



## Lectotypification of the name *Alnus brembana* (Betulaceae), a controversial Alpine endemic species

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*Alnus brembana* Rota (1853: 102, 79) (Betulaceae) was described by Italian botanist Lorenzo Rota (1819–1855) within his flora of the province of Bergamo (Rota 1853). Since its publication, the treatment of this taxon as an autonomous species did not reach a general agreement among botanists, as it was often recognized at different taxonomic ranks, e.g. a variety or a subspecies (see e.g., Regel 1865, Parlatore 1868, Cesati *et al.* 1872, Arcangeli 1882, Fiori 1923, Schmidt 1996), or a synonym of *A. alnobetula* (Ehrhart 1783: 193) Koch (1872: 625). Some contemporary authors (Landolt 1993, 2010, Martini *et al.* 2012) still recognize the species as a local endemic to the southern Alps. Most current European floras and checklists (see e.g., Ball 1964, Pignatti 1982, Greuter *et al.* 1984, Ball 1993, Aeschimann *et al.* 2004, Conti *et al.* 2005, Euro+Med 2006 onwards) do however list it as a synonym of *A. alnobetula* subsp. *alnobetula* or its synonym *A. viridis* (Chaix 1785: 70) Candolle in Candolle & Lamarck (1805: 304). Its separation from *A. alnobetula* is questionable, since, as stated by Landolt (1993) himself, transitional forms occur within their alleged distribution areas.

Since no type material was mentioned in the protologue (Rota 1853: 102, 79), and the name *Alnus brembana* has not been typified by subsequent authors who studied this taxon (see e.g., Landolt 1993, 2010, Martini *et al.* 2012), we designate here a lectotype in order to prevent misinterpretation of this name in future.

The protologue of *Alnus brembana* consists of a detailed description of the species vegetative and floral traits (e.g., leaf blades, petioles, staminate catkins), followed by the only locality of provenance, the forests surrounding Branzi, a village located in Val Brembana, northern Lombardy (“Boschi a fondo Gneis e Schisto sopra Branzi”).

The majority of the specimens collected by Lorenzo Rota (10,650 sheets) are currently stored at the herbarium of the Bergamo Botanical Garden (BER), while a smaller amount (494 *exsiccata*) is kept at the Erbario Lombardo of the University of Pavia (PAV), where Rota studied and worked as an assistant to Professor Giuseppe Moretti from 1837 to 1845, before relocating to Bergamo to pursue the profession of physician (Saccardo 1901, Rinaldi 2009). Among these collections, we discovered the following six specimens, whose labels have been fully transcribed:

- 1) “Rizzi Marisa, 29, domestica, ~~pubite~~ povera, in Bergamo C.<sup>a</sup> S. Alessandro [...] / sevante [?], [...] religiosa, abuso di liquori, [...] / minacce saltare dalle finestre e strangolarsi, e ci impedisce di andare / alla ricerca di un [...]. [first four rows struck through with four oblique lines] / Differt a [...] Sect. I<sup>a</sup> (*Piloselloidea*) ob pilos foliorum et caulium [...] et stellatos / Differt ab *A. minoris Alnus* (*Betula*) *brembana* Rota. frutex altitudinem humum, / [...], a basi ramosa, ramis strictis arrectis, cortice obscure cinereis, gemmis fol. linearibus acutis resinosis, folios strictos petiolo / 6 millim. lungo pubescente, lamina fol. ovata acuta [...] 23 millim. longa 11 mill. lata, ramoso-venosa subtus in venis / pubescentibus, margine duplicato-serrata incisaque, ciliata, amenta mascula pedunculata / ante anthesim long. 10 mill. diametro 2 mill. glutinosa, squamae cordato-ovatis obtusis ciliatis..... / ..... / *Betula Brembana* Rota”, s.loc., s.d., [*L. Rota*] (BER-Rota 29793 [digital image!]);
- 2) “tra Branzi e Valleve in Val Brembana”, s.d., [*L. Rota*] (RO-Cesati [digital image!]);
- 3) “*Alnus brembana* Rota / Branzi, Ag. [= “agosto, August”, *sine anno*]”, [*L. Rota*] (PAV-Erbario Lombardo!, ex *Herb. Rota*);
- 4) “*Alnus Brembana* Rota”, s.loc., s.d., [*L. Rota*] (PAV-Erbario Lombardo!, ex *Herb. O. Balzarini*, 2 specimens);
- 5) “*Alnus Brembana* Rota / - 188 [printed number belonging to the piece of paper carved from a university register or a calendar and then used as a label] / Val Sanguigna”, s.d., [*L. Rota*] (PAV-Lombardo!, ex *Herb. O. Balzarini*).

Each specimen, identified either as “*Alnus brembana* Rota” or as “*Betula brembana* Rota” (the latter binomial has never been validly published, but the name “*Betula*” appears in brackets in the protologue), bears a label undoubtedly written by Rota’s hand: his handwriting was confirmed by comparison with the calligraphy on herbarium labels and original documents pictured by Rinaldi (2009), and with the handwritten labels attached to Rota’s *exsiccata* at PAV.