

addition, the specimen lacks any annotation by Tournefort (or Desfontaines), and does not have any identification, provenance, or collection date. Therefore, this material cannot be indubitably considered as original material, and the “typification” published by Ekim (l.c.) must be treated as ineffective.

On the other hand, there is a specimen of this species from the collection of Vaillant at P. The sheet, with barcode P04283877, bears a specimen with leaves and flowers, and two labels: “Chamaedrys Cretica, saxatilis, folio / exiguo, subtus incano. Coroll. I.R.H. / 14. / herbier du Vaillant” and “Teucrium microphyllum Desf. plant. du Tourn. / (Desfontaines)” [handwritten by Édouard Spach] (image available at <https://mediaphoto.mnhn.fr/media/1441362667877bjpdZAdZkqn0YRYF>). This specimen can be considered original material of *T. microphyllum*.

We have found another specimen of this taxon in the Tournefort Herbarium at P. The sheet is barcoded P00667264 and bears a stem with leaves and flowers, and two labels: the first: “Teucrium microphyllum”, and the second: “Chamaedrys Cretica, saxa / tilis, folio exiguo, subtus / incano. Corol. IRH 14.”, to which is glued the notation “Specimen unicum” (image available at <https://mediaphoto.mnhn.fr/media/1658246733201RtalKzKGugqirVUg>). This specimen can also be considered original material and is designated here as lectotype of the name.

Still another specimen at P (barcode P00652497, image available at <https://mediaphoto.mnhn.fr/media/164078588760441hsTfFAxQj8vDRW>), labelled “Herbarium Tournefortianum N°. 1469” and “Chamaedrys / Cretica, saxatilis, folio exiguo / subtus incano”, also can be identified with this species. It bears the identification of Coincy: “= *T. quadratum* Schreb.?” who discussed this specimen in his 1897 article (Coincy, l.c.: 315): “Il y a dans l’herbier de Tournefort, conservé au Muséum sous le n° 1469, un *Teucrium* étiqueté *Chamaedrys cretica saxatilis folio exiguo subtus incano* tellement identique avec le *T. quadratum* authentique de l’herbier Schreber qu’on dirait les deux exemplaires détachés de la même souche: il est donc probable qu’il faut rayer le *Teucrium quadratum* de la liste des plantes espagnoles” (There is in the Tournefort Herbarium, preserved in the Museum under the number 1469, a *Teucrium* labeled *Chamaedrys cretica saxatilis folio exiguo subtus incano* so identical

with the authentic *T. quadratum* of the Schreber Herbarium that it looks like the two specimens are detached from the same strain: it is therefore likely that *Teucrium quadratum* should be removed from the list of Spanish plants). While it may duplicate the other collection of Tournefort, it is not associated in any way with *T. microphyllum* or Desfontaines, so it may not be original material for his name.

These specimens (herb. Vaillant P04283877 and herb. Tournefort P00667264 and P00652497), and the illustration included in the protologue of Desfontaines, can be identified with the concept of Schreber’s *Teucrium quadratum* (see Smith in Sibthorp & Smith, Fl. Graec. 6: 25, t. 530. 1825). Therefore, the names *T. microphyllum* and *T. quadratum* should be treated as synonymous.

Because *Teucrium quadratum* has priority over *T. microphyllum* under Art. 11.4 of the ICN, it is incorrect to treat the former as the synonym of the latter, but replacing the name *T. microphyllum* by *T. quadratum* would be destabilising. Therefore, to preserve nomenclatural stability, we propose conservation of *T. microphyllum* against *T. quadratum* under Art. 14.1 of the ICN. Rejection of this proposal would have an undesirable consequence because the well-known and well-established name *T. microphyllum* (see, e.g., Tutin & Wood, l.c.; Ekim, l.c.; Özcan, l.c.) would be abandoned and become a later heterotypic synonym of the unknown and ignored name *T. quadratum*.

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(2022) Proposal to conserve the name *Loasa rudis* (“*Nasa rudis*”) against *L. rhoeadifolia* (*Loasaceae*)

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(2022) *Loasa rudis* Benth., Pl. Hartw.: 75. 15 Mar 1841, nom. cons. prop.

Typus: Guatemala: Santa María, Nov 1840, Hartweg (K barcode K000372760!).

(=) *Loasa rhoeadifolia* Schltld. in *Linnaea* 14: 382. Oct–Nov (prim.) 1840, nom. rej. prop.
Holotypus: [Mexico, Veracruz], Cuesta grande de Chiconquiaco, Sep [1829?], *Schiede* [deest].

The genus *Nasa* Weigend (in *Taxon* 55: 465. 2006) comprises species formerly included in *Loasa* Adans. (Fam. Pl. 2: 501. 1763). The segregation of both genera is supported by virtue of *Nasa* having a single bract per flower, a distinctive nectar scale structure and compelling molecular evidence (Weigend, l.c. 2006; Acuña-Castillo & al. in *Bot. J. Linn. Soc.* 196: 480–505. 2021).

One of the most collected and widely distributed taxa in *Nasa* is *N. triphylla* subsp. *rudis* (Benth.) Weigend (in Weigend & al. in *Revista Peruana Biol.* 13: 82. 2006), which is distributed from southern Mexico to Panama. The latest molecular evidence (Acuña-Castillo & al., l.c., supported by morphological evidence presented here), indicates that it will be more appropriate to treat *N. triphylla* subsp. *rudis* at species rank (henceforth “*Nasa rudis*”, as the combination has yet to be made). This taxon is morphologically and phylogenetically closer to *N. dyeri* (Urb. & Gilg) Weigend (in Weigend & al., l.c.: 74) than to the type subspecies of *N. triphylla* (Juss.) Weigend (in Weigend & al., l.c.: 82), hence it makes sense to consider the three as separate species (see phylogenetic analyses by Acuña-Castillo & al., l.c.). “*Nasa rudis*” and *N. dyeri* have robust, thick basal stems (vs. relatively slender basal stems of *N. triphylla*), dark green calli at the base of the petioles of mature leaves (vs. calli absent in *N. triphylla*), and petals protracted into two long filiform appendages up to 4 mm in length (vs. a single filament to 5 mm or two short ones to 2 mm in *N. triphylla*). Additionally, the coloration and morphology of the nectar scales of most populations of “*Nasa rudis*” are very close to those of *N. dyeri* subsp. *dyeri*, as both taxa have white and pink scales lacking yellow bands and distinct nectar sacs. “*Nasa rudis*” differs from *N. dyeri* by its more sparsely verrucose (vs. densely verrucose in *N. dyeri*) stems with denser (vs. sparse in *N. dyeri*) stinging trichome cover and mature capsules with erect (vs. deflexed in *N. dyeri*) and usually significantly longer (up to ca. 45 mm vs. up to ca. 20 mm in *N. dyeri*) pedicels.

Before the publication of the “*Monographia Loasacearum*” (Urban & Gilg in *Nova Acta Acad. Caes. Leop.-Carol. German. Nat. Cur.* 76: 239. 1900), “*Nasa rudis*” was recognized at species rank under the names *Loasa rhoeadifolia* Schltld. (in *Linnaea* 14: 382. 1840), *L. rudis* Benth. (Pl. Hartw.: 75. 1841), the rarely mentioned *L. bicolor* Klotzsch (in *Allg. Gartenzeitung* 19: 361. 1851), and *L. bipinnata* Donn. Sm. (in *Bot. Gaz.* 23: 7. 1897). In one of the earliest attempts to catalogue the flora of Central America, Hemsley (Biol. Cent.-Amer., Bot. 1: 473. 1880) recognized both *L. rhoeadifolia* and *L. rudis* as distinct species, but he was apparently unaware that *L. bicolor* had been described from Central American material, while *L. bipinnata* had yet to be published.

Urban & Gilg (l.c.) synonymized *Loasa rhoeadifolia*, *L. rudis*, and *L. bipinnata* under *L. triphylla* var. *rudis* (Benth.) Urb. & Gilg (l.c.), but for unknown reasons, they considered *L. bicolor* a synonym of *L. tricolor* Ker Gawl. (in *Bot. Reg.* 8: t. 667. 1822). The main floristic treatments of Central America (and adjacent regions) during the 20th and 21st centuries have all considered ‘*rudis*’ as the correct specific or infraspecific epithet for this taxon (both in *Loasa* and in *Nasa*), as can be seen in the acceptance of *L. rudis* by Woodson

& Schery (in *Ann. Missouri Bot. Gard.* 45 [Fl. Panama]: 36. 1958), *L. triphylla* var. *rudis* by Standley & Williams (in *Fieldiana, Bot.* 24(7) [Fl. Guatemala]: 155. 1961), *L. triphylla* subsp. *rudis* (Benth.) Weigend (in *Sendtnera* 3: 227. 1996) by Avendaño (in *Fl. Veracruz* 110: 18. 1999) and *Nasa triphylla* subsp. *rudis* by Pool (in *Monogr. Syst. Bot. Missouri Bot. Gard.* 85(2) [Fl. Nicaragua]: 1234. 2001) and Morales (in *Monogr. Syst. Bot. Missouri Bot. Gard.* 111 [Man. Costa Rica]: 206. 2008).

Despite this universal acceptance, and after a closer inspection of the nomenclatural history of the names discussed in this proposal, the effective publication date of *Loasa rudis* is February or, more likely, March 1841 (Benth., l.c.; Stafleu & Cowan in *Regnum Veg.* 94: 175. 1976), not 1839 as has been often assumed (e.g., by Urban & Gilg, l.c.; Weigend, l.c. 1996; Weigend & al., l.c.). Due to this, *L. rhoeadifolia*, published in October to early November 1840 (Schlechtendal, l.c.; Stafleu & Cowan in *Regnum Veg.* 112: 196. 1985), has priority under Art. 11 of the *JCN* (Turland & al. in *Regnum Veg.* 159. 2018). However, even before the beginning of the 20th century (over 100 years), this name has been consistently regarded as a synonym (Urban & Gilg, l.c.) and has not been used as the correct name for any taxon, in any reference we are aware of, during all the 20th and 21st centuries (<https://tropicos.org/name/18900323>, <http://www.worldfloraonline.org/taxon/wfo-0001073739>, <http://www.theplantlist.org/tpl1.1/record/tro-18900323>, all accessed on 17 Jun 2022). Search engines such as Elsevier, Google Scholar, SciELO, Scopus and Web of Science retrieve a single citation for the name *Loasa rhoeadifolia* (viz., Braun & Wittig in *Schlechtendalia* 10: 45. 2003), and this reference only mentions that the type material associated with this name is not in HAL. *Loasa rudis* and its homotypic synonyms are retrieved 33 times in the same search engines.

In addition, the type material associated with *Loasa rhoeadifolia* seems to be lost. It is not in HAL (Braun & Wittig, l.c.; Heuchert & al. in *Schlechtendalia* 31: 84. 2017), one of the main repositories of Schlechtendal’s types, and neither we nor the curatorial staff have been able to locate type material associated with this name in B, BR, C, F, G, GH, K, KIEL, LE, M, MEXU, MO, NY, OXF, P, S, U, US, W or XAL. The absence of any recognizable type material associated with *L. rhoeadifolia* renders the application of that name problematic. On the other hand, the holotype of *L. rudis* is still extant at K and is quite well preserved.

Thus, we recommend the name *Loasa rudis* to be conserved against the earlier legitimate, but seldom used *L. rhoeadifolia*. The conservation of *L. rudis* will ensure nomenclatural stability (Art. 14.2), with the continued usage of the well-established epithet *rudis*, and prevent further nomenclatural confusion potentially associated with the lost type material of *L. rhoeadifolia*.

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