



Typification of the Linnaean name *Asperula cynanchica* (Rubiaceae)

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Abstract

The typification of *Asperula cynanchica* L. (Rubiaceae) is discussed. Designation of a lectotype is based on consultation of Linnaeus's original material and the literature cited in the protologue. The herbarium sheet preserved at UPS [Herb. Burser XIX: 8 (UPS-BURSER)] is designated as lectotype.

Key words: lectotypification, Linnaeus, nomenclature

Introduction

Asperula cynanchica Linnaeus (1753: 104) is a polymorphic perennial plant, that grows in short grassland on calcareous soils. It is distributed throughout most part of Europe (Ehrendofer & Krendl 1976) and includes several subspecies and varieties (Govaerts *et al.* 2012). Typifications of several species of *Asperula* Linnaeus (1753: 103) have already been published (Del Guacchio & Caputo 2005, 2013). However, the Linnaean name *Asperula cynanchica* has not yet been considered (Jarvis 2007: 326) and is here typified.

Typification

Linnaeus's protologue (1753: 104) consisted of a *nomen specificum legitimum*, "*Asperula foliis inferioribus senis, intermediis quaternis subulatis triquetris, floribus quadrifidis*", followed by five synonyms, and the locality: "*Habitat in Europae pratis aridis*", and the habit perennial. The first synonym, "*Asperula foliis linearibus quaternis, summis oppositis*", was cited from van Royen (1740: 255) and Sauvages (1751: 163); the second, "*Rubeola foliis quaternis, seminibus glabris, floribus umbellatis*", from Haller (1742: 458); the third, "*Rubia cynanchica*", from Bauhin (1623: 333) and Bauhin & Cherler (1651: 723); the fourth, "*Gallium montanum latifolium cruciatum*", from Colonna (1606: 296, t. 297, f. 1); and the fifth, "*Gallium album minus*", from Tabernaemontanus (1664: 433, t. 433, f. 2). Only three of these synonyms were accompanied by illustrations (Colonna 1606; Tabernaemontanus 1664; Bauhin & Cherler 1651) that can be considered as original material.

Among the herbarium specimens available to Linnaeus (Jarvis 2007: 220, 326), three sheets that can be associated with *Asperula cynanchica* were found: two in the Linnaean Herbaria, at LINN and S-LINN, and one in the Joachim Burser Herbarium at UPS. The sheet Herb. Linn. No. 127.9 (LINN) is annotated "*6 cynanchica*" by Linnaeus, the original Linnaean species number from *Species Plantarum* (Turland & Jarvis 1997; Turland 2006; Jarvis 2007: 41–46, 397), and with a label "*Galium caulibus erectis glabris, foliis margine reflexis [...]*" (image available at <http://linnean-online.org/642/>). This plant was collected by Friedrich Wilhelm von Leysser (1731–1815), a correspondent of Linnaeus from 1757 and author of *Flora Halensis*, published in 1761, but is doubtfully that is an original material, as was indicated by Jarvis (2007: 220, 326).

In the Linnaean Herbarium at S-LINN are preserved four sheets of *Asperula cynanchica* (Nos. 55.5, 55.7, 55.9 and 55.11). Only sheet No. 55.7 (S-LINN) (image available at <http://linnaeus.nrm.se/botany/fbo/a/asper/aspercyn2.html.en>) is annotated "*6 cynanchica*" by Linnaeus and is original material for this name. The sheet only has a poorly preserved incomplete fragment, and is not a good choice for lectotype.

Finally, the sheet Herb. Burser XIX: 8 (UPS-BURSER) has a well preserved specimen of this species. Linnaeus's citation of the polynomial from Bauhin's (1623) *Pinax* provides a link to the specimen. Joachim Burser's herbarium was arranged and labelled according to the *Pinax* (Jarvis 2007), and was cited in the introduction to *Species Plantarum* (Linnaeus 1753: 7th unnumbered page) as one of the sources for that work. This herbarium was in Uppsala when it was used by Linnaeus for the interpretation of the names that appeared in Bauhin's work. A manuscript at LINN (transcribed by Savage) records that the material in vol. XIX: 8, was determined by Linnaeus as *Asperula cynanchica* (Savage 1937: 62). Therefore, this specimen is undoubtedly original material. The sheet Burser XIX: 8 is labelled "*Rubia cynanchica flosculus rubellis*" (Bauhin 1623: 333), a polynomial cited in the protologue, and has two plants that are a good match with the Linnaean diagnosis. No specimens relevant to the typification of *Asperula cynanchica* could be traced in any other Linnaean or Linnaean-linked herbaria.

Although the illustrations from Colonna (1606), Tabernaemontanus (1664) and Bauhin & Cherler (1651) are identifiable as Linnaeus's *Asperula cynanchica*, I prefer to designate the herbarium sheet Herb. Burser XIX: 8 (UPS-BURSER) as lectotype of this name, because this sheet is the more complete, and makes a much better lectotype than the illustrations.

Asperula cynanchica Linnaeus (1753: 104)

Type:—(lectotype designated here: Herb. Burser XIX: 8 (UPS-BURSER!). Fig. 1.

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