verrucosa* Gaertn.

Lecythopsis **guianensis* Oken, Allg. Naturgesch. 3(3): 1921. 1841 = *Couratari guianensis* Aubl.

The generic entry is "*Lecythopsis, Couratari*" and the specific one is "*L. guianensis*." At the end of the description are references to the illustrations of A. Richard, Poiteau, Schrank and St. Hilaire.

Liquidambar **excelsa* Oken, Allg. Naturgesch. 3(3): 1539. 1841 = *Altingia excelsa* Noronha.

The entry is "*L. excelsa, altingia*" with the first reference to Blume, Fl. Jav. (Balsamifluae), pl. 1, 2. 1829, the descriptive data from this source with additional references to Rumphius, Noronha, Hayne, etc.

Melanthesia **oblongifolia* Oken, Allg. Naturgesch. 3(3): 1602. 1841 = *Breynia rhamnoides* (Willd.) Muell.-Arg.

The specific entry is "*M. oblongifolia*" but at the end of the description is a reference to *Katou-nirouri* Rheede, Hort. Malabar. 5: 87. pl. 44. 1685. This Rheede reference is the whole basis of *Phyllanthus oblongifolius* Dennst. Schlüs. Hort. Malabar. 12, 24, 31. 1818., which is apparently the same as *Breynia rhamnoides* (Willd.) Muell.-Arg.

Melanthesia †*turbinata* Oken, Allg. Naturgesch. 3(3): 1603. 1841; Wight, Ic. pl. 1897. 1852 = *Breynia retusa* (Dennst.) Alston, Ann.

Bot. Gard. Perideniya 11: 204. 1929 (*Phyllanthus turbinatus* Koenig ex Roxb. et *P. patens* Hook. f. Fl. Brit. Ind. 5: 329. 1887).

The basis of Oken's binomial was *Perin-nirouri* Rheede, Hort. Malabar. 5: 85. *pl.* 43. 1685, i.e., *Phyllanthus turbinatus* Koenig ex Roxb. *Phyllanthus retusus* Dennst. Schlüs. Hort. Malabar. 13, 15, 31, 1818 provides the oldest specific name. It was based entirely on the Rheede description and illustration.

Mollugo **malabarica* Oken, Allg. Naturgesch. 3(2): 1354. 1841 == *Mollugo pentaphylla* Linn.

The whole basis of this is *Tsjeru-tsjonganam-pullu* Rheede, Hort. Malabar. 10: 50. *pl.* 26. 1690. It may be doubted if Oken really intended to publish this under *Mollugo*, although it is the second numbered species of the genus and the entry is "M. malabaricum." Immediately before this entry is the line commencing with "b, Pharnaceum," and the ending of the specific name, written "malabaricum" by Oken, agrees with *Pharnaceum*; he may have intended to record *Pharnaceum malabaricum* Kostel. (1835) (*Pharnaceum triphyllum* Dennst., 1818); both of these were based wholly on the same Rheede reference == *M. pentaphylla* Linn.

Myrsine **athruphyllum* Oken, Allg. Naturgesch. 3(2): 1122. 1841 == *M. arthyrophyllum* R. & S. Syst. 4: 509. 1819, *sphalm.* (*Athruphyllum lineare* Lour.) == *Rapanea linearis* (Lour.) Moore (*Myrsine playfairii* Hemsl.; *Rapanea playfairii* Mez).

Myrsine **badula* Oken, Allg. Naturgesch. 3(2): 1122. 1841 == *Badula barthesia* (Lam.) A. DC.

The entry is "M. badula, barthesia" and at the end of the description is the entry *Anguillaria*, i.e., *Anguillaria barthesia* Lam.

Negretia **gigantea* Oken, Allg. Naturgesch. 3(3): 1666. 1841 == *Mucuna gigantea* (Willd.) DC.

The only references are to Rheede, Hort. Malabar. 8: *pl.* 36. 1688, and *Lobus litoralis* Rumph. Herb. Amb. 5: 10. *pl.* 6. 1747.

Negretia †*pruriens* Oken, Allg. Naturgesch. 3(3): 1666. 1841; Blanco, Fl. Filip. ed. 2, 411. 1845 == *Mucuna pruriens* (Linn.) DC.

Oken's references are to the illustrations of Rumphius, Rheede, P. Browne, Jacquin and Plenck.

Nepenthes **moluccensis* Oken, Allg. Naturgesch. 3(2): 1368. 1841 == *N. mirabilis* (Lour.) Druce Rep. Bot. Exch. Club Brit. Isles 1916: 637. 1917; Merr. Interpret. Herb. Amb. 242. 1917 (Nov. 1). (*N. phyllamphora* Willd.).

The entry is "N. moluccensis, phyllamphora." The ample description was based entirely on *Cantharifera* Rumph. Herb. Amb. 5: 121. *pl.* 59. *fig.* 2. 1747, *N. moluccensis* Oken being merely a new name for *N. phyllamphora* Willd.

Paeonia **chinensis* Oken, Allg. Naturgesch. 3(2): 1164. 1841 = *Paeonia suffruticosa* Andr., 1804 (*P. moutan* Sims, 1808).

The entry is "*P. chinensis, moutan*" with reference to illustrations in the Botanical Repository, Botanical Magazine, and Bonpland, Pl. Malmaison. *Paeonia chinensis* Hort. ex Vilm. Fl. Pl. Terre, ed. 3, 892. 1870 is a synonym of *P. lactiflora* Pallas.

Panax **vera* Oken, Allg. Naturgesch. 3(3): 1858. 1841 = *P. schin-seng* Nees et *P. pseudo-ginseng* Wall. (quoad syn. Wall.).

The specific entry is "(1) Der ächte (*P. vera*)" with references to Jartoux, Lafitau, Wallich and "Düsseld., Suppl. V I. 16" as opposed to the only other species considered, the American *P. quinquefolius* Linn. What was manifestly intended by the long description and the references was the true ginseng of eastern Asia.

Pastinica **suaveolens* Oken, Allg. Naturgesch. 3(3): 1812. 1841 = *Malabaila* †*sekakul* [Solander ex] Russell, Nat. Hist. Aleppo ed. 2, 249. 1794.

The entry is "*P. suaveolens, dissecta*," with references to Bauhin, Russell, and Ventenat. The *Index Kewensis* entry for *Malabaila sekakul* is "*Boiss. Fl. Orient. ii. 1055*" [1872] but Boissier there credits the binomial to Russell. The list of plants in the second edition of Russell's *Natural History of Aleppo* was prepared by Solander.

Penicillaria **italica* Oken, Allg. Naturgesch. 3(1): 406. 1841 = *Setaria italica* (Linn.) Beauv.

The generic entry is "*Penicillaria, Pennisetum, Setaria*" and the specific one is "*P. italica*." The description and the references appertain to the common Italian millet.

Petaloma **guianensis* Oken, Allg. Naturgesch. 3(3): 1904. 1841 = *Mouriria guianensis*.

The generic entry is "*Petaloma, Mouriria*" and the specific one is "*P. guianensis*" with a reference at the end of the description to "Aublet T. 180. Mouriri-chira," i.e. *Mouriri guianensis* Aubl. Hist. Pl. Guian, Franç. 1: 453. pl. 180 (*M. guyanensis*) 1775.

Phyllanthus †*brasiliensis* Oken, Allg. Naturgesch. 3(3): 1601. 1841; Muell.-Arg. in DC. Prodr. 15(2): 383. 1866, non Poir (1804) = *P. conami* Sw.

The entry is "*Ph. brasiliensis, conami*" the only reference being to "Aublet, T. 254," (error for 354), i.e., Aublet, Hist. Pl. Guian. Franç. 926, pl. 354. 1775, which is *Conami brasiliensis* Aublet, the basis of *Phyllanthus conami* Sw.

Phyllanthus **moeroris* Oken, Allg. Naturgesch. 3(3): 1601. 1841 = *Phyllanthus niruri* Linn.

The entry is "*Ph. moeroris, niruri*" with references to Rheede, Rumphius, and Burman, i.e., the *Herba moeroris* of Rumphius (1750).

Piper **roxburghii* J. S. Presl, Wseob. Rostlin. 2: 1452. 1846 == *Piper longum* Linn.

The basis of Presl's binomial was *Chavica roxburghii* Miq.

Pittosporum **filarium* Oken, Allg. Naturgesch. 3(2): 1299. 1841 == *Aquilaria filaria* (Oken) comb. nov.

The entry is "P. filarium, ferrugineum" but the only reference is to "Rumph. VII. S. 13. Cortex filarius," i.e. Rumph. Herb. Amb. Auctuarium 13. 1755, from which Oken's description was wholly taken. By the entry "ferrugineum" undoubtedly *Pittosporum ferrugineum* Ait. was intended, for facing page 13 of Rumphius is plate 13 which is *Cortex foetidus* Rumph. = *Pittosporum moluccanum* (Lam.) Miq., prob. = *Pittosporum ferrugineum* Ait. De Candolle, Prodr. 1: 347. 1824 initiated the confusion as between *Cortex foetidus* Rumph. and *Cortex filarius* Rumph. for *Pittosporum ferrugineum* Ait. var. *filarium* DC. was based on the former as to the page and plate references; but unfortunately De Candolle took his varietal name from *Cortex filarius* Rumph., yet his description was taken from *Cortex foetidus* Rumph. To the synonymy of *Aquilaria filaria* (Oken) Merr. is now to be added *Gyrinopsis brachyantha* Merr. Philip. Jour. Sci. Bot. 7: 313. 1912, Interpret. Rumph. Herb. Amb. 380. 1917, and *Aquilaria brachyantha* H. Hallier, Meded. Rijks. Herb. 44: 16. 1922. Philippines, Borneo, Moluccas. See Merrill, Interpret. Rumph. Herb. Amb. 243, 380. 1917.

Platonia **esculenta* Oken, Allg. Naturgesch. 3(2): 1431. 1841 == *Clusia insignis* Mart.

The entry is merely "Pl[atonia] esculenta" with references to "Arruda Centuria (*Isis* 1818, 1502). Bacuri; Martius III. T. 288, 289." The latter is *Clusia insignis* Mart. Nov. Gen. Sp. Pl. Brasil. 3: 165. pl. 288, 289. 1832, and Oken's description applies to that species.

Pterospermum **xylocarpum* (Gaertn.) Oken, Allg. Naturgesch. 3(2): 1198. 1841 (*P. heyneanum* Wall.; *Pterospermadendron xylocarpum* O. Kuntze).

The entry is "Pt. xylocarpum, heyneanum" with references to *Velaga* [*xylocarpa*] Gaertn. Fruct. 245. pl. 133. 1791, and Sims, Bot. Mag. pl. 1526, and with *P. suberifolium* Willd. cited at the end. If *Velaga xylocarpa* Gaertn. (1791) is really the same as *Pterospermum heyneanum* Wall. (1829), as I suspect it is, then Oken's binomial is the valid one and *P. canescens* Roxb. (1832) is a synonym. *Pterospermum suberosum* Willd. (1801) as to the name, was based on *Pentapetes suberifolia* Linn. (1753). I interpret *Fl. Zeyl.* 250 as the type as Linnaeus saw this specimen and as far as his description was a new one, it was based on this plant. There is no specimen in the Linnaean herbarium. No matter what Willdenow described (which was *P. heyneanum* Wall.), the name goes with what Linnaeus characterized. I disagree with Hochreutiner's interpretations of *P. canescens* Roxb. and *P. suberifolium* Willd. (Ann. Conserv. Jard. Bot. Genève 21: 432-433. 1920).

Rhizobolus **amygdaliferus* Oken, Allg. Naturgesch. 3(2): 1325. 1841
= *Caryocar amygdaliferum* Mutis ex Cav.

The generic entry is "*Rhizobolus*, *Caryocar*" and the specific one is merely "*Rh. amygdaliferus*." At the end of the long description is the entry "*Mutis in Cavanilles Ic. IV. t. 361-2*." This is *Caryocar amygdaliferum* Mutis ex Cav. (1797).

Rhizobolus **tomentosus* Oken, Allg. Naturgesch. 3(2): 1324. 1841 =
Caryocar tuberculosum (Aubl.) Baill. (*C. tomentosum* Willd.).

The references are to *Amygdala guianensis* Clusius, Exot. p. 27, Aublet *pl. 239*, and Gaertner, *pl. 98. fig. 1*. The Aublet reference is *Pekea tuberculosa* Aublet = *Caryocar tomentosum* Willd. = *C. tuberculosum* (Aubl.) Baill.

Rhus **vernificer* Oken, Allg. Naturgesch. 3(3): 1770. 1841 = *R. vernicifera* DC. (1825) = *R. verniciflua* Stokes (1812).

The only reference is to Kaempfer, *Amoen. pl. 792*.

Sansevieria **ceylonica* Oken, Allg. Naturgesch. 3(1): 565. 1841 = *Sansevieria zeylanica* Willd.

The references are to Commelyn Hort. *pl. 21* and to Cavanilles *Ic. 3: 24. pl. 246. 1794* (*Salmia spicata* Cav.).

Samandura **littoralis* Oken, Allg. Naturgesch. 3(2): 1205. 1841 =
Heritiera littoralis Dry.

The generic entry is "*Samandura*, *Balanopteris*, *Heritiera*," with references at the end to Rheede 6, *pl. 21*, Rumphius 3. *pl. 63*, and to Gaertner, *pl. 99, Balanopteris tothila* Gaertn. All references appertain to *Heritiera littoralis* Dry.

Schleichera †*oleosa* (Lour.) Oken, Allg. Naturgesch. 3(2): 1341. 1841;
Duchesne, *Pl. Util. 194. 1846*; Merr. *Interp. Rumph. Herb. Amb. 337. 1917. (S. trijuga* Willd.).

The entry is "*Sch. oleosa, spinosa*" and the references at the end are to *Cussambium* Rumph. *Herb. Amb. 1: 154. pl. 57. 1741, Pistacia [oleosa]* Lour. *Fl. Cochinch. 615. 1790*. It is suspected that the "*spinosa*" cited above was taken from *Cussambium spinosum* Ham.

Sciurus **officinalis* Oken, Allg. Naturgesch. 3(2): 1268. 1841 = *Galipea officinalis* Hancock (1829).

The generic entry is "*Sciuris*, *Galipea*" and at the end of the species description is a reference to Kosteletzky, *Med. Pharm. Fl. 5: 1792. 1836*, who, however considered it as *Galipea officinalis*.

Sebestena **myxa* J. S. Presl, *Wseob. Rostlin. 2: 1102. 1846* = *Cordia myxa* Linn.

Sebestena **collococca* J. S. Presl, *Wseob. Rostlin. 2: 1102. 1846* = *Cordia collococca* Linn.

Sebestena **rumphii* J. S. Presl, Wseob. Rostlin. 2: 1103. 1846 == *Cordia subcordata* Lam.

The basis of this was *Cordia rumphii* Oken and *Novella nigra* Rumph. Herb. Amb. 2: 226. *pl.* 75. 1741; typical *Cordia subcordata* Lam.

Smilax **ceylanica* Oken, Allg. Naturgesch. 3(1): 616. 1841 == *S. zeylanica* Linn.

The references are to Rumphius, Herb. Amb. 5: 437. *pl.* 161. 1747 (*Pseudochina amboinensis* Rumph. = *Smilax javensis* A. DC.) and to Rheede, Hort. Malabar. 7: 59. *pl.* 31. 1688, the latter currently referred to *Smilax zeylanica* Linn.

Sonneratia **rubra* Oken, Allg. Naturgesch. 3(3): 1952. 1841 == *Sonneratia caseolaris* (Linn.) Engl.

The entry is "S. rubra, acida" with references to Rheede, Rumphius, Sonnerat, and other early authors. Oken apparently derived his new specific name from *Mangium caseolare rubrum* (*Brappat rubra*) Rumph. Herb. Amb. 3: 112. *pl.* 74. 1743.

Stellera †*hirsuta* Oken, Allg. Naturgesch. 3(3): 1492. 1841; O. Kuntze, Rev. Gen. Pl. 585. 1891 (*Passerina hirsuta* Linn.).

Stellera †*thymelaea* Oken, l.c.; O. Kuntze, l.c. (*Passerina thymelaea* (Linn.) DC.).

Stellera †*tinctoria* Oken, op. cit. 1491; O. Kuntze, l.c. (*Passerina tinctoria* Pourr.).

For these the generic entry is "Stellera, Passerina" which indicates that Oken considered all the *Passerina* species that he admitted to belong in *Stellera*. As usual he cites various references under each species.

Stillingia †*aucuparia* Oken, Allg. Naturgesch. 3(3): 1607. 1841; Muell.-Arg. in DC. Prodr. 15(2): 1161, 1216. 1866 == *Sapium aucuparium* Jacq.

Stillingia †*indica* Oken, op. cit. 1606; Muell.-Arg. op. cit. 1161, 1191 == *Sapium indicum* Willd.

For these the generic entry is "Stillingia, Sapium," Oken considering that all the species he admitted belonged to *Stillingia*. Under each of the above species he gives references to the works of earlier authors who considered them.

Symphonia **coccinea* Oken, Allg. Naturgesch. 3(2): 1431. 1841 == *Moronobea coccinea* Aubl.

The generic entry is "Symphonia, Moronobea," and at the end of the description is a reference to "Aublet T. 313," i.e., *Moronobea coccinea* Aubl. Hist. Pl. Guian. Franç. 789, *pl.* 313. 1775.

Symplocos †*thaeaeformis* (Linn. f.) Oken, Allg. Naturgesch. 3(2): 928. 1841; Gürke in Engl. & Prantl, Nat. Pflanzenfam. 4(1): 171, 172. 1890. (*Symplocos alstonia* L'Herit., 1791).

The entry is "*S. theaeformis, alstonia*" and the first reference is to L'Heritier's consideration of *Symplocos alstonia*. The oldest specific name is that of Linnaeus f. Suppl. 264. 1781.

Tabernaemontana **gummifera* Oken, Allg. Naturgesch. 3(2): 1040. 1841 = *Landolphia gummifera* (Lam.) K. Schum. (*Vahea madagascariensis* Bojer; *Landolphia madagascariensis* K. Schum.).

The reference at the end of the description is to "Lamarck, Illustr. t. 169, Vahea," i.e., *Vahea gummifera* Lam. of Madagascar. Lamarck's species has, by some authors, been erroneously reduced to the very different *Urceola elastica* Roxb. of the Malay Peninsula. Dr. Pichon, of the Paris Museum assures me that Lamarck's species is a *Landolphia*.

Tabernaemontana **montana* Oken, Allg. Naturgesch. 3(2): 1039. 1841 = *Tabernaemontana utilis* Arn.

The entry is "*T. montana, utilis*"; there is no other reference but the species was from Demarara, there known as *hya-hya*, i.e., *Tabernaemontana utilis* Arn. (1830).

Tetragastris †*balsamifera* (Sw.) Oken, Allg. Naturgesch. 3(3): 1764. 1841; O. Kuntze, Rev. Gen. Pl. 107. 1891 (*Hedwigia balsamifera* Sw.).

The generic entry is "*Tetragastris, Hedwigia*" and the references at the end of the species description are to Gaertner, Swartz, and Tussac.

Timonius **polygamus* Oken, Allg. Naturgesch. 3(2): 875. 1841 = *Timonius timon* (Spreng.) Merr. Jour. Arnold Arb. 18: 131. 1937. (*T. rumphii* DC., *T. sericeus* K. Sch.).

The entry is "*T. polygamus, rumphii*" and the only reference is to Rumph. Herb. Amb. 3: 216. *pl.* 140. 1743, with the generic name *Erithalis* added, undoubtedly taken from *Erithalis timon* Spreng. (1813). The Rumphian plate and description typify the binomials of Sprengel and De Candolle.

Tomex **myrrha* Oken, Allg. Naturgesch. 3(3): 1524. 1841 = *Lindera myrrha* (Lour.) Merr. Trans. Am. Philos. Soc. II. 24(2): 167. 1935.

The generic entry is "*Tomex, Tetranthera*" and the first reference under *Tomex myrrha* is to Lour. Fl. Cochinch. ed. Willd. 1: 308. 1793 (ed. 1, 251. 1790), which is *Laurus myrrha* Lour., the source of the specific name. The references to the works of Nees, Plukenet, and Rumphius do not apply to Loureiro's species. At the end appears the name *Laurus japonica*, a part of the Rumphian reference, *Laurus japonica* Rumph. Herb. Amb. Auctuarium 63. 1755, clearly a species of *Cinnamomum*.

Uvaria **malabarica* Oken, Allg. Naturgesch. 3(2): 1254. 1841 = *Uvaria narum* Wall.

The entry is "*Uvaria malabarica, narum*" and the references are to *Narum-panel* Rheede, Hort. Malabar. 2: *pl.* 9. 1679, and to works of Linnaeus, Burman, Gaertner, and Lamarck.

Vanda **spatulata* Oken, Allg. Naturgesch. 3(1): 485. 1841, *sphalm.* =
Vanda *spathulata* (Linn.) Spreng.

The references are to Rheede and Rudbeck, with the generic names *Epidendrum* and *Limodorum*.

Visnea **canariensis* Oken, Allg. Naturgesch. 3(2): 932. 1841 = *Visnea*
mocanera Linn.

The entry is "V. *canariensis*, *mocanera*" with references to illustrations of Bory de St. Vincent and of Berthelot, *Visnea canariensis* Oken being merely a new name for *Visnea mocanera* Linn.

Willughbeia **acida* Oken, Allg. Naturgesch. 3(2): 1049. 1841 = *Ambelania* *acida* Aubl.

The generic entry is "Willughbeia, Pacuria, Ambelania," the specific entry merely "W. *acida*." At the end of the description are the references "Aublet, Guiane t. 104. Lamarck, Illustr. t. 169, Ambelania," i.e., *Ambelania acida* Aubl.

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Merrill, Elmer D. 1950. "Unlisted technical plant names in the published works of L. Oken (1841) and J.S. Presl (1846)." *Journal of the Arnold Arboretum* 31(3), 264–287. <https://doi.org/10.5962/p.333927>.

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