

Lectotypification of three Linnaean names in the genera *Phillyrea* and *Fraxinus* (Oleaceae)

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Lectotypes for the Linnaean names *Phillyrea angustifolia*, *P. media* and *Fraxinus ornus* (Oleaceae), are designated from original material conserved in LINN (Linnaean Herbarium) and BM (George Clifford Herbarium). A specimen at BM is designated here as the second-step lectotype of the name *Fraxinus ornus*.

Introduction

Within the family Oleaceae, there are still some names for which nomenclatural types have not been designated. This paper designates lectotypes for three names in the Oleaceae: *Phillyrea angustifolia* L., *Phillyrea media* L. and *Fraxinus ornus* L. We studied the literature cited in Linnaeus's protologues and the specimens of the original material conserved in the herbaria BM, LINN, S-LINN and UPS-BURSER.

The genus *Phillyrea* encompasses a range of species with taxonomic complexity, distributed through the Mediterranean region and Asia Minor. Within this genus, about 80 species and many subspecies and varieties have been described (Sennen 1929, 1935). However, most authors currently recognize just 2–5 taxa (Franco & Rocha 1972, Ceballos & Ruiz de la Torre 1979, Malagarriga 1980, López-González 2001, Ruiz de la Torre 2006, Andrés 2012, De Juana 2012).

Phillyrea is a genus of evergreen shrubs or small trees, with simple, opposite, sessile or shortly petiolate leaves, very variable in shape, inflorescences in pauciflorous racemiform cymes, and the fruit a globose or subglobose fleshy drupe, usually with one spherical seed. *Phillyrea angustifolia* is distributed throughout the central and western Mediterranean region, where it inhabits sclerophyllous shrublands and forests. *Phillyrea media* has a similar ecology but is much more controversial taxonomically. Many authors included it within *P. latifolia*, given the high variability of many of its characters, and the existence of mixed populations with intermediate characters (Franco & Rocha 1972, Davis 1978, Feinbrun-Dothan 1978, Sfikas 1995, Polunin 1997, Strasser 1999, Charco 2001, López-González 2001, Fielding & Turland 2005, Andrés 2012). However, in our opinion, *P. angustifolia* is a distinct species and it has a wider geographic distribution than *P. latifolia*. *Phillyrea media* differs from *P. latifolia* by its

narrowly lanceolate leaves, elliptic or ovate, acute or obtuse at the base and apex, with entire margins or with few teeth, and ovate-apiculate fruit, while *P. latifolia* has oblong or oblong-lanceolate leaves, obtuse at the apex, broad, truncated and auriculate at the base, serrate margins and an umbiculate fruit (López-González 2001, Ruiz de la Torre 2006).

Fraxinus ornus is a deciduous tree, distributed through southern Europe and western Asia, with imparipinnate leaves of 7–9 ovate-lanceolate leaflets, showy flowers in the spring and samara fruits.

Typification

Phillyrea angustifolia L.

Sp. Pl.: 7. 1753. Ind. loc.: “*Habitat in Europae australioris collibus*”. — LECTOTYPE (designated here): Herb. Linn. No. 19.3 (LINN).

Linnaeus’s protologue consists of a *nomen specificum legitimum* “*Phillyrea foliis lanceolatis subintegerrimis*” followed by four synonyms. The first, “*Phillyrea foliis ovato-lanceolatis vix crenatis*”, and the third (an unnamed variety indicated by “β”), “*Phillyrea foliis lanceolatis integerrimis*”, were cited from *Hortus Cliffortianus* (Linnaeus 1738: 4) and Van Royen (1740: 398). The second “*Phillyrea ligustri folio*” and fourth “*Phillyrea angustifolia* I” came from Bauhin (1623: 476), the latter name being a synonym for the unnamed variety. None of those synonyms is accompanied by illustrations.

Among the original material (Jarvis 2007: 737), five specimens are relevant for typification. In the Linnaean herbaria, the sheet Herb. Linn. No. 19.3 (LINN) bears a specimen with entire linear-lanceolate leaves and a label handwritten by Pehr Löfving reading: “*Phillyrea Hort. ups. 5: n. 1 γ. / Hab. Ulyssiponi in sylvis apertis / venalis exponitur foro ad / saepes conficiendas / vulgo Lentisco*” [“It inhabits Lisbon in open woods / set out for sale in the market to be made into fences / commonly [called] Lentisco”].

In the Linnaean herbarium at S there is a sheet Herb. Linn. No. 4.1 (S-LINN), which bears a specimen with flowers and leaves in good condition. In the George Clifford Herbarium at

BM there is a sheet Herb. Clifford: 4, *Phillyrea* 2 (BM 000557516), containing three branchlets, one of them with only leaves, a second with only flowers and a third with flowers and three leaves. This material is somewhat heterogeneous, because it has dimorphic leaves: ovate-elliptic and lanceolate. Finally there are two sheets in the Burser Herbarium: Herb. Burser XXIV: 127 and 130 (UPS-BURSER), both with the specimens in good condition. The first one (Herb. Burser XXIV: 127) contains two branchlets with leaves and flowers, but the shape of the leaves (ovate-elliptic, not linear-lanceolate) does not conform precisely to the current use of the name *Phillyrea angustifolia*. The other sheet (Herb. Burser XXIV: 130) contains also two branchlets, the right-hand-side specimen with leaves and fruits, and the left-hand-side one with flowers and entire linear-lanceolate leaves. We are designating here the sheet in LINN as the lectotype of *Phillyrea angustifolia*, because that material has the best quality among the original Linnaean material.

Phillyrea media L.

Syst. Nat. ed. 10, 2: 847. 1759. Ind. loc.: “*Habitat in Europae australioris collibus*” (Linnaeus 1762: 10). — LECTOTYPE (designated here): Herb. Linn. No. 19.2 (LINN).

Linnaeus’s protologue contains only a short diagnosis, without any synonyms cited that may provide illustrations, so the original material must be sought among the specimens used by Linnaeus for the description of this species.

Among the original material (Jarvis 2007: 738), two sheets are relevant for typification: Herb. Linn. No. 19.1. and 19.2 (LINN). The specimen of Herb. Linn. No. 19.1 is in good condition, with shortly petiolate and broadly ovate leaves. It is annotated by Linnaeus at the bottom of the sheet “*A. media*” and on the reverse “*Phillyrea latifolia non spinosa CB et Millero*”. Herb. Linn. No. 19.2 has a specimen with petiolate, ovate-lanceolate to lanceolate or elliptic-oblong leaves, finely toothed at the margin. This sheet was annotated by Linnaeus “*A media*” and on the reverse “*Phillyrea oleae [illegible] foliis Pluk & Mill*”. We consider it more appropriate to designate as lectotype the Herb. Linn. No. 19.2, because the shape of the leaves (narrowly

lanceolate, elliptic or ovate rather than oblong or oblong-lanceolate leaves as in *P. latifolia*) is closer to those plants fitting the traditional application of the name.

Another sheet preserved in the Linnaean herbarium at S, Herb. Linn. No. 3.20 (S-LINN), bears a specimen and a label (unsigned) on which is written: “*Phillyrea (media) foliis ovato-lanceolatis / subintegerrimis. Syst. nat. ed. 13. p. 55. n. [illegible?] [probably the species number in this work, but difficult to read] / Habitat in Europae australioris collibus. [symbol indicating woody] / Specimen ex Horto Upsaliensi habui.*”, although the writing is exactly as on the label of herbarium sheet: Herb. Linn. No. 345.15 (S-LINN) of *Senecio trilobus* L. annotated by Lars Montin (see also Jarvis 2007: 175, 222). This material is probably post-1759 and was not used by Linnaeus for the description of the species (see Jarvis 2007: 738), because this sheet carries nothing written by Linnaeus, and the main annotations appear to have been added after 1759.

***Fraxinus ornus* L.**

Sp. Pl.: 1057. 1753. Ind. loc.: “*Habitat in Europa australi*”. — LECTOTYPE (first-step, designated by Nikolaev 1981: 1429): BM. — LECTOTYPE (second-step, designated here): Herb. Clifford: 470, *Fraxinus* 2 A (BM 000647545).

An earlier typification was done by Nikolaev (1981: 1429), who ambiguously designated unspecified material at BM as type. This could be reasonably interpreted as referring to original material in the George Clifford Herbarium at BM. There are two relevant sheets: Herb. Clifford: 470, *Fraxinus* 2 A (BM 000647545), bearing a specimen with flowers and leaves, and Herb. Clifford: 470, *Fraxinus* 2 B (BM 000647546), bearing a specimen with only leaves. The type designation made by Nikolaev (1981) should be treated as the first-step lectotype because it cannot be ascertained which of the two specimens at BM he selected as lectotype. Thus a second-step lectotype has to be designated following McNeill *et al.* (2012: art. 9.17). We designate here the herbarium sheet BM 000647545 as the lectotype of *Fraxinus ornus* because that material is more complete

(with leaves and flowers) than BM 000647545 (only with leaves) and more consistent with Linnaeus’s protologue “*Fraxinus foliolis serratis, floribus corollatis*”.

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