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## ***Bellevia dubia* subsp. *dubia* (Hyacinthaceae), an endemic unit for the Sicilian flora**

### **Abstract**

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*Bellevia dubia* (Guss.) Kunth is an uncommon geophyte of the arid and uncultivated grounds of Central Eastern Mediterranean area, with three subspecific units: *Bellevia dubia* (Guss.) Kunth subsp. *dubia* (Southern Italy, Sicily and Dalmatia), *B. dubia* subsp. *boissieri* (Freyn) Feinbr. (Greece, Turkey and Eastern Mediterranean coasts) and *B. dubia* subsp. *hackelii* (Freyn) Feinbr. (Portugal).

Biosystematic investigations on *Bellevia* populations from Calabria and Sicily, carried out in Pisa Botanic Gardens, evidenced considerable differences among them. Only the Sicilian populations agree with the original description of *Bellevia dubia*; on the contrary, the Calabrian plants look similar to *Bellevia dubia* subsp. *boissieri*.

Accordingly, *Bellevia dubia* subsp. *dubia* (Lectotype in NAP!) is to be considered as a Sicilian endemic unit.

### **Introduction**

*Hyacinthus dubius* was published by Gussone (1821) in his *Catalogus Plantarum* for Sicily. The specific combination, under the genus *Bellevia* Lapeyr., as *B. dubia* is sometimes incorrectly ascribed to H. G. L. Reichenbach (1830) or to J. J. Roemer & J. H. Schultes (1829), but the former author - to whom the latter ones refer - considered, naming the plant, a specimen collected "In Ligurien bei Pontremoli" where only *Bellevia webbiana* Parl. is recorded. The combination *Bellevia dubia* (Guss.) Kunth was correctly published by Kunth (1843) in his *Enumeratio Plantarum* where the basionym and some Sicilian localities were mentioned. Feinbrun (1940) in her revision of the genus *Bellevia* considered three subspecies for *Bellevia dubia*: *B. dubia* subsp. *dubia* from southern Italy, *B. dubia* subsp. *hackelii* from Portugal and *B. dubia* subsp. *boissieri* from Balkan peninsula, Greece and Eastern Mediterranean area. Considerable differences among Italian populations from Calabria and Sicily beared the present authors to identify as *Bellevia dubia* subsp. *dubia* only the Sicilian populations while the Calabrian ones look similar to *Bellevia dubia* subsp. *boissieri*. Accordingly *Bellevia dubia* (Guss.) Kunth subsp. *dubia* is to be considered as an endemic unit for Sicily.

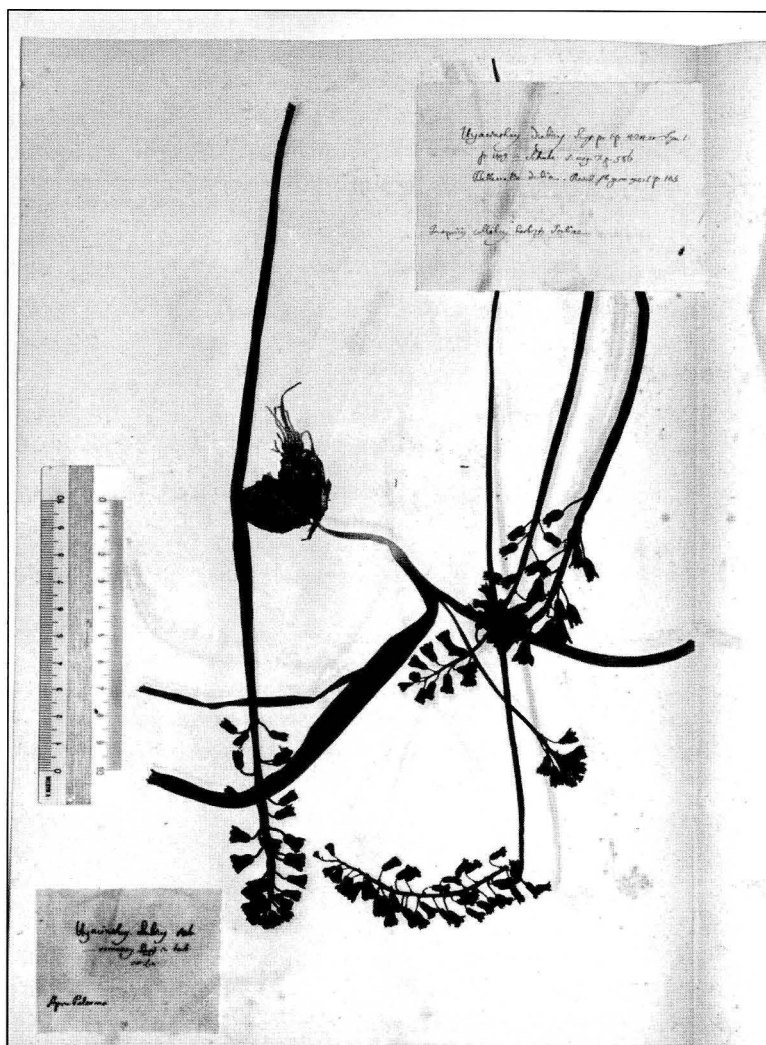


Fig. 1. The herbarium sheet of Gussone's general collection (NAP) here designated as lectotype.

### Typification

*Bellevalia dubia* (Guss.) Kunth, Enum. pl. 4: 308. 1843.

Basion.: *Hyacinthus dubius* Guss., Cat. H. Reg. Boccadif., pp. 32, 78. 1821.

Lectotype: *Hyacinthus dubius* Nob. - *Hyacinthus romanus* Desf. in herb. non Lin. Apr.-Palermo [manu Gussone] (NAP!), designated here.

The sheet selected (Fig. 1) is located in the General Herbarium of Gussone in NAP and not in the "Sicilian Herbarium" of Gussone where seven sheets are present but none of them can be eligible or adequately considered for the typification process. Our choice is

Table 1.

	<i>B. dubia</i> subsp. <i>dubia</i>	<i>B. dubia</i> subsp. <i>boissieri</i>
Perigone length	≤1 cm	≥1 cm
Perigone colour	light sky blue	dark blue
Capsule	ovate-emarginate	obovate-truncate
Raceme length	down to half scape	up to half scape
Raceme density	high	low
Size	20-30 cm	30-50 cm

due to the collecting locality (Palermo), mentioned in the protologue, and to the good conservation state of the specimens: a complete plant with a sectioned bulb and four flowered scapes. They match very well with the diagnosis. The sheet bears two labels with Gussone's handwriting, the upper one with some references (Supp. pr. 1 p. 424 et Syn. 1 p. 409 = Schulte. s. veg. 7 p. 586 - *Bellevalia dubia* Reichenb. fl. germ. exc. 1 p. 105) and a synthetic description of habitat (*In apricis collibus herbosis Italiae*), the lower one (Fig. 2) with the name of the plant, season (April) and collecting locality (Palermo).

### Diagnostic characters

The main important morphological characters which allow to distinguish *B. dubia* subsp. *dubia* from *B. dubia* subsp. *boissieri* are: the light sky blue colour of flowers (Fig. 3), the length of the scape (20-30 cm), the density of the inflorescence, the raceme/scape length ratio and the emarginate shape of the capsules (Table 1).

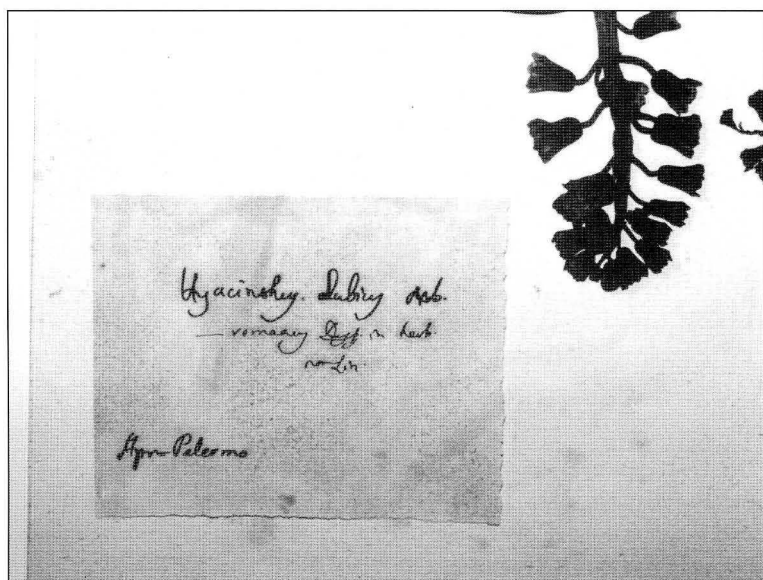


Fig. 2. The label with Gussone's handwriting showing the name of the plant, season (April) and collecting locality (Palermo).



Fig. 3. Flowered scape of *B. dubia* subsp. *dubia* (up on the left) and entire plant, with flowers and capsules of *B. dubia* subsp. *boissieri* (close-up). The original illustration (by A. Maury, Florence) is based on material from Sicily (063/1987) and Calabria (625-2/2000) respectively, cultivated in the Pisa Botanic Gardens.

## Karyological observations

The investigated plants, cultivated in the Pisa Botanic Gardens (acc. numb. 1987/056; 1987/063), are diploid,  $2n=8$ . The karyotype, according to the records presented by Garbari (1968) and Bareka & al. (2000), does not show remarkable differences among Sicilian *Bellevallia dubia* subsp. *dubia* and Calabrian and Greek *Bellevallia dubia* subsp. *boissieri* (Kapasa & al. 2001).

## Distribution and conclusions

Up to now *B. dubia* subsp. *dubia* pertains only to Sicily, including the Favignana Isle: rocky hillsides and pastures near Palermo, Taormina, Agrigento, Caltanissetta and Madonie mountains.

*B. dubia* subsp. *boissieri* is effectively recorded, in peninsular Italy, only for Calabria (Borzatti de Loewenstern & Garbari 2002).

## Specimina visa

In montosis Palermo a S. Martino, Aprile, Todaro (FI) - Fields [...] Taormina Sicily, 1 apr. 1895, *M. Spencer* (FI) - Girgenti ai Macalubbi in arvis, 1873, *Sommier (Plantae Siculae)* (FI) - Palermo, ago. 1845, s.c. (FI) - Sub *Hyacinthus dubius* Parl., In pasquis montosis Palermo, 1896, *Todaro* (FI) - Palermo sul M. Caputo (900 m), 2 mag. 1895, *Baroni* (FI) - In pasquis montosis supra Bocca di Falco 18[...], *Huet du Pavillon* (FI) - Sub *Hyacinthus dubius* Guss., Sicilia da Parlatores, mar. 1842, *Parlatores* (FI) - Ma[...] hillsides Taormina Sicily, 28 feb. 1896, *M. Spencer* (FI) - Colli presso Taormina Sicilia, 18 mar. 1898, *M. Spencer* (FI) - Sub *Hyacinthus dubius* Guss., Sicilia Porto Empedocle, 23 feb. 1906, *A. Fiori* (FI) - Pizzuta, s.d., s.c., (PA) - Boschi di Valdemone, s.d., *Citarda & Riccobono* (PA) - In montosis Palermo a S. Martino, mag., *Todaro* (Fl. Sic. Exsicc.) (PA) - Spicati, Apr. 1884, s.c. (PA) - Pizzuta, 1880, s.c. (PA) - Sub *Hyacinthus dubius* Guss., Monti di Palermo, s.d., *Todaro* (PA) - In montosis Palermo, mag., *Todaro* (PA) - Sub *Bellevallia*, Madonia Minà, Madonia alla Cubia, apr. 1867, *Todaro* (PA) - Valledemone, s.d., *Citarda & Riccobono* (PA) - Sub *Hyacinthus dubius* Guss., S. Martino, mag. '49, s.c. (PA) - Sub *Hyacinthus dubius*, Monte dell'Occhio, 14 apr. '56, s.c. (PA) - Sub *Hyacinthus dubius*, Ubique [...], s.d., s.c. (PA) - Sicilia, s.d., s.c. (PI) - In montosis Palermo a S. Martino, apr., *Todaro* (PI) - *Bellevallia dubia* (Guss.) Kunth, in coltivi abbandonati, nicchie lungo la strada statale per la vetta del Monte S. Caterina, Favignana (TP), 31 mar. 1987, *Garbari* (PI) - Sub *Hyacinthus dubius* Guss., in pasquis montosis Caltanissetta, Aprile, s.d. (NAP) - Sub *Hyacinthus dubius* Guss., Palermo a S. Martino e S. Anna, 8 mag. 1844, s.c. (NAP) - Sub *Hyacinthus dubius* Guss., Palermo, s.d., s.c. (NAP) - Sub *Hyacinthus dubius* Guss., Caputo, Marzo, s.c. (NAP) - Sub *Hyacinthus dubius* Nob., Palermo, Aprile, s.c. (NAP).

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