

**TRILLIUM SUBG. SESSILIUM RAF. (1830), AN EARLIER NAME FOR
TRILLIUM SUBG. PHYLLANTHERUM (SCHULT. & SCHULT.F.) J.D. FREEMAN
(MELANTHIACEAE: PARIDEAE).**

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ABSTRACT

Our recent effort to ascertain the first valid place of publication for *Trillium* subg. *Phyllantherum*, now in common use and typified by *T. sessile* L., demonstrated that this name, long attributed to Rafinesque’s invalid 1820 publication, was inadvertently validated by J.D. Freeman in 1975. Continued review of Rafinesque names brought to our notice that Rafinesque validly established *Trillium* subg. *Sessilium* in 1830, based on the same type species, *T. sessile*, without any mention of his earlier “name.” Accordingly, the 1830 subgeneric name has priority over the long-established name *Trillium* subg. *Phyllantherum*.

We (Reveal & Gandhi 2014: 1) recently reported on the validity of a commonly used subgeneric name for the sessile-flowered species of *Trillium* L. subg. *Phyllantherum*. That name was initially proposed by Rafinesque (1820: 72), who did not provide a description or diagnosis. He circumscribed the subgenus to include three species, *T. sessile* L., *T. petiolatum* Pursh, and *T. tinctorium* Raf., but only provided a French diagnosis for *T. sessile*.

Rafinesque’s (1820) invalidly published subgeneric name was first validated as an unranked infrageneric name, *Trillium* [unranked] *Phyllantherum*, by Schultes and Schultes f. (1830: 1497). Unfortunately, that valid name remained essentially unknown. Later, the sessile-flowered trilliums were distinguished by Salisbury (1866: 61) as the genus *Esdra*, typified by *T. sessile*. He did not refer to either Rafinesque (1820) or Schultes and Schultes f. (1830). Subsequently, Nieuwland (1913: 112) proposed *Phyllantherum* at the rank of genus, validating it, albeit as a superfluous name because he cited *Esdra*, Salisbury’s earlier generic name, in synonymy. As a consequence, when Freeman (1975: 2) took up “*Trillium* subg. *Phyllantherum* Raf.” (1820) as an accepted name, he inadvertently validated it (see Reveal & Gandhi 2014 for details). Although Freeman did not refer to the basionym, his citations of *Estra* and *T.* subg. *Sessilium* (mistakenly cited as genus “*Sessilium* Raf.”) provide the requirements for the validity of his subgeneric name.

We assumed that we resolved the nomenclature and that the hitherto widely used *Trillium* subg. *Phyllantherum* would continue to be the correct name for the taxon. Clearly, we failed to appreciate the nomenclatural chaos that is synonymous with Constantin Samuel Rafinesque (1783–1840).

One possible reason for Freeman's mistake of using "*Trillium* subg. *Phyllantherum* Raf." (1820) can be attributed to Merrill (1949: 93), who considered *T.* subg. *Phyllantherum* to have been validly published in 1820. Perhaps this impression was influenced by Fernald (1944: 17–18) who mentioned Rafinesque's *T.* subg. *Sessilium* without actually commenting on its nomenclatural significance. Whatever the reason for the failure, including ourselves for not finding the 1830 name earlier, the majority of the blame can be laid at the feet of Rafinesque for not mentioning his 1820 name in 1830 (p. 97) or in 1840 (p. 132) when he treated *Trillium* in detail. Thus, the relationship between Rafinesque's 1820 and 1830 subgeneric names simply has gone unnoticed by monographers of the genus. It is not, however, clear to us how Freeman mistook *Trillium* subg. *Sessilium* as genus "*Sessilium* Raf."

There is no question that Rafinesque effectively validated, and typified *Trillium* subg. *Sessilium*. Under *Trillium*, he recognized three subgeneric names including *Sessilium*.

1. *Sessilium*. Petals erect, anthers adnate, filaments flat, stigmas sessile. *Flowers sessile, erect.* (the *Tr.* sessile of L.[sic.,]).

Unless the 1830 Rafinesque name is proposed for rejection under provisions in Art. 56 of the *International Code of Nomenclature* (McNeill et al. 2012) and is conserved, the correct name at the rank of subgenus for the sessile-flowered trilliums, a monophyletic group (Kato et al. 1995), is as follows:

***Trillium* L. subg. *Sessilium* Raf., Med. Fl. 2: 97. Jun-Dec 1830. – TYPE: *T. sessile* L.**

Trillium [unranked] *Phyllantherum* Schult. & Schult.f. in J.J. Roemer., Syst. Veg. 7(2): 1497. Oct-Dec 1830. – TYPE: not cited; DESIGNATED TYPE: *T. sessile* L. (vide J.D. Freeman, 1975: 2).

Esdra Salisb., Gen. Pl. 60-61. Apr-Mai 1866. – TYPE: *T. sessile* L.

Phyllantherum (Schult. & Schult.f.) Nieuwl., Amer. Midl. Naturalist 3: 112. Jul 1913, nom. superfl. ≡ *Esdra* Salisb.

Trillium subg. *Phyllantherum* (Schult. & Schult.f.) J.D. Freeman, Brittonia 27: 2. 30 Mar 1975, nom. superfl. ≡ *Trillium* subg. *Sessilium* Raf.

Trillium subg. "*Phyllantherum*" Raf., J. Phys. Chim. Hist. Nat. Arts 91: 72. 1820, nom. inval. (as "*Jrillium*")

Note: For purposes of typification of generic and infrageneric names, Article 10.1 of the *International Code of Nomenclature* mentions the terms "citation" (cited in the protologue of a taxon) and "designation" (= lectotypification). Also, in Art. 9.2 and the glossary, the term "lectotype" is restricted to a specimen or an illustration, not to a name. Accordingly, we choose to use the term "designated type" (instead of "lectotype") to denote the designation of a type for generic and infrageneric names.

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LITERATURE CITED

- Fernald, M.L. 1944. Overlooked species, transfers and novelties in the flora of eastern North America. *Rhodora* 46: 1–21.
- Freeman, J.D. 1975. Revision of *Trillium* subgenus *Phyllantherum* (Liliaceae). *Brittonia* 27: 1–62.
- Kato, H., R. Terauchi, F.H. Utech, and S. Kawano. 1995. Molecular systematics of the Trilliaceae sensu lato as inferred from *rbcL* sequence data. *Molec. Phylog. Evol.* 4: 184–193.
- McNeill, J., F.R. Barrie, W.R. Buck, V. Demoulin, W. Greuter, D.L. Hawksworth, P.S. Herendeen, S. Knapp, K. Marhold, J. Prado, W.F. Prud'homme van Reine, G.F. Smith, J.H. Wiersema, and N.J. Turland. (eds.). 2012. *International Code of Nomenclature for Algae, Fungi, and Plants* (Melbourne Code). *Regnum Vegetabile* 146. A.R.G. Gantner Verlag, Ruggell.

- Merrill, E.D. 1949. Index rafinesquianus. Arnold Arboretum, Jamaica Plains, Massachusetts. 296 pp.
- Nieuwland, J.A. 1913. Notes on our local plants.–IV. Amer. Midl. Naturalist 3: 98–125.
- Rafinesque, C.S. 1820. D'un nouveau genre de plantes, *Enemion*, et remarques botaniques. J. Phys. Chim. Hist. Nat. Arts 91: 70–72.
- Rafinesque, C.S. 1830. Medical flora; or, manual of the medical botany of the United States of North America. Containing a selection of above 100 figures and descriptions of medical plants, with their names, qualities, properties, history, &c. and notes or remarks on nearly 500 equivalent substitutes. Vol. 2. Atkinson & Alexander, Philadelphia.
- Rafinesque, C.S. 1840. Autikon botanikon. Icones plantarum select. nov. vel rariorum, plerumque americana, interdum african. europ. asiat. oceanic. &c. centur. xxv. Botanical illustrations by select specimens or self-figures in 25 centuries of 2500 plants, trees, shrubs, vines, lilies, grasses, ferns &c, chiefly new or rare, doubtful or interesting, from North America and some other regions; with accounts of the undescribed, notes, synonyms, localities &c. in 5 parts of 5 centuries each of text with 25 volumes folio of self-figures. Published by the author, Philadelphia.
- Reveal, J.L. and K.N. Gandhi. 2014. On the validity of *Trillium* L. subg. *Phyllantherum* Raf. (*Melanthiaceae: Parideae*). Phytoneuron 2014-40: 1–3.
- Salisbury, R.A. 1866. The genera of plants. John van Voorst, London.
- Schultes, J.A. and J.H. Schultes. 1830. 1529. *Trillium*. P. 1497, in J.J. Roemer, Caroli a Linné equitis secundum classes ordines genera species. Cum characteribus, differentiis et synonymiis, editio nova, speciebus inde ab edition xv. detectis aucta et locupletata. J.G. Cottae, Stuttgartiae.