Typification of Linnaean plant names in *Brassicaceae* (*Cruciferae*)

Edited by Steve Cafferty & Charles E. Jarvis

Department of Botany, The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. E-mail: s.cafferty@nhm.ac.uk (author for correspondence); c.jarvis@nhm.ac.uk

Lectotypes, neotypes and epitypes are designated by 23 specialists for 86 previously untypified Linnaean plant names belonging to the family *Brassicaceae* (*Cruciferae*), and one epitype is designated for a previously lectotypified name. These newly proposed types support the current usage of the names concerned. Earlier but ineffective or supersedable type statements are discussed.

KEYWORDS: *Brassicaceae*, Linnaean plant names, nomenclature, typification.

INTRODUCTION

As part of continuing research by the Linnaean Plant Name Typification Project at The Natural History Museum, London, all Linnaean names belonging to the family *Brassicaceae* have been investigated. Linnaeus validly published at the rank of species or variety 244 names now placed in this family (excluding 10 re-namings). Effective typifications exist for 123 of these. Each of the 121 untypified names was examined closely, relevant literature was searched for typifications, and details of all original elements were compiled. Specialists were then approached to establish choices of lectotype (or neotype where original material is lacking) to fix the current application of each name.

Of the 121 untypified names 86 are newly typified here in addition to the designation of an epitype for one previously lectotypified name. Of the remaining 35 names, 28 are to be typified independently in other works or are currently being studied, four are to be the subject of conservation or rejection proposals, and three have proven unidentifiable.

There is insufficient space in the present work to include all details pertinent to each typification (e.g., full lists of original material), but further information on individual type designations is freely available from the editors of the paper. Moreover, information on other Linnaean names, whether already typified or not, is available on request. From late 2002, information on individual names will begin to become available via the Linnaean Project's website (http://www.nhm.ac.uk/botany/linnaean/). The first group of names to appear there will be Linnaean generitypes, followed by Linnaean names in the family *Asteraceae*. The Project is always keen to collaborate with specialists in particular plant groups, from families down to genera or even single species, in order to establish choices of type or to identify cases where conservation or rejection proposals are necessary to avoid nomenclatural disruption.

METHODS

The methods used for the present work have been described in detail by Turland & Jarvis (1997: 458–461) and will not be repeated in full. However, the following points may be helpful.

In selecting types for the present paper, wherever a choice was possible between specimens and illustrations, the most complete of the specimens has generally been chosen, except where such a choice would disrupt current usage, in which case an illustration supporting current usage has been chosen instead. All lectotype illustrations designated here have been carefully evaluated and if considered inadequate for the purpose of fixing the precise taxonomic application of the name, then a suitable epitype specimen (Art. 9.7) has been designated to remove ambiguity. For some names, the lectotype illustration is already adequately supported by a typotype or voucher specimen.

In situations where all potential sources of original material were checked but nothing relevant was found, then (and only then) have neotypes been designated. Both neotypes and epitypes have generally been chosen from among material originating from the geographical area given by Linnaeus in his statements of provenance ("Habitat in ...") in the respective protologue. Great care has been taken to try to ensure that all newly proposed types support the current usage of the names.

LIST OF CONTRIBUTORS

The following specialists, for whose collaboration

we are most grateful, have contributed typifications to this work:

Ihsan Al-Shehbaz – Missouri Botanical Garden, P.O. Box 299, St. Louis, Missouri 63166, U.S.A.

Peter W. Ball – Department of Botany, Erindale Campus, University of Toronto, Mississauga, Ontario, Canada L5L IC6.

Liv Borgen – Botanical Garden and Museum, University of Oslo, 0562 Oslo, Norway.

Alexandr Ebel – Department of Botany, Tomsk State University, 36 Lenina Street, 634050 Tomsk, Russia.

Carlos Gómez Campo – Departamento de Biología Vegetal, Escuela T. S. de Ingenieros Agrónomos, Universidad Politécnica de Madrid, Ciudad Universitaria, E-28040 Madrid, Spain.

Zoë Gowler – 5 Eaton Close, Leamington Spa, Warwickshire, CV32 6HR, England.

Ian Hedge – Royal Botanic Garden, 20a Inverleith Row, Edinburgh, EH3 5LR, Scotland.

Marie Jordaan – National Botanical Institute, Private Bag X101, Pretoria 0001, Republic of South Africa.

Kit Tan – Botanical Museum, University of Copenhagen, Gothersgade 130, DK-1123, Copenhagen K, Denmark.

Dmitar Lakusic – Botanical Institute and Garden, Faculty of Biology, University of Belgrade, Takovska 43, YU-11000 Belgrade, Yugoslavia.

Ginés López González – Real Jardín Botánico, Plaza de Murillo 2, 28014 Madrid, Spain.

Karol Marhold – Institute of Botany, Slovak Academy of Sciences, Dúbravská cesta 14, SK-842 23 Bratislava, Slovak Republic.

Juan Batista Martínez Laborde – Departamento de Biología Vegetal, Escuela T. S. de Ingenieros Agrónomos, Universidad Politécnica de Madrid, Ciudad Universitaria, E-28040 Madrid, Spain.

Pavol Mártonfi – Department of Experimental Botany and Genetics, P.J. Šafárik University, Mánesova 23, SK 041 54 Košice, Slovak Republic.

Margarita Moreno – Departamento de Biología Vegetal, Escuela T. S. de Ingenieros Agrónomos, Universidad Politécnica de Madrid, Ciudad Universitaria, E-28040 Madrid, Spain.

Adolf Polatschek – Naturhistorisches Museum Wien, Burgring 7, Postfach 417, A-1014 Wien, Austria.

Antonio J. Pujadas Salvà – Depto. Ciencias y Recursos Agrícolas y Forestales, ETSIAM Universidad de Córdoba, Apdo. 3048, E-14080 Córdoba, Spain.

James L. Reveal – 18625 Spring Canyon Road, Montrose, Colorado 81401, U.S.A.

Tim Rich – Botany Department, National Museum of Wales, Cardiff CF1 3NP, Wales.

Josep Rosselló – Departamento de Biología Vegetal, Universidad de Valencia, E-46100 Burjassot (Valencia), Spain.

Eduardo Sobrino Vesperinas – Departamento de Producción Vegetal Botánica y Protección Vegetal, Escuela T. S. de Ingenieros Agrónomos, Universidad Politécnica de Madrid, Ciudad Universitaria, E-28040 Madrid, Spain.

Nick Turland – Missouri Botanical Garden, P.O. Box 299, St. Louis, Missouri 63166, U.S.A.

Luis Villar Perez – Instituto Pirenaico de Ecología (C.S.I.C.), Apdo. 64, E-22700 Jaca (Huesca), Spain.

NEW TYPIFICATIONS

The 86 new, and one corrected, type designations are presented alphabetically in the following format: Linnaean name with full bibliographic reference, any earlier homonym (placed in square brackets), any later homotypic Linnaean name (recombination), the currently accepted name (when different), the lectotype, any typotype or voucher specimen that supports a lectotype illustration, any epitype, and any explanatory notes. For each entry, the first name to be cited is the name being typified; any later recombinations are, of course, simultaneously typified. The currently accepted name in each entry is shown in ***bold italic*** typeface, and is placed in square brackets if not homotypic with the name being typified.

Alyssum alpestre L., Syst. Nat., ed. 12, 2: 436; Mant. Pl.: 92. 15–31 Oct 1767. – Lectotype (designated here by Polatschek): [icon] "*Alyssum caulibus fruticulosis, diffusis, foliis subrotundis, incanis*" in Gerard, Flora Gallo-provincia: t. 13, f. 2. 1761.

Alyssum campestre (L.) L. – see *Clypeola campestris* L.

Alyssum deltoideum L., Sp. Pl. ed. 2, 2: 908. Jul-Aug 1763. ≡ ***Aubrieta deltoidea*** (L.) DC. – Lectotype (designated here by Al-Shehbaz & Turland): Herb. Linn. 828.25 (LINN).

Alyssum minimum L., Sp. Pl.: 651. 1 May 1753. [= ***Lobularia maritima*** (L.) Desv.] – Lectotype (designated here by Borgen): Herb. Linn. 828.8 (LINN).

Alyssum sinuatum L., Sp. Pl.: 651. 1 May 1753. ≡ ***Aurinia sinuata*** (L.) Griseb. – Lectotype (designated here by López González): Herb. Burser XI: 30, right-hand specimen (UPS).

Note. — A specimen in the Clifford herbarium (BM) was indicated as type by Dudley (in sched., 1962) but

apparently never published. López González (1995: 125-127) discussed the original elements, and illustrated Clusius's figure (as fig. 1) but did not choose a type. He does so here, preferring a well-preserved Burser specimen, bearing mature fruits, to the Clifford sheet.

Alyssum utriculatum L., Syst. Nat., ed. 12, 2: 437; Mant. Pl.: 92. 15-31 Oct 1767. ≡ ***Alyssoidès utriculata*** (L.) Medik. – Lectotype (designated here by Al-Shehbaz & Turland): Herb. Linn. 828.22 (LINN).

Note. — Hartvig (1986: 276) noted the existence of 828.22 and 828.23 (LINN) but did not designate a type.

Alyssum vesicaria L., Sp. Pl.: 651. 1 May 1753. ≡ ***Coluteocarpus vesicaria*** (L.) Holmboe – Lectotype (designated here by Al-Shehbaz & Turland): [icon] "*Vesicaria Orientalis foliis dentatis Coroll.*" in Tournefort, Rel. voy. Levant 2: no number ["t. 14"]. 1717.

Note. — Hedge (1968: 97) indicated unspecified Tournefort material as type. However, as Linnaeus did not have the opportunity to study Tournefort's specimens, this is not an original element for Linnaeus' name, so we do not accept this as a valid typification.

Anastatica syriaca L., Sp. Pl., ed. 2: 895. Jul-Aug 1763. ≡ ***Euclidium syriacum*** (Linnaeus) R. Br. – Lectotype (designated here by Hedge): Herb. Linn. No. 821.3 (LINN).

Note. — Jafri (1973: 103) indicated both 821.2 and 821.3 (LINN) as "type" and therefore did not make an effective choice.

Arabis canadensis L., Sp. Pl.: 665, 1200. 1 May 1753. – Lectotype (designated here by Reveal): *Clayton 400*, left hand specimen, Herb. Linn. No. 842.12 (LINN; iso- BM).

Arabis capensis L., Syst. Nat., ed. 10: 1135. 7 Jun 1759. [= ***Heliophila pusilla*** Linn. f. var. ***pusilla***] – Lectotype (designated here by Jordaan): "*Arabis capensis*" ex Herb. Linn. (BM).

Note. — The lectotype chosen here is one of the specimens given by J.E. Smith to Sir Joseph Banks from the Linnaean Herbarium (as a supposed duplicate) after its purchase from Linnaeus' widow. It is listed by Savage (1937: 10).

Arabis grandiflora L., Sp. Pl.: 665. 1 May 1753. [=***Parrya nudicaulis*** (L.) Regal] – Lectotype (designated here by Marhold): Herb. Linn. 842.3 (LINN).

Arabis halleri L., Sp. Pl., ed. 2: 929. Jul-Aug 1763. ≡ ***Arabidopsis halleri*** (L.) O'Kane & Al-Shehbaz – Lectotype (designated here by Al-Shehbaz): [icon] "*Sisymbrium [palustre album] foliis imis Barbareae reliquis*" in Haller, Opusc. Bot.: ["t. 1, f. 1"]. 1749 – Epitype (designated here by Al-Shehbaz): Herb. Linn. No. 842.11 (LINN).

Note. — O'Kane & Al-Shehbaz (1997: 325) indicated Herb. Linn. No. 842.11 (LINN) as holotype. However, the specimen is unannotated by Linnaeus and cannot be considered original material for the name. This choice is therefore rejected here, and a Haller illustration designated as lectotype in its place, supported by the Linnaean sheet as epitype.

Arabis turrita L., Sp. Pl.: 665. 1 May 1753. – Lectotype (designated here by Al-Shehbaz & Turland): [icon] "*Brassica sylv. albido flore nutante siliqua*" in Boccone, Museo di Piante: t. 72. 1697. – Epitype (designated here by Al-Shehbaz & Turland): [Italy]. Toscana, La Verna, 27 May 1956, *Corradi s.n.* (FI).

Note. — As Boccone's illustration is unclear in some details, an epitype is also designated here. Boccone stated "Cresce questa Pianta nei Monti Siciliani, dell'Umbria, in quelli della Vernia, e della Pania in Italia", and the epitype is chosen from La Verna (= "Vernia"). We are most grateful to Riccardo Baldini (FI) for his help and advice in tracing suitable material.

Brassica arvensis L., Syst. Nat., ed. 12, 2: 444; Mant. Pl.: 95. 15-31 Oct 1767. ≡ ***Moricandia arvensis*** (L.) DC. – Lectotype (designated here by Sobrino Vesperinas): Herb. Linn. No. 844.6 (LINN).

Brassica eruca L., Sp. Pl.: 667. 1 May 1753. ≡ ***Eruca sativa*** Mill. – Lectotype (designated here by Gómez-Campo): Herb. Linn. No. 844.18 (LINN).

Note. — Although Heath (1997: 149) says this is partly based on a Bauhin & Cherler (1651) element, this cannot constitute formal typification.

Brassica erucastrum L., Sp. Pl.: 667. 1 May 1753. [= ***Raphanus raphanistrum*** L.], **syn. nov.** – Lectotype (designated here by Sobrino Vesperinas): Herb. Linn. 844.17 (LINN).

Note. — There have been some difficulties over the application of this name. Many post-Linnaean authors from Villars (1779) onwards (including recent treatments by e.g., Gómez Campo, 1993 and Tutin & Ackeroyd, 1993) have applied the name in the sense of the taxon now widely known as *Erucastrum nasturtiifolium* (Poiret) O. E. Schulz. However, Schulz (1919) himself applied the Linnaean name as the basionym of *Brassicella erucastrum* (L.) O. E. Schulz (= *Coincya monensis* (L.) Greuter & Burdet subsp. *recurvata* (All.) Leadlay). Pugsley (1936), looking more closely at the

original elements involved, regarded the name as of doubtful application, determining a Clifford sheet and the Fuchsius (1542) element as *Diplotaxis tenuifolia* (L.) DC., Bauhin's (1623) plant as probably being *Erucastrum obtusangulum* (Schleich.) Rchb. f. (now accepted as a synonym of *E. nasturtiifolium*) and a sheet in LINN as *Raphanus raphanistrum*. However, recent study by Sobrino Vesperinas of the material linked to Bauhin's description in Herb. Burser (IV: 62, UPS), which lacks fruits and is in poor condition, shows it to be material of either *D. tenuifolia* or *D. muralis* (L.) DC. As none of the original material matches current usage (albeit in synonymy), we are therefore typifying Linnaeus' name such that it falls into the synonymy of another 1753 name, *R. raphanistrum*, in order to avoid further nomenclatural disruption.

Brassica vesicaria L., Sp. Pl.: 668. 1 May 1753. ≡ ***Eruca vesicaria*** (L.) Cav. – Lectotype (designated here by Gómez Campo): Herb. Linn. No. 844.20 (LINN).

Brassica violacea L., Sp. Pl.: 667. 1 May 1753. ≡ ***Orychophragmus violacea*** (L.) O.E. Schulz – Neotype (designated here by Al-Shehbaz): [China], Henan Province, Neixang Xian: Baotianman Nat. Reserve Yinghu Gou, 20 May 1994, *Boufford, Liu, Ying, Zhang & Zhu 26131* (A, iso-E, MO).

Bunias aegyptiaca L., Syst. Nat., ed. 12, 3: 231. Dec 1768. ≡ ***Ochthodium aegyptiacum*** (L.) DC. – Lectotype (designated here by Hedge): Herb. Linn. No. 847.12 (LINN).

Bunias balearica L., Syst. Nat., ed. 12, 2: 446. 15-31 Oct 1767. ≡ ***Succowia balearica*** (L.) Medik. – Lectotype (designated here by Rosselló): Herb. Linn. 847.13 (LINN).

Note. — Rosselló & Sáez (2000: 32) indicated unspecified collections in BM and LINN as syntypes, but this does not constitute typification.

Bunias myagroides L., Syst. Nat., ed. 12, 2: 446; Mant. Pl.: 96. 15-31 Oct 1767. [= ***Erucaria hispanica*** (L.) Druce] – Lectotype (designated here by Gómez Campo): Herb. Linn. No. 847.9 (LINN).

Cheiranthus alpinus L., Syst. Nat., ed. 12, 2: 441; Mant. Pl.: 93. 15-31 Oct 1767. [= ***Erysimum sylvestre*** (Crantz) Scop.] – Lectotype (designated here by Polatschek): *Jacquin 61*, Herb. Linn. No. 839.5 (LINN).

Cheiranthus annuus L., Sp. Pl.: 662. 1 May 1753. [= ***Matthiola incana*** (L.) R. Br.] – Lectotype (designated here by Gowler): Herb. Burser XI: 18 (UPS).

Cheiranthus erysimoides L., Sp. Pl.: 661. 1 May 1753. [= ***Erysimum odoratum*** Ehrh.] – Lectotype (designated here by Polatschek): Herb. Linn. No. 839.1 (LINN).

Cheiranthus fenestralis L., Sp. Pl.: 1198. 1 May 1753. [= ***Matthiola incana*** (L.) R. Brown] – Neotype (designated here by Gowler): [France], "Schistes argileux du Bord de mer à Toulon (Var)", 10 May 1860, Fl. Galliae et Germaniae exsiccata de C. Billot No. 3009. Rec. par A. Huet (BM).

Cheiranthus lacerus L., Sp. Pl.: 662. 1 May 1753. ≡ *Hesperis lacera* (L.) L., Syst. Veg. ed. 13: 501. Apr-Jun 1774. ≡ ***Malcolmia lacera*** (L.) DC. – Lectotype (designated here by Ball): [icon] "*Leucoium lusitanicum purpureum.*" in Hermann, Parad. bat.: t. 193. 1698. – Epitype (designated here by Ball): [Portugal], "Abundant in sandy places by the Douro, about Pinhão", 10 Jun 1889, *R. P. Murray* s.n. (BM).

Cheiranthus littoreus L., Sp. Pl. ed. 2: 925. Jul-Aug 1763. ≡ ***Malcolmia littorea*** (L.) R. Br. – Lectotype (designated here by Ball): Herb. Linn. No. 839.16 (LINN).

Cheiranthus tricuspidatus L., Sp. Pl.: 663. 1 May 1753. ≡ ***Matthiola tricuspidata*** (L.) R. Br. – Lectotype (designated here by Gowler): Herb. Clifford: 335, *Cheiranthus* 6 (BM).

Note. — Jafri (1977: 158) wrongly indicated Kaehler material (Herb. Linn. No. 839.26, LINN), received by Linnaeus only in 1757, as "type", and Meikle (1977: 158) indicated unspecified material in BM as "type". Neither statement can be accepted as an effective typification.

Clypeola campestris L., Sp. Pl.: 652, Errata. 1 May 1753. ≡ *Alyssum campestre* (L.) L., Syst. Nat. ed. 10: 1130. May-Jun 1759. [= ***Alyssum alyssoides*** (L.) L.] – Neotype (designated here by Polatschek): [France], Montpellier, Herb. Endl. *Alyssum calycinum*, Endlicher s.n. (W).

Note. — Dudley (1964: 63) regarded Sauvages' description itself as the basis of the name but this would be contrary to Art. 8.1. As no original material is in existence, a neotype is designated here. *Alyssum campestre* L., Sp. Pl. ed. 2: 909 (1763) is evidently not the same taxon as *A. campestre* (L.) L. 1759, and this has caused confusion leading to "*A. campestre*" being informally rejected as ambiguous by some authors (e.g. Turrill, 1935; Botschantzev, 1978). However, our choice of neotype confirms the position of *A. campestre* 1759 as a synonym of *A. alyssoides*, in agreement with the treatment

of Dudley.

Clypeola maritima L., Sp. Pl.: 652. 1 May 1753. ≡ ***Lobularia maritima*** (L.) Desv. – Lectotype (designated here by Borgen): [icon] "*Thlapsi narbonense centunculi angusto folio*" in Tabernaemontanus, Eicones pl.: 461. 1590. – Epitype (designated here by Borgen): Herb. Linn. No. 830.3 (LINN).

Note. — Meikle (1977: 142) wrongly indicated unspecified material at LINN (three sheets are labelled as "*maritima*" but none is original material for the name) as type. Borgen (1987: 84), Fernandes (1992: 313) and Jonsell (1997: 102) all indicated 830.3 LINN as lectotype, but this sheet was an ineligible choice. The cited illustration is the only original element, and is designated here as lectotype, with the Linnaean sheet as epitype.

Cochlearia armoracia L., Sp. Pl.: 648. 1 May 1753. ≡ ***Armoracia rusticana*** Gaertn. & al. – Lectotype (designated here by Rich): Herb. Linn. No. 826.6 (LINN).

Cochlearia draba (L.) L. – see *Lepidium draba* L.

Cochlearia saxatilis L., Sp. Pl.: 648. 1 May 1753. ≡ *Myagrum saxatile* (L.) L., Syst. Nat. ed. 10, 2: 1126. May-Jun 1759. ≡ ***Kernera saxatilis*** (L.) Rchb. – Lectotype (designated here by Kit Tan): Herb. Linn. No. 819.13 (LINN).

Draba aizoides L., Syst. Nat., ed. 12, 2: 432; Mant. Pl.: 91. 15-31 Oct 1767. – Lectotype (designated here by Rich): Herb. Linn. No. 823.1 (LINN).

Draba ciliaris L., Syst. Nat., ed. 12, 2: 432; Mant. Pl.: 91. 15–31 Oct 1767. – Lectotype (designated here by Lakusic): Herb. Linn. No. 823.3 (LINN).

Note. — This name has traditionally been treated as a synonym of *Draba aizoides* L. However, in the opinion of Lakusic, who typifies the name here, it should be recognised as a distinct species. This causes no nomenclatural disruption.

Draba pyrenaica L., Sp. Pl.: 642. 1 May 1753. ≡ ***Petrocallis pyrenaica*** (L.) R. Br. – Lectotype (designated here by L. Villar): Herb. Linn. No. 823.8 (LINN).

Erysimum alliaria L., Sp. Pl.: 660. 1 May 1753. [= ***Alliaria petiolata*** (M. Bieb.) Cavara & Grande] – Lectotype (designated here by Hedge): Herb. Clifford: 338, *Erysimum* 6 (BM).

Erysimum repandum L., Demonstr. Pl. Horto Upsaliensi: 17. Oct 1753. – Lectotype (designated here by Ebel): Herb. Linn. No. 837.5 (LINN).

Note. — Polatschek (1974: 180) designated 837.4 LINN as lectotype, but as this is evidently an Arduino collection, it could not have reached Linnaeus before 1761 and is therefore not original material for the name. Meikle (1977: 162) indicated unspecified material at LINN as type, but did not distinguish between sheets 837.4 and 837.5 so his intention is unclear, and cannot constitute a formal choice of type.

Hesperis africana L., Sp. Pl.: 663. 1 May 1753. ≡ ***Malcolmia africana*** (L.) R. Br. – Lectotype (designated here by Ball): Herb. Clifford: 335, *Hesperis* 3 (BM).

Note. — Botschantzev (1972: 1038) indicated unspecified material at LINN (but evidently 841.5) as type, as did Jafri (1973: 219; 1977: 169) but the lack of a relevant *Species Plantarum* number (in this case "4") indicates it is a post-1753 addition to the herbarium.

Hesperis inodora L., Sp. Pl. ed. 2: 927. Jul–Aug 1763. – Lectotype (designated here by Ball): *Jacquin 67*, Herb. Linn. No. 841.4 (LINN).

Hesperis lacera (L.) L. – see *Cheiranthus lacerus* L.

Hesperis provincialis L., Sp. Pl.: 664. 1 May 1753. [= ***Matthiola fruticulosa*** (L.) Maire] – Lectotype (designated here by Gowler): Herb. Clifford: 335, *Cheiranthus* 4 (BM).

Hesperis sibirica L., Sp. Pl.: 663. 1 May 1753. – Lectotype (designated here by Ebel): Herb. Linn. No. 841.3 (LINN).

Hesperis tristis L., Sp. Pl.: 663. 1 May 1753. – Lectotype (designated here by Ball): Herb. Linn. No. 841.1 (LINN).

Iberis amara L., Sp. Pl.: 649. 1 May 1753. – Lectotype (designated here by Ebel): Herb. Linn. No. 827.8 (LINN).

Iberis arabica L., Cent. I Pl.: 17. 19 Feb 1755. ≡ ***Aethionema arabicum*** (L.) A. DC. – Lectotype (designated here by Hedge): *Hasselquist*, Herb. Linn. No. 827.10 (LINN).

Iberis badensis L., Cent. I Pl.: 17. 19 Feb 1755. [= ***Thlaspi montanum*** L.] – Lectotype (designated here by Marhold & Mártonfi): [icon] "*Thlaspi montanum II.*" in Clusius, Rar. pl. hist. 2: 131. 1601.

Iberis cretica L., Sp. Pl.: 649. 1 May 1753. [= ***Iberis umbellata*** L.] – Neotype (designated here by Moreno): [France], Var, Fréjus, "Bois dans le Malpey", May 1905,

Herbier E. Jahandiez (Leg. *C. Bertrand*) [MA 44808] (MA).

Iberis gibraltarica L., Sp. Pl.: 649. 1 May 1753. – Lectotype (designated here by Moreno): [icon] "*Thlaspidium hispanicum ampliore flore folio crasso dentato*" in Dillenius, Hort. eltham. 2: t. 287, f. 371. 1732. – Epitype (designated here by Moreno): [Gibraltar], 19 Apr 1907, *Bicknell & Pollini*, lower left-hand specimen [MA 44627] (MA).

Iberis nudicaulis L., Sp. Pl.: 650. 1 May 1753. ≡ ***Teesdalia nudicaulis*** (L.) R. Br. – Lectotype (designated here by Moreno): Herb. Linn. No. 827.11 (LINN).

Iberis odorata L., Sp. Pl.: 649. 1 May 1753. – Lectotype (designated by Meikle, 1977: 123): [icon] "*Thlaspi IIII parvum odorato flore*" in Clusius, Rar. Pl. Hist. 2: 132. 1601. – Epitype (designated here by Moreno): Algeria. 8 Apr 1952, *Dubuis & Faurel* s.n., lower left-hand specimen [MA 562364] (MA).

Note. — As noted by Villarrubia & Moreno (1992: 127), Linnaeus believed, on the authority of Clusius, that this taxon came from the Savoie Alps in France, but this is erroneous, the species in fact occurring in Greece, Turkey, Crete and Algeria. Although the designated lectotype, Clusius' illustration, is identifiable with this taxon, an epitype is designated here in order to clarify the discrepancy in distribution.

Iberis pinnata L., Cent. I Pl.: 18. 19 Feb 1755. – Lectotype (designated here by Moreno): Herb. Linn. No. 827.12 (LINN).

Note. — Villarrubia & Moreno (1993: 130) noted the existence of 827.12 and 827.13 LINN but did not indicate either as type.

Iberis sempervirens L., Sp. Pl.: 648. 1 May 1753. – Lectotype (designated here by Moreno): Herb. Clifford: 330, *Iberis* 3 (BM).

Iberis umbellata L., Sp. Pl.: 649. 1 May 1753. – Lectotype (designated here by Moreno): Herb. Linn. No. 827.6 (LINN).

Note. — Franchetti (1958: 178) discussed various options for the typification of this name noting, for example, the ineligibility of *Loefling 473*, Herb. Linn. 827.7 LINN (from Spain) when Linnaeus had indicated "in Hetruria, Creta", but did not herself choose a type.

Isatis armena L., Sp. Pl.: 670. 1 May 1753. ≡ ***Sameraria armena*** (L.) Desv. – Lectotype (designated here by Hedge): [icon] "*I. Armena foliis brassicae perfoliata fructu cordiiformis canescente*" in Buxbaum, Cent. 1: t. 4. 1728.

Note. — Hedge (1968: 93) indicated unspecified Tournefort material as type. However, as no Tournefort illustration was cited, and Linnaeus did not have the opportunity to study Tournefort's specimens, this statement cannot be accepted as a valid typification.

Lepidium cardamine L., Cent. I Pl.: 17. 19 Feb 1755. – Lectotype (designated here by López González): *Loefling 468b*, Herb. Linn. No. 824.8 (LINN).

Lepidium graminifolium L., Syst. Nat. ed. 10: 1127. May–Jun 1759. – Lectotype (designated here by Hedge): Herb. Linn. No. 824.15 (LINN).

Lepidium iberis L., Sp. Pl.: 645. 1 May 1753. [= ***Lepidium virginicum*** L.], **syn. nov.** – Lectotype (designated here by Rich): Herb. Linn. No. 824.19 (LINN).

Note. — This name has been treated as a synonym of *L. graminifolium* L. subsp. *graminifolium* (e.g., by De Carvalho e Vasconcellos, 1964; Pignatti, 1982; Akeroyd & Rich, 1993), despite its pre-dating the latter. Study of the original elements for this name shows some to be identifiable as *L. graminifolium* (Herb. Clifford: 33, *Lepidium 6* — 2 sheets (BM); Herb. Burser IV: 58 (UPS)) and another, Herb. Linn. 824.19 (LINN), as *L. virginicum*. In order to avoid an unfortunate change of name, the LINN material is being chosen as lectotype here, allowing *L. iberis* to fall into the synonymy of *L. virginicum*, another name dating from 1753.

Lepidium lyratum L., Sp. Pl.: 644. 1 May 1753. – Lectotype (designated here by Hedge): [icon] "*Lepidium orientale, nasturtii crispi folio*" in Tournefort, Rel. Voy. Levant 2: p. 339. 1717.

Lepidium nudicaule L., Sp. Pl.: 643. 1 May 1753. [= ***Teesdalia nudicaulis*** (L.) R. Br.] – Lectotype (designated here by Moreno): Herb. Linn. No. 824.3 (LINN).

Note. — The basionym of *T. nudicaulis* is *Iberis nudicaulis* L. (see above), not *L. nudicaule*. The latter is therefore a heterotypic synonym of *T. nudicaulis*.

Lepidium procumbens L., Sp. Pl.: 643. 1 May 1753. ≡ ***Hymenolobus procumbens*** (L.) Nutt. – Lectotype (designated here by Hedge): [icon] "*Nasturtium pumilum supinum vernum*" in Magnol, Bot. Monsp.: t. 184. 1676.

Lepidium subulatum L., Sp. Pl.: 644. 1 May 1753. – Lectotype (designated here by López González): *Loefling 469*, Herb. Linn. No. 824.12 (LINN).

Lepidium suffruticosum L., Syst. Nat. ed. 12, 2: 433; Mant. Pl.: 91. 15-31 Oct 1767. ≡ ***Lepidium graminifoli-***

um L. subsp. ***suffruticosum*** (L.) P. Monts. – Neotype (designated here by López González): [Spain], "Barcelone, Riera de Vallvidrera, lieux herbeux", 16 Oct 1924, F. Sennen, Exsicc. Pl. d'Espagne, No. 5025 (specimen on the left, MA 44005; iso- BM).

Lepidium vesicarium L., Sp. Pl.: 643. 1 May 1753. – Lectotype (designated here by López González): [icon] "*Lepidium Orientale, Nasturtii folio, caule vesicario*" in Buxbaum, Pl. Min. Cogn. Cent. 1: t. 26. 1728.

Note. — Hedge (1968: 66) indicated unspecified Tournefort material as type. However, as no Tournefort illustration was cited, and Linnaeus did not have the opportunity to study Tournefort's specimens, this statement cannot be accepted as a valid typification.

Myagrum orientale L., Sp. Pl.: 640. 1 May 1753. ≡ ***Rapistrum rugosum*** (L.) All. subsp. ***orientale*** (L.) Arcangeli. – Lectotype (designated here by Al-Shehbaz & Turland): Herb. Linn. 819.4 (LINN).

Myagrum perenne L., Sp. Pl.: 640. 1 May 1753. ≡ ***Rapistrum perenne*** (L.) All. – Lectotype (designated here by Hedge): Herb. Linn. No. 819.1 (LINN).

Myagrum rugosum L., Sp. Pl.: 640. 1 May 1753. ≡ ***Rapistrum rugosum*** (L.) All. – Lectotype (designated here by Hedge): Herb. Linn. No. 819.5 (LINN).

Myagrum saxatile (L.) L. – see *Cochlearia saxatile* L.

Raphanus sibiricus L., Sp. Pl.: 669. 1 May 1753. ≡ ***Chorispora sibirica*** (L.) DC. – Lectotype (designated here by Ebel): Herb. Linn. No. 846.6 (LINN).

Sinapis brassicata L., Syst. Nat. ed. 12, 3: 231. Dec 1768. [= ***Brassica oleracea*** L., **syn. nov.**] – Neotype (designated here by Al-Shehbaz): [China], Kwangtung Province, Honam, 22 Feb 1922, *To Kang Peng* s.n. (BM, iso- IBSC).

Note. — Bailey (1922: 101), in the absence of any original material or cited illustrations, treated this name as a *nomen dubium*. The typification made here reduces *S. brassicata* to a synonym of *B. oleracea*.

Sinapis chinensis L., Syst. Nat. ed. 12, 2: 445, Mant. Pl.: 95. 15–31 Oct 1767. [= ***Brassica tournefortii*** Gouan] – Lectotype (designated here by Al-Shehbaz): *Arduino*, Herb. Linn. No. 845.9 (LINN).

Note. — Bailey (1922: 93) suggested that Linnaeus based this on an Arduino description, and noted the existence of an Arduino collection in LINN but did not designate a type. Although Burtt & Lewis (1949: 285) referred to material in LINN as "the type specimen", they did not distinguish between sheets 845.9 and 845.10, both annotated as *S. chinensis* by Linnaeus but evidently not part of the same gathering. Arduino's sheet is here chosen as the lectotype.

Sinapis erucoides L., Cent. II Pl.: 24. 2 Jun 1756. ≡ ***Diplotaxis erucoides*** (L.) DC. – Lectotype (designated here by Martínez-Laborde): Herb. Linn. 845.14 (LINN).

Sinapis incana L., Cent. I Pl.: 19. 19 Feb 1755. ≡ ***Hirschfeldia incana*** (L.) Lag.-Foss. – Lectotype (designated here by Gómez-Campo): [icon] "*Erysimum foliis subincanis, siliquis brevissimis*" in Hermann, Parad. Bat.: 155 ["115"]. 1698.

Note. — Jafri (1977: 27) designated Herb. Linn. No. 845.16 (LINN) as type, evidently unaware that the material is identifiable as *Brassica nigra* (L.) Koch. The other original element, however, the cited Hermann plate, does correspond with current usage. Although there are few characters in the protologue that allow the two taxa to be distinguished, Linnaeus (1755: 20) did refer to "Folia canescentia", a character pointing strongly to *H. incana* but not to *B. nigra*. We are therefore rejecting Jafri's typification here in favour of the Hermann plate, in accordance with Art. 9.17 (b), in order to preserve nomenclatural stability.

Sinapis orientalis L., Cent. Pl. I: 19. 19 Feb 1755. ≡ ***Sinapis arvensis*** L. var. ***orientalis*** (L.) Koch & Ziz – Lectotype (designated here by Hedge): Herb. Linn. No. 845.3 (LINN).

Sinapis pyrenaica L., Sp. Pl., ed. 2: 934. Jul-Aug 1763. [= ***Sisymbrium austriacum*** Jacq. subsp. ***chrysanthum*** (Jord.) Rouy & Foucaud] – Lectotype (designated here by Pujadas Salvà): Herb. Linn. No. 845.5 (LINN).

Sisymbrium asperum L., Sp. Pl.: 659. 1 May 1753. ≡ ***Sisymbrella aspera*** (L.) Spach – Lectotype (designated here by Martínez-Laborde): [icon] "*Sinapi monspessulanum, siliqua aspera hirsuta*" in Bauhin & Cherler, Hist. Pl. 2: 858. 1651. – Epitype (designated here by Martínez-Laborde): [France], "Aveyron, rochers aqueux de Montpellier le Vieux", 25 Jun 1910, *Bec* s.n. (BM).

Sisymbrium barbarae L., Sp. Pl., ed. 2: 921. Jul–Aug 1763. [= ***Barbarea plantaginea*** DC.] – Lectotype (designated here by Al-Shehbaz & Turland): Herb. Linn. 836.44 (LINN) – Epitype (designated here by Al-Shehbaz): [Iran], Kerman, montis Kuh Lalesar, 2 Jul 1892, *Bornmüller 2066* (BM, iso-JE).

Sisymbrium barrelieri L., Sp. Pl. ed. 2: 919. Jul–Aug

1763. ≡ ***Brassica barrelieri*** (L.) Janka – Lectotype (designated here by López González): *Loefling*, Herb. Linn. No. 836.25, right hand specimen (LINN).

Sisymbrium catholicum L., Syst. Nat. ed. 12, 2: 440; Mant. Pl.: 93. 15-31 Oct 1767. ≡ ***Diplotaxis catholica*** (L.) DC. – Lectotype (designated here by Martínez-Laborde): Herb. Linn. No. 836.48 (LINN).

Sisymbrium integrifolium L., Sp. Pl.: 660. 1 May 1753. ≡ ***Dontostemon integrifolius*** (L.) C.A. Mey. – Lectotype (designated here by Ebel): Herb. Linn. No. 836.51 (LINN).

Sisymbrium parra L., Mant. Pl. Alt.: 255. Oct 1771. [= ***Brassica barrelieri*** (L.) Janka] – Neotype (designated here by Gómez Campo): [Spain], "Entre Puerta de Hierro y El Pardo (Madrid)", Apr 1917, *C. Vicioso* [Madrid 46637(2)] (MA; iso- MA).

Sisymbrium strictissimum L., Sp. Pl.: 660. 1 May 1753. – Lectotype (designated here by Jonsell): Herb. Linn. No. 836.49 (LINN).

Sisymbrium tanacetifolium L., Sp. Pl.: 659. 1 May 1753. ≡ ***Hugueninia tanacetifolia*** (L.) Rchb. – Lectotype (designated here by Ball): Herb. van Royen 901, 256–631 (L).

Sisymbrium tenuifolium L., Cent. I Pl.: 18. 19 Feb 1755. ≡ ***Diplotaxis tenuifolia*** (L.) DC. – Lectotype (designated here by Hedge): [icon] "*Eruca tenuifolia perennis*" in Bauhin & Cherler, Hist. Pl. 2: 861. 1651. – Epitype (designated here by Hedge): [France], Camargue. Tour du Valat, S.E. of Mas, 11 Jun 1968, *Kendrick & Moyes 230* (BM).

Sisymbrium vimineum L., Sp. Pl.: 658. 1 May 1753. ≡ ***Diplotaxis viminea*** (L.) DC. – Lectotype (designated here by Hedge): Herb. Linn. No. 836.21 (LINN).

Thlaspi alpestre L., Sp. Pl., ed. 2, 2: 903. Jul-Aug 1763, *nom. illeg.*, non Jacq., Enum. Stirp. Vindob.: 116, 260. 1762 [= ***Thlaspi caerulescens*** J. & C. Presl] – Lectotype (designated here by Marhold & Mártonfi): Herb. Linn. 825.14 (LINN).

Note. — Although the Linnaean name is a later homonym, and therefore illegitimate, there has been some confusion in the way it has been either used or synonymized by some authors (see review by Kerguélen & al. 1987: 175). The name is therefore typified here.

Thlaspi hirsutum L. – see *T. hirtum* L.

Thlaspi hirtum L., Sp. Pl.: 646. 1 May 1753 ≡ *T. hirsutum* L., Fl. Angl.: 19. 3 Apr 1754, *orth. var.* ≡ ***Lepidium hirtum*** (L.) Sm. subsp. ***hirtum*** – Lectotype (designated here by López González): Herb. Linn. No. 825.7 (LINN).

Thlaspi peregrinum L., Sp. Pl. 2: 645. 1 May 1753. [= ***Aethionema saxatile*** (L.) R. Br. – Lectotype (designated here by Hedge): Herb. Clifford: 330, *Thlaspi* 1 (BM).

Thlaspi saxatile L., Sp. Pl.: 646. 1 May 1753. ≡ ***Aethionema saxatile*** (L.) R. Br. – Lectotype (designated here by Hedge): [icon] "*Lithothlaspi montanum fruticosius vermiculato acuto folio*" in Columna, Ekphr.: 277, bottom figure. 1606. – Epitype (designated here by Hedge): Herb. Linn. No. 825.4 (LINN).

Note. — Franchetti (1958: 183) discussed the possible original elements for the name (rejecting Herb. Linn. No. 825.4 LINN as a candidate) but did not designate a lectotype. Franzén (1986: 317) noted the existence of the Linnaean sheet, and Andersson & al. (1983: 7) designated it as the type. However, the material cannot be associated with this name, is unannotated by Linnaeus and is not original material for the name despite its current determination. This choice is therefore rejected in favour of Columna's illustration, with the Linnaean sheet as epitype.

Turritis alpina L., Syst. Nat., ed. 12, 2: 443. 15-31 Oct 1767. [= ***Arabis hirsuta*** (L.) Scop. var. ***glaberrima*** Wahlenb.] – Lectotype (designated here by Al-Shehbaz & Turland): Herb. Linn. 843.3, right hand specimen (LINN).

Note. — Titz (1968: 266) noted the existence of what is (presumably) 843.3 LINN but did not designate it as type.

Vella annua L., Sp. Pl. 2: 641. 1 May 1753. ≡ ***Carrichtera annua*** (L.) DC. – Lectotype (designated here by Roselló): Herb. Clifford: 329, *Vella* 1 (BM).

ACKNOWLEDGEMENTS

We are very grateful to those who have examined original material and made the type choices published here (see List of contributors). Without their specialist knowledge, this work could not have been produced. We are also indebted to the many others who have provided help and advice on various matters, including Arne Anderberg (S), Argyro Tiniakou (UPA), Riccardo Baldini (FI), Jo Beyers (NBG), Pilar Catalan (University of Zaragoza, Spain), G. Nieto Feliner (MA), Hilde Nybom (Swedish University of Agricultural Science, Kristianstad), Alan Paton (K), Dimitrios

Phitos (UPA), Mia Ehn Salter (S), Brian Schrire (K), Britt Snogerup (LD) and JeF Veldkamp (L). We are also grateful to Sven Snogerup (LD) for his careful review of this paper. The work of S.C. has been supported by awards from the Linnean Society of London to the Linnaean Plant Name Typification Project at The Natural History Museum, London.

LITERATURE CITED

Akeroyd, J. R. & Rich, T. C. D. 1993. *Lepidium.* Pp. 398–402 in: Tutin, T. G., Burges, N. A., Chater, A. O., Edmondson, J. R., Heywood, V. H., Moore, D. M., Valentine, D. H., Walters, S. M. & Webb, D. A. (eds.), *Flora Europaea*, ed. 2, vol. 1. Cambridge Univ. Press, Cambridge.

Andersson, I. A., Carlström, A., Franzén, R., Karlen, Th. & Nybom, H. 1983. A revision of the *Aethionema saxatile* complex (*Brassicaceae*). *Willdenowia* 13: 3–42.

Bailey, L. H. 1922. The Cultivated Brassicas. *Gentes Herb.* 1: 53–108.

Bauhin, C. 1623. *Pinax Theatri Botanici.* Ludovici Regis, Basel.

Bauhin, J. & Cherler, J. H. 1651. *Historia Plantarum Universalis*, vol. 3. Ebroduni.

Borgen, L. 1987. *Lobularia (Cruciferae).* A biosystematic study with special reference to the Macaronesian region. *Opera Bot.* 91: 1–96.

Botschantzev, V. P. 1972. The genus *Strigosella* Boiss. and its relation to the genus *Malcolmia* R. Br. (*Cruciferae*). *Bot. Zhurn.* 57: 1033–1046 [in Russian].

Botschantzev, V. P. 1978. De Cruciferis Notae Criticae, 7. *Nov. Syst. Pl. Vasc.* 15: 149–153 [in Russian].

Burtt, B. L. & Lewis, P. 1949. On the flora of Kuwait : 1. *Kew Bull.* 4: 273–308.

De Carvalho e Vasconcellos, J. 1964. *Lepidium.* Pp. 330–333 in: Tutin, T. G., Heywood, V. H., Burges, N. A., Valentine, D. H., Walters, S. M. & Webb, D. A. (eds.), *Flora Europaea*, ed. 1, vol. 1. Cambridge Univ. Press, Cambridge.

Dudley, T. R. 1964. Studies in *Alyssum*: Near Eastern representatives and their allies, I. *J. Arnold Arb.* 45: 57–100.

Fernandes, R. B. 1992. Notas sobre *Lobularia maritima* (L.) Desv. *Anal. Jard. Bot. Madrid* 49: 311–315.

Franchetti, G. 1958. Adumbratio Florae Aethiopicae. 7. *Cruciferae* (Trib. Lepidieae, Euclideae, Sisymbrieae). *Webbia* 14: 161–211.

Franzén, R. 1986. *Kernera.* in: Strid, A. (ed.), *Mountain Flora of Greece*, vol. 1. Cambridge Univ. Press, Cambridge.

Fuchsius, L. 1542. *De Historia Stirpium Commentarii Insignes.* Officina Isingriniana, Basileae.

Gómez Campo, C. 1993. *Erucastrum* C. Presl. Pp. 392–398 in: Castroviejo, S. & al. (eds.), *Flora Iberica*, vol. 4. Real Jardín Botánico, CSIC, Madrid.

Hartvig, P. 1986. *Alyssoides.* Pp. 276–278 in: Strid, A. (ed.), *Mountain Flora of Greece*, vol. 1. Cambridge Univ. Press, Cambridge.

Heath, P. V. 1997. The early generic names of Miller (supplement, part 1). *Calyx* 5: 139–158.

Hedge, I. 1968. *Lepidieae.* Pp. 63–122 in: Hedge, I. & Rechinger, K. H. (eds.), *Flora Iranica*, vol. 57. Akademische Druck- u. Verlagsanstalt, Graz.

Jafri, S. M. H. 1973. *Brassicaceae.* Pp. 1–308 in: Nasir, E. & Ali, S. I. (eds.), *Flora of West Pakistan*, vol. 55. Univ. of Karachi, Karachi.

Jafri, S. M. H. 1977. *Brassicaceae.* Pp. 1–205 in: Jafri, S. M. H. & El-Gadi, A. (eds.), *Flora of Libya*, vol. 23. Al Faateh Univ., Tripoli.

Jonsell, B. 1997. *Cruciferae* (*Brassicaceae*). Pp. 81–117 in: Morat, Ph. (ed.), *Flora de la Nouvelle-Calédonie*, vol. 21. Muséum National d'Histoire Naturelle, Paris.

Kerguélen, M., Bosc, G. & Lambinon, J. 1987. Données taxonomiques, nomenclaturales et chorologiques pour une révision de la flore de France. *Lejeunia n.s.*, 120: 1–263.

Linnaeus, C. 1755. *Centuria I Plantarum.* L. M. Höjer, Uppsala.

López González, G. 1995. *Aurinia sinuata* (L.) Griseb. [*Vesicaria sinuata* (L.) Cav.] (*Cruciferae*), ¿una planta extinta en la Península Ibérica? *Anales Jard. Bot. Madrid* 53: 125–127.

Meikle, R. D. 1977. *Flora of Cyprus*, vol. 1. Bentham-Maxom Trust, Royal Botanic Gardens, Kew .

O'Kane S. L. & Al-Shehbaz, I. A. 1997. A synopsis of *Arabidopsis* (*Brassicaceae*). *Novon* 7: 323–327.

Pignatti, S. 1982. *Flora d'Italia*, vol. 1. Edagricole, Bologna.

Polatschek, A. 1974. Systematisch-nomenklatorische Vorarbeit zur Gattung *Erysimum* in Italien. *Ann. Naturhist. Mus. Wien* 78: 171–182.

Pugsley, H. W. 1936. The *Brassica* of Lundy Island. *J. Bot. (London)* 74: 323–326.

Rosselló, J. A. & Sáez, L. 2000. Index Balaearicum: An annotated check-list of the vascular plants described from the Balearic Islands. *Collect. Bot.* 25: 3–203.

Savage, S. 1937. Sir James E. Smith and the Linnaean Herbarium. *Proc. Linn. Soc. London*, sess. 149: 6–10.

Schulz, O. E. 1919. *Brassicella* Fourreau. Pp. 106–116 in: Engler, A. (ed.), *Das Pflanzenreich*, vol. 70 (IV.105). W. Engelmann, Leipzig.

Titz, W. 1968. Zur Cytotaxonomie von *Arabis hirsuta* agg. (*Cruciferae*). I. Allgemeine Grundlagen und die Chromosomenzahlen der in Österreich vorkommenden Sippen. *Österr. Bot. Zeit.* 115: 255–290.

Turland, N. & Jarvis, C. E. (eds.). 1997. Typification of Linnaean specific and varietal names in the *Leguminosae* (*Fabaceae*). *Taxon* 46: 457–485.

Turrill, W. B. 1935. *Alyssum campestre* L. *J. Bot. (London)* 73: 261–262.

Tutin, T. G. & Ackeroyd, J. R. 1993. *Erucastrum* C. Presl. Pp. 410–411 in: Tutin, T. G., Burges, N. A., Chater, A. O., Edmondson, J. R., Heywood, V. H., Moore, D. M., Valentine, D. H., Walters, S. M. & Webb, D. A. (eds.), *Flora Europaea*, ed. 2, vol. 1. Cambridge Univ. Press, Cambridge.

Villars, D. 1779. *Prospectus de l'Histoire des Plantes de Dauphiné.* Imprimerie Royale, Grenoble.

Villarrubia, M. J. & Moreno, M. 1992. Estudio comparado de *Iberis odorata* L. e *I. pectinata* Boiss. & Reut. (*Cruciferae*). *Acta Bot. Malacitana* 17: 127–133.

Villarrubia, M. J. & Moreno, M. 1993. Estudio de la variabilidad intraespecífica en *Iberis pinnata* L. (*Cruciferae*). *Bot. Complut.* 18: 129–136.