

P. P. Ferrer-Gallego, R. Roselló, J. R. Vázquez & J. B. Peris

On two Cavanillesian names from *Malvaceae*

Abstract

Ferrer-Gallego, P. P., Roselló, R., Vázquez, J. R. & Peris, J. B.: On two Cavanillesian names from *Malvaceae*. — Fl. Medit. 35: 191-207. 2025. — ISSN: 1120-4052 printed, 2240-4538 online.

The nomenclatural types of the Cavanillesian names *Malope multiflora* and *Malva cretica* (*Malvaceae*) are discussed. When the Linnaean name *Lavatera cretica* is transferred to the genus *Malva*, the priority name becomes *Malva multiflora*, based on *Malope multiflora*. For this name, a neotype is designated from a specimen preserved at SEV and collected in Carmona (Sevilla, Spain), a city mentioned in the protologue by Cavanilles. The correspondence between Cándido Trigueros and Cavanilles has been essential in understanding the origin and description of this name. This typification definitively establishes Cavanilles' name within the genus *Malva* according to Linnaeus' concept of *Lavatera cretica*. On the other hand, the type of the name *Malva cretica* had previously been indicated, in 2017, as the "holotype" from a specimen collected by Antoine-Tristan Danty d'Isnard and cultivated in the Jardin du Roi in Paris, preserved at P (P00662859). However, because that type indication did not include the phrase "designated here", nor a similar expression, it is not an effective type designation according to the International Code of Nomenclature for algae, fungi, and plants. We formally confirm this attempted typification and designate the specimen at P as the lectotype of the name *Malva cretica*.

Key words: Cándido Trigueros, Cavanilles, nomenclature, original material, syntype, typification.

Article history: Received 5 October 2025; received in revised form 25 November 2025; accepted 10 December 2025; published 13 December 2025.

Introduction

Molecular studies on *Malvoideae* (= *Malvaceae* sensu stricto) (Ray 1995; Fuertes & al. 2003; Tate & Simpson 2003; Escobar & al. 2009 among others) have demonstrated that some genera, as traditionally defined, are not monophyletic, this requiring a recircumscription. *Malva* L. and *Lavatera* L. are among these genera. Consequently, species of *Malva* and *Lavatera* are distributed across two different clades: the "Lavateroid clade" and "Malvoid clade" (Ray 1995).

According to Fernandes (1968), the distinction between *Malva* and *Lavatera*, based on the epicalyx segments fused at the base in former genus, is highly unsatisfactory. Ray (1995) emphasized the significance of the fruit morphology, more reliable than epicalyx

connation, for a more accurate taxonomy that aligns with molecular data (see e.g., Tate & al. 2005). As a result of these findings, *Lavatera* taxa were transferred from the “Malvoid clade” to *Malva*, under different names and combinations (Ray 1998; Molero & Montserrat 2005, 2006; Banfi & al. 2005; Iamónico 2010, 2014; Valdés 2011; Conti & Bartolucci 2012).

The name of a well-known species, *Lavatera cretica* L., becomes notably complex when transferred from the genus *Lavatera* to *Malva*. Being widely distributed across the Mediterranean, it has been referred to by various names throughout history (see below), especially in 18th and 19th centuries. Thus, several binomials come into play during this transfer from *Lavatera* to *Malva*, complicating the search for the correct priority name. Linnaeus’s combination in the genus *Malva* would create a later homonym with Cavanilles’s name *Malva cretica*. The search for the oldest heterotypic synonym is not straightforward, especially when many of these names have not been analyzed from a nomenclatural perspective and their respective types have not been designated. In such cases, typification becomes a crucial act in order to establish a solid nomenclature. A relevant candidate for naming the Linnaean species (*Lavatera cretica*) within the genus *Malva* is Cavanilles’s name *Malope multiflora*, a name that had been forgotten and scarcely used in subsequent works since its publication. In this context, Webb (1968: 249) mentioned: “*M. multiflora* Cav., *Monad. Class. Diss. Dec.* 85 (1786), from S. Spain, has never been seen since its original discovery, and may belong to some other genus. It was said to have 3–4 small, white flowers in each leaf-axil”. This name was not included in the revision of the Malvaceae family for the Iberian flora (see Nogueira & Paiva 2005).

On the other hand, a comprehensive review of the nomenclatural types of the names of the taxa included and accepted within *Malva cretica* Cav. was presented by Iamónico & Del Guacchio (2017). For Cavanilles’s name *Malva cretica*, its nomenclatural type is indicated. However, the indication of the type as “holotype” is incorrect according to the rules of the International Code of Nomenclature for algae, fungi, and plants (ICN, Madrid Code of 2025).

This paper revisits the types and original material of the Cavanillesian names *Malva cretica* and *Malope multiflora*, designating the corresponding types accordance with the articles of the International Code of Nomenclature. This act is essential, particularly for the latter name, in order to confirm the correct nomenclature for a well-known plant.

Materials and methods

The Historical Archive of the Royal Botanical Garden of Madrid (Spain) has been consulted to study the correspondence between Cándido Trigueros and Cavanilles (see San Pío Aladrén & Collar del Castillo 1995, Aguilar & Valdés 1998). This documentation has been crucial in understanding the origins of the description of *Malope multiflora*.

A preliminary screening of the material was possible thanks to digital type images provided at JSTOR Global Plants web (<http://plants.jstor.org>) and other online sources. The herbaria acronyms follow Thiers (2025 [continuously updated]).

In typifying names of taxa, we strictly followed the International Code of Nomenclature for algae, fungi, and plants, ICN onwards (Turland & al. 2025). The identity of the designated types has been verified with the current use of their respective names.

The homotypic synonyms are indicated with the symbol $\equiv$, the heterotypic synonyms are indicated with the symbol $=$. Currently accepted names are set in bold italics typeface.

Results and discussion

Lavatera cretica L.

When considering the name *Lavatera cretica* (Linnaeus 1753) within the genus *Malva*, a homonymy arises with the name *Malva cretica* (Cavanilles 1786). This issue led Webb and Berthelot to propose the name *Malva pseudolavatera* (Webb & Berthelot 1836) as a new name based on Linnaeus's replaced synonym (see Molero & Montserrat 2005).

A few years later, Visiani (1851) proposed another substitute name for Linnaeus's binomial, *Malva hederifolia* ('*hederaefolia*'), just as Ray (1998) did more recently with his proposed binomial *Malva linnaei*, also as a substitute name for Linnaeus's name. However, in both cases, the names are superfluous and illegitimate, as a new name with the same purpose had already been proposed by Webb & Berthelot (1836).

However, there are several earlier species names that could be considered potential heterotypic synonyms, which could take priority over the new name proposal by Webb & Berthelot (1836). Before proposing new names, it is essential to consider the existence of older available synonyms in adhere to the principle of priority. For instance, Fernandes (1993) proposes Cavanilles' name *Malope multiflora* as a synonym of *Lavatera cretica* (see Banfi & al. 2005; Juan & Crespo 2011).

Malope multiflora is undoubtedly a forgotten name, but its combination within the genus *Malva* and its typification would help resolve a longstanding issue in the nomenclature of this species. It is the oldest name on which certain authors believe the Linnaean concept of *Lavatera cretica* should be based.

However, if this is not the case, before accepting the substitute name proposed by Webb & Berthelot (1836) as the priority name for this species, it would have been necessary to examine the types of other candidate heterotypic synonyms under Linnaeus name, such as: *Lavatera empedoclis* Ucria ex Roemer, *L. sicula* Tineo, *L. neapolitana* Ten., and *Anthema tenoreana* C.Presl.

Since its publication by Cavanilles, *Malope multiflora* has been rarely used, with few exceptions such as Candolle (1824: 430) and more recently Banfi & al. (2005). As no original material has been located, only a brief description by the author in comparison with other species described in his work exists, and no iconography was created by Cavanilles, the name was considered somewhat ambiguous. In this context, a suitable alternative could have been not to use the name published by Cavanilles.

However, this approach would further destabilize the nomenclature of the group, as it would require an in-depth study of the original materials of candidate names that could be used to designate Linnaeus' species under the genus *Malva*.

On the other hand, preserving *Malva pseudolavatera* over other potentially priority names for assigning the specific epithet within the genus *Malva* for Linnaeus' species does not appear to be the best suited option. This is because there is an opportunity, through typification, to use a name to designate this widely known species, without resurrecting other

names that also are rarely known or used. The typification of Cavanilles's name *Malope multiflora* could reaffirm the acceptance of this name as proposed by Banfi & al. (2005) and Juan & Crespo (2011), among other authors, and accepted by POWO (2025).

The protologue of *Malope multiflora* includes a brief diagnosis in polynomial form "M. [*Malope*] Foliis subrotundis crenatis villosis: floribus 3–4 axillaribus" [trans.: M. [*Malope*] Leaves suborbicular, crenate, villous; flowers 3–4 per leaf axil] followed by the reference "*Trigueros, Sp. Floræ Carm. mss.*", and a brief description of the plant "Caulis vix semipedalis, parum ramosus. / Folia subrotunda, crenata, villosa. / Flores axillares parvi, tres aut quatuor in singulis axillis. / Calyces villosi. / Corolla alba. / Fructus (habita proportione) maior quam in ceteris." [trans.: Stem scarcely half a foot tall, slightly branched. / Leaves subrounded, crenate, villous. / Small axillary flowers, three or four in each axil. / Calyces villous. / Corolla white. / Fruit (in proportion) larger than in the others]. The protologue also includes the provenance "*Habitat in Baeticae pratis prope Hispalim et Carmonam*" [trans.: It grows in the meadows of Baetica near Seville and Carmona], the symbol "O" (indicating that it is an annual plant), and a very relevant comment "Observata a D. de Trigueros. Quum specimen videam, delineabo, ac primo quoque tempore cum, aliis plantis incidendum dabo" [trans.: Observed by Mr. de Trigueros. When I see the specimen, I will illustrate it, and at the first opportunity, I will provide it along with other plants].

As will be explained later, Cavanilles merely translated into Latin the exact description of this species provided by Trigueros, without adding any additional details. Furthermore, the polynomial or synonym included in the diagnosis, "M. Foliis subrotundis crenatis villosis: floribus 3–4 axillaribus", was not mentioned in the correspondence Trigueros sent to Cavanilles (as will be shown below). This strongly suggests that the "Specimen Floræ Carmonensis" was, in fact, an independent work (a manuscript "mss." [manuscriptum]), of which Cavanilles merely had a copy. The text of Trigueros' *Specimen Floræ Carmonensis* is believed to have begun in 1779, and by 1785 (the year of his correspondence with Cavanilles), it was already finished. Unfortunately, this manuscript seems to have been lost, as, apart from Trigueros and possibly Cavanilles, no one else is known to have seen it (see Aguilar & Valdés 1998). This manuscript was cited by Cavanilles (1786) in several names in his *Secunda Dissertatio Botanica* (e.g., *Malva nicaeensis*, *Malope trifida*, *Triguera ambrosiaca*). Although related to the Trigueros's *Flora Carmonensis*, the *Specimen Floræ Carmonensis* should be considered an independent work. The testimonies of Trigueros and Cavanilles are the only evidence of the existence of this work, which is not mentioned elsewhere in botanical literature. Based on how Cavanilles uses it in his synonymies, it appears the work employed a polynomial nomenclature, perhaps following José Quer's *Flora Española* (Quer 1762-1764).

Cavanilles clearly indicates in the protologue that he has not seen the material, but that as soon as he can study it, he will include it in his work along with other species ("Quum specimen videam, delineabo, ac primo quoque tempore cum, aliis plantis incidendum dabo"). For this reason, this species is not included among the illustrations in Cavanilles' work.

After an exhaustive search in the herbaria where Cavanilles' and Trigueros' material or its duplicates are preserved (see Muñoz Garmendia 2004), we have been unable to locate any specimens of this species. Garilleti (1993) reported that no specimen corresponding to *Malope multiflora* could be found at MA or LINN. Although material from the herbarium

of the University of Sevilla (SEV) has been catalogued by Salgueiro González (1998), we have not found any relevant material related to this species related to Cavanilles and Trigueros in this collection either.

The description of *Malope multiflora* indicates that it has suborbicular, crenate leaves with 3–4 flowers per leaf axil (Cavanilles 1786). Many species of *Lavatera* or *Malva* exhibit the combination of these features described by Cavanilles. However, the characteristics of the genus *Malope*, with its four recognized species (e.g., *M. anatolocha* Hub.-Mor., *M. malacoides* L., *M. rhodoleuca* Maire, and *M. trifida* Cav.), are highly distinctive. It is highly likely that Cavanilles did not have any specimen of this species; his description was taken verbatim from a letter sent to him by Trigueros on 27 June 1785 (see Aguilar & Valdés 1998; correspondence that we have been able to study thanks to Esther García Guillén -The Historical Archive of the Royal Botanical Garden of Madrid-) (see below). Therefore, this name will remain of uncertain status in the absence of any type material. However, its typification with material belonging to the Linnaean concept of *Lavatera cretica* would resolve a major nomenclatural issue, as it would definitively fix the name without the need for further in-depth research on the subsequent heterotypic synonyms proposed.

A similar situation involving the absence of original material from Cavanilles also applies to the name *Triguera inodora* Cav., which was also published in the same 1786 work and based on a communication from Trigueros (see Knapp 2007).

Cándido Melchor María Trigueros Díaz de Lara y Luján (Orgaz, Toledo, September 4, 1736 – Madrid, May 20, 1798) was a Spanish writer, Hebraist, translator, and Enlightened playwright. He was a member of the Economic Society of Seville, the Royal Academy of History, and a correspondent of the Botanical Garden. In Carmona, he studied a wide range of subjects, including poetry, epigraphy, numismatics, botany, archaeology, philology, law, history, mathematics, physics, and chemistry, as evidenced by his rich and diverse library, which contained books written in Latin, Greek, Hebrew, English, French, and Italian, languages he taught himself (Aguilar & Valdés 1998).

After studying the correspondence between Trigueros and Cavanilles (see San Pío Aladrén & Collar del Castillo 1995; Aguilar & Valdés 1998), and with the help of Esther García Guillén (Historical Archive, Royal Botanical Garden of Madrid - CSIC, Madrid), we have been able to access the original description Trigueros sent to Cavanilles in the letters dated June 27 and October 3, 1785 (Fig. 1). In these letters, Trigueros wrote: “Apuntamientos sobre algunas plantas malvaceae, que se crían en el termino de Carmona en la Andalucía baja [...] Como el género *Malope* L. tiene por el calyx tanta afinidad con el género *Malva* L; i como Linné no conoce mas que la especie *Malope* (*malacoides*) *foliis ovatis crenatis supra glabris* sist. nat. 3. 462. edit. 13 teniendo io observadas otras dos especies, por si podían servir para algún apéndice quise participarlas a Vm, i por no tener ni esqueletos, ni semilla, ni descripción de la una, i de la otra solamente la descripción, i esqueleto mui mal conservado; Sali tres veces en su busca a los sitios en que años hace la vi; mas el sol que tiene agotada aquella parte de Dehesa, i el ganado que se ha comido el heno, me privaron de hacer esta remesa como quisiera; embio pues la descripción exacta, i mal esqueleto de la una; i otra vez habrá otra cosa, si el tipo [tiempo?] lo diere. [...] La otra *Malope* me acuerdo quera de medio pie o menos, poco ramosa, con hojas quasi redondas, velludas, crenadas, flores blancas, pequeñas, tres o quatro con cabillos cortos

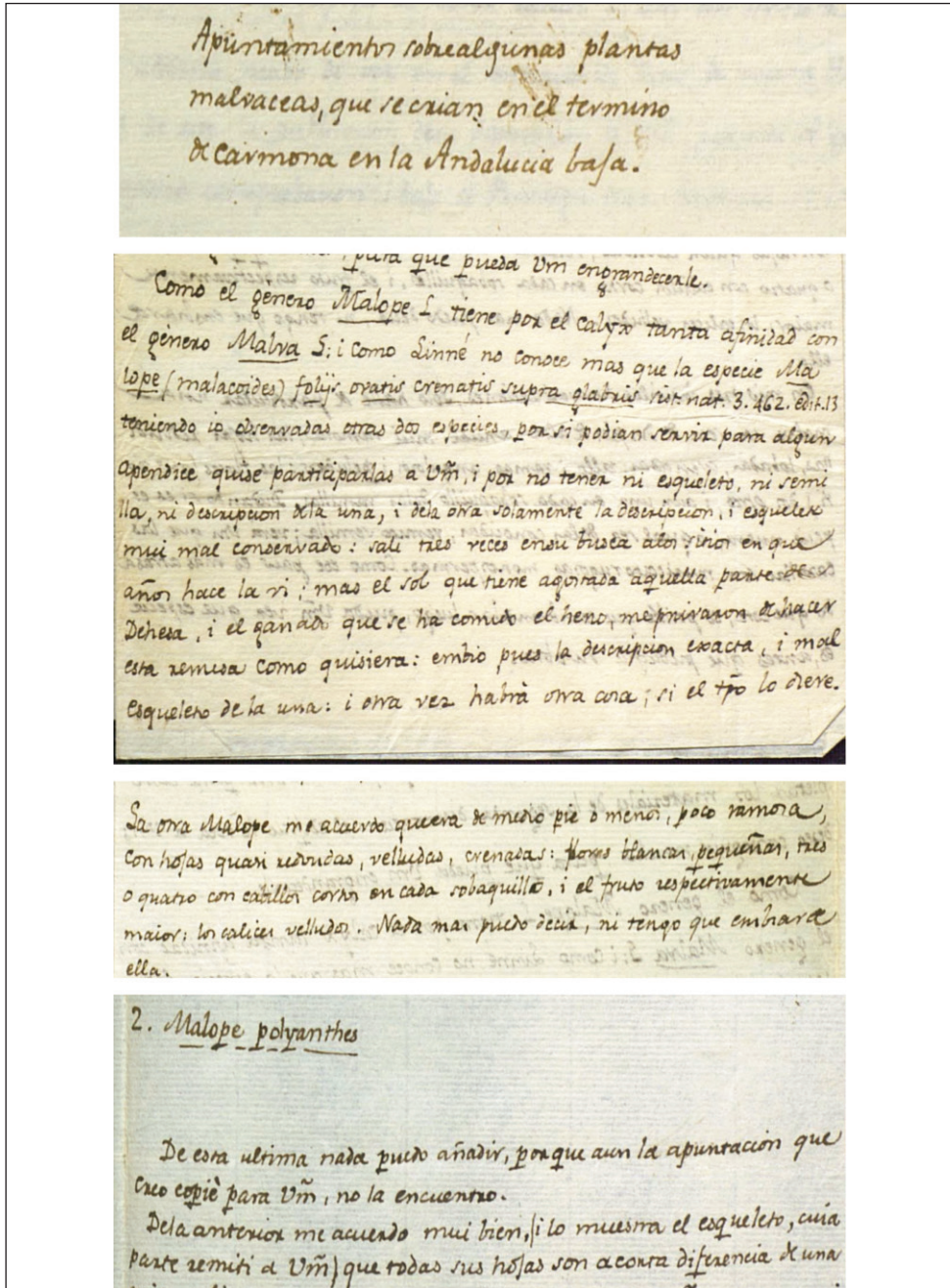


Fig. 1. Letters from Cándido Trigueros to Cavanilles: the three excerpts above: June 27, 1785 (in "Apuntamientos 1", see Aguilar & Valdés (1998: 111-113); the excerpt below: October 3, 1785 (in "Apuntamientos 5", see Aguilar & Valdés (1998: 119-124). Image courtesy of the Historical Archive of the Royal Botanical Garden of Madrid, reproduced with permission.

en cada sobaquillo, i el fruto respectivamente maior; los calices velludos, Nada mas puedo decir, ni tengo que embiar de ella. [...]" (letter from Cándido Trigueros to Cavanilles in "Apuntamientos 1" (June 27, 1785), see Aguilar & Valdés (1998: 111-113); and "2. *Malope polyanthes* / De esta ultima nada puedo añadir, porque aun la apuntación que creo copiè para Vm, no la encuentro" (letter from Cándido Trigueros to Cavanilles in "Apuntamientos 5" (October 3, 1785), see Aguilar & Valdés (1998: 119-124) (see Fig. 1) [trans.: "Notes on some Malvaceae plants found in the Carmona area in Lower Andalusia [...] Since the genus *Malope* L. shares so many similarities with the genus *Malva* L. in terms of the calyx, and since Linnaeus only recognizes the species *Malope (malacoides)* with ovate, crenate leaves, glabrous on top, as described in *Systema Naturae* 3. 462, edit. 13; having observed two other species, I thought they might be useful for an appendix and wanted to share them with you. However, as I do not have herbarium samples, seeds, or a description of one of them, and only a description and a poorly preserved herbarium sample of the other, I went out three times to search for them in the places where I had seen them years ago. But the sun, which has dried out that part of the Dehesa, and the livestock that has eaten the grass, prevented me from making the collection as I had hoped. I am sending the exact description and an herbarium sample of one of them; perhaps at another time, if the weather allows, I will be able to send more. [...] The other *Malope* I remember was about half a foot tall or less, not very branched, with nearly round, hairy, crenate leaves, small white flowers, three or four with short pedicels in each axil, and a relatively larger fruit; the calyces were hairy. I cannot say anything more, nor do I have anything else to send about it. [...] (letter from Cándido Trigueros to Cavanilles in "Apuntamientos 1" (June 27, 1785), see Aguilar & Valdés (1998: 111-113) // 2. *Malope polyanthes* / I cannot add anything about this last one, as I cannot even find the note that I believe I copied for you" (letter from Cándido Trigueros to Cavanilles in "Apuntamientos 5" (October 3, 1785), see Aguilar & Valdés (1998: 119-124)].

We translate this part of the letter sent by Trigueros to Cavanilles, in which he mentions his inability to collect material for what could have been a new species of *Malope*, that he tentatively names "*Malope polyanthes*". Cavanilles likely relied on this brief description for the species (see Cavanilles 1786: 85), altering the name to *Malope multiflora*. This letter makes it clear that Trigueros was never able to send material of this plant to Cavanilles, something that remained pending between them. However, Cavanilles, trusting Trigueros' description, still included the species in his work as a new species.

In a later letter sent from Trigueros to Cavanilles, dated August 24, 1785, he will again express his regret for the lack of material of this plant: "*Malvas*. Cuatro herbolarios he traído por todos estos campos en busca de *Malváceas*, pero nada digno me han traído: está todo agostado y deshecho, donde no está comido o quemado; no me queda recurso hasta su estación. Tampoco se ha encontrado la *Malope carmonensis*, como yo la diría por no haberla hallado en otra parte, ni la que Ud. dice *Polyanthes*: luego que vaya a Carmona diré lo que tenga apuntado; entretanto puedo adelantar que las hojas son del medio de la planta, las inferiores son algo mayores y más chatas, pero de la misma figura; de las estípulas, nada me acuerdo ahora; los peciolos don a las hojas comúnmente: 1:4^{1/2}" [trans.: *Malvas*. I have sent four herbalists across all these fields in search of *Malvaceae*, but they have brought nothing of value: everything is parched and destroyed, where it is not eaten or burned. I have no resources left until its season. Neither has the *Malope carmonensis*

been found, as I would call it for not having encountered it elsewhere, nor the one you refer to as *Polyanthes*. Once I go to Carmona, I will share what I have noted; in the meantime, I can report that the leaves are from the middle of the plant; the lower leaves are somewhat larger and more flattened, but of the same shape. As for the stipules, I cannot recall them at the moment. The petioles are usually attached to the leaves: 1:4^{1/2}] (see Fig. 2). The name "*Malope carmonensis*" corresponds to *M. trifida* Cav., which at that time was only known from Carmona. The name "*Malope polyanthes*" is most likely the species described by Cavanilles as *Malope multiflora*.

However, what species was Trigueros really talking about? According to Trigueros' correspondence with Cavanilles (letter dated October 3, 1785, "Apuntamientos 5" (see Aguilar & Valdés, 1998: 122), see Fig. 2), Trigueros was well acquainted with the Linnaean species *Lavatera cretica*, providing the following details about it: "4. *Lavatera cretica* L. — Malva. — Flor. April. / Folia quinqueloba, rugosa, sericea, afabre serrulata, lobis acutis: superiora acutiora. Stipulae lato lanceolatae. Corollae albido purpurascens, striis saturationibus virgatae. Flores ad alas, pedunculis longis confertis unifloris"

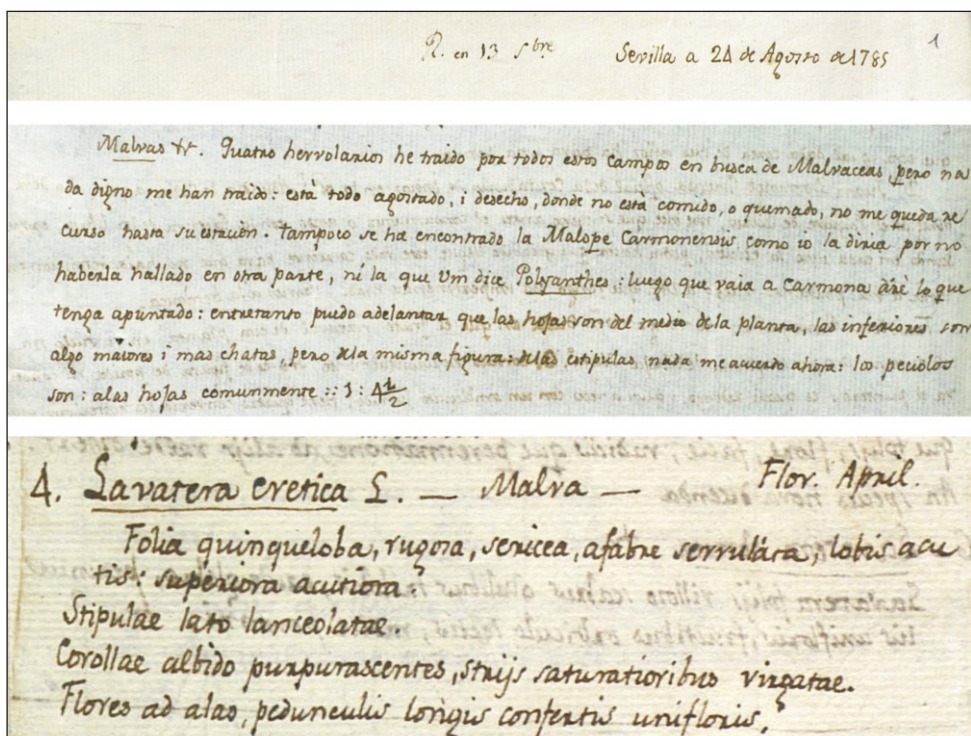


Fig. 2. Letters from Cándido Trigueros to Cavanilles: the two excerpts above: August 24, 1785 (see Aguilar & Valdés (1998: 241); the excerpt below: October 3, 1785 (in "Apuntamientos 5", see Aguilar & Valdés (1998: 122). Image courtesy of the Historical Archive of the Royal Botanical Garden of Madrid, reproduced with permission.

[trans.: Leaves with five lobes, rough, silky, finely serrated, with sharp lobes: the upper ones are sharper. Stipules wide, lanceolate. White-purple corollas, with more intense stripes in a rod-like pattern. Flowers arranged in [wings?], with long, dense, and uniflorous pedicels] (see Fig. 2). Trigueros owned a copy of Linnaeus' *Species Plantarum* (Editio tertia, 1764) in his library, a work with which he was very well acquainted (Aguilar & Valdés 1998: 127). In western Andalusia, *Lavatera cretica*, alongside *L. trimestris* L., is one of the most common species. Moreover, Cavanilles was also thoroughly familiar with this Linnaean species, having included and illustrated it in his own work (Cavanilles 1786: 89, Tab. XXXII, f. 1).

Thus, it seems that the use of this “phantom” name by Cavanilles, *Malope multiflora*, to definitively fix the concept of Linnaeus' name *Lavatera cretica* within the genus *Malva*, may have been merely an act of convenience for the stability of the nomenclature of this group. What species did Trigueros have in mind? Did Cavanilles really come to know this species? Or was he simply influenced by the information provided by his friend Trigueros? These questions are difficult to answer.

In conclusion, and to continue with the act of fixing the name, as an exhaustive search for original material of *Malope multiflora* failed to locate any original material, a neotype is selected according to Art. 9.8 of the Madrid Code (Turland & al. 2025). We have located a well-preserved herbarium sheet at SEV (No. 41292), collected in Carmona (Seville, Spain) in 1979. The sheet contains a complete specimen, matches the description in the protologue, and shows diagnostic features of this species (e.g., plant stellate-pubescent to slightly hispid, up to 20 cm; stems herbaceous; suborbicular-cordate leaves, with 5–7 short lobes; flowers in clusters of 2–8; pedicels unequal, shorter than the subtending petiole; epicalyx-segments shorter than sepals, ca. 6 mm, free nearly to the base, ovate; sepals only slightly acrescent, 8 mm, triangular-ovate, acuminate; petals 10–20 mm, lilac), and clearly represents the current application of the name. This material is selected as the neotype of *Malva multiflora* (Fig. 3).

This typification definitively establishes Cavanilles' name within the genus *Malva* according to Linnaeus' concept of *Lavatera cretica*. It simplifies and stabilizes the nomenclature of this group of plants.

Malva multiflora (Cav.) Soldano, Banfi & Galasso in Atti Soc. Ital. Sci. Nat. Mus. Civico Storia Nat. Milano 146(2): 230. 2005

≡ *Malope multiflora* Cav., Diss. 2, Secunda Diss. Bot.: 85. 1786 [basionym]

Neotype (designated here): Spain, Sevilla, Carmona, Ermita de Santa María de Gracia, 24 April 1979, *P. Candau, I. Fernández et T. Luque* 1498/79 (SEV No. 41292 [photo!]) (Fig. 3).

≡ *Lavatera cretica* L., Sp. Pl.: 691. 1753 ≡ *Anthema cretica* (L.) Medik., Malvenfam.: 42. 1787 ≡ *Althaea cretica* (L.) Alef. in Oesterr. Bot. Z. 12: 260. 1862, nom. illeg., non Weinm., Syll. Ratisb. 2: 171. 1828 ≡ *Malva cretica* (L.) Pau, Not. Bot. Fl. Españ. 3: 29. 1889, nom. illeg., non Cav., Diss. 5, Quinta Diss. Bot.: 280. 1788 ≡ *Malva pseudolavatera* Webb & Berthel., Hist. Nat. Iles Canaries 3(2) [Phytogr. Canar. 1]: 29–30. 1836 [syn. subst.] ≡ *Malva hederæfolia* Visiani, Flora dalmatica 3(2): 205. 1851 [syn. subst. pro *Lavatera cretica* L. (1753)], nom. superfl. ≡ *Malva linnaei* M.F. Ray in Novon 8: 292. 1998 [syn. subst. pro *Lavatera cretica* L. (1753)], nom. superfl.



Fig. 3. Neotype of *Malope multiflora* Cav., SEV (No. 41292). Image courtesy of the herbarium SEV, reproduced with permission.

Lectotype (designated by Fernandes 1968: 429): Herb. Linn. No. 287.11 (S-LINN). For an image of the lectotype: <http://linnaeus.nrm.se/botany/fbo/l/lavat/lavacre.html.en>

Note: Regarding the lectotype of the Linnaean name *Lavatera cretica*, Fernandes (1968: 429) mentioned: “No herbario de Lineu (S) existe um exemplar dessa espécie, proveniente do Hortus Upsaliensis, e com a indicação, no verso do papel de montagem, de ter sido visto por aquel botânico. É este, pois, o *lectotypus* de *L. cretica* L. / Em LINN, o espécime 871-10, etiquetado também como *L. cretica*, é um *typus* da espécie” [In the Linnaean herbarium (S), there is a specimen of this species, originating from the *Hortus Upsaliensis*, with a note on the back of the mounting paper indicating that it was seen by that botanist. This is, therefore, the lectotype of *L. cretica* L. In LINN, specimen 871.10, also labeled as *L. cretica*, is a type of the species]. The term “*typus*” attributed to the specimen LINN 871.10, should be understood as “original material” (image of the sheet available at https://linnean.access.preservica.com/uncategorized/IO_d56527b1-e7de-4e0c-ae51-acdc7697b940/).

Malva cretica Cav.

Malva cretica comprises two recognized subspecies: *M. cretica* subsp. *cretica*, which is distributed across the central and eastern Mediterranean Basin, from Corsica and Sardinia to Cyprus and Turkey, including Tunisia and Malta; some populations in Spain may be introduced (see Valdés 2011; Del Guacchio & al. 2020); and *M. cretica* subsp. *althaeoides* (Cav.) Béguinot (based on *Malva althaeoides* Cav. Icon. 2: 30. 1793), and distributed in Spain, northwestern Africa, and Corsica (see Jeanmonod 2002; Nogueira & Paiva 2005; Valdés 2011; Del Guacchio & al. 2020).

The lectotype of *M. althaeoides* was designated by Iamónico & Del Guacchio (2017: 285) from a specimen collected by Cavanilles in Valencia province, Spain (“Engueræ tractu vulgo Lloruz”) in May 1791 (MA barcode MA179849; image of the lectotype available at <https://imagenes.rjb.csic.es/herbarioV/visorVCat.php?img=MA-01-00179849>).

On the other hand, Iamónico & Del Guacchio (2017) also indicated a “holotype” for the name *Malva cretica*, from a specimen kept at the Herbarium of the Muséum national d’Histoire Naturelle in Paris, at P: “*Malva cretica* Cavanilles (1786: 67) ≡ *Dinacrusa cretica* (Cav.) Krebs (1994: 309). Type:—FRANCE. Jardin du Roi [Paris], *s.d.*, *Isnardi s.n.* (holotype P-00662859 [Digital image!])” (see Fig. 4).

However, in our opinion, the original material for *M. cretica* comprises more than one element. Moreover, the “holotype” indicated by these authors, as they failed to include the phrase “designated here” (or a similar one) cannot be treated as an effective “typification”, nor can it be corrected to “lectotype” (see ICN Art. 7.11 and 9.10 Note 9; see Turland & al. 2025). Consequently, the result is that, even though a “holotype” was cited, in fact, no type was formally designated.

Cavanilles (1786: 67) included the name *Malva cretica* in the protologue under number 108, followed by a brief diagnosis, the synonym “*Alcea cretica hirsuta*” cited from Tournefort (1703: 2), a detailed description of the plant, its geographical provenance “*Habitat in Creta*”, and two relevant comments:

“V. S. apud de Jussieu in herbario D. Isnardi. Unicum exemplar” [trans.: V. S. [vidi sicum] I saw it in its dried state at the house of Jussieu, in the herbarium of Mr.

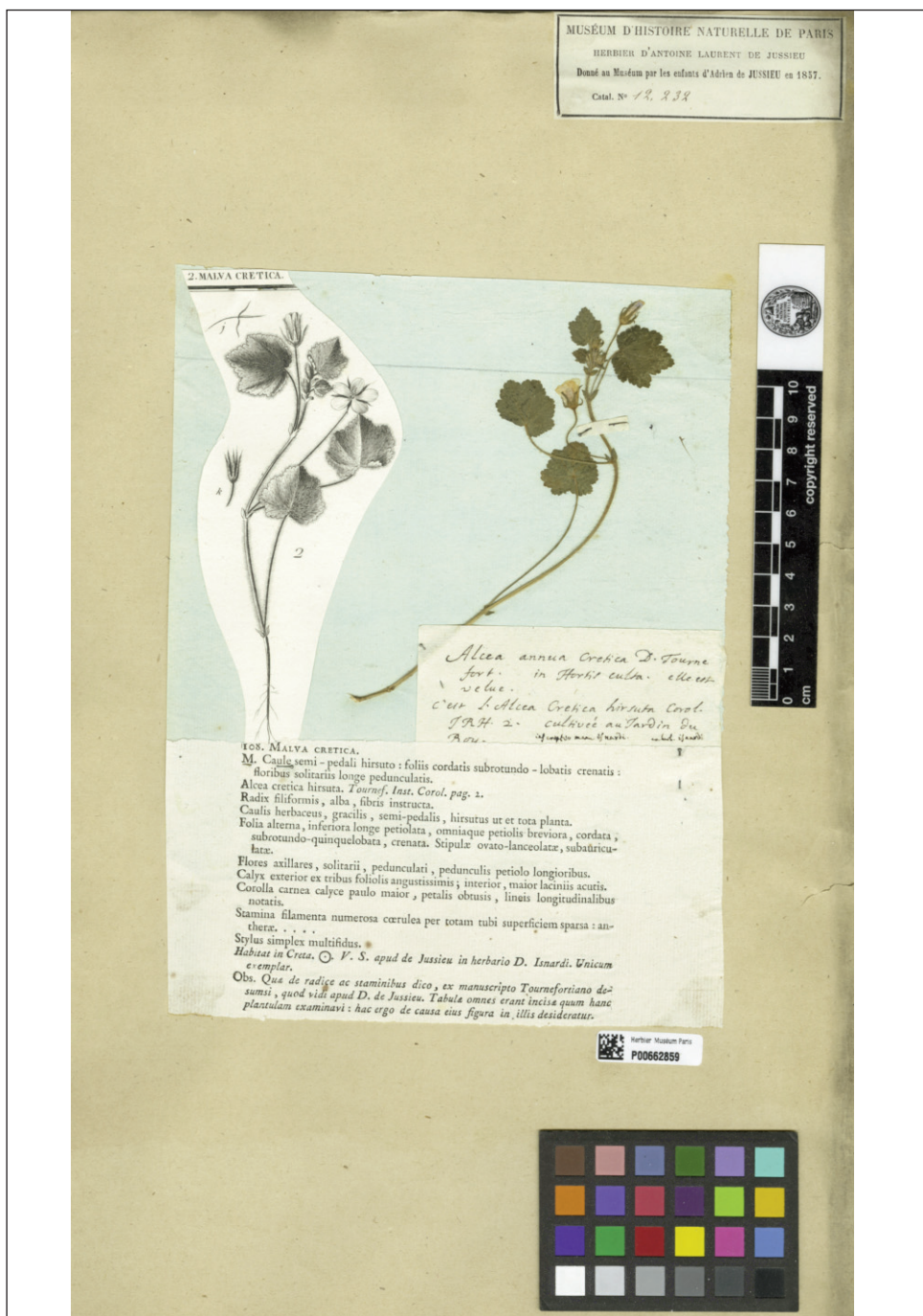


Fig. 4. Lectotype of *Malva cretica* Cav., P (2-D code P00662859). Image courtesy of the herbarium P, reproduced with permission.

Isnardi”, or more generally, “in the herbarium of Mr. Isnardi, under the supervision of Jussieu”. “A single specimen”].

“Obs. Quæ de radice ac staminibus dico, ex manuscripto Tournefortiano desumsi, quod vidi apud D. de Jussieu. Tabulæ omnes erant incisæ quum hanc plantulam examinavi: hac ergo de causa eius figura in illis desideratur” [“Remarks: What I say about the root and stamens I took from a manuscript by Tournefort, which I examined at Mr. de Jussieu’s. All the plates were engraved when I studied this plant; therefore, for this reason, its figure is lacking from them”].

Iamonico & Del Guacchio (2017) mentioned that: “since Cavanilles (1786) reported “*Unicum exemplar*”, and there is no suggestion that the Tournefortian manuscript was more than text, this specimen [i.e., P00662859] is the holotype of the name *Malva cretica* (see Art 9.1, and the discussion by McNeill 2014)”. They further added: “according to the author, the book was already in press when he examined the holotype, therefore its illustration is lacking. Effectively, Cavanilles published the illustration some years later (Cavanilles 1788: Tab. CXXXVIII fig. 2). Notably, it is the faithful portrait of P-00662859 (the holotype), including a precise detail: the root was drawn on the basis of the Tournefort’s manuscript, because it lacks in the Isnard’s specimen”.

The illustration of *Malva cretica* published by Cavanilles in 1788 closely matches the specimen P00662859, with the addition of roots, highlighting the specimen’s key role in typification. As the only specimen cited in the protologue, it qualifies as original material and, by *ICN* rules, must be accepted as the lectotype. Cavanilles examined this specimen, cultivated in the Jardin du Roi and part of Antoine-Tristan Danty d’Isnard’s herbarium, in the presence of Jussieu. While details of roots and stamens were drawn from the Tournefort manuscript, the rest of the morphological description derives from the Isnard specimen. The illustration was likely created while studying the specimen but could not be included in *Secunda Dissertatio Botanica* because all plates had already been engraved before its publication. Therefore, both the Isnard specimen (Fig. 4) and the original drawing (Fig. 5) constitute Cavanilles’ original material. However, the specimen P00662859 plays a key role in typification and, being the single specimen cited in the protologue (i.e., the only syntype), it must be accepted as the lectotype (see *ICN* Art. 9.12), since, according to this article, an illustration (cited or not) can be designated as a lectotype only when no syntype (cited specimen) exists.

Thanks to the invaluable assistance of Esther García Guillén, we have become aware of the existence of Cavanilles’ original drawing, which is preserved in the Historical Archive of the Royal Botanical Garden of Madrid (Fig. 5). Figures 5 and 6 show both the front and back of the sheet containing Cavanilles’ drawing, along with the original drawings of *Malva scabra* and *Malva polystachya*. On the reverse side of the sheet, Cavanilles wrote by hand: “Hotel del Ynfantado rue St Florentin place de Louis XV. / 15. Juin 1787. / Cavanilles” (Fig. 6). This date on the reverse may correspond to the time when the other two drawings, *M. scabra* and *M. polystachya*, were made. In creating these two drawings, it is reasonable to assume that Cavanilles was aware that he would later insert the cutout of the *M. cretica* drawing between them. On the other hand, after reviewing the letters from Jussieu to Cavanilles and several other documents related to *Monadelphia*, we have found no references to the *M. cretica* drawing.

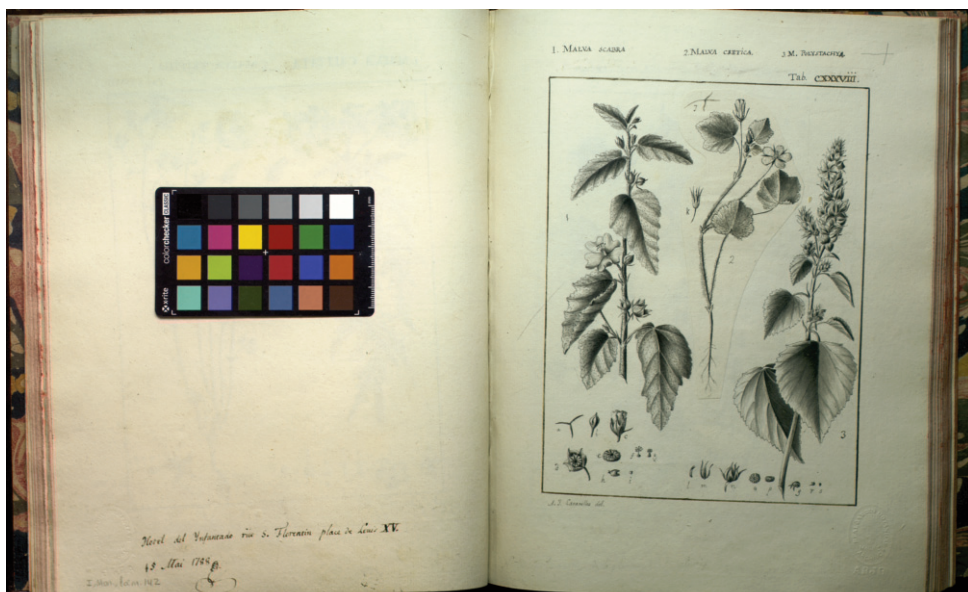


Fig. 5. Front of the sheet with the drawing of *Malva cretica* Cav. by Cavanilles, and published in Cavanilles (1788: Tab. CXXXVIII, fig. 2). Call number: AJB, Div. 1, Mon, 2, 143r. Image courtesy of the Historical Archive of the Royal Botanical Garden of Madrid, reproduced with permission.



Fig. 6. Reverse side of the sheet with the drawing of *Malva cretica* Cav. by Cavanilles, including Cavanilles' handwritten annotation: "Hotel del Ynfantado rue St Florentin place de Louis XV. / 15. Juin 1787. / Cavanilles". Call number: AJB, Div. 1, Mon, 2, 143v. Image courtesy of the Historical Archive of the Royal Botanical Garden of Madrid, reproduced with permission.

In conclusion, although Iamonico & Del Guacchio (2017) treated specimen P00662859 as the sole material, under *ICN* Art. 9.1 and Art. 9.4, original material can include both specimens and illustrations associated with the taxon at the time of description. Consequently, the previous “type” designation cannot be corrected from “holotype” to “lectotype” because it was not formally indicated. Following *ICN* rules, we formally designate the Isnard specimen at P (P00662859) as the lectotype of *Malva cretica*.

Malva cretica Cav., Diss. 2: 67. 1786

Lectotype (designated here): [France], Jardin du Roi [Paris], *s.d.*, *A.-T. D. d'Isnard s.n.*, P (2-D code P00662859 [photo!]). (Fig. 4).

Acknowledgements

We thank Dr. Esther García Guillén (Archivo Histórico, Real Jardín Botánico – CSIC, Madrid) for her invaluable assistance in studying the correspondence between Trigueros and Cavanilles, as well as the original drawings by Cavanilles. We also thank Dr. Francisco Javier Salgueiro González (SEV) for his help in examining the herbarium sheets preserved at SEV, and Dr. Werner Greuter for reviewing the manuscript and providing valuable contributions that have greatly improved the work.

References

- Aguilar, F. & Valdés, B. 1998: La obra botánica de Trigueros en Carmona (1779-1785): según su correspondencia. – *Codex Carmonensis*, **3**. – Carmona.
- Banfi, E., Galasso, G. & Soldano, A. 2005: Notes on systematics and taxonomy for the Italian vascular flora, I. – *Atti Soc. Ital. Sci. Nat., Mus. Civ. Stor. Nat. Milano* **146(2)**: 219-244.
- Candolle, A. P. De 1824: *Prodromus systematis naturalis regne vegetabilis, sive enumeration contracta ordinum generum specierumque plantarum hucusque cognitarum, juxta methodi naturalis normas digesta*, **1**. – Paris, Estrasburgo, Londres.
- Cavanilles, A. J. 1786: *Secundo dissertatione botanica, de Malva, Serra, Malope, Lavatera, Alcea, Althaea et Malachra. Suppl. Triguera*. – Parisiis.
- 1788: *Quinta dissertatio botanica*. – Parisiis.
- Conti, F. & Bartolucci, F. 2012: Two new combinations in *Malva* (*Malvaceae*). – *Ann. Bot. Fenn.* **49**: 123-124. <http://dx.doi.org/10.5735/085.049.0121>
- Del Guacchio, E., Vallariello, R. & Iamonico, D. 2020: Taxonomic investigations on *Malva cretica* s.l. (*Malvaceae*). – *Anales J. Bot. Madrid* **77**: e095. <https://doi.org/10.3989/ajbm.2539>
- Escobar, P., Schönschetter, P., Fuertes, J., Nieto, G. & Schneeweiss, G. M. 2009: Five molecular markers reveal extensive morphological homoplasy and reticulate evolution in the *Malva* alliance (*Malvaceae*). – *Mol. Phylogenet. Evol.* **50**: 226-239. <https://doi.org/10.1016/j.ympev.2008.10.015>
- Fernandes, R. 1968: Contribuições para o conhecimento do género *Lavatera* L. – *Collect. Bot.* **7**: 393-448.
- 1993. *Lavatera* L. – Pp. 232-243 in: Castroviejo, S., Lainz, M., López Gonzáles, G., Montserrat, P., Muñoz Garmendia, F., Paiva, J. & Villar, L. (eds), *Flora iberica*, **3**. – Madrid.
- Fuertes, J., Fryxell, P. A. & Jansen, R. K. 2003: Phylogenetic relationships and classification of the *Sida* generic alliance based on nrDNA ITS evidence. – *Syst. Bot.* **28**: 352-364. <https://doi.org/10.1043/0363-6445-28.2.352>

- Garilleti, R. 1993: Herbarium Cavanillesianum, seu, Enumeratio plantarum exsiccatarum aliquo modo ad novitates Cavanillesianas pertinentium, quae in Horti Regii Matritensis atque Londinensis Societatis Linnaeanae herbariis asservantur. – *Fontqueria* **38**: 1-248.
- Iamónico, D. 2010: *Malva subovata* subsp. *bicolor*, comb. & stat. nov. (*Malvaceae*). – *Ann. Bot. Fenn.* **47**: 312-314. <https://doi.org/10.5735/085.047.0409>
- 2014: *Lavatera stenopetala* subsp. *plazzae* comb. et stat. nov., endemic taxon from north-western Sardinia (Italy). – *Pl. Ecol. Evol.* **147**(2): 293-298. <https://doi.org/10.5091/plecevo.2014.920>
- & Del Guacchio, E. 2017: Typification of the names in *Malva cretica* s.l. (*Malvaceae*). – *Phytotaxa* **295**(3): 280-286. <https://doi.org/10.11646/phytotaxa.295.3.9>
- Jeanmonod, D. 2002: Espèces dispaues de Corse. – *Candollea* **56**: 350-362.
- Juan, A. & Crespo, M. B. 2011: A new nomenclatural combination in *Malva* L. (*Malvaceae*). – *Fl. Montiber.* **48**: 3-6.
- Knapp, S. 2007: Lectotypification of Cavanilles' names in *Solanum* (*Solanaceae*). – *Anales Jard. Bot. Madrid* **64**(2): 195-203. <https://doi.org/10.3989/ajbm.2007.v64.i2.175>
- McNeill, J. 2014: Holotype specimens and type citations: General issues. – *Taxon* **63**: 1112-1113. <https://doi.org/10.12705/635.7>
- Molero, J. & Montserrat, J. M. 2005: Nomenclatura de algunas especies del género *Malva* Linnaeus (*Malvaceae*). – *Fontqueria* **55**(38): 285-292.
- & — 2006: Adiciones y enmiendas nomenclaturales en el género *Malva* L. (*Malvaceae*). – *Lagascalia* **26**: 153-155.
- Muñoz Garmendia, F. (ed.) 2004: *La botánica Ilustrada de Antonio José Cavanilles (1745-1804), jardines, botánicos y expediciones científicas*. – Madrid.
- Nogueira, I. M. S. & Paiva, J. A. R. 2005: *Malvaceae* Juss. – Pp. 216-217 in: Castroviejo S., Aedo C., Cirujano S., Lainz M., Montserrat P. & al. (eds.), *Flora iberica*, **3**. – Madrid.
- POWO 2025: *Malva multiflora* (Cav.) Soldano, Banfi & Galasso. In: Plant of the World Online. – Royal Botanic Gardens, Kew. <https://powo.science.kew.org/results?q=Malva%20multiflora> [accessed 28 Mar 2025].
- Quer, J. 1762-1764: *Flora española, ó historia de las plantas, que se crían en España*, **1-4**. – Madrid.
- Ray, M. F. 1995: Systematics of *Lavatera* and *Malva* (*Malvaceae*, *Malveae*), a new perspective. – *Pl. Syst. Evol.* **198**: 29-53. <https://doi.org/10.1007/BF00985106>
- 1998: New combinations in *Malva* (*Malvaceae*: *Malveae*). – *Novon* **8**: 288-295. <https://doi.org/10.2307/3392022>
- Salgueiro González, F. J. 1998: Estudio sobre los herbarios históricos de la Universidad de Sevilla. – Sevilla.
- San Pío Aladrén, M. de & Collar del Castillo, P. 1995: El Archivo de A.J. Cavanilles en el Real Jardín Botánico. – *Asclepio* **47**(1): 217-240.
- Tate, J. A. & Simpson B. B. 2003: Paraphyly of *Tarasa* (*Malvaceae*) and diverse origins of the polyploidy species. – *Syst. Bot.* **28**(4): 723-737. <https://doi.org/10.1043/02-64.1>
- , Fuertes Aguilar, J., Wagstaff, S. J., La Duke, J. C., Slotta, T. A. B. & Simpson, B. B. 2005: Phylogenetic relationships within the tribe Malveae (*Malvaceae*, subfamily *Malvoideae*) as inferred from ITS sequence data. – *Amer. J. Bot.* **92**: 584-602. <https://doi.org/10.3732/ajb.92.4.584>
- Thiers, B. 2025 [continuously updated]: *Index Herbariorum: A global directory of public herbaria and associated staff*. – <http://sweetgum.nybg.org/science/ih/> [accessed: 15 Jan 2025]
- Tournefort, J. P. 1703: *Corollarium Istitutionum Rei Herbariae*. – Parisiis.
- Turland, N. J., Wiersema, J. H., Barrie, F. R., Gandhi, K. N., Gravendyck, J. & al. (eds) 2025: *International Code of Nomenclature for algae, fungi, and plants (Madrid Code)*. Regnum Vegetabile, 162. – Chicago.

- Valdés, B. 2011: *Malvaceae*. In: Greuter W., Raus T. (eds) Med Checklist Notulae 30. – Willdenowia **41**: 318-319. <https://doi.org/10.3372/wi.41.41213>
- Visiani, R. 1851: Flora dalmatica sive enumeration stirpium vascularium quae hactenus in Dalmatia lectas et sibi observatas descripsis digessit rariorumque iconibus illustravit Robertus de Visiani. – D. Sibenicensis **3(2)**: 185-390.
- Webb, D. A. 1968: *Malope* L. – P. 249 in: Tutin, T. G., Heywood, V. H., Burges, N. A., Moore, D. H., Valentine, D. H. & al. (eds), Flora Europaea, **2**. – Cambridge.
- Webb, P. B. & Berthelot, S. 1836: Histoire naturelle des Îles Canaries, **3(2)** [Phytographia Canariensis 1]. – Paris.

Addresses of the authors:

P. Pablo Ferrer-Gallego^{1*} (<https://orcid.org/0000-0001-7595-9302>), Roberto Roselló², Juan Ramón Vázquez² & Juan B. Peris²,

¹Servicio de Vida Silvestre y Red Natura 2000, Centro para la Investigación y Experimentación Forestal (CIEF), Generalitat Valenciana, Avda. Comarques del País Valencià 114, 46930 Quart de Poblet, Valencia, Spain.

²Departamento de Botánica, Facultad de Farmacia, Universitat de València. Av. Vicent Andrés Estellés, s/n. E-46100 Burjassot, Valencia, Spain.

*Author for correspondence: pferrergallego@gmail.com

