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## Nomenclatural and taxonomic remarks on *Prunus cupaniana* (*Rosaceae*) from Sicily

### Abstract

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The name “*Prunus cupaniana*” was created, but not validly published, by Gussone in 1843 for a taxon of N Sicily closely related to *Prunus mahaleb*. The nomenclature of this taxon has been mishandled, and the valid publication of its name by the Huet brothers, on printed herbarium labels distributed in 1857, has remained unnoticed. The authors confirm their earlier view, that the plants in question are best considered a subspecies of *Prunus mahaleb*, and draw attention to the appropriate combination that was published by Arcangeli in 1882 but has been similarly ignored. The correct name is therefore *Prunus mahaleb* subsp. *cupaniana* (Guss. ex E. Huet & A. Huet) Arcang. In the absence of unquestionable original herbarium material, an illustration on one of Cupani’s plates is designated as lectotype, with an epitype to aid its interpretation. Updated distributional data for the taxon are provided.

### Introduction

In the recent inventory of the Sicilian flora (Giardina & al. 2007: 150) an endemic taxon which had so far been by and large ignored has been redeemed: *Prunus cupaniana* “Guss. ex Nyman”, later reduced by the present authors (Raimondo & Spadaro 2009: 309) to subspecific status under *P. mahaleb*. The required combination, supposedly new in 2009, was not then validly published, but when proceeding to remedy this omission, the authors found that the nomenclatural situation was not as plain and straightforward as had been assumed. This realisation gave rise to the present paper.

Recent authors such as Webb (1968) generally ignored the Sicilian taxon, including it in *Prunus mahaleb* by default. Among modern Floras only Pignatti (1982: 618) mentions *P. cupaniana*, as a synonym of *P. mahaleb* var. *prostrata* Lojac. Soják (1985), who treated *P. mahaleb* under the genus *Padellus* Vassilcz., accepted the same taxon at subspecific rank, as *Padellus mahaleb* subsp. *cupaniana* – but he failed to cite the basionym correctly and, by consequence, did not establish that combination.

## Material and methods

Relevant specimens of the herbaria in Florence (FI), Geneva (G), Naples (NAP), Palermo (PAL) and Minà-Palumbo in Castelbuono have been studied.

## Results and Conclusions

*“Prunus cupaniana”* is a provisional name proposed by Gussone (1843) for some Sicilian populations close to *Prunus mahaleb* L., from which they differ by both morphological and ecological features. Gussone, while failing to validly publish the name (he wrote: “An planta sicula species propria?, et tunc *P. Cupaniana* appellanda”), provided a description of the taxon. The binomial was first validly published by the Huet brothers, who accepted it on printed herbarium labels accompanying their Sicilian gatherings and who, by ascribing it to Gussone, provided a clear if indirect reference to the latter author’s description. The printed label has been seen in the herbaria of FI (Fig. 1) and G. The FI label bears the manuscript note: “Comp. Da Huet de Pavillon in Dic. 1857” [bought ... in December 1857], which establishes 1857 as the date of distribution, i.e. effective publication (the plants themselves had been collected in 1856).

This validation has been completely ignored so far. Instead (e.g. in IPNI), the name *Prunus cupaniana* has been credited to “Guss. ex Nyman”. Nyman (1878: 213) mentions the name *“Prunus cupaniana”* twice: first ascribing it to Gussone when citing the Sicilian *exsiccatum* of the Huet brothers, then, lower down, as a varietal name under *Prunus mahaleb* (note that apparent binomials preceded by a dash, in Nyman’s book, represent named varieties, as explained elsewhere in the same work). The name *Prunus mahaleb* var. *cupaniana* is ascribed by Nyman to “Tineo” and accompanied by the briefest of descriptions (“planta nana nebrodensis”), but its basionym is by implication the binomial validated by the Huet brothers. Arcangeli (1882) treated the same taxon at subspecies rank, Lojacono (1891) again as a variety that he named *Prunus mahaleb* var. *prostrata* – an illegitimate name due to Nyman’s earlier varietal name, because Lojacono included Gussone’s type material.



Fig. 1. The printed label of *Prunus cupaniana* specimen by Huet brothers in FI.

The search for original material of *Prunus cupaniana* proved difficult if not frustrating. Under the nomenclatural rules, the type must be designated from among the elements on which the validating description was based, which means that they must have been in Gussone's hand prior to 1843 when the validating description in the *Synopsis* was published. In the *Synopsis*, as already in the *Prodromus* (Gussone 1828: 562-563), no specimens are cited, only two locality or rather areas. Indeed, in both relevant publications (Gussone 1828, 1843) the phrase used is identical: "In fissuris rupium in elatioribus montosis umbrosis; *Madonie, Busambra*." As can be seen from the list of specimens below, the relevant material in Gussone's Sicilian herbarium (NAP-Guss.Sic.) and in Tenore's herbarium (NAP-Ten.), both of which are kept separate from the general herbarium, are either undated or were collected at a later date.

As far as we know, the single specimen of this taxon bearing a pre-1843 date is one in the Palermo herbarium (PAL) labelled by Vincenzo Tineo, and presumably collected by himself in June 1828 (Fig. 2). This bears an interesting annotation, obviously added subsequently but also in Tineo's hand, which reads: "an spec. propria, conf. Guss. Suppl." The label neither bears the epithet *cupaniana* nor any annotation by Gussone that would make it qualify as original material, but the addition prompted us to look up Gussone's *Supplementum*, an exceedingly rare and mostly ignored book. There (Gussone 1832: 154) we found exactly the same diagnosis, word for word, that was included in Gussone (1843); which, in other words, means that the validating description was based on material seen by Gussone prior to 1832, not 1843 as we had initially assumed.

This being said, we know of only a single unquestionable original element for *Prunus cupaniana*: an unpublished illustration of Cupani (Fig. 3), which is cited by Gussone in both the *Prodromus* and the *Synopsis*, where it is indeed the only illustration based on Sicilian material, and the only one which, in 1843, is followed with an exclamation mark and not a question mark. This we are selecting as the nomenclatural type. We are confident that it represents the correct taxon, but as there is no indication of scale, and to be on the safe side, we are furthermore designating a modern epitype specimen (Fig. 4), with several duplicates.

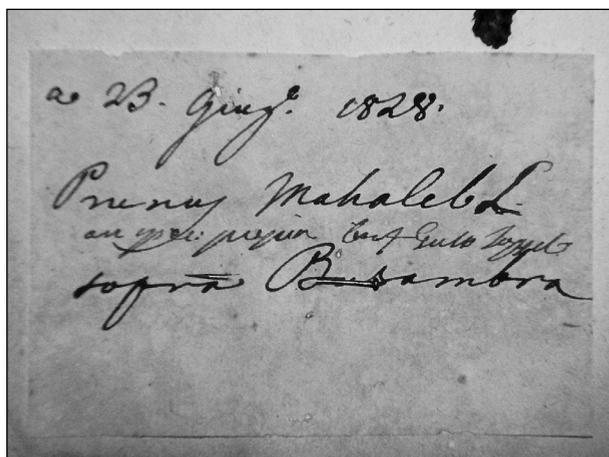


Fig. 2. The label of the single specimen of *Prunus cupaniana* bearing a pre-1843 date, handwritten by V. Tineo.



Fig. 3. Illustration of Cupani (Tab. 55 vol.1), which is cited by Gussone in both the *Prodromus* and the *Synopsis*.

The set of Cupani plates used and cited by Gussone is now kept at the Biblioteca centrale della Regione siciliana in Palermo, bound in three contemporary volumes. They (and some other, supplementary plates of the same vintage) have meanwhile been made available in print (Cupani 2003), where the plates (except the supplementary ones) conveniently bear the numbers of the Palermo copy, i.e., those cited by Gussone. We refer to the preface matter in that printed edition, and to the extensive review by Greuter (2007), for details on the fate of Cupani's legacy.

*Prunus mahaleb* subsp. *cupaniana* differs from *P. mahaleb* subsp. *mahaleb* by its characteristic prostrate or ascending, many-stemmed bushy habit; smaller, cordate, coriaceous leaves; few-flowered corymbs; smaller flowers; and smaller, ovoid, slightly flattened fruits, black when mature. It is also ecologically distinct (Raimondo & al. 2010). Based on these differences, supported by molecular evidence (Spallino & al. 2010), the appropriate placement and rank of Gussone's taxon is that of a subspecies under *Prunus mahaleb* L. The required combination has been published by Arcangeli (1882), the same (intended) combination by the present authors being its isonym. The relevant synonymy is as follows:

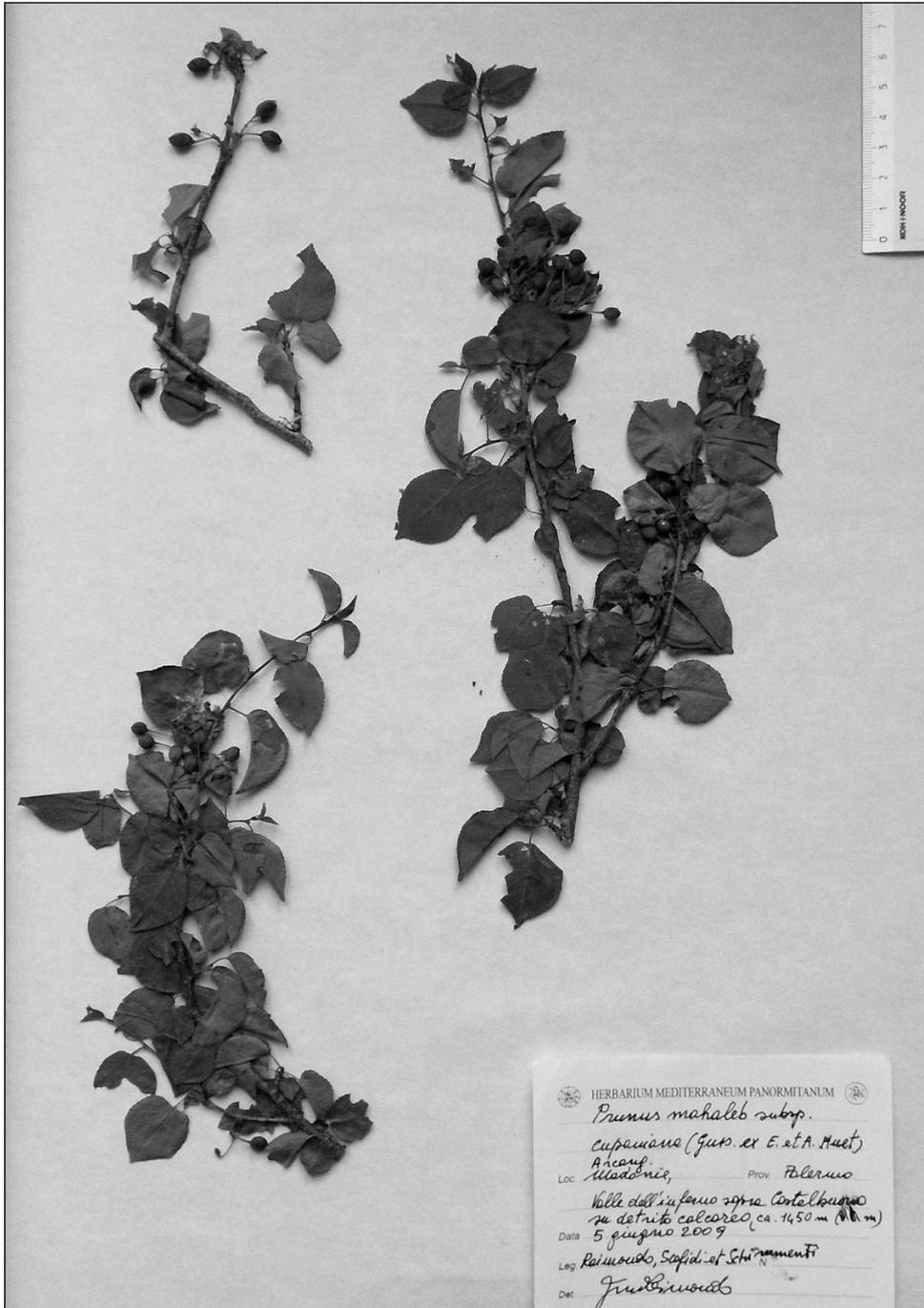


Fig. 4. The modern epitype specimen, designated here, collected on the Madonie Mountains at Valle dell'Inferno.

*Prunus mahaleb* subsp. *cupaniana* (Guss. ex E. Huet & A. Huet) Arcangeli, Comp. Fl. Ital.: 211. 1882 ≡ *Prunus cupaniana* Guss. [Fl. Sicul. Syn. 1: 552-553. 1843, nom. prov. inval. sed cum descr.] ex E. Huet & A. Huet, Pl. Sicul. a. 1856 [in schedis impr.]: n° 86. 1857 ≡ *Prunus mahaleb* var. *cupaniana* (Guss. ex E. Huet & A. Huet) Nyman, Consp. Fl. Eur.: 213. 1878 ≡ *P. mahaleb* var. *prostrata* Lojac., Fl. Sicula 1(2): 164. 1891, nom. illeg.

*Padellus mahaleb* subsp. *cupaniana* Soják in Čas. Nár. Muz. Praze, Rada Přír. 153(3): 171. 1985, comb. inval. [cit. basion. erronea].

*Lectotype* (designated here): “*Cerasus amara alpina foliolo subrotundo fructu nigro singulari Ciciris mag[n]itudine*” in Cupani, Panphyton siculum 1: plate 55, upper right-hand figure (unpublished illustration in the 3-volume copy kept at the Biblioteca centrale della Regione siciliana in Palermo). *Epitype* (designated here): Madonie: Valle dell’Inferno sopra Castelbuono, su detrito calcareo, circa m 1400 s.l.m., 5.06.2009, Raimondo, Scafidi & Schimmenti (PAL!; isoeotypes: B!, PAL-Gr!).

*Distribution*. – Apparently confined to NW and NC Sicily. Apart from the classically known localities of the Madonie Mts. (Figs. 5 & 6) and Mt. Busambra.

*Specimens seen*: Madonie, s. dat., s. coll. (NAP-Ten!; Gussone’s hand); Monte Scalone [Madonie], s. dat., s. coll. (NAP-Guss. Sic.; Gussone’s hand); Ficuzza nel bosco, s. dat., Tineo (NAP-Guss.Sic.); Sicilia a Busambra, 1858, s. coll. (NAP Guss. Sic!; Gussone’s hand); sopra Busambra, 23 giug. 1828, s. coll. (PAL!; V. Tineo’s hand); In sylvaticis montis Busambra, 3.6.1856, E. Huet du Pavillon & A. Huet du Pavillon (G [photo!], FI!); M.te Busambra, Jun. 856, E. Huet & A. Huet (RO!); Busambra, ad rupes in elatioribus montosis, Junio, Todaro 475 (FI!, PAL!, RO!); Busambra, 6.1880, Todaro (PAL!); Ficuzza, in nemoribus, majo 1882, Lojaco 539

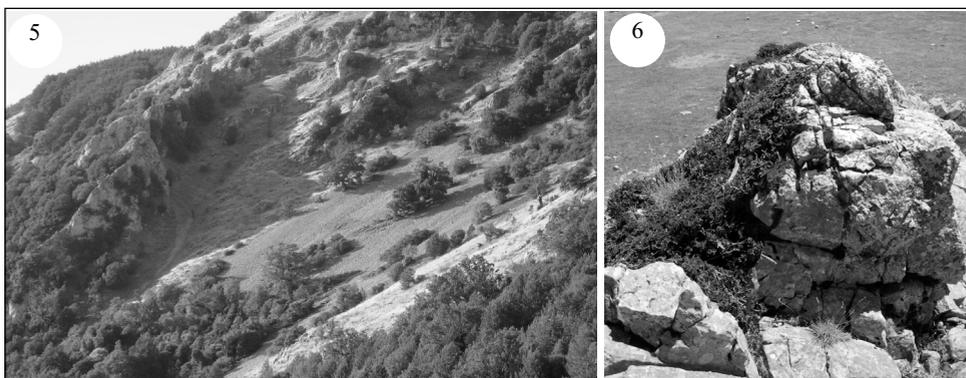


Fig. 5 & 6. *Prunus mahaleb* subsp. *cupaniana*: 5. Macchia dell’Inferno, N slope of Mt. Carbonara, Madonie, locality of collection of the Epitype designated here; 6. Prostrated plant in a classical locality of Mt. Carbonara, Madonie (Fosse di S. Gandolfo).

(FI!); Madonie, Pizzo delle Case, in saxosis, 1800 m, *Lojacono* (FI!); Ficuzza, ad radices montis Busambra, in sylva, 11.5.1895, *Sommier* (FI!); Ficuzza, in sylva ad basis montis Busambra, 11.5.1895, *Sommier* (FI!); Ficuzza ai piedi M. Busambra, in sylva, 11.5.1895, *Sommier* (FI!); Alla Busambra presso la Ficuzza (Sicilia), a m. 960 circa, 11.5.1895, *Biondi* (FI!); Sicilia, alle Madonie, *Gussone* (RO!); Busambra, Sicilia, *Tineo* (RO!); Madonie, 7.1888, *Ross 22* (PAL!); Madonie, s. dat., s. coll. (PAL!; same label as of *Ross 22*); Madonie, Pizzo dell'Antenna, 9.6.1847, s. coll. (PAL!; V. Tineo's hand); Cozzo della Mufara s. dat., s. coll. (PAL!; V. Tineo's hand); Busambra, s. dat., s. coll. (PAL!; V. Tineo's hand); Madonia, s. dat., s. coll. (Herb. Minà-Palumbo, Castelbuono Todaro's hand!); Colma Grande, junio 1847, s. coll. 16.; Pizzo delle Case, 9 junio 1847, s. coll. [mixed specimen with two labels] (Herb. Minà-Palumbo, Castelbuono; Minà-Palumbo's hand!); Pizzo dell'Antenna, tra le pietre – raro. Maggio 1845 (Herb. Minà-Palumbo, Castelbuono; Minà-Palumbo's hand!); Cuozzu di Bissini, Juntera 4. junio 1841, s. coll. n. 76 (Herb. Minà-Palumbo, Castelbuono; Minà-Palumbo's hand!); Pizzo dell'Antenna, in lapidosis calcareis, 9. junio 1847, s. coll. (Herb. Minà-Palumbo, Castelbuono; Minà-Palumbo's hand !); Pizzo delle Case, s. dat., s. coll. (Herb. Minà-Palumbo, Castelbuono; Todaro's hand !); Madonie, Monte Carbonara 37°53' N – 14°01' E, calcareous soil, 1800-1900 m a.s.l., 05/06/1990, *Raimondo & al. 1304* (PAL!); Rocca Busambra: cliffs and slopes, 37° 51' N – 13° 23' E, calcareous soil, 1100-1400 m a.s.l., 02/06/1990, *Raimondo & al. 838* (PAL!); Madonie, Fosse di San Gandolfo, su litosuolo calcareo, 14.06.2009, *Raimondo, Scafidi & Schimmenti* (PAL !); Madonie, pendici occidentali del Monte Carbonara, su litosuolo calcareo, circa m 1250 s.l.m., 07.06.2011, *Raimondo, Scafidi & Schimmenti* (PAL !); Madonie, Quacella, su detriti dolomitici, circa m 1200 s.l.m., 26.08.2009, *Raimondo, Scafidi & Schimmenti* (PAL !); Madonie, Quacella, su detrito dolomitico, circa m 1250 s.l.m., 26.05.2010, *Raimondo, Scafidi & Schimmenti* (PAL !).

*Prunus mahaleb* subsp. *mahaleb* also grows in Sicily but was unknown in Gussone's times, being an even rarer plant. It occurs on the Nebrodi Mts. (NE Sicily) where subsp. *cupaniana* is lacking, but coexists with the latter in the Ficuzza-Busambra area, growing in woodland at somewhat lower altitudes. In fact, of the localities cited by Giardina & al. (2007) under *P. mahaleb*, some belong to subsp. *cupaniana*; only the following are genuine subsp. *mahaleb*:

Boschi di Ficuzza, in sylvaticis montosis, ca. 800 m, 5.7.1896, *Ross* (FI!); Ficuzza, ai margini del bosco sopra Valle Cerasa, nei pressi di Portella S. Giovanni, ca. m 1000 s.l.m., 15.06.2004, *Raimondo, Scafidi & Spadaro* (PAL !); Mezzojuso: Valle Cerasa, 1000 m a.s.l., 06. 2009, *Domina & Raimondo* (PAL !); Nebrodi, Contrada Daza (Frazzanò), 900 m a.s.l., giugno 1989, *Raimondo & Mazzola* (PAL !); Vallone nei pressi dell'abitato di Longi, ca. 500 m s.l.m., giugno 1984, *Raimondo* (PAL !); Nebrodi, alla base delle Rocche del Crasto (Alcara Li Fusi), su litosuolo calcareo, m 550 s.l.m., 19.8.2009, *Raimondo* (PAL!); Mt. San Giuliano: near Erice, 38° 02' N – 12° 35' E, calcareous soil, 600-700 m a.s.l., 31.05.1990, *Raimondo & al. 476* (PAL!).

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