

ARTICLE

Nomenclatural types of three Cuatrecasas' names in Ericaceae

Tipos nomenclaturales de tres nombres de Cuatrecasas en *Ericaceae*

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Abstract: NOMENCLATURAL TYPES OF THREE CUATRECASAS' NAMES IN ERICACEAE. — The typification of three names of Cuatrecasas (*Cavendishia mutisiana*, *Ceratostema dichogamum*, and *Gaultheria mutisiana*) is discussed. Types of these three names were indicated as “holotypes” in 2024. However, in all cases, the original material consists of more than one element, making the type indication ineffective according to the International Code of Nomenclature for algae, fungi, and plants (ICN, Madrid Code of 2025). We propose here the effective lectotypification of these names, along with data on the gatherings and syntypes used to describe these species. The names are lectotypified using specimens collected by Cuatrecasas in 1932 and preserved at MA. *Cavendishia mutisiana* is currently accepted as a heterotypic synonym of *C. macrocephala*; the name *Ceratostema dichogamum* is a synonym of *Plutarchia rigida*, and finally, *Gaultheria mutisiana* is currently known as *G. hapalotricha*.

Keywords: holotype; lectotype; nomenclature; syntype; typification.

Resumen: TIPOS NOMENCLATURALES DE TRES NOMBRES DE CUATRECASAS EN ERICACEAE. — Se discute la tipificación de tres nombres de Cuatrecasas (*Cavendishia mutisiana*, *Ceratostema dichogamum* y *Gaultheria mutisiana*). En 2024, se seleccionaron tipos para estos tres nombres bajo la indicación de “holotipos”. Sin embargo, el material original comprende más de un elemento en todos los casos, por lo que las tipificaciones fueron ineficaces, según el Código Internacional de Nomenclatura para algas, hongos y plantas (ICN, Código de Madrid de 2025). En este trabajo, se propone la lectotipificación efectiva de estos nombres, junto con los datos sobre los ejemplares y los sintipos utilizados para describir estas especies. Los nombres se lectotipifican utilizando ejemplares recolectados por Cuatrecasas en 1932 y conservados en MA. *Cavendishia mutisiana* es actualmente aceptada como un sinónimo heterotípico de *C. macrocephala*; el nombre *Ceratostema dichogamum* es sinónimo de *Plutarchia rigida*, y finalmente, *Gaultheria mutisiana* se conoce actualmente como *G. hapalotricha*.

Palabras clave: holotipo; lectotipo; nomenclatura; sintipo; tipificación.

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Supplementary information ↓

INTRODUCTION

Luteyn & Pedraza-Peñalosa (2024) recently indicated holotypes for the names *Cavendishia mutisiana* Cuatrec., *Ceratostema dichogamum* Cuatrec., and *Gaultheria mutisiana* Cuatrec. (Ericaceae Durande) based on specimens kept at the herbarium MA. However, no holotype was reported in the protologues, and the original material for these three names comprises more than one element (see below). Therefore the term “holotype” indicated by Luteyn & Pedraza-Peñalosa (2024) cannot be treated as such (see McNeill, 2014), nor even as an inadvertent typification (i.e., designating a lectotype without intending to do so; see Prado *et al.*, 2015), nor can it be corrected to a “lectotype” (see Art. 7.11 and 9.10 Note 9 of ICN; Turland *et al.*, 2025). Consequently, a lectotypification is necessary to fix the identity of the three names aforementioned.

In this paper, a nomenclatural type is effectively designated for each of these names.

MATERIAL AND METHODS

The names in current use are set in bold italics typeface. The heterotypic synonyms are indicated with the symbol =. Acronym of the herbarium consulted is according to Thiers (2025 [continuously updated]).

RESULTS AND DISCUSSION

Nomenclatural background

Cuatrecasas (1933), in the protologues of *Cavendishia mutisiana*, *Ceratostema dichogamum*, and *Gaultheria mutisiana*, cited specific gatherings for each name and provided illustrations of these species (Figs. 1–3), which therefore constitute part of the original material used by the author to describe the species. According to the International Code of Nomenclature for algae, fungi, and plants (ICN, Madrid Code, Turland *et al.*, 2025), a lectotype for each of these names (*C. mutisiana*, *C. dichogamum*, and *G. mutisiana*) may be designated from among these original elements.

Luteyn & Pedraza-Peñalosa (2024) mentioned that «Cuatrecasas never used the word “Type” or “Typus” or its modern equivalent in the publications (this not being required until 1958, see Code, Art. 40.1, Turland *et al.*, 2018). In summary, they cited the entire gathering and never mention the existence of duplicates; this goes along with our experience (in Ericaceae) that in most cases Cuatrecasas’ gatherings consisted of unicates and the fact that no other duplicates were found elsewhere. Therefore, we cite that one specimen at MA (the herbarium indicated by Cuatrecasas) as the holotype (see Code, Art. 9.1 and Note 1 and also Art. 9.2, Turland *et al.*, 2018). Alternatively, when we did find duplicates or fragments from the type gathering, we designated them as syntypes and from them a lectotype was selected and designated». Please note that: in the 2025 edition of the ICN (Madrid Code, see Turland *et al.*, 2025), Art. 40.1 and 9.1 remain unchanged, Art. 9 Note 1 has been renumbered as Art. 9.2, and Art. 9.2 has been renumbered as Art. 9.24. So, Luteyn & Pedraza-Peñalosa (2024) reported the nomenclatural type of the names *Cavendishia mutisiana*, *Ceratostema dichogamum*, and *Gaultheria mutisiana* as “holotypes”.

However, according to Art. 9.1 of the ICN (see Turland *et al.*, 2025), “a holotype [...] is the one specimen or illustration either (a) indicated by the author(s) as the nomenclatural type or (b) used by the author(s) when no type was indicated”. In the protologues of *Cavendishia mutisiana*, *Ceratostema dichogamum*, and *Gaultheria mutisiana*, Cuatrecasas (1933) did not indicate a type, but rather a specific gathering for each of these names, along with an illustration in each protologue (see Figs. 1–3).

Luteyn & Pedraza-Peñalosa (2024) therefore considered the specimens preserved at MA for each of these species as the only material (“the one specimen” according to ICN Art. 9.1) used by Cuatrecasas to describe the species, because in the protologue “no type was indicated” (clearly). These considerations as holotypes were common practice for many years and were even the subject of “inadvertent lecto- (or neo-) typifications”—as Prado *et al.* (2015) defines the term “inadvertent”. However, as McNeill (2014) published, “If, prior to 1958, a single gathering (but not a single specimen) is indicated as the basis of a

new taxon but without the word type, there will be a holotype only if it can be established that the author used no other element [this is the relevant section for our analyses] and if the gathering is represented by a single specimen—because the specimens that comprise the gathering are syntypes (Art. 40 Note 1)".

Therefore, the original elements used by Cuatrecasas to describe *Cavendishia mutisiana*, *Ceratostema dichogamum*, and *Gaultheria mutisiana* were the specimens (or specimen for each gatherings, according to the data published by Luteyn & Pedraza-Peñalosa (2024)) that comprise the gathering mentioned for each species in the respective protologues, along with the illustration of these species included in the protologues (see Figs. 1–3).

In conclusion, the "holotype" indication for *Cavendishia mutisiana*, *Ceratostema dichogamum*, and *Gaultheria mutisiana* (Luteyn & Pedraza-Peñalosa, 2024) does not constitute an effective typification, and the term "holotype" cannot be corrected to "lectotype" under ICN Art. 9.10. According to the ICN, "A misused term may be corrected only if the requirements of Art. 7.11 (for correction to lectotype, neotype, and epitype) are met and Art. 40.4 (for correction to holotype) does not apply" (see Art. 9 Note 9, Turland *et al.*, 2025). The fact that Cuatrecasas indicated on the herbarium sheets that the material is "Type" is irrelevant for the purposes of typification in these three cases.

Finally, the specimens that are part of the gatherings mentioned in the respective protologues play a key role in the typification of these names. As the single specimen for each gathering (i.e., the only syntype), they must be accepted as the lectotype (see ICN Art. 9.12; Turland *et al.*, 2025), since, according to this article, an illustration (whether cited or not) can be designated as a lectotype only if no syntype (cited specimen) exists.

TYPIIFICATION OF THE NAMES

Cavendishia mutisiana Cuatrec., Trab. Mus. Nac. Cienc. Nat. Jard. Bot., Ser. Bot. 26: 5, fig. 1. 1933 (see Fig. 1).

= *Cavendishia macrocephala* A.C. Sm., Contr. U.S. Natl. Herb. 28: 475. 1932

Lectotype (**designated here**): Colombia. Tolima: Cordillera Central, Cuesta del Sacrificio, between Ibagué and Nevado del Tolima, 2000 m, 17 May 1932 (fl), Cuatrecasas 2668 (MA 249067) (image of the lectotype available at <https://imagenes.rjb.csic.es/herbarioV/visorVCat.php?img=MA-01-00249067>).

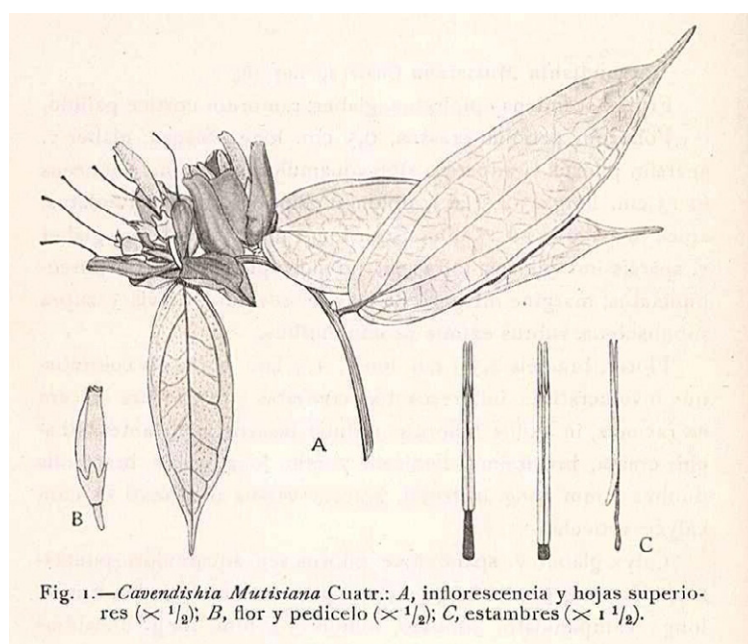


Figure 1. Original material of *Cavendishia mutisiana* Cuatrec., illustration published by Cuatrecasas (1933: fig. 1) (an image of the original drawing is available at https://imagenes.rjb.csic.es/herbarioV/visorVCat.php?img=MA-01-00249067_a; see also https://imagenes.rjb.csic.es/herbarioV/visorVCat.php?img=MA-01-00249067_b).

Ceratostema dichogamum Cuatrec., Trab. Mus. Nac. Cienc. Nat. Jard. Bot., Ser. Bot. 26: 10, fig. 5. 1933 (see Fig. 2).

= *Plutarchia rigida* (Benth.) A.C. Sm., Bull. Torrey Bot. Club 63: 312. 1936

Lectotype (**designated here**): Colombia. Tolima: Cordillera Central, El Salto, 3300 m, 15 May 1932 (fl), Cuatrecasas 2664 (MA 249375 mounted on two clearly connected sheets, the second one marked MA 249375-2) (image of the lectotype available at <https://imagenes.rjb.csic.es/herbarioV/visorVCat.php?img=MA-01-00249375> and <https://imagenes.rjb.csic.es/herbarioV/visorVCat.php?img=MA-02-00249375>).

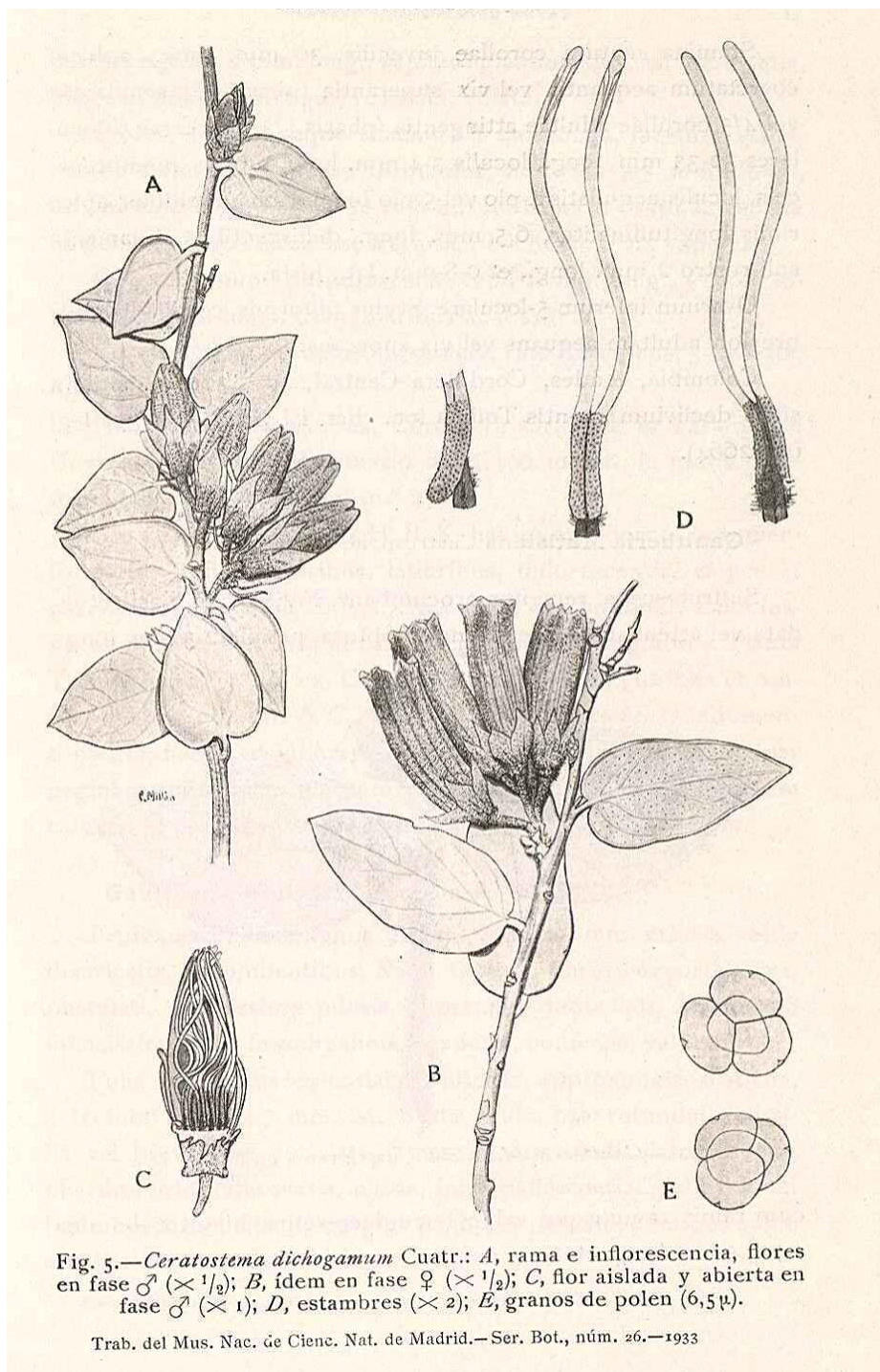


Figure 2. Original material of *Ceratostema dichogamum* Cuatrec., illustration published by Cuatrecasas (1933: fig. 5) (an image of the original drawing is available at https://imagenes.rjb.csic.es/herbarioV/visorVCat.php?img=MA-01-00249375_b; see also https://imagenes.rjb.csic.es/herbarioV/visorVCat.php?img=MA-01-00249375_a).

Gaultheria mutisiana Cuatrec., Trab. Mus. Nac. Cienc. Nat. Jard. Bot., Ser. Bot. 26: 12, fig. 6. 1933 (see Fig. 3).

= *Gaultheria hapalotricha* A.C. Sm., Bull. Torrey Bot. Club 60: 106. 1933

Lectotype (**designated here**): Colombia. Cundinamarca: Páramo de Guasca, El Santuario, 3300 m, 25 April 1932 (fl), *Cuatrecasas* 2718 (MA 249258) (image of the lectotype available at <https://imagenes.rjb.csic.es/herbarioV/visorVCat.php?img=MA-01-00249258>).

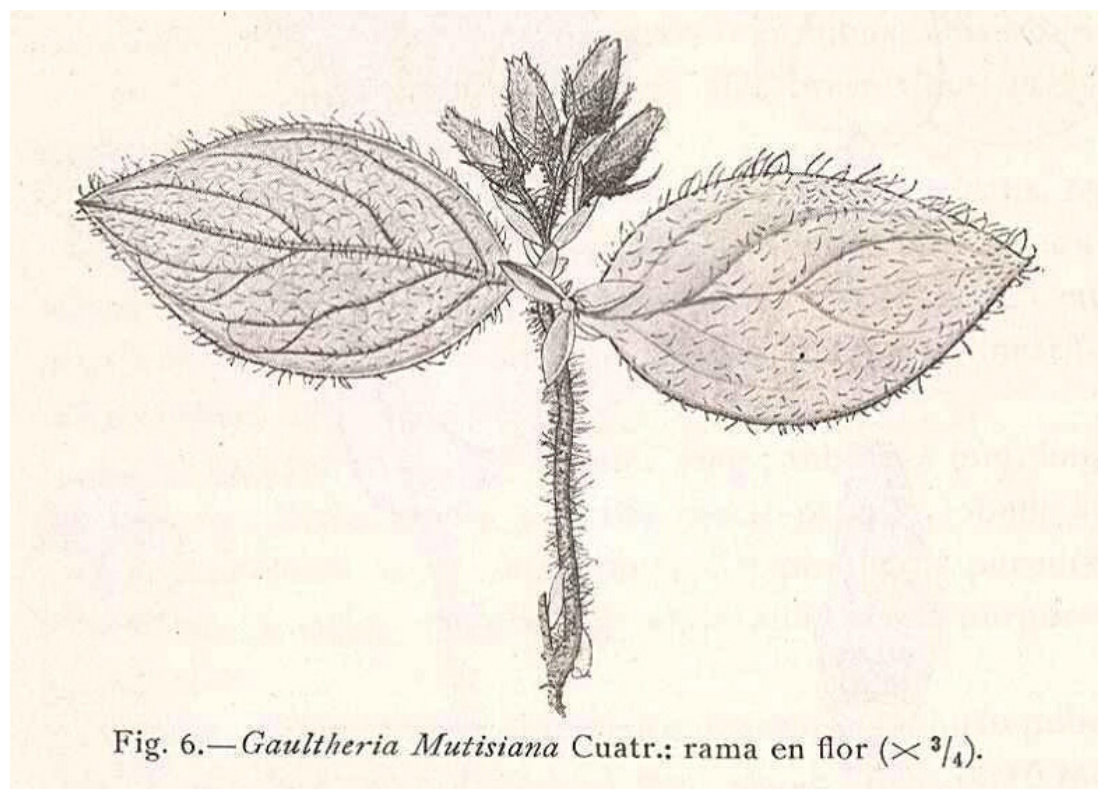


Fig. 6.—*Gaultheria Mutisiana* Cuatr.: rama en flor ($\times \frac{3}{4}$).

Figure 3. Original material of *Gaultheria mutisiana* Cuatrec., illustration published by Cuatrecasas (1933: fig. 6) (an image of the original drawing is available at https://imagenes.rjb.csic.es/herbarioV/visorVCat.php?img=MA-01-00249258_a).

Supplementary information ↑

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Supplementary material

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Data availability

Not applicable.

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Authorship contribution statement

Not applicable.

Competing interests

Not applicable.

Statement on the use of Artificial Intelligence

Not applicable.

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