Hershkovitz – Montiaceae taxonomy

Taxonomy of Montiaceae: critical clarifications and corrections

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ABSTRACT
This work provides critical commentary on and corrections of a recently published taxonomy of Montiaceae. Valid citation and publication dates of novel taxa per the International Code of Nomenclature for Plants, Algae, and Fungi are summarized.

KEY WORDS: Montiaceae, taxonomy, nomenclature.

Introduction

Hershkovitz (2019a) published a new subfamilial taxonomy of Montiaceae that validated the names of 24 new taxa. Multiple earlier circulated versions of this work (Hershkovitz, 2018a, 2019b, and versions thereof) included most of these and a few other nomenclatural novelties, but these did not constitute valid publication per the International Code of Nomenclature for Plants, Algae, and Fungi (Shenzhen Code; Turland et al., 2018), with particular reference to Article 30.2. Accordingly, Hershkovitz (2019a) and no other facsimile should be referenced for the nomenclature contained therein. Other or differently parsed taxon names in different versions distributed otherwise are not valid. For convenience and clarification, the validated names and publication dates in Hershkovitz (2019a) are summarized below. Discretionally holo-/lectotypified names are indicated with an asterisk. Additional lectotypifications in Hershkovitz (2019a) are superfluous, because typification follows from the taxon name. I report here that the name Calyptridinae Hershk. is superfluous, and Calandrinia Kunth sect. Caespitosa Phil. was typified erroneously.

Suprageneric taxon names validated in Hershkovitz (2019a)

The suprageneric taxonomy in Hershkovitz (2019a) is “incomplete” in that only reasonably well-evidenced clades of two or more genera were named. Corresponding higher taxa of remaining singleton genera were not named, nor were named higher taxa not well corroborated by phylogenetic evidence. Although suprageneric taxonomic ranks were not designated explicitly, they were deliberately implicit in grammatical suffixes that correspond with those specified in the Code (Turland et al., 2018). The newly validated suprageneric taxa are:


PHEMERANTHEAE Hershk., Phytoneuron 2019-27: 64. 6 May 2019. This taxon was named with the wrong suffix. An earlier draft of Hershkovitz (2019a) raised Montioideae to effectively subfamilial rank, but failed to revise the suffix of Phemeranthaceae accordingly. Although Phemeranthaceae Hershk. remains valid, in context, it should have been called Phemeranthoideae.
Generic name validated in Hershkovitz (2019a)


Subgeneric names validated in Hershkovitz (2019a)


Binomials validated in Hershkovitz (2019a)


Additional Montiaceae names contemporaneously validated elsewhere


Other noteworthy nomenclatural observations/corrections

In addition to the above novelties, Hershkovitz’ (2019a) taxonomic revision included a few long-overlooked synonyms. These include *Tutuca* Molina (= *Calandrinia* Kunth), *T. chilensis* Molina (=? *Calandrinia compressa* Schrad.), and *T. fistulosa* (nom. superfl., = *T. chilensis* Molina). Three sections of *Calandrinia* were recognized as having been validly published: *Ca.* sect. *Amarantoidea* Phil., *Ca.* sect. *Caespitosae* Phil., and *Ca.* sect. *Grandiflorae* Phil. The first two of these have priority over the later synonyms, respectively, *Ca.* sect. *Amarantoidea* Reiche and *Ca.* sect. *Acaules* Reiche. These later synonyms are superfluous, because they refer exactly to the sections as circumscribed and named by Philippi. Hershkovitz (2019a and earlier versions) failed to correct the typification of *Ca.* sect. *Caespitosae*. Per Article 10.8 (Turland et al., 2018), it must be *Calandrinia caespitosa* Gillies ex Arn. *Calandrinia* sect. *Grandiflorae* has priority in *Calandrinia* over *Ca.* sect. *Cistanthe* Reiche, not only because of historical precedent, but because of Art. 10.8 (Turland et al., 2018), since this section includes *Calandrinia grandiflora* Lindl. [≡ *Cistanthe grandiflora* (Lindl.) Schltdl., nom. conserv.]. In the genus *Cistanthe*, the section is named *Cistanthe* sect. *Cistanthe*.

Discussion

The taxonomy of Montiaceae elaborated in Hershkovitz (2019a) originated in 2017 as a rather skeletal table or appendix in manuscripts focusing on Montiaceae natural history (e.g., evolution, ecology, geography), as well as theory. At that time, no satisfactory current and cohesive taxonomy existed spanning the superspecific up to the familial level. As the preliminary effort elaborated in length and complexity, it was spun off from the more theoretical work (Hershkovitz, 2018b, c) into a separate work with an intentionally “scientific” title (Hershkovitz, 2018a). That title reflects its initial rejection in the biological sciences preprint archive bioRxiv.org. A new logically constructed taxonomic analysis was not considered per se to embody a new scientific analysis. Further research and refinement yielded multiple versions of Hershkovitz (2019b), but, per Article 30.2 (Turland et al., 2018), taxonomic novelties were not validated prior to Hershkovitz (2019a). As demonstrated here, Hershkovitz (2019a) includes some “bugs.” These errors bring great shame to my village. Nonetheless, I am so confident that the taxonomy will facilitate new Montiaceae research that I guarantee that if consumers are not completely satisfied, the complete purchase price will be refunded cheerfully.

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Literature Cited


