

Typification of the name *Hippocrepis balearica* (Leguminosae)

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Abstract. The typification of the name *Hippocrepis balearica* is discussed. The name is lectotypified on an illustration published by Jacquin in 1781.

Keywords. Balearic Islands, Fabaceae, lectotype, nomenclature, original material, Spain.

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Introduction

Hippocrepis balearica Jacq. (1781a: 305) (Fabaceae) is a species endemic to the Balearic Islands (Mallorca, Menorca, and Cabrera). This species belongs to a taxonomic complex with other two taxa, *H. valentina* Boissier (1838: 38) and *H. grosii* (Pau) Boira *et al.* (in Llorens *et al.*, 1996: 170) [\equiv *H. balearica* var. *grosii* Pau (1934: 58)] (Bolòs & Vigo, 1984; Llorens *et al.*, 1995; Rosselló *et al.*, 2002). It is a diploid shrubby plant that mainly inhabits calcareous cliffs and littoral scrubs (Ball, 1968; Talavera & Domínguez, 2000).

Traditionally, *Hippocrepis valentina*, the mainland species distributed in Alicante and Valencia provinces (Spain), was considered to be the vicariant taxon of *H. balearica*, the insular element. According to the molecular data published by Rosselló *et al.* (2002) the western and eastern Balearic populations of the complex (*H. grosii* and *H. balearica*) were more closely related to each other than to continental populations (*H. valentina*). Lánz (1989) studied *H. balearica* on Menorca and proposed that the populations on this island constitute a variety, *H. balearica* var. *minoricensis* P. Montserrat ex Lánz (1989: 24) (see Mus *et al.*, 1990). Using a morphometric approach, Llorens *et al.* (1996) supported the distinction of this taxon. However, it was not accepted by Crespo (2000), Talavera & Domínguez (2000) and Rosselló *et al.* (2002), who included this name under *H. balearica*.

From the nomenclatural point of view, the names *H. valentina* and *H. grosii* have been typified (Burdet *et*

al., 1988; Mus *et al.*, 1990). However, *H. balearica* has apparently not yet been typified (Crespo, 2000; Rosselló & Sáez, 2000). The purpose of this paper is to fix the application of *H. balearica* through lectotypification. This contribution increases the number of designated types included in the *Index Balearicum*, a check-list of the vascular plants described from the Balearic Islands (Rosselló & Sáez, 2000, 2008, 2017; Ferrer-Gallego *et al.*, 2018, 2019, 2020, 2021).

Materials and Methods

Type designation was based on consultation of original elements (herbarium specimens and illustration). Herbaria are referred to by their acronyms following Thiers (2022)

Results and Discussion

Typification of the name *Hippocrepis balearica*

The protologue of *H. balearica* includes a complete description in Latin, followed by the provenance «Ex horto Parisino transiit in nostrum» (Jacquin 1781a: 305–306).

Rosselló & Sáez (2000: 78) mentioned that the type material has to be searched for at BM, LINN and W. According to Talavera & Domínguez (2000), the following herbarium specimens (MA 262301, G-DC 2: 312 n.º 1,

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LINN 919.5) were taken from the cultivated plants which were sent to Jacquin to describe the species.

No specimen is cited in the protologue of *H. balearica*, but it is known that there are often authentic Jacquin specimens that can be linked to his names (D'Arcy,

1970). However, a colour plate was published by Jacquin (1781b: plate 149). This excellent drawing illustrated a plant with leaves and flowers, and a detail of two fruits and a seed (see Figure 1). This element could be used for typification purposes (see below).



Figure 1. Lectotype of *Hippocrepis balearica* Jacq., illustration of Jacquin (1781b: plate 149) "*Hippocrepis balearica*".

We have found two relevant specimens in the Jacquin herbarium at W. The specimen barcoded W 0107359 is a vegetative fragment plant, only a stem with leaves but no flowers or fruits (Figure 2). The sheet bears a label annotated as «Willd. Linn. Spec. Plant. / Tom. III. Pars. II. Pag. 1158. / Class. XVII. Gen. 1369. / Spec. 3. Hippocrepis / balearica / Habitat in Minorca / ex H. Bot. Paris / 1781”. This label (“ex H. Bot. Paris / 1781”) matches with the information mentioned in the protologue “Ex horto Parisino transiit in nostrum”. In our opinion, this specimen can be treated as

original material for the name *H. balearica* and therefore was used by Jacquin to describe this species. In this sense, according to Stafleu & Cowan (1979: 407) and D’Arcy (1970), Austrian and garden plants collected by Jacquin are scarce or not identified as belonging to this botanist in the European herbaria (AWH, B, BM, CGE, H, JE, LINN, LIV, OXF, UPS, W). Thus, for the typification of Jacquin’s names, in several cases it will be possible to find Jacquin types in one of the mentioned herbaria, especially BM, LINN and W (see D’Arcy, 1970).

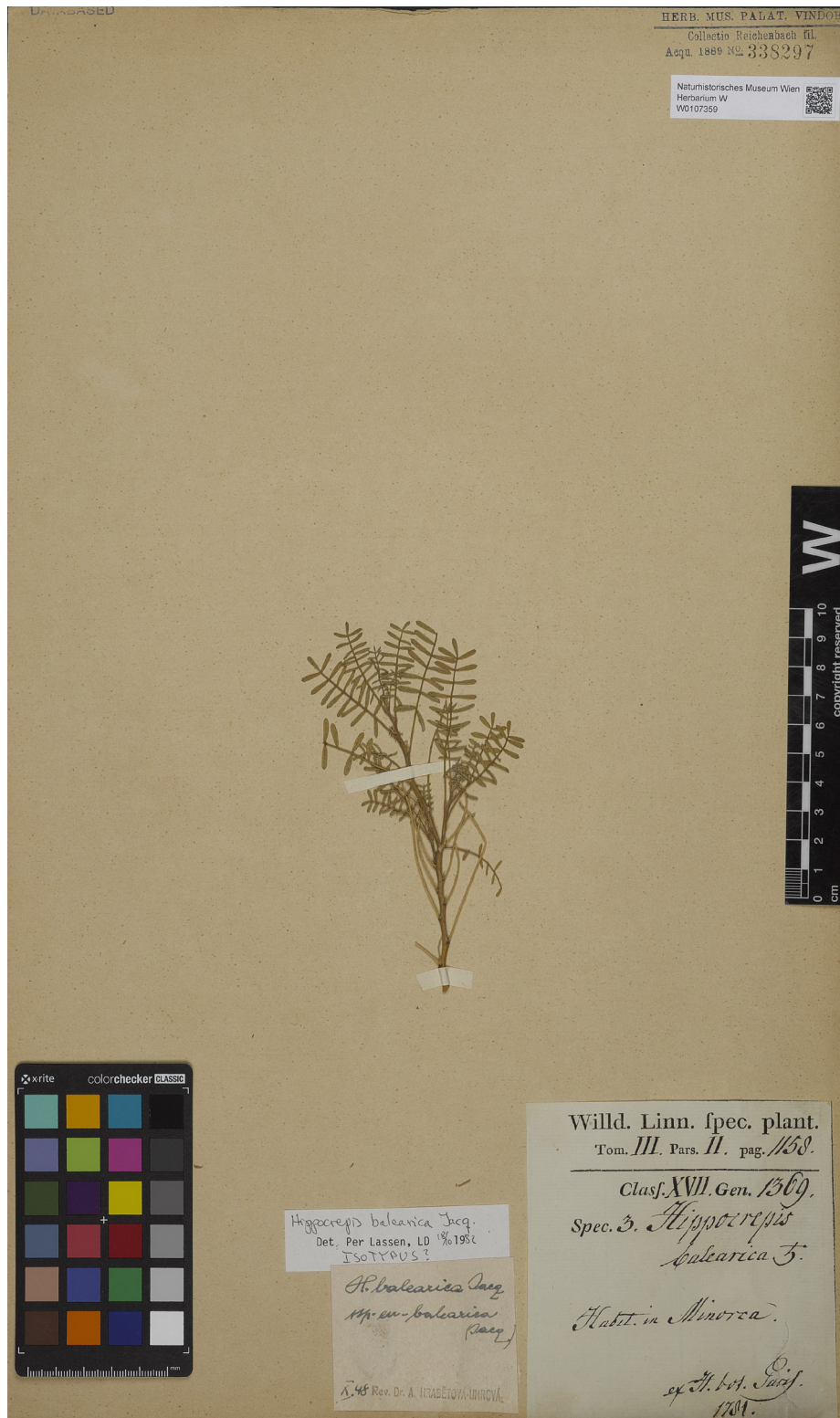


Figure 2. Original material of *Hippocrepis balearica* Jacq., W (barcode W 0107359). Image reproduced with permission of the herbarium W.

In addition, the sheet barcoded W 0107361 bears a poorly specimen of this species, five vegetative fragments plant, and a label “*Hippocrepis / balearis / Hb. Jacq.*” (image available at <https://w.jacq.org/W0107361>). The sheet also bears a revision label annotated as “*Hippocrepis balearica* Jacq. / Det. Per Lassen, LD 18/10/1982 / Isotypus?”. However, unfortunately this specimen lacks any link with the protologue to treat it as original material.

On the other hand, we have found a relevant specimen at MA, with barcode MA 00262301 (image available at <http://161.111.171.57/herbarioV/visorVCat.php?img=MA-02-00262301>). The specimen consists in three stems, two of them poorly preserved (but with some fruits) and identified as *H. commutata* Pau by Salvador Talavera on a revised label, and only one (on the left of the sheet) well developed and preserved, with leaves and flowers, and identified as *H. balearica* by Salvador Talavera and Maurici Mus on two revised labels. The sheet contains a small original label, handwritten by Cavanilles, with “*Hypocrepis / Madrid*”, and a second handwritten label with a complete description in Latin, and the provenance “*habitat in Insulá Balear. Vidique in R.h.P. mense Maio 1781*” (perhaps handwritten by Cavanilles). The sheet bears also a recent printed label “*from Hortus Regius Matritensis “Hippocrepis balearica Cav. / Islas Baleares - Madrid / H.R.Paris. Marzo.-1781 / Det. Cavanilles”*”; and three revision labels, the upper one with a relevant comment annotated by Talavera: “*Hippocrepis balearica Jacq. / Este pliego le viene a Cavanilles antes de la publicación de la especie por Jacquin y aunque es del material original no se puede considerar tipo*”.

Certainly, although this material at MA is not original one used by Jacquin to describe *H. balearica* and therefore cannot be selected as a lectotype, it seems that the specimen comes from the Paris Botanical Garden, where it could have been cultivated. Thus, both the date and the origin would coincide with the original material preserved at W (W 0107359), so it could be a duplicate, as Talavera indicates in the revision label of sheet MA 00262301. However, this hypothesis is difficult to prove and perhaps the most cautious thing to do would be to consider it as “probable” duplicate material. We have not found any further original material of this name in any of the consulted herbaria (e.g., AWH, B, BM, CGE, H, JE, LINN, LIV, OXF, UPS).

Finally, the plates published in Jacquin’s *Icones plantarum rariorum* are often eligible as source material for their new names, if it can be shown by a precise date that they were available before or at the time of the publication of the protologues of the Jacquin’s names. Regarding the case of *H. balearica*, Jacquin’s *Icones plantarum rariorum* (1781–1795) contains an excellent illustration (plate 149) (Figure 1). According to Schubert (1945), the plates in the *Icones* were originally published in fascicles and later rearranged into a book. Schubert (1945: 4, 12) worked out the publication dates for the plates bound in the *Icones* and by her reckoning the final plate 149 was first published in 1781, the same year as the protologue of *H. balearica*. We therefore consider

plate 149 in the *Icones* as original material for that name. This plate is then the best choice as a lectotype.

In conclusion, among the original elements above cited, only the specimen W 0107359 (cultivated in Hor. Bot. Paris from material collected in Menorca, Balearic Islands) and the illustration published by Jacquin can be used for the lectotypification purpose. We selected as the lectotype of *H. balearica* the Jacquin’s illustration because it is the most complete and informative material. This drawing shows relevant diagnostic characters (e.g., leaflets 5–10 pairs, linear or oblong, acute, and seed arched to semicircular) and clearly represents the traditional concept and current use and application of the name (e.g., Knoche, 1922; Bellot, 1947; Hrabětová-Uhrová, 1949; Ball, 1968; Bolòs & Vigo, 1984; Llorens *et al.*, 1996; Crespo, 2000; Talavera & Domínguez, 2000).

Hippocrepis balearica Jacq., Misc. Austriac. 2: 305. 1781a

Lectotype (designated here): [illustration] “*Hippocrepis balearica*” in Jacquin (1781b: plate 149) Figure 1.

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Authorship contribution

PPFG: Design and Writing; LSG: Analysis of the original elements and their interpretation, Literature and Text review.

Conflict of interest

None.

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