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## Type designation of *Cistus ×canescens* Sweet (*Cistaceae*)

### Abstract

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The typification of the name *Cistus ×canescens* (*Cistaceae*) is discussed. The designation of the nomenclatural type is based on the assessment of the protologue and the original elements used by the author to describe this plant. The name is lectotypified using an illustration included in the protologue.

*Key words:* *Cistus*, hybrid, lectotype, nomenclature.

### Introduction

*Cistus* L. (*Cistaceae*) includes about 20 species from the Mediterranean basin, reaching the Caucasus Mountains to the east and the Canary Islands to the west (Warburg 1968; Arrington & Kubitzki 2003). However, its highest diversity is found in the western Mediterranean, with about 14 species occurring in the Iberian Peninsula and northwestern Africa (Guzmán & Vargas 2005). Some taxa of this genus are not well characterized morphologically and are not always easy to identify, such as *C. creticus* L. aggr. (see, e.g., Paolini & al. 2009; Lo Bianco & al. 2017; Pignatti 2017, 2019; Moosmang & al. 2020). In addition, there are several more taxonomically complex hybrids and cultivars (Demoly 1994, 1996).

Species of *Cistus* have been in cultivation for centuries in renowned collections (see Sweet 1825-1830), due to their spectacular blooming and wide variation of hybrid forms that are grown successfully (Demoly 1996). Consequently, some authors, as for example Linnaeus (1753), based many of their descriptions on cultivated material from European botanic gardens, the origin of which was usually uncertain, and their morphology being sometimes anomalous due to cultivation or *in situ* hybridization processes.

The present paper, is a new contribution to the nomenclature in *Cistaceae* (see, e.g., Ferrer-Gallego & Laguna 2012; Ferrer-Gallego & al. 2013a, 2013b, 2020; Ferrer-Gallego 2015a, 2015b; Ferrer-Gallego & Boisset 2015), and the name *Cistus ×canescens* Sweet, pro species is typified to contribute to the stability of the nomenclature.

## Materials and methods

The designation of the type of *Cistus × canescens* is based on the consultation of original elements and the literature cited in the protologue. In typifying name, we strictly followed the International Code of Nomenclature for algae, fungi, and plants (Turland & al. 2018). The identity of the designated type is verified with the current use and traditional concept of the name.

## Results and discussion

*Cistus × canescens* is a hybrid between *C. albidus* L. and *C. creticus* L. (Dansereau 1940; Demoly 1994; Gómez Navarro & Roselló 2008) and was described from cultivated plants from the nursery of Mr. Lee, at Hammersmith (a district of west London, England). The nursery garden founded by James Lee (1715–1795), was one of the most respected and most successful English establishments of ornamental plants, and also one of the oldest in the neighborhood of London, which survived until the early part of the 20th century.

About the year 1760, Mr. James Lee entered into partnership with Mr. Lewis Kennedy, gardener to Lord Bolton, at Chiswick, and commenced a nursery, in what was called The Vineyard, at Hammersmith. Mr. James Lee and his partner established a successful Horticultural Nursery, remarkable for obtaining from distant countries everything rare and beautiful to be obtained. They maintained collector at the Cape of Good Hope, and another in America and enjoyed world-wide celebrity. Every known, rare, or new plant could be obtained there. Along with Linnaeus, Mr. Lee wrote *An Introduction to Botany*, published in 1760 (see Linnaeus & Lee 1760), which went through five editions, and for many years was in the highest repute.

Sweet (1827) described *Cistus canescens* providing a short diagnosis “*C. canescens*, foliis oblongo-linearibus obtusiusculis tomentoso-canescensibus undulatis subtrinerviis sessilibus subconnatis, pedunculis terminalibus unifloris aut subcymosis, sepalis ovatis acutis nervosis stellato-pubescentibus, petalis obovatis distinctis”, and followed by three synonyms, the first synonym “*Cistus canescens*. Sw. hort. brit. p. 468, n. 29” was cited from an earlier work of the author, the second “*Cistus mas* 2” was cited from Clusius (1601: 69) and the third synonym “*Cistus incanus* β. foliis linearibus longis” was cited from Candolle (1824: 264). The protologue also includes a complete description of this plant, a vernacular or common name “Narrow-leaved hoary Rock-Rose”, and a relevant comment: “Our drawing of this rare and handsome plant was taken at the Nursery of Mr. Lee, at Hammersmith, last Summer. It has generally been considered as a variety of *C. incanus*, but we have no hesitation in giving it as a distinct species, easily distinguishable at first sight from all others, whether in flower or not; as it is a native of the South of Europe, it is rather more tender than some of the other species, and requires a little covering in severe frosty weather, either the covering of a mat, or to be protected by a frame, succeeding well in a light sandy soil. Young cuttings, planted under hand-glasses in August or September, will soon strike root, but they must not remain covered too long, or they will be liable to damp off”.

The illustration included in the protologue (Sweet 1827 tab. 45) is an excellent color drawing of this plant, with leaves and flowers (Fig. 1). This element is original of Sweet and a good candidate to be selected as lectotype of *C. × canescens*.



Fig 1. Lectotype of *Cistus × canescens* Sweet, illustration “*Cistus canescens*” in Sweet, Cistineae: tab. 45 (1827).

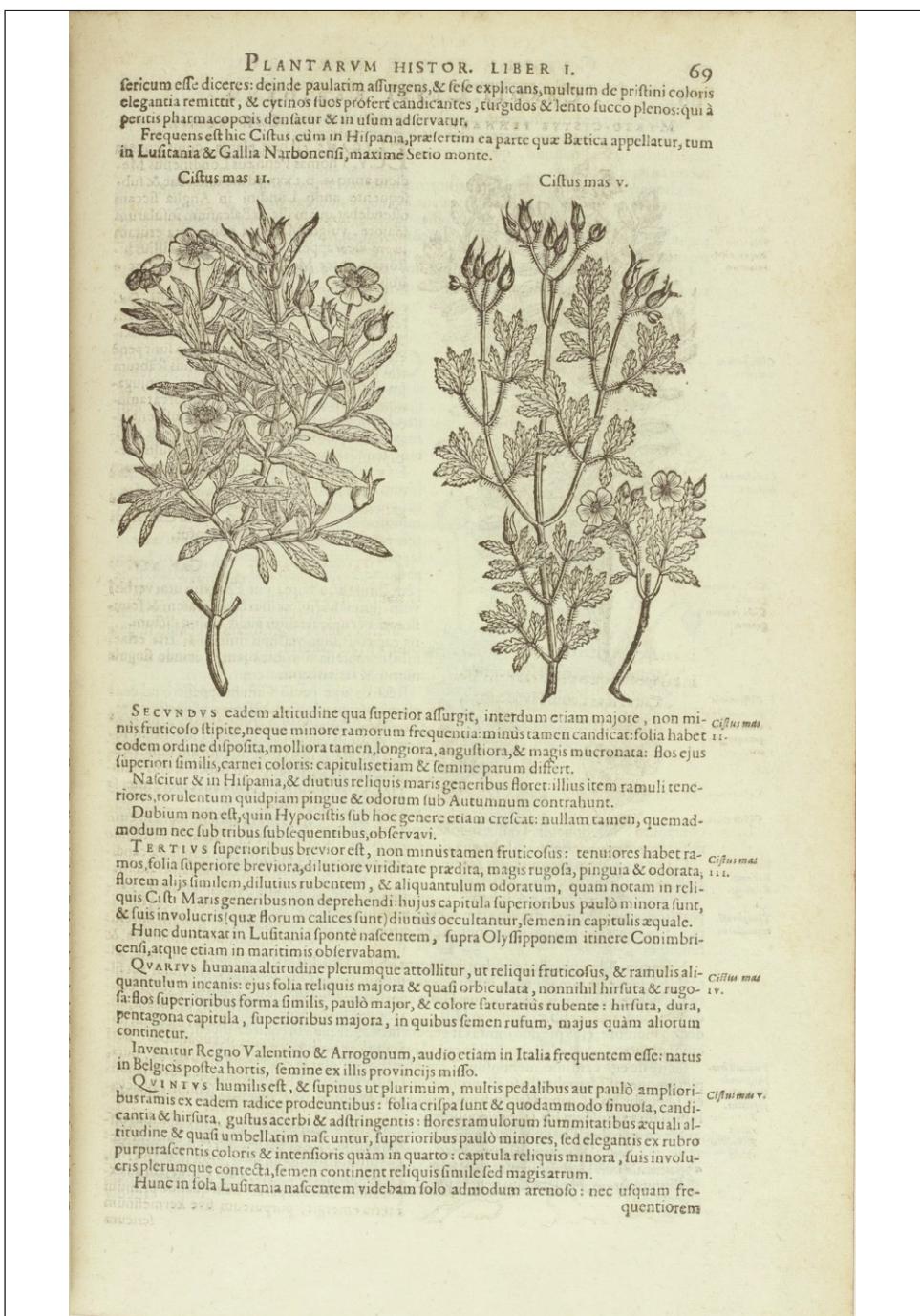


Fig. 2. Original material of *Cistus × canescens* Sweet, illustration "Cistus mas II" in Clusius *Rariorum plantarum historia* (1601: 69).

In addition, the reference of Clusius (1601: 69) cited in the protologue provided an illustration “*Cistus mas II*” that can be considered also original material used by Sweet to describe this plant. This drawing illustrates a stem with leaves and flowers (Fig. 2), and was originally published and described by Clusius (1576: 136-137). This illustration could be identified as belonging to *C. × canescens*, and perhaps also to *C. creticus*.

On the other hand, we have not been able to locate any further original material in any consulted herbaria (e.g., at BM, CGE, G, K, L, LINN, MW, P, UPS, etc.). Robert Sweet (1783–1835) was a British horticulturist and botanist, nursery-man at Stockwell (1810–1815), at Fulham (1815–1819) and Chelsea (1819–1826). This author described several taxa from cultivated specimens, and their herbarium is preserved at CGE and MW (see Stafleu & Cowan 1986). However, at CGE and MW there are no specimens of *C. × canescens*.

In conclusion, among the original elements, the Clusius’s and Sweet’s illustrations, we designate as the lectotype of the name *Cistus × canescens* the excellent drawing “*Cistus canescens*” published by Sweet (1827). This illustration match with the current use and traditional concept of the name (see e.g., Dansereau 1940; Martín Bolaños & Guinea 1949; Demoly 1994; Gómez Navarro & Roselló 2008).

***Cistus × canescens*** Sweet, Cistineae: “45 *Cistus canescens*”, tab. 45. 1827 pro. sp. [= *C. albidus* L. × *C. creticus* L.]

**Lectotype** (designated here): illustration “*Cistus canescens*” in Sweet, Cistineae: tab. 45. 1827 (Fig. 1).

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