



## New combinations in Balkans *Clinopodium* (Lamiaceae)

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To accommodate the morphological diversity of *Satureja* s.l. (Lamiaceae, Nepetoideae, Menthae, Menthinae), many taxonomists (Bentham 1848, Boissier 1879, Ball & Getliffe 1972, Davis 1982) assign the species of this genus to different genera, mainly *Satureja* Linnaeus (1753: 587), *Clinopodium* Linnaeus (1753: 587), *Acinos* Miller (1754: without pagination), *Calamintha* Miller (1754: without pagination), and *Micromeria* Bentham (1829: ad tab 1282, no. 17), while others recognize only *Satureja* (e.g., Greuter *et al.* 1984) or *Clinopodium* (e.g., Kuntze 1891). Recent molecular studies (Wagstaff & al. 1995, Prether & al. 2002, Harley & al. 2004, Trusty & al. 2004, Bräuchler & al. 2005) have contributed to a better understanding of the group and they favoured abandonment of the concept of *Satureja sensu lato*. As consequence, the genera *Acinos*, *Calamintha* and *Micromeria* p.p. were transferred to the genus *Clinopodium* and several new combinations were validated both for the Americas (Cantino & Wagstaff 1998, Govaerts 1999, Harley & Paucar 2000, Pool 2008) and for Europe (Rosselló 2006, Bräuchler & al. 2008a, 2008b, Peruzzi & Conti 2008, Brullo & Brullo 2009, Bartolucci & Conti, 2011, 2012).

Concerning the genus *Acinos*, the Balkan *A. alpinus* (Linnaeus 1753: 591–592) Moench (1794: 407) subsp. *dinaricus* Šilić (1979: 274) and *Melissa majoranifolia* Miller (1768: without page) were not transferred to *Clinopodium* and the following new combinations are therefore necessary. For nomenclatural purposes, the names *M. majoranifolia* Miller (1768: without page) and *Thymus patavinum* Jacquin (1771: 7) are discussed and typified.

***Clinopodium alpinum* (L.) Merino subsp. *dinaricum* (Šilić) Iamónico & Bogdanović, comb. nov.**

Basionym: *Acinos alpinus* (L.) Moench subsp. *dinaricus* Šilić (1979: 274). Type:—BOSNIA-HERZEGOVINA, Sarajevo, Ravna planina (Jahorina), in monte Hum, about 1400 m, 11 Jul 1939, K. Malý (holotype, SARA).

***Clinopodium majoranifolium* (Miller) Iamónico & Bogdanović, comb. nov.**

Basionym: *Melissa majoranifolia* Miller (1768: without page). Type (lectotype, designated here):—ITALY. Veneto, Padova, Botanical Garden, *P. Miller s.n.* (BM-0000999967!). (Fig. 1)

*Thymus patavinum* Jacquin (1771: 7). Type (lectotype, designated here):—ITALY. Boccone (1697): [icon] *Clinopodium perenne Pulegii odore BBB*, Tab. 45, fig. B.

**Notes:**—*Melissa majoranifolia* was first described by Miller (1768: without page) who provided a short diagnosis (in Latin and English), plus a synonym (“*Calamintha Romana, majoranae folio, pulegi odore*”) cited from Boccone (1697); a description, including flowering time (“...*July and August*...”), propagation mode (“...*by seeds...by cuttings*...”), and provenance (“...*grows naturally in Italy*”), are also given. Boccone (p. 58–59) discussed the members of *Calamintha* citing a “*Calamintha montana, pulegi odore*” (page 58) followed by a long description and the provenance: “...*nella Pieve di Quero, non molto lontano dalla città di Belluno...nello Stato Veneto...à Saffi...sopra il Fiume Piave...trà il Villaggio di Vasso, e la Terra di Alano*” [“...*in Pieve di Quero, not far from the city of Belluno...in the Venetian State...in Saffi...on the river Piave...between the Village fo Vasso, and the Terra di Alano*” (Belluno is a city of Veneto region, north-easter Italy)]; at page 59 Boccone named the plant as “*Cliopodium pulegi odore*”. A third taxon (“*Clinopodium minus, angustifolium Pulegii odore, Romanum*”) was mentioned at page 50, with the provenance “*Nasce nelle Campagne di Tivoli, e nello stato di Siena*...” [“*It is born in the rural ares of Tivoli, and in the State of Siena*...”; Tivoli and Siena are towns of respectively the regions Lazio, and Tuscany in central Italy]; an iconography is associated with the latter polynomial. Examining Boccone’s index (page 179) to the figures, two members of *Calamintha* are

php?Libro=3301&Hojas) includes five pieces of plants that are referred to three polynomials, as clearly indicated: “*Clinopodium minus Pulegy odore Romanum*” (the plant on the left of the plate, marked as “A”), “*Clinopodium montanum Casp. Bauh.*” (the little piece on the top-left of the plate, marked as “C”), and “*Clinopodium perenne Pulegy odore BBB*” (the three parts on the top-center, center, and bottom-right of the plate, marked as “B”). None of these polynomials match Miller’s synonym, although those associated with the figures “A” and “B” partially correspond, but the word “*minus*” by Boccone (figure “A”) does not occur in the Miller’s synonym, while “*perenne*” (figure “B”) is in contrast with the Miller’s concept of his *M. majoranifolia* who stated that “...*this is a biennial [sic] plant...*”. Moreover, the plant “A” shows features that do not match Miller’s diagnosis both as to leaves shape [“...*folii ovatis...*” inasmuch as the Boccone’s image shows lanceolate leaves] and in the inflorescence [“...*floribus verticillatis...*” while the Boccone image shows solitary flowers]. Thus, the Miller’s statement “*Calamintha Romana, majoranae folio, pulegi odore*” is ambiguous and cannot be applied to any of the Boccone’s images. The only sure match is Boccone’s (p. 50) “*Clinopodium minus, angustifolium Pulegii odore, Romanum*” that, unfortunately, is not linked to an image, and therefore cannot be used for the lectotypification of *M. majoranifolia* since a type must be a specimen or an illustration (Art. 9.2 of the ICN, McNeill *et al.* 2012). All things considered, none of the Boccone images can be considered original material, and thus none is eligible for lectotypification. Boccone’s figure “B”, that matches Miller’s diagnosis, could be considered a neotype if no original material could be found (Art. 9.7 of the ICN, McNeill *et al.* 2012). Miller (1768) probably wrongly interpreted Boccone’s discussion and figures. In fact, Boccone (1697: 57–61), in a section entitled “*Osservazione Settima...Intorno ad alcune altre piante, con odore di Pulegio, osservate in Roma*” [“*Seventh Observation...Around some other plants, with smell of Pulegio, observed in Rome*”]) discussed another plant [alien according to Boccone (“...*una Pianta straniera, ed esotica...*” that means “...*a alien plant, exotic...*”)], named “*Clinopodium perenne, Patavinum Ocymi subrotundo folio, Pulegii odore*” that was cultivated at the Botanical Garden of Padova (Veneto region, North-Eastern Italy) according to the author. The figure “B” of Plate 45 is probably representative of this polynomial. There is one specimen at BM (barcode 0000999967) that bears six pieces of the same plant whose features match the Miller’s description. The sheet represents the only extant original material and it is selected here as lectotype of the name *Melissa majoranifolia*.

It is interesting to note that about 70 years after Boccone, Jacquin (1771: 7) described a new species, *Thymus patavinus*, providing a short diagnosis (“*THYMUS floribus verticillatis; pedunculis unifloris; caulibus ramosis, adscendentibus; foliis subserratis*”) and citing a synonym from Boccone (1697), namely “*Clinopodium perenne, pulegi odore, Majoranae folio, Patvinum. Bocc. mus. tab. 45. fig. B*”. The cited Boccone’s image matches Jacquin’s protologue and is there designated as the lectotype of *T. patavinum*.

Comparing Miller’s specimen (lectotype of *Melissa majoranifolia*), and the image by Boccone (lectotype of *Thymus patavinus*), we conclude that these names are heterotypic synonyms as already proposed by recent authors (e.g., World Checklist of Selected Plant Families 2010).

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