

TYPIFICATION OF TEN NAMES IN THE GENUS *BISCUTELLA* (*CRUCIFERAE*) DESCRIBED FROM MATERIAL COLLECTED IN THE VALENCIAN COMMUNITY (SPAIN)

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ABSTRACT: In this paper, ten names of *Biscutella* are treated: *B. montana* Cav., *B. tomentosa* Lag. ex DC., *B. montana* var. *genuina* subvar. *laevis* Rouy, *B. montana* var. *genuina* subvar. *scabridula* Rouy, *B. montana* var. *subdecurrens* Rouy, *B. montana* var. *longifolia* Rouy, *B. montana* var. *patula* Rouy, *B. montana* var. *brevifolia* Rouy, *B. laevigata* var. *latifolia* Willk., and *B. leptophylla* Pau. In order to fix their applications, nomenclatural types are designated. All the type material available is listed with full label data, and some nomenclatural and taxonomic comments are provided. **Keywords:** *Brassicaceae*; lectotype; Mediterranean flora; nomenclature; taxonomy; Spain.

RESUMEN: Tipificación de varios nombres en el género *Biscutella* (*Cruciferae*) descritas a partir de material recolectado en la Comunidad Valenciana (España). En el presente trabajo se tratan diez nombres de *Biscutella*: *B. montana* Cav., *B. tomentosa* Lag. ex DC., *B. montana* var. *genuina* subvar. *laevis* Rouy, *B. montana* var. *genuina* subvar. *scabridula* Rouy, *B. montana* var. *subdecurrens* Rouy, *B. montana* var. *longifolia* Rouy, *B. montana* var. *patula* Rouy, *B. montana* var. *brevifolia* Rouy, *B. laevigata* var. *latifolia* Willk. y *B. leptophylla* Pau. Para fijar sus aplicaciones, se designan los respectivos tipos nomenclaturales para estos nombres en el género. Todo el material tipo disponible se enumera con los datos completos de la etiqueta y se proporcionan algunos comentarios nomenclaturales y taxonómicos. **Palabras clave:** *Brassicaceae*; lectotipo; flora mediterránea; nomenclatura; taxonomía; España.

INTRODUCTION

The genus *Biscutella* L. (*Cruciferae*) includes annual herbs or dwarf shrubs distributed through Europe, northern Africa, and Southwest Asia, and comprises about 45 to 53 species according to more recent studies (WARWICK & AL-SHEHBAZ, 2006; AL-SHEHBAZ, 2012; POWO, 2024).

From a taxonomic point of view, the genus *Biscutella* is very complex due to the wide variation of vegetative features and the broad interspecific morphological plasticity (OLOWOKUDEJO, 1986; GUINEA & HEYWOOD, 1993). Therefore, designation of reference material must be the starting point of any taxonomic study dealing with a difficult genus such as *Biscutella* that includes a vast number of validly published names involving hundreds of nomenclatural and taxonomic synonyms. MATEO (2023) has recently published a commented list of the main species of the genus *Biscutella* present in the Iberian Cordillera (NE Spain) and its surroundings.

As a further contribution in our studies to the nomenclature of the species described for the Valencian Community area, we here discuss the nomenclatural types of ten names: *B. leptophylla* Pau, *B. montana* Cav., *B. montana* var. *brevifolia* Rouy, *B. montana* var. *genuina* subvar. *laevis* Rouy, *B. montana* var. *genuina* subvar. *scabridula* Rouy, *B. montana* var. *longifolia* Rouy, *B. montana* var. *patula* Rouy, *B. montana* var. *subdecurrens* Rouy, *B. laevigata* var. *latifolia* Willk., and *B. tomentosa* Lag. ex DC. The purpose

of this paper is to contribute to the stability of the nomenclature by the lectotypification of these names.

MATERIALS AND METHODS

This work is based on the examination of relevant literature and on the study of the specimens conserved in the public herbaria G, BM, LY and MA. Herbarium acronyms are according to THIERS (2024 [continuously updated]). A preliminary screening of the material was possible thanks to digital type images provided at JSTOR Global Plants web (<http://plants.jstor.org>) and other online sources. For the selection of types, protologues have been compared with original material and the most complete and informative specimens were selected (Art. 9.4 of the *Shenzhen Code, ICN*; TURLAND & al., 2018). The identity of the designated lectotypes is verified with the current use of their respective names.

For several names, always published before 1958, for which we have found only one specimen, it can be established that the author used at least one specimen, but as we cannot exclude that there was originally more than one specimen of the taxon in his collection or the gathering is represented by a single specimen, these specimens are treated in this paper as lectotypes, but admitting that such specimens might well be holotypes (see McNEILL, 2014).

The typified names are arranged in chronological order. In the following list, currently accepted names are set

in bold italics typeface (heterotypic synonyms are indicated with the symbol =, and the homotypic synonyms are indicated with the symbol ≡). References to *B. montana* Cav., are made sensu lato, as *B. gr. montana*, due that for some cases they can match best the current meaning of *B. rosularis* Boiss. & Reut. The original labels preserved on the herbarium sheets have been transcribed.

TYPIFICATION OF THE NAMES

Biscutella montana Cav.

The protologue of *Biscutella montana* includes a brief diagnosis “194. BISCUTELLA siliculis glabris: foliis ovatis, dentatis, tomentosus”, and a complete description in Latin followed by a provenance “Habitat in altioribus montis regni Valentini, praecipue tamen in *Cabesó* qui Lucentum inter Saxosam iacet, et in *Cova alta* prope Conventum Sanctae Annae”; a comment “Florebant hic Aprili mense Antirrhinum triphyllum et crassifolium, Ranunculus gramineus, Arum arisarum, Campanula alpina, Geum reptans, Fumaria eneaphylla, Cotyledon umbilicus, et inter alias stirpes Alyssum spinosum”. An excellent illustration of this plant and its explanation is also included in the protologue (CAVANILLES, 1793: tab. 177). The drawing illustrates a complete plant, with leaves, flowers, and fruits, including several details of the flowers and fruits (see fig. 1). Therefore, this illustration can be considered original material of *B. montana*.

GARILLETI (1993: 69) stated that the specimen MA 475443 was “Material tipo” [type material], which might be taken as a designation of type. However, Garilleti (1993) stated in the introduction to his work that his aim was to study the Cavanilles Herbarium and not to designate types. He wrote: “Nuestro objetivo ha sido estudiar el herbario de A. J. Cavanilles, en ningún caso se ha concretado una lectotipificación de sus táxones” [Our aim was to study the herbarium of A. J. Cavanilles, in no case a lectotipification of his taxa has been materialized] (GARILLETI, 1993: 5; GARILLETI, pers. comm.). Inadvertent lectotipifications were permitted and common before 2001, usually when a specimen mistakenly believed to be a holotype was by that statement accidentally designated as a lectotype (ICN Art. 9, Ex. 11). However, Garilleti’s work is unusual in bearing an explicit statement that the work was to contain no lectotipifications. Further, “type material,” as opposed to “type specimen,” could refer to one or multiple syntypes or original material, so does not indicate that a single specimen mentioned was considered to be the type. Therefore, subsequent authorities have interpreted his mentions of “type material” as not constituting effective typifications (e.g., KNAPP, 2007; BUIRA & al., 2015; IAMONICO & VALDÉS, 2017; FERRER, 2021). Because similar mentions were made for over 1000 taxa, if those were to be interpreted as unintended typifications, it would be very disruptive to nomenclature. Therefore, we follow established practice in considering that no effective designation of type has been made.

The sheet MA 475443 bears a complete and well-preserved material, and two original labels handwritten by Cavanilles: 1) “*Biscutella montana* / Icon T. 177 / Aprili Santa Ana de Albayda”, and 2) “*Biscutella montana* n. / Icon. Tab. 177. / Habitat in culmine Montis Stæ / Annæ de Albayda prope Cova Alta / 17 Aprili 1792” (fig. 2).

On the other hand, there is a relevant specimen at BM, (BM000750318). This sheet bears a plant with leaves, flowers and fruits, and a handwritten label: “*Biscutella montana* Cav. Ic. / Cavanilles 1803”. Unfortunately, this specimen at BM lacks relevant information such as provenance and date of collection. Therefore, although it may be original material (however, based on the date annotated on the label “1803”, this material is therefore post-protologue and cannot be treated as original material), it is not possible to accredit this statement, so we do not recommend their choice as a lectotype.

In conclusion, among the original elements, the specimen at MA and the excellent illustration included in the protologue, we designate as the lectotype of the name *Biscutella montana* the specimen MA 475443. This material matches the traditional concept and current use of the name.

***Biscutella montana* Cav.**, Icon. 2: 59, lámina 177. XII-1793 “Habitat in altioribus montibus regni Valentini, praecipue tamen in *Cabesó* qui Lucentum et Saxosam iacet, et in *Cova alta* prope Conventum Sanctae Annae”

Lectotypus (designated here): Spain, Valencia, Montis Santa Anna de Albayda prope Cova Alta, 17 April 1792, A.J. Cavanilles s.n., MA 475443! (Fig. 2).

Biscutella tomentosa Lag. ex DC.

CANDOLLE (1821: 416) published the name *Biscutella tomentosa*, with the number “23”, followed by a description “B. [*Biscutella*] siliculis tenuissimè pubescentibus punctato-scabris, foliis oblongis basi angustatis repando-dentatis mollissimè tomentosus, rameis amplexicaulibus”. The protologue also included the name “B. [*Biscutella*] tomentosa. Lag! in litt.”, the provenance “Hab. in montibus Hispaniae ad saxorum rimas prope Onteniente (Lagasca). (v.s.sp.)”, and the comment “Planta subpedalis. Caulis basi lignescens, tomento denso candido mollissimo obtectus. Rami plurimi, annotini, filiformes, infernè tomentosi, parcè ramosuli. Folia ramea inferiora cordato-ovata aut oblonga amplexicaulia, superiora sublinearia (Lag.)”.

There is a relevant specimen preserved in the Candolle herbarium at G-DC (G00202774). The sheet bears a poorly preserved specimen, leaves fragments and a poorly preserved inflorescence with only two fruits. The sheet contains an original label handwritten by Lagasca in 1819, and a second one label handwritten by Candolle, annotated as “*Biscutella tomentosa* Lag!” (fig. 3).

We have not found any original material of Lagasca in the herbaria consulted (e.g., BM, K, MA, MPU, P, SE).

In conclusion, this specimen at G-DC is the only original material found for this name. However, as cannot exclude that there were more than one specimen of this taxon, we consider this specimen in this work as the lectotype of the name, admitting that the specimen might well be the holotype of the name *Biscutella tomentosa*.

***Biscutella tomentosa* Lag. ex DC.**, Syst. Nat. 2: 168. 1821 “Hab. in montibus Hispaniae ad saxorum rimas prope Onteniente (Lagasca)”

Lectotypus [or perhaps holotype] (designated here): Spain, Onteniente, 1819, M. Lagasca 154, G-DC [G00202774] (Fig. 3).

[= *B. gr. montana* Cav.].

***Biscutella montana* var. *genuina* subvar. *laevis* Rouy**

ROUY (1886: 525) described *Biscutella montana* α [var.] *genuina* subvar. *laevis* providing a very brief diagnosis: “Silicules lisses”.

In the personal herbarium of Rouy at LY there are two relevant sheets, with barcodes LY0676365 and 0676364. The sheet LY0676365 bears three plants, with leaves and flowers, and some plant fragments. The sheet contains a label handwritten by Rouy “Plantes d’Espagne / Flore de la Province de Alicante / *Biscutella montana* Cav. / var. *genuina* (s.var. *laevis*) / Denia: Le Mongo: abondant sur / les parois des hauts rochers / 1 Juin 1883 / Legi G. Rouy”. The sheet LY 0676364 bears two plants, with leaves, flowers, and fruits, and an original handwritten label by Rouy with the same information that appears in the label of the sheet LY 0676365.

We designate as the lectotype of the name *Biscutella montana* var. *genuina* subvar. *laevis* the specimen with barcode LY0676365.

***Biscutella montana* α [var.] *genuina* subvar. *laevis* Rouy** in Bull. Soc. Bot. France 33: 525. 1886

“Alicante” y “Denia: Le Mongo [in sched. at LY0676365 and LY0676364]”

Lectotypus (designated here): Spain, Alicante, Denia, Le Mongo, abondant sur les parois des hauts rochers, 1 June 1883, G. Rouy s.n., LY0676365! (fig. 4). **Isolectotypus:** LY0676364!

[= *B. montana* Cav.]

***Biscutella montana* var. *genuina* subvar. *scabridula* Rouy**

The protologue of *Biscutella montana* α [var.] *genuina* subvar. *scabridula* only includes the brief diagnosis: “Sicules munies de fines papilles blanchâtres” (ROUY, 1886: 525).

There is an original specimen in the Rouy herbarium in LY (0676366). The specimen, two plants with leaves and flowers, and a separate inflorescence, is accompanied by a handwritten label: “Plantes d’Espagne / Flore de la Province de Alicante / *Biscutella montana* Cav. / var. *genuina* Rouy (s.var. *scabridula*) / Denia: Le Mongo: abondant / sur les parois des hauts rochers / 1 Juin 1883 / Legi G. Rouy”. We designate this specimen as the lectotype of the name *Biscutella montana* var. *genuina* subvar. *scabridula*.

Biscutella montana* α [var.] *genuina* subvar. *scabridula Rouy in Bull. Soc. Bot. France 33: 525. 1886

“Alicante” y “Denia: Le Mongo [in sched. at LY0676366]”

Lectotypus (designated here): Spain, Alicante, Denia, Le Mongo, sur les parois des hauts rochers, 1 June 1883, G. Rouy s.n., LY0676366! (Fig. 5).

[= *B. montana* Cav.]

***Biscutella montana* var. *subdecurrens* Rouy**

The protologue of *Biscutella montana* β [var.] *subdecurrens* includes a diagnosis: “Diffère de la forme α par ses feuilles plus étroites atténuées en un pétiole moins court, ses silicules peu ou point échanrées au sommet, à lobes formant Presque un angle droit avec le style” (ROUY, 1886: 525-526).

There is a relevant sheet at LY (0676363). The sheet bears a plant, with leaves, flowers, and fruits, and a handwritten label by Rouy, annotated as: “Plantes d’Espagne / Flore de la Province de Alicante / *Biscutella montana* Cav. / var. *subdecurrens* Rouy / Denia: le Mongo; abondant rare / sur

les parois des hauts rochers. / 1 Juin 1883 / Legi G. Rouy”. We designate this specimen as the lectotype of the name.

***Biscutella montana* β [var.] *subdecurrens* Rouy** in Bull. Soc. Bot. France 33: 525. 1886

“Alicante” y “Denia: le Mongo [in sched. at LY0676363]”

Lectotypus (designated here): Spain, Alicante, Denia, le Mongo, sur les parois des hauts rochers, 1 June 1883, G. Rouy s.n., LY0676363! (fig. 6).

[= *B. gr. montana* Cav.]

***Biscutella montana* var. *longifolia* Rouy**

The protologue of *Biscutella montana* γ [var.] *longifolia* includes the synonym “*B. [Biscutella] tomentosa* Lag.” followed by a complete description “Feuilles moins épaisses et moins blanchâtres-laineuses que dans la forme α , mais toujours molles et veloutées, les inférieures moins nettement disposées en rosette, oblongues-lancéolées, allongées (de 7 à 12 centim. de long, pétiole compris), plus ou moins longuement atténuées en pétiole; feuilles caulinaires plus régulièrement décroissantes de la base au sommet, à peine sinuées ou peu dentées. Plante peu rameuse et seulement dans le quart supérieur, à rameaux dressés” (ROUY, 1886: 526).

There are three original specimens at LY. The sheet with barcode LY0676431 bears a complete plant, and an original and handwritten label, annotated as: “Plantes d’Espagne / Flore de la Province de Alicante / *Biscutella montana* Cav. / var. *longifolia* Rouy (*B. tomentosa* Lag.!) / Denia: rochers abrupts du promon- / toire d’Hifac. / 30 mai 1883 / Legi G. Rouy”. There is a duplicate of this specimen at LY (a specimen mounted on two sheets, with barcodes and LY0676427 [feuille 1] and LY0676427 [feuille 2]). The sheet bears a complete plant, with leaves, flowers and fruits, and a label with the same information that the label on the sheet LY0676431.

On the other hand, the sheet LY0676432 bears a plant only with leaves, and an original label: “Plantes d’Espagne / Flore de la Province de Alicante / *Biscutella montana* Cav. / var. *longifolia* Rouy (*B. tomentosa* Lag.!) / Denia: seul pied trouvé sur la sierra / de Segarria, dans une grotte du [ilegible] de Vergel. – 4 Juin 1883 / Legi G. Rouy”. Therefore, these two specimens are not duplicates

We designate as the lectotype of the name *Biscutella montana* var. *longifolia* the most complete and informative specimen, LY0676431.

***Biscutella montana* γ [var.] *longifolia* Rouy** in Bull. Soc. Bot. France 33: 525. 1886

“Alicante”, “Denia: rochers du promontorie d’Hifac [in sched. at LY0676431 and LY0676427] “Denia: seul pied trouvé sur la sierra de Segarria, dans une grotte du [ilegible] de Vergel [in sched. at LY0676432]”

Lectotypus (designated here): Spain, Alicante, Denia: rochers abrupts du promontoire d’Hifac, 30 May 1883, G. Rouy s.n., LY0676431! (fig. 7). **Isolectotypus:** LY0676427 [feuille 1] and LY0676427 [feuille 2].

[= *B. rosularis* Boiss. & Reut.]

***Biscutella montana* var. *patula* Rouy**

The protologue of *Biscutella montana* δ [var.] *patula* comprises only a brief diagnosis “Feuilles assez semblables à celles de la var. *longifolia*, mais à villosité devenant rude. Plante très rameuse, souvent presque dès la base, à rameaux étalés.” (ROUY, 1886: 526).

There is a sheet at LY (0676429), that bears original material of this name. The sheet bears two plants, with

leaves and flowers, and a handwritten label, annotated as: “Plantes d’Espagne / Flore de la Province de Alicante / *Biscutella montana* Cav. / var. *patula* Rouy / Denia: montagnes entre Benisa / et Gata / 31 mai 1883 / Legi G. Rouy”. This specimen is designated as the lectotype of the name *Biscutella montana* var. *patula*.

Biscutella montana* δ [var.] *patula Rouy in Bull. Soc. Bot. France 33: 526. 1886

“Alicante” y “Denia: montagnes entre Benisa et Gata [in sched. at LY0676429]”

Lectotypus (designated here): Spain, Alicante, Denia, montagnes entre Benisa et Gata, 31 May 1883, *G. Rouy s.n.*, LY0676429! (fig. 8).

[= *B. gr. montana* Cav.]

***Biscutella montana* var. *brevifolia* Rouy**

ROUY (1886: 526) described *Biscutella montana* ε [var.] *brevifolia* providing a description in French: “Diffère de la forme α [var. *genuina*] par sa souche plus ligneuse, ses feuilles toutes radicales (les caulinaires étant réduites à des feuilles bractéiformes linéaires), elliptiques, presque et régulièrement sinuées-dentées, plus petites (2-3 centim. de long), aiguës, à villosité moins soyeuse Silicules peu échancrées au sommet”, and the synonym “*B. rosularis* Boiss. et Reut.”.

There is a sheet in the personal herbarium of Rouy at LY (0003325), which bears original material of this name (fig. 9). This sheet contains two plants, with leaves and flowers, and is accompanied by an original handwritten label, annotated as: “Plantes d’Espagne / Flore de la Province de Alicante / *Biscutella montana* Cav. var. *brevifolia* Rouy! / = *B. rosularis* B. & R. / Denia: rochers du promontorie / d’Hifac. / May 30, 1883 / Legi G. Rouy”.

We consider the specimen as the lectotype of the name *Biscutella montana* var. *brevifolia*. This specimen matches well with the current usage and concept of the name as a synonym of *Biscutella montana*.

Biscutella montana* ε [var.] *brevifolia Rouy in Bull. Soc. Bot. France 33: 526. 1886

“Alicante” y “Denia: rochers du promontorie d’Hifac [in sched. at LY0003325]”

Lectotypus (designated here): Spain, Alicante, Denia: rochers du promontorie d’Hifac, 30 May 1883, *G. Rouy s.n.*, LY0003325! (fig. 9).

[= *B. rosularis* Boiss. & Reut.]

***Biscutella laevigata* var. *latifolia* Willk.**

The protologue of *Biscutella laevigata* var. *latifolia* includes a diagnosis in Latin “foliis basilaribus maximis (ad 7 cm. usque longis et 24-30 mm. latis), late lanceolatis vel elliptico-spathulatis, in petiolum attenuatis, planis tenuibus, subintegerrimis vel sinuato-dentatis, supra pubescentibus viridibus, subtus molliter villosis canescentibus” followed by the provenance “In regno Valentino (ad rupes verticales montis La Segarria atque ad Castillo de S. Juan pr. Gandia, Lacaïta! d. 3. Apr. 1884” (WILLKOMM, 1891: 87).

There is a specimen at BM (000750320) that is part of the gathering cited by Willkomm in the protologue. The specimen is a complete plant and well-preserved, with leaves, flowers, and fruits. The sheet contains several labels. A label handwritten by Lacaïta, annotated as: “37 / *Biscutella laevigata* L. / var: (nova!) *latifolia* Wk.! / Gandia (in regno Valentino) / shady rocks of Castillo de S. Juan / 3-4-84” and “[coll. C. C. Lacaïta]”; 2) a printed label “Herb. C. C.

Lacaïta – Bequeathed 1933”; a label handwritten by Willkomm: 3) “37 et 98^b / Videtur mihi var. (nov.!) *latifolia* *Biscutella* / *laevigata* L. – *B. rosularis* B. et R., quem mihi / ignota, ex descriptione ab [...] planta omnino distincta / videtur. / Willkomm!; another handwritten label: 4) “37 / *B. montana* Cav. var: / I am inclined to refer their / to *B. montana*, [...] that / my 98^b. which Wk. thinks / identical with this, is certainly / a form of *B. montana*” (fig. 10).

We have been unable to trace further original material in other herbaria. Therefore, we designate as a lectotype of the name *Biscutella laevigata* var. *latifolia* the specimen preserved at BM.

Biscutella laevigata* var. *latifolia Willk. in Österr. Bot. Zeit. 41: 87. 1891

“In regno Valentino ad rupes verticales montis La Segarria atque ad Castillo de S. Juan pr. Gandia, Lacaïta! d. 3. Apr. 1884”.

Lectotypus (designated here): Spain, Valencia, Gandia, Castillo de San Juan, 3 April 1884, *C.C. Lacaïta* 37, BM000750320! (fig. 10).

[= *B. montana* Cav.]

***Biscutella leptophylla* Pau**

The protologue of *Biscutella leptophylla* (PAU, 1907: 88) includes a description “Planta ad 50 cm usque ramosa foliis angustissimis laevibus seu parce hispidualis supra médium 2-4 ofidis caulinis subulatis, ramulis valde elongato-divaricatis parce bracteatis ei parvis, floribus arctecortmbois, soliculis 9 × 6 mm” followed by the provenance “Ayora”, and the comments: “Forma foliis hispidiioribus ad Alpuente”, and “La *B. stenophylla* Duf. según descripción del autor y sinónimos (*B. coronopifolia* DC., tab. 841 de Barrelier), así sean propuestos con duda, corresponde á la *B. pyrenaica* Willkomm. suppl. p. 295, no. 4611; forma idéntica á las citadas bajo *B. stenophylla* Duf. en el no. 4610 de Las Parras de Martín! Albarracín! y Sierra de Jabalambre! / Las confusiones de algunos autores no dejan de tener su razón de existencia, por no existir la *B. stenophylla* en los montes de las cercanías de Játiva; y por eso que su autor dice: “Je ne l’ai jamais observée que dans le royaume de Valence, et particulièrement sut les montagnes de St. Philippe”. Es planta de mayores alturas (Peñagolosa, Sierra de El Toro) y de terrenos más fríos. Tiene por sinónimos *B. coronopifolia* Linneo, mant. alt. p. 255 (1771) excl. pl. itálica; Cavanilles! obs. II, 233 (1797) – *B. laxa* Boiss. et Rt.”.

The protologue also includes a gathering: “Porta y Rigo, 1891, iter III Hispanicum no. 166!”.

Carlos Pau Español (1857–1937) was a Spanish botanist and pharmacist at Segorbe (Castellón province). Between 1880 and 1930 he made extensive field work, especially in Eastern Iberian Peninsula, where he collected a large quantity of herbarium specimens. Furthermore, he was connected with more than one hundred botanists, naturalists or amateur botanists who exchanged herbarium specimens. His herbarium was one of the largest in Spain, including about 80,000–100,000 specimens at the end of his life. As a result, a large number of new species described by him were based on this herbarium. Pau’s own herbarium was given after his death to the Royal Botanic Gardens of Madrid (MA). Many duplicates are preserved in the herbarium of Botanic Institute of Barcelona (BC), and other public herbaria (i.e., G, MAF, VAL) (see STAFLEU & COWAN, 1983).

There are several relevant specimens at MA. The sheet with barcode MA-01-00044455 bears three complete and well-preserved plants of this species. The sheet contains

three labels: 1) “Nº 166. Porta et Rigo iter III Hispanicum 1891 / *Biscutella laxa* Boiss. Prodr. III. 763 / Albacete in pascuis rupestribus m^l Mugron / sol. calcar. 800-900^m s.m. / 3 Junii”; 2) an original label handwritten by Pau, annotated as: “*Biscutella leptophylla* Pau” / “Rev. C. Pau” / “44455”; and a third revision label with date 1965. This specimen is part of the gathering cited by Pau in the protologue.

The specimen with barcode MA-01-00044458 bears three plants, with leaves and several fruits, and some separate stems, a specimen. The sheet bears a handwritten label by Pau: “Caroli Pau herbarium hispanicum / *Biscutella leptophylla* Pau forma / foliis hispidioribus / Alpuente Valentiae / Legi 21 Aug. 1895”.

Finally, the specimen with barcode MA-01-00044456 bears two plants, with leaves, flowers, and fruits; and some separate stems. The sheet contains a handwritten label by Pau: “Caroli Pau herbarium hispanicum / *Biscutella leptophylla* Pau / Ayora vias Valentia / Legi 20-VI-1906”.

In conclusion, among these specimens, as in lectotype designation, syntypes have priority over uncited specimens and cited illustrations (see Art. 9.12 of *ICN*), we designate as the lectotype of the name *Biscutella leptophylla* the specimen syntype MA-01-00044455.

Biscutella leptophylla Pau in Butl. Inst. Catalana Hist. Nat. 7: 88. 1907

“Ayora. Forma foliis hispidioribus ad Alpuente”

Lectotypus (designated here): Spain, Albacete, in pascuis rupestribus m^l Mugron, 800-900^m s.m., 3 June 1891, *P. Porta & G. Rigo 166 (Iter III Hispanicum 1891)*, MA-01-00044455! (fig. 11).

[≡ *B. stenophylla* subsp. *leptophylla* (Pau) Mateo & M.B. Crespo]

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Figure 1. Cavanilles's original material of *Biscutella montana* Cav, illustration n. 177 of *Biscutella montana* published by CAVANILLES (1793: tab. 177).

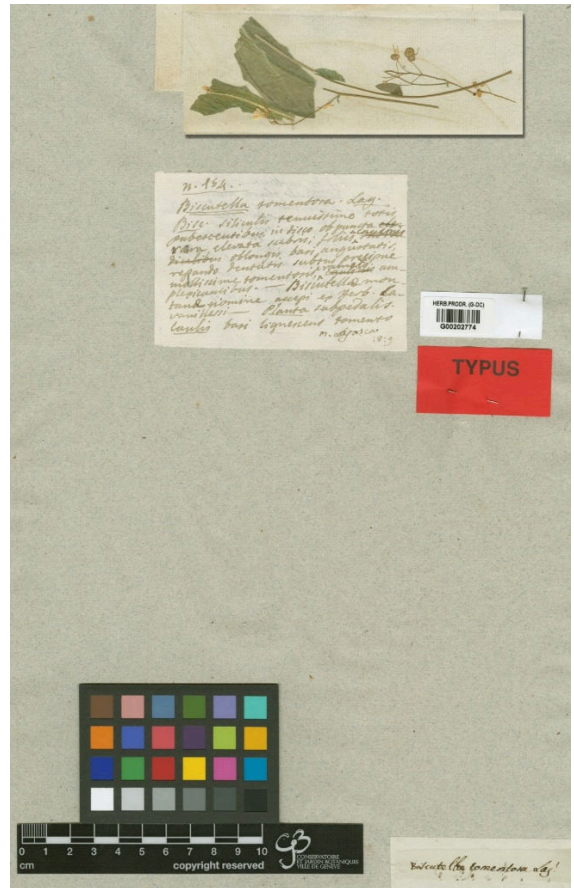


Figure 3. Lectotype of *Biscutella tomentosa* Lag. ex DC., G-DC, G00202774. Photography by courtesy of the herbarium G, reproduced with permission.



Figure 2. Lectotype of *Biscutella montana* Cav., MA 475443. Photography by courtesy of the herbarium MA, reproduced with permission.



Figure 4. Lectotype of *Biscutella montana* var. *genuina* subvar. *laevis* Rouy, LY0676365. Photography by courtesy of the herbarium LY, reproduced with permission.



Figure 5. Lectotype of *Biscutella montana* var. *genuina* subvar. *scabridula* Rouy, LY0676366. Photography by courtesy of the herbarium LY, reproduced with permission.



Figure 7. Lectotype of *Biscutella montana* var. *longifolia* Rouy, LY0676431. Photography by courtesy of the herbarium LY, reproduced with permission.

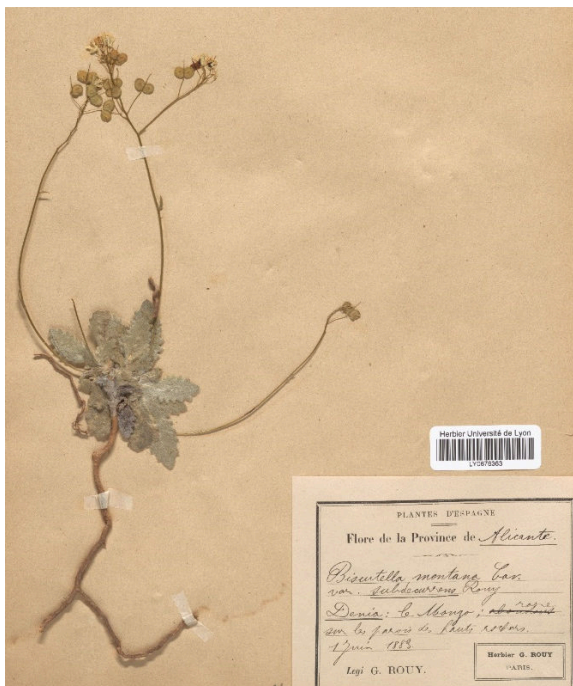


Figure 6. Lectotype of *Biscutella montana* var. *subdecurrens* Rouy, LY0676363. Photography by courtesy of the herbarium LY, reproduced with permission.



Figure 8. Lectotype of *Biscutella montana* var. *patula* Rouy, LY0676429. Photography by courtesy of the herbarium LY, reproduced with permission.

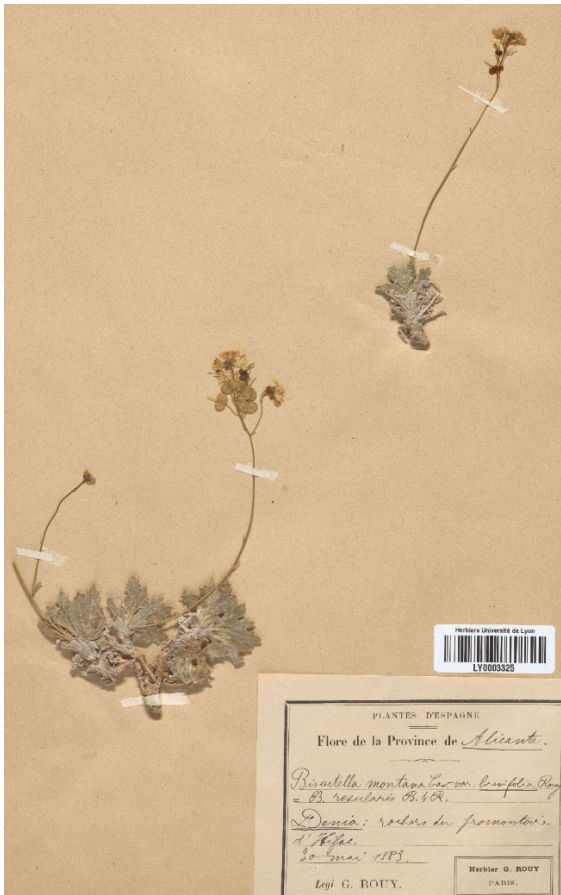


Figure 9. Lectotype *Biscutella montana* var. *brevifolia* Rouy, LY0003325. Photography by courtesy of the herbarium LY, reproduced with permission.

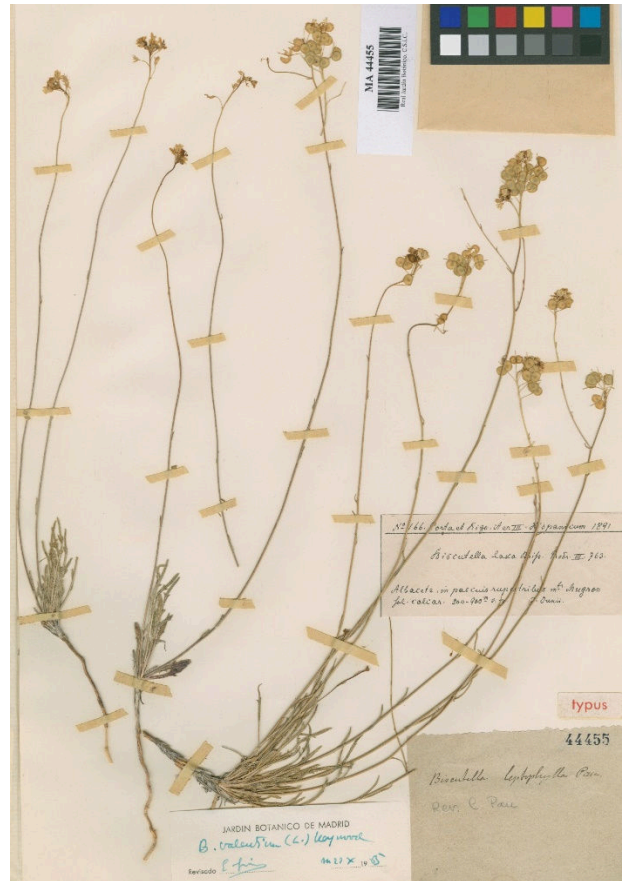


Figure 11. Lectotype *Biscutella leptophylla* Pau, MA-01-00044455. Photography by courtesy of the herbarium MA, reproduced with permission.

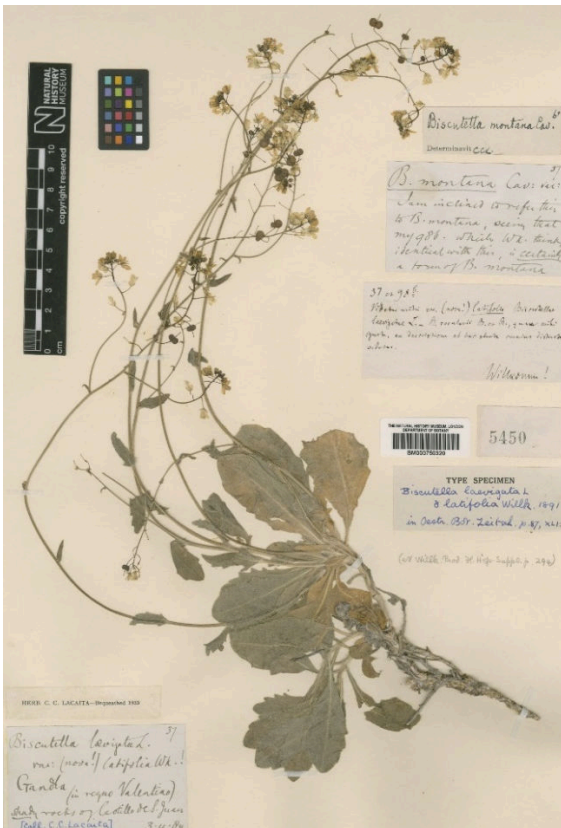


Figure 10. Lectotype *Biscutella laevigata* var. *latifolia* Willk., BM000750320. Photography by courtesy of the herbarium BM, reproduced with permission.