Lectotypification of *Anthemis aetnensis* (Asteraceae)

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Abstract. The name *Anthemis aetnensis* Spreng. is lectotypified with a specimen from the personal collection of Sprengel kept in the Paris Herbarium (P), and its duplicates (isolectotypes) are traced at G and K.

Key words: *Anthemis*, Asteraceae, endemic species, Italy, lectotype, nomenclature, Sicily.

Anthemis L. (Asteraceae subfam. Asteroideae) includes around 175 species in the Mediterranean region and adjacent areas (Oberprieler et al., 2022a). Its geographical distribution comprises almost all of western Eurasia, northern Africa, the Mediterranean Basin, and a small part of eastern Africa (Lo Presti et al., 2010). According to the Portal to the Flora of Italy (2023), there are 29 accepted names at all ranks belonging to this genus in Italy. Several of these taxa, including *A. aetnensis* Spreng., are endemic to Sicily. This species belongs to *Anthemis* sect. *Hiorthia* (DC.) R. Fernandes, which includes perennial representatives of the genus. It is closely related to another endemic Sicilian species, *A. cupaniana* Tod. ex Nyman (Oberprieler et al., 2022b).

According to Brullo and Brullo (2020), *Anthemis aetnensis* differs from *A. cupaniana* in several characters. *Anthemis aetnensis* has stems 5–20 cm (vs. 10–60 cm in *A. cupaniana*), lower cauline leaves up to 2.5 cm (vs. 1–1.5 cm), capitula 2–2.5 cm in diameter with a peduncle 1.5–7 cm (vs. capitula 2–4 cm with a peduncle up to 25 cm), involucral bracts with pale membranous (vs. brown-blackish) margins, ray florets 3.5–6.5 × 2.2–3 mm (vs. 8–24 × 3–8 mm), and achenes obconical-pyramidal with a corona 0.2–0.5 mm (vs. quadrangular-pyramidal with a corona up to 1 mm). This species is endemic to Mount Etna, where it grows on cacuminal stands (Fernandes, 1976; Brullo & Brullo, 2020; Sciandrello et al., 2020; POWO, 2023).

Within our work on the endemic vascular flora of Etna, we initiated a study focused on the nomenclatural type of *Anthemis aetnensis*, for which no information has been available (Peruzzi et al., 2015). *Anthemis aetnensis* was described by Sprengel (1826) with a mention of "*Aetna*. Schow" as the place of its geographical origin and collector. The collector was J. F. Schouw, a Danish botanist who resided in Copenhagen and traveled across Europe (in Germany, Italy, France, and Switzerland) in 1816–1820 and 1829–1830 (Stafleu & Cowan, 1985). Schouw visited Mount Etna three times during his journey to Italy, first at the end of August and beginning of September in 1818, then in May of 1819, reaching as high as the summit of the Montagnola cone at 9000 feet above sea level, and finally in March of 1830 (Schouw, 1839, 1854). The plants of *A. aetnensis* were presumably collected during his first ascent to Etna, because the plants were still in flower, and the flowering period of this species covers July and August (Tornabene, 1890).

After the death of K. Sprengel's son, his herbarium was divided up and sold in parts to different specialists and public institutions (Stafleu & Cowan, 1985). Notably, the Asteraceae went to C. H. Schultz Bipontinus, a renowned expert in this plant family, whose collections were obtained by E. Cosson and subsequently acquired by the Natural History Museum in Paris (Stafleu & Cowan, 1985); these specimens remain intact and serve as the primary basis for type designations of the asteraceous species described by K. Sprengel (e.g., Moraes, 2020a, 2020b). Also, a considerable portion of this herbarium was bought by Karl Müller and was later acquired by the Berlin-Dahlem Herbarium (B). Unfortunately, the Müller-Sprengel Herbarium at B was destroyed during the Second World War (Garnock-Jones, 1986). In Paris, there is a single collection from the possession of Sprengel, who annotated it as "Anthemis montana sicula," and then added "aetnensis." The original collector's label is retained, reading, "in regione sterili, Etna." This collection is undoubtedly part of the original material of *A. aetnensis* and appropriately designated as a lectotype of that name. It includes five fragments, which are mounted on the same sheet with two other collections. One of those (*Gussone*) also

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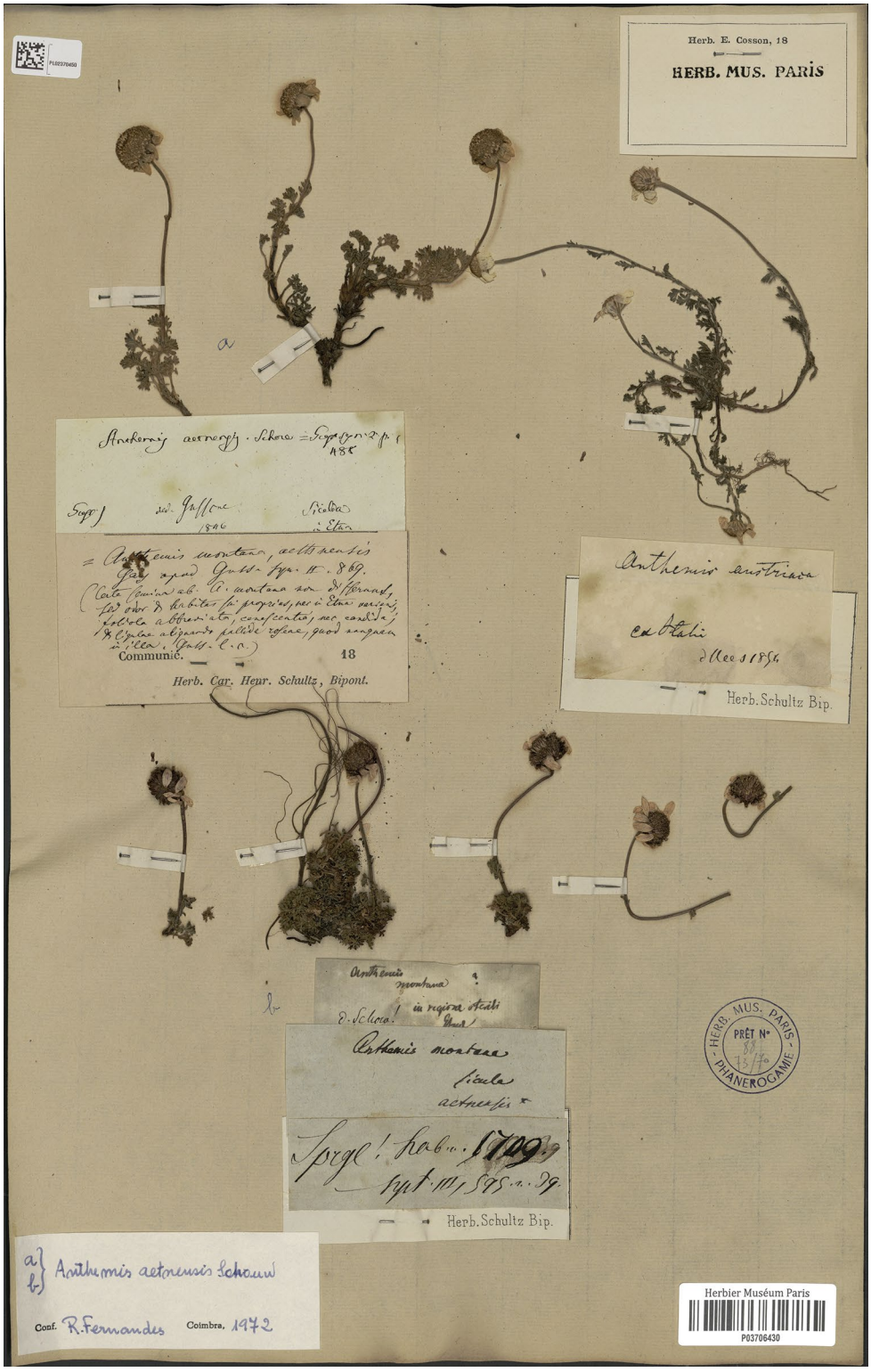

Figure 1. Lectotype of *Anthemis aetnensis* Spreng. High-resolution scanned image provided by the Paris Herbarium (<http://coldb.mnhn.fr/catalognumber/mnhn/p/p03706430>).

belongs to *A. aetnensis* according to the annotation by R. Fernandes made in 1972, who marked Sprengel's original specimen as "b" (Fig. 1).

The collections of J. F. Schouw, as indicated by Stafleu and Cowan (1985), are currently preserved in some botanical museums, such as C, G, G-DC, P, and TRH (herbarium acronyms follow Thiers, 2022). In the Copenhagen Herbarium (C), where the main part of Schouw's collection is preserved (Stafleu & Cowan, 1985), we found no material of *Anthemis aetnensis*. Some specimens of *A. aetnensis*, which Schouw collected during his trips to Etna in 1818 and 1819 (Schouw, 1839), are kept at the de Candolle Herbarium (G-DC) and Royal Botanic Gardens (K). Schouw's material at G-DC includes three specimens mounted onto one sheet: two specimens of *A. aetnensis* originated from Etna (barcodes G00453278, G00453349), and one of *A. cupaniana* was collected from Mount Cammarata (barcode G00453327). On the same sheet, there is also a specimen collected by Gussone from Etna, sent by him to de Candolle in 1831 (barcode G00453348). Further, Schouw sent an original specimen of *A. aetnensis* to J. Gay in 1841, which is currently preserved at the Kew Herbarium (barcode K000928659). Since these plants are in flower, they also can be presumed to have been collected during the first ascent of Schouw to Etna, i.e., to belong to the type collection of *A. aetnensis*.

There is no evidence that Schouw's specimens at G-DC or K were seen by Sprengel, so some might presume the specimen at P to be a holotype. However, in our opinion, it is not possible to be certain that Sprengel did not see the material at G-DC before it was sent there, without separately labeling it. The International Code of Nomenclature (Art. 9, Note 1; Turland et al., 2018) encourages us to consider the possibility that more than one specimen was seen, if the author did not explicitly say otherwise. Therefore, we believe that the duplicates of the cited gathering are, at present, syntypes of *Anthemis aetnensis* under Article 9.6 of the ICN, and that the duplicate at P should be designated as a lectotype. The specimens at G and K will consequently be isolectotypes of *A. aetnensis*.

Anthemis aetnensis Spreng., Syst. Veg., ed. 16 [Sprengel] 3: 595. 1826. TYPE: Italy. Sicily: in regione sterili, Etna, [Aug. 1818], *Schouw s.n.* (lectotype, designated here, P-P03706430 collection b!; isolectotypes, G00453278! and G00453349! [on one sheet], K000928659!). Figure 1.

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